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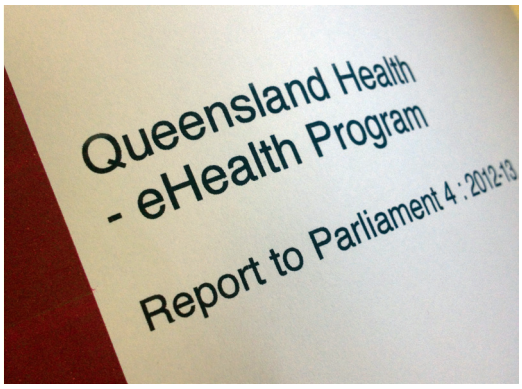

Queensland Health - eHealth Program – Auditor-General's Report to Parliament No. 4 for 2012-2013

Report No. 63
Health and Community Services Committee
December 2014

Parliamentary Committees

Queensland Health - eHealth Program

Auditor-General's Report to Parliament No.4 for 2012-2013

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Health and Community Services Committee

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Abbreviations and glossary

CIO	Chief Information Officer
the department	Department of Health
eMR	electronic medical record
GCHHS	Gold Coast Hospital and Health Service
HBCIS	Hospital Based Corporate Information System
HHS	Hospital and Health Service
HSIA	Health Services Information Agency
ICT	information and communication technology
ieMR	integrated electronic medical record
PAS	Patient Administration System
QAO	Queensland Audit Office

Chair's foreword

This report summarises the committee's inquiry into the Department of Health's implementation of recommendations included in the Auditor-General's Report to Parliament on the *Queensland Health - eHealth Program*.

The report provides an overview of the Queensland Audit Office's audit of the eHealth Program in late 2012. It includes a summary of the Auditor-General's conclusions, findings and recommendations and an analysis of the information gathered during the inquiry to assess the extent to which the department has implemented the Auditor-General's recommendations.

The committee acknowledges that recent changes in the department's approach to information and communication technology have affected the department's implementation approach and timeframes.

While the department has implemented the majority of recommendations, the committee considers implementation of recommendation 3, which involves taking action to address the obsolescence of the Hospital Based Corporate Information System, is a long term project, with significant risk.

The committee urges the department to ensure an effective governance framework is in place to support Hospital and Health Services in their management of this important information and communication technology initiative and recommends a future committee of the Parliament inquire into Queensland Health's progress in replacing the Hospital Based Corporate Information System with a new patient administration system, or systems.

On behalf of the committee, I thank officials from the Department of Health and Queensland Audit Office, who briefed the committee and provided ongoing advice during the course of the inquiry.

I commend the report to the house.

(Chair's signature)

Trevor Ruthenberg MP

Chair

Committee recommendations

Recommendation 1 **18**

The committee recommends that a future committee of the Legislative Assembly inquire into Queensland Health's progress in replacing the Hospital Based Corporate Information System with a new patient administration system or systems. The committee recommends that the inquiry commence after the Auditor-General reports on a performance audit of patient management and administration systems, scheduled to occur in 2016-17.

1 Introduction

1.1 Role of the committee

The Health and Community Services Committee (the committee) was established by resolution of the Legislative Assembly on 18 May 2012, and consists of government and non-government members. The committee's areas of portfolio responsibility are: Health; Communities, Child Safety and Disability Services; National Parks, Recreation, Sport and Racing; and Aboriginal and Torres Strait Islander and Multicultural Affairs.[1]

Section 94 of the *Parliament of Queensland Act 2001* provides that the committee is responsible for the assessment of the integrity, economy, efficiency, and effectiveness of government financial management by examining government financial documents and considering the annual and other reports of the Auditor-General.[2]

1.2 Committee process

The Auditor-General's Report to Parliament No. 4 for 2012-2013 – *Queensland Health-eHealth Program* (the Auditor-General's report) was tabled in the Legislative Assembly on 27 November 2012.

The Auditor-General briefed the committee on the report on 28 November 2012.

The report was referred to the committee for consideration on 13 February 2013, at which time the committee resolved to conduct an inquiry into the implementation of the recommendations contained in the report.

On 21 May 2013 the committee wrote to the Department of Health (the department) to advise of the inquiry and to invite the department to brief the committee at a public hearing. Dr Michael Cleary, Deputy Director-General of the department, and Mr Ray Brown, Chief Information Officer of the Health Services Information Agency (HSIA), briefed the committee on 7 August 2013. A transcript of the proceedings is available on the committee's webpage at:
http://www.parliament.qld.gov.au/documents/committees/HCSC/2013/AG-eHealth/trns-ph07Aug2013-eHealth.pdf

The committee wrote again to the department in September 2013 and May and August 2014 to request information on the progress of the implementation of the Auditor-General's recommendations. The relevant correspondence is at Appendices 2 to 7.

1.3 Structure of this report

This report:

- provides an overview of the role of the Auditor-General, the eHealth Program, the Auditor-General's audit of the eHealth Program and the Queensland Health ICT Strategic Roadmap (sections 1.4 to 1.7)
- summarises the Auditor-General's conclusions, findings and recommendations about the eHealth Program audit (chapter 2)
- summarises the information provided by the department to assess the extent to which the Auditor-General's recommendations have been implemented (chapters 3 to 8).

1 Legislative Assembly of Queensland, *Standing Rules and Orders of the Legislative Assembly*, http://www.parliament.qld.gov.au/work-of-assembly/procedures

2 *Parliament of Queensland Act 2001*, https://www.legislation.qld.gov.au/LEGISLTN/CURRENT/P/ParliaQA01.pdf

1.4 Role of the Auditor-General

The Auditor-General's role and functions are provided for in the *Auditor-General Act 2009*. The Auditor-General's functions include conducting performance audits of public sector entities.[3] A performance audit evaluates whether an agency or government program is achieving its objectives effectively, economically and efficiently, and is compliant with relevant legislation. It does not consider the merits of government policy; rather, it focusses on how that policy is implemented.

The Auditor-General may prepare a report on any audit conducted under the *Auditor-General Act 2009* and table it in the Legislative Assembly. The *Standing Rules and Orders of the Legislative Assembly* require that the Committee of the Legislative Assembly refer an Auditor-General report to the relevant portfolio committee/s, as soon as practicable after it has been tabled.[4]

1.5 Overview of the eHealth Program

The eHealth Program was established in 2007 to improve capability and delivery of Queensland Health services through information and communication technology (ICT). The Program was to be implemented progressively, from 2008 to 2012, via two tranches:

- Tranche 1 – statewide rollout of 15 specialist clinical and administrative systems, including supporting infrastructure.
- Tranche 2 – implementation of an integrated electronic medical record (ieMR) system in nine hospitals, which represent 60 per cent of Queensland Health patient throughput.[5]

The total approved funding for the eHealth Program is $466 million.[6]

Planning for a third tranche of work was underway at the time of the audit, to extend the rollout of the ieMR to facilities managing 80 per cent of Queensland Health patient throughput and to replace the current patient administration system (PAS), known as the Hospital Based Corporate Information System (HBCIS). Tranche 3 was unfunded at the time of the audit.[7]

1.6 Overview of the eHealth Program audit

The Queensland Audit Office (QAO) audit was conducted between February and October 2012. The objective of the audit was to determine whether the eHealth Program was being implemented as intended and was achieving its planned outcomes and realising expected benefits.

The decision to conduct the audit was influenced by the findings of an information systems governance and control audit undertaken by the QAO in 2010, which "… identified weaknesses in Queensland Health's capability in managing and delivering complex ICT programs and projects".[8]

The audit consisted of:

- interviews with staff at the HSIA, Queensland Health and a number of public hospitals
- attendance as observers at eHealth Program Board meetings
- observation of specialist clinical and administrative systems at selected public hospitals, and the eMR at the Gold Coast Hospital and Health Service (GCHHS)

3 *Auditor-General Act 2009*, section 37A, https://www.legislation.qld.gov.au/LEGISLTN/CURRENT/A/AuditGenA09.pdf
4 Legislative Assembly of Queensland, *Standing Rules and Orders of the Legislative Assembly*, http://www.parliament.qld.gov.au/work-of-assembly/procedures, SO 194B
5 Auditor-General's Report to Parliament No. 4 for 2012-13 – *Queensland Health-eHealth Program* (Report 4:2012-13), p.7, https://www.qao.qld.gov.au/report-4-:-2012-13
6 Report 4:2012-13, p.9
7 Report 4:2012-13, p.9
8 Report 4:2012-13, p.38

- analysis of documents including strategies, plans, policies, guidelines, finance and performance reports, funding submissions and business cases, and eHealth Program Board agendas and minutes.

The audit was undertaken in accordance with *Auditor-General of Queensland Auditing Standards*, which incorporate Australian auditing and assurance standards.[9]

1.7 Queensland Health ICT Strategic Roadmap

In July 2014, the ten-year *Queensland Health ICT Strategic Roadmap* (the Roadmap) for Queensland's public health system was released. The Roadmap states

> *Queensland Health needs to shift to support clear ownership of ICT investment and outcomes to HHSs by devolving significant accountability for ICT decision making and fund holding to HHSs, whilst implementing levers and incentives to ensure (a) sufficient coordination in meeting overall Queensland Health objectives, and (b) appropriate governance of ICT investments in alignment with Queensland Government investment and contestability guidelines.*[10]

The Roadmap includes the development of a new ICT Strategic Framework, new governance arrangements for ICT and greater devolution of responsibility for ICT to HHSs. The Roadmap makes recommendations in four areas (strategy; large projects; operations; governance and operating model) and sets specific milestones, the first of which is to "… build a strong foundation to enable best-practice healthcare by ensuring that HHSs have clear ownership of ICT investment and outcomes".[11]

The committee is aware of the significant changes in the department's approach to ICT with the publication of the ICT Strategic Roadmap and notes this has had an impact on the department's progress in implementing some of the recommendations arising from the QAO's audit of the eHealth Program.

9 Report 4:2012-13, p.38

10 Queensland Health, *Queensland Health ICT Strategic Roadmap*, Version 3, prepared by McKinsey & Company, 2 June 2014, p.1, http://www.health.qld.gov.au/publications/system-governance/strategic-direction/ict-strategic-roadmap.pdf

11 Queensland Health, *ICT Strategic Roadmap*, August 2014, http://www.health.qld.gov.au/system-governance/strategic-direction/plans/ict-roadmap/default.asp

2 Auditor-General's conclusions, findings and recommendations

2.1 Conclusion

The Auditor-General's report concludes that while Queensland Health has applied learnings from a previous audit which examined the implementation of the payroll project, it could still "… strengthen program governance, monitoring and oversight and in particular, pay greater attention to benefits management, measurement and realisation at all stages of such major ICT projects".[12]

2.2 Key findings

The Auditor-General's report makes a number of key findings about the implementation of the eHealth Program. These include:

- *A failure to meet implementation timeframes*. At the time of the audit, Tranches 1 and 2 were two years behind schedule, with a revised completion date of June 2013 and 2015 respectively (see Appendix 1). The Auditor-General's report attributes the delay to procurement, contract and staff recruitment problems. The report also comments on the lack of an overarching business case and delays in establishing a benefits management framework to demonstrate return on investment.[13]
- *The implementation of a different version of the electronic medical record (eMR) at the Gold Coast Hospital and Health Service* (GCHHS). The Auditor-General's report states the eMR was not functioning as expected, that learnings from the eMR should inform the development of the ieMR and that any enhancements to the ieMR should be incorporated into the eMR and tested at the GCHHS before the roll out of the ieMR in other hospitals.[14]
- *The need to replace HBCIS*. The Auditor-General's report describes HBCIS as a crucial component of the ieMR and notes that HBCIS is approaching technical obsolescence and will not be supported by the vendor once the contract expires in 2015. The report states Queensland Health's 2007-08 budget submission to implement the eHealth Strategy (which preceded the eHealth Program) identified the need to replace HBCIS, at an estimated cost of $250 to $350 million. The report states "… Queensland Health estimates the cost to replace HBCIS is now $440 million".[15]
- *Different timeframes in the Health Service Directives and the implementation schedule.* The Auditor-General's report states the Health Service Directives, which require Hospital and Health Service (HHS) Boards to proceed with the ieMR, are in force until 30 June 2014 while Tranche 2 of the eHealth Program is not scheduled for completion until 2015. The report notes that while Queensland Health proposes to review the directives, the time lag "creates uncertainty about the continuity of the eHealth Program."[16]
- *Ineffective governance*. The Auditor-General's report states the program is behind schedule and that the "… inconsistent approach to performance measurement and reporting has limited the capacity to effectively assess outcomes and benefits". The report notes that governance improved with the establishment of the eHealth Program Board in 2010 and the adoption of standard portfolio, program and project management methodologies in 2011. The report states performance reports to the eHealth Program Board "… do not clearly demonstrate the progress of each project, tranche of work, and the overall program against relevant budgets, baseline milestones, and the subsequent impact of variations to project plans".[17]

12 Report 4:2012-13, p.1
13 Report 4:2012-13, pp.2-3
14 Report 4:2012-13, p.3
15 Report 4:2012-13, p.3
16 Report 4:2012-13, p.3
17 Report 4:2012-13, p.3

- *Difficulties monitoring the allocated budget*. The total approved funding for the eHealth Program was $466 million, $249 million of which had been spent at 30 June 2012 on the implementation of specialist clinical and administrative systems and an initial contract payment for the ieMR system. The Auditor-General's report states the financial information presented to the eHealth Program Board is not clear or concise and that this "… limits its usefulness in supporting effective decision making, and makes it difficult for Queensland Health to continually monitor the adequacy of the remaining budget". The report notes that the cost of the supporting infrastructure for the ieMR has not been finalised and is not reflected in the program budget. The report concludes that the "… absence of an overarching eHealth business case that identifies and costs all program elements means the approved funding is less than required for full implementation".[18]
- *A lack of timely guidance on expected performance outcomes and benefits*. The Auditor-General's report states 13 of the 15 specialist clinician and administrative projects were already underway before guidance was provided on performance measurement. The report states baseline data was not collected in a consistent manner and consequently, "… Queensland Health has had difficulty measuring, tracking, and reporting on the achievement of outcomes and benefits resulting from changes to clinical and administrative processes". The report notes the importance of being able to demonstrate links between improved capability and better health outcomes, improved service delivery or efficiency, particularly given the significant financial investment in the eHealth Program.[19]

2.3 Recommendations

The Auditor-General's report made six recommendations in relation to the findings. Queensland Health agreed with all six recommendations and identified implementation timeframes for each, in a letter to the Auditor-General dated 14 November 2012. The letter is included as an appendix in the Auditor-General's report.[20]

An overview of each recommendation, including background information from the Auditor-General's report and information provided by the department during the committee's inquiry, is provided in chapters 3 to 8 of this report.

18 Report 4:2012-13, p.4
19 Report 4:2012-13, p.4
20 Report 4:2012-13, p.31

3 Integrated electronic medical record – infrastructure upgrade

3.1 Background

Development of Queensland's integrated electronic medical record (ieMR) was scheduled to commence in 2010 and be completed in 2012. The Auditor-General's report states commencement was deferred to September 2011, following additional due diligence activities to ensure implementation issues experienced with the Queensland Health payroll system were not repeated.[21]

Tranche 2 of the eHealth Program involves implementing the ieMR in nine hospitals, which represent 60 per cent of Queensland Health patient throughput.[22] Planning for a third tranche of work was underway at the time of audit, to extend the rollout of the ieMR to facilities managing 80 per cent of Queensland Health patient throughput (see Appendix 1).[23]

3.1.1 Infrastructure assessments

During the audit Queensland Health was "… undertaking end user device and associated infrastructure assessments to determine the minimum upgrade requirements at the nine ieMR facilities and the implications of these upgrades". This involved identifying what devices and wiring and server upgrades were needed to provide bedside access to data viewing and input.[24]

The assessments identified the need for an additional $4 million in device and infrastructure funding. The funding source and who would pay (the HSIA or each ieMR facility) had not been determined at the time the Auditor-General reported.[25]

3.2 Auditor-General's recommendation

The Auditor-General recommended that Queensland Health

1. *assess the full infrastructure upgrade costs necessary to effectively implement the ieMR at the nine selected hospitals, and fund the implementation accordingly*.[26]

The department agreed with the recommendation and set an implementation date of October 2013.

3.3 Department of Health's response

In August 2013 the department advised the committee that HHSs are responsible for funding their own end-user devices. The department stated site audits had been completed for each ieMR site to verify the quantity and device type best suited for the clinical work spaces and that these devices had been approved by the HHSs.

The department stated that infrastructure upgrades (including cabling and wireless infrastructure) had also been required to support the devices and that $25 million had been reprioritised from available eHealth funds to enable this.

The department concluded "… the infrastructure deemed as necessary and sufficient for the ieMR is in place or will be in place for systems deployment and the department regards this recommendation as having been addressed and we will be seeking in the future to have it closed".[27]

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21 Report 4:2012-13, p.15
22 Report 4:2012-13, p.7
23 Report 4:2012-13, p.9
24 Report 4:2012-13, p.18
25 Report 4:2012-13, p.18
26 Report 4:2012-13, p.5
27 Mr Ray Brown, Chief Information Officer, Health Services information Agency, *Public Hearing Transcript*, 7 August 2013, p.4, http://www.parliament.qld.gov.au/documents/committees/HCSC/2013/AG-eHealth/trns-ph07Aug2013-eHealth.pdf

In September 2013 the committee asked the department whether the $25 million in reprioritised funds would ensure the infrastructure upgrades necessary to effectively implement the ieMR at each of the nine sites.[28] In response, the department stated that the ieMR program and HHSs had funded device and infrastructure upgrades at the nine sites and the number and mix of device types required at each site had been agreed with each HHS.[29]

3.3.1 Impact of reprioritised funding

During the inquiry the committee asked the department whether the reprioritisation of $25 million to fund ieMR infrastructure upgrades would impact on HBCIS replacement, or any other eHealth project.[30] The department stated there is no impact on the HBCIS project as "… as its replacement was not within the original scope of the eHealth funds" and that the impact of the $25 million in reprioritised funds on other eHealth projects "… will be minimal as savings have been achieved within the ieMR Program through the contract negotiation process".[31]

3.4 Committee comment

The department appears to have implemented recommendation 1 of the Auditor-General's report.

The committee notes advice provided by the department that the infrastructure upgrades necessary to support the implementation of the ieMR at the nine selected hospitals have been identified and funded through available eHealth funds.

The committee acknowledges the department's advice that HHSs are responsible for approving their own end-user devices and have contributed to the funding of these devices and notes this approach is consistent with recommendations in the ICT Strategic Roadmap (see section 1.7) about HHSs having responsibility for local ICT decisions and budgets.

The committee understands the department has recently decided to focus the roll out of the ieMR on two sites (Princess Alexandra Hospital and Cairns Hospital), not nine as previously planned. The committee is not aware whether the change from nine to two sites may mean some of the funding to upgrade device and infrastructure for the ieMR has been prematurely spent, or whether the infrastructure will be used at some point in the future.

28 Mr Trevor Ruthenberg MP, Chair, Health and Community Services Committee, *Correspondence*, 24 September 2013, p.1, see Appendix 2

29 Dr Michael Cleary, Acting Director-General, Department of Health, *Correspondence*, 8 October 2013, p.1, see Appendix 3

30 Mr Trevor Ruthenberg MP, *Correspondence*, 24 September 2013, p.1

31 Dr Michael Cleary, *Correspondence*, 8 October 2013, p.1

4 Integrated electronic medical record – outcome and benefit measures

4.1 Background

The Auditor-General's report states the Queensland Government "… has an obligation to ensure that value for money in terms of both efficiency and effectiveness is delivered through its ongoing investments" and refers to the Queensland Government's *Benefits Management Framework*, which outlines benefits management processes and provides guidance for those involved in business planning, program management and project delivery.

The report states the aim of benefits management is to ensure that benefits are "… clearly defined, are measurable and provide a compelling case for investment – and ultimately to make sure that those benefits are actually achieved", and concludes that Queensland Health is:

> *… unable to effectively evaluate and report on outcomes and benefits for some clinical and administrative systems due to delays in issuing guidance on performance measurement, and inconsistent practices in collecting baseline data*.[32]

4.1.1 Benefits realisation and baseline measurement

The Auditor-General reported in November 2012. An *ieMR Benefits Realisation Plan, Release 1* had been developed at this time while baseline measurement for the ieMR commenced in September 2012 – approximately one year after the commencement of the ieMR project.

The Auditor-General's report states a benefits team will work with ieMR sites to assist in the collection of baseline data and to measure and report on the prioritised benefits.[33]

4.2 Auditor-General's recommendation

The Auditor-General recommended that Queensland Health:

> 5. *develop measures for outcomes and benefits for the ieMR, and future specialist clinical and administrative systems, that are specific, measurable, attainable, realistic and timely. Collect baseline data to facilitate performance measurement and reporting in accordance with the Queensland Government Benefits Management Framework.*[34]

The department agreed with the recommendation and set an implementation date of June 2013.

4.3 Department of Health's response

In August 2013 the department advised the committee that the ieMR program benefits management plan "… details the SMART (specific, measurable, attainable, relevant and time-bound measures) that will be baselined, and when and how that will occur".[35]

The department stated baseline measurement activity had commenced for release one of the ieMR and would be completed by the end of September 2013.[36] The department stated post implementation reviews were planned and that each subsequent release would have specific benefits realisation management plans.[37]

32 Report 4:2012-13, p.23
33 Report 4:2012-13, p.15
34 Report 4:2012-13, p.5
35 Mr Ray Brown, *Public Hearing Transcript*, 7 August 2013, p.5
36 Mr Ray Brown, *Public Hearing Transcript*, 7 August 2013, p.5
37 Mr Ray Brown, *Public Hearing Transcript*, 7 August 2013, pp.5-6

The department also advised that "… primary benefits realisation ultimately rests with Hospital and Health Service as they are identified as the primary benefit owners responsible for realisation and harvesting".[38]

4.3.1 Expected benefits

In September 2013 the committee asked the department whether the ieMR program benefits management plan identified qualitative and quantitative benefits to patients.[39] The department responded that while HHSs are responsible for the realisation of benefits at the business level, implementation of the ieMR is expected to produce the following benefits:

- more targeted care for patients
- a reduced need for patients to recite their medical history
- a reduced risk of adverse events due to secure capture of known allergies and adverse reactions
- a reduction in unnecessary tests as care providers will be able to access recent test results
- electronic recording and monitoring of children's growth against World Health Organisation, Fenton and Centre for Disease Control growth charts
- secure record storage, in two Queensland based, disaster proof data centres.[40]

4.3.2 Promoting public confidence

During the inquiry the committee questioned whether the ieMR program benefits management plan included measures to promote public confidence.[41] The department stated it is engaging with industry about future delivery and support for other information platforms, including finance, telephony and health workspace.[42]

4.3.3 Support for HHSs

Early in the inquiry the committee asked the department how legacy systems will be managed during the transition of projects to HHSs for ongoing monitoring and realisation, and what the department's role will be following transition.[43] The department again advised that HHSs are responsible for the realisation of benefits at a business level[44] and stated that the HSIA will "… continue to provide support of legacy and new enterprise information systems on behalf of all Hospital and Health Services". The department stated that the delivery of ongoing system support is being reviewed, in line with the Commission of Audit report, and that the ieMR delivery model conforms with the approach outlined in the report, as it is hosted and managed in commercial, private sector data centres.[45]

4.4 Committee comment

The department appears to have implemented recommendation 5 of the Auditor-General's report.

The committee notes advice provided by the department that baseline measurement activity for release one of the ieMR would be completed by the end of September 2013 and that subsequent releases would have specific benefits realisation management plans.

The committee acknowledges the department's advice that HHSs are primary benefit owners, with responsibility for realising the benefits of the ieMR at the business level, and notes this approach is

38 Mr Ray Brown, *Public Hearing Transcript*, 7 August 2013, pp.5-6
39 Mr Trevor Ruthenberg MP, *Correspondence*, 24 September 2013, p.2
40 Dr Michael Cleary, *Correspondence*, 8 October 2013, p.5
41 Mr Trevor Ruthenberg MP, *Correspondence*, 24 September 2013, p.2
42 Dr Michael Cleary, *Correspondence*, 8 October 2013, p.5
43 Mr Trevor Ruthenberg MP, *Correspondence*, 24 September 2013, p.2
44 Dr Michael Cleary, *Correspondence*, 8 October 2013, p.5
45 Dr Michael Cleary, *Correspondence*, 8 October 2013, p.5

consistent with the directions identified in the ICT Strategic Roadmap (see section 1.7) to devolve ownership of ICT outcomes to HHSs.

The committee notes that post implementation reviews are planned to define and measure the outcomes and benefits of the ieMR. The timeframe for reviews is unclear. The committee considers post implementation reviews should be undertaken on a site by site basis, at the end of each release, to ensure any learnings can inform later releases.

The committee notes that as primary benefit owners, HHSs will also be responsible for measuring and reporting on the benefits of the ieMR. The committee considers consistent measurement across HHSs is essential and that HHSs should be supported in this exercise.

5 Electronic medical record

5.1 Background

The Gold Coast Hospital and Health Service (GCHHS) implemented a limited version of an electronic medical record (eMR) district-wide in December 2011. The HSIA provided assistance and partial funding for implementation.

Concerns about the functionality of the eMR were raised during the audit. There was no formal process to capture and analyse implementation and system issues and clinicians were concerned that patient safety may be compromised without system enhancements.

Formal processes to capture and analyse system issues had commenced at the time of the Auditor-General's report, with learnings from the eMR implementation informing the development and implementation of the ieMR.[46]

5.2 Auditor-General's recommendation

The Auditor-General recommended that Queensland Health:

> 6. *provide system enhancements incorporated into the ieMR to the eMR at the Gold Coast Hospital and Health Service to address current deficiencies, and to test the practicality of these changes by using hospital based testing prior to implementing the ieMR in other hospitals.*[47]

The department agreed with the recommendation and set an implementation date of June 2013.

5.3 Department of Health's response

In August 2013 the department advised the committee that design decisions on the ieMR have been made available to the GCHHS eMR team for consideration and implementation, and that lessons from the GCHHS have been incorporated into the design of the ieMR.[48]

The department stated GCHHS has incorporated state-wide recommendations and lessons learnt from release 1 of the ieMR into update activities for their solution, and will transition to the ieMR as part of release 2 in 2014.[49]

The department concluded the recommendation had been addressed and stated it would "… be seeking to have it closed".[50]

5.3.1 Hospital based testing

During the inquiry the committee asked the department whether hospital based testing of the ieMR had been undertaken.[51] In response, the department advised that the eMR was a separate project to the ieMR, and separate to the work undertaken by the department to implement an ieMR in the original nine hospital sites. The department described the eMR as having adopted a centralised document scanning model and a stand-alone design for localised implementation, whereas the ieMR uses a decentralised document scanning model and state-wide build approach.[52]

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46 Report 4:2012-13, p.26
47 Report 4:2012-13, p.5
48 Mr Ray Brown, *Public Hearing Transcript*, 7 August 2013, p.6
49 Mr Ray Brown, *Public Hearing Transcript*, 7 August 2013, p.6
50 Mr Ray Brown, *Public Hearing Transcript*, 7 August 2013, p.6
51 Mr Trevor Ruthenberg MP, *Correspondence*, 24 September 2013, p.2; Mr Trevor Ruthenberg MP, *Correspondence*, 12 May 2014, p.2, see Appendix 4
52 Mr Ray Brown, Chief Information Officer, Department of Health, *Correspondence*, 11 June 2014, pp.2-3, see Appendix 5

5.3.2 Assistance to migrate to the ieMR

The department advised the committee that an assessment of the eMR was undertaken in January 2012 to identify the impact of moving the GCHHS to the ieMR and a decision was made to defer migration until release 2 of the ieMR. The department stated the HSIA is working with the GCHHS to support the transition by funding an ieMR site project team and acquiring the services of a GCHHS senior medical officer to ensure learnings from the eMR are incorporated into ieMR deployment.

The department also advised that a comprehensive test strategy, including user acceptance with staff from five hospitals, was completed as part of the ieMR implementation process. The test strategy, release plan and outcomes were all independently assessed, and found to be "… of a good standard, having achieved a higher than industry average defect removal effectiveness, with minimal technical issues raised in production".[53]

The department stated the ieMR will go live in three GCHHS hospitals (Southport, Robina and Carrara), as part of release 2, between July and November 2014.[54]

5.3.3 Promoting user confidence

Early in the inquiry the committee asked the department to outline any steps taken to address clinician dissatisfaction with the eMR at the Gold Coast and to reassure other clinicians and promote user acceptance of and confidence in the ieMR.[55] In response, the department advised the GCHHS is continuing to improve their work practices and training in the local eMR and are adopting a centralised document scanning model similar to that proposed for the ieMR. The department stated a clinical reference group at the Gold Coast is engaged in identifying and implementing improvements into the current eMR system and a Gold Coast based project team is working with the ieMR program to support the change to the eMR.[56]

5.4 Committee comment

The committee notes the advice provided by the department in October 2013 that the GCHHS will migrate to the ieMR as part of release two, between July and November 2014.

As noted in section 3.4, the committee understands the ieMR will now be rolled at out two sites (Princess Alexandra Hospital and Cairns Hospital), not nine as previously planned. The impact of this on the timeframe for transition from the eMR to the ieMR at the GCHHS is not known. A future committee of the Legislative Assembly may wish to further examine this matter.

53 Mr Ray Brown, *Correspondence*, 11 June 2014, p.3
54 Dr Michael Cleary, *Correspondence*, 8 October 2013, p.2
55 Mr Trevor Ruthenberg MP, *Correspondence*, 24 September 2013, p.2
56 Dr Michael Cleary, *Correspondence*, 8 October 2013, p.6

6 Management and reporting

6.1 Background

The HSIA is responsible for implementing the eHealth Program, under the management of the Chief Information Officer (CIO).

The eHealth Program Broad was established in 2010 to oversee the eHealth Program and to provide input to and approval of management's strategic, operational and performance objectives. The Board reports and makes recommendations to the sponsoring group, ICT Executive, and the Clinical Informatics Steering Committee.

The Board meets monthly and is chaired by the Deputy Director-General, Health Service and Clinical Innovation. The Chair of the Board is also the Senior Responsible Owner for the eHealth Program, and is responsible for ensuring the Program meets its objectives and realises the expected benefits.

The CIO is also a member of the eHealth Program Board. The CIO is the Senior Supplier, with accountability for the quality of products delivered and the technical integrity of the projects which underpin the eHealth Program, and the Senior Responsible Owner for the ieMR project.

Both the eHealth Board Chair and the CIO are members of the ICT Executive Committee.

The remainder of the eHealth Board members are representatives from clinical and administrative areas across the state – there are no external representatives.[57]

6.2 Auditor-General's recommendation

The Auditor-General recommended that Queensland Health:

2. *Review the management and reporting of the eHealth Program to:*
    - *enhance financial reporting to the eHealth Program Board to clearly and concisely provide information on the financial status of the program, including a breakdown of future expenditure projected to complete the program*
    - *provide performance measurement data to the eHealth Program Board in a clear concise format that clearly demonstrates the progress of each project, tranche of work, and the overall program, against the relevant budgets, baseline milestones, and subsequent impact of variations to plans*
    - *report more clearly on the outcomes and benefits of eHealth specialist clinical and administrative systems, demonstrating clearly their impact.*[58]

The department agreed with the recommendation and set an implementation date of June 2013.

6.3 Department of Health's response

The department advised the committee during a public hearing on 7 August 2013 that it "… regards this recommendation as having been addressed" and "… will be seeking to have this closed".[59]

6.3.1 Financial reports

In August 2013, the department advised the committee that improvements had been made to financial reports. The department stated financial reports were clearer, more succinct, and better

57 Report 4:2012-13, p.10
58 Report 4:2012-13, p.5
59 Mr Ray Brown, *Public Hearing Transcript*, 7 August 2013, p.4

able to be understood by board members. The department stated the financial status of each project and the overall eHealth Program was reported to the Board monthly.[60]

The committee asked the department in September 2013 whether the Board was satisfied with the new financial reports and confident with the accountability arrangements for the program.[61] In response, the department stated the Board had noted at a meeting in February 2013 that the financial report is now consistent with the Auditor-General's recommendation.[62]

During the inquiry the committee also asked the department whether financial reports included a breakdown of projected future expenditure to complete the program and clearly identified, against budgets and timelines, how each project and tranche is progressing and how the overall program is tracking.[63] The department advised the committee that financial reporting was being aligned with the new reporting requirements of the Queensland Government ICT dashboard and that the Board's terms of reference aligned with the Queensland Government Architecture Policy in the management of programs.[64]

The department also stated that financial reports include expenditure projections to the end of the current scope of work and that the Board receives comprehensive monthly reports, which show the progress of each project against budget and plans and any variation.[65]

6.3.2 Performance reporting

In August 2013 the department advised the committee that the Board also receives monthly reports, which include an overall program road map with timelines and red/amber/green reporting by project, and quarterly reports, which include benefits reports cards and a quarterly summary.[66] The department stated eHealth benefits report cards have been presented to the Board quarterly since June 2012 and that quarterly progress reporting to the Department of Premier and Cabinet and Queensland Treasury commenced in April 2013.[67]

In September 2013 the committee asked the department whether the quarterly benefit report cards included the benefits to and impact on users and patients.[68] The department advised that quarterly benefit cards include information about benefits to users, capability delivered to business, benefits realised by the business and measures such as adoption and usage rates.[69]

6.4 Committee comment

The department appears to have implemented recommendation 2 of the Auditor-General's report.

The committee notes that advice provided by the department during the inquiry identified improvements in financial and performance reporting to the eHealth Board.

60 Mr Ray Brown, *Public Hearing Transcript*, 7 August 2013, p.4
61 Mr Trevor Ruthenberg MP, *Correspondence*, 24 September 2013, p.2
62 Dr Michael Cleary, *Correspondence*, 8 October 2013, p.2
63 Mr Trevor Ruthenberg MP, *Correspondence*, 24 September 2013, p.2
64 Dr Michael Cleary, *Correspondence*, 8 October 2013, p.2
65 Dr Michael Cleary, *Correspondence*, 8 October 2013, p.2
66 Mr Ray Brown, *Public Hearing Transcript*, 7 August 2013, p.4
67 Mr Ray Brown, *Public Hearing Transcript*, 7 August 2013, p.4
68 Mr Trevor Ruthenberg MP, *Correspondence*, 24 September 2013, p.2
69 Dr Michael Cleary, *Correspondence*, 8 October 2013, p.3

7 Hospital Based Corporate Information System

7.1 Background

The Hospital Based Corporate Information System (HBCIS) is the core patient administration system (PAS) used by Queensland Health to:

- *register and manage patient identity, tracking patients through admissions, discharge and transfers*
- *feed core information to other local and enterprise systems*
- *provide core information for management and reporting at local and central levels.*[70]

The system has been in use since 1991, is approaching technical obsolescence, and will not be supported by the vendor beyond 2015. HBCIS is considered 'mission critical' for healthcare delivery and Queensland Health reports a state-wide rollout of a new patient administration system (PAS)[71] would take approximately seven years.[72]

The 2007-08 budget submission to implement the eHealth Strategy identified the need to replace HBCIS, at a cost of $250 to $350 million. At the time of the Auditor-General's audit in 2012 the department advised that the replacement of HBCIS was its highest priority and that it was developing a business case, with detailed options analysis, costings and benefits, to support a funding submission.[73]

Replacement of HBCIS is part of Tranche 3 of the eHealth Program, which was unfunded at the time of the audit. The estimated cost of HBCIS replacement at that time was $440 million.[74]

The Auditor-General's report notes that lengthy lead times are often associated with complex ICT projects and states Queensland Health should give priority to ensuring the HBCIS remains fully operational to support public hospitals. The report also notes that delays in replacing HBCIS may result in system unavailability and impact on the implementation of the ieMR.[75]

7.2 Auditor-General's recommendation

The Auditor-General recommended that Queensland Health:

> *3. take appropriate action to address the obsolescence of the patient administration system, Hospital Based Corporate Information System (HBCIS), within a timeframe that will not impact adversely on hospital administration.*[76]

The department agreed and set an implementation date of December 2013.

7.3 Department of Health's response

7.3.1 Infrastructure upgrade and vendor support

In August 2013 the department advised that over the past 12 to 18 months it had replaced server infrastructure and now has "… a solid hardware base in place to support HBCIS through to probably around 2019 and 2020".[77]

70 Report 4:2012-13, p.16
71 The Auditor-General's report states over 170 facilities currently use HBCIS.
72 Report 4:2012-13, p.16
73 Report 4:2012-13, p.16
74 Report 4:2012-13, p.16
75 Report 4:2012-13, p.16
76 Report 4:2012-13, p.5
77 Mr Ray Brown, *Public Hearing Transcript*, 7 August 2013, p.7

In September 2013 the committee asked the department to provide further information on major risks to HBCIS functionality and how these will be mitigated.[78] In response, the department advised that a HBCIS System Support Strategy will be developed as part of an investment planning project, to ensure HBCIS software support is in place before vendor support ceases in 2015.[79]

In May 2014 the committee asked the department whether the HBCIS infrastructure upgrade had delivered the anticipated improvements, including "… improved hardware reliability, resiliency and discovery recovery capabilities", and whether vendor support had been extended beyond 2015.[80] The department advised that:

- the upgrade of HBCIS infrastructure platforms completed in October 2013 would provide stability through to 2019[81]
- there had been no reported HBCIS performance issues or hardware failures since the October 2013 upgrade [82]
- vendor support had been extended to 2023.[83]

7.3.2 PAS investment planning project

In August 2013 the department stated it had commenced a PAS investment planning project to deliver an implementation approach architectural framework and business case to guide the selection and implementation of a new PAS. The approach will incorporate recommendations form recent reviews and will align with strategic directions articulated in the Blueprint for Better Health Care in Queensland and the Queensland Government ICT strategy for 2013-17 (see section 1.7).

The department stated the architectural framework and business case would be completed by January 2014, at which time it would recommend the appropriate approach to HBCIS replacement. The department noted that HBCIS replacement is complex as HBCIS it is more than just a PAS – it includes a range of additional functionality associated with managing the registration and flow of patients.[84]

In May 2014, the committee asked the department to provide further information on the business case, including likely commencement and completion dates for the new PAS project.[85] The department advised that that the business case for the new PAS was not completed by January 2014 as previously advised, due to additional governance processes and a refocus of activities to prioritise extending vendor support. The department stated in June 2014 that it had been progressing the engagement of an external consultant to develop a business and program plan however consultation with the Queensland Government Chief Information Office resulted in a "reorientation of the current strategy of developing a centred *[sic]* led system".[86]

The department stated it was now working with HHSs to co-design the new PAS and that a submission would be prepared for Government which sets out "… a co-design methodology and approach to market" and "… detail how in partnership with HHSs a requirement will be developed". The department anticipates that "HHSs in consortia with other HHSs will put forward a business case for a future PAS for what they need, when they need it". Commencement and completion dates for

78 Mr Trevor Ruthenberg MP, *Correspondence*, 24 September 2013, p.2
79 Dr Michael Cleary, *Correspondence*, 8 October 2013, p.4
80 Mr Trevor Ruthenberg MP, *Correspondence*, 12 May 2014, p.1
81 Mr Ray Brown, Chief Information Officer, Department of Health, *Correspondence*, 11 June 2014, p.1
82 Mr Ian Maynard, Director-General, Queensland Health, *Correspondence*, 23 September 2014, p.1, see Appendix 7
83 Mr Ray Brown, *Correspondence*, 11 June 2014, p.1
84 Mr Ray Brown, *Public Hearing Transcript*, 7 August 2013, p.5
85 Mr Trevor Ruthenberg MP, Chair, Health and Community Services Committee, *Correspondence*, 12 May 2014, p.1
86 Mr Ray Brown, *Correspondence*, 11 June 2014, p.2

the HBCIS replacement project will be determined as part of the business case and program plan development.[87]

In August 2014 the committee again asked the department to provide information on the implementation timeframes for the new PAS.[88] In response, the department advised that there is no confirmed date for a replacement PAS to be in place and that it is working with HHSs to deliver a "… capability roadmap to inform the prospectus of prioritised proposed investments which will include the PAS replacement". The roadmap should be finalised by November 2014. It will be followed by the development of the PAS replacement business case in early 2015, which identifies milestones and timeframes.[89]

The committee also asked the department at this time whether moving from a centre led approach to working with HHS on a submission for Government which sets out "… a co-design methodology and approach to market" means HBCIS could be replaced with more than one PAS and if so, what arrangements will be implemented to ensure system interoperability between HHSs.[90] In response, the department stated it cannot confirm that there will only be one PAS provided by a single vendor, as this will now be informed by HHS's business needs, and advised that "… several steps are being taken to ensure seamless service and interoperability between systems". These include an Enterprise Architecture and Standards Board to ensure that "any system/s that support a patient pathway or journey comply to a minimum set of information, data, messaging, security and transport standard" and making it a contractual obligation for vendors to ensure that all interfaces of systems are documented to agreed standards.[91]

7.3.3 Alignment with Queensland ICT Strategy

During the inquiry the committee asked the department how the PAS investment planning project will take account of the 2013-17 Queensland Government ICT strategy.[92] In response, the department stated the project aligns with the requirements of the 2013-17 Queensland Government ICT strategy in the following ways:

- early market engagement to ensure every opportunity is utilised to identify innovative solutions for inclusion in the business case
- investment planning for a new PAS and identifying support systems for HBCIS while replacement activity occurs
- external gateway reviews throughout the project to ensure strategic alignment
- monthly project status updates following initiation of the project, which will be published on the Whole of Government ICT Dashboard.[93]

7.3.4 Governance

In August 2014 the committee asked the department about governance arrangements for HBCIS replacement.[94] The department stated there is no ongoing role for eHealth Program Board in the HBCIS replacement project as Queensland Health has "… implemented a revitalised governance framework that aims to better support HHSs to lead, prioritise and manage business initiatives".[95]

87 Mr Ray Brown, *Correspondence*, 11 June 2014, p.2
88 Mr Trevor Ruthenberg MP, Chair, Health and Community Services Committee, *Correspondence*, 21 August 2014, p.1, see Appendix 6
89 Mr Ian Maynard, *Correspondence*, 23 September 2014, pp.1-2
90 Mr Trevor Ruthenberg MP, *Correspondence*, 21 August 2014, p.1
91 Mr Ian Maynard, *Correspondence*, 23 September 2014, pp.1-2
92 Mr Trevor Ruthenberg MP, *Correspondence*, 24 September 2013, p.2
93 Dr Michael Cleary, *Correspondence*, 8 October 2013, p.3
94 Mr Trevor Ruthenberg MP, *Correspondence*, 21 August 2014, p.2
95 Mr Ian Maynard, *Correspondence*, 23 September 2014, p.2

7.3.5 Estimated cost of replacement

During the inquiry the committee asked the department to provide information on the estimated cost of HBCIS replacement, and how and when it will be funded.[96] In response, the department advised that the investment planning project for the new PAS will identify total estimated implementation and recurrent costs and form the basis of a submission to Government, for approval to commence in 2014-15.[97]

7.4 Committee comment

The implementation of recommendation 3 of the Auditor-General's report is incomplete.

The committee considers the department has partially addressed the recommendation by taking action to address the obsolescence of HBCIS in the medium term. Specifically, the committee notes the department's upgrading of HBCIS infrastructure (hardware) platforms to provide stability through to 2019 and negotiations with the vendor to extend HBCIS software support to 2023.

The committee notes the department has also described a longer term, replacement approach to address the obsolescence of HBCIS, which involves HHSs contracting out for the development and implementation of a new PAS, following the acceptance of a submission by Government which sets out "… a co-design methodology and approach to market". While this approach is consistent with the directions outlined in the ICT Strategic Roadmap (see section 1.7), the committee continues to have concerns about:

- the cost of the development and implementation of new PASs
- potential impacts of the development and implementation of new PASs on the successful implementation of the ieMR
- issues of inter-operability should different PASs be implemented by different HHSs
- the potential for and impact of further delays.

The committee considers an effective governance framework is essential to support the replacement of HBCIS and urges the department to ensure the revitalised governance framework it referred to in September 2014 supports HHSs to lead, prioritise and manage this ICT initiative.

The committee notes that the Auditor-General's *Strategic Audit Plan 2014-17* includes a performance audit of patient management and administration systems in 2016-17.[98] The committee considers it would be appropriate for a future committee of the Parliament to inquire into Queensland Health's progress in replacing HBCIS, following the Auditor-General's report to Parliament.

Recommendation 1

The committee recommends that a future committee of the Legislative Assembly inquire into Queensland Health's progress in replacing the Hospital Based Corporate Information System with a new patient administration system or systems. The committee recommends that the inquiry commence after the Auditor-General reports on a performance audit of patient management and administration systems, scheduled to occur in 2016-17.

96 Mr Trevor Ruthenberg MP, *Correspondence*, 24 September 2013, p.2
97 Dr Michael Cleary, *Correspondence*, 8 October 2013, p.4
98 Queensland Audit Office, *Strategic Audit Plan 2014-17*, p.16, https://www.qao.qld.gov.au/files/file/Reports%20and%20publications/Strategic%20Audit%20Plan/StrategicAuditPlan2014-17.pdf

8 Single Sign On

8.1 Background

Clinical and administration system applications in Queensland Health facilities require separate logons by users, with different usernames and passwords. The use of a single sign on would avoid users needing to re-authenticate for every application. The Auditor-General's report states "… the current approach could result in clinicians being locked out of systems as their passwords have expired" and concludes this would impact on patient services, with clinicians unable to access vital information. At the time of the audit Queensland Health was progressing work on a single sign on solution.[99]

8.2 Auditor-General's recommendation

The Auditor-General recommended that Queensland Health:

> *4. progress the single sign on solution to increase the efficiency of accessing multiple systems, particularly for the ieMR sites*.[100]

The department agreed and set an implementation timeframe of December 2014.

8.3 Department of Health's response

In August 2013 the department advised the committee that it had "… approved a project to implement a single sign on solution in the nine ieMR sites, as part of release 2, with the implementation schedule to commence in the second quarter of 2014, in line with the ieMR implementation time frames".[101]

The department stated a procurement plan had been drafted and governance was in place. The department described the key outcomes expected of the project, including a reduction in the number of user names and passwords, the removal of generic logins, improved speed of access to clinical information and improved security.[102]

8.3.1 Key milestones and implementation dates

In September 2013 the committee asked the department to provide information on the key milestones and expected completion date for the single sign on project.[103] In response, the department advised that a solution to support multiple clinicians using the same workstations would be available in mid-March 2014, with state wide deployment to occur in mid-2014.[104]

The committee followed up the matter in May 2014, when it asked the department whether the single sign on solution was available in mid-March 2014 and whether the department was on track to deploy the single sign on state wide by mid-2014, as previously advised.[105]

The department advised that single sign on will be delivered through the Authorisation and Authentication Project, which will be implemented in two stages to align with the ieMR:

- an interim solution delivering the core functionality of a long term commercial off the shelf single sign on solution will be deployed at the initial ieMR sites in July 2014

99 Report 4:2012-13, p.15
100 Report 4:2012-13, p.5
101 Mr Ray Brown, *Public Hearing Transcript*, 7 August 2013, p.5
102 Mr Ray Brown, *Public Hearing Transcript*, 7 August 2013, p.5
103 Mr Trevor Ruthenberg MP, *Correspondence*, 24 September 2013, p.2
104 Dr Michael Cleary, *Correspondence*, 8 October 2013, p.4
105 Mr Trevor Ruthenberg MP, *Correspondence*, 12 May 2014, p.1

- acquisition of the commercial solution is advanced and expected to be available for deployment in August 2014.

The department stated that the single sign on solution is designed to be 'enterprise scalable' and that the HSIA will offer it as a service to HHSs on a cost sharing basis.[106]

The committee also asked the department in May and August 2014 to identify which, if any, hospitals were using the single sign on.[107] The department did not respond to this question. Subsequently, the department advised that no hospitals were using the single sign on solution at May 2014.[108]

8.3.2 Interim and commercial solution

In August 2014 the committee asked the department to advise whether the timeframes for the interim and commercial solutions identified in the Authorisation and Authentication Project were met and if so, to name the sites using the solutions and to describe the functions they deliver.[109]

The department stated that the interim solution was delivered to the Royal Children's Hospital (RCH) on 23 June 2014. It described the solution as allowing clinicians to log-on to a shared workstation, using a smart card, and access a limited number of applications through single sign on, and stated this was planned to allow staff to get rapid access to three applications commonly used by clinicians with the ieMR.

The department stated there is no plan to roll-out the interim solution further. The preference is to wait for the increased functionality available under the new commercial solution. The department stated the contract for the commercial solution was finalised in September 2014. The solution will be available for deployment at a pilot site in November 2014 and state-wide from 1 January 2015, "… with HHSs choosing when and if to access the service".[110]

8.3.3 Promoting clinician confidence

During the inquiry the committee asked the department whether the project has considered how to promote clinician confidence in and use of a single sign on solution.[111] The department stated development work "… has confirmed strong, broad-based support among clinicians" and that a Stakeholder Engagement Plan, which aims to analysing the impact and influence of key stakeholders and identifies appropriate channels of communication to build and maintain stakeholder support, has been produced.[112]

8.3.4 Funding

The committee also asked the department about the impact of the single sign on project on the overall eHealth Program budget.[113] The department advised that the single sign on project is funded as part of the overall ICT capital budget –it is not funded from the eHealth budget.[114]

8.4 Committee comment

The implementation of recommendation 4 of the Auditor-General's report appears incomplete.

106 Mr Ray Brown, *Correspondence*, 11 June 2014, p.2
107 Mr Trevor Ruthenberg MP, *Correspondence*, 12 May 2014, p.2; Mr Trevor Ruthenberg MP, *Correspondence*, 21 August 2014, p.2
108 Mr Ian Maynard, *Correspondence*, 23 September 2014, p.2
109 Mr Trevor Ruthenberg MP, *Correspondence*, 21 August 2014, p.2
110 Mr Ian Maynard, *Correspondence*, 23 September 2014, p.2
111 Mr Trevor Ruthenberg MP, *Correspondence*, 24 September 2013, p.2
112 Dr Michael Cleary, *Correspondence*, 8 October 2013, p.4
113 Mr Trevor Ruthenberg MP, *Correspondence*, 24 September 2013, p.2
114 Dr Michael Cleary, *Correspondence*, 8 October 2013, p.5

The committee notes that the while the implementation timeframe for this recommendation (December 2014) has not yet been reached, timeframes for stages in the implementation process have slipped over the course of the committee's inquiry, generally as a result of a change in implementation approach. Specifically, the committee notes the change in approach between October 2013, when it was advised a single sign on solution would be deployed state-wide in mid-2014, and September 2014, when the it was advised a commercial solution would be piloted at one site in November 2014, with the intent of it being available state-wide from 1 January 2015.

The committee considers it is possible that timeframes will slip further, particularly given that the commercial solution is only being piloted at one site and that the department has stated that HHSs will choose when and if to access the solution.

The committee notes the inter-relatedness of a number of the Auditor-General's recommendations and is concerned that changes in timeframes for the single sign on solution may also impact on the timely implementation of the ieMR. A future committee of the Legislative Assembly may wish to further examine this matter.

Appendices

Appendix 1 – Auditor-General's Report, Figure 2B Progress delivering the eHealth Program

Tranche/phase	Deliverables	Original milestone	Revised milestone
1	Statewide rollout of specialist clinical and administrative systems and supporting infrastructure	2007-10	2007-mid 2013
2	Integrated electronic medical record (ieMR) to 9 hospitals that represent 60% of Queensland Health patient throughput: Cairns Base, Carrara, Mackay Base, Princess Alexandra, Robina, Royal Brisbane and Women's, Southport, Townsville and the new Royal Children's hospital. Delivered in four releases:		
	Release 1: • Core build and scanning • Growth charts • End user devices and infrastructure	2010-12	2011-mid 2013
	Release 2: • Order entry • Results reporting • Alerts and adverse reactions	2010-12	2012-14
	Release 3: • Structured clinical notes • Discharge summaries • Advanced decisions support	2010-12	2012-late 2014
	Release 4: • Medication management • Scheduling	2010-12	2012-15
3	Completion of the statewide rollout of an ieMR to facilities that represent 80% of Queensland Health patient throughput.	2012-beyond Unfunded	Unfunded
	Replacement for the Hospital Based Corporate Information System (HBCIS).	2012-beyond Unfunded	Unfunded

Appendix 2 – Letter to Dr Michael Cleary, Deputy Director-General, Department of Health, dated 24 September 2013

Health and Community Services Committee

Health and Community Services Committee
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Brisbane Qld 4000
email: hcsc@parliament.qld.gov.au
web: www.parliament.qld.gov.au/hcsc

Your Ref: Our Ref: 11.10.2

24 September 2013

Dr Michael Cleary
Deputy Director-General, Health Service and Clinical Innovation Division
Department of Health
BRISBANE QLD

Email: clearym@health.qld.gov.au

Dear Dr Cleary

Additional information on eHealth Program

Thank you for attending the committee's public hearing on 7 August 2013 about the department's implementation of recommendations in the Auditor-General's Report to Parliament 4: 2012-3, *Queensland Health – eHealth Program*. The committee has considered the hearing transcript and now seeks further information about implementation of the Auditor-General's recommendations.

Recommendation 1: That Queensland Health assess the full infrastructure upgrade costs necessary to effectively implement the ieMR at the nine selected hospitals, and fund the implementation accordingly.

1. Have implementation timeframes for the ieMR changed as a result of the assessed device needs and infrastructure upgrade costs and funding re-allocations?
2. Will the additional $25 million in reprioritised funds ensure the "full infrastructure upgrade costs" necessary to effectively implement ieMR at the nine hospitals?
3. What impact will the $25 million reprioritisation of funds have on the HBCIS project and other eHealth projects?
4. What are the implementation dates for the ieMR in the each of the nine selected hospitals?

Recommendation 2: That Queensland Health review the management and reporting of the eHealth Program to:

- *enhance financial reporting to the eHealth Program Board to clearly and concisely provide information on the financial status of the program, including a breakdown of future expenditure projected to complete the program*
- *provide performance measurement data to the eHealth Program Board in a clear concise format that clearly demonstrates the progress of each project, tranche of work, and the overall program against the relevant budgets, baseline timeline, and subsequent impact of variations to plans*
- *report more clearly on the outcomes and benefits of eHealth clinical and administrative systems, to demonstrate their impact.*

5. Do regular reports to the eHealth Program Board include a breakdown of projected future expenditure to complete the program?
6. What information do you have to assess whether the eHealth Program Board is satisfied with the new financial reports?

7. Is the eHealth Program Board confident that the accountability arrangements in place for the eHealth Program can withstand public scrutiny?
8. Do program reports clearly identify, against budgets and timelines, how each project and tranche is progressing and how the overall eHealth Program is tracking?
9. Do the quarterly benefit report cards for eHealth clinical and administrative systems provided to the eHealth Program Board include the benefits to and impact on users (clinicians and other hospital staff) and patients?

   Recommendation 3: That Queensland Health take appropriate action to address the obsolescence of the patient administration system, Hospital Based Corporate Information System (HBCIS), within a timeframe that will not impact adversely on hospital administration.

During the hearing Mr Brown advised that by January 2014 a *patient administration system investment planning project to deliver an implementation approach, architectural framework and business case to guide the selection and implementation of a new patient administration system* will be completed.

10. Please provide information about progress of the project and any challenges which may affect the January 2014 timeframes.
11. How will the project take account of the 2013-17 Queensland Government ICT strategy?
12. Please advise what major risks to HBCIS functionality have been identified between now and the 'crunch date' in 2019 or 2020, and how those risks will be effectively mitigated.
13. What is the current estimated cost of replacement of HBCIS and how and when is it expected to be funded?

    Recommendation 4: That Queensland Health progress the single sign on project to increase the efficiency of accessing multiple systems, particularly for the ieMR sites.

14. What are the key milestones and expected completion date for the single-sign on project, and how do these align with the ieMR release timings?
15. During the hearing Mr Brown described a number benefits to a single sign-on solution, including improved speed of access to clinical information at the point of care and improved security of information. Has the project considered how to promote clinician confidence in and use of a single sign-on solution?
16. What is the impact of the single sign-on project on the overall eHealth Program budget?

    Recommendation 5: That Queensland Health develop measures for outcomes and benefits for the ieMR, and future specialist clinical and administrative systems, that are specific, measurable, attainable, realistic and timely. Collect baseline data to facilitate performance measurement and reporting in accordance with the Queensland Government Benefits Management Framework.

17. Does the ieMR program benefits management plan identify qualitative and quantitative benefits to patients, or include measures to promote public confidence?
18. How will legacy systems be managed during the transition of projects to Hospital and Health Services for ongoing monitoring and realisation? What will the department's role be?

    Recommendation 6: That Queensland Health provide system enhancements incorporated into the ieMR to the eMR at the Gold Coast Hospital and Health Service to address current deficiencies, and test the practicality of these changes by using hospital based testing prior to implementing the ieMR to other hospitals.

19. The committee is aware of significant dissatisfaction, among clinicians at the Gold Coast, with the eMR. What steps have been taken to address this and to reassure other clinicians and promote user acceptance of and confidence in the ieMR?

20. Has hospital based testing of the ieMR been undertaken? If not, when will it occur?

The committee would appreciate your response to these questions by **Friday 4 October 2103**. Please email your response to the committee secretariat at hcsc@parliament.qld.gov.au.

Should you have any queries, please contact Kath Dalladay on [redacted] (Tuesday – Wednesday) or Sue Cawcutt on [redacted]

Yours sincerely

Trevor Ruthenberg MP
Chair

cc: David Noon, Department of Health
email: CLLO@health.qld.gov.au

Appendix 3 – Letter from Dr Michael Cleary, Acting Director-General, Department of Health, dated 8 October 2013

Queensland Government

Queensland Health

Enquiries to: Ms Renaie Dicker
Manager, Office of the Chief Information Officer
Health Services Information Agency
Telephone: [redacted]
Facsimile: [redacted]
File Ref: CAPS215

Mr Trevor Ruthenberg MP
Chair
Health and Community Services Committee
Parliament House
George Street
BRISBANE QLD 4000

RECEIVED
15 OCT 2013
HEALTH AND COMMUNITY SERVICES COMMITTEE

Dear Mr Ruthenberg

Thank you for your letter dated 24 September 2013 requesting further information about the implementation of recommendations from the Auditor-General's Report to Parliament 4: 2012-3, *Queensland Health – eHealth Program*.

Please find following the responses to the committee's additional questions.

Additional information in relation to Recommendation 1:

1. ***Have implementation timeframes for the ieMR changed as a result of the assessed device needs and infrastructure upgrade costs and funding re-allocations?***
   The implementation timeframes for the integrated electronic Medical Record (ieMR) have not been affected by the device and infrastructure upgrade costs and funding reallocation.

2. ***Will the additional $25 million in reprioritised funds ensure the "full infrastructure upgrade costs" necessary to effectively implement ieMR at the nine hospitals?***
   The ieMR Program and Hospital and Health Services have funded device and infrastructure upgrades at the nine sites. The number and mix of device types required at each site to implement the ieMR has been agreed with each Hospital and Health Service.

3. ***What impact will the $25 million reprioritisation of funds have on the HBCIS project and other eHealth projects?***
   There is no impact on the HBCIS project as its replacement was not within the original scope of the eHealth funds.

   The impact of the $25 million reprioritisation on other eHealth projects will be minimal as savings have been achieved within the ieMR Program through the contract negotiation process to offset the reprioritisation of funds.

Office Queensland Health, Level 2, 108 Wickham St, Fortitude Valley, 4006
Postal PO Box 117, Fortitude Valley 4006
Phone [redacted]
Fax [redacted]

4. ***What are the implementation dates for the ieMR in the each of the nine selected hospitals?***
   The ieMR will be implemented in four releases. The confirmed dates and locations for Release One are as follows:
   - Cairns Hospital - November 2013
   - Mackay Hospital - December 2013
   - Royal Brisbane and Women's Hospital - February 2014
   - Royal Children's Hospital - March 2014
   - Princess Alexandra Hospital - April 2014

   The Townsville Hospital and Gold Coast Hospital and Health Service (Southport, Robina and Carrara) will go live as part of Release Two between July and November 2014.

Additional information in relation to Recommendation 2:

5. ***Do regular reports to the eHealth Program Board include a breakdown of projected future expenditure to complete the program?***
   Financial reporting to the eHealth Program Board includes expenditure projections to the end of the current scope of work.

6. ***What information do you have to assess whether the eHealth Program Board is satisfied with the new financial reports?***
   The eHealth Program Board meeting in February 2013 discussed the financial report to the board in the context of the QAO eHealth Report. The Board noted that the Financial Board Report is consistent with the QAO report recommendation. Financial reporting is currently being updated to align with the new reporting requirements of the Queensland Government ICT dashboard.

   In addition to the formal written reports, a senior financial officer attends each meeting of the Board to provide a verbal update to members and to answer any questions in relation to the report.

7. ***Is the eHealth Program Board confident that the accountability arrangements in place for the eHealth Program can withstand public scrutiny?***
   The eHealth Program Board operates under an approved terms of reference which aligns to best practice methodology as mandated by the Qld Government Enterprise Architecture Policy in the management of programs. The terms of reference outline the board and the board members accountabilities and responsibilities in exercising their obligation in relation to corporate governance.

   The eHealth Program board operates within a hierarchy of governance with project board executives for the individual projects that comprise the program reporting to the board. The board itself then escalates through the Senior Responsible Officer to the ICT Portfolio Board.

8. ***Do program reports clearly identify, against budgets and timelines, how each project and tranche is progressing and how the overall eHealth Program is tracking?***
   Each month the eHealth Program Board receives comprehensive reports which show the progress of each eHealth project and how it is tracking against budget and plans and any variation.

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9. ***Do the quarterly benefit report cards for eHealth clinical and administrative systems provided to the eHealth Program Board include the benefits to and impact on users (clinicians and other hospital staff) and patients?***
The benefit report cards identify progress towards the electronic record. workflow, decision support, location independent services and networked model of care.

They include the following information about initiatives within the eHealth Program:
- benefits to users (eg. clinicians and other hospital staff)
- capability delivered to the business
- benefits realised by the business
- measures (eg. adoption and usage rates)

The impacts (eg. technology, organisational, patient interface changes) are the starting points for benefits planning, and the progress of delivery and change is reported through the project/program reporting process.

Additional information in relation to Recommendation 3:

10. ***Please provide information about progress of the project and any challenges which may affect the January 2014 timeframes.***
The investment planning project has completed the start-up phase, and a detailed review has been undertaken to ensure the Department's approach for the new Patient Administration System (PAS) considered and incorporated learnings and recommendations from recent government reviews including, Right of Private Practice in Queensland public hospitals, Queensland Health Payroll Commission of Inquiry and Queensland Government ICT Strategy 2013-17 Action Plan.

The Project Initiation Documentation has been completed and outlines the scope, budget, resources and stakeholder engagement required to complete the investment planning activity, and the investment business case.

11. ***How will the project take account of the 2013-17 Queensland Government ICT strategy?***
The project approach aligns with the requirements of the 2013-17 Queensland government ICT Strategy in the following ways (note responses are against specific strategies):
- 8.09 – The strategic sourcing strategy will investigate leveraging early market engagement and market sounding activities to ensure every opportunity is utilised to identify innovative solutions (including ICT as-a-service opportunities) for inclusion in the business case.
- 10.03 – The project will undertake investment planning for the implementation of a Patient Administration System and will also identify a system support strategy to ensure the ongoing operation of the HBCIS system while the replacement activity is undertaken.
- 12.01 – External Gateway reviews will be undertaken throughout the project to ensure strategic alignment including a final review of the final business case prior to project closure. Additional to these reviews, an external industry partner will also be engaged to provide assurance support over the project deliverables prior to Board endorsement and Gateway review.
- 12.04 – Following initiation of the project, monthly project status updates will be provided to the Directors-General Council and as directed in the ICT Strategy Action Plan this reporting will include the lessons learnt that are gathered during the cross jurisdictional scan scoped within the first phase of the investment planning initiative.
- 12.06 – These monthly project status updates will be published publically on the Whole of Government ICT Dashboard.

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12. ***Please advise what major risks to HBCIS functionality have been identified between now and the 'crunch date' in 2019 or 2020, and how those risks will be effectively mitigated.***
The HBCIS software is very stable, however the Department is reliant on vendor support to address software faults, data corrections, software configuration, and enhancement requests from Hospital and Health Services to support ongoing clinical and administrative needs. The investment planning project will develop a HBCIS System Support Strategy which will address the implementation of an alternate model for HBCIS software support prior to the end of vendor support in December 2015.

A refresh of the HBCIS infrastructure (hardware) platforms is expected to be completed in October 2013. This will provide improved hardware reliability, resiliency and disaster recovery capabilities.

13. ***What is the current estimated cost of replacement of HBCIS and how and when is it expected to be funded?***
The most recent cost estimate developed by the Department were based on upgrading HBCIS to the current vendor's latest PAS offering (and included extensive business change management costs).

The investment planning project will align with the Queensland Government's ICT Strategy and will identify solution options and develop an investment business case to provide Government with estimated total implementation and recurrent costs.

The business case will form the basis of a submission to Government seeking approval to initiate the Program during the 2014-15 year.

The investment planning project is anticipated to cost $2.1M and will be internally funded by the Department of Health.

Additional information in relation to Recommendation 4:

14. ***What are the key milestones and expected completion date for the single-sign on project, and how do these align with the ieMR release timings?***
The Single Sign-On project is progressing a two stage solution that recognises both the roll-out schedule for the ieMR, and the estimated open market procurement and implementation timeframes for acquisition of an enterprise-wide solution and support service.
    - A solution to support multiple clinicians sharing workstations will be available March 2014.
    - A solution that can be deployed state wide will be procured and deployed mid 2014.

15. ***During the hearing Mr Brown described a number benefits to a single sign-on solution, including improved speed of access to clinical information at the point of care and improved security of information. Has the project considered how to promote clinician confidence in and use of a single sign-on solution?***
Previous prototype development work has confirmed strong, broad-based support among clinicians for the functionality proposed. Building on this early work, the project has produced a Stakeholder Engagement Plan aimed at analysing the impact and influence of key stakeholders, as well as identifying the appropriate channels of communication to build and maintain stakeholder support for the solution. Clinicians will be engaged in the design and testing of the solution.

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16. What is the impact of the single sign-on project on the overall eHealth Program budget?
The single sign on service will provide business benefits to Queensland Health across a wide range of users of enterprise administrative and ehealth applications. This investment is funded as part of the overall ICT capital budget and is not funded from the eHealth budget.

Additional information in relation to Recommendation 5:

17. Does the ieMR program benefits management plan identify qualitative and quantitative benefits to patients, or include measures to promote public confidence?
The initial implementation of the ieMR into nine hospitals will integrate medical record access across 47% of Queensland's hospital-care activity, creating a longitudinal record where the patient is at the centre of all that we do.

Extending the common access to one patient record will serve to break down the barriers that currently separate the nine ieMR hospitals.

While Hospital and Health Services are responsible for the realisation of benefits at a business level, is it is expected that the following benefits will be realised through the implementation of the ieMR:

- Patients can expect to experience greater levels of targeted care, based on a holistic view of their individual medical needs.
- Reduced need for patients to recite history of previous care and comprehensive records of medications that have been prescribed.
- Secure capture of known allergies and adverse reactions will reduce the risk of adverse events during care.
- Reduction in unnecessary, duplicated medical tests (pathology and radiology) that have been recently performed but not accessible to all providers of care.
- Children in Queensland will have their growth recorded and monitored electronically using World Health Organisation, Fenton and Centre for Disease Control Growth charts.
- Patients will be able to have confidence that their medical records will be securely located in two Queensland based, disaster proof, high availability data centres.

18. How will legacy systems be managed during the transition of projects to Hospital and Health Services for ongoing monitoring and realisation? What will the department's role be?
Operating in the managing agent role the Health Services Information Agency (within the Department of Health) will continue to provide ongoing support of legacy and new enterprise information systems on behalf of all Hospital and Health Services.

The approach to deliver ongoing system support is being reviewed in line with the new government direction outlined in the Commission of Audit Report.

The ieMR delivery model conforms to this new approach, as it is hosted and managed in commercial data centres by the private sector.

The Department of Health has also recently commenced early market engagements with industry around the future delivery and support of other information platforms (finance, telephony and health workspace (desktop etc)).

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Additional information in relation to Recommendation 6:

19. The committee is aware of significant dissatisfaction, among clinicians at the Gold Coast, with the eMR. What steps have been taken to address this and to reassure other clinicians and promote user acceptance of and confidence in the ieMR?

The Gold Coast Hospital and Health Service (GCHHS) local EMR system was introduced, by the Health Service, as a short term solution until the ieMR could be implemented. It is planned that the local EMR will be replaced by the ieMR in 2014.

The GCHHS is continuing to improve their work practices and training associated with the local EMR system, and in particular, they are adopting a centralised document scanning model similar to that proposed for the ieMR.

A clinical reference group at Gold Coast is sponsoring the identification and implementation of a range of improvements which are being progressively incorporated in to the current system.

A Gold Coast based project team is working in conjunction with ieMR Program to support the change to the new system.

20. Has hospital based testing of the ieMR been undertaken? If not, when will it occur?

- Hospital based demonstrations of the initial system build commenced in February 2013.
- User acceptance testing for staff from different hospitals is currently being performed in the Brisbane testing centre.
- Hospital based testing in Cairns will commence from October 2013 until go-live in November.
- Hospital based testing for other facilities will follow.

Should you require any further information, please contact Ms Renaie Dicker, Manager, Office of the Chief Information Officer, Health Services Information Agency on [redacted]

Yours sincerely

[redacted]

Dr Michael Cleary
Acting Director-General
8/10/2013

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Appendix 4 – Letter to Mr Ian Maynard, Director-General, Department of Health, dated 12 May 2014

Health and Community Services Committee

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Your Ref: Our Ref: 11.10.2

12 May 2014

Mr Ian Maynard
Director-General
Department of Health
GPO Box 48
BRISBANE QLD 4001

Dear Mr Maynard

Implementation of the Auditor-General's recommendations about the eHealth Program

On 7 March 2014 I invited you to attend a public hearing on Wednesday 7 May 2014 to brief the Health and Community Services Committee (the committee) on the Department of Health's progress on implementing the Auditor-General's recommendations in the Report to Parliament 4: 2012-3, "Queensland Health – eHealth Program." Unfortunately, as you know, the hearing will not proceed.

The committee will, however, continue to monitor the department's implementation of the Auditor-General's recommendations and would therefore appreciate a response to the following questions:

Recommendation 3: *That Queensland Health take appropriate action to address the obsolescence of the patient administration system, Hospital Based Corporate Information System (HBCIS), within a timeframe that will not impact adversely on hospital administration.*

1. In September 2013 the department advised that a refresh of the HBCIS infrastructure (hardware) platforms was expected to be completed in October 2013. Is the refresh complete? Has it delivered "Improved hardware reliability, resiliency and disaster recovery capabilities" as anticipated?
2. Has vendor support for HBCIS been extended beyond 2015?
3. In September 2013 the department advised that a patient administration system investment planning project business case would be completed by January 2014. Was this achieved?
4. What are the planned commencement and completion dates for the new PAS project?

Recommendation 4: *That Queensland Health progress the single sign on project to increase the efficiency of accessing multiple systems, particularly for the ieMR sites.*

5. In September 2013 the department advised that a solution to support multiple clinicians using the same workstations will be available in mid March 2014. Was this achieved?
6. Which hospitals are currently using the single sign on?
7. Are you on track to deploy the single sign on state wide, by mid 2014, as originally planned? If implementation plans have changed, please advise of the details.

Recommendation 6: *That Queensland Health provide system enhancements incorporated into the ieMR to the eMR at the Gold Coast Hospital and Health Service (GCHHS) to address current deficiencies, and test the practicality of these changes by using hospital based testing prior to implementing the ieMR to other hospitals.*

8. In September 2013 the department advised that a clinical reference group at the Gold coast is engaged in identifying and implementing improvements into the current EMR system and that a Gold Coast based project team is also working with the ieMR Program to support the change to the EMR. Did you test ieMR changes at the GCHHS prior to implementing it in other hospitals?

The committee would appreciate your response by Friday 6 June 2014, along with any additional information to inform the committee's deliberations. Please email your responses to the committee secretariat at hcsc@parliament.qld.gov.au. Questions can be directed to the secretariat's Principal Research Officer, Kath Dalladay, on [redacted] or by email to hcsc@parliament.qld.gov.au.

Yours sincerely

[redacted]

Trevor Ruthenberg MP
Chair

cc: David Noon, Cabinet and Parliamentary Services, Department of Health

Appendix 5 – Letter from Mr Ray Brown, Chief Information Officer, Department of Health, dated 11 June 2014

Queensland Government

Department of Health

Enquiries to: Renaie Dicker
A/Program Director
Health Services Information Agency
Telephone: 3170 4771
Facsimile: 3170 4780
File Ref: DG073905

Mr Trevor Ruthenberg MP
Chair
Health and Community Services Committee
Parliament House, George Street
BRISBANE QLD 4000

RECEIVED
11 JUN 2014
HEALTH AND COMMUNITY SERVICES COMMITTEE

Dear Mr Ruthenberg

Thank you for your letter dated 12 May 2014, in relation to the implementation of the Auditor-General's recommendations about the eHealth Program. The Director-General, Mr Ian Maynard has asked that I respond on his behalf.

As requested please find below a response to each of the committee's questions in regards to the department's implementation of three of the Auditor-General's recommendations.

Recommendation 3:
That Queensland Health take appropriate action to address the obsolescence of the patient administration system, Hospital Based Corporate Information System (HBCIS), within a timeframe that will not impact adversely on hospital administration.

Response:
An upgrade of the HBCiS infrastructure platforms was completed in October 2013 to provide stability ('improved hardware reliability, resiliency and disaster recovery capabilities') through to 2019.

An extension of the HBCIS software support to 2023 (including the purchase of the HBCIS software source code) was negotiated with the vendor in March 2014.

The Department of Health is progressing work to seek Government approval to commence work on a Patient Administration System (PAS) investment business case and program plan (including a high level implementation schedule for the new PAS).

The project business case was not completed by January 2014 due to additional governance processes aligned with the Queensland Government's renewal agenda and a refocusing of activities to prioritise the extended support agreement.

The Department of Health had been progressing the engagement of an external consultancy in June 2014 to commence business and program plan development. However, evolving consultation between Queensland Government Chief Information Office, Department of Science, Information Technology, Innovation and the Arts and Queensland Health resulted in a reorientation of the current strategy of developing a centred led system.

As a result of that reorientation, Queensland Health commissioned the development of a 10 year ICT Strategic roadmap, to ensure that it aligned to the new whole-of-Government ICT strategy.

Now having developed the ICT Strategic Roadmap, Queensland Health is working with Hospital and Health Services (HHSs) in concert to co-design the PAS system and ensuring it has patient centric focus and business benefits when designing the future solution.

A submission will then be prepared for Government setting out a co-design methodology and approach to market. This will detail how in partnership with HHSs a requirement will be developed. It is anticipated with the new business approach to developing systems, HHSs in consortia with other HHSs will put forward a business case for a future PAS for what they need, when they need it.

Commencement and completion dates for the HBCIS replacement project will be determined as part of the business case and program plan development.

Recommendation 4:
That Queensland Health progress the single sign on project to increase the efficiency of accessing multiple systems, particularly for the ieMR sites.

Response:
The Authorisation and Authentication Project (delivering single sign-on capability) is progressing a two-fold implementation strategy to ensure alignment with the release two deployment of the integrated electronic Medical Record (ieMR) solution.

An Interim solution delivering the core functionality of the proposed long term commercial-off-the-shelf single sign-on solution has been developed and is available for deployment at the initial ieMR sites (currently scheduled for July 2014).

Acquisition of the commercial solution is well advanced and expected to be available for deployment from August 2014.

The solution is being designed to be enterprise-scalable and as an outcome of the project, the Health Services Information Agency (HSIA) will be able to offer the solution as a service offering to HHSs on a cost sharing basis.

Recommendation 6:
The Queensland Health provide system enhancements incorporated into the ieMR to the eMR at the Gold Coast Hospital and Health Service (GCHHS) to address current deficiencies, and test the practicality of these changes by using hospital based testing prior to implementing the ieMR to other hospitals.

Response:
That GCHHS electronic Medical Record (eMR) Implementation was a separate project and separate to Implementation to the program of work undertaken by the Department of Health to implement an ieMR solution to nine public hospitals.

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The GCHHS adopted a centralised document scanning model and a stand-alone design for its localised eMR implementation. This is different to the decentralised document scanning model and statewide build approach for the department's ieMR implementation.

To ensure the department's ieMR solution is delivered in an effective and sustainable way it is being rolled out in collaboration with the HHSs in four releases.

As the GCHHS was in scope to receive the ieMR solution, an assessment was initiated in January 2012 to identify the current state of the GCHHS eMR build and analyse the impact of moving to the statewide ieMR build. Several key differences and risks were identified and it was recommended that migration of the GCHHS to the ieMR be deferred until the second release of the solution.

This recommendation was supported by the eHealth Program Board and the (then) Gold Coast Health Service District eMR Board, with the GCHHS electing not to go live in release one, but to be included from release two of the ieMR.

To date, the first release of the ieMR has been successfully deployed to the Cairns, Mackay Base, Royal Children's, Royal Brisbane and Women's hospitals and the Princess Alexandra Hospital.

The HSIA has been working closely with the GCHHS (and all ieMR HHSs) to support their transition to the ieMR. This includes funding an ieMR site project team and the acquisition of a GCHHS senior medical officer's services to ensure learnings from their local eMR implementation are incorporated into the ieMR deployment.

As part of the implementation process a comprehensive test strategy was completed culminating in user acceptance testing with representatives from five hospitals. The test strategy, release plan and outcomes were all independently assured by KJ Ross Associates, who in their final test assurance report concluded that ... *'In examining the post go-live state of the ieMR project, we find that QH's (Queensland Health) system testing effort is of a good standard, having achieved a higher than industry average defect removal effectiveness, with minimal technical issues raised in production'.*

Should you require any further information in relation to this matter, I have arranged for Ms Renaie Dicker, A/Program Director, Office of the Chief Information Officer, Health Services Information Agency on telephone 07 [redacted] to be available to assist you.

Yours sincerely

[redacted]

RAY BROWN
Chief Information Officer, Department of Health

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Appendix 6 – Letter to Mr Ian Maynard, Director-General, Department of Health, dated 21 August 2014

Health and Community Services Committee

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Your Ref: DG073905 Our Ref: 11.10.2

21 August 2014

Mr Ian Maynard
Director-General
Department of Health
GPO Box 48
BRISBANE QLD 4001

Dear Mr Maynard

Implementation of the Auditor-General's recommendations about the eHealth Program

Thank you for the response from Mr Ray Brown (undated) to my letter of 12 May 2014 about the Department of Health's progress on implementing the Auditor-General's recommendations in the Report to Parliament 4: 2012-3, "Queensland Health – eHealth Program."

The committee has considered the information provided and would appreciate further information about the implementation of recommendations 3 and 4, as outlined below.

Recommendation 3: *That Queensland Health take appropriate action to address the obsolescence of the patient administration system, Hospital Based Corporate Information System (HBCIS), within a timeframe that will not impact adversely on hospital administration.*

In June 2014 the department advised that HBCIS infrastructure platforms were upgraded in October 2013 "to provide stability ('improved hardware reliability, resiliency and disaster recovery capabilities') through to 2019" and that vendor support has been extended to 2023.

1. Please outline the improvements provided by the October 2013 HBCIS infrastructure upgrade.
2. The committee notes the department's advice that the upgrade to HBCIS infrastructure platforms will provide stability through to 2019. Will a new Patient Administration System (PAS) be in place by 2019?
3. Please advise the main milestones and timeframes for HBCIS replacement up to 2019 and beyond if appropriate.

In June 2014 the department advised that consultation with the Chief Information Office had "resulted in a reorientation of the current strategy of developing a centred led system." The department advised that as a result of the reorientation, Queensland Health has commissioned a 10 year ICT Strategic Roadmap and is working with HHSs to co-design the PAS. The department stated a submission will then be prepared for Government, which sets out "a co-design methodology and approach to market" and details how a requirement will be developed in partnership with HHSs.

The department advised that it anticipates that consortia of HHSs will put forward a business case "for what they need, when they need it" and that "commencement and completion dates for the HBCIS replacement project will be determined as part of the business case and program plan development."

4. The committee notes the department's advice that is working with HHSs to co-design the PAS and that HHSs will put forward a business case "for what they need, when they need it." Can you confirm that the outcome will be one PAS? If not, please describe what arrangements will be implemented to ensure system interoperability between HHSs.

5. Does the eHealth Board have an ongoing role in the HBCIS replacement project? If not, please describe the governance arrangements for HBCIS replacement.

***Recommendation 4: That** Queensland Health progress the single sign on project to increase the efficiency of accessing multiple systems, particularly for the ieMR sites.*

The department has previously advised that a solution to support multiple clinicians using the same workstation would be available in mid-March 2014, with state wide deployment to occur in mid-2014.

6. The department did not respond to the committee's request in May 2014 to name those hospitals using single sign on. Where any hospitals using single sign on at this time?

In June 2014 the department advised that an Authorisation and Authentication Project would deliver single sign-on in two stages:

- an interim solution delivering the core functionality of a long term commercial off the shelf single sign-on solution, to be deployed at the initial ieMR sites in July 2014, and
- a commercial solution, which was expected to be available for deployment in August 2014.

7. Was the interim solution delivered in July? If so, please name the sites which commenced using the solution in July and describe the functions it delivered.

8. Is the commercial solution available? Are any sites using the solution? If so, please name the sites.

The committee seeks your response by Friday 19 September 2014, along with any additional information you wish to provide to inform the committee's deliberations. Please email your responses to the committee secretariat at hcsc@parliament.qld.gov.au. Questions can be directed to the secretariat's Principal Research Officer, Kath Dalladay, on [redacted] or by email to hcsc@parliament.qld.gov.au.

Yours sincerely

[redacted]

Trevor Ruthenberg MP
Chair

cc: David Noon, Cabinet and Parliamentary Services, Department of Health

Appendix 7 – Letter from Mr Ian Maynard, Director-General, Department of Health, dated 23 September 2014

Queensland Government

Queensland **Health**

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File Ref: DG074758

Mr Trevor Ruthenberg MP
Chair
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Parliament House, George Street
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Dear Mr ~~Ruthenberg~~ Trevor,

Thank you for your letter dated 21 August 2014 regarding further information about the implementation of the recommendations of the Auditor-General's report to Parliament 4: 2012-13, *Queensland Health - eHealth Program*. I appreciate you taking the time to write and as requested below is a response to each of the committee's questions.

Recommendation 3: *That Queensland Health take appropriate action to address the obsolescence of the patient administration system, Hospital Based Corporate Information System (HBCIS), within a timeframe that will not impact adversely on hospital administration.*

Response

1. Prior to the upgrade in 2013, the HBCIS application was delivered on a distributed basis involving 13 separate hardware platforms across the state. Replacement and consolidation of this aged infrastructure with modern hardware and backend database systems significantly reduced the primary risk of the previous operational failure. There have been no reported HBCIS performance issues or hardware failures since the upgrade.
2. At this stage a date has not yet been confirmed for a replacement Patient Administration System (PAS) to be in place, however, the department will ensure the HBCIS infrastructure platforms remain stable until the replacement occurs.
3. The Department of Health has commenced work with the HHSs to deliver a capability roadmap to inform the prospectus of prioritised proposed investments which will include the PAS replacement. This roadmap is expected to be finalised by November 2014. Following this, the PAS replacement business case which will identify the milestones and timeframes will be developed in early 2015. The extension of the HBCIS software support with the current vendor to 2023 (including the purchase of the HBCIS software source code) has provided time for this investment planning process to be carefully considered.
4. At this stage, the department cannot confirm that the outcome will be one PAS provided by a single vendor, as this is now being informed by HHS's as to the approach and solution they wish to take that meets their business needs. However, to mitigate patient risk and support a life approach to patient services several steps are being taken to ensure seamless service and interoperability between systems will be in place. These include:

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- An Enterprise Architecture and Standards Board has been tasked to ensure any system/s that support a patient pathway or journey comply to a minimum set of information, data, messaging, security and transport standards.
- All interfaces of systems in Queensland Health will be required to be documented to agreed standards and it will be a contractual obligation for vendors to ensure this occurs.

5. The eHealth Program Board will not have an ongoing role in the HBCIS replacement project. As of August 2014, Queensland Health implemented a revitalised governance framework that aims to better support HHSs to lead, prioritise and manage business initiatives. Following the inaugural ICT Strategy Board meeting on 7 August 2014, work is currently being progressed to develop a forward schedule which outlines key priorities for each governing body.

Recommendation 4: *That Queensland Health progress the single sign on project to increase the efficiency of accessing multiple systems, particularly for the ieMR sites.*

Response

6. I apologise if the response to your request in May was not clear. There were no hospitals using the single sign-on solution as at May 2014, as the initial deployment of release two of the integrated electronic Medical Record (ieMR) was not scheduled until July 2014.
7. The interim solution was successfully delivered to the Royal Children's Hospital on 23 June 2014 shortly before the deployment of release two functionality of the ieMR. The interim solution provides the capability for a clinician to log-on to a shared workstation by use of a smart card and to gain access to a limited number of applications through single sign-on. This was a planned capability to allow staff to get rapid access to three applications commonly used by clinicians with the ieMR. It is not planned to roll-out the interim solution further in preference to waiting for the increased functionality available under the new commercial solution.
8. The contract for the commercial solution was subject to protracted negotiations but finalised in September 2014. The solution:
   - will be available for deployment at a pilot site in November 2014
   - provides rapid access to a significantly greater number of applications commonly used by clinicians and will be available as a state-wide service offering from 1 January 2015, with HHSs choosing when and if to access the service.

Should you require any further information in relation to this matter I have arranged for Mrs Renaie Dicker, A/Program Director, Office of the Chief Technology Officer, Health Services Information Agency on telephone [redacted] to be available to assist you.

Yours sincerely

[redacted]

Ian Maynard
Director-General, Queensland Health
23 SEP 2014

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