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## GLOSSARY

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<th>Term</th>
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<tr>
<td>Aged Care Act</td>
<td><em>Aged Care Act 1997</em></td>
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<tr>
<td>AHMAC</td>
<td>Australian Health Ministers’ Advisory Council</td>
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<td>AHPRA</td>
<td>Australian Health Practitioner Regulation Agency</td>
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<td>AIIA</td>
<td>Australian Information Industry Association</td>
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<td>BAU</td>
<td>Business As Usual</td>
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<td>CCA</td>
<td>Compliance, Conformance &amp; Accreditation</td>
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<td>COAG</td>
<td>Council of Australian Governments</td>
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<td>CR</td>
<td>Change Request</td>
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<td>CSP</td>
<td>Contracted Service Providers</td>
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<td>DHS</td>
<td>Department of Human Services</td>
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<td>DOHA</td>
<td>Department of Health and Ageing</td>
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<td>DVA</td>
<td>Department of Veterans’ Affairs</td>
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<tr>
<td>eHWG</td>
<td>eHealth Working Group</td>
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<tr>
<td>ELS</td>
<td>Endpoint Location Service</td>
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<tr>
<td>EOI</td>
<td>Evidence of Identity</td>
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<tr>
<td>ePIP</td>
<td><em>e</em>-Health Practice Incentive Program</td>
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<tr>
<td>eTP</td>
<td>Electronic Transfer of Prescriptions</td>
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<td>Health Insurance Act</td>
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<td>HI</td>
<td>Healthcare Identifiers</td>
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<td>HI Act</td>
<td><em>Healthcare Identifiers Act 2010</em></td>
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<tr>
<td>HI Service</td>
<td>Healthcare Identifiers Service (the system and supporting management processes)</td>
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<td>HI Service Operator</td>
<td>Healthcare Identifiers Service Operator (Chief Executive Medicare)</td>
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<td>HI System</td>
<td>The Healthcare Identifiers software and technical infrastructure</td>
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<td>HISOC</td>
<td>Healthcare Identifiers Service Operations Committee</td>
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<tr>
<td>HPD</td>
<td>Healthcare Provider Directory</td>
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<tr>
<td>HPI-I</td>
<td>Healthcare Provider Identifier - Individual</td>
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<tr>
<td>HPI-O</td>
<td>Healthcare Provider Identifier - Organisation</td>
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<tr>
<td>HPOS</td>
<td>Health Professional Online Services</td>
</tr>
<tr>
<td>IAARG</td>
<td>Identification, Authentication and Access Reference Group</td>
</tr>
<tr>
<td>IHI</td>
<td>Individual Healthcare Identifier</td>
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<tr>
<td>JOWG</td>
<td>Joint Operations Working Group</td>
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<td>JSC</td>
<td>Joint NEHTA Medicare Australia Strategic Steering Committee</td>
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<td>ML</td>
<td>Medicare Local</td>
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<tr>
<td>MSIA</td>
<td>Medical Software Industry Association</td>
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<tr>
<td>NASH</td>
<td>National Authentication Service for Health</td>
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<td>Acronym</td>
<td>Term</td>
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<tr>
<td>National Health Act</td>
<td>National Health Act 1953</td>
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<tr>
<td>NEHTA</td>
<td>National E-Health Transition Authority Limited</td>
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<tr>
<td>NHIRF</td>
<td>National Health Information Regulatory Framework</td>
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<tr>
<td>NOC</td>
<td>Notice of Connection</td>
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<tr>
<td>NPA</td>
<td>National Partnership Agreement (on e-Health)</td>
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<td>NRA</td>
<td>National Registration Authority</td>
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<tr>
<td>OMO</td>
<td>Organisation Maintenance Officer</td>
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<tr>
<td>PCEHR</td>
<td>Personally Controlled Electronic Health Record</td>
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<tr>
<td>PCEHR Act</td>
<td>Personally Controlled Electronic Health Records Act 2012</td>
</tr>
<tr>
<td>PCEHR System Operator</td>
<td>Personally Controlled Electronic Health Record System Operator</td>
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<tr>
<td>PKI</td>
<td>Public Key Infrastructure</td>
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<tr>
<td>Privacy Act</td>
<td>Privacy Act 1988</td>
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<tr>
<td>RO</td>
<td>Responsible Officer</td>
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<td>SLA</td>
<td>Service Level Agreement</td>
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<td>SMD</td>
<td>Secure Messaging Delivery</td>
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1. INTRODUCTION

1.1 Background to the Review

In 2006 the Council of Australian Governments (COAG) agreed to a national approach to developing and implementing Healthcare Identifiers (HI) for individuals and providers. The implementation of the Healthcare Identifiers Service (HI Service) is the first step in a transformational e-Health reform program. When fully implemented this program will help drive improved quality and safety of care, increase efficiency, support integration and enhanced communication between disparate health services and providers, and reduce duplication of services, assisting with the long term sustainability of the health system in Australia. Implementation of the Personally Controlled Electronic Health Record (PCEHR) system, secure messaging and other programs cannot be achieved without a reliable and accurate means of identifying healthcare recipients, healthcare providers and healthcare services.

The National Partnership Agreement on e-Health (NPA) was signed by COAG in 2009, formalising the commitment to Healthcare Identifiers by all jurisdictions but without requiring a specific timeline for this to occur. The NPA lapsed in June 2012 and is proposed to be replaced by a Memorandum of Understanding on developing a national e-Health capability. This Memorandum of Understanding is currently in the process of being ratified by all jurisdictions.

The Healthcare Identifiers Bill 2010 was introduced to Parliament on 10 February 2010. The Healthcare Identifiers Bill 2010 was passed by Federal Parliament and received Royal Assent on 28 June 2010. The then Chief Executive Officer of Medicare Australia commenced operations as the Healthcare Identifiers Service Operator (HI Service Operator) on 1 July 2010. There have subsequently been Regulations made under the Healthcare Identifiers Act 2010 (HI Act) on 20 October 2010. The Act anticipates that a State or Territory may make its own Healthcare Identifiers legislation to cover public bodies of that jurisdiction. It is noted that Healthcare Identifiers are regulated under existing legislation in some jurisdictions, such as Health Privacy Principle 12 in the NSW Health Records and Information Privacy Act 2002.

Section 35(1) of the HI Act requires that an independent review is undertaken of the legislation and the Service after two years of operation. The aim of the Review is to ensure that the Act provides the regulatory support to enable the HI Service to operate efficiently and effectively and support the sharing of clinical information in practice.

The objective of the Review was to consider:

- The HI Act and Regulations made under the Act
- Amendments to the HI Act proposed in the Personally Controlled Electronic Health Record (Consequential Amendments) Act 2012 (PCEHR (Consequential Amendments) Act)
- The implementation, operation, performance and governance of:
  - The HI Service
  - The HI Service Operator (SO).

The Review considered any legislative or administrative barriers that may be impacting the Act achieving its objectives and makes recommendations on changes that may be made to improve performance against the objectives of the HI Act. This report presents the findings of the Review. The Terms of Reference for the Review are provided in Appendix 1.

The findings were informed through a review of documents relating to the HI Service, interviews with key stakeholders and written submissions.
The full list of documents reviewed, interviews and written submissions is included in Appendix 2-4.

In total the consultation involved interviews with 86 stakeholders from the Department of Human Services (DHS), the National E-Health Transition Authority (NEHTA), the Department of Health and Ageing (DOHA), the Australian Health Practitioner Regulation Agency (AHPRA), the Office of the Australian Information Commissioner (OAIC), jurisdictions, Medicare Locals, clinicians, vendors, and professional and consumer groups over the period November 2012 to January 2013.

Twenty two organisations were also given the opportunity to provide written submissions. Written submissions have been received from seven organisations:

- NPS Medicinewise
- Consumers Health Forum
- Royal Australasian College of Physicians
- Office of the Australian Information Commissioner
- Australian Privacy Foundation
- Australian Medical Association
- Healthdirect Australia.

### 1.2 Objectives of the Healthcare Identifiers Service

The HI Service is a core component of the broader range of programs addressed in the National e-Health Strategy. The HI Service Concept of Operations\(^1\) released by NEHTA in 2010 states that the purpose of the HI Service is “to assign, issue and maintain national Healthcare Identifiers for consumers and providers”. The capacity to accurately identify individuals seeking healthcare, healthcare providers and organisations is critical to:

- The ability to communicate health information between providers with a high level of confidence that the information is being sent about the right person, to the right person; and
- The ability to apply security and access controls that will give the community confidence in the system and in e-Health.

This will enable:

- Safer, more effective care for individuals that is better co-ordinated between the many services and healthcare providers that a person may access in relation to a single episode of care, as well as over their lifetime.
- More active consumer involvement in their health care and management of their health information.
- A more efficient health system with reduced fragmentation and duplication of services.
- Continuous improvement in the health system through improved monitoring of patient outcomes.
- Improved management of health services, population health activities and research.

Although a separate service, the HI Service is core to the PCEHR system and other e-Health initiatives such as secure messaging and medication management.

\(^1\) NEHTA, HI Service Concept of Operations v2.0, 8/6/2010
The widespread adoption and use of national Healthcare Identifiers is critical to support these functions. The basis of participation in the Service was changed from a voluntary model after the National e-Health and Information Principle Committee advised the Australian Health Ministers’ Advisory Council (AHMAC) that voluntary participation would significantly constrain the widespread uptake of Individual Healthcare Identifiers (IHI) and the capacity for health services to adopt IHIs as their primary identifiers, flagged as a potential benefit of the Service in the Concept of Operations.

1.3 Healthcare Identifiers Service overview

There are three types of Healthcare Identifiers:

- Individual Healthcare Identifiers (IHI) - for individuals receiving healthcare services;
- Healthcare Provider Identifiers - Individual (HPI-I) for healthcare professionals involved in providing patient care; and
- Healthcare Provider Identifiers - Organisation (HPI-O) for organisations such as hospitals or health clinics where healthcare is provided.

The Department of Health and Ageing (DOHA), with input from States and Territories, is responsible for legislation and policy setting for Healthcare Identifiers and other national e-Health programs.

Two organisations play a key role in the management of the HI Service:

- The Department of Human Services (Chief Executive Medicare) as the HI Service Operator; and
- The National E-Health Transition Authority (NEHTA) as the Managing Agent overseeing the contract and operation of the Service and with responsibilities for stakeholder engagement, communication, clinical safety and assurance.

The Australian Health Practitioner Regulation Agency (AHPRA) is a Trusted Data Source responsible for assigning identifiers for registered Healthcare Providers that fall within AHPRA’s area of responsibility. Identifiers for other providers not registered by AHPRA are assigned by DHS. The Department of Veterans’ Affairs is also a Trusted Data Source for the HI Service.

The Office of the Australian Information Commissioner (OAIC) has a key role in the regulation and oversight of the HI Service.

Components of the e-Health strategy that have dependencies on the Healthcare Identifiers program include:

- **PCEHR - Personally Controlled Electronic Health Record**: A secure electronic record of a patient’s medical history that is stored and shared in a network of connected systems. The PCEHR system uses the HI Service to facilitate the identification of patients and healthcare providers. The PCEHR System Operator is the Secretary of the Department of Health and Ageing.

- **eTP - Electronic Transfer of Prescriptions**: Secure exchange of prescription information between prescribers and dispensers. eTP specifications have been developed by NEHTA. Similar to the PCEHR system, eTP will use the HI Service to identify the parties involved.

- **NASH - National Authentication Service for Health**: Nationwide secure and authenticated service for healthcare organisations and providers to exchange e-Health information. NASH uses Public Key Infrastructure (PKI) Certificates to authenticate healthcare providers.
Secure Messaging: Secure Messaging combines the basic technologies of unique identification, authorisation, and message security to provide the safest and optimally secure method of exchanging healthcare information.

Electronic Discharge Summaries: Secure transmission of hospital discharge summaries to an individual's nominated provider.

E-Referrals: E-referrals provide a secure mechanism to exchange significant patient information from one treating healthcare provider to another.

1.4 Current usage of the Healthcare Identifiers Service

There has been a steady growth in the allocation of identifiers across all categories. The HI Service is also monitoring the number of transactions that are occurring for major business processes, which provides an insight to the level of utilisation and maintenance activities that are currently occurring. The active count refers to identifiers that are in current usage. The total assigned count includes all identifiers ever assigned, including those that have now been retired from use.

<table>
<thead>
<tr>
<th>Identifier Type</th>
<th>Total Active Count</th>
<th>Total assigned count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Healthcare Identifiers (IHI)</td>
<td>24,778,567</td>
<td>25,127,896</td>
</tr>
<tr>
<td>Healthcare Provider Identifier-Individual (HPI-I)</td>
<td>631,037</td>
<td>632,003</td>
</tr>
<tr>
<td>Healthcare Provider Identifier-Organisation (HPI-O)</td>
<td>5,300</td>
<td>5,342</td>
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Table 1: Identifiers allocated as at May 2013

As at May 2013 DHS reported that 49 vendors had been issued with a Notice of Connection (NOC) and 42 vendors with a Declaration of Conformity.

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2 Extract from DHS HI Service Operations Report, November 2012
3 DHS HI Service Operations Report, November 2012
2. GENERAL FINDINGS

The development and implementation of a national HI Service is a very significant achievement and a major contributing step towards the implementation of national e-Health programs. The difficulty of integrating national Healthcare Identifiers into extremely diverse clinical processes and clinical systems, all with their own identifiers, across public and private health services is a major undertaking and the scale of this challenge should not be underestimated. The significant effort made by DHS, NEHTA and AHPRA in implementing this Service and establishing the day to day operations is very evident, as is the level of expertise of the staff involved across all organisations.

The core functionality of the HI Service is in operation and working effectively. There have been a number of improvements made to the business processes that underpin it to support vendors and implementers and positive feedback about the role of both DHS and NEHTA.

Although the HI Service has been operational since 1 July 2010, the systems that have a high dependency on the Service such as the PCEHR system are only now being implemented. In addition the incremental release of compliant software by vendors since 2011 has also influenced the uptake. As a result the usage of the HI Service to date has been low. Consequently, some of the issues associated with the functionality that has been built, the policies and processes surrounding the HI Service, and implementation processes are only now starting to emerge. The scale of the change management and technical effort involved in this implementation will only become fully evident when there is a drive for the use of the HI Service to become more integrated with local business processes.

Now that clinical users are beginning to access the Service it is highlighting aspects of the operation that do not integrate well into clinical workflows and this creates a risk for adoption. These issues could be addressed by making some changes to the Act, or to Healthcare Identifier Service functionality, policy and processes that would facilitate easier access to both Healthcare Provider Identifiers and IHIs.

As new health systems and services begin to integrate with the HI Service it is inevitable that issues will be identified that were not anticipated at the time of development of the Service. As the HI Service supports clinical systems the ability to manage and resolve issues as they arise in a timely fashion is critical. The success of the implementation will largely be driven by the degree to which the HI Service is tightly integrated from a technical, process and policy perspective with the other clinical systems in daily use in healthcare services.

The governance structure must be able to manage change requests, incident resolution and drive the strategic direction of the Service through clear responsibilities and accountabilities, user engagement and agile decision making processes. Equally important is the capacity to support a steadily increasing user base through a robust policy framework that provides clear guidelines to support the implementation and use of the system. Effective communication and well defined and resourced pathways for implementation and operational support are also important.

The major issues identified in relation to the operation of the HI Service were in the areas of management of change requests, prioritisation and content of releases, the complexity experienced in establishing organisational seed and network structures, access to HPI-Is, and assignment of IHIs for individuals that do not return a result when a search is conducted. Concerns about the processes relating to identifiers for newborns were also reported, as well as the as yet unimplemented functionality relating to provisional and unverified IHIs.
As additional programs such as the PCEHR system are being implemented there are increasing issues arising from the parallel operation, support, policy frameworks and governance of these programs. This environment will become even more complex as additional programs come online. This is likely to exacerbate the challenges for all participating organisations that arise from maintaining the separation between these programs.

The primary issues identified in relation to governance were: determining a long term funding strategy for the Service, lack of clarity in responsibilities and accountability between organisations, parallel governance structures for programs of work with a high level of interdependency, and a need to revise the terms of reference and members of key governance groups to enhance stakeholder engagement.

There are overlaps in functions between organisations that result in duplication of infrastructure, cost and maintenance effort, and in the operational complexity of the Service. This is particularly evident in the functions relating to assignment and management of HPI-Is by AHPRA, and DHS and in provider directory infrastructure between DHS and the National Health Services Directory operated by Healthdirect Australia.

2.1 Governance

Role delineation

Discussions with NEHTA, DHS and DOHA highlighted a number of functions where there is insufficient clarity about the roles and responsibilities of the various partners involved in delivering the Service. Interviews highlighted a certain degree of fragmentation, and in some cases duplication, between functions that is impacting the efficiency of some processes, communication, decision making and governance.

This is perceived as a lack of transparency by stakeholders, which impacts confidence in the operation of the Service. This is reported to have become more of an issue since the Service transitioned to the Business As Usual operation. Examples of areas of roles and responsibilities that would benefit from further definition and formalisation are: development and maintenance of information collateral, customer management, Healthcare Identifiers product development prioritisation, and policy development.

There are other functions, such as clinical safety, where responsibilities are clear but would benefit from further developing the processes between DHS and NEHTA (for example, to agree on a referral process so that DHS refers all issues that may have a clinical safety impact to NEHTA, collaborative investigation processes and escalation processes).

Once roles and responsibilities are clarified it would be beneficial to communicate these widely to external stakeholders.

AHPRA

At present AHPRA’s sole function in relation to the HI Service is as a Trusted Data Source, however there are opportunities to leverage AHPRA’s regular interaction with providers to expand the communication and promotion of e-Health programs. This would be facilitated through the inclusion of AHPRA in formal governance groups.

DHS and AHPRA are working towards finalising a Memorandum of Understanding which will include the requirements for the HI Service. Finalising this would clarify expectations about data, quality standards and issue resolution processes.
Meeting structures and Terms of Reference

The Identification, Authentication and Access Reference Group (IAARG) was the major vehicle for stakeholder input into the Healthcare Identifiers system. The IAARG membership included three jurisdictions, private hospitals, vendors, the Medical Software Industry Association (MSIA), the Australian Information Industry Association (AIIA), consumer representatives, DOHA, DHS and NEHTA.

Meetings became less frequent after the Service became operational and while attempts were made by IAARG in 2011 to review the terms of reference to reflect the change in focus, these were not endorsed. This reference group has now been terminated but information has not been provided to jurisdictions on alternative consultation mechanisms. At the same time there is a high level of frustration from stakeholders that their business requirements and priorities are not being reflected in new releases of the Healthcare Identifiers system. In July 2012, at the National Health Chief Information Officers (CIOs) forum the jurisdictions and NEHTA agreed a revised governance structure but this is yet to be fully implemented.

It is inevitable that there will be changes required to the HI Service as the requirements of these other programs are better understood. This will continue to be an issue as new programs and new uses of the Service emerge. It is critical for the success of the HI Service and the wider e-Health agenda that governance structures are in place to enable rapid access to people with expertise in the business requirements of end users to ensure appropriate design decisions are made.

It is also important that the membership of these committees reflects the highly integrated nature of the Healthcare Identifiers system with other e-Health systems to prevent disconnects between programs that may impact the utility of the HI Service.

The National Health Information Regulatory Framework (NHIRF) working group has not been meeting regularly, but would be a valuable mechanism for resolving issues around interpretation of the Act and communicating this to stakeholders to increase the level and consistency of understanding.

Collaboration

The interdependencies between the HI Service, the PCEHR system, and other programs like Secure Messaging and NASH require a close collaboration between NEHTA, DHS and DOHA to manage dependencies and incidents effectively and plan future development. The scale of the e-Health strategy and the number of organisations who are an integral part of delivering these programs make this very difficult to achieve without integrated governance and process frameworks. Currently, different programs have separate governance structures, management and support processes. These present a navigation challenge to end users. At the same time, it is a challenge to manage communication, stakeholder engagement and benefits management so that changes made in one program will not negatively impact the operation of another.

This environment will become even more complex as additional programs start to be rolled out that have a dependency on the HI Service. Co-ordination of contractual terms and obligations, Service Level Agreements (SLAs), support structures, help desks and communication, engagement and change activities to ensure all services operate as an integrated whole from a user perspective will be very important to promote utilisation.
Funding

Funding for the HI Service is provided on a cost share basis by the Commonwealth and the jurisdictions by means of annual grants. The current funding arrangements will cease in June 2014. Funding certainty for the operation of the HI Service is important, both for DHS as the Service Operator and the jurisdictions. Implementation of the Service will involve a significant cost to all healthcare organisations, but particularly to the jurisdictions where changes to clinical systems and the associated costs of changing business processes across a large workforce will be very substantial. While there is any uncertainty about the ongoing funding there is a risk that there will be reluctance to make the full scope of changes needed to embed the HI Service into normal business operations which will impact adoption.

Payments for the operation of the HI Service are made on a cost recovery basis. Base fees are paid quarterly in advance and adjusted each quarter for actual costs. To date the actual costs have always been lower than the projections. This may change as utilisation increases, especially if take up occurs in projects/sites outside NEHTA’s control.

A review of the financial model for the HI Service was undertaken by KPMG. The review found that the model and assumptions made in costing the Service was sound.4

Both DHS and NEHTA highlighted the importance of a robust process for estimating demand as the utilisation of the HI Service starts to increase. It was reported that the process around demand planning and the impact on resources and costs has improved significantly since implementation of the Service. However as the Service evolves, there will be factors affecting the costing process, for example:

- Automating processes that are currently manual will introduce efficiencies
- Changes in DHS from using IBM to an insourced model
- Implementation of change requests to increase the capacity of the HI Service to cater for increased demand which will lead to an infrastructure upgrade and additional capital costs in 2013.

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4 KPMG Financial Component Assessment for the Healthcare Identifiers Service Final Report, 28 July

Recommendation 1 – Governance

It is recommended that roles and responsibilities of all organisations contributing to the full end to end management process for the HI Service be reviewed to ensure that responsibilities and accountability for all aspects of the Service are clear. These should be formalised in appropriate contracts/agreements, and communicated to all stakeholders. In particular the following responsibilities and management processes should be further refined:

- Policy development and advice
- Legal review and risk assessments
- Support call procedures and handoff processes between service desks
- Healthcare Identifiers Service assurance
- Communication and stakeholder engagement.

Recommendation 2 – Governance

It is recommended that governance structures be reviewed to assist closer integration of the governance, development and operation of COAG and PCEHR programs of work.

Recommendation 3 – Governance

It is recommended that a process of regular review of governance structures and processes be implemented by DOHA to make sure they remain appropriate as the system moves through different stages of its lifecycle and new dependent systems start to be implemented.
If accepted, a number of recommendations made in this report would have funding implications that would need to be considered in the future funding arrangements for the HI Service, in particular those related to system functionality and technical and support infrastructure (Recommendations 4, 7, 10, 11, 12, 13, 17, 18, 19 and 23).

**Recommendation 4 – Funding**

It is recommended AHMAC review options for a long term funding model for the HI Service to promote the sustainability of the Service. This should include a review of the demand estimation methodology to assess its effectiveness in planning for growth generated by programs outside of NEHTA’s control and implementation of processes between NEHTA and DHS to manage the impact of unanticipated spikes in demand.

### 2.3 Contractual obligations/management

The HI Service Operations Contract between NEHTA and the Commonwealth of Australia (as represented by the Chief Executive Medicare) was drafted at the commencement of the Service but has not been signed. The draft Contract was updated 6 months into the service operation to reflect that the legislation had been passed and to incorporate forward estimates and budget. This revision is also unsigned. The HI Service has been operating on a letter of understanding between the two organisations which requires them to operate in accordance with the intent of the contract.

At the time of the Review the contract is under review and remains unsigned. The major area of contention relates to the requirements of the *Financial Management and Accountability Act 1997*, which has introduced some constraints and differing views about the financial arrangements between the organisations.

Part of the challenge is that the level of demand that will be experienced when the system is in more active use is still relatively unknown and there is little information to identify potential spikes in utilisation that will impact resourcing and service levels. This will be an ongoing issue and requires a strong process between DHS and NEHTA to manage this effectively.

A number of issues were identified by stakeholders relating to the current SLAs for the HI Service. The major concern was the exclusion of scheduled downtime from calculation of SLAs, and the absence of limitations in contracts of the duration or frequency of maintenance outages. Outages have been a major problem to end users and have become more frequent over 2012, with the longest outage being 39 hours in October 2012. The circumstances of this particular outage do appear to have been exceptional, with failures in both production and failover environments and required parts being unavailable in Australia. It was reported that the increase in outages was partly triggered by activities that needed to be performed as a result of major changes to the DHS technical infrastructure environment. Given the integration between the HI Service and clinical systems with a 24x7 requirement, the expectation from CIOs is complete failover capability should be provided to guard against any system outages. A change request is being progressed to seek funding for dedicated failover capabilities for the HI Service.

A main concern for users was the lack of information being provided about the changes that are made during outages. Users were also concerned that there is often not an adequate period of notice being given before the system goes down for a scheduled outage for stakeholders to assess the impact and manage the outage.

Other aspects of the SLA that could be tightened to better support the users of the HI Service include:
• Alignment between the SLAs of the HI Service and the PCEHR system.
• SLAs for the vendor test environment as availability of this environment is critical for uptake. Given current and anticipated future levels of demand it would be appropriate to review the requirements for vendor test environments and develop an upgrade strategy and business case for enhancement of this infrastructure.
• Extended reporting on the analysis of root causes of incidents to enhance opportunities to learn from incidents and foster an environment of continuous quality improvement.
• Timeliness of reporting performance against SLAs needs to be addressed as this impacts NEHTA’s capacity to communicate effectively with stakeholders and manage the contract.

**Recommendation 5 – Service Level Agreements (SLA)**

It is recommended that consideration be given to:

a) Revising the SLAs for the HI Service to:
   • Ensure alignment between the Healthcare Identifiers and PCEHR SLAs
   • Include scheduled downtime in measures of availability
   • Include SLAs in relation to availability of the vendor test environment
   • Enhance the management and resolution of any incidents that occur for the purposes of continuous improvement of the Service.

b) Undertaking periodic independent review of performance against SLAs and other contractual requirements, such as reporting.

### 2.4 Reporting

Reporting requirements were defined prior to commencement of the Service. Since implementation additional requirements have emerged that would be valuable for supporting implementation. For example, additional reporting on utilisation would facilitate change and adoption activities and data on trends of unsuccessful searches would be very useful in indicating areas of poor data quality that could be used to develop and implement training strategies among end users. DHS have been providing NEHTA with a number of reports over and above those that are contractually required.

The timeliness of reporting should be improved. All financial reports for the period of the Review in the 2012/13 financial year were delivered late. Operations reports that are required for NEHTA to perform their service assurance role in relation to operational volumes and trend analysis, service call management and data quality have been provided for the Review period but were frequently issued late.

The status of reports is monitored by the Joint Operations Working Group (JOWG). Given the importance of timely and accurate reporting for assurance of the Service and budget management it would be advantageous for this also to be monitored by the Healthcare Identifiers Service Operations Committee (HISOC).
2.5 Strategy

The majority of stakeholders who provided input into the Review raised concerns that fragmentation in governance, development, implementation and operation of components of the e-Health strategy could compromise the effectiveness of the HI Service in meeting the needs of all the programs and users who have dependencies on the system.

In the absence of detailed requirements, specifications and designs for other programs that would use the Service, the controls placed around the HI Service through the Act, policy framework and functionality at the time it was implemented were appropriate. Now that systems like the PCEHR system are being introduced, and the requirements and operating model of other programs are better understood, maintaining a segregation between the HI Service and the other components of the e-Health strategy presents some risks to the utility of the Healthcare Identifiers system, ease of use for end users, future design decisions and the operating efficiency across the broader e-Health context.

A strategic roadmap that integrates future Healthcare Identifiers development with the requirements of the PCEHR system, NASH, Secure Messaging Delivery (SMD) and other emerging e-Health programs would assist in making sure the initiatives are aligned and in understanding dependencies between the Healthcare Identifiers and other programs to inform prioritisation of change requests.

<table>
<thead>
<tr>
<th>Recommendation 6 – Strategic planning</th>
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<tbody>
<tr>
<td>It is recommended that NEHTA, DHS and DOHA consider developing a formal product management process including a strategic roadmap and annual business plan for the HI Service that identifies for a 12 month period all changes to be implemented, structure of releases, budget and required resources. This plan should be used as the basis for communication and reporting to stakeholders.</td>
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<th>Recommendation 7 – Resourcing</th>
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<tr>
<td>It is recommended that NEHTA and DHS review the resource requirements, budget and responsibilities required to support ongoing product development and the HI Service strategic roadmap.</td>
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2.6 Policy

Alignment of provider requirements across legislation supporting e-Health initiatives would make it easier to standardise and manage policies and simplify the policy environment for staff of the HI Service and end users. Healthcare providers are currently attempting to develop separate internal policies to govern use of the HI Service. This will introduce a number of complexities for staff, increasing the risk of non-compliance, and creating a considerable overhead for healthcare organisations in maintaining and implementing separate (but often similar) policies. There is a need for greater clarity about responsibilities for policy and provision of definitive policy advice to be communicated to HI Service stakeholders.

Assistance in developing local level policies and procedures and associated change management documentation would assist in promoting a common understanding about obligations (e.g. data quality, privacy and security and maintenance of access and audit information). Stakeholders are seeking further policy advice on some aspects of the Service, particularly relating to the impact of differing HPI-O seed and network structures on business processes, policy and procedures, the requirements for Responsible Officers (RO), Organisation Maintenance Officers (OMO), and authorised employee authorities in different types of organisations and the implications of assuming this role for the individuals.
2.7 Data management processes

The criticality of good data management processes at all levels is becoming apparent as more organisations begin using the HI Service. Data management and cleansing has been a significant effort for all sites to maximise IHI match rates and to ensure provider data are useable. It is evident from the Data Profiling and IHI Match Rate Assessment report \(^5\) that there are data quality issues across all sites that will impact use of the HI Service that need to be addressed. A number of common issues were identified in this report but at this point these are not being fed into targeted data quality strategies.

To achieve the level of rigour currently required for a match to be returned there will need to be an ongoing emphasis on data cleansing and quality improvement strategies in all healthcare organisations. It is unclear at this stage how resource intensive the data management obligations will be for organisations, not just in relation to patient data but also for maintenance of organisation structure data and updates to provider information. The maintenance effort for provider data given the number of healthcare providers engaged by public health services will be considerable. The challenge associated with this has been acknowledged and there is currently a two year exemption period from using HPI-Is on discharge summaries.

Poor information management processes and poor data quality in the clinical information system will create risks for the integrity of the IHI database as a failure to retrieve a result will increase the likelihood of unverified IHIs being allocated. The more unverified IHIs are in the system for the same individual that contain slight variations in demographic data, the higher the risk of the individual’s verified IHI being missed in response to a search and an unverified IHI being created. This will become a compounding error as the individual moves around the system and will be more difficult to resolve.

Obligations to maintain data should be included in communication material to healthcare providers to ensure there is a common level of understanding of the criticality of data quality for the HI Service and the systems with which it integrates. Data quality would be improved if health services had a better level of understanding of DHS data requirements and guidelines and registration processes reflected these, to increase the level of alignment between data held at DHS and health services.

Data quality would also be facilitated if there was more interaction between providers and the HI Service to resolve data quality problems that prevent retrieval of IHIs. The HI Act imposes constraints on the Service that limits the capacity of the HI Service to support providers in this way.

Recommendation 8 – Data governance

It is recommended that:

- a) National guidelines on best practice processes for recording of identification data and a national data governance framework for data quality improvement for the purpose of the Healthcare Identifiers and other national systems be developed and implemented.
- b) Consideration be given to amendments to the HI Act to provide legislative support for the HI Service to engage in data quality improvement activities.

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\(^5\) Data Profiling and IHI Match Rate Assessment Report, IBM, July 2012
3. HEALTHCARE IDENTIFIERS ACT FINDINGS

Among the clinical stakeholders of the HI Service there is a strong perception that the balance between privacy and clinical utility in the HI Act has swung too far to ensure privacy, to a level that it impacts efficient clinical processes and has resulted in systems that are difficult to use and processes that are cumbersome for healthcare providers and consumers. It was highlighted in a number of interviews that privacy protections need to be appropriate to the level of risk to an individual that would occur from disclosure of information. The risk associated from disclosure of an IHI number (or HPI-I) (as opposed to the health information attached to it) is seen as minimal by most stakeholders. Stakeholders also emphasised that Healthcare Identifiers need to be seen as an integral component of a much larger system and the way they are handled has to be considered in this context.

Many of the issues that were raised are more a result of misinterpretation or lack of knowledge of the Act than actual legislative barriers. There is a high level of variability in the way that the Act is interpreted among HI Service stakeholders, particularly in relation to what are permitted uses and disclosures, generating lack of confidence in using the system.

A number of legislative issues identified by stakeholders were referred to Minter Ellison Lawyers for advice on potential options to address these constraints, any potential legal risks or implications associated with these options and suggested amendments to the Act that would be required. This section contains extracts from this advice.

3.1 Assignment of Identifiers

The process of assigning IHIs by DHS has worked well for the majority of the population. There are unresolved issues around assignment of identifiers for newborns, and the use of provisional and unverified IHIs. While functionality for assigning newborn identifiers was deployed in April 2013 additional work is required to clarify how this functionality will align with local business processes. While it is noted that progress has been made on these issues there needs to be greater stakeholder engagement in confirming this functionality in the context of local processes and in the development of a policy framework and guidelines to support the implementation of this capability. Resolution of these issues needs to be a priority as these impact on key registration processes for health services and if not effective and practical will negatively affect adoption.

The assignment process for individual Healthcare Provider Identifiers - Individual (HPI-Is) managed by AHPRA is effective. Healthcare providers were notified of their Healthcare Identifier at the time their identifier was assigned. However, the delay between assignment and implementation of systems requiring these identifiers has caused issues as at the time the HPI-I was assigned most providers had little understanding of when and how this number would be used. Now that there are uses for the HPI-I many providers do not remember their identifier and are not clear about the mechanism to retrieve it.

AHPRA does not assign identifiers to all providers, only those covered by AHPRA legislation. These include professionals covered by the following Boards:

- Aboriginal and Torres Strait Islander Health Practice Board of Australia
- Chinese Medicine Board of Australia
- Chiropractic Board of Australia
- Dental Board of Australia
- Medical Board of Australia
- Medical Radiation Practice Board of Australia
- Nursing and Midwifery Board of Australia
• Occupational Therapy Board of Australia
• Optometry Board of Australia
• Osteopathy Board of Australia
• Pharmacy Board of Australia
• Physiotherapy Board of Australia
• Podiatry Board of Australia
• Psychology Board of Australia.

HPI-Is are assigned to other providers by DHS on application. Maintaining two mechanisms for registration creates an additional overhead on the HI Service as two organisations need resources, processes and systems in place to manage functions such as assignment of numbers, changes to registrations, communication to providers and data quality functions, such as checking for duplicates (e.g. a provider allocated an identifier by both DHS and AHPRA). This would be streamlined by consolidating the management of provider identifiers within AHPRA. It is noted that this would require amendments to the Health Practitioner Regulation National Law and changes to internal systems and processes within AHPRA. As AHPRA is funded through provider registrations, an alternative source of funding would need to be identified to fund changes to systems to meet any additional HI Service requirements.

The process of assigning Healthcare Provider Identifiers for organisations has been identified as a substantial barrier to participation. The process is difficult and time consuming to navigate and there are a number of unresolved policy issues relating to Seed and Network structures that are impacting registration (see section 3.4.2). It is noted that NEHTA have recently developed a guide to assist organisations to determine appropriate structures.

Recommendation 9 – Newborn, unverified and provisional IHIs
It is recommended that functionality, business processes and policy to assign and resolve newborn, unverified and provisional IHIs should be validated with stakeholders and implemented as a priority.

Recommendation 10 – Assignment of Provider HPI-Is
It is recommended that AHMAC consider transitioning all provider Healthcare Identifier (HPI-I) registration functions to AHPRA to standardise and streamline provider registration and associated information management processes.

3.2 Use and disclosure of identifiers and identifying information

There are constraints around the use and disclosure of identifiers and identifying information (both real and perceived) that are limiting the potential of the HI Service to fully meet its objectives. The Act and the Service were introduced with the aim of facilitating communication between providers and organisations to promote widespread adoption of e-Health. At the time the Act was drafted the detail of potential uses of the HI Service and the design were not known, nor was the identity of the Service Operator or the privacy controls that would be implemented to manage access to the PCEHR system. To mitigate risks that may occur given this level of uncertainty the Act and the design incorporated very tight restrictions on use and disclosure.

This sets a very high standard of privacy protection, but introduces practical issues for use at a clinical service level that are impacting confidence in the system and limiting its full adoption.
Individual Health Identifiers

IHI Search

In 2009 DOHA proposed that exact matching for an individual’s IHI was the preferred option in the design of the HI Service. This proposal was initially taken to the NEHTA Identifiers Authentication and Access Reference Group stakeholders in March 2009 and then presented to the NHIRF working group, the National Health CIOs Forum and NEHTA at a combined meeting on 22 April 2009. At these forums specific search criteria for IHI were agreed together with the requirement to have only a ‘single exact match’ returned. It should be noted that at the time this decision was made the scope of privacy controls and protections within the PCEHR system were unknown, and it was in this context that decisions were made about the privacy controls in the HI Service.

The rationale for the use of an exact match was that the information fields which are used to verify the identity of an individual when retrieving their IHI comprises personal information. When a healthcare provider is already in possession of the data fields required to successfully retrieve an IHI, the confirmation of those data fields by the Service Operator would not constitute a breach of the healthcare recipient's privacy.

By using probabilistic search functionality for a failed search, a search result may confirm that some of the information submitted by the healthcare provider about the healthcare recipient was correct, therefore disclosing personal information or inadvertently disclosing personal information about a third party consumer.

The disclosure of personal information in this way would constitute a privacy breach by the Service Operator unless the individual has consented to the disclosure, or the disclosure is authorised by law.

The outcomes of these discussions were then taken to OAIC who supported this outcome and indicated that this approach would enable agencies and organisations to meet their privacy obligations. This information was communicated to NEHTA in August 2009 with the purpose of revising and updating the Detailed Business Requirements, Policy Register and other HI Service related documentation.

While the HI Act does not specify the type of search to be performed6 the Explanatory Memorandum for the Act indicates that:

> An individual’s healthcare identifier will only be disclosed back to the healthcare provider where an exact match is available. Where an exact match is unavailable, an error message will be sent to the healthcare provider from the HI Service Operator.7

Collection of IHIs is occurring through a combination of batch downloads and opportunistic collection when a patient presents for a service. The match rate for IHIs collected through a batch process is variable across services, ranging from 30 – 90% and is much higher for patients who have recently presented at a service.

To be widely adopted by healthcare services Healthcare Identifiers must be allocated to all patients and readily available and accessible for authorised uses, primarily to support clinical information flows. The mechanisms used to access identifiers must support both system level functions where there is no direct interaction with users as well as user level functions.

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Jurisdictions have identified a number of concerns with the current implementation of IHIs. Until processes for newborns and other healthcare recipients without an IHI are implemented IHIs will only be able to be used as a secondary identifier as otherwise it will inhibit core business processes. The implementation costs are high and this is a deterrent while IHIs cannot be used for all transactions. In addition current match rates result in a large number of individuals for whom an IHI cannot be retrieved, particularly for older records, both as a result of the matching technique used and variable data quality across the sector.

Frustration with search and matching processes was raised in all interviews with clinical and jurisdictional users and was perceived as a significant barrier to use of the Service within day to day clinical business processes. Constraints around disclosure mean that minimal information is provided back to end users in situations where they conduct a search that does not return a result. For example, there is no indication in a failed search which field has failed to match. This information would allow the user to confirm just one detail with the healthcare recipient rather than having to try multiple searches to identify which field was incorrect (not a practical approach in a health service dealing with a high throughput of patients).

The majority of clinical systems use a probabilistic algorithm that may return more than one close match if an exact match cannot be made. These systems are not subject to the same constraints as they are not regulated by the HI Act which has more onerous privacy controls than the Privacy Act 1988 (Privacy Act). Privacy requirements in most healthcare provider organisations are governed by the National Privacy Principles, which provides a broader authority to use personal information than the Information Privacy Principles. In particular, National Privacy Principle 2.1 provides that personal information collected about an individual can be used for a secondary purpose related to the primary purpose of collection, "if the individual would reasonably expect the organisation to use or disclose the information for the secondary purpose”.

There are a number of factors that contribute to a low match rate:

- Age of the records – the highest match rates were for individuals who had a recent presentation at a health service (within the last 2 years). Match rates were significantly lower when an individual had not attended a health service for more than two years.
- Nature of the matching algorithm resulting in rejections occurring because abbreviations, upper/lower case have been used.
- Data quality issues in provider systems.
- Discrepancies between the data held by the healthcare provider and DHS. Any variation will cause a record to be rejected. Although the current process asserts that DHS is the source of truth for all data about healthcare recipients, in many cases healthcare providers will have more up to date information.

The risks of an unauthorised disclosure would be limited, but the likelihood of a match improved, if probabilistic search functionality was implemented but confined to 'almost exact' matches where the HI Service Operator could have a very high level of confidence that the healthcare provider requires the IHI and the healthcare recipient in question is in their care (i.e. an existing or attending patient).

For example, the search functionality could require that the Medicare Card Number (which the healthcare provider will usually have on file or ready access to) and the date of birth and gender fields return exact matches, but that the name field have an acceptable tolerance (e.g. last name not case sensitive and not ‘character’, e.g. hyphen-, sensitive). If probabilistic search results were limited to entries which had an exact match on Medicare Card Number and date of birth, and a ‘very close’ match on name, the risk of returning multiple or incorrect search results would appear low.
This approach would be more consistent with DHS services accessed by Healthcare Providers, such as the Online Patient Verification process. If providers access the Online Patient Verification service they can get a result if there are minor discrepancies in some fields and can also access updated information.

There was a common view among clinical groups that if constraints around searching as a consequence of these more stringent privacy protections result in low match rates, this will impact confidence in the system and will impact adoption of the PCEHR system.

A number of options could potentially mitigate this risk and improve the useability of the Healthcare Identifiers system, but each would need to be assessed against the cost of modifying the system and risks of degradation of service:

- Review the search algorithm and methodology to align more closely with health system current practice of probabilistic matches using mandatory and other locally held data. Alternatives include:
  a) Enhance the HI Service to support probabilistic matching for calls to the current Service interfaces
  b) Implement a new HI Service interface supporting patient searching which returns a list of possible matches to the user, with a high percentage match cut off
  c) Implement a probabilistic search only when a deterministic search had failed
  d) Introduce a 2 step process so that if there is not an initial exact match the HI Service performs a probabilistic match at the back end, resolves it and returns matched records
  e) Use a single search utilising all relevant locally held data

- Healthcare Identifiers system returns an error message that provides more detail on fields that fail to match (e.g. incorrect date of birth, Name has changed – please confirm with individual)

- Inclusion of part address searches

- Further develop policy, processes and tools to facilitate allocation and resolution of newborn, unverified and provisional IHIs.

It is recommended that a feasibility assessment for implementation of a probabilistic search as described above be undertaken, taking into consideration the functional changes that would be required, the cost of these changes to the HI Service and vendor systems, and the privacy risks and impacts that would need to be addressed. If considered feasible the legislative and legal barriers to adopting probabilistic search functionality for IHI searches conducted by healthcare providers could be overcome by amendments to the HI Act which expressly authorised the disclosure of certain identifying information to a healthcare provider in connection with the disclosure/collection of an IHI.

It would also facilitate usage if a failure to match returned an error message that indicated which field was in error to assist the user to check one, not multiple details. This is not permitted within the current privacy settings in the HI Act as by confirming which field was incorrect the Service Operator would be confirming the accuracy of the other information submitted. The return of a meaningful error message would require the Service Operator to be authorised (under an amendment to the HI Act) to disclose the relevant information for the purposes of the retrieval of an IHI.

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Disclosure of IHIs to the OAIC and NEHTA

In the context of complaints handling, there may be circumstances where either DOHA (for the PCEHR system) or DHS (for the Healthcare Identifiers Service) will pass on IHIs to the OAIC for the purpose of handling a complaint or to NEHTA for investigation of an issue. However, the OAIC believe that they are not authorised to collect IHIs under the HI Act. Division 2A of the HI Act authorises the System Operator, repository operators and portal operators to collect Healthcare Identifiers for purposes of the PCEHR system in particular circumstances. It does not authorise the OAIC to do so, for the purposes of complaints investigation.

Consequential amendments have been made to the Act to allow the PCEHR System Operator to collect IHIs, as there were concerns that such collection would not have been allowed under the existing use and disclosure provisions. Similar amendments should be considered to allow the OAIC to collect IHIs for the purpose of investigating and handling privacy complaints and NEHTA for the purposes of investigation.

Disclosure of IHIs for incident investigation and quality assurance

It was reported by DHS and NEHTA that disclosure of Healthcare Identifiers for the purposes of investigation are not permitted under the Act. In the event that an issue is found with a record, for example a duplicate or replicate, it is critical that this can be resolved quickly to ensure the clinical safety of the system. It is not uncommon for multiple parties, including vendors, to need to be involved in resolution of errors. However section 24(1)(a)(ii) of the Act does enable investigation to be undertaken, and section 36 extends this authority to Contracted Service Providers (CSPs) where the duties of the CSP under contract to the healthcare provider involve provision of information technology services relating to the communication of healthcare information or health information management services. The issue appears to be more a lack of understanding of what is permitted than a real legislative impediment. The circumstances in which disclosure for investigation occur should be well defined and should occur within a defined access framework and processes.

Disclosure to aged care, disability services and insurers

A number of other issues and queries were raised during the consultations that indicated there needs to be clearer guidance available on circumstances where disclosure is permitted to address the concerns people have about using IHIs in case they inadvertently commit a breach of the Act. There also needs to be a process to assist people in situations where it is not clear whether disclosure is permitted or not.

The definition of a “health service” was seen as unclear or too restrictive in a number of interviews, particularly in services providing a mix of health and social care, such as aged care and disability services. The clients of both types of services are heavy users of the health system and will be major beneficiaries of the improved co-ordination and integration of services that will be made possible with e-Health. Concerns were raised about staff who are not healthcare providers in these facilities being able to access IHIs. It should be noted that this situation is already common in the clinical systems environment and is managed through role based access and other security settings.

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**Recommendation 11 – Search functionality**

It is recommended that an evaluation of implementation of a probabilistic search be undertaken, taking into consideration the functional changes that would be required, the cost of making these changes to HI Service and vendor systems and the privacy risks and impacts that would need to be addressed.
Healthcare Provider Identifiers

Restrictions on disclosure of HPI-Is and the opt in basis for participation to the Healthcare Provider Directory (HPD) is also creating a barrier. Current functionality makes it very difficult to search for a healthcare provider or validate a provider's Healthcare Provider Identifier. This is an impediment to implementation of functions such as electronic referrals, discharge summaries, electronic transfer of prescriptions etc. It is noted that a change request is in progress that will enable searches for HPI-Is and HPI-Os to be conducted on the HI Service regardless of whether an individual has opted in to the HPD.

Basis of participation in the Healthcare Provider Directory

The HPD is a consent based directory of healthcare providers. The opt in basis for the HPD has been identified as a significant barrier to participation in the directory, and by extension to other e-Health services that are dependent on the HPD, such as secure messaging.

The HPD is needed to link providers and organisations with the end point location service and certificates to support the following use cases:

- Addressing clinical documents to a specific provider e.g. a referral to a private specialist
- Accessing the PCEHR system provider portal when a hard linkage is required between the organisation and individual provider.

Other use cases are supported by directly looking up the HI Service.

The participation rate is currently low which will undermine the objectives of the Act. There is not a common level of understanding about the purpose of the HPD, nor its criticality for e-Health. Medicare Locals reported that once GPs understood the purpose, the information held and that it was limited to the provider community, GPs had no issue with participating. If the HPD does not work effectively it will potentially have an even more significant impact on the acute sector which does not have the same level of control over their referral base as GPs, who tend to work with a smaller network of other healthcare providers.

It is understood that the opt in model was adopted as clinicians were concerned about the risks of exposure of their contact details. The HPD requires the providers' business address and does not contain details of providers' personal address or contact details (unless they provide their private address as the business address), and details can be amended by healthcare providers using Health Professional Online Services which gives individuals a high level of control over the information that is displayed.

Given the impact of the current consent model and the risks that low participation pose to the e-Health agenda, and considering the low risks to healthcare providers that would result from having their details included in the HPD, it is recommended that the opt in provisions be removed for HPI-Os at a minimum.

The potential for changing the basis of consent for HPI-Is to mandatory inclusion or opt out participation in the directory for providers wishing to utilise any e-Health system was strongly supported by the majority of people interviewed. Given the dependency between the HPD and utilisation of e-Health there is a strong justification for automatic inclusion of at least a minimum set of mandatory information for providers who register for the PCEHR system or other e-Health programs in the HPD.

Merely exposing details held by the HI Service in the HPD would not necessarily resolve the issues that providers are experiencing in performing a reliable search as there are limitations in the minimum dataset exposed in the HPD for this purpose. The majority of the information that is held in the HPD is already available through the AHPRA website. In relation to HPI-Is it is recommended that consideration be given to a return to the model originally contemplated in the design of the HI Service and list the HPI-I on the public register published by AHPRA. The data published by AHPRA is more suitable for searching than the minimum data available through the HPD.
Constraints relating to disclosure/authority to act

The ability for Medicare Locals to actively support local GP Practices is expected to increase registration and adoption of e-Health. Medicare Locals are supporting practices by preparing the paperwork to set up HPI-O seed and network structures and are submitting this to DHS on behalf of GP Practices.

There appears to be a lack of clarity among Medicare Locals about what they can do on behalf of the practices in their areas. A number of organisations interviewed identified legislative constraints relating to disclosure as a concern as information on HPI-Os is not being fed back to Medicare Locals by DHS once an HPI-O is assigned (even if the practice has provided a written authority for the Medicare Local to act on their behalf in completing registrations).

Difficulty in accessing a healthcare provider’s HPI-Is (both their own and other providers’) was raised as a significant risk for adoption and use. The intent behind the allocation of HPI-Is is to facilitate communication between healthcare providers, but the current controls around use and disclosure of HPI-Is are undermining this objective.

Healthcare providers were notified of their HPI-Is at the commencement of the HI Service, but potential uses for this are only now coming into effect. It was reported that many healthcare providers are not aware of their HPI-I, nor how they can locate this number. The Medicare Locals have tried to facilitate this process and do this on behalf of the GPs, but currently legislation prevents DHS from disclosing HPI-Is to the Medicare Locals, although the Medicare Locals hold all other details about the GPs. This is likely to be an even more significant issue for the acute sector.

Legal advice was sought on options to support the disclosure of HPI-Is to organisations such as Medicare Locals to facilitate these organisations to act on Healthcare Providers’ behalf for the purposes of managing their identifiers. This advice\textsuperscript{10} indicated that currently the Service Operator’s authority to disclose HPI-Is is narrowly confined under the HI Act and is limited to disclosing an HPI-I, subject to use for specific purposes to:

- The individual healthcare provider who has been assigned the HPI-I\textsuperscript{11}
- A registration authority (being an entity that is responsible under a law for registering members of a particular health profession) for the purpose of the registration authority registering the individual healthcare provider\textsuperscript{12}
- The PCEHR System Operator\textsuperscript{13}

\textsuperscript{10} Minter Ellison Lawyers, \textit{Legal Report: Healthcare Identifiers Act and Service Review}, 2013, Section 5
\textsuperscript{11} Section 17, \textit{Healthcare Identifier Act 2010} (Cth)
\textsuperscript{12} Section 19, \textit{Healthcare Identifier Act 2010} (Cth)
\textsuperscript{13} Section 19A, \textit{Healthcare Identifier Act 2010} (Cth)
In order for the Service Operator to disclose Healthcare Identifiers to Medicare Locals and other non-healthcare provider organisations, the Act would need to be amended to expressly authorise the Service Operator to do so. The amendment would need to specify the purposes for which Medicare Locals (or any other third party) are permitted to use the HPI-I.

This could be done by including additional provisions in Division 1 of Part 3 of the HI Act which enable the making of regulations in respect to the prescribing of additional organisations to which Healthcare Identifiers can be disclosed for prescribed purposes/circumstances.

**Disclosure and performance of AHPRA’s role**

The purpose of HPI-Is is to be a unique identifier for providers. It would facilitate AHPRA’s interaction with key partners, such as State and Territory health departments, if HPI-Is could be used to exchange information (e.g. to inform an employer should a provider employee cease to be registered) but this is not a permitted use for AHPRA. If this was permitted, it would increase HPI-Is adoption as it would integrate these identifiers into key business processes within the health sector. It would also support AHPRA’s obligation to inform employers of changes in provider details and confirm that they are providing an update on the correct person. This transaction is currently conducted via AHPRA’s provider information exchange system, but could be managed via the HI Service. The benefit would be a reduction in duplication between systems as well as providing an incentive for health services to adopt the HI Service.

Other strategies to increase adoption could include the provision of HPI-Is on the annual renewal cards sent to providers to increase its accessibility, and to record HPI-Is on AHPRA’s public register. This is not currently supported by the Act. To better leverage AHPRA’s relationship with providers and enable the organisation to facilitate the notification of HPI-Is an amendment would be required to the Act to enable disclosure in this way.

To date AHPRA has been unable to view records in the Healthcare Identifiers system to confirm provider details. This has been a result of both perceived legislative and functional impediments. As AHPRA are not providers of healthcare this was not a permitted disclosure, even though they are the original source of the information. Subsequent legal advice has supported this disclosure and a system change request is being implemented in June 2013 to provide access to AHPRA.

**Access to HPI information**

One of the major issues arising from interviews related to limitations in searching for provider information, and the impact of this on utility of the HI Service. The user requirement is that when an HPI-O is sent to the HI Service details of the providers associated with that healthcare provider organisation would be returned.

The current built functionality of the system has been limited by the Act which prohibits the disclosure of ‘identifying’ information relating to IHI, HPI-Is and HPI-Os by the Service Operator, unless the disclosure is for the purpose for which the information was provided to the Service Operator under Part 2 of the Act (section 15(2)), which is for the purpose of assigning the HPI-O. Given this constraint the functionality that has been built is limited to returning the HPI-O number and status, with no details of the organisation. It is noted that Change Request (CR) 77 will partially resolve this but there needs to be stakeholder validation of the solution before this can be confirmed.

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14 Section 19B, *Healthcare Identifier Act 2010* (Cth)
15 Section 19C, *Healthcare Identifier Act 2010* (Cth)
Legal advice provided in the course of this Review indicated that section 17 provides the Service Operator with authority to disclose an HPI-I to a healthcare provider organisation where that disclosure is necessary for the purposes of communicating and managing health information as part of providing healthcare to a healthcare recipient\textsuperscript{16}. The Act does not provide specific guidance on the meaning of 'communicating or managing' and definitions provided in the Act for 'health information' and 'healthcare' are broadly framed and designed to capture most information and activities arising in connection with the delivery of healthcare.

The Service Operator is implementing functionality to support improved HPI-I searches. To support this and for the avoidance of doubt, it is recommended that the HI Act is amended to expressly authorise the Service Operator to disclose an HPI-I to a healthcare provider organisation and expressly authorise the organisation to collect and use the HPI-Is. This amendment would ensure that there can be no dispute about the scope of the Service Operator's authority under section 17 and, if necessary, enable privacy controls associated with the disclosure and use of HPI-Is to be clearly identified.

### Legislative wording

There is some ambiguity in the scope of reference of section 15 on \textit{Service Operator's duty of confidentiality}. The heading of the section implies the section applies only to the HI Service Operator, but the reference in 15 (1)(a) to “or this Division” implies a broader application.

#### 3.3 Unauthorised use and disclosure

The Review identified a range of views in relation to the effectiveness of penalties, from a lack of awareness of the existence of penalties to misperceptions about the circumstances in which a penalty would be applied. Where providers are aware of the penalties, for some people this has reduced the incentive to participate in e-Health, particularly when taken in conjunction with PCEHR system terms and conditions. There is real anxiety among clinicians (especially in small practices) on the burden of their obligations and risk of inadvertent disclosure. This anxiety largely arises from a lack of understanding of the circumstances in which a penalty would be applied.

DHS have stringent risk mitigation strategies in place in relation to change requests, information requests and support processes to ensure that no inappropriate disclosure occurs in breach of the HI Act. While this concern is understandable the strategies implemented to mitigate risk cause frustration for stakeholders and can extend the timeframes to get changes made to the Service that are critical for end users.

A number of providers commented that many penalties in relation to privacy breaches in the HI Act would be more appropriately applied in relation to the clinical data in the PCEHR system.

#### 3.4 Other issues

##### 3.4.1 Treatment of organisations

The treatment of organisations under the Act was raised repeatedly in interviews as a constraint to effective use of Healthcare Identifiers. Currently the Act is interpreted as having the same provisions for organisations as for individuals and providers. The Privacy Act does not consider information about organisations to be personal information and the privacy provisions do not apply to information held about the organisational entity.

\textsuperscript{16} Minter Ellison Lawyers, \textit{Legal Report: Healthcare Identifiers Act and Service Review}, 2013, section 4
The OAIC was consulted about whether section 29(3) of the HI Act should be interpreted as intending that HPI-Os be defined as personal information for the purposes of section 29(3) of the HI Act as it relates to section 27(1)(h) of the Privacy Act. The OAIC believes that the reference to Healthcare Identifiers in section 29(3) was not intended to include HPI-Os and has provided reference to the Bills Digest for the Healthcare Identifiers Bill, which outlines the policy intent underlying the HI Act.

The Bills Digest states that “subclause 29(3) will allow the Privacy Commissioner to undertake audits of Healthcare Identifiers under the Privacy Act in relation to personal information”. This suggests that the reference to Healthcare Identifiers in s 29(3) was not intended to include HPI-Os. The Bills Digest also indicates that the privacy and security considerations in drafting the HI Act were not intended to include HPI-Os, by referring to “individual Identifiers” and “healthcare recipient Identifiers”.

The OAIC does not believe the privacy and security requirements in the HI Act apply to organisations, and have recommended that this would be clarified by amendments to definitions in the Act.

3.4.2 Organisation structure – seed and networks

The legal requirements around seed and network structures are generating considerable confusion. Further guidance on legal considerations for different types of health organisations and appropriate organisational structures to meet the requirements of e-Health systems is also required. The legal status of seed organisations is one issue causing debate. Sites are being informed that a HPI-O seed organisation must be a legal entity. This is not specified in the HI Act or HI Regulations or PCEHR Regulations and Rules.

Legal advice was sought on this issue and advised that a seed organisation can either be a legal entity or part of a legal entity. The HI Service Operator cannot assign an HPI-O to a body which does not have legal capacity or is not part of an organisation which has legal capacity.

The advice\(^{17}\) noted that:

- A 'seed organisation' does not need to be the principal organisation in an organisation's governance structure (e.g. a seed organisation could be a hospital which is owned and ultimately controlled by a State health service). Compare this to a 'network organisation', which must be "part of or subordinate to"\(^ {18}\) a seed organisation.

- A single legal entity (e.g. a State health service) can be assigned multiple Healthcare Identifiers for parts of its organisation. Some or all of those parts of the organisation can be registered as 'seed organisations'. In each case, the obligations which arise in connection with 'organisations' registration in the HI Service would fall on the legal entity and the nominated Responsible Officer and Organisation Maintenance Officer (who would be employees of the legal entity).

- An HPI-O cannot be assigned to a non-legal entity such as an ethics committee unless the ethics committee is part of a legal entity which provides healthcare (e.g. a hospital). If the ethics committee did apply to be assigned an HPI-O as a 'seed organisation', the obligations which arise in connection with its registration in the HI Service would fall on the legal entity (i.e. the hospital) and the nominated Responsible Officer and Organisation Maintenance Officer (who would be employees of the legal entity).

\(^{17}\) Minter Ellison Lawyers, *Healthcare Identifiers Act and Service Review: Legal Advice on Specific Questions*, Part D, section 8

\(^{18}\) Section 9A(6)(a), *Healthcare Identifiers Act 2010*
The basis for participation in the HI Service and the PCEHR system for corporate practices is also seen as unclear. For example there are GPs or specialists who aren’t employed by a practice, but who contract the practice to provide professional and/or administrative services. It is unclear to stakeholders how these practices might establish themselves in a HPI-O network structure, or whether they are able to use the CSP provisions to enable them to meet their obligations under the HI Act and the PCEHR Act and PCEHR (Consequential Amendments) Act.

Organisations also require additional information and support to make appropriate decisions about the structures they implement and the consequences of these decisions on downstream systems, particularly in relation to the way the organisation will be able to manage access controls for the PCEHR system. There needs to be clear communication on the implications and responsibilities of the Responsible Officer and Organisation Maintenance Officer roles so that the expectations are clear.

### 3.4.3 Expansion of the permitted uses of Healthcare Identifiers

Consultation for this Review highlighted a number of other uses relating to population health, clinical registries and clinical trials that offer the potential to deliver significant improvements in healthcare if data from different health services can be linked and outcomes and trends monitored. The Act currently limits use and disclosure for research to a “healthcare provider”. This restricts the use of Healthcare Identifiers for research conducted by DOHA or jurisdictions.

The absence of a means of uniquely identifying individuals has limited the opportunities in the past to effectively access data to assess the effectiveness of different treatments on health outcomes, antecedent conditions, population health status and risk factors and epidemiology that would provide information to better structure health programs, direct funding and inform evidence based policy. As demands on the health system escalate as the population ages this information will be even more critical to better target care and manage the health system. These purposes were one of the original drivers for the business case for a system of national Healthcare Identifiers.

Amendments to the HI Act to enable this type of use within healthcare services, subject to appropriate protections, could provide an invaluable mechanism to support this type of research to help deliver better targeted, more cost effective healthcare services and better health outcomes for the community.

Section 24(1) of the Act specifies that “A healthcare provider is authorised to use a Healthcare Identifier, or to disclose a Healthcare Identifier for....the conduct of research that has been approved by an ethics committee”. Consultation for this Review highlighted a number of other uses relating to population health and clinical registries that offer the potential to deliver significant improvements in healthcare if data from different health services can be linked and outcomes and trends monitored.

By limiting this use and disclosure for research to a “healthcare provider”, the Act precludes the use of Healthcare Identifiers for research conducted by DOHA or jurisdictions. The absence of a means of uniquely identifying individuals has limited the opportunities in the past to access data to assess the effectiveness of different treatments on health outcomes, antecedent conditions, population health status and risk factors and epidemiology.

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39 See PCEHR Rules 2012
The ability to do this would provide information to better structure health programs, direct funding and inform evidence based policy. As demands on the health system escalate as the population ages this information will be even more critical to better target care and manage health services. These purposes were one of the original drivers for the business case for a system of national Healthcare Identifiers. The implementation of the HI Service could provide an invaluable mechanism to support this type of research to help deliver better targeted, more cost effective healthcare services and better health outcomes for the community.

Section 135 of the National Health Act 1953 (National Health Act), section 130 of the Health Insurance Act 1973 (Health Insurance Act) and section 86 of the Aged Care Act 1997 (Aged Care Act) are consistent in the approach to release of data for secondary purposes if the disclosure is deemed to be in the public interest. It is recommended that section 24 of the HI Act is reviewed to align with the National Health Act, Health Insurance Act and Aged Care Act.

Legal advice was also sought on this issue. The following sections summarise this advice. Section 24 of the Act identifies four secondary purposes for which Healthcare Identifiers can be used by a healthcare provider organisation or disclosed by a healthcare provider organisation to a third party entity. The Explanatory Memorandum to the Healthcare Identifiers Bill 2010 provides that “Healthcare identifiers are expected to be used broadly within the healthcare sector provided the uses and discloses [sic] fall under the activities described in subclause 24(1). Any activities that fall outside those activities described in subclause 24(1) are intended to be prohibited.”

The activities or purposes identified in section 24 of the HI Act were designed to be “broad enough to cover a range of clinical, administrative and business activities that are regularly undertaken to support the delivery of healthcare. For example, management, funding, monitoring or evaluation of healthcare is intended to include activities such as quality assurance, quality improvement, policy development, planning, cost benefit analysis and the compilation of statistics in relation to those activities”.

The broad interpretation of subparagraph 24(1)(a)(ii) suggests that the authority provided to healthcare provider organisations would not be limited to activities performed for or on behalf of the organisation. That is, so long as the activity for which the IHI was disclosed related to 'healthcare' there is no requirement that the activity be for the benefit of the organisation itself. This broad interpretation would support the proposition that Healthcare Identifiers could be disclosed by a healthcare provider to a third party and used by that third party to conduct its own monitoring or evaluation of healthcare.

However, because subparagraph 24(1)(a)(iv) expressly authorises the disclosure of an IHI in connection with the conduct of research which has been approved by a Human Research Ethics Committee, it indicates that section 24(1)(a)(ii) was not intended to create a 'catch-all' authority for research.

Because there is doubt about the scope of the authority granted to healthcare providers under section 17, it is recommended that the HI Act be amended to:

- Clarify the purpose for which IHIs can be disclosed under subparagraph 24(1)(a)(ii); and
- If necessary, introduce a specific authority to address the disclosure of IHIs by public healthcare provider organisations to government agencies and other relevant research organisations for the purposes of monitoring, evaluating and funding healthcare.

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20 Minter Ellison Lawyers, Healthcare Identifiers Act and Service Review: Legal Advice on Specific Questions, Section 16
21 Explanatory Memorandum, Healthcare Identifiers Bill 2010, p 19
22 Explanatory Memorandum, Healthcare Identifiers Bill 2010, p 18
As potential uses for Healthcare Identifiers emerge it would be beneficial to develop and implement a governance process for consideration and endorsement of new uses so that this process is transparent, relevant interest groups are consulted and decisions are clearly communicated.

3.4.4 Use of the Healthcare Identifier as the primary identifier

The HI Act flags that providers can adopt IHIs as the primary identifiers used in their health service. This would have advantages in reducing the maintenance effort associated with multiple identifiers and reducing issues with matching/searching for IHIs, which would support the broader e-Health objectives. However, it is the view of most health services that it is unlikely the IHI will ever become the only identifiers in local systems, because the Act states that a person can be given treatment without an IHI. Therefore if the IHI is not mandatory, health services must have the capacity to allocate local identifiers. Adoption as a primary identifier will also be impacted by issues relating to provisional and unverified IHIs if the processes relating to these do not support clinical practice.

A number of clinical stakeholders questioned the role of multiple provider identifiers. The use of HPI-Is, provider numbers, prescriber numbers and the maintenance of these for different purposes is introducing increasing complexity for providers. There were strong benefits to providers perceived if numbers allocated to providers could be rationalised and simplified, with potentially the HPI-I becoming the only identifiers for providers.

Legal advice was sought on the potential implications if the HPI-I was to be adopted as a sole provider number. Neither the Health Insurance Act nor the National Health Act expressly requires a healthcare provider to have a ‘prescriber number’. However, as an operational matter the Chief Executive Medicare assigns a number to all persons who participate in the Pharmaceutical Benefits Scheme (PBS) and requires that number to be identified in connection with a PBS prescription. Other identifiers are used in the health sector, for example, chiropractors, osteopaths, physiotherapists and podiatrists can be assigned a ‘requester number’ under the Health Insurance Regulations 1975.

The following advice was provided in relation to this issue\(^\text{23}\). While an HPI-I is treated as a Commonwealth identifier for the purposes of the Privacy Act, the prohibition against adopting government identifiers under NPP 7 arises in connection with organisations only and would not apply to the Chief Executive Medicare.

The legal obstacles to adopting the HPI-I as the sole identifier for providers will be different if the use of HPI-Is by Medicare in connection with the Medicare Benefit Scheme (MBS) and PBS business is consented to by healthcare providers under section 24A of the HI Act. This assumption that the use of an HPI-I for MBS and PBS purposes is “a purpose relating to the provision of healthcare”\(^\text{24}\).

Where consent is provided by a healthcare provider, there would appear no legal prohibition under the HI Act against the HPI-I being adopted as a ‘provider number’ or ‘prescriber number’, nor published by the provider or used by Medicare.\(^\text{25}\) Neither the Health Insurance Act nor the National Health Act include provisions which would make the HPI-I unsuitable to be the number assigned by Chief Executive Medicare for the purpose of those Acts.

However, in the absence of consent being provided by a healthcare provider, the HI Act would need to be amended to give the Service Operator express authority to disclose the HPI-I to the Medicare service for the purpose of Chief Executive Medicare adopting the HPI-I as a ‘provider number’ or a ‘prescriber number’.

\(^\text{23}\) Minter Ellison Lawyers, Healthcare Identifiers Act and Service Review: Legal Advice on Specific Questions, Section 11
\(^\text{24}\) Section 24A of the HI Act
\(^\text{25}\) Section 24A of the HI Act provides the HI Service Operator with broad authority to disclose a healthcare provider’s HPI-I if consent has been provided
It was also recommended that the HI Act be amended to specifically authorise the Chief Executive Medicare to adopt the HPI-I as an identifier for the purposes of transacting MBS and/or PBS business.

Other issues that would need to be addressed if the HPI-I were to be adopted as a sole provider number include:

- HPI-Is could not be adopted for the purposes of MBS and PBS unless the healthcare provider had first been assigned an HPI-I by the Service Operator, which will not necessarily be universal.
- The Chief Executive Medicare would always need to be in a position to assign a non-HPI-I identifiers for MBS and PBS purposes if a provider does not have an HPI-I.
- The HI Service and DHS would need to enhance their systems to enable a single number to be used while ensuring that the number was associated with different information in each business context.

Recommendation 13 – Consolidation of provider numbers

It is recommended that a feasibility assessment and Privacy Impact Assessment be conducted to evaluate the costs, benefits and risks that would be incurred if the HPI-I was adopted as the sole identifier for healthcare providers, replacing existing provider and prescriber numbers.

3.4.5 Contracted Service Providers (CSP)

An amendment has been made to section 36 to enable CSPs that supply information technology and/or health information management services to healthcare providers under contract (e.g. secure messaging services) to access, use and disclose Healthcare Identifiers on behalf of PCEHR system entities.

While the amendment resolved some issues relating to CSPs, now the Service is starting to interact with other programs additional concerns are emerging that pose a risk to use of the HI Service.

In planning for implementation it has become evident that IHIs and information relating to that individual will be seen by CSPs who provide services for secure messaging (for example in the event of integration errors, the CSP may have to access messages to resolve the issue). Most GPs and many jurisdictions will use a CSP. For Secure Messaging Delivery purposes CSPs will need to access the Endpoint Location Service (ELS) of the destination organisation from the HPD and include their own ELS in the HPD as the sender’s address because they manage the distribution of the return message. The message itself includes both the CSP registration number and that of the HPI-O it is acting for.

Under the HI Act, the CSP can have the same authorisations as the HPI-O that contracted it and so can access the ELS in the HPD. However only an OMO can change or insert an ELS entry in the HPD. For the CSP to update ELS entries they would need to have a named employee as an OMO on behalf of the HPI-O. This would give the CSP very strong rights and control over the way their organisation interacts with the HI Service.
The ‘contracted service provider’ definition is similar, but not the same, in the Healthcare Identifiers and PCEHR Acts (specifies ‘relating to the PCEHR System’). In the HI Act the CSP definition cross references the defined term healthcare provider, while in the PCEHR Act the CSP defined term that is cross referenced is healthcare provider organisation. Both Acts define healthcare provider and healthcare provider organisation the same way. CSPs as defined in PCEHR Act do not interact with the PCEHR system at all unless they are registered CSPs which is also a defined, and different, term.

The ‘employee’ definitions are the same in both Acts. The PCEHR Act requires registration of CSPs (Division 3), and includes conditions that the CSP must meet. It also has the ability to impose conditions on the registration (section 49) which is a significant difference to the Healthcare Identifiers requirements.

**Recommendation 14 – Amendments to the Healthcare Identifiers Act**

It is recommended that AHMAC consider the following amendments to the HI Act:

a) Including additional provisions in Division 1 of Part 3 of the HI Act which enable the making of regulations in respect to the prescribing of additional organisations to which Healthcare Identifiers can be disclosed for prescribed purposes to enable the HI Service Operator to disclose HPI-Is to Medicare Locals.

b) To enable the disclosure of IHIs to the OAIC for the purposes of complaints investigation and resolution.

c) To enable AHPRA to disclose HPI-Is to providers to promote adoption and use (e.g. through inclusion on annual registration renewals).

d) To expressly authorise the HI Service Operator to disclose an HPI-I to a healthcare provider organisation and expressly authorise the organisation to collect and use the HPI-Is.

e) Part 4 of the HI Act be amended to include a provision that ensures that for the purpose of applying Parts IV and V of the Privacy Act in connection with a Healthcare Identifier, or an act or practice relating to a Healthcare Identifier, the National Registration Authority is to be treated as if it were an agency (within the meaning of the Privacy Act).

f) To clarify the definitions in the HI Act to reflect that only HPI-I and IHI are considered personal information for privacy purposes.

g) To amend the heading of s15(1)(a) to clarify the scope of application of this section.

h) Consider revising the term “healthcare provider” in section 24 to resolve uncertainty regarding the use and disclosure of Healthcare Identifiers for aged care and disability programs.

i) To clarify the purpose for which IHIs can be disclosed under subparagraph 24(1)(a)(ii) and if necessary, introduce a specific authority to address the disclosure of IHIs by public healthcare provider organisations to government agencies and other relevant research organisations for the purposes of monitoring, evaluating and funding healthcare.

j) Standardisation of the definitions and conditions relating to CSPs across the HI and PCEHR Acts.
3.5 Interaction with the Privacy Act

The OAIC has a role as compliance reviewer of the HI Service Operator. The OAIC is also responsible for investigating any potential misuses of Healthcare Identifiers by Commonwealth agencies, private sector organisations or individuals. The functions of the Commissioner in relation to the HI Service are defined in section 27A of the Privacy Act.

To date, two audits of the Service have been conducted. No privacy issues were identified in either audit. Only one formal complaint has been received by the OAIC in the period the Service has been operating. Following investigation it was found that there had been no breach. In 2010/11 DHS received and resolved three complaints; on investigation two were queries and only one was a complaint which was subsequently resolved. In 2011/12 one complaint was received and resolved.

It should be noted however that the usage of the HI Service over this period was very low. The number of complaints may rise as usage of the Service increases.

The nature of the audits conducted by the OAIC is anticipated to undergo a minor change as a result of the Privacy Act reforms which is proposing the removal of section 27(1)(h) of the Privacy Act. The audit function is to be replaced by a similar role, undertaking privacy performance assessments.

Section 29(3) of the HI Act provides that: “For the purpose of paragraph 27(1)(h) of the Privacy Act (about audits), a healthcare identifier is taken to be personal information”. Following the proposed Privacy Act reforms (Privacy Amendment (Enhancing Privacy Protection) Act 2012), the OAIC’s audit powers under s 27(1)(h) will no longer exist. This authority will be replaced with the power under the new Act for the OAIC to do ‘privacy performance assessments’ on Australian Privacy Principle (APP) entities which will include agencies and organisations. This will require an amendment to section 29(3) of the HI Act.

Under the current Act the OAIC only has jurisdiction to audit agencies’ compliance against the Information Privacy Principles (IPPs). With the current definition of an agency in the Privacy Act this means that the OAIC cannot audit the handling of Healthcare Identifiers by private sector or State and Territory bodies. The OAIC believes that AHPRA currently falls outside their jurisdiction as it is a body established by State and Territory legislation and that they cannot audit AHPRA in relation to the assigning of HPI-Is. This creates a gap in their effectiveness as the regulator of the Service given that AHPRA is responsible for assigning the majority of Healthcare Provider Identifiers - Individual (HPI-Is).

An assessment of this situation was undertaken by Minter Ellison during this Review. They advise that section 6C(1) of the Privacy Act defines an ‘organisation’ to include a body corporate which is not a 'State or Territory authority'26. While section 23(1) of the National Law makes clear that AHPRA is a body corporate, AHPRA will be excluded from being an 'organisation' on account of its status as a 'State or Territory authority' because:

- A 'State or Territory authority' is defined under section 6(3) of the Privacy Act to include "a body established or appointed for a public purpose by or under a law of a State or Territory, other than an incorporated company, society or association..."; and
- It appears that AHPRA falls within the definition of a 'State or Territory authority' on the basis that AHPRA:
  - Is established under subsection 23(1) of the National Law, which is a law of each State and Territory

• Is established for a public purpose, being the establishment and administration of applications for registration as a health practitioner and other matters relating to the registration of registered health practitioners.\(^{27}\)

• Is not registered as a company and appears to be subject only to reporting and other requirements specified in the National Law,\(^{28}\) and not to the equivalent requirements contained in the *Corporations Act 2001* (Cth).

The advice indicates that the Information Commissioner’s privacy assessment power under subsection 33C(1) of the amending act applies only to APP entities. As AHPRA is neither an agency nor an organisation, it is not an APP entity for the purposes of the Privacy Act, and the Information Commissioner will be unable to exercise the assessment power in relation to AHPRA.

To allow AHPRA to be subject to audit/assessment by the Information Commissioner it is recommended that Part 4 of the HI Act be amended to include a provision that ensures that for the purpose of applying Parts IV and V of the Privacy Act in connection with a Healthcare Identifier, or an act or practice relating to a Healthcare Identifier, the National Registration Authority is to be treated as if it were an agency (within the meaning of the Privacy Act).

In treating a National Registration Authority (i.e. AHPRA) as an agency under the Privacy Act, the Information Commissioner would be able to exercise the audit power under subsection 27(1)(h) of the Privacy Act and after the commencement of the Amending Act, exercise the assessment power under subsection 33C(1) of the Privacy Act (as an agency falls within the ambit of an ‘APP entity’).

**Recommendation 15 – Alignment of Healthcare Identifiers Act and Privacy Act reforms**

It is recommended that section 29(3) of the HI Act be amended in line with the Privacy Act reforms.

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\(^{27}\) See *Health Practitioner Regulation National Law*, s 25(e)

\(^{28}\) See *Health Practitioner Regulation National Law*, s 263
4. PERFORMANCE OF THE HEALTHCARE IDENTIFIERS
SERVICE OPERATOR

DHS has many strengths as the Service Operator for the HI Service. They offer a familiar and well trusted brand which is important in engendering confidence in the community. Audits conducted by the OAIC have confirmed the effectiveness of DHS’s privacy framework and operational processes for the HI Service. Their ability to leverage well established data sources, PKI processes and policies has also been valuable. The organisation has extensive experience with operational functions, processing large transaction volumes and in front line customer service from a consumer and healthcare provider perspective.

The HI Service has introduced a system that directly supports clinical services into the portfolio. As an integral component of clinical systems, the requirements around availability, support, quality and timeliness of change requests are critical. Given the complexity of the clinical systems environment and the potential impact of system decisions on clinical processes, a good knowledge of the way the Service impacts clinical systems and its role in the broader e-Health context is also critical. This requires a highly collaborative development and implementation model between NEHTA and DHS as well as very robust stakeholder engagement processes and transparency in design, decision making and issue management processes. While NEHTA are responsible for managing stakeholder engagement activities and expectations, there need to be effective processes in place to feedback any stakeholder requirements and issues to DHS, if DHS are not actively involved in consultation activities.

Although the core service is operational it is still in a very early stage in terms of active use. As utilisation increases there will be an ongoing need to monitor the functionality of the system and the processes and policies that have been implemented to ensure they are appropriate and aligned with the requirements of the users of the Service and the objectives of the e-Health reform agenda.

One of the issues of greatest concern to stakeholders is the lack of control and input of major stakeholders in directing the content and timing of change requests and release content and schedules that have significant business impacts. It is particularly important that there are transparent processes to set priorities and release timeframes for development and change requests involving the end users of the HI Service, particularly the jurisdictions as funders and major users of the Service. While NEHTA is responsible for liaising with stakeholders to negotiate these priorities and reporting back progress and expected timeframes to stakeholders, NEHTA and DHS have a joint responsibility to define the release schedule taking into consideration the requirements of all programs.

The Review identified aspects of governance, stakeholder engagement, policy and processes that need further refinement and agreement between DHS, NEHTA, DOHA, AHPRA and the jurisdictions to support this complex environment. It is particularly critical that the communication between NEHTA and DHS is effective to ensure that proposed enhancements meet the business requirements specified by users of the Service. This engagement needs to occur at key points throughout the development lifecycle to ensure that planned releases address the highest priority issues for end users.

The availability of test environments, testing processes and co-ordinating emerging test requirements to support multiple programs were highlighted as an issue by many stakeholders. As the demands on the HI Service are broader than originally anticipated and the test environments were implemented in accordance with the original specifications, it would be valuable to review the test environment strategy and infrastructure to ensure it can meet emerging requirements.
4.1 Change requests

The change request process is not currently meeting HI Service stakeholder requirements particularly in relation to the timeframes for implementation of changes and the processes for requirement definition, prioritisation, communication and engagement and release management. Stakeholders of the Service are seeking an improvement in the turnaround time for assessment, development and implementation of change requests, the process for the prioritisation and delivery of enhancements. The process of setting priorities for change requests is done between NEHTA, who consult with stakeholders to establish their priorities, and DHS. Prior to the transition to Business As Usual, the stakeholder engagement process through the IAARG and tiger teams was seen as very effective. Since implementation, the end users of the system are not being engaged at the same level and this is causing significant levels of frustration. It is critical that end user representatives of the system have an opportunity to contribute to the specification, design, User Acceptance Testing and sign off of changes to ensure that they are fit for purpose and meet usability requirements.

To ensure this process works effectively between DHS and NEHTA, it is critical that an adequate level of detail is provided in the initial change request and that there is traceability between the business requirements, specifications, test use cases and functionality. Developing an agreed format and minimum content for business requirements and maintaining a traceability matrix that aligns business requirements to technical specifications, test cases and releases is a potential solution.

Stakeholders outside DHS have not been made aware of, or been involved in, incremental sign off at defined stage gates. It is important that NEHTA actively engage stakeholders in the process of developing change requests and in communicating the status of these through the development lifecycle. To be able to do this effectively it is important for NEHTA to have early notification of what is included in each release and advice on any factors that risk causing a delay in the development and release of change requests to be able to effectively manage their role in change and adoption and manage expectations.

Managing change requests to ensure both the specifications and timeframe for delivery meet the requests of the agencies involved and end users would be facilitated by:

- The re-establishment of a HI Service reference group with representatives from each of the major stakeholder groups. The role of this group should include review and feedback on new requirements, specifications and solution options to ensure that the developed solution is aligned with user business requirements.
  This group should also be used as a mechanism to communicate the status of change requests and any issues that may impact delivery.

- The development of a strategic roadmap and business plan for the HI Service that has input from the reference group. This should assist in setting expectations in relation to delivery timeframes and gaining consensus on priorities from affected organisations, as well as assisting to set the work program and associated budget requirements for the Service.

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**Recommendation 16 – Change request process**

It is recommended that consideration be given to refining:

a) The change request process so that the status of change requests, process of prioritisation, specification and design is more transparent to stakeholders

b) The processes used to determine whether the enhancements are fit for purpose

c) Governance processes to ensure directly affected stakeholders have signed off on specifications prior to development and on system testing prior to implementation.
4.2 Testing processes

Responsibilities for testing have transitioned from NEHTA to DHS. NEHTA still retain “light touch” assurance over releases. The level of quality assurance they perform is based on the assessed risk of the release. NEHTA defines the requirements for sign off to DHS. DHS manages all the processes relating to testing. There are some areas of tension between DHS and NEHTA evident in relation to testing responsibilities and outcomes that appear to be generated by inconsistent expectations across the organisations. The testing processes that could be enhanced include:

- Closer alignment between the DHS testing strategy and test plans and the Clinical Safety Plan developed by NEHTA to confirm that the clinical safety requirements are being met through testing and to assess the impact of any workarounds that may be put in place.

- Review of testing timeframes to ensure that NEHTA have adequate time to validate that the system is fit for purpose. DHS provide NEHTA with the release plan, test plan, test cases and outcomes, defects list and defect reports to support their assurance role. Both NEHTA and DHS are required to sign off testing outcomes as a pre-requisite for go live. However NEHTA reported that due to the timing of receipt of the documentation they often have very limited time for assurance activities prior to go/no go meetings for deployment.

Since the commencement of the current CIO at DHS, substantial efforts have been made to resolve all defects and good progress is reported in this area.

A number of limitations around testing of the HI Service in relation to its interaction with the PCEHR system were identified. Under the HI Act IHIs can’t be disclosed for testing or training purposes. This limits the level of testing that can be done increasing the risk of issues occurring in a live environment which could introduce clinical safety risks. There is currently no capacity to undertake production verification testing at a site level, which is necessary given the variability between instances of provider software. This testing, which confirms the configuration of an individual provider’s instance of a piece of software is able to connect to the HI Service, cannot be performed as it would involve retrieving an IHI for the purpose of testing, not for healthcare. DHS do conduct production verification testing for each release to test that services are available.

Although vendor products are subjected to Notice of Connection (NOC) and Compliance, Conformance and Accreditation (CCA) testing, production verification testing is important as there are differences in the way that every organisation implements software that cannot be picked up by the vendor performing NOC and CCA. There are often issues with local configuration or certificates which mean the connection to the HI Service does not work when implemented in production, and this is only discovered when a patient presents.

It is important to healthcare organisations to have certainty that the integration will work on their environment before they start using it in a clinical context. However, there is little understanding among providers of their legal liability if they attempt to perform production verification testing. This could be addressed if individual organisations were able to perform this testing in the test environment, but this would significantly increase the demand on the test infrastructure. Jurisdictions also want to be able to perform User Acceptance Testing prior to implementation, but at this point all User Acceptance Testing is performed by DHS, as requested and contracted by NEHTA. There are similar issues with the availability of environments and data for healthcare organisations to use for training and change management purposes.
4.3 Maintenance of Healthcare Identifiers databases

DHS has implemented comprehensive processes to maintain the accuracy of the Healthcare Identifiers databases. These processes include checks for duplicates and replicates, updating status of records to verified, deceased etc. Data are maintained on the number of transactions performed for each of these maintenance activities. These business processes are underpinned by a suite of procedure guides for staff within DHS that provide clear instructions on the processes that should be followed.

Duplicate and replicate management is a major concern from a clinical safety perspective. This function is actively managed by DHS and they have implemented robust processes to manage this. DHS routinely reports duplicates and replicates that are identified through DHS processes as well as those that are identified by providers or a trusted data source. The process to resolve duplicates is actively managed and the reporting effective in monitoring occurrence and resolution, as are processes for the allocation and retirement of numbers.

It would increase confidence in the Service if information about the processes to manage the database were made available to key external stakeholders. Summary operational reports which provide this data are circulated to the major governance groups, including the NEHTA Board.

Across all healthcare services using the Healthcare Identifiers system, ongoing data quality processes will need to be implemented and appropriately resourced. Within large health services, the effort to resolve issues will fall to health information managers. There are concerns in jurisdictions that they do not currently have the resource capacity to undertake the level of data cleansing that will be required to make the Service operate reliably.

However, this is also likely to be an issue for smaller practices who have no staff dedicated to this task.

4.4 Healthcare Identifiers Infrastructure

Outages and system availability is a major concern for stakeholders in relation to the Healthcare Identifiers infrastructure. The current SLA of 99.5% availability (unscheduled downtime only) is low compared with the availability levels required for systems used at the point of clinical care such as electronic medical records, patient administration and imaging systems where 99.9% is common. An SLA of 99.5% availability equates to 43.8 hours of downtime per annum compared to 8.8 hours at 99.9%. As adoption increases in parallel with wider implementation of the PCEHR system and Secure Messaging Delivery, availability at a level that matches the clinical systems using the Service will be critical. The notification processes and responsibilities for maintenance and release related outages need to be improved so that users can prepare appropriately for the period of the outage, and for any functional changes (in the case of new releases) that may need to be communicated to users. In the event of any outage, information should be provided on what the issue is and the expected down time provided to stakeholders as early as possible and updated if the situation changes. NEHTA is responsible for communication with stakeholders but unless this information is provided by DHS and communicated to the users in a timely fashion, it impacts the level of confidence needed to promote uptake of the system.

A change request is being processed to provide dedicated failover capabilities for the HI Service. There will be a risk of ongoing outages if this is not approved and funded.
Accurate demand planning is critical to ensure that DHS can predict and plan for the load on the system. Performance parameters need to be constantly monitored to make sure that they are appropriate, given the requirements of other systems integrating with the HI Service.

There have been recent issues with the vendor test environments. These were set up for testing of Healthcare Identifiers by vendors but their use has expanded to the PCEHR system and other purposes and they were not designed for this level of demand. A review of the test environment strategy based on the emerging requirements should be conducted to assess the full range of test requirements and users, and the infrastructure required to support this expanding role.

It should be noted that use of the HI Service is still very limited and at this point the system, support structures and infrastructure have not been tested with significant volumes. Regular review of performance as demand increases and effective processes to manage any emerging issues need to be in place.

### 4.5 Operational support

There was positive feedback from stakeholders on the support they received from DHS call centre staff, in relation to both Healthcare Identifiers support and online technical support for vendors. It was reported that staff are helpful and assistance has been timely. However it was also reported that the advice given by different staff can be variable and that staff may need more guidance to ensure that consistent responses are provided to questions from stakeholders (for example, one Medicare Local found that some staff would provide them with information on providers in their area, others would not, saying that it would be a breach of privacy).

Across programs (HI Service, PCEHR system etc.) there are separate entry points for user support. Users who do not distinguish between components find it difficult to navigate the disparate support structures. In some situations (e.g. advice on setting up HPI-O structures) both NEHTA and DHS service desks handle calls. It would clarify responsibilities and simplify navigation for users if clearer guidelines were developed on responsibilities for different call types and hand off processes between NEHTA and DHS service desks were agreed.

**Recommendation 18 – End user support structures**

It is recommended that:

- a) As an interim measure a single point of contact for support for national e-Health systems and infrastructure is implemented with referral to appropriate support desks as a back end process to simplify support for users
- b) Consideration be given to transitioning to an integrated application and technical support structure for national e-Health systems.

### 4.6 Release cycle and release management

Scheduled releases for the Healthcare Identifiers system occur in March, June, September and December. There have also been a number of mid cycle releases since the introduction of the PCEHR system. Processes for emergency releases to fix critical issues have been implemented. Infrastructure changes are not tied to this release cycle. The process for determining the content of a release is managed by DHS. It would facilitate NEHTA’s role in assurance and stakeholder consultation and communication if there was earlier notification of the content of each release and improved processes in place for DHS and NEHTA to work together on the release strategy and plans.
While there is joint sign off of releases, NEHTA does not always have adequate notice of the content of each release to be able to fully perform their clinical safety or quality assurance role. It is important that the information needed to perform quality assurance role for the quarterly releases is made available on a timely basis. Developing a common view of the release strategy and development road map and plan would allow NEHTA to better plan assurance requirements and resources and jurisdictions or vendors to prepare for changes. There are concerns in the vendor community about the impact and cost of compliance on small vendors that will occur. Performance testing and project closure reports for releases are also required for NEHTA’s assurance activities. At the point of this Review a number of these reports were still outstanding.

4.7 Healthcare Provider Directory

The Healthcare Provider Directory (HPD) has a number of constraints that are impacting the potential of the directory to fulfil its objectives, and are causing significant frustration with stakeholders. The major issues are outlined below.

The opt in basis for participation was raised as the major concern with the utility of the HPD and was seen as a significant barrier to a number of programs, in particular to the implementation and effectiveness of Secure Message Delivery and NASH. (See section 3.2) The opt in rate is currently very low. This is partly a result of a lack of understanding about the purpose of the directory, partly a lack of awareness about the existence of directory, or the need to actively consent, and partly functional issues impacting the process. While there is a web service that allows people to consent online and maintain their details this is not being routinely used at this point. Low participation rates impacts confidence in the quality of the HPD as most searches do not return a result.

The lack of data in the HPD is causing a lot of frustration with users as manual workarounds are needed to ensure messages are being correctly routed. Other functional limitations also affect adoption, particularly the lack of functionality to download provider details from the directory to update local Patient Administration Systems. The inability to download provider information has resulted in many health services implementing their own directories, causing duplication that a national directory should reduce. This functionality is critical for efficient workflow. The HPD needs to support referral and other clinical projects, but should also be able to be used for the PCEHR system to manage consumer access choices.

There appears to be duplication in the infrastructure and content of the HPD and the National Health Call Centre directory (National Health Services Directory (NHSD)). Maintaining more than one directory, containing similar data, but involving different maintenance processes and structures will increase costs, increase the maintenance effort and potentially reduce the utility as users need to navigate between multiple directories. The requirement and value of maintaining multiple directories needs to be reassessed as the burden maintaining multiple directories will be considerable and the value of this is questionable. The HPD is only accessible by healthcare providers. The NHSD supports secure sections that are only accessible to providers as well as public areas for consumer access. HPI-Is have been added to the restricted section of the NHSD to enable discharge summaries to be sent.

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There is potential to rationalise national healthcare provider directories through integration between the NHSD and the HI Service as the source of truth for the data relating to the identifiers. In this model selected information relating to HPI-Os and HPI-Is (e.g. the identifiers, the status of these, Seed/Responsible Officer/Organisation Maintenance Officer registration information) would be managed by the HI Service and would be read only in the NHSD. Other information that is more appropriate to be managed by providers could be editable in the NHSD, where the provider information supports multiple functions. Integration between directories would require changes to the HI Act and to the functionality of the NHSD.

**Recommendation 19 – Directory infrastructure**

It is recommended that a concept of operations for directory infrastructure be developed to identify options to rationalise directories, increase use and decrease maintenance cost and effort. This should consider the feasibility of integration between the National Health Services Directory and the Healthcare Provider Directory to reduce duplication and rationalise the national directory infrastructure.
5. PERFORMANCE OF NEHTA

NEHTA’s role in relation to the HI Service has changed since the transition to service operation as they have moved from a strategy and development role to that of Managing Agent. NEHTA also has a key role in stakeholder engagement and managing communication, clinical safety and assurance of the Healthcare Identifiers system. There have been some challenges in this transition and there are aspects of the service delivery where the boundaries of NEHTA’s and DHS’s roles and responsibilities are not clear.

Although the focus has shifted to service operation, there is an ongoing and potentially long term role for NEHTA to manage the development roadmap for the HI Service and in ensuring the effective co-ordination, definition and prioritisation of new requirements emerging from multiple programs. This requirement should be considered in decisions about NEHTA’s future funding and structure.

Stakeholders acknowledged the significant levels of support that NEHTA has provided to them to implement Healthcare Identifiers. The structures adopted by NEHTA, with designated implementation leads and architects to support sites through implementation, are working effectively, and the expertise and assistance given is acknowledged by end users. However, it is noted that even large sites are reporting that they have experienced considerable difficulty in completing integration with the Service and have been dependent on extensive assistance, both from a policy and technical perspective. As the number of participating organisations increases, this may have a substantial impact on NEHTA’s resourcing and capacity to respond.

As more organisations attempt to implement Healthcare Identifiers it is becoming apparent that the optimal implementation approach and the type of issues that need to be resolved vary considerably between types of health services. This is highlighting a number of policy issues that still need to be addressed and also has impacts for the communication tools and implementation guides that are needed to support different types of health services.

Prior to implementation NEHTA actively engaged with stakeholders through governance groups, reference groups and “tiger teams” (groups of subject matter experts brought together to work on specific issues). Since the system became operational, stakeholders do not feel they have adequate opportunities to provide input and ensure that their priorities are being recognised. It is understood that all NEHTA reference groups have been disbanded. It is critical that stakeholders continue to be actively engaged as the HI Service (and other e-Health programs) begins to be more actively used. There will continue to be issues discovered that will need input both from the Commonwealth, Service Operator, clinical users and the jurisdictions which need to ensure solutions are appropriate within the broader end to end IT context. There is a need to re-engage end users of the system, particularly the jurisdictions, through mechanisms such as Reference Groups and tiger teams.

5.1 Clinical safety processes

There is ongoing work between NEHTA and DHS to improve the issue identification, management and resolution processes for the HI Service. Increasingly though, issue investigation cannot be restricted to the boundaries of the HI Service and requires collaboration between the HI Service and the PCEHR system (and ultimately other e-Health programs) to identify where the interaction between the Healthcare Identifiers and other systems may have contributed to the issue. It is anticipated that impacts of issues may increase now the Service is being used more widely as a component of e-Health services. The implementation schedules of other initiatives mean that there will be a spike of implementations in the next 12 months and the ability to resolve issues and act quickly on change requests will be critical.
Open collaboration between organisations to identify and resolve incidents are critical to ensure that issues are resolved quickly and do not pose a clinical safety risk. There needs to be a formalised feedback loop implemented when an incident occurs. It was reported that there is no formal feedback loop on how an issue has been resolved if issues are raised by a user because of constraints on disclosure. It is important that correct details are provided back to sites that lodge an issue to maintain data quality and reduce clinical risk.

It is inevitable that there will be issues that will occur with the HI Service. In order to continuously improve the quality of the Service and to maintain a high level of confidence there needs to be a culture of disclosure when an incident does occur and transparency in processes and in the resolution that is put in place.

Incorporating ongoing prospective surveillance to identify potential mismatches will be important, not just within DHS but in the clinical systems in healthcare organisations. There is always a risk that misidentification will occur because of the human steps in the process.

**Recommendation 20 – Clinical Safety**

It is recommended that potential clinical safety incidents occurring in any national e-Health system be reported through a single point of entry and that a single entity is allocated responsibility for co-ordinating the resolution of these with the appropriate managing agency.

**Recommendation 21 – Issue resolution**

It is recommended that the governance structure for incident investigation for the PCEHR system be reviewed to ensure the effective co-ordination of actions between the HI Service Operator and the PCEHR System Operator to resolve incidents related to the HI Service that impact the PCEHR system and downstream systems.

**Recommendation 22 - Issue management**

It is recommended that a process of structured analysis of adverse events that are related to misidentification be implemented to identify process issues that could be addressed through system or business process change.

### 5.2 Conformance, Compliance and Accreditation (CCA) process

Given the stage of maturity the programs have now reached, it may be appropriate to reconsider CCA to cover end to end processes to ensure requirements are consistent across e-Health program components. Within NEHTA’s CCA team, there are subject matter experts who work across programs to enable cross checking and alignment between conformance points for different, but closely coupled, programs.

The CCA function is one that will need to be resourced on an ongoing basis to manage new versions and enhancements, both from a Healthcare Identifiers system and vendor software testing perspective. The sustainability of this process as demand and utilisation increases will need to be reviewed. There needs to be a clear definition developed of the circumstances when a vendor needs to go through a formal CCA/NOC process, and when it is appropriate for this to be devolved to the vendor to include an agreed set of tests in their own testing/Quality Assurance process prior to release. There needs to be best practice guidelines developed for vendors to clarify and guide this process.

The CCA function is currently limited to (and only resourced for) programs within NEHTA’s control, although it does also support other clinical system functions that require interaction with the HI Service (such as point to point messaging). However it is not clear who owns the responsibility for ensuring that vendors comply with CCA requirements for Secure Message Delivery.
5.3 Implementation support

5.3.1 Timing and implementation focus
The HI Service was implemented in advance of other components of the e-Health program. As a dependency for other programs this was appropriate, but has caused some challenges for wide-spread adoption as the benefits of the HI Service only become evident to end users when it has a practical application. Without these other services in place, it is difficult to generate the impetus for the data cleansing and change management activities that are needed for effective use of Healthcare Identifiers.

The focus of Healthcare Identifiers registration may be more effective if it is changed from a standalone activity, with health services performing bulk searches and downloads of IHIs for their patients, to a “just in time” implementation model where IHIs are downloaded when a patient presents at a service so that demographic details can be resolved when the individual is present. If this approach is aligned with increasing availability and maturity of other services and applications that actively require the HI Service there will be more of a context for the adoption of the Service that may facilitate uptake.

5.3.2 Guidance and implementation materials
Most sites interviewed felt that they needed more support with implementation and guidance on appropriate ways to set up their organisational structures, as well as practical guidance on how to incorporate Healthcare Identifiers into their business processes and increase adoption. Change management activities should focus on end to end business processes and how healthcare providers use identifiers in their clinical systems and in communication with other providers.

While there is a considerable body of documentation and resources available, much of this is focussed on the GP environment and does not effectively take into consideration the variability in structures and requirements of different types of health organisations. The high level of localisation that is required introduces major complexity for change management, training and support activities, and implications for the level of resourcing that is required. NEHTA is having to take a very “hands on” approach to supporting organisations even to register for an HPI-O and will be dedicating resources to this function.

The current implementation support resources could be expanded if the DHS Business Development Officers were utilised as part of the engagement team. While this would require additional funding (as it would be an expansion of their current role), it would have the advantage of leveraging an existing support infrastructure with an understanding of DHS guidelines and requirements, in each State and Territory.

5.4 Communication and engagement

Communication with end users
At the moment, uptake is being driven by financial incentives (for GPs through e-Health Practice Incentive Program payments) but there is not a high level of understanding in the sector as to why they should use the HI Service once they are registered and what benefits it will ultimately deliver. To date much of the communication that has occurred has focused on technical capability and requirements of the HI Service. Feedback from clinicians indicates that communication would be more effective if messages about the HI Service were integrated with information about the applications and clinical business processes that will utilise the Service.
There is a very variable level of knowledge of the current status of the HI Service functionality, uses and policies, and how the HI Service relates to other services (e.g. the relationship between HI Service and PCEHR system registration). It is important that accurate information be provided from a single source to promote a common understanding of the Service.

As the use of the HI Service expands beyond projects that NEHTA manages, there will need to be agreement on who is responsible for ensuring all stakeholders are included in relevant communication.

Communication between delivery organisations

An agreed and widely disseminated responsibility matrix would clarify the functions of each organisation involved in development and delivery and promote the consistency of information. This will be essential as the HI Service integrates with more programs, and therefore more organisations. As the environment becomes more complex, simplifying the pathways for support and access to information, and ensuring the consistency of information, will become even more important to assist users.

Stakeholder engagement

Stakeholders, particularly in the jurisdictions, have noted a significant reduction in their level of involvement in the HI Service and engagement with NEHTA since deployment of the Service. Stakeholder engagement and consultation continues to be NEHTA’s role, but this function has suffered due to the loss of a number of key staff and the redirection of resources to other programs still under development. A robust stakeholder engagement process will continue to be vital to ensure that the Service meets the requirements of clinicians, both for the development of new functionality and to address issues that will inevitably occur as the Healthcare Identifiers system becomes more actively used by a range of other systems. The more programs that utilise the Service, the more critical it will become that design impacts on all stakeholders are understood and that there is input from the jurisdictions and primary care to inform priorities and dependencies.

Communication materials

Extensive communication materials have been produced for Healthcare Identifiers, aimed at vendors, providers and consumers. Core documentation required to integrate and use the HI Service and other e-Health systems is held on three different websites (DHS for HPI-O application forms and support, PKI and HPD consent, NEHTA for confirmation of compliant software, AHPRA and DHS for HPI-Is), as well as via the websites of professional associations such as the Australian Medical Association and Australian Practice Managers Association). There has been an effort by NEHTA, DHS and groups like the Australian Medical Association to develop checklists for GPs to simplify the navigation through these information sources. There has been a significant improvement in consolidating the information required by vendors for the HI Service (e.g. specifications, testing information) onto a single website. However, healthcare providers aiming to participate in the HI Service and the PCEHR system report that it is still difficult to navigate the many sources of information and that a “one stop shop” for all related information, guides and forms would be beneficial (even if this just provided links to all relevant sources of information). DHS has initiated work to simplify the range of forms currently required to register for HPI-Os, HPI-Is, PKI, NASH etc. and to create a single form. A single explanatory booklet that provides a guide to the whole end to end process would also assist.

The appropriateness of guidelines and other communication materials has to be reviewed to ensure that they are appropriate for all types of healthcare organisations. The requirements and nature of interactions between the HI Service and different types of health services are likely to vary considerably and documents should reflect this.
5.5 Change management

As systems that will use the HI Service are starting to be implemented, the full extent of the change management requirement to underpin the implementation and use of the Service is becoming more apparent. The lack of clarity and disparity of views about the Service indicates that there is still considerable change management effort to occur, either for the HI Service alone or integrated into the change management activities of other programs.

As utilisation of the HI Service increases, organisations need to consider the impact of this in terms of:

- Organisational seed and network structures, their establishment and ongoing maintenance.
- Roles, positions or skills (e.g. to accommodate the responsibilities of Responsible Officers, Organisation Maintenance Officers, compliance activities etc.).
- Business processes (e.g. develop local strategies for handling new and existing patient and provider identifiers).
- Change management processes to ensure modifications to business processes are implemented.
- Compliance with relevant national and State legislation and regulations.
- Business systems and the requirement to upgrade.
- Requirement for PKI/NASH certificates.

Change management activities for the HI Service alone are significant. The multi-agency nature of these integrated initiatives makes it difficult to co-ordinate communication, change and adoption activities and without a clearly defined plan and responsibilities there is a high risk of activities being overlooked. Given the scale of change management required, a decentralised approach to change management is inevitable.

Recommendation 23 – Change management

It is recommended that the change management strategy for Healthcare Identifiers be reviewed to consider:

- Communication of changes to the HI Service, including functionality, policy, support etc. to be channelled through a single, agreed point
- Clarification of responsibilities for developing implementation support material
- Development of material to reflect the business models of different provider groups (Acute Services, General Practice, Community Health etc.) to be developed in consultation with stakeholders
- Leveraging existing resources such as the DHS Business Development Officers and existing AHPRA communication processes with providers to increase the pool of available support
- Including a targeted Healthcare Identifiers component in the change and adoption processes for the PCEHR system and other e-Health programs.
5.6 Functionality

A number of functional issues were raised by stakeholders during consultation sessions. The major issue was in relation to the need for more flexibility in the way searches are undertaken and the information that is returned to the user to make this more user friendly and more closely aligned with existing business processes. A general issue noted was the time lag between Healthcare Identifiers functionality being built and details of functional enhancements provided to jurisdictions, healthcare providers and clinical system vendors to enable any required changes to be made to downstream systems and business processes.

Recommendation 24 – System enhancement

It is recommended that a mechanism for ongoing business process review be implemented now the system is moving to active use to inform ongoing system development and enhancement to ensure that business processes are practical as usage increases.
6. BARRIERS TO ACHIEVEMENT OF THE OBJECTIVES OF THE ACT

Adoption of the HI Service will increase as health services incrementally gain access to new e-Health programs that depend on integration with the Service, such as the PCEHR system. The success of this will be dependent on the effective incorporation of the major change management considerations for Healthcare Identifiers in the change and adoption strategies of other e-Health programs. Adoption will also be influenced by the degree to which there is tight integration between the HI Service and the other clinical systems within healthcare services. All systems supporting clinical care, including the HI Service, need to operate seamlessly end to end to minimise the business impacts in time poor clinical environments.

From a policy perspective there is a need to standardise requirements for data maintenance, privacy, security, access and use.

The Review found that there are disjoints between the Healthcare Identifiers system functionality and the way business processes and clinical systems currently work that is a barrier to adoption and use. These differences are complicated, and to an extent driven, by variations in State and Commonwealth legislation that also create inconsistencies between established local policies and new policies that are required to support the use of the HI Service. Again, it makes it difficult for healthcare services to drive adoption if there are separate processes and policies for the HI Service to those applying to other clinical systems.

The major issues identified in relation to the operation of the HI Service that are seen as barriers to adoption were in the areas of management of change requests, prioritisation and content of releases, complexity of establishing organisational seed and network structures, access to HPI-Is and assignment of IHIs for individuals that do not return a result when a search is conducted. As additional programs such as the PCEHR system are being implemented there are increasing issues arising from the parallel operation, support, policy frameworks and governance of these programs. This environment will become even more complex as additional programs come online. Maintaining the separation between these programs is likely to increase the challenges for all organisations participating in e-Health.

In summary, the major barriers identified in the consultation for this Review included the following:

- Complex registration processes for healthcare organisations that are perceived by providers to not adequately leverage existing relationships with these organisations, resulting in duplication of effort for organisations. Although it is noted that there has been an improvement in these processes and Evidence of Identity (EOI) is not required for a “known customer”, there are opportunities to further streamline or clarify some processes for providers. For example to register a seed organisation the Responsible Officer has to prove their authority. The Application To Register a Seed Organisation form on the HI Service website states that “To establish that the Responsible Officer is authorised to act on behalf of the Seed Organisation one of the following documents must be submitted in support of this application: An ASIC Company search displaying the Responsible Officer as Director....). Rather than requiring healthcare services to do this process, the company search can also be performed by DHS. While these searches are performed by DHS, the written instructions on the application form lead providers to assume they need to do this search prior to applying which is seen as an unnecessary overhead.

- Difficulties accessing identifiers for Providers and a lack of clear processes for individuals for whom an IHI cannot be found (processes for newborns, provisional and unverified IHIs) that impacts use in a clinical setting (section 3.1 and 3.2).
• Challenges with establishing appropriate seed and network structures (section 3.4.2).
• The opt in basis and low participation rates in the HPD that is impacting utility for downstream systems (section 3.2 and 4.7).
• Restrictions on disclosure of identifiers and identifying information impacting utility in health services (section 3.2).
• Parallel and fragmented governance, support and implementation processes for Healthcare Identifiers and other dependent programs (section 2.1 and section 2.5).
• Functional constraints that limit the use of IHIIs being adopted for communication purposes within jurisdictions (section 5.6).

Although there are issues that are having an impact on adoption and use, the majority of these can be addressed through refinement of business processes across the organisations participating in the HI Service (both from a service delivery and end user perspective) and through a focus on communication and change management activities. The recommended changes to the Act and HI Service functionality, infrastructure and support are intended to address the issues highlighted by stakeholders in the course of this Review and enhance the useability of the Service for health services as the e-Health environment expands in scope and complexity. Appendix 5 recommends additional operational actions to address issues raised by stakeholders to further streamline the operation of the Service.
## Appendix 1: Terms of Reference of the Review

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<th>Review component</th>
<th>Review considerations</th>
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| **Assignment of identifiers** | • Effectiveness of assignment of identifiers  
• Effectiveness of record keeping by the Service Operator in relation to assignment of identifiers |
| **Use and disclosure of identifying information** | Effectiveness of provisions in relation to:  
• Use and disclosure of identifying information by providers  
• Disclosure of identifying information by data sources  
• Disclosure of identifying information by the national registration authority  
• Extent of/effectiveness of penalties for unauthorised use or disclosure |
| **Disclosure of identifiers by Service Operator** | Effectiveness of provisions in relation to the Service Operator’s obligations to:  
• Disclose IHIs to a provider for authorised purposes  
• Disclose the HPI-I to the registration authority to register the provider |
| **Disclosure of identifiers by healthcare providers** | Effectiveness of provisions in relation to the obligations of providers to disclose IHIs to the healthcare recipient or entity for purposes prescribed under the Act |
| **Unauthorised use and disclosure of identifiers** | Effectiveness of penalties imposed for unauthorised use or disclosure of identifiers |
| **Interaction with the Privacy Act** | • Breaches of privacy under the Privacy Act  
• Findings of any Audits or investigations of the Service Operator undertaken by the Privacy Commissioner  
• Complaints regarding the HI Service handled by the Privacy Commissioner  
• Issues highlighted by the Privacy Commissioner and enforcement activities undertaken in relation to the HI Service |
| **Oversight role of the Ministerial Council** | • Directions given by the Minister for Health to the Service Operator  
• Compliance by the Service Operator with directions issued  
• Compliance by the Service Operator in relation to preparation of the Annual Reports on the HI Service |
| **Performance of the HI Service Operator (DHS)** | Consideration of the performance of the HI Service Operator in relation to:  
• Maintenance of HI databases and infrastructure  
• Recordkeeping  
• Management of change requests  
• Provision of the HPD  
• Contractual arrangements supporting operation of the HI Service, including SLA |
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<td>• Support for the widespread adoption of the HI Service through ongoing development of HI implementation collateral</td>
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<td>• Distribution channels for the HI Service (HI Service Channel Enhancement Project)</td>
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<td>• Support provided to healthcare organisations in implementing the Service</td>
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<td>• Collaboration with HI Service to improve service delivery</td>
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<td>• Clinical safety in relation to the HI Service</td>
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<td>• Managing change on behalf of stakeholders</td>
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<td><strong>Barriers to achievement of objectives of the Act</strong></td>
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<td>• Any legislative, administrative or operational restrictions to use of the HI Service</td>
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<td>• Amendments to the HI Act proposed in the PCEHR (Consequential Amendments) Act</td>
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<td>• Support of the HI Service for clinical practice in relation to:</td>
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<td><strong>Recommendations</strong></td>
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## Appendix 2: Consultation Sessions

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<tr>
<th>Name</th>
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<tr>
<td><strong>Dept of Health and Aging</strong></td>
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<tr>
<td>Matthew Corkhill</td>
<td>Assistant Secretary, eHealth Operations Branch</td>
<td>DOHA</td>
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<tr>
<td>David Dennis</td>
<td>Assistant Secretary, Economic and Statistical Analysis Branch</td>
<td>DOHA</td>
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<tr>
<td>Liz Forman</td>
<td>Assistant Secretary, eHealth Strategy and Policy Branch</td>
<td>DOHA</td>
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<tr>
<td>Rosemary Huxtable</td>
<td>Deputy Secretary</td>
<td>DOHA</td>
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<tr>
<td>Paul Madden</td>
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<td>Kim Richter</td>
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<td>David Bunker</td>
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<td>Alicia Curry</td>
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<td>Peter Padd</td>
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<tr>
<td>Les Schumer</td>
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**JURISDICTIONS**

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<td>Mike Allen</td>
<td>Manager, Healthcare Identifiers</td>
<td>WA Health</td>
</tr>
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<td>Antonio Abbenante</td>
<td>Manager Design Authority</td>
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<tr>
<td>Ian Betheras</td>
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<tr>
<td>Robyn Daniels</td>
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<tr>
<td>Nicole Kinghorn</td>
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<td>DHHS Tasmania</td>
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<tr>
<td>Tony Lopes</td>
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<td>Andrew Robertson</td>
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<tr>
<td>Paul Campbell</td>
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<tr>
<td>Chris Bain</td>
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<td>Annette Toohill</td>
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<td>Royal Women’s Hospital Melbourne</td>
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<tr>
<td>Anna Greenwood</td>
<td>Chief Executive</td>
<td>Consumers Health Forum</td>
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</table>
Appendix 3: Written Submissions

The following organisations were requested to provide a written submission to the Review:
Royal Australian Collage of General Practitioners
Royal Australasian College of Medical Administrators
Royal Australian and New Zealand College of Obstetricians and Gynaecologists
Royal College of Pathologists
Royal Australasian College of Physicians
Royal Australian and New Zealand College of Radiologists
Australian College of Rural and Remote Medicine
Royal Australian College of Surgeons
National Prescribing Service
Health Consumers of Rural and Remote Australia
Consumers Health Forum
Council on the Aged
Carers Australia
Cancer Council of Australia
National Disability Service
Pharmacy Guild of Australia
Catholic Health Australia
National Rural Health Alliance
Australian Privacy Foundation
Health Informatics Association
Australian Information Industry Association
Aged Care Industry IT Council
Appendix 4: References

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*Healthcare Identifiers Act 2010*, Canberra, August 2012
*Healthcare Identifiers Regulations 2010*, Canberra, June 2012
*Healthcare Identifiers (Consequential Amendments) Act 2010*
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Medicare Australia, Common Security Policy, Release 3b, FR.POLSECPL100, 2010
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Medicare Australia, Create Unverified IHI record policy
Medicare Australia, Create Unverified IHI record procedure
Medicare Australia, Amend an IHI record – policy
Medicare Australia, Amend an IHI record – procedure
Medicare Australia, Create IHI record non Medicare enrolled Policy
Medicare Australia, Create IHI record non Medicare enrolled Procedure
Medicare Australia, Create Provisional IHI record policy
Medicare Australia, Create HPI-O record for seed organisation policy
Medicare Australia, Create HPI-O record for seed organisation procedure
Medicare Australia, Create HPI-O record for network organisation policy
Medicare Australia, Create HPI-O record for network organisation procedure
Medicare Australia, Amend HPI-O record policy
Medicare Australia, Amend HPI-O record procedure
Medicare Australia, Create HPI-O record policy
Medicare Australia, Create HPI-O record procedure
Medicare Australia, Amend HPI-I record policy
Medicare Australia, Create HPI-I record procedure
Medicare Australia, Procedure – RO, OMO or CSP calls on behalf of an organisation
Medicare Australia, Request to amend an IHI record of a Medicare enrolled individual by a person acting on behalf of that individual
Medicare Australia, Request to amend an IHI record of a non-Medicare enrolled individual by a person acting on behalf of that individual
Medicare Australia, Procedure – provider or authorised employee calls about an IHI number
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NEHTA/DHS, HISOC Minutes (selected meetings)
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Office of the Australian Information Commissioner, Compliance and enforcement activities under the Healthcare Identifiers Act 2010; Annual report by the Australian Information Commissioner 1 July 2011-30 June 2012

Personally Controlled Electronic Health Records Act 2012, Canberra, 2012
Royal Australasian College of Physicians, Submission to the Australian Health Ministers’ Conference on Healthcare Identifiers and Privacy Legislation
Senate Community Affairs Legislation Committee, Healthcare Identifiers Bill 2010 (Provisions); Healthcare Identifiers (Consequential Amendments) Bill (Provisions)
### Appendix 5: Recommended Actions

In addition to the recommendations identified in the body of the report, the following actions are recommended:

<table>
<thead>
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<th>Actions</th>
<th>Priority</th>
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<tr>
<td>DOHA</td>
<td>Governing Agreements</td>
<td>Amend references to the National Partnership Agreement on E-Health in the HI Act in line with the revised Agreement.</td>
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<tr>
<td>DOHA</td>
<td>Governing Agreements</td>
<td>Consider extending HPI-O participation agreements to introduce a requirement to support clinical safety incident investigations relating to HIs.</td>
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<td>eHWG</td>
<td>Governance</td>
<td>Re-establish engagement with the NHIRF working group</td>
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<td>Governance</td>
<td>Expand membership of the Joint NEHTA Medicare Australia Strategic Steering Committee to include jurisdictional representation to ensure that the requirements and priorities identified and agreed in the National Health CIOs Forum are considered in setting the work program of the HI Service</td>
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<td>Establish a reference group to act as a consultative committee to the change approval board</td>
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<td>AHPRA be included on key HI governance groups.</td>
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<td>Routinely involve DHS representatives in tiger teams tasked with defining requirements to ensure that all stakeholders have a common view of business requirements and input into high level solution options</td>
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<td>Invite the CIO of DHS and AHPRA to regularly engage with the</td>
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<tr>
<td>National Health CIO Forum</td>
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<td>Include a DHS IT representative on HISOC to support information flow between HI stakeholders and DHS IT Services</td>
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<td>Develop and issue a policy on quality assurance that defines the activities, scope, permitted disclosures and responsibilities.</td>
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<td>Develop and issue a policy framework and guidelines to all Medicare Locals regarding the extent of their authority to act for the GPs in their area.</td>
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<td>Review the requirements for Seed and Network structures, Responsible Officers, Organisation Maintenance Officers and authorised employee authorities to make sure that the structure defined is appropriate for all types of organisations.</td>
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<td>Ensure that all policy and other communication documents relating to the HI Service are made accessible through a single point to facilitate access by stakeholders.</td>
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<td>Confirm the compliance requirements in relation to address validation for Evidence of Identity.</td>
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<td>Risk management</td>
<td>Engage input from clinical advisors in formulating privacy and risk assessments to ensure a balanced assessment of potential risks.</td>
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<td>Change and adoption</td>
<td>Identify relevant data and agree on process to release information to support more effective targeting of change and adoption activities, such as utilisation by area and error rates for</td>
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<td>Include an overview of the obligations, risks and impact on business processes to be managed by healthcare providers in relation to the use of Healthcare Identifiers in the change and adoption processes for all programs using the HI Service.</td>
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<td>Consider leveraging and expanding the role of DHS Business Development Officers to support implementation of HI.</td>
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<td>Communication and engagement</td>
<td>Assess opportunities to leverage AHPRA’s existing communication processes with providers to disseminate information on the HI Service and other e-Health programs.</td>
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<td>Communication and engagement</td>
<td>Develop a series of communication materials/guidelines targeting providers using the HI Service to clarify:</td>
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<td>• Business processes (electronic and manual) where use and disclosure of Healthcare Identifiers is and is not permitted</td>
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<td>• The use of Healthcare Identifiers in sectors such as aged care, disability services and healthcare services operated by insurers</td>
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<td>• What disclosure is permitted in the investigation of incidents, who should lead and participate in these investigations, what information can be disclosed and the extent of vendors' obligations to investigate</td>
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<td>• Considerations and potential impacts for different organisation types associated with seed</td>
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<td>Actions</td>
<td>Priority</td>
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<td></td>
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<td>and network structures</td>
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<td></td>
<td></td>
<td>• IHI collection processes to inform local implementations</td>
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<td></td>
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<td>• Targeted information for providers on permitted uses and circumstances where penalties would apply to mitigate concerns about inadvertent disclosure</td>
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<td>• Data management responsibilities to support the effective operation of the HI Service</td>
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<tr>
<td>DHS and NEHTA</td>
<td>Communication and engagement</td>
<td>Develop and agree processes to engage and manage stakeholder expectations and their participation in requirement definition and sign off of specifications, design and testing.</td>
<td>High</td>
</tr>
<tr>
<td>AHPRA</td>
<td>Business processes</td>
<td>Develop business rules for the assignment of HPI-Is for healthcare providers who are not Australian residents.</td>
<td>Low</td>
</tr>
<tr>
<td>NEHTA/DHS</td>
<td>Business processes</td>
<td>It is recommended that a more strategic approach be adopted to prioritising and scheduling Change Request (CR) development and implementation, for example by grouping CRs touching the same functional areas, rather than managing each CR independently.</td>
<td>Medium</td>
</tr>
<tr>
<td>DHS</td>
<td>End user support</td>
<td>Review current training materials/processes to ensure a consistent message is always provided by service desk staff.</td>
<td>Medium</td>
</tr>
<tr>
<td>NEHTA</td>
<td>Data quality improvement</td>
<td>Release the Data Profiling and IHI Match Rate Assessment report to sites to enable the findings to be used to formulate targeted data quality strategies.</td>
<td>High</td>
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<tr>
<td>Organisation responsible</td>
<td>Service component</td>
<td>Actions</td>
<td>Priority</td>
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<tr>
<td>DHS</td>
<td>Data quality improvement</td>
<td>Develop and implement processes to feed the results of ongoing data quality monitoring back to providers to support local data improvement activities.</td>
<td>High</td>
</tr>
<tr>
<td>NEHTA</td>
<td>CCA</td>
<td>Review the scope and on-going resourcing requirements to manage CCA in line with the HI development roadmap.</td>
<td>Medium</td>
</tr>
<tr>
<td>NEHTA</td>
<td>CCA</td>
<td>Develop best practice guidelines to assist vendors to determine when a formal CCA/NOC process is required and when testing can be incorporated into the vendors own test/Quality Assurance process.</td>
<td>Low</td>
</tr>
</tbody>
</table>