V E R I F I E D V E R S I O N

PUBLIC ACCOUNTS AND ESTIMATES COMMITTEE

Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects

Melbourne — 22 August 2012

Members

Mr N. Angus
Mr P. Davis
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Mr D. Morris
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Mr M. Pakula
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Chair: Mr P. Davis
Deputy Chair: Mr M. Pakula

Staff

Executive Officer: Ms V. Cheong

Witnesses

Dr B. Murphy, Chief Executive Officer (affirmed),

Ms F. Webster, Executive Director, Acute Operations (affirmed), and

Ms J. MacLeod, Director of Romeo (affirmed), Austin Health.

Necessary corrections to be notified to executive officer of committee

The CHAIR — I declare open the Public Accounts and Estimates Committee hearing on the inquiry into effective decision making for the successful delivery of significant infrastructure projects. On behalf of the committee I welcome from Austin Health Dr Brendan Murphy, chief executive officer; Ms Fiona Webster, executive director, acute operations; and Ms Jackie MacLeod, director of — I have got to read this — Romeo?

Dr MURPHY — It is Romeo.

The CHAIR — I did not want to say that on the transcript. Members of Parliament, departmental officers, members of the public and the media are also welcome. In accordance with the guidelines for public hearings, I remind members of the public gallery they cannot participate in any way in the committee's proceedings. Only officers of the PAEC secretariat are to approach PAEC members; officers and health staff as requested by the chief executive officer may approach the table during a hearing to provide information to witnesses by leave of myself. Written communication to witnesses may only be provided by officers of the PAEC secretariat.

Members of the media are also request to observe the guidelines for filming and recording. Please note these proceedings are not being webcast. All evidence taken by this committee is taken under the provisions of the Parliamentary Committees Act, attracts parliamentary privilege and is protected from judicial review; however, any comments made outside the precincts of the hearing are not protected by parliamentary privilege. All evidence given today is taken under affirmation and is being recorded. Witnesses will be provided with proof versions of the transcript within 15 working days of the hearing, which is to be verified and returned to the committee secretariat within two working days of receipt and then it will be posted on the committee website.

Following a brief presentation, if any, by the chief executive officer, committee members will ask questions relating to the inquiry. Generally the procedure followed will be that relating to questions in the Legislative Assembly, but hopefully we can do it less formally and have more of a conversation. I ask that all mobile telephones be turned off. I now call on the chief executive officer to make some brief opening remarks.

Dr MURPHY — Thank you, Chair. Obviously we are here to talk about the HealthSMART implementation at Austin, but in particular the Cerner clinical implementation, which has been the one that obviously has attracted the most interest. I will not say much to start with other than to quote one of our leading surgeons, whom I ran into just before I left, Professor Bob Jones, who is the liver transplant surgeon. He is a crusty older surgeon, and I said, 'Tell me what I can say about Cerner', and he said, 'Despite all the whinges and the problems, it is a bloody good thing to have and we're glad we've got it'. I think that probably summarises our feeling at Austin Health. We now have a very good clinical information system as a building block for the future. No doubt the project had issues. It was delayed. There were some cost issues, and at the start there were some issues around project governance. There was perhaps an overly zealous attempt at central control. I think people have always underestimated in IT projects the necessary change management, some of the complexities of the build and perhaps early on there was an underestimation of the basic infrastructure required, the state of the infrastructure in hospitals, that needed to be upgraded to host such a system.

But our implementation has been successful. We now have no paper in ordering pathology results or radiology results in any of our wards, and we have progressively done away completely with medication charts. We now prescribe, administer and record all medications in subacute campuses electronically; and already I am sure that has saved significant drug-adverse reactions. There is no doubt because it is a complex system that particularly some of the senior doctors, who like instant gratification, were not really keen to go through a change process, but progressively now they have all come on side. The junior medical staff and the nurses love it. There is no doubt that there are lessons to be learned from the implementation, but ultimately we want to say that it is a good news story at Austin Health.

The CHAIR — Thank you for those introductory comments. Essentially my brief is to initiate a discussion, a dialogue, if we can between the committee and witnesses. In that context I remind us all that we are here to talk about issues relating to accountability, transparency, relevant skills, capacity and extracting something from the lessons learned. In that context and just picking up on some of your comment in your introduction in particular — and it is referred to in your written response to our questionnaire — I was interested to tease out the issue of time lines.

In your written contribution you talked about how they were heavily influenced by government imperatives and funding cycles and were viewed by the hospital as being ambitious. If we can draw that out, could you tell the

committee to what extent you consider that project time lines were politically influenced — I do not mean in a partisan sense, but the big P, if you like — or due to poor project scoping and budgeting by project managers.

Dr MURPHY — The original time lines that were established when the project was initiated were reasonable. They were fair and they were feasible, but perhaps not to deliver the original scope. I think originally the scope was 10 health services doing clinical, which probably was not feasible. Within the time lines originally identified we should have been able to deliver what we had. The problem was that the project took an awfully long time to get to the stage where health services signed up to it, and there were a number of reasons for that. The tendering process was prolonged. The contract negotiation with the vendor was incredibly tortuous, and then health services were very reluctant to sign up because their boards were worried about the ongoing recurrent cost implications. They were meant to be funded from savings, and at least before the event it was hard to demonstrate that was happening. So there was a couple of years of lost time before health services signed up.

Then delivering within the time frame that was left of the original project plan was ambitious, but it was pretty clear that there was an approved appropriation and funding cycle and there was a lot of pressure from HealthSMART to deliver in that time frame. Again it might have been possible had we not then really underestimated some of the complexity, particularly of the medication management. We have built for Australia electronically the first Australianised version of what we call a pharmacopoeia — the medications inventory. We have done what the rest of the country will benefit upon. I do not think anyone realised how complicated that was, so that is why there were delays. I think clearly government wanted to finish what it had committed to, so the HealthSMART people in the department were keen to push us to deliver in that time frame. I do not know whether Jackie or Fiona would like to comment more on that?

Ms WEBSTER — I think it is worth noting that we are very much the first in doing this on this scale, and a lot of information that we were getting nationally from NEHTA (National E-health Transition Authority) had not really been used for this purpose before. So a lot of the information was not designed in such a way that made it meaningful to clinicians, and we were producing a system that clinicians would use. At a national level the decision to run with a national pharmacopoeia absolutely is the right long-term decision, but we wore a lot of the development of doing that.

Ms MacLEOD — I would add to that. This product had been implemented in the US, but the medication's formulary component had not been Australianised. We have PBS rules in Australia, so that took longer than expected to develop. It is now developed, so it is now available to the rest of Australia. Other sites are benefiting from that now. I would agree that it was absolutely the complexity of developing the medications formulary that took the additional time.

Mr PAKULA — I am interested to follow that up either with you, Dr Murphy or Ms MacLeod. Can you give the committee an appreciation of why applying this to clinical information systems and pharmaceutical administration is as difficult as it is? If you can assume that we are reasonably uninformed about that sort of matter, could you try to give us an appreciation of why it is as difficult as it is in regard to clinical information and pharmaceutical administration?

Dr MURPHY — I think there are a couple of reasons. Firstly, this has been done elsewhere in the world, but in very different systems. Our PBS system is different, our pharmacopoeia is different and our drug names are different. You have to actually compile order sentences for just about every variation of every drug and you cannot ever make a mistake. You have to double-check and check. There are a whole lot of issues with interactions with drugs. We had a whole room full of pharmacists going for a long time doing this. This will not have to be done again by anybody, because we have done it. Now any other Victorian or Australian health service can take this work. It continually needs to be updated. We have full-time pharmacists updating those changes that happened in the pharmacopoeia. There are so many permutations and combinations. Our pharmacopoeia is so different. The US gives medications out in a different form. Ours come in a different box and they are dispensed in a different way. The situation is different in every part of the world. Ms MacLeod might say something else.

Ms MacLEOD — At the simplest level you could visit a US hospital. The centre is not the only system in the world that does this. There are other systems. They are primarily US-based systems. A US based system has

every medication packed at its individual dose. It is barcoded at its lowest level. That is called unit dose administration. We do not have that in Australia. In fact other countries in the world do not have that either.

There are different systems. In the US every single order needs to be verified by a pharmacist before it can be administered by a nurse. That is laid down in their JCAHO administration policies. We do not have 24-hour-7-day-a-week pharmacists. Our pharmacists do not work in the same way, so the whole process around this administration is different in Australia to the US. Making systems work and fit within the Australian environment took time — even just the drug names. The whole process took some time.

Mr MORRIS — Can I, firstly, acknowledge the quality of the response that you sent us. It is obviously a fairly complex subject. It certainly gave me, who has had absolutely no involvement in the health sector apart from being on the board of a community health service, a pretty good picture of the challenges you faced. I just wanted to say that up-front.

On page 3 of the submission under the heading 'Poor project planning', you list a series of dot points of things that were not taken into account in the initial planning. The pharmaceutical aspect is obviously a significant part of it. The issue of Australianising the system is obviously part of it, but also there is the variety or changes required from location to location. I think you said that basically there was no provision for that at all assuming that one-size-fits-all was the assumption. Can I ask you whether the issues that you have listed have been listed with the benefit of hindsight, or whether in fact you were able to feed some of those issues into the process to start with? Also, related to that can you say whether the complexity of the implementation of the clinical application particularly was unanticipated or basically ignored, and was there a feeling of 'We hope it will all be alright in the end?'.

Dr MURPHY — I do not think it was ignored. I think there was an appreciation that every IT project is complex. There was an underestimation of the complexity of this project. I should say that the HealthSMART organisation has been very responsive to our issues. One of the reasons the most recent implementation has gone so well — the most difficult one; the medication — is that they have devolved to us a lot of the freedom to build things locally to meet our needs.

There is an interesting reflection. I remember at the time I was involved with the original HealthSMART board there was desire to centrally and rigidly control a project with a very onerous governance structure and centrally deliver a one-size-fits-all for everybody. That was seen as a control mechanism to prevent various health services from going off on their own and not being controlled, governed and going over budget. In fact the aim was perfectly laudable — that is, it was to produce a budget system that was controlled and a project system that was centrally controlled. But it was too bureaucratic. It became too rigid and prevented, particularly health services — and I can say this without being too boastful — with a lot of talent locally from actually benefitting fully. We initially had to go and get everything changed and negotiated with the other health service involved and dealt with in a central committee. It took forever, and it had to be delivered centrally.

Now we have a lot of the build tools we can build things within reasonable parameters, yet we still have that sense of a statewide project that has local modifications. There was an appreciation that it was going to be complex and it needed to be tightly controlled, but I think there were things that were underscoped. I think one of the most important things was the poor state of the IT infrastructure in our public hospital systems. We now have one of the best IT infrastructures in the system, partly because of HealthSMART and partly because we have done reasonably well financially as a health service and have invested, as a priority, a couple of million dollars each year. When I arrived at Austin Health most of our computers were seven or eight years old. We now have all the computers up to speed. We have a wonderful wireless network. You need all of that to be able to deliver absolutely reliable clinical IT.

Ms WEBSTER — I would agree. I think even though the Austin tower at the time was five years old it not have clinical grade wireless installed in it. We actually required a significant amount of money that needed to be invested in infrastructure before we could even start the project. We were no different from any other health service, but I think there was a lack of understanding of what it would take to ensure that you had sufficient wireless coverage so that people could move around and not have the system dropping out with patient information on it. We were aware of that whole issue up-front, but it was perhaps a surprise when we put in our initial business case to say this is what we actually need to get up to scratch.

I think we all learned a tremendous amount through the project and are running it very differently now as we continue to work with HealthSMART on our projects. But it has been an evolution, and it has been a three-party project between us, the government and the vendor as well as another health service. The complexity has obviously increased by the number of people with whom we have to negotiate.

Mr MORRIS — I would just quickly follow up on that. You said the approach from HealthSMART had, I guess, evolved, to put it that way, and also that perhaps there were some objectives in the original system that meant it was not necessarily all about the patient experience but also it might have been driving other outcomes. I just want to clarify that that is what I heard. I just want to make sure of that.

Dr MURPHY — Could you clarify that a bit?

Mr MORRIS — You were talking about driving costs.

Dr MURPHY — IT projects have, as everybody knows, this horrendous propensity to run out of control with the costs.

Mr MORRIS — So it was seen as a method of keeping a cap on it.

Dr MURPHY — It was seen as a method of delivering this project on budget.

Mr MORRIS — I was hearing it slightly differently. I assume that the evolution that has occurred is that HealthSMART has realised that a centralised system is not going to keep a cap on the costs; in fact it might be the reverse.

Dr MURPHY — There needs to be a balance. Project scope creep is very real in IT projects, so you do need a governance structure. The beauty of the Victorian health system is that we have semi-autonomous governance, and that is why we are the best health system in the country. You need to use that a little bit and use the expertise, drive and enthusiasm locally. However, as a funder you do need to keep control; otherwise you can get out of control. We think we have got the balance about right now. The balance was too central, and that led to such a delay in flexibility that was a frustration for us.

Mr MORRIS — Earlier this afternoon CSC highlighted the difficulty, as they saw it, of having HealthSMART between the provider and the client and the backwards and forwards. The reason I raise it is that obviously we are interested in getting structures right as well. Thank you for that.

Mr SCOTT — In the submission received by the committee on 30 July, on page 7 there is commentary around the Ombudsman's report, and in particular there are issues about which it said, 'strongly disagree with the views expressed by the Ombudsman'. It is reported that the system had a negative impact on patient safety. In discussion earlier today with the deputy ombudsman and staff my memory is that they stated that the views of Austin Health were not reported in the ombudsman's report. Further, I would be interested to know, firstly, what contact you had with the Ombudsman's office during that period and, secondly, the reasons you take such a strong view on that issue.

Dr MURPHY — 'Strong' is my word. I gave evidence to the Ombudsman's inquiry — quite a long period of evidence to some nice young people. They listened, and I was quoted in their report. I think there is a quote around some underestimation of costs. I think where they have got that view from — and I know you are hearing from the Eye and Ear Hospital later — is that one of the mistakes we made with HealthSMART was implementing the outpatient module of Cerner in ophthalmology outpatients. It is the one group of doctors that does not need a complex system. They see patients for a few minutes and use about three drugs. It was a very foolish decision, and it was based basically on the fact that the Eye and Ear Hospital was the only hospital at that time to put up its hand to do it.

The senior medical staff are the most change resistant of the lot. They will react rather than sit down and understand. The way Jackie set it up at the Austin was so that every senior doctor in the clinic had a one-on-one hand-holder in the clinic to show them through the system. They will not come to training. They have to be dealt with in a special way, and at the eye and ear hospital they just roll it out. These ophthalmologists went pretty crazy. Some of them have voiced their opinions, even to senior members of the government. That was a real problem for us. I think some of the pharmacists who spoke to the Ombudsman early on in the piece were

worried about the direction in which the build has happened. We believe the way that the build has happened at the Austin provides a definite enhancement of patient safety. We do not agree with that finding. Sometimes you find findings from the Ombudsman's office that are not necessarily tainted with real-world experience.

Mr PAKULA — Did you express that view to the Ombudsman before the report, or did you not know that he was going to make that finding?

Dr MURPHY — I said very strongly in my evidence that we went through all the difficulties of the project but that we had ended up with something that we are pleased to have and want to build on and that we thought it was good for Austin Health. I was very clear in that statement to the Ombudsman's people.

Mr PAKULA — Were you surprised to find that that element of your conversation was not reflected?

Dr MURPHY — I was not asked specifically, 'Is this a threat to patient safety?'. I was not asked to comment on the other statements, but I was asked to give a general impression of the thing.

Mr SCOTT — In what ways — obviously as you think it has been positive — has the system improved patient safety?

Dr MURPHY — I can start and then Jackie can continue. Basically, medications are clearly the most important, because the system prompts nurses if they have missed a dose, and it prompts doctors who are prescribing. It says, 'This patient is already on this drug that might interact', or it tells them if they are prescribing a dose that is unsafe. It has a whole lot of checks and balances to make sure that the right drug is given at the right time and is not interacting with other drugs, and that is really important. But on the other side of it there is order entry results reporting. We now have radiologists — and it is embarrassing to admit it, but most radiology departments in public hospitals get scribbled bits of paper that are illegible — who have electronic forms that come up with a clear patient history, so there are a lot of ways of preventing doing the wrong test or side. Similarly you can keep a much better track of the results. In pathology we now have automated systems to make sure that you are ordering the right tests. Jackie is the expert. I will ask her to expand on that a bit more.

Ms MacLEOD — In implementing inpatient medications I have had the opportunity to work on the floor and watch nurses and doctors interact with the system. It is very clear it does provide safety barriers for the nurses and doctors. I will give you an example. There are two different types of morphine, one being a slow release — so it is a top-up dose — and they might be given one to top up the other. I watched a nurse, and it warned her that the last dose was given at 10.15. She said, 'I didn't give the last dose at 10.15'. But because they were the same drug and one was at one end and one was at the other end, she said 'Oh, isn't that clever?'. Absolutely it is clever, because that is what the systems are designed to do — warn people.

The other thing we started to see in practice was that from a nurse unit manager's perspective they could actually see whether all their patients had had their drugs and whether they had had them on time. If they did not have their drugs, the nurse unit manager could see why. We started to see we had some increased efficiencies around getting medication supplies to the wards. We could actually influence practice. The people who do the ordering in our hospitals are our most junior doctors. They have not been practising medicine for 30 or 40 years, so they do not always know what the loading dose is for a particular drug. What we have managed to do is build that decision support into the system to assist them. We can influence good practice in the way that we build that system. A junior nurse told us, 'Now I can see the reference for that drug'. She was a trainee nurse. Previously she would have looked at a drug chart and had to go off and find that reference somewhere else. That reference is right there. She did not leave her patient and look up the contraindications of that medication at the patient's bedside. She was a graduate nurse.

The safety benefits of these systems are absolute. That is what we did it for. We did it to improve drug safety, reduce errors and provide that support to our staff. No system is perfect. We still expect our staff to be clinicians. What happens is that when you put something on a computer people believe it. People will still make mistakes. Computers are run by humans. So we still have to train new staff — you are still a nurse and you are still a doctor — but these systems help them do the right thing.

Mr O'BRIEN — It does touch on an issue broader than perhaps just this particular IT program, and that is the relationship between senior doctors and automated systems. Some of that may be changing, and you

mentioned those senior clinicians at the other hospital. I imagine they are also experts in their trade. The work of our senior doctors in Australia is why we have a comparatively good health system. A lot of them will be able to spot, if they examine a patient — I remember the phrase given to me: 'I can see a patient, and with respect I can see nine things wrong. Someone without my seniority can only see two or three'. They know the order in which they must be treated to manage the patient through. Yes, there are the IT histories and all that databasing, which is very important and one of the benefits, and original ideas of the system. Where there are inefficiencies and we cannot get records — that is certainly something that it would be good to have IT pick up on, but at the same time we want to keep this clinical specialty there and that check so that we are not relying on a 'beyond 2001'-type computer to tell us something we should not do.

That is the general issue. Relating to these particular procurements, would you say in retrospect, having regard to the criticisms, that a more respectful or pilot approach with, say, a couple of hospitals like yours, where the IT component could have been worked up in a better clinical environment to respect these various tenders — I see you are nodding there, Ms MacLeod. I do not want to verbal you, but I would like you to respond to these opportunities to improve the way we would do these projects in the future, particularly having regard to the expertise within our devolved hospitals or health networks.

Ms MacLEOD — I agree, and I think we touched on it before. The original scope of HealthSMART was to deliver a fully built system built by people sitting around a table, who are clinicians in their own right, but that does not work. What does work is if you build it in a hospital where you have expertise, you have the world-renowned ID physician and you have all of those people at your service. If you can build it at a hospital — we have built it at this hospital. I could go and implement this at another hospital now. Doctors in Australia trust other doctors. If it works at Austin, it is going to work at Northern and Melbourne and all of those sorts of things, and you get that buy-in, because it has been done by people who have that clinical knowledge.

Mr O'BRIEN — So in the general scope of the next hundred years this is only the start of the IT-health interaction. We want to develop the best governance models and structures. That is why we appreciate you taking the time to give us this evidence and insight, specifically on the models that work. It is something we wish to do.

Dr MURPHY — I think it is important to supplement that by saying that we are not trying to replace clinical judgement and clinical assessment. This is a tool to assist clinicians and often to take away some of the trivial tasks that they do, like writing orders and radiology. It provides some safeguards, but the system will not stop a doctor making a clinical decision. It might help you; it will say 'Warning! Are you aware that this is a very large dose of X?'. But you can override that. It is not stopping a clinician from doing what a clinician has the authority to do.

Mr ANGUS — Dr Murphy, I just want to follow on from the matter we have just been discussing, in particular the whole issue of delay, which you have well noted in your comprehensive response, and the fact that the project started outside the hospital environment and was brought back in. Then you had more input into it. Indeed I think it was as recently as early last year — early 2011, as you said here — there were significant improvements.

I suppose from our point of view one of the learnings we are trying to glean is, as Mr O'Brien just mentioned, how we can do things better in the future. Can I just get you to comment a little bit more on perhaps the isolation situation outside the working environment of the project and how that was significant in the delays?

Dr MURPHY — I think I will start, and I might ask Ms Webster to comment later. The ideal model to me is that you have a statewide strategy and that you have statewide objectives. I believe you should have some limitation on what products you are buying as a state, because our doctors and nurses move from hospital to hospital, and it would be helpful to be able to have some, at least, common systems and not to have to be retrained all the time.

But within that environment I think you need to give health services some flexibility to perhaps choose some elements of a system, to choose what they do and when and particularly to give them that capacity. I think Jackie referred to it before. In the build-up of their systems, doctors — what we went live with is quite different to what we have. Over the six months after we went live with the first system there was lots and lots of

feedback: 'This doesn't work for us'. If you have a 12-month or 6-month delay to get that fixed by a central process, that is unacceptable. We want to be able to respond quickly. So you have to give people enough local build capacity to be able to respond to local needs without busting the core system, which is for the state. It is a very fine balance, and I think it took us a while. I might ask Fiona to comment on that a bit.

Ms WEBSTER — I think we absolutely got to the point where it was essentially us and Peninsula doing it together, so from 10 it came down to the 2 of us. In some ways we got to that more in a hospital, working in local systems. What we really need to get to is a point where hospitals can lead and others can quickly follow, because I guess the risk is that we will continue to move ahead, but other hospitals need a trajectory to follow very closely behind. It may be that there are things we focus on and develop up, other hospitals focus on other things and develop them up and then ultimately we share them, because the complexity of the system means we actually need a lot of people working together to build it out quickly enough to meet the expectations of what a system like this can do.

Having a system where multiple hospitals can collaborate but collaborate from their own base is absolutely essential going forward. Trying to push everyone down a single path at a single time is just hard work, but you can see that people could prioritise different elements of a system, develop them up and then share them. That would be a perfect opportunity to really move forward quickly.

Mr PAKULA — Dr Murphy, I just want to take you to point 4 of your submission, pages 12 and 13. We have already heard from Ms MacLeod about the way in which the project assists in a clinical sense, and as much as I would be delighted to have you repeat all that, I think we have heard about it. You also then go on to say that subsequent implementations will benefit from the project and that to gain from the investment the government should consider extending the system to other health services. What I have written alongside that is, 'How, who and when?'. I am interested in what you might offer the committee in terms of those questions — how it should be extended, to whom and when.

Dr MURPHY — Yes, that is a really complex issue. I think the most important thing is that we cannot stop investing in clinical IT; that would be a very foolish thing to do as a state. There are health services in Melbourne that are completely paper — everything is on paper. They might have some of their pathology results on a computer, but they order everything on paper. We actually have scanned records, so even the paper stuff we write gets scanned and digitised and stored electronically.

Because we have done so much work to get the system functional in the Victorian environment, I think it would be foolish for other health services — even though there are now other products to not build on what we have done. When this product was chosen it was probably the only viable product there. There are now other products, some of which are probably a bit slicker and fancier and 10 times more expensive, that are out there, and other health services are now looking at them — those who have had money in their redevelopment budgets. I think it would be foolish to do that, because we have invested so much work. What we have done can be readily — not readily, but nothing is readily done in IT — and fairly simply transported and needs to go live.

We are only halfway there at the Austin. We still write our clinical notes on paper. We just opened the Olivia Newton-John cancer centre and we do not have a cancer management system because that was not part of the HealthSMART program, so we are having to write all the chemotherapy drugs on paper still because the budget only went as far as we have gone. We have actually started doing some work directly with the vendor to try to develop some of the electronic documentation work. Fiona did a very good deal with it.

I accept absolutely the government's view that health services should be allowed to choose, but I think this product is very cost effective for them to take up now. You can probably only do a couple of metropolitan health services at a time, and it will probably take us, I would think, five or six years to get the whole of Victoria to where we are now. At the same time, places like us and Peninsula need to start the next boundaries. So unfortunately at a time when we as a state have no money it is an expensive venture, but probably not as expensive as ours was in terms of all that build work.

Ms WEBSTER — Given that most hospitals are starting from such a low base in terms of their IT infrastructure and the clinical systems they have — we still have clinical systems in hospitals that are 20 years old; you know, like marginally better than green screen — and everyone is starting at a different point, we actually need to give hospitals the choice about what priority IT development they do next in the trajectory to

get them from where they are now to where ultimately we would want all health services to be. Not every hospital would choose to do a clinical system like we have done as their next big IT project. Some will, some will not. It is really about having the pool of funding that enables hospitals to say, 'Our next priority is a clinical system' or, 'Our next priority is an ED system', or for us it would be a cancer system. As you actually give hospitals those choices they can build their own future and they have the buy-in for fixing their biggest problem first.

The CHAIR — Ms MacLeod made some comments a little while ago, which Dr Murphy and Ms Webster also commented on, on the same central theme around the fact of early adopters versus the rest, in effect. This is revisionist as opposed to looking forward, but I am trying to understand the implementation of this project. I accept that there have been some problems with implementation, costs and whatever, but the bottom line is that the question that arises out of all of that is: if the planning had been around a different model of implementation — meaning, for example, design, build, construct, however you like to express it — and used one or two selected providers to demonstrate and in effect absorb the development costs, to be the focus of development, to then be the early adopter which was then able to plan in a rational way the rollout beyond that, would that have been a more effective approach than the template that was used, which was a big-picture template?

Dr MURPHY — I think it would have been; I think it definitely would have been. I think there was a desire to do as much as possible for as many health services as possible but there were uncertainties about the viability of the business cases, and health services were very reluctant. As Fiona said, some of them needed to learn to walk before they could run. Austin refused to participate for the first year or two because we were worried about the risks and the costs, and it took us a while. In the end — they blame me — we just said, 'Let's do it; someone's got to show some leadership'. My board had to take some significant risk, because we went into a project which has meant that we now spend a couple of million a year in recurrent costs to run the system, which we have to find from other savings, so we had to make a really serious commitment as an organisation to do it. What has eventually happened is the available money has been focused largely on two health services, and probably if you had done that initially — —

The CHAIR — As part of the plan.

Dr MURPHY — As part of the plan, you would have had a quicker and better outcome. But the motives were very honourable to start with.

The CHAIR — You have just raised another point I wanted to go to, a slightly separate point, about cost. I do not know if you have had enough time to evaluate this, but in terms of net cost implementation versus efficiency gains over time, would your view be you are on track to get well ahead of the game in terms of generating savings — not just clinical benefits to patients but, importantly, efficiencies in the business model?

Dr MURPHY — Sure. There are definitely some efficiencies. For example, in the pathology service you do not need to have the same number of clerical staff inputting stuff. In radiology we have got rid of several clerical positions that took the paper reports and loaded them up into the system. Even the work of the pharmacists is simpler now because instead of running around looking at every drug chart, they can look at them all from the one place. But it is important to recognise that clinical IT systems are not primarily implemented to achieve operational savings. They do achieve some, but they come at a cost because they are very complex to run. So the savings, in most international experiences in terms of direct operational costs, are rarely sufficient to offset some of the increased costs. But we do not measure the savings to us of not giving the patients the wrong drug, of not causing someone to stay in hospital for three months from an adverse drug reaction or having had the wrong X-ray or the wrong blood test. We are not very good at capturing in an economic sense improvements in safety and quality, but our primary driver in clinical IT is to provide better patient care.

The CHAIR — Just for clarity, I guess for the record, what you are saying is that the investment in the system will continue to escalate over time but that is an investment in patient care as opposed to any economic benefit?

Dr MURPHY — No, there is definitely economic benefit that happens eventually, but it is incremental. So we might be spending another 2 million on operational costs. We might have saved half a million now, and over

the next few years we will probably save another half to one million, and the costs will not go up substantially. So it may well come close to paying for itself, but if you measured the impact on patient safety, it would clearly pay for itself. Doctors do not have to work so long once they get slick. If you are the liver transplant doctor and you have been used to spending 20 minutes writing out the 20 tests and you just go 'click' and the computer spits them all out, then that is pretty easy.

Mr O'BRIEN — On that aspect of it, is there also something we need to look at in our budgeting for hospitals and the health system to properly reflect the true benefits of a properly integrated IT system? Have we got some false economies occurring at the moment in the way budgets are structured? I would ask you to answer that. The follow-up question I will ask now, and you can give your answer in two parts — that is, you have mentioned a number of times the work you have put in, and you have talked about your pharmacopoeia and other things that in a sense the hospital has invested its own time into. How are you presently renumerated for that under the funding arrangements, if any? There would obviously be pros and cons for increasing the incentive or compensation for hospitals working to develop IT systems that have a broad benefit beyond their own. I know there is a general legitimate goodwill and networking amongst hospitals, but at the same time if you are competing for government funds, you need to be properly compensated for the legitimate work you do. So I suppose that is three questions — first, second and third.

Dr MURPHY — Sure. So in general terms obviously we work in and out of a base funding system, so we are paid for the work that we do, but unfortunately we focus our expenditure on direct clinical care delivery, so hospitals generally do not spend enough on IT because it is seen as a relatively discretionary expenditure. When you have got people waiting for hip joint replacements and you want to spend money on surgeons and hips you tend to do that rather than spending it on something that might cost a bit of money, take some years and then develop a quality benefit in the end. You do need to have, I think, at least initially, specific support funding to drive these investments and changes, but then ultimately they should be incorporated into the output-based funding system. It should be that part of my costs of doing a hip joint is a little bit of a contribution for the clinical IT system, so the clinical costing system should cover that.

We are always having to meet growth demands and productivity demands, and we are generally onto them, but it makes it very difficult to make really strategic IT investments in that environment. Most of the work that we have done on this project was funded by government, to be frank. Our pharmacists were funded from the project. We did receive a reasonable amount of money because the budget originally for 10 health services was given to 2. Fiona and Jackie argued very strongly for our business case. Our business case actually held absolutely true except for the delays that meant that salary costs blew out, but all the capital costs and all the other things held true. What is not funded by government is the recurrent costs, but from our point of view we have offset some of that with savings, and we think the benefits of patient safety and quality are so much worth it.

Mr O'BRIEN — Just on the IT aspect, this committee also had a review of the Auditor-General's report into performance-based funding models and there is commonwealth work and the 1995 performance criteria. We have had various representations about the need for that work — to still remember the patient focus is the no. 1 important tool. Are your IT systems as part of this integrating in that? Is there feed-off data? The big thing was to allow the data to feed into the central agencies — that was one of the recommendations — so that they could properly analyse it in terms of funding models and patient numbers coming through. Is that something that is assisted by this? Is that integrating?

Dr MURPHY — Our IT systems do feed access performance, but it is a different system. This system is not part of that. It is our patient administration system generally and our ED system. Fiona might be able help me.

Ms WEBSTER — It is probably worth noting that the national accreditation that is coming in for all hospitals — it is being driven nationally — actually has a lot of requirements to be able to audit the work of clinicians and to know that care was delivered in a very particular way. We are not there yet, but we will be in a position to audit that electronically — to know that people have had their care handed over, to know that they met a particular pattern of care. Hospitals that do not have a system like this will literally have to have the people with the clipboards going around and manually picking up pieces of paper and auditing at that level. So to some degree the national agenda is very important to patient safety, but the tools do not exist on the ground to necessarily really drive some of that forward. We are going to be better placed to do that, but most health

services will not actually be very well placed at all to provide anything other than the very rudimentary diagnostic information that we provide already for standardised activity reports.

Mr SCOTT — Briefly in a response to the chair you touched upon the non-clinical patient safety benefits that you believe accrue. I would be grateful if you could provide more detail of those but also at the same time to address the issue of whether the time taken to establish the system was necessary in order to accrue those benefits — that is, if it had been more rushed, would you have been able to generate those sort of benefits out of the system?

Dr MURPHY — I might ask Jackie to give some examples later.

Mr SCOTT — Time often comes up.

Dr MURPHY — Yes, I think it is true that you need time to iteratively develop the system. So once you pilot it, go live, get the feedback, respond to it, it is really important not to say, 'This is what you have got to and live with it'. You could have that process of modification. That is probably going to go on forever — it will never stop — but obviously it slows down. Some of the delays in the beginning probably were not very functional delays. We were trying to get changes made and having a bureaucratic process. Those time delays did not add to the benefits, but it is true that a very rushed implementation probably would not have been as effective. Jackie can probably give more examples of patient safety benefits.

Mr SCOTT — Looking at the non-patient safety. If you outline the patient — —

Dr MURPHY — The economic benefits?

Mr SCOTT — Yes.

Dr MURPHY — If you look at the work of the junior doctors, they have lived previously in a world of paper. You go on a ward round with a junior doctor and they have five folders and 10 pens and they are writing notes. They have come an hour early and written down all of the pathology results on a bit of paper so that they can tell them to the consultant, like I used to be. Now they go round with a little wireless laptop and they say, 'What is the potassium like?'. There it is on the screen. They can record things on the screen and they can even say, 'You better organise a quick chest X-ray', then you just knock it off in the middle of the ward and do not have to go off and write things down. They will take some time to get slick. Obviously there is a learning curve, and sometimes when you are a new to a system you do not realise the savings in time. But the good ones, some of them in the complex clinics, will say they can see two or three more patients at clinic because they are not sitting there for half an hour writing up the same list of tests and orders. So that is really important.

As I already mentioned, the pharmacists are a surprising benefit. They used to literally walk around every bed, look at every drug chart and scan through. Now they can just flick them up on the screen, and they can even have expert systems to pick issues with that. We have saved a hell of a lot of paper and porters. People are not carting request slips anymore down to pathology or radiology. As I have already mentioned, we have saved a lot of clerical staff in radiology and pathology. Think of some more.

Ms MacLEOD — Previously when you ordered a pathology test you have no idea if it had been collected — if someone had collected it — you had no idea what time it got to the laboratory and you had no idea what time you would get a result. You would think that all those processes would happen. In any logistics system in the world now you can look at where your parcel is and all those sorts of things. So now in hospital a doctor can actually see, 'Has this test been taken? Has radiology received this order?'. They do not have to ring any more to say, 'Have you got my sample?'. The whole process is now supported. There are lots of little efficiencies like that. In fact one of the things we did was we actually shadowed — it is very tedious, but someone from our team shadowed junior doctors for 100 hours pre and 100 hours post.

In Australia we are quite bad at collecting financial benefits from systems like this. If you look at data that is coming out of the US, where hospitals are incentivised to get electronic systems through Barack Obama's meaningful use legislation there, hospitals are incentivised to become electronic because they see that that is the way. The data that is coming out of there is now showing that hospitals that have these systems are more efficient. But they absolutely measure everything there. We have spent all this time implementing, but it is really hard to measure absolutely everything that is of benefit to this. I would love to see us do that because we

are one of the first in Australia to do this, so really it would be great to see some of that research coming out of Australia and showing that.

The CHAIR — And by the time you get around measuring it, it will be too late because you will not remember what it was like in the old days. I understand that.

Mr MORRIS — Can I go to page 8 of your response, the third paragraph down, just around the issue of the statewide licence, some of the modules that were not purchased and the advanced clinical documentation. I was not clear, but the ED system and the surgical system — were they also not part of the — —

Dr MURPHY — They were not part of it, no.

Mr MORRIS — Obviously you were not the ones making the decision, but did you acquire any understanding of why those sorts of things were excluded?

Dr MURPHY — Money, basically. We had a budget and the decision was made. I think it might have been better, as we said before, to do more in fewer hospitals, but there was a decision made to do two modules: order entry pathology in radiology, and order entry in results for reporting and medications management. Medications management is a complex system and you might normally have done documentation before, but it was decided by the HealthSMART process, and endorsed by the HealthSMART board, that medications management would give a fantastic bang for your buck and the best improvement in patient safety. Our experience would support that. But I think there was only about $300 million for the whole of the state — —

Mr MORRIS — Only?

Dr MURPHY — Yes. But Canberra Hospital's clinical IT budget —

Mr MORRIS — They are. I appreciate what you are saying.

Dr MURPHY — is 90 million for one hospital. But the ACT is different.

Mr MORRIS — Entirely!

Dr MURPHY — But we understand the funding constraints of government, so this was a compromise. You could have cut that 300 million in a different way. But our ED module has now been funded from some commonwealth health reform money, and the Minister for Health has approved that so we are now implementing it, and we are delighted with it. But to do clinical IT really well and comprehensively in the Victorian health system you are getting into the Bs, not the Ms. It is possibly billions over time. They are very expensive implementations, and we do not have billions to spare at the moment.

The CHAIR — Is this a related issue?

Mr ANGUS — It is, Mr Chairman; it is just in relation to financial matters. Can I ask, Dr Murphy, what is your understanding of who owns the product that you are now using?

Dr MURPHY — Do you want to talk about that?

Ms MacLEOD — It is interesting because the head agreement belongs to the state of Victoria, so the Cerner licence is owned by the state government. When we contract with Cerner to implement, the implementation services are direct contracts with the hospitals themselves, so it is a very interesting governance arrangement. The way it is now is quite interesting. The support agreement for the system now sits with the state. We do not have direct access to the vendor unless we go through HealthSMART.

Mr ANGUS — The reason I ask is that obviously you have put enormous amounts of time and effort in with enormous consequent costs. I am wondering whether there is an opportunity as a state to export that product to other states. That is probably not a matter for this committee at this time, but I am thinking that the budget has blown out by hundreds of millions of dollars, so now is the chance for us as a state to try to recoup a bit of the funding money that has gone in.

Ms WEBSTER — If I can answer that, the intellectual property that was developed in all of those catalogues rests with the state. I guess it is up to negotiations with other states that want those catalogues as to how that works. But I must say when I look at some of the things that other states are doing with the same products, we would like some of theirs too.

Mr ANGUS — There might be a trade, do you think?

Mr O'BRIEN — A barter economy!

Mr ANGUS — It is just food for thought.

Ms WEBSTER — Yes. We are very interested in bartering.

Mr PAKULA — I have one final question that I have also put to previous witnesses. You have already given some very detailed evidence about the difficulty that comes with having inconsistent software and hardware platforms across all these different health networks. But in our health system you also have, as you do in others, a very devolved governance structure. With regard to IT we got to the point where, and you have indicated this, perhaps moving forward the best way is to have an early adopter. In terms of the other challenges that will be presented to the health system as we move forward, is there anything you can share with the committee that will help us in the future with regard to the best way to deal with that very devolved governance structure and the attempts to implement any kind of common architecture, whether it be about IT or anything else?

Dr MURPHY — I think it is important to have a state policy framework. That may not necessarily be only one system; it may be a panel of systems that you can choose from. There need to be some centrally driven priorities about what we are going to invest in. Within that context I think you need to have a process of, as Fiona said, examining where each health service is and what its readiness is. I think it is very reasonable for health services to have to satisfy a rigorous business case process and some reasonably flexible policy parameters and then make funding available in that context and hold them accountable to it.

I think probably a prerequisite in order to do anything substantial in clinical IT is going to be to upgrade the infrastructure across the sector, because it is not good. We tend to buy MRI scanners and CAT scanners and those sorts of things rather than computer systems. Ours is the best; ours is really good now. That is a lot of the cost that will hit other health services, but that can be done in a very easy and consistent way. I think that is probably one of the highest priorities.

Ms WEBSTER — To some degree having a statewide footprint, as it is termed, is a useful idea so that we have a commonality of the system. It is then how you allow agencies to diverge from that, because we will get to a situation where software is being upgraded every year. The more hospitals that go down very individualised paths, the harder it is to upgrade. So everyone is upgrading individually. The cost of upgrading individually is significant. The cost of maintaining catalogues individually is significant. The cost of other people Australianising products that are not already in Australia is significant. So to some degree it is finding that trade-off between not stifling people's choice but being very clear about the cost of those choices.

Ms MacLEOD — I would add that you need to provide hospitals with some autonomy to make the decisions. Hospitals need to be able to respond to their clinical staff requirements quite quickly. There are things like medication catalogues that can be state content. But you have to be very careful about what you prescribe as must be done. It takes too much time and negotiation to try to agree on the same form across five hospitals; that is just silly. So there is that fine line of being able to give hospitals the autonomy.

Mr ANGUS — I want to refer back to your response again, Dr Murphy, particularly page 13. You have very generously outlined a number of learnings, as the committee requested you to. I note in the third paragraph you finish a comment regarding the state build philosophy by saying:

> The process of building a state build should not be led by the DoH.

I thought that was a very decisive comment. I am just wondering whether you want to add anything further to that or flesh that out any more.

Dr MURPHY — I think what that was reflecting is that in the original structure there was definitely clinical engagement. Health services were brought in but it was done in the department with input from health services. It was done in a somewhat theoretical way without that practical input. Clearly the department needs to be involved; it needs to have some governance. But what we found was when the build for the second system, the medications, was done out in the health services by health service staff, even with the involvement of the health department and Cerner people, it worked better.

Mr ANGUS — At least in respect of earlier discussions.

Dr MURPHY — Yes. It was really just that overcentralisation and control. It was not criticising the department necessarily, it was just that it thought that it was possible to build something in a somewhat removed environment.

Mr ANGUS — In a laboratory rather than in the field sort of thing.

Mr O'BRIEN — If I can add to that, some of the consultants gave some evidence that by the time they had completed specifications in terms of that computer work, they were finding in the clinical contexts or out in the agencies and health services that that was not what they wanted and they had spent two years working on something perhaps in the sense where some sunk or wasted funds would go.

Dr MURPHY — I am sure that is right because if you ask a set of clinicians for some specifications in a theoretical context, feed them into a central process and then two years later you deliver a product, their views have changed. That is why we talked before about this iterative process. You would need to develop it with the clinicians, at each step of the ways test things, and then when you roll something out initially be able to respond, change and modify it. So I am sure that is right.

The CHAIR — Thank you very much. That was very informative. We all know a lot more about health now than we did an hour ago. Dr Murphy, Ms MacLeod and Ms Webster, thank you very much for your contribution. You will receive a copy of the transcript in about 15 days. If you could make any corrections and return it to the secretariat within a couple of days, it will be posted on the website. Thank you. This closes this hearing.

Committee adjourned.