COMMONWEALTH OF AUSTRALIA

JOINT STANDING COMMITTEE

on

FOREIGN AFFAIRS, DEFENCE AND TRADE

Reference: Hong Kong's transfer to Chinese sovereignty

SYDNEY

Thursday, 30 January 1997

OFFICIAL HANSARD REPORT

CANBERRA

JOINT STANDING COMMITTEE ON FOREIGN AFFAIRS, DEFENCE AND TRADE

(Trade Subcommittee)

Members:

Mr Sinclair (Chair)

Senator Chapman	Mr Brough
Senator Childs	Mr Dondas
Senator Forshaw	Mrs Gallus
Senator Ian Macdonald	Mr Hollis
Senator Margetts	Mr Nugent
Senator Panizza	Mr Slipper
	Mr Stephen Smith

Matter referred:

The implications of Australia's exports of services to Indonesia and Hong Kong with particular reference to:

the Australian commercial environment including matters such as currency, taxation, banking, the legal framework, insurance, investment, research and development, and education;

any trade barriers that services exporters face and ways to alleviate them; and

the competitiveness of Australian services in these matters.

CONDITIONS OF DISTRIBUTION

WITNESSES

CHAIRMAN—As Chairman of the House of Representatives Standing Committee on Family and Community Affairs, I am pleased to open this fifth day of public hearings on the inquiry of the committee into Health Information Management and Telemedicine, as referred by the Minister for Health and Family Services, Dr Michael Wooldridge, in June last year. The committee is looking at a range of matters relating to the potential of developments in information management and Information Technology in the health sector to improve health care delivery and to increase Australia's international competitiveness.

The main issues to be resolved by the inquiry are to establish an appropriate role for government in setting standards and guidelines for the evolving industry; to address issues of data security and the privacy rights of patients; to examine the impact on the medical profession and the community generally of new procedures enabling medicine to be practised across state, national and international boundaries; and to look at the strength of current Australian knowledge and expertise in the area.

In the minister's letter of referral, he said that the inquiry `would greatly assist the Government and the wider community to obtain a better understanding of this important emerging policy issue.' The committee will address the potential of this technology to assist health practitioners improve health status and patient care in all parts of Australia, whether in hospital or home settings in urban, remote or rural areas.

To date, the committee has received a total of 125 submissions from a wide range of organisations and individuals. I would like to take this opportunity to thank all of those who have made a contribution and whose cooperation has greatly assisted our efforts to come to grips with the complex issues being considered by this inquiry. The committee, in seeking the views of representatives of organisations who have made submissions from New South Wales, is committed to broad consultation on this very important topic. The committee has some members from the state of New South Wales.

The program will continue with further public hearings in the remaining capital cities next year. For this reason, the evidence to be given today will provide a good opportunity to explore some of the key issues from a state government perspective. To assist us in this task, Mr Peter Williams, a representative of the New South Wales government, is appearing before us today.

While the committee has already authorised the publication of the majority of submissions received, five further submissions from organisations based in New South Wales were received after the original deadline. For this reason, before we commence the questioning I seek leave from the committee to authorise the publication in the transcript of evidence of today's proceedings of submission No. 111, from Healthsure Pty Ltd; No. 113, from the Liverpool Health Service; No. 116, from the Royal College of Pathologists of Australasia; No. 117, from the New South Wales Farmers Association; and No. 118,

from the Human Rights and Equal Opportunity Commission. There being no objection, it is so ordered.

The submissions read as follows—

CHAIRMAN—I call our first witness today, Mr Williams, to be sworn in. Welcome, and thank you for appearing in your position as Director of Information Data Services of the New South Wales Health Department. We have received your submission. It has been circulated to members and we have all had the opportunity of looking at it. Would you like to make a very brief opening statement?

Mr Williams—I am appearing on behalf of the New South Wales government. In relation to the statement, I would like to provide a brief update to some of the items that are included in the statement, given that it was originally submitted in September. There is a reference in the document to the development of an enterprise information model for New South Wales Health, and I would like to table the current version of that model. Its significance is that it incorporates mappings for the National Health Information Model and also for community based services, work which was done through the national primary and community based services project. I table that document formally.

There is a reference in the paper to the joint development with two other states of a community health information system. The reference is to ACT and South Australia, but Queensland has now joined that project. That has been formalised by a memorandum of understanding between the four states, and we are moving to a contractual arrangement with those.

A project which had not been initiated at the time of the completion of this submission is the clinician information access project. New South Wales Health is now undertaking that, putting in place the infrastructure to provide working clinicians across the state with access to key clinical databases, such as Medline and CINAHL. This is seen as being of particular benefit to rural clinicians who may not have ready access to the library services available in metropolitan teaching hospitals. That project is under way.

I would like to mention one minor amendment to the document. At one point the document refers to New South Wales as being the lead agency for the DACS—developmental ambulatory classification system—project. That is incorrect. I think there was some confusion in the drafting of the document. New South Wales is the lead agency for the national institution based ambulatory model project. There is a relationship there: that project is developing standards and definitions which will be used by the ambulatory classification project. I would like to clarify that for the record. Apart from that, I think the document stands as it is. I am happy to take any questions.

CHAIRMAN—Could you provide an overview of the government's information policy and discuss how it proposes to rationalise health information in order to support the New South Wales health system?

Mr Williams—About two years ago it was felt that there was a significant gap in our policy development. We had an overall statement of government policies and the initiatives we

wished to undertake. We had, at that time in particular, an IT&T—Information Technology and telecommunications—strategy for the department. We did not—as we now do—have an information management and technology strategy. There was a gap there in trying to take the implications of very broad policy initiatives, such as integrated care and those sorts of things, and saying, `What is the implication of that, in terms of our information management and systems development?' The information policy was developed to try and fill that gap, to say, `There is a five- to 10-year window in which we have to think about what information developments will be necessary to support the health care developments that we envisage.'

The information policy was consciously cast at a level that was broader than just IT. It was about saying, from a business need, `What should our information policies be?' It does reflect the broader policies of the government in relation to population and person centred health care, integration of care delivery and the movement towards case management models. A lot of the work that will be necessary to create the infrastructure is described in this document.

What is of particular relevance to this committee is that there was a strong emphasis on standards. If you are going to talk about all those things, you are going to talk about reliability of information over time, comparability of the information for benchmarking purposes and transfer of information for clinical purposes. All those things are very much standards driven. This document makes quite a strong point. In fact, the very first of the enabling policies in here is on information standards and quality. That was seen as being a critical driver.

The mechanisms for how you might go about developing these things—the community framework in which we operate—are also looked at. For example, there are references in here to client data linkage: that is obviously a highly sensitive issue, and so it suggests an approach that involves high level consulting of the community, understanding those sorts of concerns and putting in place solutions to address them.

Similarly, in relation to privacy and confidentiality, New South Wales was the first state to actually develop and publish an information privacy code of practice. That was a direct result of this policy. It was seen as being essential to get this in place before you went too far down the technical path. The policy is about trying to address those issues. If you look at where we are with things like Telemedicine, the real purpose of the document was to understand that, up-front, and not trail behind the technology.

CHAIRMAN—Your submission refers to the health information warehouse as a tool for the collection, storage and dissemination of health information and states that it will be the single state-wide electronic reference source for all data standards. In the Privacy Commissioner's discussion paper No. 1 of August 1994, it was pointed out that new communications networks have created a number of risks to the privacy of personal information that have either previously not existed or have not existed on the scale which is now emerging.

Mr Williams, could you inform the committee if you are aware of the concerns outlined by the Privacy Commissioner and discuss what measures the New South Wales government has taken to lessen or prevent the risk of threats to individuals' information and privacy in computerised networks? I must say also that a lot of people have expressed concerns about privacy, even at medical practitioner level. Yet, given the lack of privacy which has attached in the past to paper based records, particularly when they are jettisoned because they are not needed any more and have sometimes been found in places where they should not have been found, maybe the problem with computers is not as great as a lot of people make out.

Mr Williams—In relation specifically to health information warehouse—and I must admit I did not bother updating it for the record—that project is now known as the health information exchange project, philosophically because that is really the core of what it is on about. A warehouse is something where basically you just store information and you may never see it again; it also provides a very centralist view. Our warehousing project is in fact piloting warehouses at two different areas—western Sydney and Wentworth—and those things are quite discrete from the department. The relevance in this context is that the access to information at each of those levels is also managed discretely, so that the transfer of information—for example, from western Sydney to the department—follows exactly the same rules as our paper based systems have had.

Information beyond prior agreement requires, in terms of our information privacy code, ethical approval and so on—the sorts of things that the Privacy Commissioner was referring to. In fact, in developing our information warehouse we worked very closely with the New South Wales privacy committee. We were aware of that project coming up. It is a typical example of the sorts of technologies that we felt we need to get a policy framework in place, and a lot of the issues and developments associated with that project, which I should emphasise is being effectively prototyped at the moment, have been addressing those concerns. We have had site committees raise these things with us and we have looked at those on a case by case basis.

One of the potential advantages of that process over a paper based process is that it does potentially give you a much more secure method of transition. At the moment, for example, reporting in-patient information to the department may require downloading of information, sent on a tape to the department and then uploaded there, and there are a number of people handling that process. In a warehousing type of environment that can be handled automatically in a secure environment.

You can also have very good audit trails of who has accessed that information. Of the issues that consumers have raised, a question they often want to know is: `Who has got access to my information?' In a paper based system you can say that with a reasonable degree of certainty; in a computerised system you can provide them with what is in effect a log of who has been able to access that and what the criteria are under which those people have been able to access that. For example, in the warehouse at western Sydney the treating medical practitioner has access to the level of detail that is appropriate to that. If someone, even within

that area, is doing some research work, then it is based on their need to know. They might not get access, for example, to a patient's address, or the warehouse might say that that person has only got privilege to address the local government area. You can control those sorts of things much more directly than you can with a paper based record. So I think it provides some opportunities for doing that.

Also, in an information management and quality sense, the critical issue for us is about putting standards around that, so that people know that, when they are comparing information from different areas, they are actually comparing the same things and that they have not been assembled according to different rules. You can actually do that as a transparent process. You can go in and have a look at what the rules were, so you understand how that information was assembled.

CHAIRMAN—I have a last question at this stage before I invite Mr Quick, the Deputy Chairman, to ask questions. We have had, and appear to continue to have, a number of pilot projects throughout the country. The committee has inspected what I thought was a very worthy project at the Queen Elizabeth Hospital in Adelaide—their renal dialysis project. It seems to us that there is a possibility that all of the information obtained from all of these pilot projects is not necessarily being shared and at times we are reinventing the wheel when the information we seek might already have been gleaned by someone else. I am also wondering at what stage you consider that we would be able to move from the pilot project situation to a situation where we accept that Telemedicine is here to stay and we are able to implement and use this technology on a regular basis?

Mr Williams—As I indicated, I am certainly not the New South Wales expert on Telemedicine. I have been briefed on where it is at and I can advise you from that. Our general position is that we do not feel that Telemedicine has yet been fully evaluated but we are putting in place quite a detailed process to do that. There is certainly a desire to realise its potential but our general approach to all investment in Information Technology, in particular, is very much business case based, if you like. That does not mean purely a cost-benefit analysis in economic terms. It means looking at the value that we gain out of the process versus alternatives for doing that.

If you like, I could talk about the process that we have put in place to do that evaluation. It is, in effect, in three stages. The first stage will look at the implementation of administrative arrangements to manage those projects and to install the equipment and telecommunications, establishment of protocols and introduction of services. That will be a baseline evaluation of the service patterns and referrals, health care data and information necessary to assess the impact of the introduction of Telemedicine services.

The second stage will be the production of a full report and the implementation over the period of trial. They will look at the impact of those Telemedicine services on outcomes, in effect, which you cannot do initially. You need a certain time to try and get an understanding of that.

The final stage will be the performance of a full state-wide independent evaluation of the whole Telemedicine initiative and it will include looking at the impact on the clinical specialities that were involved in our particular trials—pathology, radiology, psychiatry and paediatrics. What we will be looking for there is trying to develop a generic framework for evaluating these things because Telemedicine can potentially go to a whole range of different things and what you want to be able to do is create those opportunities and put that framework in place.

We will be looking at an assessment of the technical capacity of the equipment to deliver reliable and accurate information, the diagnostic accuracy and impact of Telemedicine services in those disciplines, the therapeutic impact of utilising Telemedicine, and whether the service results in an improved outcome. We would see that sort of process being applied to each of these things. So in a sense the projects are pilots of that particular application of Telemedicine, but we would be looking for those to be ongoing projects once those benefits are established.

Mr QUICK—I am interested in the dissemination of health information. Concerning the protocols, there are various organisations that might wish to access the statistical information that you collate over a period of years. For example, the National Cancer Council might want to look at the management and treatment of various forms of cancer as you are collecting that information. How are those protocols developed? Is it just state by state?

You are dragging other states along with your community health information system. How do you see those protocols being developed? What role does the Commonwealth health department have in that? How are patients being made aware of what could and should be made available to these groups when all this information is being put on the computers?

Mr Williams—If I might deal with the second part first, in terms of patient awareness the department in New South Wales has had for some time a home page established on the World Wide Web site and we are about to expand that quite dramatically within the next few weeks. That includes a range of information about the organisation and also about certain options for health care, health promotion type information, and links to a range of other sites.

One of the issues there is how to accredit those links, particularly if you are moving to international things, and from a consumer perspective that is quite difficult knowing what reliance to place on those things. That then leads into the second issue about how we are developing the protocols and the authority given to them.

We have a four-year strategy, which is mentioned in the document, of creating an informed community. The challenge for us in doing that is to develop a set of relevant protocols that are very accessible to people. The sorts of protocols that might be developed for a clinical community and help inform them may be quite different from those necessary from a consumer perspective. We recognise there is a significant challenge in doing those sorts of things and in coming up with the mechanisms to deliver them to the community. When you look for an IT perspective, establishing a World Wide Web site is a useful thing, but there are

a lot of people who do not have access to that. Information kiosks that can be placed in an accessible range of sites could be an example of what we are looking at. But we are also looking at some quite low-tech solutions to those sorts of things.

We are at the point where, as a state, we are effectively in the planning stage of the process. We are in the first year of a four-year process, but one of the 10 key focus areas for the department is to look at all those mechanisms. I think we would certainly be looking for opportunities to collaborate. There is too much effort being expended in developing these things and I endorse the comments of the chairman in relation to providing access to that philosophically. We would like to be able to point people to the information where it is available. We would like to avoid duplication of effort in developing those things where they need to be developed.

Mr QUICK—How do you see the role of the Commonwealth health department in all this? Do they sit back and wait until all the states design their own? As I said, you are sucking in South Australia, Queensland and the ACT.

Mr Williams—I would hope that the Commonwealth has an active role in helping to bring those people together. Considering the sorts of things that have happened, for example, with the health outcomes clearing house—or if you look at overseas experience with things like the Cochrane collaboration which have been sponsored and supported by central government—there are considerable opportunities for the Commonwealth.

Mrs ELIZABETH GRACE—New South Wales is trialling projects in order to test the potential of telecommunications infrastructure for Telemedicine in rural and remote areas. How is this information being promoted and disseminated to rural and remote areas? I would also like to know to what extent training is integrated into the projects and the services that are involved in this technology within Telemedicine.

Mr Williams—Training is an integral part of this thing. One of the things that we have organised is an interchange between the projects we have organised. Also, because it is an area of new learning, we have tried to facilitate a Telemedicine project managers workshop where we have brought together the people who are running the various trials and help them jointly understand the issues around clinical protocols and technical maintenance and those sorts of things. We also have established a Telemedicine clinical service and an operational issues advisory committee whose role is to look at potentially difficult issues in the use of this technology and to assist local project managers. It is an expert group, if you like, and provides a resource or a point of contact which people can get in touch with and say, `What is happening with these things?' We are creating visibility in this way.

Each of the projects is seen as something that is of considerable public interest so we have been promoting it through those ways. I do not know if we tabled the full list of projects but, in each of those sites, particularly the rural ones, there has been quite a strong public visibility.

Mr QUICK—Are there any areas in New South Wales that do not have access to modern, say, Telstra technology? What is being done to resolve that? I know in Tasmania, where I come from, the roll-out of the cable will never happen and so you have isolated areas that cannot access this. Do you have similar problems in New South Wales?

Mr Williams—There are elements of that. We have strategies dealing with that. In particular our community health implementation program is going to assist that. That was not a randomly chosen example. For example, in the far west, which would be the most difficult to serve in this, we invested one-quarter of a million dollars this year to put in place the links which will allow the remote community health sites to establish electronic communication between them.

Mr QUICK—So that is basically a state by state responsibility. Do you see a role for the Commonwealth government to put some sort of pressure on—New South Wales is easy to fix—perhaps remote Western Australia, Queensland and the Northern Territory?

Mr Williams—I think that is really an issue for the Commonwealth. I think opportunities may well arise with the freeing up of the telecommunications environment later this year. But that is a difficult area of planning for state governments because of the uncertainties around that.

Mr QUICK—Yes, but state governments usually say, `If we are going to implement all this, we need a handout financially from the Commonwealth. We are better suited to do this. You give us the money. We have got the strategies in place.' Do you agree with that sort of philosophy? Or do you expect the Commonwealth to come along and say, `We'll do it and you can have access to it'?

Mr Williams—Telecommunications is something that has to have a national perspective. Take the example I talked about in terms of the far west: patients feed from the far west down to Adelaide. There are a lot of cross-border issues in New South Wales and significant patient flows into the ACT and southern Queensland. So I think there has to be a national perspective on those things.

CHAIRMAN—You've got a problem with medical registrations also across state boundaries at times.

Dr NELSON—Mr Williams, your submission, like a number of others, urges a review of the legislative regulatory and payments infrastructure, particularly in relation to Medicare and health insurance benefits. Have you got any suggestions about how that restructuring might occur and what kind of changes that the Commonwealth, in particular, might need to consider to facilitate the introduction of Telemedicine?

Mr Williams—It is probably not appropriate for me to comment in terms of my expertise, other than that I would see this as being analogous to the introduction of new technologies into pathology, for example. This is a different mechanism for delivering a service

and we would hopefully be looking for a payment structure that created the right incentives to provide a cost-efficient service.

Dr NELSON—In your position, presumably you identify the obstacles to it. You have obviously put an enormous amount of hard work into this and it will all be, dare I suggest, wasted if we cannot actually implement it. So I just wondered if, from the coalface if you like, you have come up against some problems that ought to be overcome.

Mr Williams—Other than as outlined in the submission in relation to the Medicare payments issue, not that I am aware of. But, as I say, I am not the appropriate person to comment on that. Deborah Oong, who is the Telemedicine project manager, could certainly provide some comments on that.

Mrs GRACE—The submission refers to Aushealth as a vehicle to foster and promote international marketing and the export of health services and expertise. What is the export potential for Aushealth?

Mr Williams—I suspect you should probably ask Aushealth that question. But, certainly from the department's perspective, Aushealth International, as it is now officially known, is seen as being an important vehicle for creating opportunities. As a state government, opportunities are particularly arising from consistent standards, tapping into international standards and creating industry development opportunities because we will then develop products in New South Wales and in the rest of Australia that are able to compete in that international market because they are compliant with those standards. That has been an issue for us for some years because we are so dependent on overseas products to have to customise those things. I think an important issue, certainly from the New South Wales perspective but feeding in where we can to those national initiatives, is to see that Australian standards are able to influence the international position and are not seen to be different from international standards.

Mr QUICK—Can you explain in layman's terms just what exactly the community health information system entails? I notice in your submission that there seem to be a plethora of acronyms. Do you see, perhaps, 10 years down the track when we have a national system in place, when we have things like DOCFACS and pharmaceutical electronic commerce and communication, that the ordinary layperson will understand when the GP says, `I need to put this into such and such a system because people need to access this for statistical reasons?'

Mr Williams—I think that 10 years might be optimistic but, at the same time, the pace of change is rapid. The first Apple Mac in Australia was in 1984 and that was only 13 years ago. It is surprising how quickly that arises. Certainly, in terms of the community health system, that will be visible to the clients without doubt.

The luxury of our community health sector at the moment is that it has not had historical investments so we have the opportunity to do things, if you like, from first principles. We have developed an information model; we have spoken to the people who are

delivering the service about what information they need to deliver the service, and not what information the government needs to know about monitoring what they do. Therefore, we are able to develop that system that will support service delivery and will be clearly visible to the client and have an impact on service.

But we are able to draw out as an administrative by-product the information that government might require. In most instances in health, because of the legacy system we already have in place, it is not easy to move to that model. It will take time. I think that there is a similar opportunity in general practice to move to those sorts of systems, as well.

Mr QUICK—And how are you linking that into the training program of doctors? We have got a wide range of ages within the medical fraternity and some doctors are not all that computer literate. What sorts of links have you made with the training institutions to ensure that the 23-year-olds and 26-year-olds that are coming out in the year 2005 take to it?

Mr Williams—We have made, in fact, some formal links with the universities to look at that. We are looking at not just doctors, but also the other clinical groups, particularly nurses and some of the other allied health groups. I also think that to some degree, particularly when you look 10 years out, we will be dealing with a generation of people that has had computers since they were eight years old and I think that there will be an expectation that their workplace would be supported by that technology, so there will be a stronger demand.

Mr QUICK—You will see people with their own little individualised cards coming in. Information will be stored on their cards about their diabetic condition, for example, and some of the pharmaceutical things that they access on a normal basis. They will swipe the cards through and the information will come up on the screen and you will be able to adjust and delete as things go. Is that the way it will be?

Mr Williams—There are opportunities to do that now. There are extensive trials in Europe and overseas doing those sorts of things. That technology exists. I think that the issues are more cultural and relate to issues of privacy and so on that need to be worked through before that is likely to happen. I do not think that there are overwhelming technical obstacles to doing that. It is much more an understanding of what people are comfortable with and feeling they can use that sort of technology.

Mrs VALE—Mr Williams, further to your answer to Mr Quick: the committee has learnt from other states that the general practitioners have generally been slow to take up Information Technology. What has been your experience here in New South Wales?

Mr Williams—I think that that has historically been true. Our evidence is that there has been a much stronger take-up in the last 18 months to two years. It is a difficult thing to get an accurate assessment on because knowing the number of computers that are held in GPs' offices does not tell you how they are actually being used and whether they are used, in effect, as accounting systems, or as part of a practice. I think the evidence is that as part of practice it is still a fairly low penetration.

Mrs VALE—Perhaps with the future computer training of doctors this is something that you would expect would pick up?

Mr Williams—I think they will pick it up when it is something that helps them do their work.

Mrs VALE—They will see it as a practical tool. Thank you.

Mr FORREST—New South Wales Health prepared a paper published in Canada last year. Could you indicate how that was received? Obviously, the uniqueness of that community information system is important over there. I suppose what I am looking for is some indication of where Australia is in terms of the rest of the world—whether we are behind, in front or at pace and so forth.

Mr Williams—In terms of that particular example, the community Health Information Management system, I attended that conference though I was not the person who presented the paper. That paper was extremely well received. It is the first work of its kind that has been done internationally to that level of detail and it certainly attracted considerable interest. The Canadian government and the British Columbian government and some people from Statistics Canada have followed up with us as a result of that presentation and we had a couple of international vendors who sought access to purchase the model that was presented.

In terms of where we are at, in that field we are probably on a par. There are elements where people have developed beyond us. We are certainly not behind the world.

If we move to the timetable that we are looking to do with the other states to develop that system then I think we will probably have a product that will be very marketable internationally. In fact, our tender to build that system includes as part of its response the opportunity to market the system that is developed internationally.

Mr FORREST—It is really not the information that is on the system; it is the way it manages it, is it? Is that what is special about the work that is done?

Mr Williams—That it is being done in a way that would allow those relationships to be understood. There are lots of systems. One of the reasons why New South Wales wanted to purchase a system in this area in the first place is that in 1993 we identified something in the order of 20 different systems that were operating out there. They had a lack of standards. A lot of then typically were home-grown, enthusiastic clinicians who had put together something to help them do their business but did not incorporate the standards and the detail that was necessary to maintain something in the long term.

What the model represents is, in effect, a knowledge asset that has value over time. As technology comes and goes, that model which is a different level from something like an enterprise information model will continue to have benefit because it describes the information

necessary to undertake the business. That does not change with the technology. That works equally well with paper. It works equally well with Telemedicine or quite sophisticated systems.

Mr FORREST—British Columbia had a system that we have been informed about, PharmaNet, the pharmacy side of it, and I note your paper talks about pharmacy as well. Are they similar? For example, are we taking advantage of what they have done rather than reinventing the wheel?

Mr Williams—In relation to British Columbia, we are very specifically taking advantage of that. The conference was actually in British Columbia and we have been exchanging information electronically on a fairly regular basis over the last six months or so.

CHAIRMAN—Are you impressed with that system?

Mr Williams—I have not looked at the details specifically of that system. We have been looking more in terms of principles and where we are going. Certainly, Canada has some interesting analogies for Australia because of the federal structure, which is of interest to us.

CHAIRMAN—And the distances.

Dr NELSON—Mr Williams, on page 4 of your submission you briefly discuss the in-patient statistics computerised on-line system which apparently gives access to health data throughout the state including rural and remote areas?

Mr Williams—Yes.

Dr NELSON—At the bottom of that page is reference to a doctor facsimile system, a trial which I understand is being conducted in the Hunter. Is the department moving towards a situation where general practitioners will have access to waiting lists for in-patient surgery, access to outpatient services and so on? Are you moving towards that? If not, is it something that you would like to see happen? Does the New South Wales government envisage, perhaps through coordinated care projects that the Commonwealth is currently running, that it might be able to give general practitioners this sort of information to facilitate the better conduct of those trials?

Mr Williams—In terms of access to waiting list information, that is already done in a couple of areas in New South Wales. As a matter of principle, we would certainly like to encourage getting better GP access to information. We recently did a review of our IM & T strategies. We spoke to each of the area chief executive officers about where their priorities lie. One of the top series of priorities for nearly all of them was about getting better links into GPs. It is something that is seen as being a critical part of our strategy.

Dr NELSON—Are you in a situation now, or are you intending to be in one, where a general practitioner considering the referral of a patient, for example, to a teaching hospital

can have immediate computer access to waiting list information, in particular, the time that it might take to wait for a particular clinician, so that perhaps at that point they can make some decisions about where that person may be referred?

Mr Williams—My understanding is that GPs in the Hunter currently have that access; that is developed through the local division of general practice. It depends very much on how that agreement is sorted out, because also it requires, obviously, the compliance of the specialists and so on—and they are happy to do that in the Hunter. It is a general principle that the department would like to encourage the free flow of information to the primary care provider.

Dr NELSON—Coming back to the inpatient statistics computerised on-line system, who is able to get access to that information at the moment?

Mr Williams—At the moment only departmental employees who are in effect hospital staff or central office staff who are responsible for the administration of that collection.

Dr NELSON—Do you think general practitioners are people who should also have access to that, or is there some political problem with that?

Mr Williams—It is not a political problem because the system is capable of producing confidential information. There are some practical problems because of the scope of that information. It is highly detailed. There are 1.7 million records per annum coming into that, with information about each episode of care. I think there are probably better ways of getting access to that information. For a particular condition in terms of facilitating service delivery, that would not be the mechanism you would use.

Mr ROSS CAMERON—How does the government assess the relationship between the costs and benefits of technology and health services delivery? Is it our thought that we should just finance the technology in a kind of incremental way as it unrolls, with customers and service providers sharing those costs? Do you have a financing model in mind?

Mr Williams—For some time we have had a benefit strategy which is a framework that was developed jointly with a consultant in late 1994. It looks at benefits at a range of levels—straight financial benefits versus service benefits and so on. The intention is that when we put in any new system we effectively pilot it, we establish benchmark measures so that we can get some assessment of the full benefit of that, if we roll that out more broadly, and that is built into the business cases.

But, as I mentioned earlier, we do have in effect a business case philosophy for systems development. That model will look at the benefits of the systems, some of which will be tangible—you may be able to realise staff savings that are quite concrete—and some of which will be intangible, such as better integrity and quality of information which you would presume will lead to better management of the system and potentially even greater savings. But you cannot necessarily cost those things. Depending on the elements involved in that, we may fund

strategies with a component of, say, an initial capital grant and a loan repayment, because it is a way of ensuring that those benefits are actually realised on the ground. That is why it has to be tied to a business case and that people have to understand that, even for those systems that have cost savings, that requires an element of business reform that in our situation is very much the responsibility of the local management and is best handled at the local level. But we want to create incentives in place to ensure those things are actually achieved.

CHAIRMAN—Thank you very much. There were a number of questions which were asked of you and you said you have not got the information but someone else would be able to provide it. Could you take those questions on notice, obtain the information we need from those who have it and send it to the committee secretariat so it can be circulated to all of our members?

Mr Williams—Yes.

CHAIRMAN—Thank you very much. As there are no further questions, I thank you for appearing before the committee this morning.

[9.50 a.m.]

\DB\WLBNESPOLON, Dr Harry Michael, Director—Health Services and General Practice, Australian Medical Association, 42 Macquarie Street, Barton, Australian Capital Territory 2600

POWER, Ms Prudence Howard, Director—General Practice Policy, Australian Medical Association, 42 Macquarie Street, Barton, Australian Capital Territory 2600

ADKINS, Dr Peter, Chairman, Chairman, National Information Committee, Royal Australian College of General Practitioners, 52 Parramatta Road, Forest Lodge, New South Wales 2037

CHAIRMAN—I now call witnesses from the Australian Medical Association and the Royal Australian College of General Practitioners to be sworn in. Dr Adkins, you are in the electorate of one of our colleagues, Mrs Andrea West, who is a member of this committee, aren't you?

Dr Adkins—That is right.

CHAIRMAN—She is a very good committee member—I want you to know that. Would one of you like to give us a brief opening statement summing up the submissions, please?

Ms Power—First of all, thank you very much for the opportunity to address this committee. We welcome this inquiry as a demonstration of parliament's timely commitment to improving Health Information Management in Australia and we certainly have high expectations of the recommendations to come out of this inquiry. Although we represent the AMA and the RACGP, through our general practice consultative structure and our information management-Information Technology project we are actually representing all general practice organisations in Australia. We can elaborate on that point, if you wish, later on.

I just have a few short statements to make. The key to improvements in Health Information Management in Australia is the promotion of a nationally planned and cooperative approach between the major players and, along with that, a parallel program in the concept development and testing by way of local and national projects. I think we need a dynamic integration between this plan—that is, a national approach—and these projects and pilots. We have talked about that in our written submission.

We believe the opportunity still exists to develop and manage a systematic and integrated approach to the introduction of Information Technology throughout the whole of the health industry, rather than the potential for an ad hoc development with little by way of

connections. We believe this can be done through a professionally managed project which underpins a partnership approach between governments, providers, the Information Technology industry and consumers. We think this can be done with the patient at the centre and using general practice as the hub of the communications technology.

The professionally managed project needs to be dealt with, I think, with government assistance, using the employment of a project manager over a period of time to make sure that there is an integrated national approach. The crucial issues in this development are the common industry standards—in particular, clinical coding and data definitions, interconnectivity, data exchange, transfer of patient data and information, privacies and security. Within that last point, obviously we need to think very carefully about how to develop a unique patient identification. These particular issues have to be emphasised because they are larger than individual general practitioners or individual providers in any sector of the health industry. With that in mind, we do need government assistance to make sure that these common industry standards occur. I would like to hand over to Michael Crampton, who will elaborate on some of these issues.

CHAIRMAN—Just before you do, what sort of government assistance in particular are you looking at?

Ms Power—We will probably elaborate on that later in the submission but, just to give a response up-front now, we are looking at the government providing an environment for the industry that will actually accommodate national standards. To do that, I believe that the government needs to provide some financial assistance, not so much for the hardware and the software to be bought by individuals, but financial assistance to encourage pilots to promote national integrated standards and interconnectivity. I think that those pilots ought to be across government. In other words, there should be some cooperation between federal and state governments and, going even further down the line, some cooperation at the GP divisional level or area health regional level. I do think it will cost money, but the money should be directed at providing the environment for a nationally integrated system.

CHAIRMAN—How much money?

Ms Power—I could not guess at that at the moment.

CHAIRMAN—Dr Crampton?

Dr Crampton—General practice, we believe, is the central player in Australian health care and we believe that general practice is the key player in advancing Health Information Management in Australia.

As general practice contacts over 80 per cent of the Australian population each year, we believe that focusing on general practice Health Information Management is, and will lead to, the best opportunity to have a significant impact on Health Information Management in the nation.

Currently IT systems to provide Health Information Management are in use in general practice. Perhaps about 50 per cent of general practitioners use them for their practice management issues and a variable estimate of around five per cent are using them for clinical systems. It is the clinical systems that we would like to focus on briefly.

We believe that general practice has not delivered, and cannot deliver, a Health Information Management system by itself. GPs are small businesses largely funded out of fee for service. Although we have a clear responsibility to have an adequate information management system for our own purposes, a lot of the health information issues and health information flows that occur do so beyond our individual practices, between practices, with other aspects of the health system as well, to hospitals, pathology labs and so on.

We need a health information system that supports the complex interchange of information. We need active planning and participation of all of the stakeholders to actually establish it.

Our current health information system, we believe, does not place a great emphasis on the need for access to distributed clinical information. Primary care providers are therefore not encouraged to invest in clinical IT systems. There are unique factors in the Australian environment which we see from the general practice perspective that lead to this and I think they are important to bring forward. There is a strong emphasis on privacy in our community and that has an impact on the notion of patient identifiers. There is a strong emphasis on freedom of choice by patients of the providers they go to and that has an impact on the location of primary records. Funding in our system is primarily fee for service and this results in a reduced emphasis on the importance of clinical information and clinical records.

There has not been much patient expectation, although perhaps it is changing, for distributed access to clinical information. We have had a history of legislative and bureaucratic barriers to implementing Information Technology systems. I could put forward the MedClaims system as an example or history to do with prescribing and stationery—

CHAIRMAN—Could you just elaborate on that comment?

Dr Crampton—Yes. MedClaims, as you are perhaps aware, is the transmission system by the Health Insurance Commission for direct bill claims. It is an electronic transmission system that practitioners can utilise, but you can only utilise it if you elect to direct bill your patients. It cannot be utilised from the perspective of general practice if you choose to charge your patient.

CHAIRMAN—You would obviously support a principle where non-bulk-billing doctors could have access to a form of the MedClaims system for the bulk-billed and for the Medicare rebate proportion of the medical bill with the patient then paying the balance?

Dr Crampton—The answer to that is yes. Certainly we would support the notion of

submitting the claim on behalf of the patient, as you have described.

CHAIRMAN—Maybe the government could bring in earlier payment for those doctors who deal with it electronically because the Health Insurance Commission tells us that it is substantially cheaper to deal electronically than by paper.

Dr Crampton—This would be a major incentive to increasing the use in patient management but we have to also focus on issues related to clinical management. Perhaps the prescribing issue might be a simple example, prescribing being a clinical office function, obviously, and, until recently—I am talking of three or four years ago—it was banned as far as state legislation was concerned. After a concerted effort that aspect has been overcome, but there are still bureaucratic barriers to prescribing. A simple example is the charge that the Health Insurance Commission makes for computer generated prescribing stationery, as opposed to the fact that there is no charge for manual stationery which practitioners use.

CHAIRMAN—How would they argue for that discrepancy?

Dr Crampton—I understand that the argument relates to—

CHAIRMAN—Do they want to discourage the use of computers?

Dr Crampton—No, I understand it relates to the cost of the stationery because of the particular paper type and the printing and so on that is associated with the paper type.

CHAIRMAN—But they would save money, wouldn't they, if people dealt with them electronically, so it is false economy.

Dr Crampton—We have argued that since 1990. That is correct.

CHAIRMAN—Even when Dr Nelson was with you?

Dr Crampton—Even when Dr Nelson was working with us. That is correct.

CHAIRMAN—He is still working for you.

Dr Crampton—I am sure of that. There are a number of significant issues which we want to emphasise to the inquiry.

Firstly, GPs are the key players in this. We think that by dealing with health information issues related to general practice we will deal with the system. The second is that information management is a process. Information Technology is just a tool to run the process. Whatever is the flavour of the day is the thing that we should be using. We might be talking about smart cards, we might be talking about Internet or we might be talking about whatever; it does not really matter. It is just the means to the end. The third point is that the focus on information has got to be on the patient. The patient has to be the centre of the

information flows.

Ms Power has outlined our belief about the key requirements: national planning, cooperative local projects and integration between these processes. We believe the government has a very significant role as a funder and a promoter. We believe that the cost of health information systems in general practice should be offset by performance based financial incentives. We believe that funding of the expansion of the health information network beyond individual practices must largely be supported by government and other health players.

Finally, we believe that all stakeholders require confirmation that their investment in clinical information systems is wise. We believe this is best provided by a statement from government, in cooperation with the medical profession, the consumer movement and the information industry, that this is a sensible way to move forward.

CHAIRMAN—You mentioned financial incentives a moment ago. Would you like to elaborate on what you meant?

Dr Crampton—Yes, there are two important aspects. The first, in regard to general practitioners themselves, is that there is a significant cost in hardware, software and time to actually establish clinical information systems. At the moment there seems to be little direct reward that they can put against those costs as an offset. It would seem sensible that there is some incentive process provided by government to encourage and advance practitioners into the use of those systems.

CHAIRMAN—Would you have any suggestions?

Dr Crampton—One of the ways that it could be done would be through prescribing systems. One way could be through recall and reminder systems and another could be through health summary systems. Perhaps Dr Adkins could give some ideas further on that.

CHAIRMAN—Would you suggest a carrot and stick approach?

Dr Crampton—I think that a carrot and stick approach is what is going to have to happen. It is important to offer reason for practitioners who are interested to move forward, but I think that it is probably sensible in time for us to see that there are definite advantages to using more modern information systems and those who do not want to move need to be led along.

CHAIRMAN—We heard some evidence that at least one pathology company was offering basically illegal incentives to practitioners to deal with them. Do you have any comments on that? Have you heard of those allegations, and what would be the name of the offender?

Dr Nespolon—One of the problems with the sort of ad hoc development of technology that is occurring at the moment in Australia is that it does allow, for example, for

those sorts of allegations or those sorts of systems to develop. If you are a pathology provider you would like to capture the whole market of a particular practice, especially if it is a big practice, and so you would be willing to offer those practices incentives such as direct computer link.

Whenever we have argued about any sort of system we have always spoken about an open system where, if you were putting pathology ordering or pathology results on a system, it needs to be a system where the practitioner can access any of the pathology providers in their area and they can also receive information from any other pathology provider.

One of the savings in pathology, for example, is the ability to recall information about a patient who has gone to a pathology provider who you do not normally deal with. The reality is that most practices use one pathology provider for very good reasons. If I ordered some blood tests, it is easy to just phone one number. I was a GP in Adelaide and if a new patient came to me and said, `I had some pathology done yesterday'—usually they cannot tell you what coloured form they have signed—it would often take four or five phone calls, which is anywhere between 10 to 15 minutes, to find out that result. Unfortunately, a lot of doctors will not spend that time and will just repeat the test. So if it was able to, in real time, instantly access pathology results, that makes a net saving.

I have not read the paper myself but I understand that in New Zealand where they developed a system like this they had about a 20 per cent cut in the amount of pathology that was being ordered and that paid for the system itself.

Mr QUICK—As far as GPs go, for the benefit of your clients, how sophisticated a system do you really need? We are talking about pilot projects. Do you see a cut-off time by, say, the year 2005 when we will have something in place, a system that you see as beneficial not the New South Wales health department or the Commonwealth health department?

Ms Power—In our original submission you may be aware that we had a draft project planned for the introduction of Information Technology into general practice over a period of three years. As far as that plan is concerned, we do have a vision that the vast majority, about 90 per cent of general practitioners, would be at ease with using Information Technology for clinical purposes by the end of 1999 and that through some well-coordinated trials there would be a larger body than there is at the moment, perhaps 40 to 45 per cent of general practitioners, actually using Information Technology at a more complex level.

We envisage the vast majority of general practitioners using Information Technology for clinical purposes for maybe one or two functions such as electronic prescribing and perhaps, with e-mail, connecting with other doctors but that the smaller percentage—about 45 per cent—will use it for complex uses with connections through to other sectors of the health industry such as hospitals, pathology and radiology and so on.

Mr QUICK—So when the government decides, `Okay, we need to look at immunisation,' someone, somewhere, can press a button and say, `Look, in Tasmania the

percentage is such and such. We need to spend X dollars there.' One of the things that we have discovered is that all this data is floating around in the ether and no-one seems to be able to trap it and say, `Well, as a result of this information we need to spend our money in various departmental areas.'

Ms Power—If, as we say, there is an integrated process of developing Information Technology in the health industry at large with general practice as the hub then, over time, general practice will be able to provide a substantial amount of epidemiological data at various levels. I think Michael Crampton might like to expand on that.

CHAIRMAN—Before we get to Dr Crampton I think that Dr Adkins was going to answer, in a supplementary way, a question I asked of Dr Crampton.

Dr Adkins—Yes, about the level of computer use in general practice. I think that by the year 2000 about 50 per cent of general practitioners will be using some form of clinical application in practice. Currently, computer prescribing runs at between 15 and 20 per cent. I think about nine per cent of practitioners would be using other forms of applications—such as recall—for immunisations, blood pressure, pap smears, mammography and the like.

A certain amount of intrinsic benefit comes from having a computer system in the practice. In my practice, for example, by generating more legible scripts, I do not have the chemist ringing me up every second day asking me to interpret my handwriting. I also have patients who are better able to understand—

CHAIRMAN—So you are an early failure?

Dr Crampton—That is right. I also have patients who are better able to understand their medication. So that generates better quality care within the practice, quite inexpensively.

But there are other aspects of practice where an incentive is needed for general practitioners to invest in not only the hardware and software which does cost a considerable amount of money but the actual cost of data entry, staff training and communication with other health providers. There are quite considerable costs in those areas. There really has to be some sort of incentive—based on quality of care issues—to encourage general practitioners to use the technology to its best advantage.

There are significant achievements in various health providers getting together and using various IT solutions to improve the quality of care. At the moment there is an enormous amount of fragmentation, with people doing different things in different places. There needs to be some sort of common plan to bring everyone together, to enable more efficient progress in the area.

CHAIRMAN—Given the age range of medical practitioners, as the younger, more computer literate practitioners get older, we should get a higher usage of computers across the entire profession—for both practice administration and clinical purposes. That is self-evident.

Is there adequate instruction in the area of computer technology in our medical courses at the moment? It seems to me that it should be a compulsory subject at some stage.

Dr Adkins—The training in the undergraduate arena is patchy. There are some quite excellent examples of undergraduate informatics training—at Monash and the University of Newcastle, for example. Other universities provide minimal training in information management, Information Technology and computers in medicine. I know that is the case in Queensland.

In the postgraduate arena, there is some training happening through the College of General Practitioners training program, which I am involved with in Brisbane. It provides basic literacy and hands-on skills for doctors training for general practice.

CHAIRMAN—We should be doing it at a time when students are studying, so that we will have much better usage in the future. Perhaps we could put something in our report to that effect, to encourage other medical schools to do what Newcastle and Monash are doing.

Dr Adkins—I think that is important but, by the time graduates move through their medical course, things have often changed and there is a new set of software to be trained on. So it is important to provide skills in the undergraduate course, but there is still a need for training in the postgraduate arena with the current software.

Dr NELSON—In the introductory remarks both Michael and Prue referred to the general practitioner being the hub of the system. Has either organisation given any thought to how you draw specialists into this network? In a health information system it would seem logical that the general practitioner would be on-line to some tertiary services and also to the specialist to whom, presumably, they need to refer.

Ms Power—In the first instance, the general practice plan that I referred to—which was in the original submission—has arisen from a GP strategic plan. It is one of the objectives in the GP strategic plan that has been passed by the AMA federal council and by the RACGP council. In passing that plan, the federal council was very well aware of all the objectives, including the introduction of IM/IT. So we have an authority from the federal council—representing all practitioners across all the craft groups—to go ahead with this project plan. Of course, in developing the plan we would need to use a lot of techniques to promote it widely, including workshops with other craft groups and with consumers, the Information Technology industry and so on.

Dr Crampton—Dr Nelson, one of the reasons why we believe that patient focus is a very important component of this is that if the patients themselves have an expectation that they will have access to or even possession of some form of electronic clinical information about themselves, then I think that brings all the providers in the system—GPs, specialists, hospitals, pathologists and so on—into the system.

Dr NELSON—I think it was the Health Insurance Commission in its submission to us

which alluded to the health ministers advisory council considering using Medicare numbers as patient identifiers. Is this something of which you are aware, and is it something that you would support?

Dr Nespolon—I think we are talking about unique patient identifiers, whether it is a Medicare number or some newly generated number. This always causes a little bit of horror amongst the Australian public, and perhaps the politicians who serve them, if you look back to something like the Australia card and the heat that that generated. I think when you are talking about unique patient identifiers you are talking about privacy. People's concerns are not about the fact that there is a number that identifies them. As we all know, we have large numbers of numbers that identify a variety of things. The concern is that this very crucial information about the person themselves—some people might argue it is the most vital information about someone—is not made available to the world.

The technology now exists to allow not only a unique number identifier but also a biological identifier—whether it be a palm print, a fingerprint or a fundoscopic examination—so that the information is less likely to be transmitted in the wrong way to the wrong person. We have argued for an opt- in system. At the end of the day, the only way you will get people to opt in is if they have confidence in the system. The only way they are going to have confidence in the system is if they are confident about the privacy and security of that information. There will be a large number of people who will not care because they will not have a lot of information about them.

CHAIRMAN—Wouldn't an opt-out system be better?

Dr Nespolon—From an administrative point of view an opt-out system would be much better in the sense that you would have to go out of your way to opt out. I think they had an opt-in system in Canada, and 97 per cent of people opted in. We would be very much against an opt-out system, because people should demonstrate their confidence in the system by saying, `Yes, I want to be part of this.' People who do not want to be part of the system should be allowed to say, `No, I'm not interested.' Sure, from an administrative point of view an opt-out system would be the easiest. But I think from an individual person point of view an opt-in system is what people should be after. That would put pressure on politicians, doctors and all the other non-consumer stakeholders to develop a system that people have confidence in.

Dr NELSON—Just two final things. Have the AMA and the college given thought to or put any suggestions to the government about changing the Medicare benefit schedule or incorporating into it item numbers which would enable teleconferencing, multidisciplinary consultations or remote services to be provided to general practitioners?

Dr Crampton—The thoughts that the colleges have given to this have been in consultation and preparation for this submission and so on, and have not gone beyond any other presentations, so I will let Dr Nespolon, with whom we have been consulting, speak on our behalf.

Dr Nespolon—One of the early questions was: how can the government help to develop a Telemedicine environment? One way of doing that is removing that restriction that we have in our schedule at the moment about having face-to-face contacts. One of the things that the HIC or the government will need to have is confidence in having virtual face-to-face contacts. Telepsychiatry, for example, is something that has been in this country for a long time now—I would guess at least 10 years. The program in the Royal Adelaide Hospital for its oncology services to Darwin has been going on for at least 10 years.

There needs to be recognition that, because of the way that we understand Telemedicine today, there are two practitioners involved—there is the remote practitioner and the practitioner at the site with the patient. Until it develops further, where you do have just doctor-patient Telemedicine—who knows when and if that will happen—the HIC needs to be able to recognise these unique situations which do provide high quality care, especially to rural patients at the moment.

Dr Crampton—Information Technology, communications technology, opens up doors and provides opportunities which were not there in previous systems. We have come across bureaucracy and legislation which have impeded the implementation of some of the IT systems over time. This may be another example, if we are talking about Telemedicine, telepsychiatry and so on, where the MBS schedule as it stands now could well impede the development of that. Therefore, it certainly does need to be considered and addressed. We have seen examples of this before, as I have mentioned already, with prescribing, recall and so on. I am sure there will be many more such examples that arise as well.

Dr NELSON—Coming back to one of the chairman's first questions, would the Australian Medical Association and the Royal Australian College of General Practitioners then support negotiations with the government in providing financial encouragement to general practitioners in particular to electronically lodge claims? For example, could you envisage a situation where those who electronically lodged would perhaps receive cheques earlier and might also be able to lodge, as we said, the benefit for non bulk-billed claims? Is that something that would be acceptable to the organisations?

Dr Crampton—From the College of GPs perspective, the answer is yes, with the condition that we also would need to look at issues related to clinical information systems, because that fairly closely relates only to practice management systems. It would be essential to also look at the clinical environment.

Dr Nespolon—The AMA is committed to efficient billing, be it in general practice or in specialists. There is no doubt that our present system has been deliberately developed to make it very difficult for patients not to be bulk-billed. In the end it is the patient who suffers. They are the ones who have to run around with cheques, they are the ones who have to lodge forms.

There is no doubt that an efficient system, which may involve general practitioners

electronically lodging their claims, will benefit everyone. It will benefit the HIC, which has very high costs. I think it costs $1.60 to deal with every paper transaction and 30c or 40c for every electronic lodgment. There is a huge saving there. There were 92 million consultations last year in general practice, so that is potentially $92 million, on those very rough and simplistic figures. We would argue that that should be shared by both the government and general practice. It would give a chance for the general practice to receive some money that they really do need to continue to provide high quality services in this country.

Mr QUICK—Ms Power, the computer assisted practice project which ran for seven years examined a whole lot of benefits. Can you briefly give us a run down of what you see as the key elements in that seven-year thing? A little later it says: `Unfortunately, there is no formal global comparative research data of manual versus computerised systems.' So what did we learn after seven years of—

Ms Power—It might be better if Michael Crampton answers the question as it was a college program.

Dr Crampton—Yes, the college ran the program under Peter's committee, so I will let Peter answer the question.

Dr Adkins—The computer assisted practice project was a project that involved 40 general practitioners from around Australia. Significant benefits accrued to the practitioners taking part in that project. They are listed in the submission. The main benefit that they realised was improved access to information. One of the problems with handwritten records in a practice, be they cards or A4 folders, is actually having to find the information. Considerable time is wasted in trying to find information. A computer system allows you to structure the information and access it more easily, so that was one of the significant benefits.

The other benefit was actually having a better summary of the patient's medications, health problems and previous history. It could be printed off and sent off to hospitals or to specialist practitioners, thereby saving an enormous amount of time for the hospital or specialist in not having to re-collect a lot of information that was already known by the general practitioner.

There are other benefits, such as a reduction in the numbers of lost files. In the practice that I work in, staff often spend half a day trying to find a patient's record that has gone missing, and they have often spent several days trying to find a missing pathology result. With an electronic system, there is a lot less chance of data going missing.

CHAIRMAN—It can still disappear, can't it?

Dr Adkins—It can still disappear, yes. But the chances of it disappearing are much less, and the actual effort taken to retrieve it is much less.

Dr Crampton—And there is usually an audit trail which you can access to try to find

what has gone wrong with it.

Mr QUICK—That finished in 1993. Did those 42 practices say that this was the best thing since sliced bread and they would refine it for their specific needs, and did they then go away and live happily ever after? What happened in the interim four years? Has it gone from 42 to 6,000 or has it just died? We have now got electronic banking, and the banking industry says, `This is what you people need and this is what you are going to get and we will punish you financially if you do not participate.' Is this Information Technology driven by the health department, Commonwealth and state?

Is it something that you see as beneficial, as a result of this six-year or seven-year study? Why invent something that your students do not really want to participate in as they are going through their medical training? Is it a case of `There is something there, but we will use it when it suits us'? I would like to see something that is beneficial to the patient and that saves some money, and that has, in the long term, a definitive time frame—so that, by the year 2000 and something, it is done and we do not need any more pilot projects and we do not need South Australia or New South Wales saying, `We have got this new whizzbang thing', because we have something in place and we can just refine it and get on with our living.

Dr Adkins—One of the difficulties with this particular project was that it was developed on older software and hardware and the company had some financial difficulties and was taken over by another company which developed a different set of software; so there were some problems in the upgrade path for that particular project. There are, however, significant other software programs around that have been taken up, particularly in the prescription area, by general practitioners—programs that I think will lead the way to the future.

There are significant benefits to patients through having a better quality information system in practice. Patients do not have to wait as long for information, they do not have to come back for results, and they can go to the hospital in one visit and have their problem attended to, rather than having to go back multiple times while tests are being redone and while information is being re-collected. So there are significant benefits for patients in the present system, but there could be a lot more benefits in the future.

Mr QUICK—Do you see electronic doctoring coming in, whereby, if you live in the North Shore and you have got e-mail access to a specific practice, you can e-mail your local doctor and say, `Here is the result of my pathology test'?

Dr Adkins—Yes. I have had more e-mails from patients than I have from specialists in my practice. I use it not on a formal basis but on an informal basis. When patients see the letterhead and my e-mail address, they often send me a message to let me know how they are going.

Mr QUICK—Do you see that being developed? Once you have got secure transmission, you can say `Turn your printer on. I am about to send you your pathology report.' So the 85-year-old lady does not have to come in, and it is there?

Dr Adkins—Yes. Sure.

CHAIRMAN—You have got a problem, though: how do you charge for these services? If people are sending you e-mails, presumably you are not charging for any service associated with those; and that is one aspect that would have to be looked at by the Health Insurance Commission as far as the benefit schedule goes.

Dr Adkins—Yes. Just as I would phone a patient to follow them up or fax them information on a particular condition, it is quite easy to e-mail them if they have an e-mail address.

Dr Nespolon—Mr Chairman, that underlines the problem associated with the way we finance health at the moment. There is no real benefit to a general practitioner in providing what we might call `value added services' in our present scheme. The schedule is based on face-to-face contacts, full stop. We are talking about e-mailing things, but what about phone calls?

If doctors, for example, were able to get some reward for taking phone calls from their patients at night, it might actually save a lot of money in terms of patients going to casualties and being admitted. Often, all it does take is just a phone call to reassure a patient, to tell a patient what they need to know. That is a much broader issue than perhaps what this IM/IT inquiry is about. But I do not think we have to focus just on big computers; you can use that silly thing called the telephone as well.

CHAIRMAN—Mrs Vale, do you have a question?

Mrs VALE—I have a question for Ms Power. I was particularly interested in relation to the role of government and whether it be a leadership role or as a facilitator or in a support role. I think you mentioned a government perhaps having a project manager for the national management of IT. Ms Power, if you had a wish list, how would you see it, how would you really like it to be? I would like to hear from other members too about how they feel. I just really would like to know. You are the people at the coalface and I would really like to know exactly you feel that government could really help this happen.

Ms Power—I do believe that government—that is, all governments—have a role in this particular issue in creating the environment whereby we can have a nationally integrated system of Information Technology across all parts of the health sector. I think—and this is different from the financial industry—I would rather see the government making that environment available rather than it being a market led development.

Mrs VALE—In making that environment, do you see that as, for example, appointing a particular person or a department? And in relation, too, to the questions that Dr Brendan Nelson asked about the management of that side of the delivery of health service, did you really see that providing the environment really should be a specific responsibility for a person

or a department to actually do that?

Ms Power—In providing the environment, I think it should be a specific responsibility of all the governments—state and federal—to actually get together, through AHMAC perhaps, and ensure that the standards that are being developed are national. When I was talking about a project manager I was specifically referring to our general practice Information Technology project plan. That is, to start, with general practice being the hub, to introduce—though introduce is not quite the right word, because some general practices are already using technology—and to make sure that the development of technology in general practice happens systematically and nationally.

To do that over, say, a three-year period, it would be very helpful to have a project manager actually employed to oversight it. Whether that continued beyond that three-year program and beyond general practice is another point; possibly it would not be necessary. In managing that plan, and in actually introducing that plan, I think governments do have a responsibility to finance certain activities, particularly pilots, and that the pilots should actually be across government so that we are introducing a cooperative approach. Others might like to expand on that.

Mrs VALE—Dr Nespolon commented about how the traditional structure in patient-client relationships has always been face-to-face. As you suggested, if there is no way that we can accommodate some sort of financial support coming to doctors for taking telephone calls—I mean, the saving of that alone I could imagine could be immense.

Dr Nespolon—There is no doubt that, especially with after-hours care, if the patient was able to access their general practitioner there would be considerable savings in visits and in use of tertiary referral. I should preface my remarks by saying that I do not think general practitioners should be available 24 hours a day, seven days a week, because it is not part of our social milieu at the moment. But more doctors would be willing to do their own after-hours work if it did not involve actually having to go out and see the patient every single time to get some reward. But I do not think you can expect them to be a charity either and just provide this service for nothing.

The reality is that doctors are estimated to spend an hour or two hours a day in unpaid work: writing out prescriptions, writing referral letters, sometimes doing insurance claims, taking phone calls, talking to relatives—the list is just huge. I am sure if general practitioners were like lawyers and were able to charge in six-minute blocks for all the non-face work they did, they would just about triple their income.

CHAIRMAN—Obviously, lawyers do a lot of unpaid work as well.

Dr Nespolon—Sure, I appreciate that.

Mrs VALE—What you are saying, Dr Nespolon, is correct. I think if you are going to change that culture, this is where you do need cooperation at the national level, the

governments, to come in with a new kind of culture to fit this technology.

Dr Nespolon—I accept that. If I were speaking on behalf of HIC, how do you audit a phone call? But at the moment, if you actually think about it, how do you audit bulk-billing? You just presume that a patient rolls up and that service takes place. I think there needs to be some trust in the system as well.

CHAIRMAN—And safeguards.

Dr Nespolon—And safeguards. I accept that wholeheartedly. But I think there needs to be a different look at the way in which the government subsidises these things, because it really does help the government as a whole in the prevention of the use of tertiary services.

Mr ROSS CAMERON—Following that question by Mrs Vale, there is the question of where your submission talks about the importance of national coordination and planning. As we have spoken with different groups around the country, it seems that we have seen examples of tremendous innovation in technology development and service delivery. But they have usually been the result of highly motivated individuals who have an expertise in areas, some of whom are idiosyncratic, some of whom are just on a private crusade, but they have come up with fantastic results. On the one hand we want to encourage and foster systems which are nationally accessible and integrated and we do not want multiple gauges, but on the other hand I think we would be reluctant to throw a huge wet blanket over innovation by having too centrally dictated an outcome. How do you think you manage that tension?

Ms Power—I think you are absolutely right about that. Our whole idea is that government would foster that nationally integrated approach. We think that is absolutely essential, so that people can talk to each other electronically throughout all the sectors of the health industry. But the plan we have been developing for general practice actually envisages capturing the really good things that are happening by individuals or through individual projects.

At the moment there is very little integration of projects which have been funded through various governments, but a lot of it from the federal government through divisions, so that some of the projects, the work of the projects or the outcomes of the projects have been lost. So obviously we need to foster that innovation but use that to inform good development of a nationally integrated approach. So we need to come from both ends.

State governments are, in their own ways, being innovative and developing good projects, but by themselves—the multiple gauges, as you mentioned. We can stop that now. The opportunity still exists to actually cooperate more nationally. I suppose AHMAC is the best body to work through that at this stage.

Dr Crampton—There are two dangers, as I see it, of not having some kind of coordination. One is the notion simply of reinventing wheels and of having multiple enthusiasts doing exactly the same thing at different points around the place, perhaps even coming up with

different solutions to it.

Mr ROSS CAMERON—Why is that so bad, though?

Dr Crampton—It is not necessarily bad in itself because there are certainly different ways of testing the concepts and so on. But if we are looking at the notion of being able to connect health care from one location to another, then we have to incorporate some kind of coordination, planning, standardisation or whatever. It is wonderful to have a health care system that works in my suburb, but if it cannot connect with the next suburb's health care system, it is going to fall over, because patients will cross from one suburb to the other. So there must be some degrees of connectivity.

The second danger that occurs is that people often end up focusing fairly narrowly on their own requirements, coming up with their own solutions to their own problems. Those solutions may well be elegant, may well be very intelligent solutions, but may not allow this cross-over, this information flow. If we are talking about a patient focus at the middle of this thing, we have to acknowledge the fact that patients will somehow find their way around and beyond any little system that we want to invent—any hospital network, any division network, any whatever you like.

Ms Power—There is one more point that probably should be considered which sets the health industry apart from other industries since financial industries are often used as an example for electronic development. It is an extremely complex industry. It is probably the most complex industry of all that we have to work with and we are dealing with health issues which, to a certain extent, need to be managed nationally. I think all of us accept that there has to be a certain amount of government intervention in the health industry.

Mr ROSS CAMERON—Just on that point, somebody said of the National Party that their basic philosophy was to privatise the profits and socialise the losses, if you like. This question of how you finance the exercise keeps coming up. As a nation, we have made a decision, basically, to socialise the benefits of medicine and of health care. We have done that by, in effect, interposing a public sector agency between doctors and their patients in a financing equation. We are constantly grappling with the problem of how do you rebuild, how do you effectively reward service and innovation, because you have got to funnel any claim through this interposed body in the middle. The acceptance, for example, of Medicare across the Australian community is obviously very high—and I think among the profession it is fairly high—but to what extent is operating as a bar to innovation and to a better quality of service delivery?

Dr Nespolon—I will start off with a few comments. I think you are asking the general question about why should the government intervene in health. Other than the popularity of Medicare, I think there are huge social benefits. The government should be subsidising services that would otherwise not take place. That is basically what is happening in health. The common orthodoxy is that, if the government did not subsidy the price of health, there would be large parts of the population that do not access health and health care and hence would be

much worse off. I think there are places in America that demonstrate that quite clearly; that without government subsidy, you end up with catastrophic costs. If you have a car accident, you are in debt for the rest of your life. I think even the most ardent right wing AMA member would not want to see that happening.

There is no doubt that the answer to your question is yes. The way the present fee for service system has developed—the retort often is you can always charge your patient extra. You can charge them for signing a form or for a telephone call. If you are a small businessman, you would say, `Are they going to pay?' and the answer is no, because it is not an expectation within the Australian community to pay for these added extras, if I can call them that. There is no doubt that Medicare has developed an expectation within the community that all political parties realise that subsidised health care in this country is here to stay. Whether you think that is good or bad, it is just a fact of life. The question is whether the government is willing to pay for the added extras or to set an environment where those added extras can be charged for.

If you are looking at financing any sort of IT/IM system, for example, there is a thing called the better practice program which has gained a lot of notoriety through the election campaign. There is $100 million available each year under the pretext of improving the standard of general practice in our country. It has been developed to try to answer some of those questions that you have raised about the fee for service system not being able to capture all the benefits that a practitioner can offer. I would argue that that money is there. The computerisation, if I can use that term, of general practice does result in much better practice. That much better practice, the benefits of which are captured by government rather than by individual practitioners, is why the government should be paying—not all of the costs, there are some private benefits for individual practitioners—

Mr ROSS CAMERON—When you say that, what do you mean? To me, the government, on one level, is not a consumer of health services at all.

Dr Nespolon—But it is a provider of health services, though. In a sense, if you want to look at it crudely, the government contracts out with all these thousands of general practitioners and specialists each day to provide health services for the Australian community—which is something they want. That is what the government is doing. You can describe it whatever way you want to, but that is basically what is happening. It provides a subsidy. It allows patients to go and see doctors at whim under our system. Whether that is a good or bad thing is another thing.

If you look at the benefits of IM/IT—better pathology ordering and perhaps decreased pathology ordering; electronic prescribing; assistance with decision support; communication with other health care providers; the provision of Consumer Product Information; the provision of continuing medical education to improve the quality of practitioners; perhaps even outcomes-based funding, in other words, rewarding doctors for doing the right thing—they are actually public benefits. They make the community healthier. It makes them better. They use hospitals less, and that is a cost that the government bears and, if there is a potential

benefit there, the people who enjoy those benefits should be paying for them.

Mr ROSS CAMERON—Yes.

Dr Crampton—Mr Cameron, I would like to make a brief comment on your question. I think that Medicare has resulted in a focus on the event rather than the content of the event. In Health Information Management and from the perspective of the provision of quality health care, we are saying that the content of the event and the communication of the content of the event is a very important thing which we think is being lost in the process. Health Information Management requires better technology; that has a cost. If we focus only in our funding system on the occurrence of the event and not the content of the event, then the system is poorer for it.

Mr ROSS CAMERON—That is my question. My concern is that in the long run if, out of a desire to make health accessible to the widest number of people, you place massive barriers to innovation and efficiency in the way of health service delivery in the long run, the people you are trying to benefit may actually suffer because of the lack of availability of the best technology, the best solutions.

Dr Nespolon—I think most people have thought about this. I do not know if you have had a submission from the people who did the IBM consultancy for the pharmaceutical benefits branch, but there should be a basic system that people are able to work into. I think they have called it the clinical platform. So if you develop a better electronic prescribing system—the innovation—that can just be one of your icons on your computer. If you develop a better pathology retrieval system, that can be another icon on your system. By the central development of a platform, it does not stop others from going on top of that platform. It allows private industry to develop better software, better hardware and better ways of patients interacting with the doctor in the health care system. When we talk about a central development, we are not talking about there being the department of health software 1.0 and that is it. But there does need to be a communications system that is able to interact.

Mr QUICK—Where are we in that uniform coding system, and was it the HL7 or something?

Dr Adkins—Coding systems are quite important for the way the health system functions. I am not an expert in coding, but others are. The idea of coding information is that it provides a common means of communication between health providers so that terms mean the same thing to different people. There also need to be standards in communication so that if you send information the other person can retrieve it as you have sent it. Those sorts of things are quite important in the health setting.

Mr QUICK—Ms Power spoke of the complexity. Is it because we have such a diversity of information and we do not have a uniform code that makes it easier for people at all levels, whether it is the person on the front desk of the Royal Hobart Hospital when Mrs X comes into the specialist oncologist who says, `Look, okay, I need to see this'?

Dr Adkins—Coding systems have come from different groups who have their own focus. The hospital setting is using the ICD9-ICD10 coding system. In the UK the READ system is being used. In the US they use UMLS and SNOMED coding systems. There are a variety of coding systems, and you can take your pick. There is also the ICPC Plus.

Mr QUICK—So why is that? We have got an international library code that everybody virtually adheres to under pain of death. Why have we got this medical complexity?

Dr Crampton—One of the specifics in regard to general practice, and they are a bit broader than just particular IT, is that general practice treats a lot of uncertainty. If you take the kind of coding systems that are used in hospital environments, those coding systems are often applied after the event when it is fairly clear what illness has transgressed, what the diagnosis was, what treatments have occurred, whereas in general practice you are talking about coding systems which you want to use at the time to communicate information onwards. A lot of the time you do not really know necessarily what is going on.

Mr QUICK—In another way explain it to me, please. Say, for example, HIV-AIDS, if people are talking internationally about specific cases, surely they are talking about it in the same language, or have we got VHS and Beta and never the twain?

Dr Crampton—Without question you are correct, but if you are talking about, for example, chest pain that someone comes in with, if someone spends three days in hospital with their chest pain, one would usually expect that they have got a fairly good diagnosis, a fairly good understanding of what that chest pain was at the end of that time. So it is fairly easy to code that chest pain as to what it was and communicate that further on.

But if you come in to my practice today with chest pain, and I have to communicate that further on, I cannot write down that you have had a heart attack or that you have got pleurisy or whatever. I can put down my suspicions about it, but I might be using time or investigations to evolve the diagnosis. So I have got to capture that uncertainty. That is one of the reasons why you get different coding systems matching different clinical environments. The coding systems we use in general practice have to cope with that greater degree of uncertainty that we face.

Mr QUICK—So we have got one coding system within Australia, or does each state have their own? How does it operate?

Dr Crampton—In general practice the coding system that we primarily use is called English. Without being silly, unfortunately that is exactly the case. There are a number of coding systems which are in use potentially in general practice, mainly in research. ICPC and extensions of ICPC—the international classification of primary care—is the prime one. We contribute to that, and I think you will be hearing further about ICPC in submissions later today. Perhaps some of my colleagues over there—

Mr QUICK—So if someone has angina, is it 167, and if they have pleurisy it is 143?

Dr Crampton—It may well be exactly that.

Mr QUICK—Is that the sort of standard you want?

Dr Crampton—Some coding systems—just for example, if you follow chest pain—do not actually have chest pain; you have got to call it angina, pleurisy or whatever. That is pretty difficult to use in general practice because, if you come in to me today, I do not know which of those you have got. Dr Nelson could give you some simple examples, I am sure, and agree with me that it is very difficult in general practice to be certain about your diagnosis initially.

Mr QUICK—So all these computer things are being developed by various state departments of health and things. How relevant is that?

Dr Crampton—Computers love definite terms and we may not be able to give them definite terms. That is one of the many issues that we have to face in general practice in the utilisation of these systems. We have to be able to have coding systems that capture our uncertainty and yet meet the computer's need to be fairly specific in the information that goes into it.

Mr QUICK—So if we do get to the stage of having a smart card in the year 2010 we will need heaps of space on the little chip so that when, for example, someone goes from Hobart to the Gold Coast and then has a heart attack they can put their little thing in and say, `We've got a history of X, Y and Z; okay, that is probably why.'

Dr Crampton—Yes.

Dr Nespolon—Can I sort of laterally answer that question? If you are talking about patient privacy, one of the ways that you can ensure patient privacy is just to have the minimum relevant information available. If you talk to people, dare I say it, in New South Wales health, their idea of the Holy Grail, as they call it, is to have every single piece of information about a person's health on a card. There is no doubt that technologically that is possible.

I do not know if you have been to a hospital recently, but even a patient with a one-day admission ends up with a one-centimetre thick paper file. They record such exciting things as when they open their bowels, so that in 10 years time you may have opened your bowels on 27 January 1996 but, big deal, it is just not particularly useful information to someone who is seeing that little old lady in Hobart Hospital.

If you are thinking about the privacy of patients, you need to minimise the amount of information. The college has what is commonly called the front sheet. I think that is the sort of information that you should be looking at—basic demographics, the medications they are on, why they have not taken some medications, their allergies and ongoing current clinical

problems. I take a very minimalist view. Some of my colleagues would say that you should expand that a little bit further. But as the Privacy Commissioner himself has said, if you think that legislation is going to protect people's privacy, you are kidding yourself. You have got to produce a system that protects people's privacy.

One of the problems with that is for example where a patient develops herpes. If you are talking about general practice, sometimes they will actually go and see another practitioner. They will go and see a different pharmacist. They will access a whole different system of health care for socially sensitive diseases. They may not want their primary health practitioner—the guy or the woman that they see for all their other problems—to know about it. Whether that is good or bad does not matter. That is what patients want to do. Therefore, they have to be able to say, `I only want this bit of information to go to this person.' They do not want their regular pharmacist to know that they have got Zovirax because herpes is the only thing that it is used for.

In answer to the smart card question, you have to minimise the amount of information, only relevant information. I would argue that general practitioners are the people in collaboration with their patients who produce that basic amount of information. When it comes to standards, as a general practitioner I do not know very much about standards such as HPL7 or the whole lot of them, and frankly I do not care. I have a need as a practitioner for the computer to do things. It is up to Standards Australia, the technologists and all the rest of them to work out how it does it. I do not care. I do not want to learn machine code. I do not want to learn about coding systems. I have no interest in them and hopefully I never will.

What Michael is saying is quite true. A patient comes in with tummy pain and you can literally pull out a differential diagnosis book and almost every single disease can potentially present with tummy pain. That is what the coding system has to be able to capture; that uncertainty in general practice. Patients with dizziness could have a million sorts of diagnoses and you may never get a diagnosis. You may never be able to say, `This is meniere's disease'. All they have got is dizziness, which is very important to the patient, very important to the practitioner, but not very important to a coding system because it does not help them.

Mrs ELIZABETH GRACE—Just changing the direction totally, among your recommendations was a cross-border registration. We have come upon this when we have travelled around and talked in different states, particularly when you start getting into corners of the states where they are moving in between states. Do you have an appropriate model for registering medical practitioners to facilitate this sort of thing?

Dr Nespolon—As the committee realises, there are now mutual recognition laws in Australia which recognise the professions and especially medical professions so that, if you are registered in one state, you are automatically registered in another state. If you work where I do now in Canberra, which is a very small area geographically, the problem is that people do have to go to New South Wales to see patients. At the moment they have to register under both the ACT and New South Wales. There needs to be the ability to register across the states.

CHAIRMAN—A national registration?

Dr Nespolon—A system of national registration.

CHAIRMAN—Instead of state based?

Dr Nespolon—That is right, but the important thing which would perhaps upset the states is—and it is a different function—that the medical boards can still exist in each individual state. Registration is a process. Registration just says, `You have met certain standards. We license you to practise as a medical practitioner.' It is then up to the medical boards in each individual state to decide whether that practitioner is practising to the appropriate standard. Then they could recommend that Dr Nespolon is not a practitioner of sufficient standards and they will recommend to the national registration authority that he should be deleted.

CHAIRMAN—That would not be likely though, would it?

Dr Nespolon—I hope not. I need the spare money. Getting back to a reason and talking about Health Information Management, we do not have a definition of where the consultation takes place. If you have a doctor in South Australia and a patient in New South Wales, whose law is appropriate? According to my conflict of law people, it is not clear. It is not clear whether the consultation takes place where the doctor is, which is what we would argue and which would benefit Australian doctors. If you had a doctor taking consultation from an American patient, there is no reason why that could not happen. Doctors in Australia might not want to do that because then they would expose themselves to the potential of American litigation and the medical defence organisations do not cover doctors in America because it is just too expensive.

I do not know whether it is within the powers of the Commonwealth to do that, but it is important that there is some definition or some legal framework. That is another area that the government can work in to define where the consultation takes place. Cross-border registration not only helps Telemedicine, but it also helps practitioners moving from state to state which is much more frequent. I am sure you have heard that many Asian patients or overseas patients, including Americans, come to Australia for their care. One of the problems—and it is a small cost—is that often for example doctors will fly from South Australia to Queensland to operate on these patients.

So in the end in theory doctors could end up being registered in seven or eight states. I think your big problem is going to be who gets the registration money at the end of the day. The answer to that is where the doctor is normally resident, however you want to define that, so that you could help the states in that way. The other thing is that the states would also want the ability to register certain practitioners for local problems. For example, in Queensland they have many overseas trained doctors who come in and work in the Queensland health system. We might not as Australians want to register them so they can go and practise anywhere, but the Queensland government should have the ability to register those doctors to practise in

their own state. That could be some form of limited registration so that it is possible. There are lots of benefits in cross-border registration.

Mrs ELIZABETH GRACE—But has the AMA got some sort of model, appropriate plan or something that we could look at as a government in this area?

Dr Nespolon—I do not know if it needs that sort of development. I think that the bases are there in what I have just said. It is really going to involve the Commonwealth negotiating with the states basically.

Dr NELSON—I have a question which comes back to introductory remarks of both groups. Dr Nespolon referred to the better practice payments program of $400 million over four years of the estimates. Are you suggesting that we are currently not spending that money wisely and would we be better off offering perhaps a new deal for general practitioners? If we are going to make them the hub of the system as both groups quite rightly say, then would we be better off spending that money on Information Technology into general practice based around electronic billing, computer generated prescribing, patient recall systems and that sort of thing. Is that something that you would consider?

Dr Nespolon—Could I make three brief points on that? Certainly the AMA and the college can speak for themselves as being very much opposed to the present form of the better practice program. The present government has undertaken to revise it. According to the IBM consultancy, to put a computer on every general practitioners desk in Australia would cost $92 million. That is one year of the better practice program. The third point that I want to make is that the Department of Health is very much against using the money in that way. My own personal view is that the government should be open to using it for one-off projects, one-off events. It might be very hard to computerise general practice in a year, but people should be open to that sort of thinking. The money is there. The technology is available. All it requires is a bit of will.

CHAIRMAN—We are just about out of time. Did Dr Crampton want to make a comment?

Dr Crampton—Just very briefly in response to Dr Nelson's question. The better practice program has its own rules and so on and they would certainly need to be revised and reviewed. The notion of the blanket funding of general practice to provide IT is not the answer. It is certainly needed that there is funding incentive—carrots and sticks as you have said—but just the blanket funding without there being a lot of other planning, development, integration and cooperation, would only result in buying a lot of expensive doorstops and there has to be an overall planned approach to this process.

Ms Power—I want to mention one thing that relates to that. There is government policy across a growing number of portfolios to fund activities according to outcomes and, of course, this is also happening in health. Within general practice there is a project to fund divisions according to outcomes and halfway through this year 10 divisions will be funded in a

pilot way according to outcomes.

The AMA supports a policy of actually integrating that project with the IMIT operational plan so that the two projects go in parallel. In other words, we are saying that to fund according to outcomes properly really requires a good electronic infrastructure and that, in fact, to do it properly as it is now without that electronic infrastructure will be a waste of time. Unfortunately, I think what often happens in government departments—and I am sure you would be aware of this—is that projects go along side by side with not much integration and we would like to see those two projects integrated.

There is a third project which is the coordinated care trials which could also be integrated into the IMIT project because it is necessary to have good electronic systems in those trials too, especially to get information back.

CHAIRMAN—Thank you very much for appearing before the committee this morning. A draft of the *Hansard* report will be sent to each of you for you to check and return. I do not think there was any question that you were unable to answer but if there was, or if you would like to clarify or elaborate or add, please send the material to the secretary.

Ms Power—There was one matter. It concerned the cost that you raised in the beginning.

CHAIRMAN—That is true. If you could send the information to the secretary, he will circulate it.

[11.08 a.m.]

CHAIRMAN—I now call Professor Yeomans from the College of Physicians to be sworn in. Welcome. We have received your submission and circulated it to members. I was wondering if you would like to commence with a brief opening statement prior to the commencement of questioning.

Prof. Yeomans—Thank you. I think it needs to be only very brief because the main interest the College of Physicians has had in Telemedicine so far has been to use it for continuing education of its own fellows. It is also beginning to look at the question of how to improve patient care by giving better access to rural doctors in particular to specialists and colleagues to be able to use electronic means for talking.

I very briefly referred to one initiative we were developing in our short submission to your inquiry. At the time I wrote, that was under development. That is implemented now and I could talk about it further if you wish.

CHAIRMAN—I suppose the college is perhaps underutilising the technology.

Prof. Yeomans—I am not entirely sure. It depends on how you look at it. Certainly Information Technology would be extensively used by the fellows in teaching hospitals in metropolitan areas and that has been part of the way they do things. They will be used to going to the library and looking up Medline sources. Many of them with attachments to teaching hospitals have had mechanisms for being able to dial in often via the hospital or the university CD-ROM towers for literature searching. I find I have to do most of mine at night or at weekends because the working day is too busy but it has been a huge advance being able to do that. But this is something that we have evolved independently over the last five years or so. What the college is trying to do is to facilitate it for those fellows who find it difficult, particularly rural and isolated consultant physicians.

CHAIRMAN—But as far as clinical applications of Telemedicine are concerned, perhaps you are not as far along the road as the renal people are in South Australia.

Prof. Yeomans—The renal people in South Australia will be fellows of the Royal Australasian College of Physicians. In fact, I remember that, in one of the very first applications of Telemedicine, Dr Graham Sloman, who was director of cardiology at Royal Melbourne Hospital when I was a registrar, was using Telemedicine to transmit electrocardiographs down telephone wires, using old-fashioned acoustic couplers. I think fellows of the college individually have been involved with this as it has evolved.

Our submission to you is to show you a dimension you might not have otherwise heard of, particularly the bulletin board mechanism, which I think is interesting because it gives doctors the opportunity to talk with each other—out of phase, out of sync—by just plugging

into the Internet at night, to pose a clinical problem about a patient they might have been worrying about during the day and to wait for a response from colleagues.

CHAIRMAN—Are you suggesting that doctors are more altruistic than other people in the community? Under the current health benefits schedule, there would clearly be no remuneration for that service.

Prof. Yeomans—I would like to think, Mr Chairman, that this has been something the profession has done from the days of Hippocrates. You will recall that medicine in this country was unremunerated for people who were honoraries in teaching hospitals until very recent history.

CHAIRMAN—And even now, they are quite poorly remunerated in that area.

Prof. Yeomans—No, I do not know that I would agree with that. But I would just remind you, because you threw the barb to me, that a good deal of medicine is done without considering remuneration, and that continues.

CHAIRMAN—You picked it up nicely and threw it back.

Mr QUICK—The first thing you say here is `a secure bulletin board'. What do you mean by `secure'? People are saying someone can always tap into it.

Prof. Yeomans—This was obviously a worry to us. We are not boffins, by and large, so we have needed some advice about it. I suppose it is still not completely secure because there is still a dial-in by telephone. If someone were to tap individual telephone wires, then it may not be completely secure. But we were rather slow in coming to it. You are partly right. We have taken a while to really get to hook fellows up and still only, I suppose, about a quarter of them are connected. It is just over a year that we have been offering a network.

But we were very conscious that the Internet itself was not going to be secure for talking about confidential information on patients. Even though they might not be named, there might be ways of identifying them, so we were looking for a provider who would be able to have a network of their own. We ended up short-listing three tenderers. One of the reasons one was put to one side is that much of their network was not secure.

The service provider that we are using for the moment has its own fibre-optic cable network which spans the capital cities. But of course there are still weak links. The country consultant dials in from a distance to the city hub and, indeed, all of us use metropolitan phone lines. There is, I suppose, a potential weakness at that point. I am not expert enough to know how likely it is that that sort of phone link would be compromised.

Mr QUICK—Is this to your hospital where you work and also to your home base?

Prof. Yeomans—Most people do this from home. As I was saying before, there is not

normally enough time in a busy day to be able to do much of this sort of activity so this sort of chat will usually occur out of hours.

Mr QUICK—You mentioned the rural doctors. Can they get on to the chat board? Is there a sort of a strata—the fellows here and the rural GPs who have perhaps got some links with some of these people and think, `I will ring such and such in Sydney'?

Prof. Yeomans—Sure. Remember that the College of Physicians, at the end of the day, is concerned with health in the broad, but certainly my Board of Continuing Education's role is to make sure that consultant physicians all keep each other up to speed. We have a particular need to try to look after the continuing education requirements of country consultant physicians. Nowadays, quite a few fellows of the college do not have an attachment to a teaching hospital because there is a limited supply of those, so then they may be attached to small metropolitan hospitals. They worry about falling behind as well. They will read journals, go to meetings, and do all the things that people have always done to try to keep up, but there is a slow lead time on that at times.

The purpose of trying to improve our IT methodology was to give them better access, first of all to literature searching, then to this bulletin board which we have just begun to trial. The first trial was by a group of rural physicians who put up a problem themselves. They actually used me as a resource person because it was a gastroenterological case. I looked in each night to see what people were saying and to comment on it. We are babes in the woods. It is early days, but I am excited by the prospects of this sort of thing.

In fact, our service provider, which has a general practitioner as one of its directors, has been very keen on being able to facilitate this sort of use of IT. She is someone who is pushing us into doing that and she has helped to make it work, and I am beginning to see how that can be very useful.

Mrs ELIZABETH GRACE—In one of our public hearings we had a practising country physician come and speak to us at some expense to himself. His criticism of the whole Telemedicine thing was that, as a physician, he needed to have hands on in his practice. Having listened to what you have said this morning, you are heading down two different paths. He is looking at Telemedicine from the medical practice type of perspective and you are looking at it as an information education update type practice. Is this something that you have come across to start with? That is my first question. Secondly, is something being done to bridge that, shall we say, lack of understanding between what can be done with Telemedicine and what some practitioners perceive as Telemedicine?

Prof. Yeomans—This was a consultant physician, was it?

Mrs ELIZABETH GRACE—Yes.

Prof. Yeomans—And his problem was that he wanted a colleague by his side to give a second opinion?

Mrs ELIZABETH GRACE—Not necessarily, but his opinion was that with Telemedicine you are practising medicine by remote control, for want of a better expression, and that he needed to have his patient with him to do his consultation. I could relate to that, but I felt that he was being very narrow in his focus. As an organisation, have you come upon this? Are you addressing that to let these people realise that there are other ways of implementing this particular practice?

Prof. Yeomans—Yes. It is one thing that just surfaced at our last council meeting as we were again looking at the issue of rural medicine. We have not formally discussed Telemedicine at council, but I think I could report what would be the feelings of most of my colleagues. There will always be a little less certainty in reaching a diagnosis if the patient is not there with us. There is the problem of physical examination information, and perhaps a general practitioner colleague will perform the examination.

If, for example, it is an issue of a difficult heart murmur, it is not something that would normally be part of the expertise of a general practitioner—actually, I suppose Telemedicine might well be able to send down a sound signal if we were smart enough to take that on board. These are the sorts of examples—things like feeling the spleen. It is a difficult organ to feel if it is only slightly enlarged. It is very much part of a specialist physician's stock in trade. General practitioners may have less experience in doing that, so there would be part of the database that would be less certain.

Similarly, on the history, a consultant physician spends a lot of time going through all the nuances of the patient's symptoms. The whole system has always been based on being able to spend more time to do that, but it is also partly expertise. If you had to rely on someone else who was not a consultant to take the history, then there would be less certainty in the database.

On the other hand, if the patient is in the outback of Western Australia and the alternative is to fly them to Perth, then it is a weighing of benefit and risk. I understand, in a way, what my rural colleague is worried about. He feels that his diagnoses will be less soundly based if he does not have the patient with him but, darn it all, I guess that is what the Flying Doctor has always tried to do and one would be better off than not trying at all. It poses some little medico-legal risk issues. I was reading the AHMAC document as I was heading here from the airport and, of course, there will be more errors made when the patient is not with a doctor. But, again, it boils down to what is the greater good.

Mrs ELIZABETH GRACE—Following that through, are you as an organisation doing something to help cross that line? Are you educating these practitioners about other things they can be doing as well: not just the narrow focus on consultation, but that there is education and there is, shall we say, cross-fertilisation of ideas and things like that available through this same scheme? Is that part of your program?

Prof. Yeomans—We are really only just beginning and these are certainly things we ought to be taking on board. Again as I was reading the AHMAC document, case

conferencing is something that our paediatric fellows in particular get involved with a lot, particularly on issues such as a genetic disorder where time is needed. More than one family member probably ought to take part as well as, obviously, the parents of the children. There may need to be more than one paediatrician involved, perhaps one who is a genetics expert. Let us suppose it is a kidney disease: a paediatric nephrologist might be needed. This is normally done face-to-face but one imagines it would work very well with videoconferencing if it was a rural patient. It would save the problem of having to come substantial distances.

Mr FORREST—I like the idea of the bulletin board. Many of the rural doctors that I have a lot to do with feel somewhat exposed out there. They are not remote in terms of the Northern Territory; they are in a reasonable rural town of 400 or 500 people. But to have access to that second opinion would encourage them to be less exposed. I have enormous difficulty in attracting doctors to come in the first place, so I like the idea.

I would like to explore one of the things that this committee is trying to get a handle on: this whole issue of cost-benefit. There is an assumption, from everybody I think, that the clinical outcomes are not going to be as good. That is the wrong emphasis. With this technology, people in those regions will get a better clinical outcome because of this sort of thing. Are there ways in which this could be included as a scheduled item of remuneration? The purpose would be to deliver a better outcome, especially to rural people. Quite often, because of the need to travel to a provincial centre, they have to wait; and that can result in a worse outcome or can even be fatal. What are your comments?

Prof. Yeomans—I really agree with everything that you have said. From time to time I go to the meetings of the country physicians in Victoria. The meetings are superb. They all travel to one centre for a weekend each year and the esprit de corps among that group is terrific. They are all the time struggling to keep up. They are, in many ways, better generalists than the city doctors, who are often much more subspecialised, but there is still the need to have access to the subspecialist. There are a number of ways we will tackle that. Within Victoria the ministerial advisory group, which includes me, is beginning to look at trying to generate more of a hub-and-spoke arrangement to move a variety of specialists out—to decentralise them from Melbourne. If that comes off it will help. But, even so, that might increase the need to have good spoke-to-hub arrangements. So, although it is best to have the patient with the doctor, use of this need not be far behind. After all, it does not have to be either/or. If patient and doctor feel that more help is needed, there is always the chance to move to the hub, be it the central city or the rural hub. This can only improve quality of care.

Mr FORREST—Earlier witnesses said that the whole medical industry was complex, I know; but so is getting a handle on the benefits of what could be delivered by what you have just talked about.

Prof. Yeomans—I am sorry. You did pose the question of how it could be funded. I would have thought that it was not beyond our ingenuity to work out ways to reasonably fund it. It is obviously important to be able to audit time spent. For instance, we think of case conferencing, for which there is not a medical benefit item at the moment anyway. It is one of

the issues that is currently under review.

CHAIRMAN—Are you suggesting it should be an item?

Prof. Yeomans—I think so, and I would not see any reason why case conferencing by video could not likewise be an MBS item, so long as it is able to be adequately audited. And I suppose in a way that IT would find it easier to audit even the time log record of a video than it would a consultation that just took place behind closed doors.

Mr ROSS CAMERON—Professor, we have talked a bit about the speed of uptake of technology generally in the profession, and there are pockets where it seems that it is going fantastically well, but other areas where there seems to be some resistance. One study suggested that among a group of third-year postgraduate registrars something like only 25 per cent had used a word processing package, and somewhat less than five per cent had used a computer database. Obviously, there has got to be good technology to take up. There has got to be a product there that people need and can see the benefits of; but there has also got to be a willingness in the culture of the profession to adopt new technology. What do you see that equation as being? Do you see the colleges as having a role in stimulating the uptake of technology?

Prof. Yeomans—Maybe I could tackle that from a couple of directions. First of all, the illiteracy you referred to is not going to be a problem in the future. Every one of our current undergraduates at the University of Melbourne has word processing skills. Not as many as perhaps I would have expected have actually used a database, but most of them have used graphics packages. For example, assignments that they will send in to us are always now word processed. With the University of Sydney's new graduate course which began this year, the whole course—and Flinders is much the same—is going to be taught with an intranet. Every week, the groups will sit down and start with a problem, and some of the database will be on the University of Sydney's intranet. They will all have superb skills by the time they graduate. And the University of Melbourne is likewise changing curriculum in 1999, so there will be a great deal more self-learning, and much less didactic teaching.

Mr FORREST—There are other universities which have not been as forward-thinking.

Prof. Yeomans—I doubt that you are right any more. The University of Queensland is beginning a graduate course this year, which likewise makes heavy use of IT. I cannot speak for the University of Western Australia, except that I know they are looking at changing their curriculum. I would be most surprised if you were right, now. You might have been right two or three years ago.

On the question of what we are doing and where the resistance is, the resistance is from older practitioners—particularly solo ones, I would have thought. And here is where there will be certainly many in the college who are not IT literate. Since we started this network, in Canberra at the annual meeting last year there was a course that ran right through

the three days of the meeting, and it was heavily subscribed, with lots of people doing hands-on things, many of them touching a computer almost for the first time. And that is something we will continue.

I am a councillor of the Gastroenterological Society of Australia, and such special societies are likewise about to tap into the College of Physicians' umbrella network. There will be gastroenologists who are older and who have never touched a computer, but that will rapidly change.

Dr NELSON—Professor Yeomans, the physician to whom Mrs Grace referred came from Port Lincoln, and he is, as I recall, on the council of the college, and is a great advocate for both the college and medicine generally; he is terrific. He made a couple of points. One was to do with the transmission of images. He does some general gastroenterology, I understand, and he was concerned about transmitting an image from a stomach or something, and having someone such as yourself interpreting at the other end, and the costs of that; and also about how you or one of your specialist colleagues might be remunerated for that.

He also made a point which was a bit refreshing compared to some of the other submissions, because he said, `What is the point of us having X hundred thousand dollars spent on this technology out in, say, Port Lincoln when what we really need is another nurse in the ward or someone to answer the phone after midnight?' He was saying to us that medical organisations in particular need to keep that in mind. Would you like to comment on some of those points?

Prof. Yeomans—Absolutely. I think it is not an either/or situation; it is a matter of weighing what his greater needs are. If he needs a nurse more than he needs a computer, and if he cannot otherwise manage to organise a nurse for himself, then I suppose we should be looking at mechanisms. The college has for a while been trying to figure out how to help with locum support for isolated consultant physicians. We are just making a submission at the moment to try to help with a database and with young recently completed fellows who are often in a phase where they are not immediately ready to set up a consultant practice by themselves and might be able to be used as a resource for locum support. The reason would be partly, I suppose, for a vacation occasionally for the isolated consultant, but also so they can come to the city for courses.

Dr NELSON—Would you envisage a situation in a teaching hospital where, for example, if you are providing a Telemedicine service to a remote practitioner, either you or the hospital on your behalf should be able to bill the patient or the Commonwealth or someone for that service?

Prof. Yeomans—I think in general the answer is going to eventually have to be yes. Quite a lot of this, as I understand it, is being done by people who are full-time staff specialists and just see it as part of their job. Dr Graham Sloman years ago was doing that as part of his job as director of cardiology. But one cannot necessarily cover the whole thing from that, nor is it necessarily desirable, in fact, now that full-timers are a smaller proportion of the medical

work force than perhaps they might have been even five years ago. So, unless one is to limit it only to hospital full-timers, there will have to be some form of remuneration. We have already talked about the pitfalls: it needs to be auditable; it needs to be in line with the amount of time and expertise that is spent, and comparable to the rest of the reimbursement mechanisms.

Dr NELSON—Would you envisage that the remote consultation should only come through a specialist or could it be initiated by a general practitioner?

Prof. Yeomans—I would have thought it ought to be able to be initiated by a general practitioner.

Dr NELSON—Thank you.

CHAIRMAN—Thank you very much, Professor, for appearing before the committee this morning.

[11.40 a.m.]

\DB\WLBLLOYD, Dr Alan John Idris, Member, Education Subcommittee, Royal College of Pathologists of Australasia, Durham Hall, 207 Albion Street, Surrey Hills, New South Wales 2010

CHAIRMAN—I now call witnesses from the Royal College of Pathologists of Australasia to be sworn in. Welcome. Is there anything you wish to add about the capacity in which you appear?

Dr Lloyd—Yes, Mr Chairman. As well as being a member of the education subcommittee, I have been appointed chairman of the Informatics and Information Technology Advisory Committee at the college.

CHAIRMAN—We have received your submission and circulated it to our members who hopefully have had the opportunity to read and digest it. Before we start questioning, would you like to give us a brief opening comment summing up some of the highlights of the submission to focus our attention in the right direction?

Prof. McGrath—Yes, we would like to do that. The profession of pathology has actually been one of the most advanced users of Information Technology in the medical field. That is really the practice of pathology, I guess, rather than the college itself. Within a practice of pathology, all laboratories these days are very highly computerised and use that Information Technology as an integral part of the practice. In recent times there has been the development of links from the pathology practice into the users of pathology, particularly in general practice where, particularly in the private pathology setting, this is being seen as a marketing tool for attracting market share. So a lot of experience has been gained in the downloading of results from a central pathology practice to users of the service.

One of the major areas that we see has enormous and further potential for pathology is in ordering of pathology and downloading of results between users and the laboratories, and also in linking central laboratories, referral laboratories, to more peripheral laboratories. The second area, which is not as well developed, where we also see enormous potential is in the utilisation of telepathology for consultation between pathologists, for continuing education, particularly in the practice of pathology. The third area, which is also not really well developed at this time but is beginning to be widely discussed, is utilisation of the appropriate form of this technology for continuing education. This could be for remote pathologists, remote scientists based in laboratories, clinicians and undergraduates in various forms of training. We see enormous potential and we have been great users.

There are some significant problems that we see, particularly in terms of regulation keeping up with the potential of this technology and in the development of appropriate

standards that will allow appropriate utilisation of this type of technology outside the sphere of its direction at the moment, in certain areas, to gain market share. They are two of the big issues that we see.

CHAIRMAN—Would you like to tell us a bit more about improper incentives offered by pathology practices to encourage medical practitioners to link into their systems and services?

Prof. McGrath—Perhaps I could start the comment on that. First of all, I think the downloading of results from a pathology service to its users is the way it must go, as well as test ordering. Alan may care to elaborate far more on that. Whilst there is a perception that there is inappropriate giving of computers by some pathology practices to clinicians to encourage them to give their business to particular practices, I think that is a bit of a side issue in terms of the potential, and the gaining control and harnessing, of this technology for the appropriate use of pathology.

CHAIRMAN—But can you tell us a little more about the side issue? Is it a fact that one or more pathology practices are illegally offering computers free?

Dr Lloyd—I believe so. What they do is set up a separate company that is not under the name of the pathology company. They supply the computers to the users, or potential users, of that pathology company through that independent company. It is a fact that it is happening.

CHAIRMAN—What pathology practice is doing it? I remind you that you are under oath, appearing before a parliamentary committee.

Prof. McGrath—I think there are suspicions. To name a particular pathology practice would be purely based on suspicion, not evidence, and I think that would not be appropriate. Could I say, however—

CHAIRMAN—I am asking you, though.

Prof. McGrath—Well, I do not have personal knowledge.

Dr NELSON—Mr Chairman, if I could perhaps assist, the College of Pathologists in Australasia is primarily concerned with standards and education. There is an organisation which represents the more, shall we say, commercial activities of pathologists.

Prof. McGrath—Yes. I do not have any personal evidence that that is actually happening. The issue about—

CHAIRMAN—A particular firm was named at earlier hearings and I was just interested to know whether it was a widespread practice because, if it is a widespread practice, clearly that is a problem that the government of the day would have to address.

Dr Lloyd—There was an article in the newspaper about 12 weeks ago that addressed this problem and it was brought up on the *7.30 Report*.

CHAIRMAN—And what was the name mentioned?

Dr Lloyd—A company called Healthnet.

Prof. McGrath—I think the issue here is that the appropriate dissemination of computers onto doctors' desks will overcome that problem. As I have heard some people giving evidence this morning say, there have to be ways to get the level of computerisation up of clinicians' practices so that this type of technology can be used to deliver efficient and effective pathology services. We would like to see it tackled from that area rather than the regulatory approach in pathology, which has not proved particularly effective.

CHAIRMAN—I think what you have suggested is a good idea. Are you suggesting a carrot and stick means of encouraging the take-up of computers, or what suggestions would you have for the committee?

Prof. McGrath—I think the take-up of computers will advance more rapidly if the packages and technology are there to deliver a service. I think that as the generations change the older generation people perhaps beyond my level in the medical profession will be relatively low users of computers where they have to take the initiative, they have to go around looking for the packages, they have to look for the ways to link into the services they need. On the other hand, I think where private pathology has provided the service of downloading results, there is no doubt that as I go around and talk to general practitioners—and I am from a public pathology service, so I have not been in the private field—this is a service they find extremely useful. I think if you have useful services available then there is far more incentive for them to take up the technology, and that is certainly what I see happening.

So I think if we have effective packages, if we have standards for delivery of these types of services so they know that not going with one particular pathology firm's package does not tie them to a provider for life, they are going to seek out ways of getting computerised. You have got to have the educational packages, which I think this technology has the potential to deliver, and packages for the appropriate utilisation of pathology, and I think in general practice a whole field of work needs to be done on that. You were talking earlier about coding systems, et cetera, for diseases. I think in general practice one has to link appropriate utilisation of pathology to the problem that faces the GP, which is the reason why the patient is sitting in front of them, rather than the disease diagnosis. I think GPs are looking for help in appropriate utilisation of pathology. Because of the activity of the HIC in feeding back the utilisation of pathology they are very sensitive in this area. I think we can get packages going that are really directed at the GP. If you get things they want to use I think they will find a reason to buy a computer and put it on the desk. The computer itself is not expensive.

CHAIRMAN—What role do you see for the government in encouraging computer use?

Prof. McGrath—I think it is a standards issue and order entry of pathology and downloading of results—Alan might comment because he is in the private field and has got more experience than I do here—is something that they really want. Alan could comment on what would make this area more attractive to doctors and easier for the providers to provide.

Dr Lloyd—Many of the general practitioners are not computer literate, so I would think that an education program to make them feel more comfortable with the use of computers is essential—rather than buying them the hardware—putting in place a process whereby they are educated in the use of computers. I think that would be the major issue.

Prof. McGrath—Just to expand on that, I think on the issue of standards a lot of general practitioners are not keen to be locked in on a lifetime to a single provider. They feel that they are then at the mercy of that provider and the service that they deliver and they like the competitive element. So, in terms of downloading results, which is the activity that goes on at the moment, we need a single standard by which results are downloaded. Then each pathology provider can package their package, if you like. However, as long as it is operating on a standard platform, if a GP does not like the service that that provider is offering they can move to another provider and know that they will not have to change their hardware; they will simply have to buy a software package that the provider can provide. That is one.

Secondly, in terms of order entry I think that there would be enormous benefit and the general practitioners would be keen to see that there be computerised ordering of pathology. They do not like all this handwriting that is now required on forms. The requirement for handwritten forms and interpretation of handwritten forms loads a substantial cost on to pathology that is unnecessary. It is imposed on us at the moment by government regulation through the HIC. Frankly, it is out of date and it is time that that was addressed. I believe that is a substantial cost to the industry and it holds back the use—

CHAIRMAN—Isn't somebody looking at that?

Prof. McGrath—No, not at the moment. It is concerned about overutilisation but I think that overutilisation can be addressed in other ways and it already has in place the audit mechanisms that will prevent overutilisation but I think the HIC has got to come up far more to date on the potential for this technology.

Mr ROSS CAMERON—Professor, the AMA and the College of General Practitioners were both very insistent that the GP ought to be, in effect, the building block of the system and, in particular, that the GP would act as a kind of gatekeeper of the information. Do you see the GP as the appropriate locus of this system or do you see their insistence on their centrality as being a sort of self-serving exercise?

Dr Lloyd—It is essential that the GP is the focus of this platform because that is where the patient episode is initiated from, so I think that is a really good idea.

Prof. McGrath—They are but part of the system really. Where they are ordering pathology, they should be able to initiate the order on their computer, send it to the pathology provider that they use and they should be able to get their results downloaded. With use of Internet technology in future, they should be able to get assistance in appropriate utilisation decision support programs on the basis of that. So for GP ordered pathology, yes, they should be the focus. That is entirely appropriate.

In terms of developing the education packages about appropriate utilisation for general practice they need to be a very pivotal part. There are dangers because some of the colleges have almost a paternalistic approach to general practitioners in advising them about appropriate use of pathology. When you talk to general practitioners, the way in which specialist bodies such as colleges package that information is not particularly useful to the general practitioner. That is because they are not confronted with a person with a particular disease; they are confronted with a person with a symptom and they have to get to the point where they diagnose the disease or decide an intervention to reach that.

That is an issue that really has to be taken up by these bodies. So for them, yes. But this same utilisation of technology in pathology could apply to specialists and where it is the specialist generating pathology they ought to be the locus for that type of pathology delivery.

But there is a whole area of interaction of pathology with other pathology services. For example, in terms of support for rural pathology services, which I think this technology offers enormous benefit to, the telepathology links there are much better practitioner to practitioner. Where I practise is part of a pilot program in New South Wales where telepathology is being utilised.

There is no doubt that in a country centre where there was difficulty in recruiting pathologists, the ability for that pathologist to be able to immediately and in real time access another 20 pathologists in a tertiary referral centre and get an immediate opinion on a sample for a patient either in a frozen section where the patient is in surgery or for an immediate problem, whether that is from a an anatomical pathologist or a haematologist or whatever, gives that person practising in isolation enormous backup and feeling of confidence and support. So it depends what area you are talking about.

Also, in the rural practice area, one of the issues that has been highlighted to me is the difficulty for scientists working in the laboratory to maintain their continuing education, to be able to provide advice to the clinicians who use their local service. If they can either get continuing education where they do not leave their desks—because with the downsizing and streamlining of pathology in the public and private sectors there is less time to leave your desk and go to a centre for weekend conferences and that sort of thing—or regular interactive sessions with a central centre, then that would provide enormous benefit. So I think there are all sorts of ways; it is not just general practitioner related.

Mr ROSS CAMERON—One other question. One of the things we are trying to get a

handle on is the issue of the most effective and appropriate use of the resources available to public health. What do you say to the suggestion that the means of payment—of remuneration to both pathologists and GPs, for example, and pathology services, the absence of effective price signals to the consumer of health services—results in a kind of skewed allocation of resources under which practitioners have a kind of bias towards just seeking more tests, and that this is the almost instinctive response to whatever problem they are presented with? The argument is that pathology then consumes an inordinate amount of resources and that there is a kind of overuse of pathology services.

Prof. McGrath—I think, frankly, that is yet to be proven. I think that is one of those assumptions out there that is not proven by any stretch of the imagination. There are a number of issues here. I do not think we have any sort of a handle on the drivers for the ordering of pathology tests in general practice. It is an area that, when you analyse the Medicare data, is growing way beyond GP attendances, specialist attendances and other.

Two years ago the college, in its negotiations with the federal government over trying to control the growth in pathology through changes to the Medicare schedule, actually commissioned a study looking at the reason the 10 most common items had risen in the previous two years. It was very revealing, and I think it has led to significant change in the health department about what is controlling pathology utilisation.

It used to be considered that it was sort of fraud, overservicing or just no price signals but, when they analysed it, the four top tests that had arisen over those previous two years included FBE and iron studies. And when you looked at why that was, it was around the time of the meat campaign where, at every butcher you went into, it said, `Are you feeling tired? Are your iron levels low?' And when you talked to general practitioners people went in saying, `I'm tired; do you think I'm iron deficient?'

The second most common test was the use of the prothrombin time or INR, which is the control of warfarin therapy. It was the time when it had been recognised that you could substantially reduce the risk of stroke in patients with atrial fibrillation by anticoagulating them. So there was and continues to be an enormous rise, an appropriate rise, in the use of anticoagulants and, therefore, in the use of INR as a monitoring test. It is substantially reducing the cost of managing stroke in the acute hospital sector and the rehabilitation thereafter.

The third most common one was cholesterol and triglycerides. It was the time at which the cholesterol lowering drugs came into being and all the professors of medicine and everyone around the country were saying, `Measure your patient's cholesterols; give them these drugs; it will do them good.' At the same time you have Medicare and the HIC saying to pathology, `You must not be doing so many cholesterol tests.' The next one was female hormone levels, and it was around the time where appropriate medication for menopause was coming into being.

So I do not think that we have a handle at all on the association between the utilisation

of pathology and the rest of health care. I think that there now need to be studies done which look at—particularly in general practice, which accounts for 70 per cent of pathology ordering—why the doctor orders all of those tests.

A patient comes in with symptoms. As you heard earlier, they come in with chest pain. They come in saying, `I'm tired, I've got a headache.' The GP has to get from that presentation to, `Is there something serious wrong with this patient? Do I have to give them a drug? Do I have to send them to a specialist? Do I have to see them again? Do I have to reassure them and counter their depression or the fact that they have had a fight with their spouse the previous morning? What do I have to do?'

I think what we have to start to analyse is the role of pathology in influencing those outcomes. We have to start to work with general practitioners to say, `You have ordered all of these tests. Now which of these have a quality outcome? Which of these influence whether you give a drug, or whether you refer to a specialist?' There is no data available, and I can assure you I have been through the Australian and international scene on this recently.

In one study that has been done—and these are very preliminary and informal results—in Newcastle where there is some work being done on data from the HIC computer bases, what has shown up as a preliminary finding is a very interesting nexus that doctors who are very high orderers of pathology are very low drug users and vice-versa. This may just be a statistical aberration. But nobody knows, so we have to do the studies to say, `Is high use of pathology a good thing because it avoids drugs, or it avoids hospital admissions, et cetera?' You cannot look at pathology in isolation. Until we have that data, I do not know whether price signals are going to work, whether better education is going to work, or whether it is a good thing that the pathology is growing because something else is not.

Dr NELSON—Professor McGrath, in relation to that, does the college think that the introduction of Information Technology, particularly in general practice, could lead to the more discerning and discriminating use of pathology by GPs? And does the college have any idea of how many tests are being ordered inappropriately—for example, for hepatitis scerology, or whatever it may be? I presume that a program could exist which could guide a general practitioner along the lines of specifically the right sort of investigations to order in a certain clinical situation.

Prof. McGrath—At the risk of repeating myself, that is the data we simply do not have. There is some data about that in public hospitals, although in my view that is now old data, and I think the pressure is on funding in public hospitals as such that there is no longer the gross overutilisation of pathology in public hospitals.

We have no data from general practice. But I would take the comment that I think was made at the end of the AMA and College of GPs' submission that until you get the technology on the desk of the general practitioner and start to look at the pathology order in relation to all these other activities and their pathology ordering in relation to the reason for encounter for the patient, there is no way of getting a handle on that type of information.

The HIC is about to do a contract with the centre for clinical epidemiology or the department of pharmacology in Newcastle to get some analysis of HIC data looking at reasons for ordering. But again HIC data does not have the reason why the doctor requested these tests. Until you have the computer on the doctor's desk, you cannot really get at that information. But get a computer, get that cooperation working between the pathologists and the general practitioners, and that data will start to emerge.

Dr NELSON—The chairman referred earlier to some more questionable provision of computers by some pathology practitioners to GPs. But would pathologists and pathology practices generally be receptive, cooperatively with the Commonwealth and perhaps other agencies that have an interest, in providing this sort of technology to GPs—certainly software, if nothing else?

Dr Lloyd—Most certainly. It would be a huge advantage to us because, as you have heard from the previous committee, their means of ordering pathology tests and giving us their patient's demograph is in English. It is a really bad code. We have to interpret what they need into something that the computer can use. We have teams of people in pathology laboratories translating English into computer codes. If we could eliminate that step, that would be a huge advantage to the whole of the pathology industry. It would cut the costs enormously, improve the quality, enable us to match patients better for cumulative reports. All pathology companies would wholeheartedly support computerisation and computer order entry.

Dr NELSON—Would it be possible for a general practitioner, or indeed a specialist, who has a patient before him or her in the surgery to establish whether there are investigations that have already been done by any particular pathology company, so that, if a person does present with a consolation of symptoms and wants tests for some reason, you can say, `Well, hang on, you had these three days ago and I have got the results'?

Dr Lloyd—That is a bit difficult. In a hospital environment, you have the database there, but in private practice, if the patient was your own patient you could access that information easily, but if the patient came from another general practitioner that may be more difficult because you would not have access to those results.

Prof. McGrath—Yes, I think that is a substantial challenge. There is no doubt that general practitioners in my practice are saying to me that when they see the patient in their rooms they would love to have access to all the results a patient has had done in hospital and I think there would be substantial merit in that. The problem we run into is that we, as the public pathology provider, have one computer system, whereas the variety of private providers that the general practitioners use have a different system. Whether one could get to a platform where everybody downloads the results into a central repository so that you could access anything on that patient is sort of two steps down the line. I think that would take a lot of sorting out. That is where confidentiality issues and protection of confidentiality issues would need to be well thought through before you got to that point. I think everybody—both on the pathology provider side and on the general practice specialist side—would endorse it strongly,

but I think it would take substantial planning and analysis before it could be achieved.

Dr Lloyd—It may be better to carry that information around on a smart card rather than having to access databases all around the country.

Dr NELSON—Do you think it is feasible that the college and other pathology organisations might, for example, go to the next triennium of pathology negotiations with a long-term, for example a 10-year, plan for uniform Information Technology throughout the country for pathology providers, thus serving the interests, one would think, of the community, and certainly the government?

Prof. McGrath—I think that is already actually happening. There is, as I say, this downloading of results developed along two lines. I am not a technologist; Alan can probably correct me if I am wrong. There was the HL7 system and there was a PIT system that was developed by a group of private pathologists. They are now coming together and I think this new committee of the college will enhance that, but under Standards Australia now they are working on a single standard for downloading of results across the country that everybody will use. I understand that the PIT system is now able to be translated into the HL7 system. I think government support for that and encouragement in ensuring that happens would be very beneficial but I think with only a little bit of government support it can be made to happen because people are seeing the benefits of that already.

Mrs ELSON—Yes. GPs have told this inquiry that their concerns are with reimbursement from health insurance claims with Telemedicine. Have you been successful with reimbursements of claims with your telepathology?

Prof. McGrath—No. We are funded by the New South Wales state department of health; we are a pilot site for that. If it is not going to be direct funded, then there has to be remuneration. In the centre in which I practise, referral specimens, whether that is by sending slides in or by telepathology, occupy some 30 per cent of the anatomical pathologists on my staff. With public funding we are being asked to reduce the price that we charge, and we are a user pays system within the public sector as well as providing private pathology. We are being asked to reduce the price of pathology all the time.

These types of activities which have previously been borne as part of the extra activity in a tertiary referral centre will not be borne in the future. Providers will need to be appropriately remunerated for the time involved. The activities are time consuming. We link with Tamworth, which previously had two pathologists and had great difficulty recruiting any. I believe very strongly that the workload can be done with one pathologist, provided there is that backup. There are enormous cost-benefit advantages in this system, and funding it would prove to be in fact a cost saving.

Mr FORREST—I have a question about legal liability. I hope I am not misreading a comment on page 2 in your submission, talking about rising legal action in the face of medical error. The need to have a better outcome with the use of this technology would be a driver to

actually avoid that problem, so that you get a better diagnosis in the first place. I am asking the question to seek your comment, because it relates to one of the issues the committee is struggling with, and that is to get a handle of the cost benefit. To me, the benefit always has to be the delivery of a better health outcome, especially for rural people. But I have not misread what you have said there, have I?

Prof. McGrath—There has not really been much evaluation done yet of telepathology and the risks and benefits. The benefits, when it is in place, are fairly obvious. The risks are that the level of accuracy is not as high as when a specialist pathologist is doing the work directly off the slides when the patient is on the same site. But I think your point is very well taken. Particularly in rural areas, patients do not wish to come to either regional or major metropolitan areas.

Mr FORREST—It is a cost to them, if they do.

Prof. McGrath—It is a cost to them, if they do. I am speaking from personal experience here, because my husband is a surgeon who actually goes out to these areas now, having worked largely in a major metropolitan centre for quite some years; and he certainly talks very strongly about the much more delayed diagnosis because patients do not wish to move and also because patients are not used to going to doctors so early in the system. In terms of our experience now with this link with Tamworth, there is no doubt that, whereas speciality areas of pathology were once not available in Tamworth, they now are; and the quality of diagnosis available to the rural patients, GPs and clinicians, as well as rural pathologists, is substantially increased by this sort of relationship.

With respect to the legal issues, though, and the concern for the pathologist sitting in the tertiary referral centre making a diagnosis by means of this technology, we need to ensure that they are not legally susceptible. If you like, they are improving a service out in Tamworth, but it may not be—because of the limits of the technology—as good as if that patient were in Newcastle, right there by their side. So you have to protect the person in the centre. Those issues do have to be addressed, but I do not think they are beyond the wit of being addressed, and the substantial benefit to peripheral services is enormous.

There are issues, too, just in telepathology. There is no doubt that some people in the pathology world talk about the ability to provide telepathology. You can now do remote operation of the microscope at the far end, so in theory you could do away totally with the pathologist at the other end. I think there are substantial downsides to that approach that have to be thought through.

This is perhaps opening another path, but doing away with the pathologist at the far end has got substantial implications that also have to be thought through. It may be cost saving but, in terms of identifying the right bit of the sample to be looked at and making sure that the right sample is under the microscope—and also making sure that there is the right interaction between the local specialists or the local clinical practitioners and the local pathologist—is an extremely important element. So there is a lot to be worked through with

telepathology. It is very early days, but I believe that its benefits will be substantial and that we just have to address these legal and other issues as we work through it all.

CHAIRMAN—Thank you very much, both of you, for appearing before the committee this morning.

Luncheon adjournment

[1.05 p.m.]

CHAIRMAN—I now call Professor Kidd from the University of Sydney to be sworn in. Professor, thank you for appearing before the committee this afternoon. I would like to apologise for our delayed resumption. We have received your submission and have had the opportunity to read it. Would you like to summarise some key aspects in a very brief way, prior to our commencing questioning?

Prof. Kidd—Thank you for the invitation to come and address the inquiry. I think it is very important and timely that an inquiry of this nature is taking place. The things which I am going to outline I would like to put in context. The first point I would like to emphasise is that we are still very much in the infancy of the information age and we can compare where we are now, if you like, to the early days of flying machines: we are not exactly sure where this Information Technology is going to take us or how it is going to take us there, but we have very vague notions of where we want to go. Those notions will become clearer as time goes on, but at the moment we are still very much in the early days.

There is an interesting quote, which you may have already heard, that those who cannot use Information Technology by the end of this century will be as disadvantaged as those who were illiterate at the beginning of the century. That probably applies as much to health professionals as it does to any other member of the community. So the challenge we have got is how to use these tools to manage information to provide health outcomes in this country. My particular focus has been on general practice and, particularly, on how we prepare our health professionals and our patients.

If we get the chance, I would like to talk about some of the developments at the University of Sydney and how we are preparing future medical graduates for their future careers in using the technology. I think it is also important that we have a built-in expectation of redundancy with all the developments which are happening at the moment, because we are at such a very early age. The spinning jenny had its day, but we do not use it any more. It may well be that the Apple Macs and the World Wide Web are the spinning jennies of the 1990s. So we are going to need to continue to fund pilot projects and innovations for a long time into the future as the technology changes.

We also need to make sure that the decisions which we do make are based on evidence and we have got very much a focus in evidence based medicine. Again, we need to focus on where the evidence is that these changes in technology are going to actually help us to improve health care and deliver better health outcomes. At the moment the evidence is a little scant.

In my submission I outlined three key areas where I thought IT can improve the quality of general practice in Australia here and now. They are: electronic medication management and prescribing; electronic preventive care; and improving communication between general

practitioners and other health professionals and with consumers. Since I wrote the submission, there are some other areas where more information has come out and it is becoming increasingly apparent that the Internet is going to become a very important tool for general practice over the coming years and, also, there are some emerging issues coming from Telemedicine pilot projects which have some relevance to general practice as well.

CHAIRMAN—You mentioned that you consider that we are going to have to fund pilot projects for a very long time given changes in technology. It seems to me that there is a very real danger that we will fail to appreciate the moment when Telemedicine passes beyond the pilot stage and into the implementation stage. There are some very effective projects which might now not be able to be called `pilot'—for instance, the renal Telemedicine project through the Queen Elizabeth Hospital in Adelaide. Do you think that it is time that we were done with pilots and maybe concentrated on utilising this technology for the greater health and good of the country?

Prof. Kidd—In part yes and in part no. Telemedicine is going to become a tool, something which every practitioner will use in the future and, particularly, a tool for rural practitioners. Eventually, it will reach the point where it is being utilised by every practitioner and benefiting all patients around the country. The pilots which we have running at the moment still have a lot to learn and still have a lot to teach us.

Part of the problem of a lot of Telemedicine projects in the past has been the lack of substantial evaluations of those particular pilots and the ability to actually look at the project, draw out the lessons which have been learned and look at how we apply those lessons in other settings.

In that context, the pilots which we have running around the country at the moment are very important. Part of what they are looking at is the cultural change which is required in order for health professionals and consumers to be able to use the technology and utilise it well. As the technology will develop further, we will still need the pilots in some different discrete areas I believe. You ask, `When will we actually know when we are finished, it is there and it is deliverable?' I do not think we will. It probably will not happen in our lifetimes.

CHAIRMAN—What you are saying is that effectively in some areas we will accept that the pilot has served its purpose and will then utilise that technology widely. But, because of the growing and expanding nature of technology, there will always be pilots, although not pilots in the same area as we now currently have pilots.

Prof. Kidd—Yes. Perhaps when every general practitioner in the country has on their desk a computer with direct access to teleconsultations and so forth, then we will have reached the end of this particular pilot phase and we will start looking at other things. But that is a long way ahead.

CHAIRMAN—Have you considered, given our federal system where we have various governments in different parts of the country responsible for health, that we are not

sharing the information we are currently deriving from pilot projects to the extent that we should and that to a certain extent one state might be reinventing the wheel already discovered by another?

Prof. Kidd—Yes, there are benefits and disadvantages to the system which we currently have. It is actually quite exciting looking around the country at some of the different developments occurring in different states in that they are addressing different health needs for different population groups, particularly in different geographical environments. There is certainly value in a wide spread of pilots focusing on different and specific topics. But the important thing that you point out is that we actually do need to bring together those evaluations and for everybody to be able to learn what is happening.

There has been rather a dearth of publication from many of the pilot projects on Telemedicine around the world. Partly this is because this is a new area and people are only starting to get results which they feel can be put into the literature. But we certainly need to encourage in this country that the projects occurring in the states do get drawn together and again shared with projects which are being funded by the Commonwealth, particularly projects being funded in general practice so that we can all learn from each other.

CHAIRMAN—I would like to take you up on your offer to tell us about the education of undergraduates at the University of Sydney to give them the tools to deal with this technology during their working lives in the future. Could you also explain whether what you are doing at the University of Sydney is done widely at other universities, or whether indeed there is a need for us as a committee to push along the education of undergraduates in the area of computer technology. In other words, are you and a few other universities doing it, but most of them not doing it? Or is it the case that the whole sector is accepting its responsibility in this field?

Prof. Kidd—My own background is that I worked at Monash University until a year ago and was heavily involved in the implementation of medical informatics in the curriculum there. Sydney university is actually undertaking another quantum leap forward in the utilisation of Information Technology with its students. That is starting this year with the graduate medical program which begins this year. The students all have a basic undergraduate degree in some discipline and are coming to medicine to do a four-year course.

The aim of the Sydney program is that the curriculum will be delivered through the Internet. All the students will develop a high degree of computer literacy and will be quite sophisticated in their ability to utilise the technology. They will expect when they graduate that they will have access to the technology and be able to use it for patient care. They will be much better than students in the past at being able to access the literature and access it quickly and easily through the Internet. They will be able to utilise other resources available on the World Wide Web and the Internet and that will help to focus their learning more. They will be much more comfortable using electronic communication to talk with their peers as well as to enter into various discussion groups and to talk to consumers. So it is really a move ahead.

We did a study at Monash in 1992 looking at computer literacy skills amongst medical students and we found that 28 per cent of the fourth year medical students at Monash in 1992 felt that they had good or excellent computing skills. That was only a very small number. Interestingly at that stage, most of the students who felt they had good skills were male students. The female students did not. They tended at that stage to have missed out on a lot of the education that had occurred at secondary schools.

At the end of last year in 1996 I did a similar survey looking at the graduate medical students who are coming into our program at Sydney university for next year, because we felt we were going to deal with a similar problem with a lack of literacy. We actually found that over 95 per cent of the students rated their computer skills already as being average, good or excellent and that only five per cent said that they had poor computer skills. So we have very much a reflection of change in the community with people getting much more au fait in using Information Technology. A lot of these people have utilised it in the undergraduate courses they have done before and the professions in which they have been working.

What I hope is going to happen at Sydney university is that these students as they go through are going to help to lead a cultural change within the health care sector in this state, in that all their tutors are going to be expected to be able to access the Internet as well to get access to the resource material. The students will actually teach the tutors and the clinicians how to use this material and show them how quickly they can do literature searches. Already we have clinicians coming forward saying, `I did not realise that all this information was there. How easy it is to use. I am learning things in the process of developing the curriculum, let alone in implementing it.' I think the students will also be part of making very significant demands on the health sector once they go through, which could well be a concern for New South Wales health.

CHAIRMAN—And other universities?

Prof. Kidd—The other two universities involved in developing the graduate program, which are Flinders and Queensland, are also looking at increasing the computer literacy skills of their students, although they have not gone down the same line as Sydney in trying to deliver the entire curriculum using the Internet. The other medical schools still have a way to go.

CHAIRMAN—So you would say that four medical schools have some involvement in this area, although a differing involvement in various cases. How many medical schools are there in the country?

Prof. Kidd—There are 10 medical schools.

CHAIRMAN—So you have six medical schools that have ignored the problem altogether until this time.

Prof. Kidd—No, I do not think that is fair. I am not actually sure what is happening in

the other five. Monash and Newcastle have addressed informatics for over a decade. The three graduate schools are addressing it now. There are five other schools and I am really not aware of how far they have taken the developments. Certainly all the schools through the Australian Medical Council recommendations are looking towards how to increase self-directed learning for their students and access to literature and so forth. But exactly how far they are moving down the IT line, I am not sure.

Mr QUICK—You mentioned that we are in the infancy of the information age. The industrial revolution saw the haves and the have-nots, England grabbed hold of it and it looks like New South Wales is leading the charge. How do we ensure that we get a national approach to all this and whose hands do we put it in? Do we leave it to state health departments or do we leave it to the universities? Do we leave it to the federal health department?

Prof. Kidd—Are we talking about undergraduate education in IT or are we talking more globally?

Mr QUICK—We are talking about the whole thing, because basically it comes down to money. If we are going to radically change the structure the Health Insurance Commission will have to set lots of plans and say, `This is what you can and cannot do and telepathology cannot be reimbursed.' In four years you have obviously revolutionised the medical system in New South Wales. Once this hits nationally, legislation will have to change and governments will argue the toss. How do we draw it all together? Do we let you guys go and say, `Go and do it,' and then we come along with the legislation later? Do the state governments try and tag along?

Prof. Kidd—That is too late. I think there is a role for the Commonwealth in supporting the national standards which need to be developed in this field. There is a role for the Commonwealth in working with the various state health departments to make sure that we do have coordinated development, that the information which is being generated in one state is going to be able to be shared with practitioners, that patients are going to be able to access their information as they move from state to state and that the developments which occur are going to occur in line with developments which were occurring internationally. Certainly the Commonwealth needs to keep itself well apprised of what is occurring overseas.

Certainly the Commonwealth has a major role in general practice. The funding for the use of this technology in general practice comes through the Commonwealth. Particularly we need to look at the role of the divisions of general practice and how they can be involved in helping to implement this technology. The Commonwealth also needs to continue to develop the pilot projects with strong evaluations, as I have mentioned, so that we can learn from past mistakes and also start looking at establishing programs.

There has been some discussion in the past that perhaps we need to develop some model centres, towns or regions around the country where we implement some of this more expensive technology in its infancy form and see what some of the lessons are to be learnt. For

example, should we implement smart cards in one particular town and gear up all the practitioners—be they general practitioners, other health care providers, community providers and hospitals—in those settings and see what sorts of developments occur, but in doing that make sure that we are going to evaluate it strongly and that we are actually going to be able to learn some lessons from it?

Mr QUICK—Okay. I can see your students coming out and then getting into some of these colleges and saying, `Well, look, let's trial the Hunter Valley and electronic medical records.' You will look and say, `Are the current standards adequate? Do we need to develop standards for the next 20 years? We will do that in the Hunter and then suddenly expect everybody else to look up and say, "Well, there is the light. We will all aim for it".'

Prof. Kidd—Precisely, so the standards need to be national. Standards Australia is already doing a lot of work, as I am sure you are aware, in developing some standards in this field, and that needs to be encouraged.

Mr QUICK—But do you see, because of the quantum leap that you have taken, that you will be setting up, say, in consultation with the New South Wales health department, for example, a trial of electronic medical records like the banks are doing on the Gold Coast, and then suddenly be saying, `Well, it works here.' The expectation will be such that everyone will say, `Why cannot we have our little smart cards?'

Prof. Kidd—Exactly, and I cannot say what the New South Wales government or New South Wales Health is or is not going to do. But I certainly think that there will be a push towards that.

Already our patients believe that we have access to a lot more information than we actually do. My patients are often surprised when they find out that I do not know that they have been in hospital; that I do not have a copy of their results from various different providers that they have had, and just the actual lack of information that I have on them, given that I am seen as being their primary family doctor.

Mr QUICK—Do you see specific hospitals actually setting up their own smart cards?

Prof. Kidd—I do not know. I doubt whether that would happen in individual hospitals. If it were going to happen, I think it would happen in health regions, area health services or in individual states.

Mr QUICK—We have got the technology. Is it just a matter of someone saying, `Tick the box'?

Prof. Kidd—There are some projects being looked at under development with regard to smart cards in health at the moment. The Illawarra region in New South Wales is looking at the use of smart cards across their region. The Warren Centre at the University of Sydney is also looking at whether it can be implemented around the country. I do not have details of the

specifics, but these are the sorts of pilot developments which we will see occurring and springing up around the country.

Mr QUICK—You likened all this to the industrial revolution. It sounds frightening. We are still paddling around in the water up to our ankles in the oceans out there.

Prof. Kidd—It is exciting as well. It is an exciting time to be around. We are in a time of great change. What we are seeing is great change in the health care sector. We are seeing people for the first time having access to far more information than they have ever had before. The development of how people actually get access to the information, how they utilise that information, how we as health care providers cope with people who come in who are better informed about some conditions than we are and have better access to some of that information than we do is a great challenge for us all.

I think the pattern of health care is going to change in this country. Already we are seeing people become more responsible for their own health care. That has been happening over the last generation with people insisting on having more of a say in what happens and being involved in decisions. One group which I have been involved in working with clinically is people with HIV and AIDS who have shown to me that you get a group who all of a sudden want to get access to the information and go out and source this information, and they come in and they say, `Why haven't you told me about such and such?' They take you to task, saying, `Why don't you know about this trial or this drug or this preparation?' You sit down and work through that. It is a great challenge for doctors and for other health care providers as well.

Mr QUICK—Okay, so you are changing the mind-set by changing the curriculum and opening the doors to your students. You are faced with a bureaucracy in state and Commonwealth health departments that is not being forced to really open the doors because they are comfortable within their own mind-set. How do we go about melding the two?

Prof. Kidd—We are not actually changing the mind-set. What is happening is that we are taking advantage. We are on the crest of the wave that is moving anyway, so no matter what we do this is going to happen. And our students, as I said, are coming into the course fully computer literate and expecting to be able to utilise these tools. We have to keep talking to the bureaucrats and the decision makers and say, `This is what is happening. These are the changes which are going to occur.'

The whole population will start saying, `Why doesn't my doctor have access to this particular piece of information? Why is it that this information isn't moving around?' At the same time, other people will be saying `Well, hang on. I am concerned about this moving around of information. I want to maintain my privacy. I want to make sure the information is secure and only the doctor or other health care provider that I choose is going to have access to that information.' So the whole conundrum of different issues is what we need to start working our way through.

Mr QUICK—Is privacy the big mind-set that we need to change? People say that this

is the thing we have to address first before we do all these other things. Other people are lighting bushfires everywhere hoping that this privacy thing will be sorted out.

Prof. Kidd—I think Australia is actually leading the world in many of the privacy elements. I understand Australia has developed this series of guidelines on privacy of health information, which is a world leader. That needs to occur at the same time. It does not mean that we necessarily need to stop some of the pilot projects from happening, but they do need to take those privacy concerns into consideration. That very much needs to be one of the fundamentals behind it.

One of the problems with some of the past Telemedicine projects around the world is that they did not really take into account a lot of the privacy issues. Therefore, when the project finished, people looked at it and said `Yes, but what about the privacy issues? What you've done really isn't going to help advance the cause at all.' So we cannot divorce the two; they must occur in parallel.

Mr FORREST—That comment you made about the capacity for patients to be armed with information is probably going to be a driver for some GPs. It could be a bit embarrassing and awkward for professional pride and all those things. I see that as a positive thing, even if the patient's information is a little bit misguided, if they got it off the Internet.

I would like to change tack a little bit and talk about rural regions. I noticed in your submission that some of your projects have involved rural areas. But one of the things, lamentably, that has occurred out there is a lack of investment in infrastructure. So, again, it is the cat chasing the tail—access to technology is not available. As well as that, it is more likely that rural doctors would be more timid about technology, too, because they have been there longer and come from the old school. Could you comment about meeting those challenges and the professional development for the doctors that are out there and so forth?

Prof. Kidd—I certainly think professional development is very important, and the divisions of general practice are a focus where a lot of that professional development can occur. I do not necessarily agree that rural doctors are timid about taking up the technology. In fact, some of the projects which we have been involved with, the phocus project, which ran through Monash and involved providing e-mail links to rural general practitioners at the start of this decade, showed that there was a great deal of enthusiasm amongst many rural doctors who saw this as a way of overcoming some of the problems of professional isolation, being stuck in the country areas where they were.

We do have problems with telecommunication access to rural general practitioners. Many of our rural hospitals have overcome these problems with more high-speed links enabling them to get high-speed access to the Internet and the World Wide Web. But that is not possible for many of our rural general practitioners and certainly not possible for many people working in very isolated areas—for example, nurses and other health workers working in very remote parts of Australia. So that is an area which I think the Commonwealth needs to address and look at. How do we get delivery of material in this technology to people right

across our country?

At Sydney university, what we are doing with our students is encouraging them to go into rural areas as part of their undergraduate training. We have developed the platform which we have for delivering our material on a platform that we hope is going to be equitable no matter where they are going to. But that is expensive, and we are funding the telecommunication cost for linking our students if they go to rural general practice or hospitals.

Mr FORREST—How do the divisions of general practice operate in terms of that professional development? Would you provide a course for them? Does the university do that? How does that work?

Prof. Kidd—There are a number of proposals being developed at the moment as to how divisions of general practice can be involved in assisting in the increase in the uptake of Information Technology in general practice. A lot of that is running through the Division's Strategy Group and the Information Management Strategy Group of the general practice branch of the Commonwealth.

Many of the divisions have an information technology/information management committee where doctors are getting together and developing pilot projects through the division's project grant funding system to try to look at various aspects of Information Technology.

Unfortunately, the funding of those projects has actually been held up by the Commonwealth over the last year or two. But change is under way and those projects are currently being reviewed. But if any of those projects are funded, we do need to make sure that they have strong evaluations and that we are actually going to be able to draw together what the findings are.

Mrs VALE—On page 4 of your submission you observe that Australia is a world leader in the research and development of information management and Telemedicine in general practice and that many of the research projects and pilot developments here have been keenly scrutinised abroad. Could you share with us how you think this expertise within the region could be commercially advantageous to Australia?

Prof. Kidd—That is a very good question. I do not know that there are a lot of commercial imperatives behind many of the projects which have taken place so far. Certainly, a lot of the scrutiny has been from other health departments, universities and other institutions looking at how they can benefit from what has happened in Australia—but, of course, without paying for it—and what the lessons are that we have actually learned in this country that we can draw on. Similarly, we have done the same. We have looked at the UK, where there has been a much more significant uptake of computerisation of general practice, to see what lessons we can learn from the UK here in Australia and benefit from. The same applies to New Zealand, Canada and some of the countries of Europe which have similar systems of general practice and family medicine to what we have.

Similarly, a lot of developing nations are now starting to look at Australia and these other countries to see what we have done and how they can avoid some of the very costly errors which we have made in looking at when the right time to implement this technology for themselves is. One of the roles I have is chairing the Informatics Working Party for the World Organisation of Family Doctors where we have doctors from 31 different countries—including places like Bangladesh, Zimbabwe and Sri Lanka—who are trying, through their family medicine organisations, to work out what we have done and how they can apply it in their own settings.

A lot of the things which we have utilised in Australia will not be appropriate at all, given that the technology is expensive and requires support and backup. So what these people may take away is more ideas rather than technological developments. Having said that, some of the software developments which have happened in Australia may well be translatable to other countries. The development of some of the standards which have occurred in Australia certainly can be translated to other countries. They can pick them up and work on them themselves, but there is not a commercial imperative so much there.

Where we may start to make some money for this country is in areas like teleconsultations into South-East Asia and the Pacific. As you know, there are already a number of projects looking at how to export our medical expertise across to those areas.

Mrs ELIZABETH GRACE—You say in your submission that over 60 per cent of all medical services are provided by GPs and that about 85 per cent of the population visit a general practitioner at least once a year and that this provides an opportunity for preventive care to take place at each visit and assists in screening immunisation, health promotion and that type of thing. Do you see a cost benefit in this? Do you see that this could be of help somewhere in the escalation and the blow-out which is occurring within the cost of health services and things like that?

Prof. Kidd—I believe that preventive care needs to be one of the foundations upon which our health care system is built and that general practice is very well placed to be one of the key providers of preventive medicine. Personally, I would like to see general practice changed so that we have much more of a mix between dealing with acute illnesses and acute problems and helping to maintain the health of the population through appropriate preventive measures.

You can argue either way. Either you can argue that if we have a more healthy population it is going to reduce the health care costs or you can argue that if we have more people coming in for preventive screening and intervention there may be associated costs with that as well. So exactly what the final cost benefit will be is difficult to know. But what we are looking at is improving the health outcomes for all Australians.

Mrs ELIZABETH GRACE—In relation to Telemedicine, where do you see that coming in and acting as a cost benefit?

Prof. Kidd—Telemedicine, if used, for example, in teleconsultations with people who are in more remote areas who do not have access to doctors as often as they would like could be used for preventive measures. For example, if you are situated out on a station a long way away, you could sit there with the doctor and go through the various preventive measures which you are now due for at your particular age, sex and so forth.

The chances are that a lot of people living in remote and rural areas are not benefiting as much from preventive measures perhaps as many people living in the cities. Having said that, there are a lot of people who are very disadvantaged living in urban areas of Australia as well. I am sure that the current low immunisation rates which we are having quoted to us do not just apply to rural and remote areas; they apply throughout the country.

Mr QUICK—The New South Wales government spoke about a health information warehouse. Where do you see the repository for all this information residing so that we can say, `Look, 95 per cent of pre-school children have been immunised', or, `Management and treatment of breast cancer is effective because such and such a procedure is being followed'? Who should be responsible for the warehouse, the building of it, the collation of the information?

Prof. Kidd—In my submission I outlined some of my concerns about data collection and the centralised collection of large volumes of data without a very clear reason why this information is being collected and what it is going to be utilised for. I would argue that we need to look at different methods of managing the information. Do we actually need to take all of the information and store it in one particular place? That is using a model very much like we have had in the past in hospitals with a single medical records department. All the information would go into that and, of course, get lost, a lot of irrelevant information added there as well, and there are the security issues associated with that.

Alternatively, do we need to look at people having more control of their own health information? This is where smart cards can come into their own with people carrying around the information decreeing which information a person gives access to which health care provider.

In my own particular work in general practice I see a lot of people with HIV who utilise me as their HIV general practitioner and utilise someone else who does not know they have HIV as their other general practitioner. They do not want me communicating with their other GP about the sorts of problems which they are encountering because that GP may be the same person who treats their mum and dad or their wife and kids or whatever the issue may be. I would argue that as we see this cultural change, with people becoming much more interested in having responsibility for their own information, that they want more control over the information as well.

It may be that people should focus information on general practice. The GP may be the repository and that may be the area where all the information on this person needs to reside.

All the information on this person could reside with a nominated general practitioner, or with the nominated patient or whoever.

Mr QUICK—Do you see some sort of uniform coding? We said the universal code is English at the moment?

Prof. Kidd—Yes.

Mr QUICK—But it is not working. We need to develop a new code.

Prof. Kidd—I do not know whether we need to develop a new code.

Mr QUICK—No, but some sort of code. Do you see this happening as your students are going through? I suppose they will bring up suggestions as a result of some of the changes they are going through.

Prof. Kidd—Our students will certainly be exposed to the coding systems utilised in hospitals and the shortfalls of those when you try and apply those to people and their existence which for most of us is most of the time outside of a hospital setting. Our students at Sydney University will also, I am sure, be exposed to the sorts of coding systems utilised in primary care and how they reflect the needs of general practice being different to the needs of community health and hospital medicine.

The actual development of the universal coding system is something which is a way off. We had a conference in Washington the year before last looking at whether we could develop international standards for coding in primary care. The decision at that time was that we cannot, we are not ready, it is not time yet. But that is what we need to be working towards so that we can map information from one coding system to another and that information can be put together.

The problem is that once you start coding from various sources and trying to apply the information, the information does degrade. The best information that I have as a doctor is information I have stored and recorded and coded myself. Once I start taking information from other sources that information becomes less reliable.

Mr QUICK—But as the industrial revolution developed there were common standards because it just did not start in England, it went to Europe and around the world. The Plimsoll Line and all the other international things followed on from that. Do you see this coding happening in the next five or 10 years or is it something that will just happen by chance when the UN decrees that it will only give aid to countries that have adopted X, Y and Z and there will be some sort of outside pressure to have countries say, `We want to be part of that'?

Prof. Kidd—One of the really exciting things about this whole area is that you can gaze in your crystal ball for as long as you like but it is incredibly cloudy and you cannot see what is happening. Think about all the concepts and terminology which have become

commonplace today. Think back two years ago. How many of us were really familiar with the Internet and worldwide webs and multimedia and so forth? What is going to happen we cannot predict. It may be, yes, that in five years time we have a universal coding system for health adopted across the world. It may take 10 years; it may be much sooner. I cannot predict, but we need to be working towards it.

CHAIRMAN—Professor, thank you very much.

Mr QUICK—I would like to say thank you for a wonderful presentation. It set us thinking.

CHAIRMAN—Thank you very much for appearing before the committee. A draft of your evidence will be sent to you for checking.

Prof. Kidd—Thank you very much.

[1.40 p.m.]

\DB\WLBGRUNSTEIN, Professor Ronald Robert, Clinical Associate Professor of Medicine, University of Sydney, and Senior Staff Specialist, Sleep Disorders Centre, Royal Prince Alfred Hospital, New South Wales 2050

CHAIRMAN—I call Professor Grunstein and Dr Seton to be sworn in. Thank you for appearing before the committee this afternoon. Would you please state the capacity in which each of you is appearing before the committee.

Prof. Grunstein—I am clinical associate professor of medicine at the University of Sydney and senior staff specialist at the Sleep Disorders Centre at Royal Prince Alfred Hospital in Sydney. I am also President of the Australasian Sleep Association, which is the professional body which represents people working clinically in the field of sleep disorders in Australia and New Zealand.

Dr Seton—I am a staff specialist at the sleep disorders unit at the new children's hospital at Westmead and I am also the chief of the paediatrics subcommittee at the Australasian Sleep Association.

CHAIRMAN—Thank you. We have had the privilege of reading your submission. Would you like to give us a brief outline of the highlights of the submission before we commence questioning?

Prof. Grunstein—Reflecting on the other submissions, I probably included a fair deal of detail about the sleep disorders and what they are. This area of medicine is fairly new and therefore we felt the need to include that sort of information.

Broadly speaking, in clinical practice the main areas which are managed are sleep and breathing disorders, mostly sleep apnoea or heavy snoring, which is one of the most common presentations to physicians dealing in this area. The diagnosis of that condition involves studying people's breathing during sleep with a fairly complex array of signals from brainwave activity and breathing. Similar conditions exist, of course, in children as well as in adults and the bulk of the clinical load facing sleep laboratories around Australia is in that area.

There are additional rarer conditions which affect sleep and produce daytime sleepiness, which is the main symptom of sleep apnoea.

CHAIRMAN—We have a lot of that in parliament!

Prof. Grunstein—Yes. We could have a few of your colleagues as patients as well.

CHAIRMAN—You are not going to give us their names.

Prof. Grunstein—No, no. Not under oath, anyway. The other areas extend into probably the most common sleep disorder in Australia and that is insomnia, which is predominantly an area of consultation rather than detailed investigation and involves obviously referral and often specialist behavioural methods of treatment. There are many sleep disorders outlined but that is basically what we do in clinical practice.

The purpose of our submission is a little bit more specific than some of the others in that we addressed some issues that have already come up as far as Telemedicine, Medicare and the Department of Health are concerned. As well, we address some issues related to ethical practice in this area and how this area could be handled in the future. The specific points relate to the fact that currently sleep studies are being paid for under a combination of methods. One is that there is a Medicare item number—12203—for sleep studies, which is the most detailed Medicare item number in the schedule. It is detailed for various reasons: one is to ensure that appropriate standards are maintained. These are actually entrenched in the schedule quite clearly.

Recently we had a review of that item number. The problem was posed that a number of centres are already operating as Telemedicine sites. They may have a regional sleep laboratory which is either continuously or intermittently sending signals to a central hub, which is usually in a capital city.

CHAIRMAN—Could you expand on what you are saying and discuss the range of Telemedicine projects carried out into sleep disorder and in doing so outline the results of any evaluations and assessments made of any of the projects.

Prof. Grunstein—Virtually all of these have been currently done on a clinical basis and are paid for by Medicare. The one centre that we commonly deal with is located at a private hospital in Orange, Dudley Hospital. Basically, the patients are set up in Orange for the sleep study which involves placing a number of electrodes on the skin measuring breathing and brainwave activity. Those signals are stored locally but also transmitted over conventional phone lines to a centre, which in this case is located in Hornsby, where there are expert staff looking at those signals. But there are also staff at the base hospital, probably less intensively staffed, who are also, in effect, supervising the patient.

Similar operations exist quite widely in Queensland. Obviously, because of the distances involved, most rural or non-urban centres in Queensland these days would have a sleep laboratory. The process is also commencing in Victoria. I know that Darwin has a connection with Adelaide at the moment.

CHAIRMAN—How are these projects funded?

Prof. Grunstein—Under the terms of the Medicare item number there is nothing preventing the procedure being done under those guidelines provided the correct signals are being monitored and the supervision is by trained staff. We have outlined the points we raised

with the department of health in relation to the review of the item number.

CHAIRMAN—It is interesting because this has been one of the criticisms of the government response to date relating to Telemedicine. In a number of the areas there is no provision for a Medicare payment to be made and this has been a disincentive for the use of Telemedicine in some fields of medicine.

Prof. Grunstein—There has not been that problem in this area. One of the reasons for presenting a submission is to explain what we believe are some of the problems. From a practical point of view it is very feasible. There is virtually no failure rate in maintaining those communications. The problem is variability in standards and we have really only begun to grapple with this problem. One is that you are dealing with a highly expert area where there is an existing Medicare item number and therefore it is hard to maintain standards when there is a demand for the service from rural areas.

To be frank, I think there is a variability in standards. One problem, and I think this is the main problem, is that if you have expert diagnostic information coming from a rural centre to central experts, unless those central experts have seen those patients in consultation at some time then it makes the interpretation of the data and what to do with a patient a lot more difficult. What is happening now at some centres is that patients are going in. There is quite a delay between anything being done. The reports are being provided but the person who is taking the action may not be a practitioner with expertise in the area.

We have outlined on page 422 of the yellow book the points that we felt as an association should cover this area, and that has been in writing with the department of health. The department of health has that as a sort of peer review mechanism. If they want to bring into question the standards of a particular service and whether it is appropriate servicing or not, they have this documented evidence.

CHAIRMAN—That is the federal department?

Prof. Grunstein—Yes, the federal department of health.

CHAIRMAN—Your submission discussed the ethical dilemma of conflict of interest. The example you provide in sleep apnoea is that the same distributor or manufacturer may be involved in both the provision of Telemedicine equipment and of treatment devices at the remote site.If the doctor providing or directing the service has financial interests in supply of equipment, a serious conflicts of interest could arise. Could you elaborate on these concerns and suggest solutions?

Prof. Grunstein—Unlike most areas of medicine where the treatment is either advice or medication, in this area, particularly sleep apnoea, the treatments are device related. There is a device called the continuous positive airway pressure device, which was actually invented in Australia, which is the main form of treatment for this condition.

CHAIRMAN—Was it developed here?

Prof. Grunstein—Developed in Australia, yes.

CHAIR—And it was produced here?

Prof. Grunstein—It is produced here, but there are a number of international manufacturers who are also available here. There are a wide number of distributors. The reason is that—and it is actually a separate issue—the patent was fought and lost and now there are a number of distributors from predominantly North America selling their products in Australia. Be that as it may, the issue is that there is obviously a lot of competition for sales of these devices and, as people are aware, it is obviously illegal in most states for doctors to be involved in receiving any benefit from the prescription of medications.

To our knowledge, there are no clear guidelines on the similar things for devices. It is a very grey area which has concerned us because we have had reports of people working in the area who have done what we interpret as accepting a remuneration for providing particular items of equipment, specific brands as opposed to others.

That is not exactly within this committee's realm, but we can see that this increases the potential problem when you are dealing with something like Telemedicine where the hub can control the regional centres. If you have a particular type of equipment which is being used for diagnostic purposes which meshes in particularly well with a particular form of therapy, then there are obvious advantages in getting that hub site. You may donate the equipment, then you are forcing the remote sites to use the particular form of equipment and there gets to be vertical integration in terms of treatment devices.

These are very early days. We see this as a potential problem. I think the solution that we have outlined is very simple. Everything has to be completely transparent with Telemedicine. Physicians are obviously actively involved in the development of these and may in fact be commercially interested in the development of these, but there has to be an arms-length relationship between that and the provision of services and there has to be open tender. Even the donation of equipment, I think, may be attractive to some hospitals but I think it has to be looked at very carefully, because there are long-term consequences.

Mrs ELIZABETH GRACE—I would just like to bring something to your attention. You talk about your international links in section 6 of your submission and you finish off by saying:

We would submit that financially independent telemedicine links are much more viable to centres in Japan, Thailand, Taiwan where there is a greater capacity to pay for such services. It would be valuable to have specific government assistance to initially establish such services.

Would you like to expand on that and say just what you had in mind there, please?

Prof. Grunstein—One of the problems is that everyone overseas is willing to send

doctors to train and gain education in the area and have equipment donated, but at least in the short term it does not seem obvious to me as an individual that there has been necessarily any short-term financial benefit. Once the local expertise is gained, unless there is a capacity to pay for consultation, that does not happen. They accept a lower standard of services.

That is my limited experience with one connection from our centre and China, which I do not run. I am observing it a little bit from outside. However, there is potential in other countries where the capacity to pay is greater. I think that we have a lot of expertise in this area in Australia which is just not available. People have not really thought about these areas. It has not been big in clinical practice.

Increasingly, we are getting requests from doctors to come here to train in this area for periods of time. We need to capitalise on that. Sometimes, when setting up the infrastructure in the exchanges, we do need support because we are operating out of a public hospital system. Similarly, evaluation of some of these services may also require assistance. But in the long term they would have to be in the commercial sphere. The main assistance would need to be in organising the education and the infrastructure of a few key centres that would be involved in training in this area.

Mrs ELIZABETH GRACE—So you are saying we should be charging for the training of overseas doctors in this area: setting up the schools for them and then recouping our costs by charging for training.

Prof. Grunstein—I think so because I can tell you that, when the doctors go back to a lot of these centres, they are not averse to charging themselves; that is the reality. There is a certain amount of international goodwill. But we have trained quite a few doctors and a lot of people want to come for two weeks, learn quickly, and go back and say they have trained at Royal such and such hospital and all that sort of thing. I would rather do it properly and have it properly funded.

Mrs ELIZABETH GRACE—So government assistance would set up a training school and would then charge—in particular overseas doctors—to train them.

Prof. Grunstein—Ultimately, yes, that would be a way to do it.

Mr FORREST—You need not have apologised for the length of your submission; I actually found it quite interesting to read. We are all snorers I suppose—most of us. I was interested in your comments about the way that your collection of information works for a remote person. You obviously need expertise at both ends; that is probably where the sensors have to be collected or something like that. How does that work? Would somebody be monitored all night? I can see it locking up a telephone link for some period. How would that work?

Prof. Grunstein—Sensors are applied at the local site by people trained in that area and they set up to calibrate the equipment. The calibrations are then often checked by the remotes—by the central site—who will ultimately be responsible for the analysis of the data.

From then on, once the study proceeds, intermittent connections are made. How often those connections are made varies from laboratory to laboratory. With the connection between Orange and Hornsby we tend to check in every 10 minutes for 30 seconds or longer if there is a problem; for example, if an electrode comes off or there is a particular signal that is wrong and you need to remind the technologist there, who may be less trained or have other responsibilities, they need to go back and check on that particular signal. So it is very important to maintain the standard of services and to have that sort of connection.

The problem that we have outlined as an association quite frankly with the department of health is how to maintain such a high standard of service when there are pressures. For example, we had a 10 per cent cut in the rebate for sleep studies. Under those circumstances, how do you maintain the quality? It is quite difficult. We have outlined these points which we feel are important in this particular area of standards that need to be maintained.

But we are talking about technical issues. The other point is that this is only half the story. If you do not have someone who is assessing that patient and determining whether this is an appropriate study, you may get overservicing or underservicing. That is why we have discussed this. Obviously there may be a role for teleconsulting if that is a viable option that is acceptable to patients. But, in many cases, this is a real super-specialty area. There is no question that we wonder whether a scheme to support people working in these areas to provide consulting at the site in a rural area is not the way to go now rather than teleconsulting. We need to compare the viability and, importantly, the patient acceptance of those services.

My colleague Dr Seton often has to talk to parents of children with sleep breathing disorders. Under ideal circumstances, that is done face to face in the same room. We do not have a good feel for that: it really needs to be evaluated as to whether a video screen would be enough and whether, if you had someone going up there to do a day or two or consulting as part of their hospital appointment or whatever in the capital city, that might be a way to go.

Mr FORREST—The committee has heard in evidence about the use of videoconferencing in psychiatric assessments that all the nuances that come across in a normal eyeball one-room contact are still available; and so that kind of audiovisual contact may overcome some of those problems. I was a bit concerned about the impression I got from your submission that, in this particular area of study, the tyranny of distance issue is not solved.

Prof. Grunstein—There are issues of physical examination. A lot of the problems in this area are structural. Other devices that can be used are orthodontic devices, so you actually have to have a fair idea of the patient's orthodontic or facial bone structure and so forth. These are obviously things which are possible in fairly stylised consultations. Everyone is being so very enthusiastic in saying that this is the way to go; yet we have found that providing a combination of a local expert service with someone who goes up intermittently—for what are often not emergency conditions, really—has to be tested against something like you are talking about.

CHAIRMAN—Australia is a huge place, and it is not possible for specialists to go to every small centre. Given the reducing cost of the technology necessary to have Telemedicine in the way it is practised in, say, South Australia at the Queen Elizabeth Hospital, it would seem most desirable that one should be travelling to the individual centres, although, as a fall-back situation, surely the distance consultation—such as is taking place in South Australia—would have to be a whole lot better than no consultation at all. In fact, the evidence that we received as a committee was that a Telemedicine consultation was almost as good.

Sure, the hands-on ability to examine a patient personally would be an advantage; but, in many cases, if there were no Telemedicine consultation there would be no consultation at all. You would have to concede that a Telemedicine consultation would be better than no consultation at all. And perhaps you might even be prepared to concede, as did another witness, that it is almost as good as a personal examination.

Prof. Grunstein—I would concede the first point. On the second point, I am not an expert in Telemedicine, but I have certainly read what literature is available, and I think that that literature is to some extent limited in terms of what the patient acceptance is. I also think that what people expect varies from country to country. I am saying that we do not make it exactly easy for specialists to provide services to rural areas. For example, my colleague who goes to Orange has substantial expenses in travelling there, but there is no benefit to him in the provision of that service: it makes no difference whether he provides the service at Orange or next door to his house.

CHAIRMAN—So why does he go to Orange?

Prof. Grunstein—At the moment, there is a big question about maintaining the service. We believe that, long term, there are going to have to be changes in this area. It is one of the realities in clinical practice: sometimes you maintain services in the hope that in the future they will develop.

CHAIRMAN—To sum up for us, what changes do you see as necessary?

Prof. Grunstein—Obviously, the Medicare schedule is going to have to take notice of this, and people are going to have to set standards for each individual procedure, because there are going to be individual differences depending on whether they are performed via a Telemedicine link or directly. People are going to have to set standards for each individual procedure because there are going to be individual differences if they are performed via a Telemedicine link or directly. We have specific areas of interest which we outline, particularly in paediatrics, where we believe Telemedicine would tremendously enhance the area such as in near-miss sudden infant death assessments.

The other thing is that I do think that the evaluation procedure is important. Maybe I am old fashioned or whatever but I do think that the patient acceptance of this is really going to have to be evaluated, the idea of teleconsulting. The other point is the ethical one. Although

it has been a minor problem, there are potential ethical problems with Telemedicine unless those are thought of first. If you have a Telemedicine hub in whatever area, you have a significant degree of control. I read the submission of the Australian Health Executives Group and they actually highlighted that area as well.

Mrs VALE—Professor, I am grateful for your submission. I found it particularly interesting to the point where there have been times when I have woken up of a night time and I have noticed my husband has stopped breathing and so I have actually given him a kick-start, which is probably a bit brutal. I will be getting him to see our GP about that; I did not realise he may have a problem.

I would like to get back to the international role that Australia could play in Telemedicine. In your submission on page 13 you confirm other observations that have been made to this committee that apart from international goodwill, the feasibility of Australia competing in the international arena as regards to Telemedicine is at best limited, but it does at present remain unclear. Do you think that Australia should abandon any existing regional role in Telemedicine, or should Australia target its markets more effectively, say through carefully planned feasibility studies?

Prof. Grunstein—I can only really speak for our area. We have targeted China because there was a degree of interest but I am not so sure that there is the capacity to pay and I think therefore there may have been other markets. There are a lot of experts but there are not people making the connection between the experts and specifically people hunting. Maybe Telemedicine will help here, or these are the right places or not. For example, for us it is not easy. You have to start from scratch almost, make the connection yourself. There is not an easy sort of mechanism.

The other thing is also to put resources where they are needed. I have a colleague who is busy trying to set up a Telemedicine link between Australia and Hong Kong and he is competing against a local team. Quite frankly, I think ultimately, unless he has got some specific expertise or skill which is unique, that is not going to work in a place like Hong Kong where there are often developed facilities.

Part of the process—what the government can do, at least through its various agencies—is linking the people to where the needs are. They can say, `Look we have a group here that possibly can do it.' That is not a general thing; I think it has to be specific and I think there has to be a lot of local intelligence done in that area. That is the problem.

Mr QUICK—I have noticed that there seems to be a reluctance. You are talking about patient acceptance. In lots of other spheres of modern society people are told by various groups, `This is what is good for you.' and they will run with it. The banks suddenly decided that plastic cards are the thing and you will be penalised if you go and get served over the counter.

I notice from the next group, the Health Service Executives, there is this view—not a

Luddite view but a real questioning of this. They ask, `What is the real benefit of all of this?' Who should drive this Information Technology? Is it just down to the dollars and cents, or patient benefit? Do we wait until the patient says, `New South Wales has got it but Tasmania has not. Why haven't we got it?' Do we just let it happen by chance or should the medical profession in its various forms say, `This is your speciality. You decide. It is not really for us so we will not take it up'? Somebody else, for example, in paediatrics or telepathology or something, might take it up, and it is real hodgepodge.

Prof. Grunstein—The first thing is that the role of the medical profession is to set professional standards in this area. Everyone has to look at each area like we have looked at our area. The department of health asked us if this was the same quality of service if you had someone in Orange or Broken Hill being hooked up to this. They wanted to know if they were paying for the same quality of service. So it is important that the medical profession be actively involved in the professional standards in this area.

I guess I am not ashamed to be called a Luddite at this stage because we are in the early days yet. There are going to be market forces here. People are going to say, `Well, I can come up to see you if you pay more versus talking to this video screen.' Those sorts of forces are going to come in. Ultimately, a lot of this is going to be affected by how health is funded in the future.

Mr QUICK—So are the other health service providers in the Orange area able to tap into this or does that happen by sheer accident?

Prof. Grunstein—At the moment it only works because it is a private service and the item number can be charged together with a bed charge in a private hospital. This is not a service which is running through the Orange base hospital. Therefore, at the moment, a patient who does not carry medical insurance has a choice: either they pay to go into that private hospital and pay a bed charge—the difference between what private insurance pays and what it does not—or they come back down to Sydney on a waiting list for a public institution.

Mr QUICK—So how do we ensure that, say, what is happening in Orange is accessible to everybody—where everybody pays a fair share so that not just a small, select group benefit from the technology that is available? The local council and the New South Wales health department say, `Well, look, this is here. Why don't we also tap in and provide some sort of financial assistance.'

Prof. Grunstein—I do not want to get too carried away because the problem is specific in the sleep area. The way the Medicare payment is structured is that there is a procedure fee and a bed charge which is covered by private insurance. If you do sleep studies in a house or in a medical centre which is not a private institution all you can do is charge a procedure fee. So there is in fact no financial viability of a non-private service in Orange unless it is funded directly by the public health system. This is a little bit different from, say, radiology and other sorts of things where there is not that much difference between the availability of public and private.

Mr QUICK—Say you are setting up some telecommunication link to some isolated area and it is just done in one narrow medical field and the other areas are missing out because someone happens to get a grant to say, `Look, I'll run this new whiz-bang service to wherever it might be—Grafton or somewhere,' and everybody else misses out. How do we ensure that there is some sort of consultation across the state medical field, the Commonwealth and the various colleges to say, `Well, look, why don't we put some money towards the cost to ensure that not only is it going there but it can go here, there and everywhere else'?

Prof. Grunstein—You have given the answer. You have to develop mechanisms to ensure equity in the area. Whether Telemedicine is appropriate or not obviously needs to have a lot of medical input, but also the standards are important, and that is where the medical input has to be. It may be that it is inappropriate to have Telemedicine in one area and appropriate in another. At the moment we could guess and give examples.

Mr QUICK—But surely patients would be reluctant. They would say, `Look, I'm not really going to benefit from it, but when they whack up the costs I am going to have to pay extra through my taxes for this.' If they see that from life to death there is some opportunity for them to avail themselves of this modern technology, this acceptance will be there and the pressure will be coming on various groups of people like you to say, `Well, okay, we ought to be involved in some of the decision-making processes.'

Prof. Grunstein—Yes. But I think the answer to your question to be honest—and I am not trying to be smart—is: `out of control'. It depends on how people view the funding of health. The example is this: that service in Orange exists for private patients and not for public patients simply because it is financially viable for private patients and it is not viable for public patients, unless they pay the difference between what the public and private rates are.

I am a little bit uncomfortable answering the question, but I think it is not really in my—the important thing that I am trying to address is that there are professional standards and ethics that have to be looked at closely in Telemedicine, and also patient acceptance and so forth. The fairness of it and the equity of it, to some extent, is the political issue.

Mr QUICK—We spoke to the last witness about the diminution in costs because of health prevention: some people might say all this research into SIDS does not really benefit them, but it does benefit the whole of society. When you solve that problem, you solve two or three of the others. This acceptance thing is a funny sort of animal. You can say there is a cost benefit to society because the number of children that have died from SIDS as a result of the research that has been undertaken and the money spent can be quantified.

Prof. Grunstein—It is an issue of standards. The point is—going back right to the beginning—that when we looked at this, we thought you would get lots of submissions from people who said, `Telemedicine is fantastic', `My company can do it for you' and all that sort of thing, perhaps giving it a little bit different perspective. We are just cautiously enthusiastic, if that is the way.

Mr QUICK—Good to hear.

CHAIRMAN—One last question. Dr Nelson.

Dr NELSON—Thanks, Mr Chairman. Professor Grunstein, do you feel that medical practitioners should be specifically credentialled before providing Telemedicine services—and certainly being reimbursed for them? If so, who should be doing that—colleges as such, or sub-specialty groups.

Prof. Grunstein—It is funny that you should ask that because we are right in the middle of that sort of battle in this area. The department of health has, given the rate of increase in and provision of sleep studies over the last two years, I think quite rightly asked who should be providing these studies and has been pushing for there to be some form of accreditation which is actually formal and clear and transparent and incorporated in some way in the schedule. The AMA, which is involved with these negotiations with us, is certainly accepting of accreditation in such super-speciality areas.

But we all agree—I think even the representative of the federal department of health that we meet with—that that accreditation should be done by the professional bodies themselves, rather than by government. It is the practical way. The professional body, in this case the College of Physicians, is obviously concerned because of legal ramifications and so forth. But we have already got accreditation. I am a physician and I can charge a different fee to someone else because we have an accreditation and we have the NASQAC which recognises that. I think it is only a matter of taking it further provided—reasonably—that for super-speciality areas you have to do the appropriate training. I do not think necessarily Telemedicine itself brings that need, but I think the increasing complexity of medicine brings that need. So I do not think there is anything specific from the Telemedicine point of view in our list in our area.

CHAIRMAN—Thank you very much for that and for appearing before the committee this afternoon, gentlemen.

[2.22 p.m.]

SOUTHON, Dr Gray, Associate Fellow, Australian College of Health Service Executives, PO Box 341, North Ryde, New South Wales 2113

CHAIRMAN—I now call witnesses from the Australian College of Health Service Executives and the New South Wales Branch of the Australian College of Health Service Executives to be sworn. Is there anything you want to add about the capacity in which you appear?

Mr Westcott—I am general manager of Nepean Health in Sydney.

Dr Southon—I am a consultant in Information Technology and have been asked to advise the college.

CHAIRMAN—Before we commence questioning, would you like to give us a brief summary of the submission, perhaps highlighting some points that you think are key matters of which we should take note.

Mr Westcott—I would like to table some points that we would like to make in today's presentation, drawing from the submission. We will cover those points today, if we may.

The Australian College of Health Service Executives is a college which represents professional health executives across Australia. It has a wide representation of members drawn from both the public and private sectors of health service, also from academics in health administration and from consultants. It has about 2,500 members across Australia. The federal branch made this submission and Gray and I are speaking on behalf of it, as New South Wales branch members.

CHAIRMAN—The submission warns that there may be significant pressures influencing assessment of clinical validity arising from possible cost savings, patient convenience, demands on professional relationships or changing professional roles. Could you elaborate, for the benefit of the committee, on your concerns and explain if your statement means that the quality of care may suffer through the practice of Telemedicine and how this may incur costs to the community.

Dr Southon—I will put this in the context that the technology has diverse impact on the organisation and the way people interact with each other, both within organisations and outside organisations. It is very important to take these factors into account, and managers, of course, are in a position of having to understand these interactions and make sure that the various parties interact effectively.

Telemedicine involves facilitating quite sophisticated interactions between people that

may have no other way of interacting with each other. They might just have an occasional interaction through this technology and in this process have to undertake quite sophisticated clinical relationships. Unless those processes are enabled and undertaken in the most beneficial way, people may not be able to actually work together effectively under this environment. It is the nature of the interactions between the people involved that have an important impact on the type of clinical process that is achieved.

Mr QUICK—Your members gain some tertiary qualifications to enable them to take up senior managerial executive positions within the health departments.

Mr Westcott—That is right.

Mr QUICK—We heard today from the University of Sydney about how they are making a quantum leap in the training of medical practitioners using available Information Technology. How are you modifying or adapting the courses that your future health service executives are undertaking? Is it a Bachelor of Management, an MBA or whatever it might be? How are you managing the changes in technology? As I said, there seems to be a reluctance running through your submission about what the benefits really might be. Can you explain that, if it is possible?

Mr Westcott—The college has entry criteria attached to it. Tertiary qualifications are required for entry to the college. They are generally undergraduate courses in health service administration, business economics and those types of things or postgraduate qualifications.

The qualifications that have been specifically developed in the area of health service administration are provided through a number of universities around Australia. They are tending more to be delivered at postgraduate level than undergraduate level now. Health service administration is a fairly narrow field. By and large, the college does not encourage people to go directly from school into such a narrow field. It is much better for people to get a general qualification in management, business, accounting or a clinical field and then decide that they want to concentrate on health service management and do a postgraduate masters qualification in that particular field.

As far as the courses themselves are concerned—I think this is one of the issues that we are raising here—the courses that are provided for health service managers have to attempt to adapt to the various sorts of environments that we are working in. There needs to be additional research and additional pilot studies done of how managers operate in an environment where you have Information Technology introduced to it.

A lot of the problems that we are alluding to in our submission are not of a technical nature. The hardware is fine; the software you buy. It is the actual implementation of making the thing work when it gets into the workplace. That is where the manager comes in trying to ensure that the greatest benefits are achieved from the implementation of these systems. Without appearing to be Luddite, as was mentioned earlier, and perhaps sounding a word of caution, it has been shown in a number of cases where systems have been introduced into the

health setting that they have been less than successful in meeting the original claims.

Mr QUICK—Can you give us some examples of those because I am interested in that? Could you give me examples of what has been introduced, what has failed and why? You mentioned in an earlier paragraph:

. . . the benefits of such technology cannot be taken for granted . . .

And you say later:

There is a wealth of information amongst the members . . . concerning the successes and failures . . .

I would like to know about some of the failures so we can read up on them and perhaps ask questions when we are wandering around. We could say, `Why did system X and system Y fail and system A and system B succeed? Whose idea were they?'

Mr Westcott—I guess you may not be able to read up on them because those that have failed are usually not too well published. I will just mention one. Gray is more involved in this area in detail and he can give you some more detailed explanations. The New South Wales health department attempted to introduce a new patient administration system recently by purchasing some American software called First Data and the whole project has been totally abandoned and basically they are back to square one now.

Mr QUICK—What would the cost of that be?

Mr Westcott—I think they admit to $15 million, but I have heard more like $80 million was the loss in trying to introduce that system. It was basically trying to take an American system and adapt it to Australian circumstances. This is not a big enough market for the American companies to do that in. They will only put so much in and after that they just write it off.

Mr FORREST—I think I have some idea of what you are talking about. There is a changed relationship between institutions. The way my own office operates, it used to be a letter, then a fax and then a phone call the next day asking, `Why haven't you answered my fax?' Now it is the e-mail and it just takes over the way the office relates. I know what you are talking about there. It seems to me that in reading your submission the emphasis is the wrong way. The emphasis in encouraging the use of this technology has to be the delivery of a better health outcome. That has to be the reason for it. It is certainly one of the reasons why I am enthusiastic in terms of giving a better health outcome for people in rural locations.

I would be interested in your comment along those lines, but the stresses and strains are going to continue, I am afraid, as modern life—and especially in this area of communications—puts us all under more pressure to respond more quickly. But in the health care area it is to deliver a better outcome. A quicker response can save a life. Could I tease you out a little bit more on what you were saying earlier about those pressures?

Dr Southon—I apologise for any interpretation of a negative response. Certainly our objective is to use technology just as effectively as possible, but the effectiveness is the key and we have to make sure the technology is effective. We have to recognise that there is not a very good record of systems being effective. The Commonwealth submission referred to a 90 per cent failure rate. I would not support that. I would support more like 30 per cent but still that is too high.

We have to recognise that it is a very difficult area and, if we are going to be putting money in, we have to have reasonable confidence that is going to be effective. We need to make sure that we get information from the trials. There were comments earlier about the lack of information from trials. We need to understand why that information is not coming from trials. I believe there are a number of reasons for that. We have to provide the managers with the tools by which they can make wise decisions about the use of the funds so that they can make sure that their technology works for them, their organisations and their patients.

CHAIRMAN—To what extent should governments be involved in the development of Telemedicine and health Information Technology? Where there is government involvement, should it be state or federal or both?

Dr Southon—I would say certainly both and both are involved very much as a facilitative role. I believe a lot of the things they are doing are good such as promoting standards and getting people to talk to each other. There is the development of communications and making sure that people know what is going on and are talking to each other effectively and are developing their own initiatives in the framework in which that interacts with other people. It is a very important contribution to be able to keep up with the developments and be able to pick the areas, thereby producing a bit of funding, a bit of information or a bit of encouragement. Then the whole process can be coordinated and developed more effectively.

CHAIRMAN—Can you provide the committee with your views about problems with confidentiality which electronic medical records pose and compare those problems with the very obvious problems that currently exist with respect to paper-based records?

Dr Southon—It is a matter of degree. There is certainly no guarantee with a paper-based record, particularly when it is transmitted through the mail. When people talk about the repository in which all the information is cumulated in one place and a whole lot of people have access to that, then the possibilities of people getting very ready access to enormous amounts of information is very high. That is the element of degree and that needs to be very carefully taken into account.

Mr Westcott—Can I follow that up by saying that it is always a balance and a compromise. When it comes to making information more readily available, generally speaking that is a good thing, but with information systems the ability for people to access vast amounts of information is much greater than under manual paper-based systems. We face this almost daily. Now we have an ability through modification to one of our existing programs whereby

we can automatically fax to general practitioners extracts of the computerised data that we keep on patients to keep them informed as to major things that happen to patients when they are in hospital. This mechanism is of huge benefit to a general practitioner. The worse thing a general practitioner will tell you about hospitals is their discharge summaries. They always come late, they are illegible and a whole range of other problems associated with them.

Information Technology can help the GP a lot here simply by recording on a computer every time a major thing happens. It might be the patient being discharged, transferred to another doctor or another hospital and we can flag a variety of things. We have IT systems now which can automatically fax that information to the general practitioner as it occurs. These are very simple but very beneficial things for general practitioners to have. But we have to be sure of the confidentiality issues associated with that. Once you start automatically generating information, if you get it wrong once, you get it wrong for ever. It just keeps spewing out. Hopefully, we have to make sure that the doctors' surgeries from where the information is coming is also providing a secure environment for that information to be captured and collected.

Mrs VALE—On page 7 of your submission you state:

Australia is in an excellent position to take a very important leadership position in developing the understanding and skills that enable health services to optimise the benefit for Information Technology.

Would you like to elaborate on that statement and perhaps let us know your sentiments on how Australia could market its potential in Information Technology within the region and internationally?

Dr Southon—It is based very much on the character of the health system in Australia which is quite diverse but has a very strong public health system base. That contrasts very much with the other competitive countries, typically the United States which has a very strong private sector base but one which has a fairly monolithic structure.

So we have the diversity, but we have that public service character which is characteristic of a lot of our neighbours. I think this gives us the organisational framework in which the systems we develop, and the knowledge we develop in terms of how technology can really be of use, can work with the organisations. Here we are talking about a diverse set of organisations from general practice, community health to hospitals, and how all this works together to produce an effective system. Of course, there are vast differences as well, and these should not be underestimated. But I think in comparison with the other leading nations in terms of developing technology we have a very strong basis too.

Mr ROSS CAMERON—Your three principal recommendations talk about comparative assessment of major IT programs in Australia, that programs be established to enhance our understanding of how technology can best contribute to health services and that educational materials and programs be developed to enable executives and clinicians to develop and use technology optimally. It seems to me that all of those could be done without any involvement at all from government. What do you see as the role of government in this

exercise?

Mr Westcott—Certainly the role of government exists in terms of the privacy area, in terms of the security of data. I guess in terms of the other areas there is definitely a need for government to support the learning that health service managers need to go through in terms of the educational environment, the courses they undertake in support of professional development in general. Not a lot of research goes on in the health service management area. Not a lot of research goes on into how effectively IT is implemented. Certainly from my point of view, and from the college's point of view, there is a role for government to encourage some of that research.

Mr ROSS CAMERON—Why do think that that does not happen considering that health is such a huge industry nationally and there are so many corporations of pretty substantial size? Why do you think that research does not happen?

Mr Westcott—A lot of it is to do with evaluation of how implementation goes after the event. Evaluation is not something that is always high on priorities in a lot of industries, and health is really no different. It is not much different to building hospitals and as to how effectively a hospital operates after it is built. That is not evaluated particularly well either. So maybe some of it is just historical and the way people are oriented. Gray, you might have another opinion.

Dr Southon—Health service research worldwide is very poorly promoted and Information Technology research industry-wide throughout all industries is very poorly promoted. When I say research, research in terms of success and failures of Information Technology is very poorly done. So you have got a combination of two poorly promoted areas. The tradition of research in health has been on the clinical area, quite justifiably. It is quite a different mind-set between looking at how you deal with a patient to how do you understand an organisation where a whole host of people work together to treat a whole lot of patients. It is quite a different mind-set, and the research framework has not really made that step.

Mr ROSS CAMERON—If I can just wrap that up as the final question from me, it seems to me we are all here to some extent as an expression of a recognition by the Commonwealth government that this is an emerging important area that may have a substantial impact on the way health services are delivered. The profession itself are the ones who are actually doing the work and who have the clinical expertise and who are dealing with the issues day to day. There seems to be a need for leadership in the field, and it seems to me on both sides—both government and the profession—there is a hesitancy there about who is going to seize the nettle and say, `Well, this is what we are going to do.' Do you have a thought about how we should resolve that?

Dr Southon—I do not see the answer lies with anyone. It is coordinated—it has got to be people working together and facilitating each other. It needs to be in conjunction with the growing technology, so it needs to be a cooperative process—bearing in mind the breadth

of the different perspectives. Each group tends to see the system in terms of their world, and that whole process needs to be fitted together.

Mr ROSS CAMERON—So should there be a formal macro attempt, a formal process and an attempt to chart out a course for the future for the profession as a whole or do you think that just an ongoing sort of ad hoc specialty by specialty, project by project, state by state approach is the way to go?

Dr Southon—It is enormous, it is very complex, it is a very uncertain future. It is very dynamic and very challenging as well—and exciting. There are very big hazards in major planning. There is only so much you can plan, and you have got to be aware of the limitations of planning. There has to be a considerable degree of adhockery. You mentioned yourself the initiatives coming up from all over the place. You have to be able to exploit those initiatives. But then you have to develop the coherence so there are not too many different railway gauges, and then the diversions together, so it is a continuing process of bringing together and exploiting the new technology. People are talking about the Internet in ways they were never talking about a year ago. We need to be very flexible to pick up these opportunities as they come along and go with it and not get locked into any specific—

Mr QUICK—I would be interested in your comments on this statement. In a country with distances as vast as Australia's and with differing distributions of health services, electronic records combined with Telemedicine technology is the obvious solution. Whilst these approaches are involved and costly at the outset, the benefits returned to our health care system will be manifold with long-term cost effectiveness greatly improved.

Dr Southon—You cannot predict the future. You cannot say that these benefits are going to be there. Certainly we expect them to be there and we certainly hope they will be there but you can only say they are there when you have proof of them.

Mr Westcott—I think, just to follow that up, that the direction we are taking is towards an electronic medical record, but if it was easy to have developed that electronic medical record it would have been developed by now—there is such a market for it worldwide. But there is not yet universal acceptance of that and there is certainly nothing like universal acceptance of it in Australia. There are other downsides to that as well—the Australia card and all that. You could have had every Australian having an electronic record, but there are other agendas as well. So I think what Gray is saying is right, we need to be keeping the future in focus. This technology will be introduced, there is no doubt about it. The medical profession is very good at dealing with innovations and technology in general, but I guess our voice is the voice of reason and is somewhat taking a measured view of the situation in trying to ensure that we have people in the system who can take a step back every now and then and ask why, why should it be so, and where are the benefits.

CHAIRMAN—Thank you very much for appearing before the committee this afternoon. A transcript of your evidence will be sent to you for checking. Feel free to sit in the gallery for the rest of the day, should you wish to do so.

Short adjournment

[3.02 p.m.]

CHAIRMAN—I now call the witness from the New South Wales Farmers Association to be sworn in. Welcome. We found your submission very interesting because so many of us represent rural and regional constituencies. Would you please summarise some of the key aspects of your submission, prior to our commencing questioning of you?

Mrs Wilkes-Bowes—The association is grateful for the opportunity to appear today and to provide you with hopefully some useful information. The association makes its submission not as an expert in medical technology or even medicine, but as a representative of an organisation which has members throughout rural New South Wales. We have first-hand knowledge of the issues faced by those rural communities.

The provision of high quality and easily accessible health services is seen as a basic need and, therefore, it is very important to our members and to all rural people—not just farmers, of course. There is an acknowledged shortage of rural doctors. There is an estimated shortfall of about 500 GPs and 900 specialists Australia wide in rural areas.

Those shortages are being felt by our members, which is one of the reasons that prompted us to look into the area of health services—both GP and allied health services. Telemedicine—the technology was shown to us and we were given some background on the technology—appeared to be something which could be used usefully to address some of the problems of rural and remote people in accessing health services.

The use of that technology is highly dependent upon telecommunications infrastructure, which is another area where there are often shortfalls in rural areas, so we saw that as something which needed to be addressed for this technology to work. We are very pleased that the government is recognising this technology. We wish to show our support for exploration of its use to address the health needs of rural and remote people.

CHAIRMAN—The submission indicates that there could be a potential for Telemedicine to address the problem of rural and remote health care, particularly specialist care. You point out that it should be an adjunct to usual medical practice, an extra tool rather than a substitute for personal medical care. However, given the vastness of rural New South Wales and the enormous size of the rural areas of many of the other states, would you not concede that in the future Telemedicine could be the only viable means of providing health care to people who are very scattered and very remote? In that sense, it could on many occasions be a substitute for personal health care rather than simply an extra tool.

Mrs Wilkes-Bowes—In certain circumstances Telemedicine might substitute for personal health care. It might substitute for personal health care for patients discharged from hospital earlier than they might normally be, who do not have the face-to-face contact with a nursing sister or with hospital staff. I do not think we would be comfortable with the thought

that Telemedicine was the only service which people in remote areas had access to. It is quite possible that not all circumstances would suit Telemedicine, so I do not think we would be comfortable with saying that you can never have face-to-face dialogue with your doctor, just because you live in Bourke, Wanaaring or some remote village. Obviously, there will be cases where patients will need to travel to specialists. We see Telemedicine more as a tool for patients who need supervision constantly but not necessarily in a hospital—the situation I just spoke of—or for patients who need access to specialist services at least for an initial diagnosis.

We also see Telemedicine as a tool for doctors. One of the main problems we have heard about from medical practitioners in rural areas is that they are loath to go to country areas because they do not have the support of the specialist colleagues they would have in the city. Perhaps another very useful way of using the technology would be for a doctor in Bourke to be able to go back, sit down—with the patient beside them—and talk to a specialist in Dubbo, Sydney or wherever and have some of that support and backup. That would be another very useful way of using the technology.

CHAIRMAN—We have had evidence that Telemedicine could be very effectively used for ongoing continuing education for specialists. It would obviously be a great disadvantage for rural specialists if they were unable to get ongoing continuing education and contact with their colleagues. I agree that that is a very positive use for Telemedicine.

Are you aware of the renal program which is run into areas north of Adelaide from the Queen Elizabeth Hospital in Adelaide? It goes all the way to the Northern Territory and Western Australia. The Tanami people, who are an Aboriginal group, have images sent to Adelaide. The quality of the medical advice that we saw given to those people is infinitely greater than could ever be available to them were that service not available. Are you aware of that project? Are you aware of pilot projects in rural and regional New South Wales for Telemedicine and do you have any comment on their effectiveness?

Mrs Wilkes-Bowes—I was not aware of the first project you spoke of.

CHAIRMAN—Sorry, it is a South Australian project run out of Adelaide.

Mrs Wilkes-Bowes—Right. I am aware of pilots in New South Wales, but I do not have enough information to comment on them in any detail. Certainly, I am aware that they exist.

CHAIRMAN—Do you see Telemedicine as being something to reduce costs and to make the health care dollar go further, or do you see it as a means of improving health care service delivery to those in rural and regional Australia? Or do you see elements of both as being positive aspects in support of Telemedicine?

Mrs Wilkes-Bowes—I would say elements of both, certainly. There is a recognition always that there are certain amounts of funds which are available from government for any sphere of spending so obviously anything that is able to reduce the cost of services whilst not

reducing the quality is seen as positive. Given the needs of rural Australia in terms of medicine and the cost of providing that, then the use of Telemedicine to reduce that cost would be very positive.

Secondly, there are a lot of services which rural people simply do not have. So, being able to use Telemedicine to bring those to people would be an improvement. Also, anything which would reduce the cost on the individual due to having to travel, they not having access to adequate public transport and so on, would be an improvement in their health care.

Mr QUICK—You mentioned in your submission that you are undertaking a range of initiatives with the state and federal government to try to address the problem of inadequate numbers of doctors and the paucity of services for your constituents. Can you elaborate on what those initiatives are?

Mrs Wilkes-Bowes—Yes. We have been speaking with federal and state governments and professionals for three years now about a range of initiatives or areas where we are seeking for government to change their policy. With regard to the state policy, the Area of Need Scheme is something where we have seen evidence that it works better in other states than in New South Wales. Whilst we would not advocate it as being the long-term solution to shortages of doctors, we do see that if it was reviewed and modified to make it work better it might provide a solution in the short term by enabling foreign doctors who wish to practise in rural areas to practise there more easily and for rural areas to be able to be deemed to be an area of need more easily than is the case, or as seems to be the case, now.

We have also sought an increased component of rural training in undergraduate programs; that is starting to happen in New South Wales and I understand it happens in other states in various ways. We would be supportive of having more students coming into medicine from rural backgrounds, because there is work that shows that students of medicine who have come from the country are more likely to go back and practise there. I guess it makes sense as well. Again, I know other states such as Tasmania and Western Australia have a policy of trying to get more students from rural backgrounds into medicine and that is something that we would be supportive of.

CHAIRMAN—Have they been successful?

Mrs Wilkes-Bowes—I understand that Tasmania has about 20 per cent of their students going into medicine with rural backgrounds. How successful that has been in getting doctors back into the country I do not know. I understand it has been successful but I do not have figures on it.

CHAIRMAN—How do they get these country students into training? Is it at the expense of those students not from the country or is it achieved by some other means?

Mrs Wilkes-Bowes—From what I understand, in Western Australia they look at students wanting to study medicine and do not simply look at the normal qualifications, the

marks they have received. They conduct interviews and so on. I understand that Newcastle University does the same thing, not simply looking at the TER score but conducting interviews and so on and so broadening their qualification requirements.

CHAIRMAN—So entry is not entirely on merit?

Mrs Wilkes-Bowes—It is merit determined by interview and by things other just the TER.

CHAIRMAN—Could that not mean that you might have doctors who are perhaps not in the first strata of students?

Mrs Wilkes-Bowes—Work has been done to show that if you reduce the marks required for medicine slightly—and we are not saying drop them by a significant amount—and also conduct interviews and testing, you will still have doctors as good as, or of better capability than, the best TER students in the state.

Mrs ELSON—I was just noticing in the submission from your association that your problem appears to be the telecommunications infrastructure throughout New South Wales. So if we do have this Telemedicine you really cannot use it unless telecommunication is improved. Is there something being done in New South Wales to bring those facilities up to date?

Mrs Wilkes-Bowes—At the federal level, there has been an undertaking by this government that they will upgrade, I believe, 95 per cent of exchanges—I could be corrected on that—within the next five years. There have been commitments. Certainly, there is a need to upgrade the telecommunications infrastructure before Telemedicine could be used effectively all over the state.

There are many exchanges now which do not sufficiently run a modem, so I suspect they would not be capable of running this sort of technology. The National Farmers Federation have run a project called `Farmwide', which has been a pilot project in getting 1,000 farmers onto the Internet. That has shown some deficiencies in telecommunications infrastructure around Australia, which may be useful to look at in terms of Telemedicine and where it may or may not be able to be used at the moment.

CHAIRMAN—Dr Nelson?

Dr NELSON—Thank you, Mr Chairman. I could answer some of your questions for you, if you like.

CHAIRMAN—You would have to be sworn in.

Dr NELSON—I do know the answer to some of those other questions.

Thank you for putting the submission in. If the government, whether it be the Commonwealth or state government, had money to distribute for Telemedicine services, would the New South Wales Farmers Association, for example, be prepared to be involved in a process of determining where the greatest priority is—for example, whether priority would be in towns that have no doctor, serviced perhaps by a nurse, versus a town that might have one or two doctors who are struggling to remain in that sort of town.

Secondly, would rural people—I guess farmers in your case in particular—be prepared to pay for Telemedicine provided services? Someone, in the end, has to pay. I suppose implicit in this inquiry is a recognition that the government would meet some of the cost. Sometimes people who are consuming health services may say, `Why should I pay just to sit here and have a guy at the other end of the line say, "Your problem is—"'—and refer to a particular clinical condition.

Mrs Wilkes-Bowes—In answer to the first part of your question as to whether the association would be prepared to identify areas of need and so on, yes, I am sure the association would be happy to work with people to determine those priority areas.

With regard to the willingness to pay, I suppose that is something individuals decide once Telemedicine or medical services become a cost to the consumer. Even now people decide whether they are going to go to a specialist, whether they are going to go to Sydney to the specialist or whether they are going to fly to Darwin if there happens to be a better specialist there. I am sure consumers will pay on the merit of the service being offered. I do not see why Telemedicine would be any different to that.

Dr NELSON—We heard from a physician from Port Lincoln, on the Eyre Peninsula in South Australia, that, whilst he saw a real benefit in Telemedicine, particularly for continuing education and receiving specialist advice about the conditions of patients, he was—I would not say lukewarm—not all that enthusiastic. His enthusiasm was tempered by a comment that `If we had the money to spend on this, I would rather have another nurse in the hospital or someone who could answer the phone.' In that area, the basic services, as he saw it, that needed to be provided in terms of in-patient care for people in what is a remote area, were more important than pouring buckets of money into a telecommunications system which left fundamental requirements unfunded.

I could imagine rural farming people, say in New South Wales, wondering about it. For example, if the government spent a couple of hundred thousand dollars on a satellite dish and some telecommunications gear, that is all very well but at the same time they could see the operating theatre closing, pregnant women needing to be confined in Sydney and things like that. Would you like to make some comments about that?

Mrs Wilkes-Bowes—Yes, I agree. I am sure it is a matter of balance. If, as you say, technology such as Telemedicine was being expanded and not taking the place of other services it was displacing, and if basic care or more fundamentally important things were being closed at the expense of something that was not proving its worth, then, yes, I am sure we

would have those comments.

I think what we would be hoping to see is enough exploration of the technology and enough funding to make sure that it is going to be of benefit. We have highlighted some of the reasons why we think it would be and some of the problems that we see it addressing. If it did not address those and it was still pursued for the sake of technology, then of course it would not be of benefit to people. But, certainly, if it can address those problems then I see a worth in putting appropriate amounts of money toward it.

Dr NELSON—I have one final question and I guess it is a political one in a sense. If the Commonwealth wanted to deal with farmers, is dealing with the National Farmers Federation enough in terms of developing Telemedicine or should it also deal with the state based associations like yours?

Mrs Wilkes-Bowes—It is probably fair to say both. The National Farmers Federation is the national body of which our organisation is a member. However, just because we are a state based organisation does not mean that we cannot deal with a federal agency or government, and the state bodies naturally have the grassroots interaction because we have farmers as members. So, from that point of view, there is opportunity to deal with both organisations at a grassroots level and in each state. Possibly the state organisation is the closest to the situation.

CHAIRMAN—Thank you very much, Mrs Wilkes-Bowes, for appearing before the committee this afternoon. A draft of your evidence will be sent to you for checking. You are welcome to stay for the rest of the proceedings. Thank you very much.

Mrs Wilkes-Bowes—Thank you very much for the opportunity.

[3.23 p.m.]

\DB\WLBLUXFORD, Dr Karen Ann, Publications Manager, National Coding Centre, University of Sydney, PO Box 170, Lidcombe, New South Wales 2141

CHAIRMAN—I now call witnesses from the National Coding Centre to be sworn in. Would one of you like to give us a brief resume of your submission, which has been circulated and read? You might like to highlight the key points of which you would like the committee to take particular note.

Prof. Roberts—At the outset I would like to say that we are addressing only one of the terms of reference, and that is the development of standards for the coding and dissemination of medical information. That is one of the key functions, in fact, of the National Centre for Classification in Health.

I would also like to point out that there has been a change since we made our submission. At that time we were the National Coding Centre. Since then, we have negotiated a joint venture with a sister organisation at the Queensland University of Technology. So we now have two sites: one in Sydney at the University of Sydney and one in Brisbane at the Queensland University of Technology.

CHAIRMAN—How has this affected the role of your organisation?

Prof. Roberts—The site at the Queensland University of Technology formerly dealt with issues regarding coding of mortality—death certificates—and was a satellite of the Australian Institute of Health and Welfare. They were made responsible for the introduction of ICD-10 for morbidity and mortality coding. As that was one of the briefs of the National Coding Centre, as well, we thought that we should become one centre because our terms of reference were so similar. That has now taken place and gives us the opportunity for having the same or similar standards for coding of morbidity in hospitals and communities and standards for coding of causes of death on death certificates.

Let me summarise very quickly what the National Centre for Classification in Health is about: our main function is to develop and implement standards for coding and classification of diseases and causes of death throughout Australia. Before we existed, states and hospitals defined and described diseases and procedures in pretty much the way they wanted to, so when data was collected or exchanged between institutions or states, there was little agreement on what was meant.

We were funded by the Commonwealth Department of Health and Family Services to establish standards for describing diseases and procedures so that when I speak to Karen Luxford about diabetes mellitus we both meant the same thing. In fact that is the kernel of what we do. We now publish an Australian standard for the classification of diseases and

procedures, we have a nationwide education program for coders in hospitals and we promote the relationship between those who are actually extracting data from medical records and from clinicians about standards for description of diseases and the coding of those diseases.

Until the National Coding Centre existed, we used classification systems mostly from the United States. But now we have the opportunity in Australia to describe codes and to have standards that are national and that we have some control over in this country. We still use an international standard as a base, but we have the chance to describe and update those codes so that they are relevant to clinical practice in Australia. There is quite a lot more to what we do, but I think that is quite enough to set the scene for the function of the centre.

Mr QUICK—Regarding when you were talking to Dr Luxford about that disease: can you tell us the difference between the Australian variation and, for instance, the US? Is it a number like a Dewey system and how does it operate so that she knows you are talking about the Australian version and not the American, British or Canadian?

Prof. Roberts—There is a range, a bundle, of numbers that describe the specifics of diabetes mellitus: whether it is insulin dependent or non-insulin dependent, whether there are eye or vascular complications and which code is assigned first when you are talking about diabetes with a complication. It is those sorts of standards that we apply in describing what we mean by diabetes.

Dr Luxford—As Rosemary mentioned, in the past, prior to the establishment of our centre, the Australian clinical coders used American publications. The publications that we use now are very similar, but we believe they have a greater degree of specificity. So you can actually still roll back that information to a comparable level internationally. But we believe that the classification that we have added to makes it better for the Australian environment.

Mr QUICK—So if someone contracts smallpox and dies of it in Australia, that is recorded here in Australia. Is it also recorded somewhere with the World Health Organisation? Do they have to have the same classification or are we inventing something extra just for Australia?

Dr Luxford—No—they are essentially the same classifications. But in some particular areas we believed that we just needed a bit more specificity in Australia. We also wanted to have an additional publication, which was the coding standards. That is unique; I do not think there is another country that has an additional standards publication.

CHAIRMAN—It would help the understanding of the committee if you could give us a definition for a standard and a code.

Dr Luxford—We did have some overheads here, but I am not sure that there is a machine.

CHAIRMAN—Technology has not reached this far yet.

Dr Luxford—Otherwise I could Telemedicine it to you! The coding is the translation of clinical data from a medical record into a coded form, so the written text ultimately becomes a numeric or an alpha-numeric code and, if everyone is using the same system, then that is recognised as being the same disease or the same procedure. The thing that we think is really crucial for this particular committee is that the coded information readily allows information exchange.

I do not know whether you have had anybody else talking to you about using electronic patient records that, say, may be text based versus code based. We really believe that that information needs to be coded, as a basic way of being able to transmit information electronically, so that everybody understands and is talking about the same sort of thing. Whilst at the moment coding is largely done on paper based records, and a lot of it is done manually, systems are starting to emerge that are done electronically which could be adapted to transmitting that information electronically.

CHAIRMAN—I understand there are some special arrangements you have made with respect to Australia. But to what extent would coding and standards be internationally consistent with those of other countries?

Dr Luxford—They are very comparable at an international level. At the sorts of levels that people like to compare health information internationally they can easily be rolled back to a particular digit level and we can compare the same sorts of things between countries and look at the differences in health trends, for example. They are very compatible.

Prof. Roberts—We use the World Health Organisation standard as a basis for our codes so that we can compare, both for morbidity and mortality, with other countries using the international classification of diseases.

CHAIRMAN—Is that HL7?

Prof. Roberts—HL7 is the standard for data exchange. What I am talking about is the actual code that is chosen.

Mr QUICK—Can you give us an example of a disease and a code? Is it six numbers, 10 numbers, or decimal something?

Prof. Roberts—The ICD classification has four or five digit codes. If I am coding diabetes, the basic code would be, say, 250, to which you would add a point zero for no complication and a point zero one, say, for non-insulin dependent diabetes. So you can keep adding to the string to indicate the specificity of what you are talking about. Any hospital, any country, using the international classification of disease would use 250 to indicate diabetes.

Mr QUICK—So if we got to the stage of electronic records and you went into the Los Angeles airport and they said, `You have been to South America. Have you been

vaccinated?' you could wave your thing through and it would have that sort of information. Or if you have contracted smallpox or have diabetes, or whatever, that sort of information could quite easily be put onto an electronic record?

Prof. Roberts—Yes, indeed.

CHAIRMAN—You gave us a definition for a code but not for a standard.

Dr Luxford—The standards that we have developed relate to the application of codes. For example, if there were an area in which a clinical coder had a doubt about whether to use code X or code Y, the standards might provide them with a little more clinical information and might embellish the things that are missing from the book that is used for coding. One of the main ideas for having national standards which were not in place prior to the establishment of our centre is that, when somebody applies a code in WA and somebody else applies one in New South Wales, we know that they are doing it consistently; otherwise, the data will not be comparable.

We have adhered to the *National Health Data Dictionary* definitions from the Australian Institute of Health and Welfare. There are, as many of you would know, some differences in the usage of medical terminology between different sites, so we have tried to standardise the terminology and to add terms that are common in Australia in clinical environments but that may not have been added in by the World Health Organisation. We are trying to make the whole process more standardised and easier for people to perform.

CHAIRMAN—The committee has taken evidence from Standards Australia, and you may have seen their submissions to this inquiry. How do you work with them, and to what extent? In particular, do you work in developing standards with them?

Prof. Roberts—We do have communication quite frequently with Standards Australia, but our function is separate from that of Standards Australia. We see them very much as setting standards for data exchange; but the actual content and coding of that data is the responsibility of our centre.

Mr ROSS CAMERON—We had some testimony from the GPs, and they talked about one of their challenges being particularly at the early stages of a diagnosis and about the fact that they did not necessarily have a fix on the diagnosis and that they needed to be able to incorporate, in whatever way their diagnosis at that point was recorded, the degree of ambiguity or doubt in their minds. Does that impact on your work?

Prof. Roberts—We do have the facility to code symptoms and signs, if no definitive diagnosis has been made, and also to track the development of the symptoms up to diagnoses, if patients are readmitted and have a number of episodes of care.

Mr ROSS CAMERON—Is there much controversy about your work? Is it purely a clinical exercise? Do you find there are raging debates within the profession about how

different matters are classified?

Prof. Roberts—Surprisingly enough, people do get quite passionate about it and we have had some raging debates about some of the standards that we have developed. But what we are trying to do is to have the raging debates and then to have some consensus agreement as a result of that, so that everyone agrees to then follow a national standard—until we have the next raging debate.

CHAIRMAN—Has that happened?

Prof. Roberts—Yes, indeed. We are updating our standards all the time in the light of new clinical information, in the light of what is efficient to capture at the hospital level, and in the light of new technologies as they develop.

Mr FORREST—How do you resolve a conflict like that? You talk about a raging debate, and sometimes it might not be solvable. Who is your umpire?

Prof. Roberts—We have a number of clinical groups that we consult with, and there are approximately 20 of those with specialists from a range of areas and a range of states. For endocrinology, for example, we have a number of endocrinologists, a paediatric endocrinologist, a diabetes educator and a surgeon. Those groups meet frequently to discuss issues, and are also consulted on an ad hoc basis when we have a problem. The results of those debates are woven into the updates that we provide for the national codes and the national standards.

Mr FORREST—When I first read your submission I thought, `Oh, my God, here we go again with different rail gauges.' I think I am getting the message, but I was confused by a reference to ICPC Plus, ICPC, ICD-9-CMA with a bracket saying `Australia'. Can you assure me that someone in the USA who might one day have the whole of this code will know what disease I have, that he will know this is the Australian version of an international variant? How far has that progressed?

Prof. Roberts—We do identify them with those acronyms but, as we said before, that goes back to the base of what is in the ICD. So it will always be 250, which is the code for diabetes mellitus. The ICD-9-CM is the national standard, so there are no state standards anymore. We have an Australian standard for coding diseases and interventions in hospitals. The ICPC—the international classification for primary care—is just that, for use in primary care. So the world has been divided up into coding systems that are used in hospitals and those that are used in ambulatory situations.

Mr QUICK—I notice you have waiting list procedure coding for New South Wales. Are you going to do one for each state and they will all be different, or are we going to have a national waiting list coding?

Prof. Roberts—We did that exercise for New South Wales Health, who have

contributed the results to the Australian Institute of Health and Welfare, so there is now a national standard for coding of procedures for patients who are waiting.

Mr QUICK—Do you see that being spread right across Australia? So if someone is waiting for a hip operation in Tasmania, they will understand the same coding?

Prof. Roberts—That is right, yes. That is the purpose of the Institute of Health and Welfare's exercise with waiting list definitions.

Mr FORREST—Getting back to clinical matters, what about a new disease? How long does it take to get that coded? Is it a quick process?

CHAIRMAN—Like lyssavirus, say.

Prof. Roberts—It is dealt with in the same process with the clinical groups who decide whether this disease is different enough from the existing descriptions of disease in order to warrant a new code. There are a number of examples, particularly in infectious diseases, where we have introduced new codes to the Australian ICD-9-CM. Karen, do you have any idea of the numbers?

Dr Luxford—I am sorry, I do not have any idea of the numbers themselves, but I just wanted to add that the things we do here in Australia, with all the background we have with the clinical groups and the development of those new codes, we actually do then feed back to the international level, to the World Health Organisation, and discuss with them the sorts of amendments that we are making to the classification here.

We adhere to the rules of classifying so it is not changed in any major way. For example, if it were something like Ross River fever, quite some time ago, our suggestions on how to classify that and how to introduce it into the ICD would then have been fed back to WHO. So we are sort of feeding off each other.

Mr FORREST—So a disease could have a different local name somewhere else but have the same number?

Dr Luxford—That is right.

CHAIRMAN—Lyssavirus, for instance, is related to rabies, but it would have a variation of the rabies code, would it? Would you be able to look at the two codes and know they were related diseases or not necessarily?

Dr Luxford—Yes. It is a hierarchical structure so you would be able to tell from the hierarchy which things were related to each other.

Mrs ELIZABETH GRACE—The Standards Australia submission suggests that the HL7 standard, which is being used in the hospitals, is going to be introduced outside the

hospitals. Could you explain to us the relationship between that and your ICD-9-CM code? If it is going to go outside the hospital and we run into this problem that we have heard about from the GPs where it is not possible to always have an accurate diagnosis as you do have in a hospital situation, just how could that be handled?

Dr Luxford—They are related, but they are actually quite different things. HL7 is a standard for the way in which data is transmitted so it talks about the way things are made up and how that information is going to be transmitted. The codes are actually just the means to do that. It is far more IT related than the coding that we are talking about, which is a lot more clinically related. They would just, say, set a standard that ICD-9-CM would be the way in which that information was communicated.

The HL7 is much more about how that data is actually sent. For example, you set a standard by saying you can only use a certain number of digits and everyone must conform to that and, if we conform to that way of sending that information, we will all be able to talk to each other. So it is far more about the Information Technology side of it.

Mrs ELIZABETH GRACE—So you are really saying that those outside the hospitals will still be able to talk to the other people?

Dr Luxford—Yes, we all must use the same sorts of systems for sending that information and receiving it. It just ensures that we can actually communicate with each other. It does not specifically relate to the codes that we are talking about.

Mrs ELIZABETH GRACE—We seem to be using HL7 as our main base for this communication. Do you consider that it is the best one that is available, or is it a bit like VHS and Beta and we have just fallen into using it because it is the one that is most commonly used?

Dr Luxford—And that Beta was actually a better quality that went by the bye. I think that it has a high level of international acceptance. It is probably one of the more frequently talked about standards for data exchange. The Americans certainly are very interested in it and they use it in different areas. Other than that, I am not sure that I am fully qualified to add anything.

Mrs ELIZABETH GRACE—You seem to know a little bit more about it than a lot of other people we have asked about it, that is all.

Dr Luxford—I do not think I could actually add anything to it further than that, but I know there are a lot of international groups that do support HL7. It certainly gets a good hearing in the European communities and in America. I know that Standards Australia has done quite a bit of work on it as well.

Mrs ELIZABETH GRACE—So it looks like we are probably stuck with HL7 if we develop this any further on a national basis.

Dr Luxford—It seems to be quite a workable standard. If everybody is using it, it would probably be quite an acceptable way of communicating. The other good thing about HL7 is that they do get a lot of feedback and they do tend to listen to the input of the committees and actually change the standard accordingly, whereas some of the others tend to move a little bit slower.

Mrs ELIZABETH GRACE—We are looking at that as a possibility to bring into the Heath Insurance Commission as a base for people to electronically download full payment and things like that.

Dr Luxford—It is most important that something like that is used nationally as a standard. That is the whole idea of using that sort of thing.

Mrs ELIZABETH GRACE—As I say, we do not want to end up in the same sort of bind that we ended up in when it came to our style of videoing.

Dr NELSON—Professor Roberts, we have seen ANDRG used for Casemix based funding for hospital in-patient care. Are we likely to see a coding system used for remuneration for out-patient services? Are you aware of any work that is going on in looking at this sort of area? I suppose we have had the Medicare Benefits Schedule, which is a form of classification. It is a little different from your work, but do you envisage a system where we might have that? Are there any projects going on, or likely to go on, which might examine that?

Prof. Roberts—We have quite a bit to do with the Casemix Development Program with the Commonwealth because ICD-9 is used as a base for ANDRG, as you know. We have been assisting with their work on the development of a Casemix classification for ambulatory situations. You may have heard of the DACS, which stands for Developmental Ambulatory Classification System, which has the same sort of elements as ANDRGs but with not quite the specificity. There are similar classification systems proposed in emergency departments and for rehabilitation and palliative care.

However, although I support the development of those specific classifications, I would like to see more emphasis on a sort of longitudinal approach so that the ANDRG can bundle together for a particular patient's episode of illness, both the in-patient and outpatient episodes, with the specific episodes of care that make up that illness. I would like to see the classification system, such as ICPC for ambulatory care and ICD-9 or ICD-10 for in-patient care, combined in a sort of umbrella ANDRG that covers episodes of illness.

Dr NELSON—Will that be at all possible as long as most general practitioners are not computerised?

Prof. Roberts—I think it is possible but it is not easy. We have gone through the sort of manual phase in hospitals so it is certainly possible. But with the volume that is required or

is associated within general practice and outpatients, I think the effort required to code a lot of those diseases is just not possible unless we have got some sort of technology to do it.

Dr NELSON—Finally, how long would it take to train, for example, a general practitioner to become familiar with the code, whichever one we might choose to have? If GPs were using codes—whether it be for clinical applications, for research or for remuneration—would they be required for example to go and spend a couple of weeks or a period of time coming up to speed to learn what the code is about and how to use it?

Prof. Roberts—Yes. It is a bit hard to say exactly how long and to what degree of expertise you would want to train them, but I would think a couple of weeks. Most practices use a small number of codes so that they would not need to learn necessarily all the codes in the book. The codes themselves are structured so that, once you have learned how to use it, you can then use it to locate whatever you need. I think a certain degree of training, follow-up and continuing education and exchange would then be required.

Dr Luxford—Can I just add that, once you had that basic education, the ultimate would be to have an electronic system where the underlying coding was actually invisible. If you had a system where you entered in terms and it coded through the terms—if you had, say, a pick list and you could ultimately come up with the thing that best fitted what you were trying to diagnose—then the underlying coding, particularly for a GP, is not something that they necessarily have to know about. Would you agree, Rosemary?

Prof. Roberts—Yes.

Mrs VALE—I would like to ask you your thoughts on the role of government. Apart from the assistance of funds, there does seem to be a coordinating and monitoring role for government in the development of Health Information Technology and Management. Would you like to discuss the nature of policies which governments could pursue in this area; and is there a role for government as a facilitator as well as a coordinator?

Prof. Roberts—Yes, indeed, I think there is a role. Without the role of governments, we really cannot get compliance with the sort of standards that we produce. We first of all need the government, the state health authorities in particular, to channel to us the problems that are being felt in the state health services in regard to coding and classification of diseases and, once we have gone through our process of deliberation and decision, for us to then channel back to the health services through those state health authorities. So it is a sort of conduit as much as anything else in that regard. But we certainly need those state health authorities to come to some agreement that they are going to follow the codes and standards that are produced by the National Centre for Classification in Health. So there is a very close involvement with the state health authorities.

Mrs VALE—Good, thank you.

Mr FORREST—Just a question about what the drivers really are for the need for this

coding. Is it primarily a need to preserve privacy or is it to enable standardised communication? One of the issues that we are trying to come to grips with is this whole issue of privacy of patient information. A coded system does not really provide that and, at the end of it, someone still finds out that they have got a disease that they do not want anybody to know about. What is really driving what must be an enormous effort of yours to code every possible permutation of disease and then the treatments? It seems to me all I would need at the end of it is an interpreter that says `250.1.2.3.3 is someone with diabetes' and the nature of their treatment. I do not see that that solves the privacy problem.

Prof. Roberts—Privacy has not been the main consideration. What has driven it is how to handle the mountains of data that are being collected about patients in health services and how to transmit that data with a common understanding between clinicians and others who are using it, for whatever reason. So the code is the sort of key to the translation.

Mr FORREST—So is it easier to transmit a number electronically than in words?

Prof. Roberts—Yes, even if were not electronic, it provides a common understanding of what is meant by the concept to which we allocate code 250.1 or whatever.

CHAIRMAN—The submission indicates that in 1994 the National Coding Centre:

> .developed and promoted clinical coding standards for the WHO-based publication ICD-9-CM *(International Classification of Diseases—9th revision—Clinical Modification)* used primarily in acute, inpatient settings in Australia and New Zealand.

Could you elaborate on this area of work done by the National Coding Centre; and to what extent this country is successfully paving the way to capture an international market for its expertise in the area of work undertaken by the National Coding Centre?

Dr Luxford—That particular paragraph relates to what we were mentioning earlier on where prior to the advent of our centre the publications that were used in Australia were the American publications of ICD-9-CM. Since the centre has been established, we have been producing our own publications in Australia. We have two editions now, including a volume of our Australian coding standards. We are pleased to say that it is also the national standard in New Zealand for in-patient settings. So we have the whole of Australia and the whole of New Zealand using the same classification.

We have close links with similar organisations internationally and we have also played a role in a lot of South-East Asian countries. We have links with the various health ministries, and they are very interested in the work that we do. They are interested in our standards and the new codes that we are developing. Some of them, I believe, have ad hoc adopted some of our standards for themselves.

We also have close links on an education front with similar organisations in different Asian countries and in Europe. There is the potential in the future for other countries in our region to adopt our versions of the international classifications, particularly the one that we are working on at the moment, which is the 10th revision of the international classification. We will be putting that out in 1998. There will be considerable interest from other neighbouring

countries, because we will implement that version of the classification a lot earlier than other countries, particularly America. We will do it before the Americans.

CHAIRMAN—Do you generate income for the centre or for the country through this cooperation with other nations or is it simply on the basis of being of benefit to Australia to have other countries adopt our standards? Is it a commercial arrangement that you have with them?

Prof. Roberts—At the moment it is not a commercial arrangement, except very minimally through education programs that we might run in South-East Asia and New Zealand. Up until now it has been through agreement with the WHO Collaborating Centres and the role that the Queensland centre had in the Western Pacific; so it has not been a revenue generating exercise primarily.

CHAIRMAN—There being no further questions, I would like to thank you very much for appearing before us this afternoon. There will be a draft of your evidence sent to you for checking. I declare the inquiry adjourned until 9 a.m. tomorrow.

Resolved (on motion by **Mr Quick**, seconded by **Mrs Elizabeth Grace**):

That, pursuant to the power conferred by section 2(2) of the Parliamentary Papers Act 1908, this committee authorises publication of the evidence given before it at public hearing this day.

Committee adjourned at 4.02 p.m.