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## **Healthcare Identifiers in Primary and Ambulatory Care**

### **Proposed Implementation Plan**

Version 0.6 - 9/1/2011

**National E-Health Transition Authority Ltd**

Level 25

56 Pitt Street

Sydney, NSW, 2000

Australia.

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# 1 Executive Summary

NEHTA, in collaboration with health sector leaders, is seeking to drive the adoption of a range of new and improved healthcare capabilities enabled by advances in information and communications technologies and the development of national information infrastructure.

One of the critical foundations for a national approach to e-health is a standard process across the health sector to consistently identify all parties involved in a healthcare event. This includes the person receiving healthcare, the person providing healthcare, and the service where the care is given.

On 1 July 2010, the Healthcare Identifiers (HI) Service commenced operations with three different types of identifiers:

- Individual Healthcare Identifiers (IHI)—for individuals receiving healthcare services.
- Healthcare Provider Identifiers—Individual (HPI-I)—for healthcare providers and other health personnel involved in providing patient care.
- Healthcare Provider Identifiers—Organisation (HPI-O)—for organisations that deliver healthcare (such as hospitals or medical practices).

Activity has now commenced to plan and manage the implementation of these identifiers across the health sector. Implementation planning activities are being undertaken in targeted sub-domains such as primary and ambulatory care (this plan), diagnostic services, community pharmacy, aged care, private hospitals, and State and Territory jurisdictions. The processes of development of these plans may also highlight additional areas where targeted exploration and planning is required. These proposed sub-domain plans will then be iterated and integrated into a coherent and comprehensive overall Implementation Plan.

In summary, this proposed plan for the primary and ambulatory care sector has been developed by firstly consulting with a range of nominated stakeholders and reviewing relevant documentation; assimilating the issues and opportunities identified and workshopping these with the stakeholder group; then generating a draft plan on the basis of this stakeholder feedback; workshopping the draft plan; and finalising it at the stakeholders' directions. A high degree of consensus was achieved in both of the workshops.

## **Implementation approach**

The key outcomes being sought from the introduction of the Healthcare Identifiers in primary and ambulatory care are:

- Safer, higher quality (timelier, more reliable, and better informed) communication of health information through more accurate and reliable identity matching.
- Greater productivity / reduced wastage in primary and ambulatory care practices, associated with less need for resolution of identity queries, less duplication of diagnostic and other testing, etc.

Primary and ambulatory care stakeholders have strongly advised leveraging e-health achievements to date by focussing earlier adoption activities on areas where identifiers can be electronically allocated and where the larger volumes of communications already take place (ideally sent or received electronically although computer generated forms could be a viable starting phase). Targeting these likely higher states of readiness will enable more rapid and widespread implementation with managed risk. Operational guidelines for managing transcription and identity-matching risks where identifiers are used in paper-based communications are currently being

developed by NEHTA as part of the 'Healthcare Identifiers Implementation Collateral Project'.

In practical terms, this means an early emphasis on general practice due to its high computerisation rate and existing support structures; and relatively early concentration on electronic communications between GPs and diagnostic services (pathology, radiology); medical deputising services; and targeted referrals (especially to physiotherapy, psychology and targeted medical specialties). To support the approach, the sector felt that a targeted survey of IT readiness should be undertaken. The survey would identify the subsequent rollout capabilities in some medical specialties and allied health. The inclusion of such a survey will be considered as part of the detailed implementation activities.

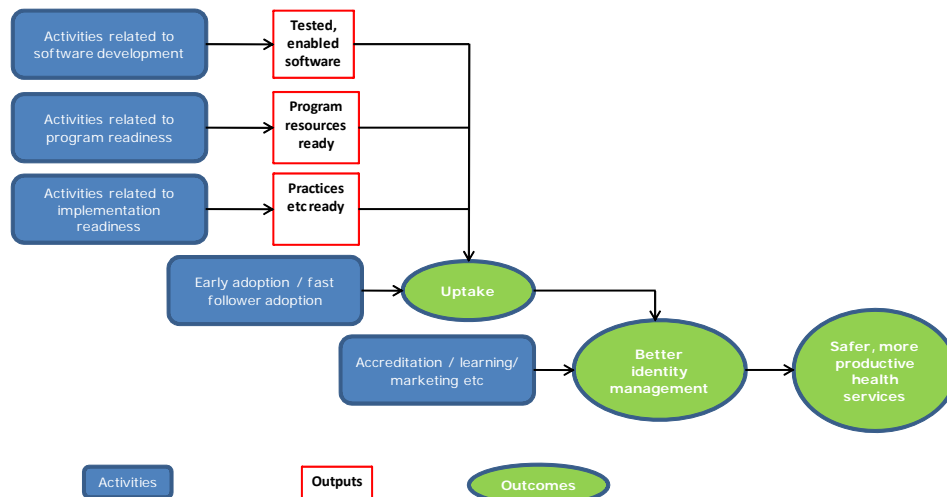
Lead sites already selected for the personally-controlled electronic health record (PCEHR) are expected to commence populating participating systems with healthcare identifiers when NEHTA processes are ready, and these are therefore part of the early adoption phase. Additional sites are also being considered, to broaden the learnings from early adoption.

There is considerable stakeholder variation in views about the accuracy of record matching and potential match rates and thereby a significant degree of uncertainty about practice level workflow and workload implications. Early adopters of Healthcare Identifiers will need to test data matching accuracy and address issues as part of the implementation process and this will yield substantially more information upon which to refine roll out planning.

As far as possible, the use of the identifiers in electronic communication should be accompanied by greater standardisation of existing messaging formats, but should not wait until the next generation of messaging formats is implemented – i.e. legacy messaging should be made more consistent where possible, but can still carry the identifiers.

### **Implementation Plan**

In summary, three parallel streams of activity are planned – a set of activities to enable the enhancement of relevant software; activities to build implementation program capacity; and another set of activities to build implementation readiness in the early adopters and subsequently the fast followers. This will produce a state of readiness for early adoption, the outputs of which will initially be uptake of the identifiers – allocation of the identifiers to the in-scope practices, providers and their patients – and better identity management within practices. As the number of identifier enabled parties grows, better identity management in communications between parties will produce safer, higher quality care. These outcomes can be reinforced and sustained by a range of policy and program measures, practice standards and accreditation, social marketing etc that further encourage the use of the identifiers. This is depicted below.



Well functioning software that enables business-to-business level access to and management of the identifiers and minimises the workflow implications for practices is essential to the success of the Healthcare Identifiers Service (HIS). “Threshold” activities critical to the enhancement of the relevant software and which require urgent action include:

- Finalisation of Medicare Australia’s Licence Agreements and delivery of NEHTA’s compliance, conformance and accreditation (CCA) scheme, a clear understanding of which will heavily influence software redesign.
- NEHTA’s ‘Healthcare Identifiers Implementation Collateral Project’ will provide guidelines on key procedural issues such as the handling of unverified identifiers – which have the potential to “pollute” the identifier system; and the allocation of identifiers as and when patients present, rather than via batching, which was strongly preferred by stakeholders on matching accuracy and workflow management grounds.
- Agreement on the levels of ongoing technical support to be provided by Medicare Australia and any transitional support to be provided to software developers.

It will be critical to the successful implementation of HIs that information, guidance and support are available at the practice level. A number of implementation support systems are currently either in place or expected to be available prior to HI take-up. It will be important to continue to review the success and suitability of these systems over the implementation cycle to ensure they are fit for purpose or to identify any additional support requirements.

The sector felt that some strong candidates existed to provide the various elements of the practice support program. Many of those strong candidate organisations have been closely involved in this sector plan and it was suggested that an Expression of Interest (EOI) process be considered to determine the potential roles of key stakeholders. As a number of organisations are currently funded to support this work, existing resources and communications channels will be leveraged to ensure that appropriate support is available.

The identification of key contact points within targeted primary and ambulatory care practices will be important. These key contact points should be the people most likely to advocate for and drive practice level change. Medicare Australia’s network of business development officers (BDOs) or DoHA’s eHealth Support Officers (eHSOs) are well placed to provide support directly to practices (BDOs) and to practices through Divisions (eHSOs).

Preparation of early adopters and fast followers is a change management process, and critical early steps include awareness-raising; clinical and practice leadership; effective communication of the vision for and direct benefits of change; and detailed education and training pertinent to use of the HIS. These activities will need to be relatively “hands on”, both to support the early adopters and to maximise feedback about the effectiveness of supporting resources. The aim should be to ensure that implementation support can be delivered in progressively less “hands on” ways as roll out accelerates and widens.

It is expected that the outcomes of the early adopter and fast follower sites will feed concurrently into both communications and education to improve both awareness and effectiveness of implementation throughout the sector. Organisations involved in communicating HI messages or delivering education and training should be informed by NEHTA of lessons learned and success stories and given direction for how to promulgate this information.

It is expected that implementation readiness activities will be provided by a number of different organisations who may be best placed to respond to particular support requirements. For example, awareness raising and information sharing that enables practice decision-makers to determine that they will implement the identifiers requires different skills from those activities that support technical implementation, and the activities that then enable practices to implement business process changes to realise benefits are of a different nature again.

Specific implementation targets (e.g. x% of practices have populated their presenting patient records with IHIs by June 2012) have not yet been declared, since field testing will better inform possible roll out profiles and many of the healthcare partners with whom primary care practices need to communicate (e.g. diagnostic services) have not yet been reviewed. Such targets should be possible in 2011.

### **Governance**

It is proposed that the critical elements of overall governance of the implementation of the HIS in primary and ambulatory care include:

- The Department of Health and Ageing (DoHA) taking the role of Project Sponsor, accepting responsibility for assurance that the implementation program is in line with strategic goals for primary and ambulatory care; and for the overall achievement of the final outcomes – safer, higher quality communication of health information within, into and from primary and ambulatory care, and practice level productivity improvements.
- DoHA also has a key role in relation to the Federal legislation, regulations and their interpretation, and would be the key agency to ensure that guidelines and communications are consistent with the regulatory framework for Healthcare Identifiers. NEHTA, as lead agency, should perform the role of Project Manager, undertaking, orchestrating and / or facilitating the activities required to ensure implementation outputs, immediate and intermediate outcomes are achieved. NEHTA’s Identification, Authentication and Access Reference Group (IAARG) is well positioned to perform as a project control group.
- A function to oversee HI Implementation across the private and public sectors is needed within NEHTA to ensure an effective forum exists for stakeholder representation and broad stakeholder ownership of plans, initiatives and results. The function will also ensure that activities are aligned with the goal of improved communications between healthcare providers and the rollout of other eHealth foundations and solutions. The function would also need to be considered closely in relation to PCEHR lead implementations as there may be merit in aligning these functions.

### **Critical success factors and risks**

Factors critical to the success of implementation in primary and ambulatory care can be expected to include:

- The ability to secure adoption of the identifiers in high volume electronic communications – i.e. in diagnostic service communications, ETP, communications with deputising services, e-referrals and hospital discharge communications.
- Commitment and involvement of all key stakeholders, including strong leadership in particular from clinicians and practice managers.
- Software enhancements that make it easy.
- Effective and responsive support, when and where it is needed.
- Relentless pursuit of the final outcomes, and willingness to “make the changes stick” via policy and program congruence and upgrading systems such as standards and accreditation.
- Strong, decisive and inclusive governance.

Accordingly, each of these factors should be regularly monitored.

Major risks to the implementation of the identifiers in primary and ambulatory care include:

- Patient and provider indifference or antipathy – i.e. the risk that practices will not implement the identifiers even if well informed, for example because they see the benefits as being sound in concept but not relevant enough to them specifically, because they are not willing to bear any associated risks or because they fear work flow slowdowns.

Mitigation strategies that could be considered include peer leadership, well targeted communication, positive feedback and financial assistance.

- Governance “disconnections” – i.e. the risks that key messages are not supported by visible actions, efforts in one domain are conflicted by visible actions in another, or supporting actions are framed to meet multiple needs and do not in fact support implementation particularly well.

Mitigation strategies include inclusive governance structures, transparent governance mechanisms and strong leadership empowered to raise perceived issues.

- Resource shortages – i.e. the risk that the overall resources available are not sufficient for smooth implementation. For example, it will take time to build effective practice support capability – it cannot simply be switched on.

Mitigation strategies include an early start to implementation capacity building to ensure it is ready for the fast follower stage, and consideration of multi-pronged strategies to access available expertise.

- Risk of disconnection with the 3 lead PCEHR sites, to the extent that they may fall under different governance arrangements and to different time frames, etc.

Mitigation strategies include effective project dependency and liaison arrangements.

## 2 Introduction

The National E-Health Transition Authority Ltd (NEHTA) has been established to support the national agenda for e-health by leading the uptake of e-health systems of national significance; and to coordinate the progression and accelerate the adoption of e-health by delivering urgently needed integration infrastructure and standards for health information.

NEHTA, in collaboration with sector leaders, will seek to drive the adoption of a range of new healthcare capabilities. These capabilities will improve how people, processes and technology can work together to achieve a range of desired outcomes. These capabilities include:

- Foundations: Individual Healthcare Identifiers, Healthcare Provider Identifiers for Individuals, Healthcare Provider Identifiers for Organisations, Authentication, Secure Messaging, Clinical Terminologies and Supply Chain.
- E-Health Solutions, including Pathology, Diagnostic Imaging, Medication Management, Referral and Discharge Summary.

The development of these capabilities supports the first planning horizon of the national strategy for e-health, and their successful implementation will significantly enhance Australia's healthcare as consumers and providers will be able to access the right information at the right time and place.

### 2.1 Healthcare Identifier Services and Implementation Plans

One of the foundations for a national approach to e-health is a standard process across the health sector to consistently identify all parties involved in a healthcare event. This includes the person receiving healthcare, the person providing healthcare, and the service where the care is given.

On 1 July 2010, the Healthcare Identifiers (HI) Service commenced operations with three different types of identifiers:

- Individual Healthcare Identifier (IHI)—for individuals receiving healthcare services.
- Healthcare Provider Identifier—Individual (HPI-I)—for healthcare providers and other health personnel involved in providing patient care.
- Healthcare Provider Identifier—Organisation (HPI-O)—for organisations that deliver healthcare (such as hospitals or medical practices).

NEHTA has developed an HI Service Implementation Approach [NEHTA 2010-1] that describes the context and background for the Healthcare Identifiers Service and establishes principles for the development of detailed Implementation Plans. These principles include:

- While NEHTA will facilitate their development, these Implementation Plans should have broad sectoral support.
- Strategic projects will be used to move toward the "tipping point" where most healthcare communications include identifiers.
- Indicators of successful adoption will include:
  - Substantial take-up of the Healthcare Identifiers Service.
  - Vendor adoption of standards as the cornerstone of future development.
  - Wide acceptance of the safety and quality benefits.

- Consumer awareness and support.
- Healthcare providers registering for and using Healthcare Identifiers in their records systems and communications.
- Change management will include communication and awareness raising, implementation support, change champions, and standards and accreditation.
- Vendors are integral to the implementation of the Healthcare Identifiers Service.
- Implementation pathways will involve early adopter, fast followers and national rollouts.
- A compliance and conformity assessment scheme will be established.
- Mechanisms will be developed to measure whether the anticipated benefits are being realised.

Proposed Implementation Plans are being developed for primary and ambulatory care, diagnostic services, aged care, private hospitals, pharmacies (to be confirmed) and State and Territory jurisdictions. The processes of development of these plans may also highlight additional areas where targeted exploration and planning is required. These proposed sub-domain plans will then be iterated and integrated into a coherent and comprehensive overall Implementation Plan.

## **2.2 Purpose of document and target audience**

This document is a Proposed Implementation Plan for the Healthcare Identifiers Service in Primary and Ambulatory Care. It has been developed following consultation with nominated representatives from the primary and ambulatory care sector. It will serve as input to the overall Implementation Plan being prepared by NEHTA.

Accordingly, the target audiences for this document are:

- Primary and ambulatory care stakeholders with an interest in the implementation of Healthcare Identifiers.
- NEHTA staff and agents engaged in developing other components of the overall Implementation Plan.

## **2.3 Process of development**

A range of stakeholder organisations have been consulted either individually or as workshop participants:

- Allied Health Professions Australia (AHPA).
- Australian Association of Practice Managers (AAPM).
- Australian College of Rural and Remote Medicine (ACRRM).
- Australian General Practice Accreditation Ltd (AGPAL).
- Australian General Practice Network (AGPN).
- Australian Medical Association (AMA).
- Australian Physiotherapy Association (APA).
- Australian Practice Nurses Association (APNA).
- Australian Psychological Society (APS).
- Best Practice Software Pty Ltd.
- Department of Health and Ageing (DoHA).
- General Practice Queensland.

- Genie Solutions Pty Ltd.
- GP Accreditation (GPA).
- GP Association Geelong.
- GP Partners Brisbane.
- Improvement Foundation Australia (IFA).
- iSOFT Group Ltd;
- Medical Software Industry Association (MSIA).
- Medicare Australia.
- MedTech Global Ltd.
- NEHTA Healthcare Identifiers Project.
- Royal Australian College of General Practice (RACGP).
- Royal Australasian College of Physicians (RACP).
- Rural Doctors Association Australia (RDAA).
- MedTech Global Ltd.
- Zedmed Pty Ltd.

An Issues Paper [NEHTA 2010-2] was developed on the basis of consultations, and was discussed at a workshop of key stakeholders on 31 August 2010. Stakeholder consideration of and direction setting about the major issues served as a basis for development of a Draft Plan, which was reviewed by nominated stakeholders at a second workshop on 22 September 2010. This Proposed Implementation Plan has been consolidated following consideration of stakeholder feedback on the Draft Plan.

## 2.4 Related documents

Important contextual documents relating to the Healthcare Identifiers include the:

- Healthcare Identifiers Service Implementation Approach [NEHTA 2010-1].
- Implementation of Healthcare Identifiers in Primary and Ambulatory Care, Issues Paper [NEHTA 2010-2].
- NEHTA Blueprint [NEHTA 2010-3].
- HI Service Concept of Operations [NEHTA 2010-4].
- Individual Healthcare Identifiers, Business Requirements [NEHTA 2010- 5].
- Healthcare Provider Identifiers, Business Requirements [NEHTA 2010- 6].
- National Partnership Agreement on E-Health [COAG 2009 -12]
- *Healthcare Identifiers Act 2010* and *Healthcare Identifiers Regulations 2010*.
- National E-Health Strategy [AHMC 2008 – 12].
- *A National Health and Hospitals Network for Australia's Future: Delivering the Reforms* [2010].

It is expected that the final (overall) Implementation Plan for Healthcare Identifier Services will comprise a consolidation of the Healthcare Identifiers Service Implementation Approach, the NEHTA Blueprint and all of the sub-domain plans.

### 3 Scope

For the purposes of this document, primary and ambulatory care is taken to mean general practice, non-hospital medical specialist services and non-hospital allied health. Specific specialities and primary care programs have not been canvassed in detail, and some of these – especially those that transcend the primary and other care sectors, may yet require closer investigation in subsequent phases of roll out of the identifiers.

This Proposed Implementation Plan is consistent with the principles and directions expounded in the Implementation Approach. Its timeframe is the next 18 months , until mid 2012.

Stakeholder engagement has been targeted through nominated representatives across the sector (as defined above). Wider engagement is expected to follow via the processes of iterating and integrating the sub-domain plans into a coherent whole.

## 4 Implementation approach

The proposed implementation approach is to leverage e-health achievements to date by focussing earlier adoption activities on areas where the larger volumes of communications already take place (ideally sent or received electronically although computer generated forms could be a viable starting phase). Targeting these likely higher states of readiness will enable more rapid and widespread implementation with managed risk. Where identifiers are used in paper-based communications, NEHTA's 'Healthcare Identifiers Implementation Collateral Project' will provide guidelines for managing transcription and identity matching risks.

More complete national rollout, however, including those primary and ambulatory care organisations that are not currently computerised, is likely to require significant time and effort.

### 4.1 Penetration of clinical computing and electronic communication in primary and ambulatory care

General practice in Australia is highly computerised. The survey of General Practice Activity in Australia during 2008-09 [AIHW 2009] indicated that:

- Only 5.3% of GPs did not use a computer at all for clinical purposes.
- Computers were used mainly for prescribing, receiving pathology results electronically and for internet use.
- 77.0% of GPs were producing prescriptions electronically.
- 73% were receiving pathology results on line, and three in five were producing and printing pathology orders via their clinical software.
- 22% were ordering pathology electronically.
- More than half (54%) had electronic medical records exclusively (i.e. were paperless).
- Over one-third (34%) reported maintaining a hybrid record where some patient information is kept electronically and some on paper records (for the same patients).

A national survey of the prevalence of electronic clinical record usage in Australian private physiotherapy practice, undertaken in 2009 [APA 2009], found that 32% of respondents used electronic clinical records in their practices, either exclusively or in conjunction with paper records. A considerably higher proportion, however, used computers for non-clinical purposes.

However, comparable data does not appear to be available for other primary and ambulatory care providers. Anecdotally, stakeholders consulted tended to consider that up to one third of specialists may use clinical systems in their private practices, and more may use practice management software. The experience of one Division of General Practice with e-referral has been that the majority of specialists in its catchment area were able to send and receive e-referrals, even if they only used practice management systems. However, it is not known whether this experience would translate to other areas. Some stakeholders considered that physicians, paediatricians and surgeons are more likely to be computerised than other specialties.

Stakeholders tended to consider that, physiotherapy aside, allied health is likely to be significantly less computerised.

Lack of objective data on the penetration of computing (clinical and non-clinical) is not only a significant inhibitor to detailed planning for the rollout of Healthcare Identifiers, but is similarly likely to impede progress with other e-

health foundations and solutions. While there is substantial information available concerning computer use in hospitals, general practice, diagnostics and pharmacy – either because of existing data collections or because the number of providers is relatively small – it would be noted that DOHA will be surveying selected specialities and allied health practices to generate at least some baseline data. This will not only feed e-health planning activities, but also contribute to the generation of baselines against which to evaluate e-health success. Without pre-empting survey development, pertinent areas of focus should include:

- Whether the practice uses either clinical systems or practice management, the former either exclusively or in conjunction with paper records.
- The proportion of healthcare providers in the practice who use these systems.
- The major uses.
- Reasons for / barriers to use.

These surveys of readiness for e-health should be designed so as to provide data coherence across the primary and ambulatory care sector. Stakeholders maintain that the major electronic data flows involving primary and ambulatory care providers are currently:

- Pathology and radiology results sent from diagnostic services to GPs and, to a lesser extent, specialists.
- Prescriptions, sent from GPs (and to a lesser extent specialists) to community pharmacies via e-prescribing intermediaries.
- Referrals and reports. The survey of General Practice Activity in Australia during 2008-09 indicates that nearly two thirds of referrals (not necessarily electronic) from GPs were to specialists with nearly 30% to allied health services. Relatively few patients were referred to hospitals, hospital emergency departments or other medical services (including outpatient departments). The largest professional destinations for referrals were physiotherapists, surgeons, psychologists and dermatologists.
- Reports from medical deputising services and call centres to GPs.

## **4.2 Perceived benefits of Healthcare Identifiers to primary and ambulatory care**

Stakeholders tended to agree that there are substantial benefits that can be delivered to the primary and ambulatory care sector through the implementation of Healthcare Identifiers, but that there are significant challenges in “personalising” or localising these – i.e. demonstrating that they will provide substantial enough benefits at the level of individual practices and providers to prompt action.

The major benefits were seen to be associated with improved safety (reduced risk) through better identification during clinical handover; and improved efficiency and productivity associated with enhanced identity management and greater access to clinical information.

While mis-identification rates in clinical communications may sound relatively small at face value, they translate to substantial clinical risks and considerable wastage of scarce resources when applied to the large numbers of transactions made<sup>1</sup>. For example:

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<sup>1</sup> Sayer, G., *Numbers, statistics and probability: the role of chance and Healthcare identifiers*, PulseIT, Issue 18, July 2010.

- Mis-identification is estimated to occur in at least 0.3 percent of the 40 million GP pathology requests annually – i.e. in at least 120,000 GP pathology requests annually.
- Mis-identification is estimated to occur in at least 0.2 percent of the 200 million GP medications dispensed as a result of GP prescribing annually – i.e. in at least 400,000 medications dispensed annually.
- Mis-identification is estimated to occur in at least 1 percent of the 7.5 million potential communications associated with public and private hospital discharges annually – i.e. in at least 112,500 discharge communications annually.

The Australian Commission on Safety and Quality in Healthcare (ACSQHC) recently released a discussion paper on Patient Safety in Primary Health Care [ACSQHC 2010]. Salient points from this paper include:

- Australia has been one of the pioneers of incident reporting in general practice, and the Threats to Australian Patient Safety (TAPS) study is one of the most comprehensive analyses of patient safety incidents internationally.
- TAPS and other studies have identified that incidents associated with the processes of care, including administration, investigation, treatment, communication and payment processes are the most common types of incidents reported (ranging from 70%-90% depending on the study).
- Data from the TAPS study indicates that around 5% of these process-of-care errors explicitly concern patient identification. Another 31% are concerned with the transfer of reports and referrals and filing patient records – and could also possibly involve mis-identification. See Attachment B.
- Of the few studies that have examined factors contributing to the occurrence of medication errors, deficiencies in communication was the most common contributing factor. Of particular importance was communication between health professionals and patients, between GPs and pharmacists and at the transfer of care.

In addition, the ACSQHC has released a preliminary set of National Safety and Quality Healthcare Service Standards [ACSQHC 2010-2]. These draft standards, which primary care organisations will be encouraged to adopt as part of their internal quality assurance mechanisms, include patient identification and transfer of care.

The Patient Identification Standard (Draft National Safety and Quality Health Service Standard 5) is:

Clinical leaders and senior managers of a Health Service Organisation establish systems to ensure patient identification and matching patient identification with the intended clinical interventions. Clinicians and other staff use the patient identification and procedure matching systems.

Criteria for the Patient Identification Standard are:

- A. Identifying individual patients - At least three approved patient identifiers are used when providing care, therapy or services.
- B. Transfer of care - A patient's identity is confirmed using three approved patient identifiers when transferring responsibility for care.
- C. Matching patients and their care - Health Service Organisations have explicit processes to correctly match patients with their intended care.
- D. Assessing risks of mismatching patients and their care - Health Service Organisations implement risk assessment mechanisms for patient matching.

It is noteworthy that the ACSQHC Draft Standards dated August 2010 state:

“Australia does not yet have a universal, unique identifier for individuals accessing the healthcare system.” (ACSQHC 2010-2, page 57).

The revised 4<sup>th</sup> edition RACGP standards [RACGP 2010] emphasise that correct identification of patients is crucial to ensure the right patient receives the right treatment, and include a new section on patient identification (section 3.1.4).

It is recommended that NEHTA and relevant professional associations advocate for the adoption of more specific standards for patient identification and record matching, including but not limited to use of the IHI – see also section 6.3.9 below.

On the basis of the above, two of the headline messages supporting implementation of the Healthcare Identifiers should be that:

- There are significant patient safety and quality improvements that can be made both in individual primary care practices and for the health system as a whole through better identification during transfers of care.
- There are significant opportunities to reduce risk / wastage / improve productivity in primary care practices by reducing the need for resolution of patient identity queries.

Most healthcare provider stakeholders consulted strongly perceived the Healthcare Identifiers as a means to an end - a “key” to unlocking other health data. There may also be benefits, therefore, in ensuring that the use of the Healthcare Identifiers is coupled with other e-health initiatives such as e-referrals, discharge summaries, service directories and personally controlled electronic health records.

### 4.3 Other issues

The implementation plan outlined below has been developed on the basis of stakeholder responses to perceived challenges. Other challenges cited by stakeholders include:

- **Awareness** – there seems little widespread awareness of the identifiers amongst primary care practitioners and the community.
- **Scope of the identifiers** – a range of “allied health” professionals are not registered but may still perform services recognised by health insurers or with other sectoral affiliations. The HI Act enables non-registered professionals who met certain criteria to obtain an HPI-I.
- **Uptake targets** – while stakeholders tended to agree that the objective should be high rates of uptake in targeted areas within a relatively short time frame, there remains a need to proceed with caution and improve via iteration.
- **Data quality and record matching** – the quality of both the Medicare and primary care practice identifying data is unknown and may require significant work to improve.
- **Unverified identifiers** – there is scope for unverified (interim) identifiers to be allocated, but excessive and inappropriate use of this option has the potential to rapidly deteriorate the quality of the identifiers service.
- **Manual transcription** – there is some debate amongst stakeholders as to whether the identifiers should be printed on clinical and other documentation, or kept in the background. NEHTA’s Clinical Safety Team has assessed the clinical risk associated with mis-transcription of health identifiers displayed on printed material as low, providing that sound operational controls contained within the ‘Healthcare Identifiers

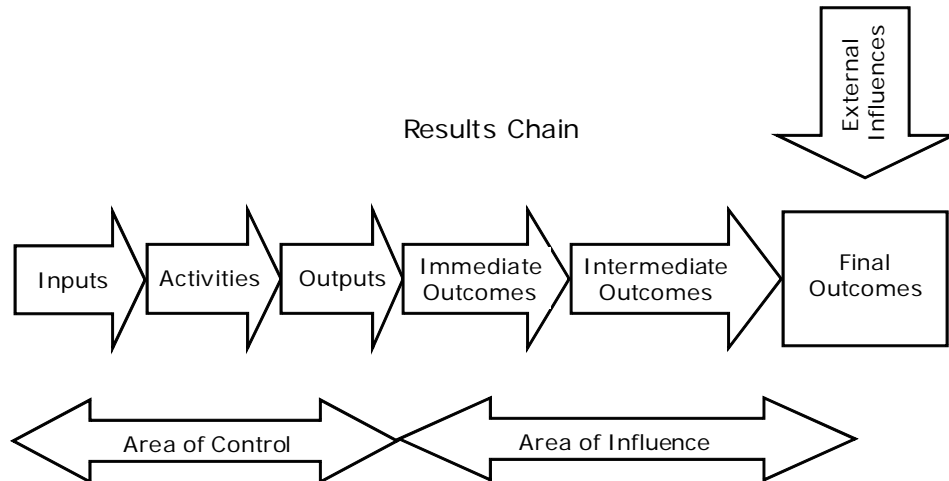
Implementation Collateral Project' are in place for identity checking within practices – e.g. use of multiple identifiers.

- **Means of upload of the IHIs** – this could be on a case by case basis (for example, at patient presentation) or via batch uploads. Most stakeholders consulted have tended to strongly support the case by case method for this sector.
- **Practice level support** – support will be required to facilitate uptake.
- **Multiple identifiers** - the need for multiple identifiers is seen by some to reduce the value proposition for the national identifiers.
- **Standards and accreditation** - practice standards and accreditation could form an important incentive for uptake of the identifiers, but not many are fully accredited.
- **Financial Assistance** – what costs may be incurred and how adoption can be encouraged.
- **Governance** - what the transitional and ongoing governance arrangements will be.

## 5 Implementation results chain

The implementation plan below is organised according to a simple results chain model, depicted below.

**Figure 1 – Results chain model**



This Proposed Implementation Plan emphasises those areas that can be controlled – inputs, activities and outputs – and these will largely be the areas emphasised over the timescale for this plan – until mid 2012. Beyond then, the emphasis switches to influencing the achievement of improved health system outcomes.

### 5.1 Outcomes sought

It is proposed that the final outcomes sought from the introduction of the Healthcare Identifiers in primary and ambulatory care are:

- Safer, higher quality (timelier, more reliable, and better informed) transfers of care within, into and from primary and ambulatory care settings through more accurate and reliable identity matching.
- Greater productivity / reduced wastage in primary and ambulatory care practices (associated with less need for resolution of identity queries, less duplication of diagnostic and other testing, etc).

Achievement of these outcomes will be in part dependent on a range of external influences including the delivery of other e-health foundations and solutions (e.g. security and access framework; more standardised secure messaging; service directories, etc) and other policy and program congruence.

## 6 Implementation plan

A range of activities will be required over the next 18 months in order to catalyse the delivery of the outcomes required. Including the categorisations used in the HI Service Implementation Approach [NEHTA 2010-1], these comprise:

- Undertaking further business analysis and system development.
- Provision of support for software vendors.
- Developing and providing change management.
- Focussing on high value areas.
- Orchestrating with related projects and initiatives.
- Establishing overall governance for the delivery of the desired outcomes.

(Proposed responsibilities for these activities are bracketed)

### 6.1 Business analysis and system development

NEHTA and Medicare Australia are still undertaking a range of activities to bring the Healthcare Identifiers Service (HIS) to full availability. These include some activities critical to implementation:

- **Completing and making available the next release of the specifications.** These specifications are expected to be ready in early 2011.

While the early 2011 release specifications are for ancillary functions and software developers could implement the business-to-business interfaces now, some may prefer to wait until they perceive the specifications to be stable.

Accordingly, the processes of finalising and quality assuring the HIS specifications will need to proceed as rapidly as possible.

(Responsibility – NEHTA/Medicare Australia)

- **The development and availability of testing facilities and conformance assessment services.** While Medicare Australia has established processes for testing that software can communicate appropriately with the HIS through the issuing of a Notice of Integration, NEHTA is still developing its more comprehensive software conformance assessment and certification scheme. This is crucial since much of the value of the identifiers is in ensuring that healthcare communications are correctly matched – i.e. that communications incorporating the identifiers are conformant, not just that the identifiers can be accessed. Current indications are that this more comprehensive CCA scheme will be available in early 2011.

In reality, detailed understanding of the requirements to achieve conformance are a critical input to software development processes. Vendors are unlikely to risk investment in substantial development and preliminary testing until they have sufficient clarity of requirements, including those associated with conformance and accreditation. Accordingly, rapid or accelerated delivery of this scheme is likely to be on or close to the critical path for software development.

(Responsibility – NEHTA)

A range of additional activities are also required, however. These include:

- **Field testing of the quality and reliability of record matching in primary and ambulatory care.**

There is little objective and substantiated information available - and substantial divergence in stakeholders' views - about the precision with which identifying data held by Medicare will match that held in primary care practices. Some stakeholders have suggested that, because of the current requirements associated with online claiming, the rate of matching of primary care records with IHIs will be high. Others have suggested that data deficiencies experienced with Medicare as well as practices are likely to require query resolution to be taken off-line, otherwise risking waiting room delays and disruption. While there are a range of possible scenarios associated with query resolution, the reality is that there is currently no objective basis upon which to advise implementers. It is believed that, as a consequence, implementers in the primary and ambulatory care sector will, at the commencement of HI implementation, prefer to integrate HIs on a case-by-case basis rather than using batch downloads.

This uncertainty also makes it difficult to ascertain the pace with which adoption of the identifiers should be pursued.

The Northwest Tasmania eHealth Information Exchange Project, funded by DoHA and managed by the University of Tasmania Rural Clinical School, is expected to integrate Healthcare Identifiers into patient records in mid-2011. The accuracy of data and issues encountered in data matching will be addressed as part of this process and the lessons learned used to inform other implementations.

Lead sites already selected for the PCEHR are expected to commence populating participating systems with healthcare identifiers in early/mid 2011 with the outcomes in relation to data matching available to inform other HI implementations.

There are other elements required to demonstrate that matching is reliable and of high quality which are also be expected to considered in PCEHR lead implementations including:

- Software performance testing – the software not only needs to be assessed to match correctly, it also needs to meet user response times, etc.
- Workflow testing – the use of software in practice to match records, in a sample of live but controlled settings, would be advantageous before proceeding to early adoptions.

Following the implementation of the PCEHR lead sites, if required, further investigation of data matching issues could be considered e.g. a field study.

(Responsibility – NEHTA/Medicare Australia/DoHA)

- **Base-lining the penetration and use of computing in primary care.** There are widely divergent views concerning the spread of clinical and practice management systems amongst specialists and allied health practices. Even within general practice, where data from the BEACH<sup>2</sup> surveys are available, factors such as the extent to which practices remain online throughout patient hours<sup>3</sup> – and therefore the extent to which batch matching or store and forward methods versus real-time querying may be advantageous – are not known. Rather than making assumptions or basing roll-out plans on anecdotal evidence, more information about the state of maturity and usage of computing in primary care, particularly in relation to specialists and allied health

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<sup>2</sup> Bettering the Evaluation of Care and Health.

<sup>3</sup> Stakeholder feedback suggests that some practices limit their exposure to the internet as a component of their information security management.

providers, would be beneficial. It is noted that DoHA is commencing this survey.

This base-lining could also provide information important to the subsequent evaluation of the HIS. A base-lining survey would most likely involve:

- Designing the survey in detail. Nominated stakeholders agreed that the survey should target those areas of high volume interchange between GPs and Allied Health providers.
- Acquiring suitable resources to undertake the study.
- Developing the survey – questionnaire design, development and testing; sample design and generation; training; the development of supporting resources; promotion, piloting and quality assurance.
- Undertaking the survey, compiling and analysing the results.
- Determining the implications for roll-out of the HIS.

The primary and ambulatory care sector accounts for the vast majority of health service delivery. However, it is clear that there are substantial knowledge gaps data about the sector's capacity to implement identifiers and other e-health applications.

The survey of specialists and allied health is being conducted as a priority in order to ensure that the results are obtained within the timeframes required to inform implementation planning. DoHA, in its role as Project Sponsor, will support and progress this work.

(Responsibility – DoHA to lead with support from NEHTA)

- **Streamlining identity related software applications.** It is understood that GPs wanting to both check a patient's Medicare eligibility status and access their IHI will need to access two different applications – ECLIPSE and the HIS. Since this may be perceived as "user unfriendly", the feasibility of integrating *any* Medicare applications that involve identity checking should be assessed.

(Responsibility – Medicare Australia, NEHTA)

- **Resolution of key procedural issues.** Stakeholders consider that:
  - The conditions under which unverified or interim identifiers can or should be created requires clear operational controls and guidance, as there is significant risk of over proliferation of identifiers. Further investigation is required by NEHTA to develop the appropriate controls, but both software-based constraints and education and training are likely to be required.
  - NEHTA's 'Healthcare Identifiers Implementation Collateral Project' is developing guidelines that will cover situations where identifiers require manual transcription, to address the clinical risk issues highlighted in section 4.3 above – i.e. so that the risk of mis-transcription is mitigated.

Issues such as this will require both further examination and negotiation amongst key stakeholders.

(Responsibility – NEHTA, DoHA, Jurisdictions)

- **Scenario analysis and contingency planning.** The timeframes for implementation of the Healthcare Identifiers, especially as influenced by aggressive timeframes associated with PCEHRs, are likely to be tight. The sensitivity of tight timeframes to various risks and dependencies requires careful analysis and the creation of contingency arrangements. Some major risks are identified in section 8 below and mitigation strategies highlighted, but "worst case" analysis should be undertaken

after each of the sub-domain plans have been completed. Analysis of external impacts such as those associated with NASH services should also be undertaken with input from key stakeholders.

(Responsibility – NEHTA)

## 6.2 Software vendors

As indicated in the Implementation Approach [NEHTA 2010-1], developers / vendors of primary care software are integral to the implementation of Healthcare Identifiers. Stakeholders strongly agree that primary and ambulatory care practices are extremely unlikely to adopt any of the identifiers unless their computer systems access the HIS on a business-to-business basis.

Core elements of support for vendors include the following.

- The most immediate issue facing software vendors is the **Medicare Australia Developer Agreement** – vendors are required to sign this Agreement before entering into a business-to-business relationship with Medicare. Concerns have been raised by software vendors and the MSIA about the level of risk to them under this Agreement and have indicated that, as it currently stands, they might not be willing to enter into the Agreement.

Resolution of these issues will be undertaken by Medicare Australia.

(Responsibility – Medicare Australia, Vendor representative organisations)

- Targeted **technical support to software developers / vendors during their product enhancements** would be beneficial, to ensure that they consistently interpret specifications and conformance requirements. This is likely to range from:
  - Access to technical advice on a one to one basis and / or in the form of a developer’s workshop or workshops.
  - Rapid publication of supporting documentation based on feedback from developers about the questions they have had, issues they have identified, etc.

(Responsibility – NEHTA/Medicare Australia)

- The provision of **ongoing technical support**. The HI Service Concept of Operations [NEHTA 2010-4] notes that:

An Online Technical Support desk for implementers (software vendors etc) which manages the test environment and provides software support documentation ... will be available within business hours on all business days (NEHTA 201-4, pages 39 and 42).

However, vendors have noted that the Healthcare Identifiers will be supporting clinical practice – a 24 X 7 X 365 business – and that improved patient safety is one of the key aims. Accordingly, rapid response to technical issues will be required irrespective of Medicare’s customary operating hours.

In reality, however, the extent of need for technical support is as yet unknown.

NEHTA and Medicare Australia have yet to finalise operational support arrangements, but it is proposed that these negotiations be informed in part by close consultation with vendors to ensure that their support requirements are addressed, and that sufficient flexibility is built in to allow for the scaling up or down of operational support as required.

(Responsibility – NEHTA/Medicare Australia)

- Ongoing **access to authoritative, consistent and comprehensive information resources** concerning the identifiers, their benefits, usage, limitations, conditions of usage, etc.

As part of the supply chain to Healthcare Identifiers, vendors will need to either provide or serve as a conduit to answers to questions that their users will inevitably ask about the HIS. It will be critical to the success of the identifier services that information made available through all potential channels is accurate, comprehensive and consistent. Accordingly, the more that stakeholders, including vendors, can link to or otherwise access existing resources rather than developing their own, the better.

(Responsibility – NEHTA)

- **HL7 standards** commonly used in the Australian healthcare industry do not currently cater for the inclusion of national Healthcare Identifiers in consistent ways, and will need to be updated. The opportunity should be taken, where possible, to introduce greater standardisation of healthcare messaging. However, there is no need to wait until the implementation of a next generation of messaging formats before transporting the identifiers.

(Responsibility – NEHTA, Standards Australia / HL7 Australia)

- **Recognition of the business realities** faced by software developers. These include:
  - Costs incurred to enhance their products and undertake the requisite testing, etc.
  - Costs incurred in providing support for their users, since they tend to be the first point of call – for example, some vendors estimate that support for Medicare Online accounts for about 10% of all of their support costs.
  - 70-80% of the total cost of supply of software products is in ongoing support, maintenance and testing.
  - Little or no expressed demand from their customers for access to the Healthcare Identifier Services, but long lists of competing development priorities.
  - Limited perceived revenue streams to offset the costs of development and support.
  - Lack of flow on from GPs of incentive funds paid for IT capabilities.
  - Development cycles that are in part determined by customers needs and necessary to assure quality, but which can introduce some response limitations – e.g. if a specification change misses the cycle.

The primary care vendors consulted are strongly supportive of national healthcare identifiers and other e-health foundations. Vendors noted that successful implementations of comparable applications over recent years (e.g. Medicare Online, electronic prescribing) have included:

- Modest funding support to encourage more rapid development.
- Transition support funding – i.e. recognition of and contribution towards the operational support loads carried by the vendors.

Stakeholders have tended to argue that output and outcome based financial assistance (i.e. encouraging the use of identifiers rather than just the existence of capability) would be effective, but that future programs should consider providing support to all of those who are

expected to invest in sustainable change. It is noted that the recent eHealth site RFP for Vendors has commenced addressing some of these issues.

(Responsibility – NEHTA/DoHA)

Financial assistance is highlighted further in section 6.3.6 below.

- **Stability** – the need for a clear roadmap for future developments, limitations on scope creep and reliable availability timeframes, so that vendor investments can be predicted and understood. This includes clear timeframes for the delivery of other sub-domain plans for health identifiers, other relevant e-health foundations and the broader e-health agenda.

(Responsibility – NEHTA)

## 6.3 Change management

NEHTA's Implementation Approach [NEHTA 2010-1] describes the need to learn from international experience and emphasise change management.

### 6.3.1 Change management models

The European Union's Study on Economic Impact of e-Health lists six factors as critical to the success of e-health projects [Stroetmann 2006]:

- Commitment and involvement of all stakeholders. All phases of development, implementation and deployment have to be supported by citizens / patients, health providers, industry, authorities, and third party payers.
- Strong health policy and clinical leadership that guides a flexible and regularly reviewed strategy. The strategy should be directed by a long term view but it must address concrete needs of actors in the system. The strategy should include achievable, shorter term goals that create an investment dynamic. A big-bang approach with ambitious goals to be achieved over a short period of time is not recommended.
- Regular assessment of costs, incentives and benefits for all stakeholders. Considering purely financial return on investment at an institutional level, or potential benefits for only one of the stakeholders, may lead to suboptimal decisions.
- Organisational changes in clinical and working practices. This is indispensable in order to optimise demand for and use of ICT-enabled solutions and to realise benefits. Such changes should be facilitated by greater legal certainty in using e-health solutions.
- Strong clinical leadership, good organisational change management, multi-disciplinary teams with a well-grounded experience in ICT and clear incentives. The combination of skills of the people involved will make the difference between success and failure, not the specific solution.
- Long term perspective, endurance and patience. "Beneficial e-health investment ... takes a considerable amount of time to mature and develop its potential fully".

Protti, in reviewing a wide range of international health IT projects, cites similar factors:

- Leadership – organizational, clinical, political and technical; embracing vision, desire and courage; commitment to process improvement and quality; commitment to resourcing; and appropriate priority setting.
- Clinician Involvement - commitment to change at the "coal face".

- Reliable, rapid, and secure infrastructure – including effective human-computer interfaces.
- Commitment to privacy and confidentiality.
- Commitment to standards.
- Strong project management.
- Performance measurement and transparency, including development of a comparative culture and feedback.
- Appreciation for increasing patient involvement.
- A single unifying organization to lead and support e-health initiatives.

These factors are distilled from a wide variety of major projects. In addition, there are an array of change management models and frameworks available to guide the development of specific plans. For example, Kotter's eight step change model<sup>4</sup> can be summarised as:

- **Increase urgency** - inspire people to move; make objectives real and relevant.
- **Build the guiding team** - get the right people in place with the right commitment and capabilities.
- **Get the vision right** - establish a simple vision and strategy; focus on those aspects necessary to drive service and efficiency.
- **Communicate for buy-in** - Involve as many people as possible; communicate the essentials simply, in ways that appeal and respond to people's needs.
- **Empower action** - Remove obstacles; enable constructive feedback and support from leaders; reward and recognise progress and achievements.
- **Create short-term wins** - Set aims that are easy to achieve in bite-size chunks.
- **Don't let up** - Foster and encourage determination and persistence and ongoing change; encourage ongoing progress reporting and highlight achieved and future milestones.
- **Make change stick** - Reinforce the value of successful change; weave change into culture.

Kotter's eight steps are used below as a framework for change management, and the lessons learned above are taken into account.

### 6.3.2 Increasing urgency

Stakeholders consulted strongly agree that there is currently no widespread awareness of the Healthcare Identifiers, let alone a sense of urgency for their implementation. On the other hand, creation of a sense of urgency carries some risk if not able to be supported by the ability to deliver.

Proposed strategies via which the urgency to implement the Healthcare Identifiers should be increased include:

- **Awareness raising.** The proposed *immediate* messages are as outlined in section 5.1 above – i.e.
  - Patient safety:

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<sup>4</sup> Sourced from <http://www.kotterinternational.com/KotterPrinciples/ChangeSteps.aspx>.

- Safer, higher quality transfers of care are needed within, into and from primary and ambulatory care settings.
- An important means to improve this aspect of patient safety is now available. It has been developed in close collaboration with clinicians. It is recognised as good practice internationally. It will operate “behind the scenes” in clinical or practice management software.
- Not using the identifiers where they are readily available (i.e. where the practice is computerised) constitutes unacceptable risk.
- Greater productivity:
  - Practices can simultaneously reduce wastage – there will be less need for resolution of identity queries, less duplication of diagnostic and other testing, etc.

These messages need to come strongly through peer networks, professional colleges and associations, practice and program support networks, the ACSQHC and other recognised safety and quality leaders. The collateral used must be simple and highly consistent, but needs to be tailored to the issues, language, levers etc recognised by each of many target audiences – GPs, specialists, allied health providers, practice nurses, practice managers, rural and remote health service providers, health program managers, etc. Accordingly, the groups that represent these target audiences need to be involved in the fine tuning of common collateral and encouraged to use their communication channels.

The identification of key contact points within targeted primary and ambulatory care practices will be important. These key contact points should be the people most likely to advocate for and drive practice level change. Medicare Australia’s network of business development officers may be of assistance in identifying these key contact points, as may DoHA’s eHealth Support Officers. eHealth Support Officers may also have a role in the development of messages as they have a unique understanding of message delivery techniques and content that results in effective engagement.

These key messages also need to be conveyed to consumers, to further raise their healthcare expectations. Organisations such as the Consumers Health Forum, Cancer Voices etc should similarly be consulted to fine tune the messages for their constituencies and advise on the most appropriate communication channels. However, it is proposed that strong linkages be made with the Australian Charter of Healthcare Rights<sup>5</sup> [ACSQHC 2008].

Additional, reinforcing messages which would be helpful but which are as yet dependent on policy development processes - see proposals at sections 6.3.6 and 6.3.9 below - include:

- Financial assistance may be considered to support the use of identifiers in transfers of care.
- Use of the national Healthcare Identifiers is expected to become a specific requirement of professional and practice standards and a requirement for health service accreditation

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<sup>5</sup> Australian Health Ministers endorsed the Australian Charter of Healthcare Rights and recommended its use nationwide on 22 July 2008. Under the heading of Safety, the Charter declares that patients “have a right to receive safe and high quality care”.

- Use of the national Healthcare Identifiers is likely, over time, to become a mainstream requirement for health program funding, including via health insurance, workers compensation etc. schemes.

(Responsibility – NEHTA to lead; professional colleges / associations to assist in tailoring and targeting)

- **Continuing visible clinical and practice level leadership.** A wide range of clinical / health professional leaders should (continue to) be engaged in “evangelising” the adoption of the Healthcare Identifiers. Strategies paralleling the techniques successfully used by the Australian Primary Care Collaboratives should be used – i.e. willing health professionals / practices successfully adopting the identifiers should be encouraged to become reference sites / advocates for their peers.

This strategy should also apply strongly to practice managers, who will be at the front line of adoption. This activity will be coordinated through NEHTA’s Clinical Leadership and Engagement unit.

(Responsibility – NEHTA/DoHA)

- **Capturing the early wins.** Systematic mechanisms need to be in place to work with and debrief adopters, capture their experiences (both positive and negative) and continuously make experiential collateral available to change leaders.

Organisations already in a position to communicate lessons learned, including eHealth Support Officers, will be key to ensuring broad awareness of the outcomes of early implementations. Consideration should be given to either employing or outsourcing a resource whose sole responsibility is to facilitate ongoing continuous improvement in the identifier implementation program.

(Responsibility – NEHTA)

### 6.3.3 Building the guiding team

Proposals for governance of the overall implementation of Healthcare Identifiers are provided in section 6.6 below. While NEHTA can provide leadership and facilitate, it is clear that no single organisation will “control” implementation and that implementation activities will involve leadership and participation from multiple organisations.

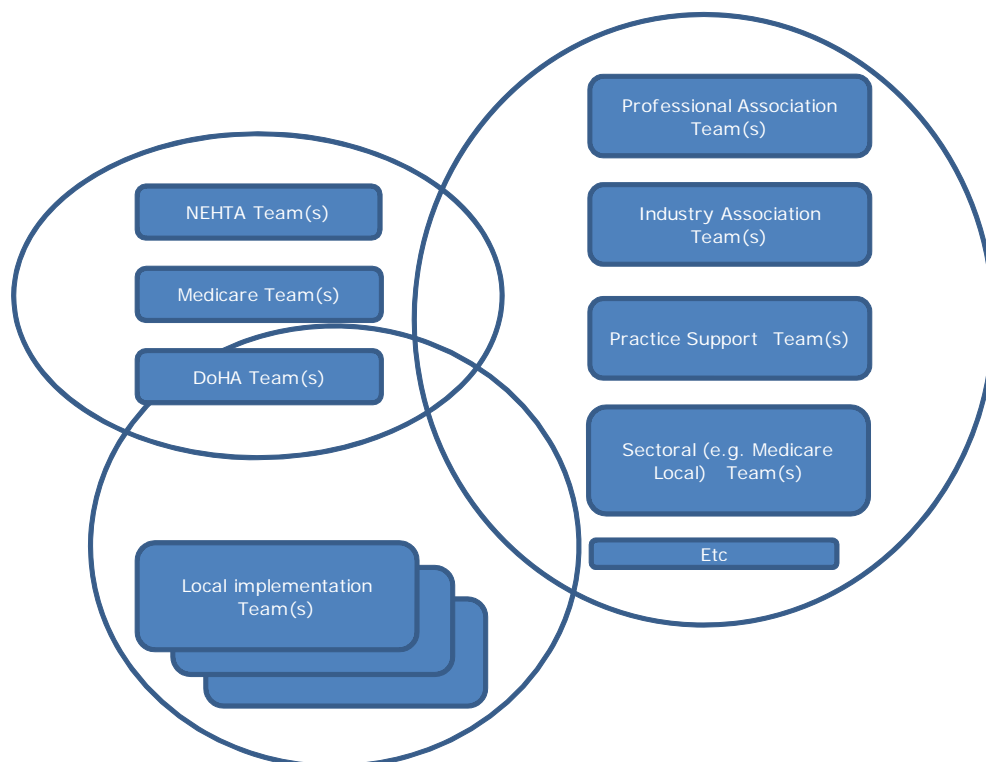
This will require a networking approach, and it will be important that the guiding team understands the concepts involved in managing through networks. For example, Ford et al describe the amorphous nature of networks [Ford 2003]:

There is no single, objective network. There is no “correct” or complete description of it. It is not [any single agency’s] network. No [single agency] owns it. No [single agency] manages it, although all try to manage in it. No [single agency] is the hub of the network. It has no “centre”, although many [agencies] may believe that they are at the centre.<sup>6</sup>

There are in fact likely to be networks of networks, for example as depicted below.

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<sup>6</sup> “Agencies” and “single agencies” inserted in place of “companies” and “company” for contextualisation.

**Figure 2 – Networked implementation teams**

It is assumed that NEHTA will remain the lead agency for implementation. **NEHTA's guiding team** will need:

- Staff who understand the distinctive needs of strategising in a network environment rather than inside organisations (even large ones); are oriented to achieving mutual goals rather than following more linear pathways; are excellent relationship managers; and are perceptive and able to react to emerging patterns – agility is a hallmark of network management.
- Collaboration tools that enable all members of the *broader* guiding team – i.e. key stakeholders who are striving to lead aspects of the implementation – to access up to date knowledge, direction, intelligence, etc; and support relationship management.
- Intelligence gathering, communication and engagement capacities closely coupled with continuous improvement skills (see “Capturing the early wins” above).
- The ability to exert significant internal influence – i.e. to obtain timely and consistent NEHTA responses to emergent issues; to influence the nature and form of related and /or impinging projects / activities; etc.

**The broader guiding team** – the network of key stakeholders – will also need staff that understand networking approaches, and in particular will need to focus on communication, engagement, education and training and delivery of operational support. Key stakeholder representatives will need the active support of their organisations, and the development of a “roles and responsibilities” charter should be considered.

(Responsibility – NEHTA)

### 6.3.4 Getting the vision right

Keys to getting the vision right include:

- Enabling and encouraging stakeholders to contribute to **ongoing development of implementation plans**, and ensuring these plans are adaptive to changing environmental conditions (e.g. changes flowing from health reforms).

(Responsibility – NEHTA)

- **Communicating the vision** and the clear and discernable steps towards its realisation effectively, in terms, language and via channels, etc that discernable target audiences understand.

(Responsibility – NEHTA to lead, professional colleges / associations etc to target and tailor)

- Seeking **policy and program congruence** – i.e. seeking to ensure that the need for adoption and use of the national identifiers is reinforced at all points of the healthcare system, and that potential policy conflicts are identified, articulated and resolved – so that the vision is not blurred by conflicting information. For example;

- The consideration of future programs should encourage active use of the identifiers *and* other data required for effective record matching – see 6.3.9 below.
- Programs that emphasise coordination within the health system, patient centricity, etc (such as chronic disease management programs etc) should explicitly encourage the use of the identifiers. NEHTA's Board members should ensure that all of the programs they sponsor that involve transfers of care within, into and out of primary and ambulatory care either require the use of the national identifiers once they are readily available, or can clearly establish why this is inappropriate.
- Programs that address safety and quality improvement and / or data management (including any future generations of the Australian Primary Care Collaboratives) should consider the inclusion of components addressing the adoption and quality use of identifying data, including the Healthcare Identifiers and core patient and provider demographics.

(Responsibility – DoHA, Jurisdictions)

- Since the required results are better transfers of care, **other e-health foundations and solutions** that support this are funded and delivered according to sectoral expectations. High priority candidates include:

- Timely delivery of a security and access framework and standards for eReferral, ePathology and eDischarge.
- Support for greater standardisation of healthcare messaging.

(Responsibility – NEHTA)

### 6.3.5 Communicating for buy-in

Some elements of communications have already been highlighted above, but key principles should include:

- Consultation with relevant organisations and groups (including eHealth Support Officers) while developing nationally consistent messages to ensure that messages are appropriate, and working with professional organisations to ensure that messages tailored to address specific audiences do not digress from consistent message delivery.

- Ensuring wide availability of comprehensive, accurate and persuasive collateral as a common base for multi-agency communications, to ensure that messages about the identifiers are consistent.
- Encouraging this collateral to be fine-tuned to the specific language, professional and other contexts of individual constituencies by the most appropriate professional associations, etc.
- Use of a wide array of channels.
- Active leadership from the relevant professional, industry and program groups.

Core collateral will need to include:

- What the identifiers are and why they are needed.
- How they are expected to be used, by whom, and with what impact and benefits.
- Constraints on usage and associated rights and responsibilities.
- Assistance available, and how to access it; where to turn in the event of issues
- Frequently asked questions.

Ensuring privacy of health information is a key priority so close collaboration with the Office of the Federal Privacy Commissioner should continue.

(Responsibility – NEHTA)

### **6.3.6 Empowering action**

Empowering action essentially involves removing obstacles, encouraging positive actions and recognising and dealing effectively with challenges and risks.

Specific actions will be required from primary and ambulatory care practices, software developers / vendors and a range of supporting organisations in order for the identifiers to be adopted:

- Primary and ambulatory care practices will need to modify their patient management processes to access IHIs and embed them in their records, apply for HPI-Is and HPI-Os and allocate responsibilities for their ongoing maintenance. Support for these activities will be provided through eHealth Support Officers and Medicare BDOs.

Keys to empowering action from practices include:

- Making it easy – preferably as behind the scenes as possible. This has significant implications for the way in which the identifiers are handled by software applications. However, it also means learning from early adoptions and “ironing out process wrinkles” iteratively and quickly.
- Ensuring there are no nasty surprises – this involves ensuring effective responses are developed for issues arising and rapidly disseminated to networks of implementers; and encouraging the availability of implementation advisory services through support networks – see below.
- Addressing transitional costs. Program development should be undertaken with consideration of transitional costs and used to encourage *active use* of identifiers. Contract arrangements (e.g. with call centre providers) should be leveraged where possible, and appropriate programs could be considered.
- Ensuring that practices have access to the information they need, including consumer-oriented material.

- Software developers / vendors will need to enhance their products to handle the identifiers and improve record matching, and provide at least transitional support as practices use the new functionality to access identifiers. Training and support will need to be provided to vendors by both NEHTA and Medicare Australia.

Keys to empowering action from developers / vendors, in addition to those outlined in section 6.2 above, include:

- Making it easy – ensuring that required specifications (including for conformance assessment) and more detailed advice are readily available to the wide array of developers / vendors of systems for general, specialist, nursing and allied health practices.
- Addressing transitional costs – Some options that could be considered include:
  - Financial assistance along the lines of the Medicare Online model;
  - A software purchase component to funding activities;
  - A time limited industry assistance scheme to encourage accelerated application enhancement.
- Potential supporting organisations will need to design and develop implementation support programs; acquire and /or orient resources to provide them; and sustainably provide them. Forms of implementation support will need to include:
  - Awareness raising and advocacy – see section 6.3.2 above.
  - Provision of implementation advisory services – i.e. readiness assessments; implementation strategy development; workflow analysis; information security; IT strategy etc. services.
  - Education and training. This will need to include training regarding rights and responsibilities associated with the identifiers; how to use the identifiers; questions likely to be raised by consumers and where to direct consumers; etc – see 6.3.6.1 below.
  - The provision of resource sets.
  - Sustained follow up, debriefing and assimilation of lessons learned.

It should be noted that not all supporting organisations may need to offer all of these services – but they are all likely to be needed by some practices. Some of these services can be provided remotely, but others will require outreach or other delivery models.

However, it is critical that the implementation support programs are consistent and coherent nationally, based on a common template and using common resources, so that the operation of the healthcare identifier services is as standardised as possible over time.

The success of support services is likely to be related to the strength of existing support relationships or the capacity to rapidly build such relationships – which will need to embrace a range of providers, not just GPs. Relationships with software vendors will also be important. As such, some Divisions of General Practice are better placed than others to provide these roles, and professional associations and membership based organisations are likely to be well placed.

It should also be noted that elements of affirmative action are likely to be required in the provision of implementation support. For example, rural and remote health services are likely, on balance, to be less well supported in terms of their IM/IT; be provided by relatively recent arrivals to the Australian

healthcare environment; and find it more difficult to access education and training. They are likely, therefore, to require additional focus in the design of implementation support programs.

(Responsibility – NEHTA, DoHA, stakeholders)

#### **6.3.6.1 Education and training**

Education and training activities will need to be undertaken at a variety of levels, initially targeting the early adopters, rapidly widening to accommodate the fast followers and progressively cascading out across national roll out.

Following the outcomes and lessons learned from the early adoption sites (including PCEHR lead sites), a range of training channels may be required including train the trainer based delivery, document based and e-learning modalities. For the early adopter stage, face to face training might be used where appropriate. The volumes involved in subsequent stages will necessitate supplementation with more remote methods and distribution of the training effort across a broader range of practice support mechanisms, including software vendors training and support networks, Divisions of General Practice (supported by eHealth Support Officers), professional associations, etc.

Last year, Capgemini undertook an initial training needs analysis for NEHTA on the HI Service implementation. Based on the HI Service Concept of Operations [NEHTA 2010-4], Capgemini identified training needs by function by target group. This analysis, which covers all of the health sector rather than specifically primary and ambulatory care, is summarised in Attachment C. It will require updating but can serve as the basis for the development of training objectives and common resources.

#### **6.3.7 Creating short-term wins**

The proposed implementation focus areas are addressed in section 6.4 below. However, this aspect of change management involves creating paradigms of “implementation in bite size chunks”, and exposing the healthcare sector to continuing success. Creating energy for the next “chunk” is an important dimension of change management.

An important facet of designing for short term wins is ensuring that each successive program element is:

- Sufficiently crucial to the implementation of Healthcare Identifiers to be visibly “connected” – i.e. specifically building to better transfers of information, not about e-health in general.
- Sufficiently discrete to be discernable when success has been achieved.
- Mile-stoned, measurable and measured.

The achievement of successive implementation milestones should be recognised and communicated to stakeholders at large, hence the importance of using models such as results chains that enable immediate, intermediate and longer term results to be defined, targeted and explained.

NEHTA’s evaluation framework needs to be congruent with and continually feeding this change management dimension.

(Responsibility – NEHTA)

#### **6.3.8 Persistence**

While short term wins – the achievement of short term results along a defined longer pathway – are important, the balancing item is that stakeholders need to be re-energised for the next steps and collaboratively kept on track – or the track redefined with the benefit of enhanced learning.

Critical elements for promoting persistence are:

- The existence and regular refreshing of longer term plans. While the National E-Health Strategy [AHMAC 2008] is endorsed by Australian Governments, many stakeholders would probably perceive that it has not been funded beyond its first trimester (2012). Many stakeholders might also observe that the long term delivery of the HIS is also not funded. However, Health Ministers have committed through the COAG National Partnership Agreement for eHealth to considering long term funding for the HI Service .
- Learning & continuous improvement. Many stakeholders might also observe that Australia's e-health track record is more a series of starts, changes of direction and at times unnecessary rediscovery than one of continuous learning and improvement.

Consideration could be given to building and projecting the longer term narrative and moving beyond program and project based funding, at least for core e-health infrastructure. However, the need for flexibility and responsiveness of eHealth work needs to be carefully considered in funding models.

Again, continual promotion of the results chain approach can encourage persistence, since it allows stakeholders to identify their position along a well defined journey.

(Responsibility – NEHTA, Jurisdictions)

### 6.3.9 Making change stick

Key elements of making change stick – mainstreaming the use of Healthcare Identifiers – are likely to include standards and accreditation and funding models:

- Congruence is required between the **practice and professional standards** in relation to areas such as patient identification, which is in turn seeking to enhance transfers of care between practice and professional domains.
  - The ACSQHC's draft National Safety and Quality Healthcare Service Standards [ACSQHC 2010-2] refer to patient identification, as noted above, but do not provide specific direction about the use of the national Healthcare Identifiers. These identifiers alone, however, are unlikely to be relied upon for record matching. While they can be expected to improve confidence in record matching and result in lower numbers of mismatches, virtually all stakeholders consulted to date expect that they will be used in conjunction with other identifying data such as patient and provider demographics.

The Australian Standards on identification of Healthcare Clients and Providers provide specific guidance for the capture of demographic data to enhance the prospects of correct record matching. It is proposed that where practice and professional standards reference patient identification, they should be encouraged to specifically reference:

- The national Healthcare Identifiers.
- The associated demographics compliant with the Australian Standards.

Similarly, transitional support programs should be encouraged to require compliance with *both* of the above.

The ACSQHC draft Standards are currently subject to consultation, and there is a window of opportunity for their updating.

- The RACGP has revised its Practice Standards<sup>7</sup>, which refer to the national identifiers and core patient demographics.
- Practice standards for Physiotherapy are also currently being revised and congruence should be pursued.
- Similar standards in other primary and ambulatory care domains, as well as those domains with which primary and ambulatory care practices commonly communicate (e.g. pathology) should also be encouraged to adopt congruent approaches.
- Accreditation processes should be encouraged to assess meaningful compliance with these standards, perhaps over a phase-in period.

(Responsibility – NEHTA, DoHA, professional associations)

- The **conformance, compliance and accreditation** (CCA) processes being developed by NEHTA can provide another important platform for sustaining change to better healthcare identification. The Medical Software Industry Association, Australian Information Industry Association, National Association of Testing Authorities, Joint Accreditation System of Australia & New Zealand and NEHTA have achieved consensus on a series of CCA principles and development of CCA capabilities are progressing (see also section 6.1 above.).

(Responsibility – NEHTA)

- In the longer term, **continuing health service funding** models could be adapted to include the use of e-health foundations – for example with output and outcomes based programs that may emerge through health reform arrangements incorporating support for e-health adoption. DoHA will continue to work with stakeholders and other agencies on models to support HI adoption.

(Responsibility – DoHA)

## 6.4 Focussing on high value areas

Stakeholder feedback strongly suggests that the implementation of Healthcare Identifiers in primary and ambulatory care should target defined areas of high volume electronic transfer of care traffic. This would imply focussing on communications between the most computerised segment of the primary and ambulatory care provider market (GPs) and:

- Diagnostic services - pathology, radiology.
- Community pharmacies in the electronic transfer of prescriptions (eTP).
- Medical deputising services and the national call centres network.
- The major groups that GPs refer to – physiotherapists, some specialists and psychologists who (can) use electronic communications.
- Hospitals, public and private – in respect of discharge summaries including from emergency departments.

Another similar situation is community nursing services – there are strong ties between these services and both GPs and hospitals, there are relatively few major agencies that could be focussed upon, and they tend to be increasingly computerised. However, much of their clientele is aged persons and it is not clear whether this provider group will be included in the aged care plan or under the auspices of primary care.

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<sup>7</sup> The RACGP revised standards state that “Unique patient identifiers are being developed which will replace the need for the three approved patient identifiers”. However, the potential for replacement of other identifiers requires testing.

There are also potentially program management levers that could be adjusted in a number of these areas. However, consultation with these areas has been out-of-scope for this project.

It is proposed that the prospects of encouraging implementation of the identifiers by these target groups, including community nursing, be investigated as soon as possible.

The logical targets for early adoption of the identifiers are the three nominated PCEHR lead implementation sites – GP Partners (Queensland), GP Access (NSW) and Melbourne East GP Network (Victoria). It is expected that additional sites will be selected through the PCEHR lead implementation ITA process.

The lead implementation sites will provide platforms to:

- Stress test the HI Service and test the workability of identifier allocation within practices.
- Further refine project plans to manage the transition to use of national identifiers.
- Test user guides, education, training and operational support.
- Identify unexpected issues and opportunities.
- Define and evaluate rollout processes and lessons learnt.

Subject to further investigation, the above areas (diagnostics, eTP, deputising and call centre services, targeted electronic referrals and hospital discharges) are proposed as the fast followers. Adoption and use of identifiers by a critical mass of these groups would rapidly provide a high volume of use in transfer of care settings.

Many stakeholders would support the next iteration of the PIP scheme to embrace health identifiers. If so, this should assist in encouraging the inclusion of identifiers in the GP end of electronic communications. Other incentives and commercial rationales may be required to encourage other parties (communication sources and destinations) to behave in congruent ways.

The fast followers also need to be closely monitored, as they provide the opportunities to validate and further refine support materials, allowing for less direct one-to-one support.

It should be noted that the identifiers can be captured by practices in two ways – via one of Medicare Australia's channels; or via communication from another healthcare provider that already contains a verified identifier (noting in turn that both channels require validation against other identifying data). Accordingly, relatively rapid *uptake* of the identifiers through general practice and potentially diagnostic services can potentially provide a means for their relatively rapid *distribution* via communication with other providers.

Moving beyond the fast follower stage, national programs that encourage the uptake of computerisation within medical specialities and allied health; encourage the uptake of practice standards and accreditation or codes of conduct; encourage data quality improvement and / or business process improvement (along the lines of GP Division and APCC initiatives); encourage conformance with identifier management in coordinated / shared care initiatives, etc. are likely to be significant contributors to national roll out capacity building. Initiatives to establish streamlined ways of enhancing the manual handling and transcription of identifiers, including the finalisation of NEHTA's 'Healthcare Identifiers Implementation Collateral Project', will also require investigation.

(Responsibility – NEHTA, DoHA)

## 6.5 Governance

As argued in section 6.3.3 above, no single agency is in a position to control the overall process of implementation of the Healthcare Identifiers and the realisation of the benefits. As suggested in the result chain diagram in section 5 above, activities can be subject to control but the achievement of outcomes can only be influenced.

Governance of the overall implementation process must reflect these realities. However, there are a range of governance roles that are already established and underway. It is assumed that:

- Since the Healthcare Identifiers initiative is an initiative of Australian Health Ministers, then achievement of desired outcomes from the initiative will need to be reported back to them via the Australian Health Ministers' Advisory Council (AHMAC).
- NEHTA - will be the lead agency for implementation of the initiative.
- As the agency with overall public policy responsibility for the primary and ambulatory care sector, DoHA would be closely involved in the achievement of outcomes.

The National E-Health Strategy also recommended a set of E-Health governance principles. Rather than introduce new ones, it is proposed that these principles underpin the implementation of the health identifiers.

**Figure 3 – Governance principles from the National E-Health Strategy<sup>8</sup>**

Governance Principle	Description
<b>Clarity of accountability</b>	Ensure clear decision making accountability and provide all stakeholders with clarity regarding their roles and responsibilities
<b>Transparency</b>	Provide widespread visibility of the progress of Australian E-Health activities
<b>Appropriate stakeholder representation</b>	Provide a forum for representation across all key stakeholder groups Ensure broad ownership and a balanced approach to the delivery of E-Health
<b>Sustainability</b>	Implement a governance model that will not be unduly impacted by changes to the political or stakeholder environment
<b>Support for activity at multiple levels</b>	Recognise that E-Health governance will need to support initiatives that deliver E-Health capability at differing levels of granularity
<b>Effective leadership and coordination</b>	Effective leadership and coordination of the range of activities that need to occur across all national E-Health work streams
<b>Balance local innovation and national outcomes</b>	Continue to encourage local innovation while ensuring that the development of E-Health solutions supports national E-Health outcomes

Accordingly, the proposed governance structure for the implementation of health identifiers in primary and ambulatory care is as follows.

- At the highest level, DoHA should accept responsibility for assurance that the implementation program is in line with strategic goals for primary and ambulatory care; and for the overall achievement of the final outcomes - safer transfers of care within, into and from primary and ambulatory care, and practice level productivity improvements. DoHA should be accountable for ensuring that this implementation plan articulates each stakeholder group's roles, rights and responsibilities; that overall resources allocated to the implementation are appropriate; and that progress towards the final outcomes is monitored, reviewed and reported transparently to stakeholders.

<sup>8</sup> AHMC 2008 page 18.

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- NEHTA, as lead agency, should undertake, orchestrate and / or facilitate the activities required to ensure implementation outputs, immediate and intermediate outcomes are achieved. NEHTA's Identification, Authentication and Access Reference Group (IAARG) is well positioned to perform as a project control group.
- A HI Implementation Steering Committee will be formed to oversee the implementation of identifiers across the health sector, to mitigate the risks of a fractured and siloed rollout, ensure learnings are shared between public and private sectors and ensure alignment of goals and outcomes. This will ensure that an effective forum exists for stakeholder representation and that broad stakeholder ownership of plans, initiatives and results is encouraged. The Steering Committee will include stakeholders who are in a position to encourage their organisations to influence outcomes. The functions of this committee have been considered closely with any similar committee proposed in relation to PCEHR lead implementations.

The roles of other key stakeholders and participants are described in section 7 below. Extensions of governance structures, however – for example governance structures established to oversee early adopter sites – should be consistent with these higher level roles. Accordingly, the principles above should be adapted and included in relevant program or funding agreements, and the roles of other key players referenced.

## 6.6 Related projects and initiatives

A range of projects and initiatives may be related to the implementation of Healthcare Identifiers overall, including authentication. However, only projects and initiatives of specific and substantial relevance to primary and ambulatory care are noted here. Such projects and initiatives include:

- Health reform and the establishment of Medicare Locals. These new primary healthcare organisations are expected to take responsibility for providing better integrated care, potentially including<sup>9</sup>:
  - Facilitating allied health care and other support for people with chronic conditions.
  - Planning to ensure the availability of face-to-face after hours services for their region.
  - Identifying groups of people missing out on GP and primary health care, or services that a local area needs, and responding to those gaps by targeting services better.
  - Working with Local Hospital Networks to assist with patients' transition out of hospital.
  - Delivering health promotion and preventive health programs to communities with identified risk factors (in cooperation with the Australian National Preventive Health Agency, once it is established).

Identity management is likely to be important to a number of these roles and functions, but the ways in which Medicare Locals will operate and the consequent impacts on implementation requirements and opportunities are not yet known. The first Medicare Locals are scheduled to be operational by mid 2011, with the remainder underway by mid 2012 – i.e. within the timeframe for this Plan.

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<sup>9</sup> Note - this is not an exhaustive list.

- E-Health solutions of high consequence to primary and ambulatory care that may be enabled or significantly enhanced via the use of the identifiers:
  - Personally controlled electronic health records. Since the vast majority of healthcare happens within the primary and ambulatory care sector, and highly accurate and reliable identity management is critical to the safety and quality associated with these records as well as public and healthcare provider confidence in them, the roll out of PCEHRs may well impact how this plan is executed.
  - eReferrals. It is expected that the Northwest Tasmania eHealth Information Exchange Project will, during 2011, refine and test processes to support electronic referrals that contain Healthcare Identifiers and make lessons learned available.
  - Service Directories. The ability to list in service directories may be an attractive lever for healthcare providers, including specialists and allied health practices.
- The redevelopment of professional and practice standards in general practice, allied health and nationally via the ACSQHC – see section 6.3.9 above – and associated accreditation processes.
- The implementation of the 5<sup>th</sup> Community Pharmacy Agreement, which is expected to see the implementation of standardised eTP messages that incorporate the identifiers.

## 7 Key stakeholders

For the purposes of this Proposed Plan, key stakeholders are defined as those whose engagement, or lack of it, can substantially affect the success of the implementation of Healthcare Identifiers in primary and ambulatory care.

Key stakeholders will include:

- Enablers. Stakeholders key to enabling the implementation of the identifiers include:
  - Sector level clinical leaders<sup>10</sup>, whose leadership and peer networks will be needed in order to articulate the needs, benefits and workability of the identifiers.

These clinical leaders will need to (continue to) be engaged to:

- Promote awareness / increase urgency.
- Monitor and advocate for policy and program congruence.
- Communicate the vision.
- Provide a conduit for feedback, facilitating continuous improvement.

- Organisations that currently support e-health and data management activities in the primary and ambulatory care sector and / or provide communication, education and training services, which can be mobilised to provide implementation support – e.g. Divisions of General Practice, Medicare Australia’s Business Development Services, eHealth Support Officers (by supporting Divisions of General Practice), professional colleges and associations.

These organisations will need to:

- Mobilise / build a range of implementation support capabilities.
- Tailor common information resources to the specific needs and contexts of their constituencies.
- Deliver implementation support for practices and professionals.
- Inform patients and consumers.
- Assimilate and feed back learning, facilitating continuous improvement.
- Market leading primary and ambulatory care software vendors, whose product enhancements will have major impacts on the ease of use of the identifiers. While all vendors should have equal access to supporting resources, market realities dictate that a relatively small number of market share leaders are key to rapidly achieving wide uptake.

These organisations will need to:

- Enhance their software offerings and have them certified for use.
- Provide (high demand) transitional and (most likely lower level) ongoing support to clients (practices).

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<sup>10</sup> Note - “clinical” in this context is defined widely, embracing a range of health professional types.

- Producers of common resources, who will need to ensure that implementers and other enablers have comprehensive and effective collateral on which to base their communication, education and training.

These organisations will need to ensure the consistency of implementation resources.

- Implementers. Stakeholders key to uptake of and realisation of benefits from the identifiers include:

- The owners of primary and ambulatory care practices, who are responsible for the business decisions concerning implementation, and practice level clinical leaders<sup>10</sup> who can advocate for and provide feedback on local implementations.

These owners and clinical leaders will need to:

- Assign resources.
- Promote awareness / increase urgency.
- Provide feedback, facilitating continuous improvement.

- Practice managers, who will be at the front line of implementation.

Practice managers, or those filling the roles of practice management, will need to:

- Adapt practice work practices.
- Ensure capabilities.
- Identify and secure consequent benefit opportunities.

- Accreditation agencies, which will in time be required to substantiate the use of the identifiers.

These agencies will need to adapt their processes and provide feedback to facilitate continuous improvement.

## 8 Critical success factors

Factors critical to the success of implementation in primary and ambulatory care can be expected to include:

- The ability to secure adoption of the identifiers in high volume electronic communications – i.e. in diagnostic service communications, ETP, communications with deputising services and call centres, e-referrals and hospital discharge communications. Investigation of these sources is outside the scope of this project.
- Commitment and involvement of all key stakeholders, including strong leadership in particular from clinicians and practice managers.
- Software enhancements that make it easy.
- Effective and responsive support, when and where it is needed.
- Relentless pursuit of the final outcomes, and willingness to “make the changes stick” via policy and program congruence and upgrading systems such as standards, accreditation and funding.
- Strong, decisive and inclusive governance.

Accordingly, each of these factors should be regularly monitored.

### 8.1 Risks

Major risks<sup>11</sup> to the implementation of the identifiers in primary and ambulatory care include:

- Patient and provider indifference or antipathy – i.e. the risk that practices will not implement the identifiers even if well informed, for example because they see the benefits as being sound in concept but not relevant enough to them specifically, because they are not willing to bear any associated risks or because they fear work flow slowdowns.

Mitigation strategies include peer leadership, well targeted communication, positive feedback and incentives.

- Governance “disconnections” – i.e. the risks that key messages are not supported by visible actions, efforts in one domain are conflicted by visible actions in another, or supporting actions are framed to meet multiple needs and do not in fact support implementation particularly well.

Mitigation strategies include inclusive governance structures, transparent governance mechanisms and strong leadership empowered to raise perceived issues.

- Unfounded assumptions – i.e. the risk that implementation plans are based on assumed behaviours, capabilities, etc that do not prove accurate.

Mitigation strategies include field testing, base-lining and ongoing testing of assumptions.

- Alienation of key stakeholders – i.e. the risk that key stakeholders will become disenfranchised, for example via flawed engagement strategies or styles, or as a result of “collateral damage” from other initiatives.

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<sup>11</sup> Only risks perceived to be high are articulated at this stage. More comprehensive risk analysis will be necessary when overall planning is further developed.

Mitigation strategies include inclusive and effective governance (providing a meaningful forum for airing stakeholder concerns) and the building of the right teams.

- Distraction – i.e. the risk of key stakeholders' priorities being diverted to more pressing issues, for example Divisions of General Practice with strong e-health capabilities being distracted by organisational and structural change as the health reforms, including Medicare Locals are implemented, or vendors having alternative development priorities that make greater commercial sense.

Mitigation strategies include effective governance, good communication, redundancy in implementation support and well designed incentives.

- Unrealistic expectations – i.e. the risk that key stakeholders' expectations will either be too high (e.g. arising from confusion about identity management and the clinical data delivered via enabled electronic communications) or too low (e.g. resulting in protracted roll out and a long pathway to benefit realisation).

Mitigation strategies include strong leadership and effective, well targeted communication and awareness-raising.

- Resource shortages – i.e. the risk that the overall resources available are not sufficient for smooth implementation. For example, it will take time to build effective practice support capability – it cannot simply be switched on.

Mitigation strategies include an early start to implementation capacity building to ensure it is ready for the fast follower stage, and consideration of multi-pronged strategies to access available expertise.

- Delays and / or other flaws in execution – i.e. the risk that sequential activities will be slowed, for example if there are protracted delays in resolving issues relating to the developer agreements, specifications etc are not completed on time, download times for identifiers prove excessive, etc.

Mitigation strategies include effective and adaptive governance and good communication.

- Delays or flaws in the execution of related projects – i.e. the risk that tight timeframes will be impacted by the flow on effects from external influences.

Mitigation strategies include scenario analyses (e.g. impact analysis in the event of late delivery of the National Authentication Service for Health (NASH) services) and contingency planning, effective and adaptive governance and good communication.

- Risk of disconnection with the lead PCEHR sites, to the extent that they may fall under different governance arrangements and to different time frames, etc.

Mitigation strategies include effective project dependency and liaison arrangements.

## 9 Roadmap and sequencing

The proposed final outcomes arising from the implementation of the Healthcare Identifiers Service are:

- Safer, higher quality (timelier, more reliable, and better informed) communication of healthcare information through more accurate and reliable identity matching.
- Greater productivity / reduced wastage in primary and ambulatory care practices (associated with less need for resolution of identity queries, less duplication of diagnostic and other testing, etc).

The set of activities proposed in section 6 are listed below:

- Business analysis and system development:
  - Complete and publish specifications.
  - Develop and make available testing facilities and conformance assessment services.
  - Field test the quality and reliability of record matching.
  - Baseline the penetration and use of computing in primary care.
  - Assess the feasibility of streamlining Medicare's identity related software applications.
  - Scenario analysis and contingency planning.
- Support software vendors:
  - Resolve Developer Agreement issues.
  - Provide technical support for product enhancements.
  - Negotiate and establish ongoing technical support services.
  - Upgrade HL7 standards.
  - Provide access to information resources.
  - Consider options relating to transitional costs.
  - Develop stable and reliable roadmaps.
- Change management:
  - Increase urgency:
    - Raise awareness.
    - Continue clinical and practice leadership.
    - Capture the wins.
  - Build the guiding teams.
  - Get the vision right:
    - Share the planning.
    - Communicate the vision.
    - Advocate for program and policy congruence.
  - Communicate for buy-in:
    - Develop common collateral.
    - Encourage fine-tuning for targeted constituencies.
  - Empower actions:
    - For practices.

- For software developers / vendors.
  - Build support programs.
- Create and celebrate short term wins.
- Persist:
  - Advocate for refreshment and extension of e-health plans.
  - Build learning and continuous improvement framework.
- Make change stick:
  - Align standards and accreditation.
  - Advocate for adaptation of funding models.
- Focus on high value areas:
- Establish overall governance.

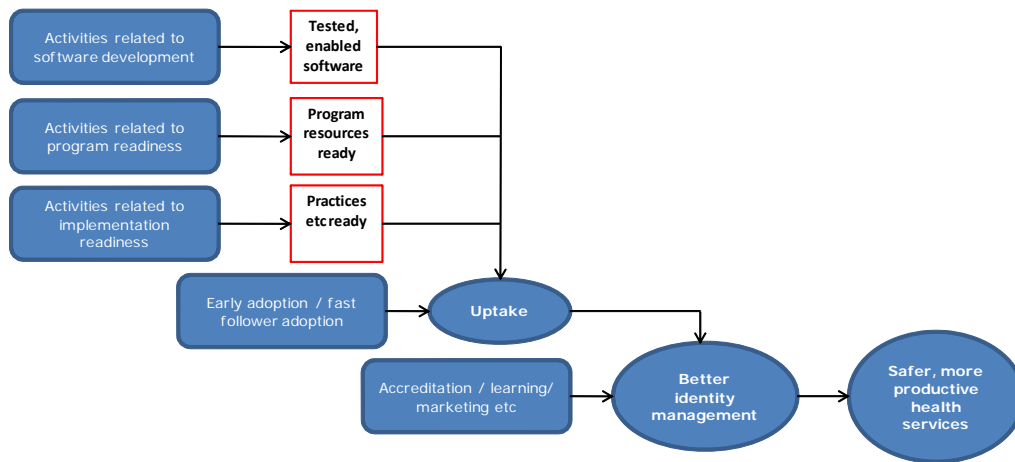
## 9.1 Outputs and outcomes

The proposed logic chain guiding the proposal of the above activities is as follows:

- Finalisation of specifications, CCA and technical support arrangements, resolution of the developer agreement issues, upgrading of HL7 standards, continued planning and consideration of transitional cost options are all activities that are pre-requisite to the development, testing and release of primary care software that handles the identifiers on a business-to-business basis (an output).
- Baselining, the development of ongoing technical support and supporting resources, the development of measurement frameworks and building of the guiding teams are all activities that aim to deliver a state of implementation program readiness (an output).
- Awareness raising, continued clinical leadership, the development of practice incentives and the development of implementation support networks are activities that aim to deliver practice level implementation readiness (an output).
- These outputs, utilised in the early adoption and fast follower sites and in parallel to the development of the learning infrastructure, will produce an immediate impact of targeted uptake of the identifiers.
- The (positive) experience base stemming from this uptake together with enhancement of professional / practice and software standards, the embedding of these in accreditation processes, wider marketing and the pursuit of policy and program congruence will produce the intermediate outcomes of accredited software and practices (capability) and, more importantly, compliant electronic communication (use).
- This chain of events should lead to the desired outcomes of safer, higher quality transfers of care and improved practice-level productivity.

This chain is depicted below.

**Figure 4 – Summary result chain**



As indicated in section 5 above, it should be noted that a coordinated program of activities can be undertaken with substantial control to produce the immediate outcome of uptake of the identifiers. Once the identifiers have begun to proliferate, however, realisation of the targeted final outcomes will require sustained good practice in information management and the development of local work practice review and improvement. This is difficult to control, but can be influenced via encouragement of practice accreditation (which is as yet not highly pervasive in primary care other than general practice), clinical and practice leadership, sustained marketing and practice level support via or along the lines of the primary care collaboratives, etc.

## 9.2 Inputs

It is premature at this point of planning to describe the inputs in any detail, since there should be substantial dependencies and synergies between this draft planning process and the planning processes for other sub-domains. Similarly, high level description such as labour, information, funding, etc are so broad as to lack meaning.

Accordingly, inputs are not discussed further in this document but will require significant consideration at the stage of integrating sub-domain plans.

## 9.3 Goals and timelines

If pursued aggressively, and subject to on-time execution of both identifier and related activities, the outputs of enhanced primary and ambulatory care software and readiness of the program resources and targeted practices should be achievable around the second quarter of 2011.

Lessons should then flow from the early adopter sites over the subsequent six months, and fast followers could be ready to commence late in 2011. Again, the supply of identifiers from these areas have yet to be investigated, but targets such as 80% of electronic communications with pathology and radiology services; ETPs; deputising and call centres; and 50% of hospital discharge summaries carrying the identifiers should be possible from late 2012.

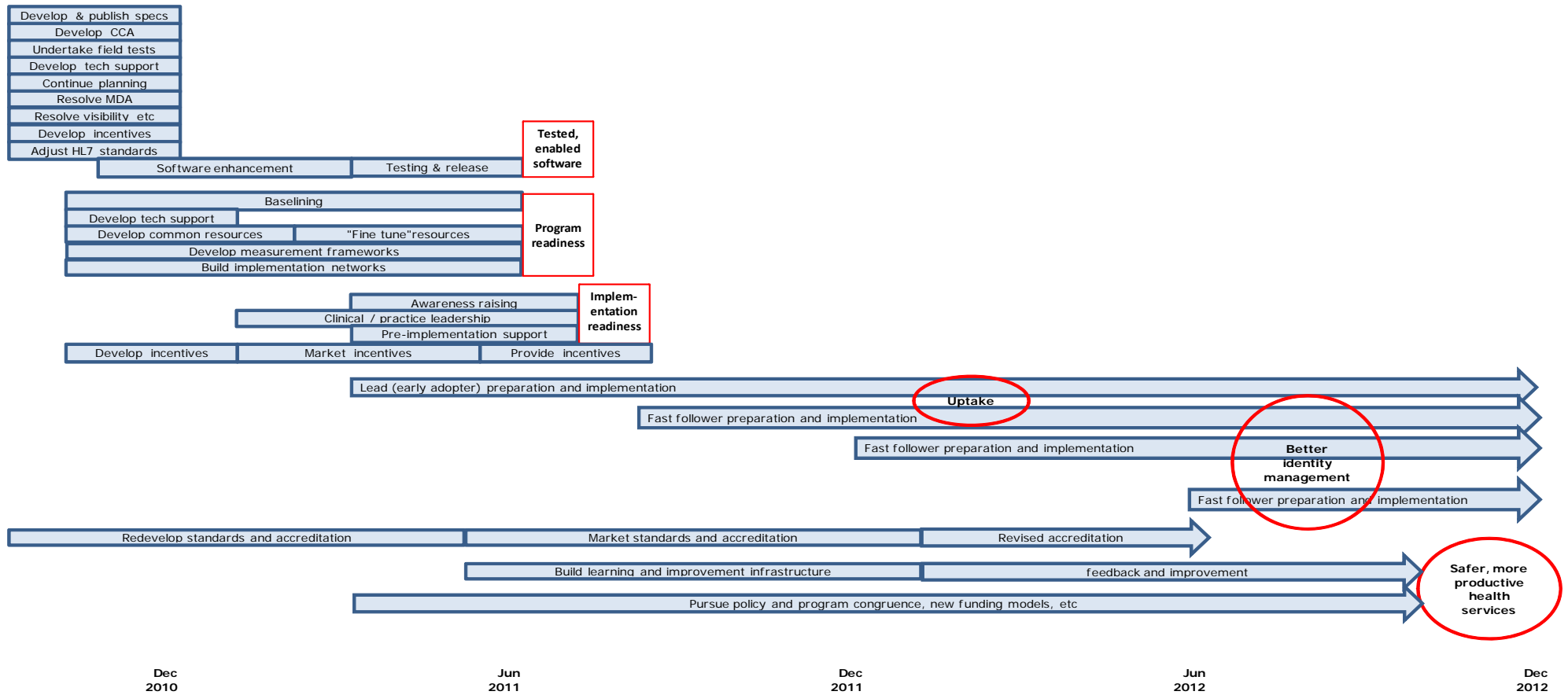
Subsequent waves of activity (noting that the detailed planning for these would need to commence from around 2012), which are beyond the scope of this draft plan, would then need to focus on:

- Increasing the proportion of communications within, into and from primary and ambulatory care that are undertaken electronically. This will require consideration of strategies to encourage the uptake of clinical and practice management systems amongst specialists and allied health providers.
- The finalisation of the 'Healthcare Identifiers Implementation Collateral Project' to encourage safer manual transcription where transfer of care communications are with non-computerised practices – e.g. the collaborative development of pre-printed report templates or cover sheets carrying the identifiers.
- Implementing identifiers within shared care etc applications.

## **9.4 Overall roadmap**

The overall roadmap proposed for the primary and ambulatory care domain is depicted overleaf.

Figure 5 – Proposed roadmap



## 10 Next steps

This Proposed Plan for Primary and Ambulatory Care will require alignment and integration with other sub-domain plans, to produce an overall Healthcare Identifiers Implementation Plan. Wider consultation is expected during this process.

# 11 References

- ACSQHC 2008 Australian Commission on Safety and Quality in Healthcare, *Australian Charter of Healthcare Rights*, 2008 <http://www.safetyandquality.gov.au/internet/safety/publicising.nsf/Content/PriorityProgram-01>
- ACSQHC 2010-1 Australian Commission on Safety and Quality in Healthcare, *Patient Safety In Primary Health Care, Discussion Paper, Draft For Public Consultation*, August 2010, [http://www.safetyandquality.gov.au/internet/safety/publicising.nsf/Content/B9CBDD0DA7EC8C88CA2573210022C464/\\$File/38689-DiscussionPaper.pdf](http://www.safetyandquality.gov.au/internet/safety/publicising.nsf/Content/B9CBDD0DA7EC8C88CA2573210022C464/$File/38689-DiscussionPaper.pdf)
- ACSQHC 2010-2 Australian Commission on Safety and Quality in Healthcare, *Consultation Paper on the Draft National Safety and Quality Health Service Standards*, August 2010, [http://www.safetyandquality.gov.au/internet/safety/publicising.nsf/Content/CA1C4B7F4C5B5547CA257793000528D5/\\$File/39220-StandardsConsultation.pdf](http://www.safetyandquality.gov.au/internet/safety/publicising.nsf/Content/CA1C4B7F4C5B5547CA257793000528D5/$File/39220-StandardsConsultation.pdf)
- AHMC 2008 Australian Health Ministers' Conference, *National E-Health Strategy, Summary*, December 2008, <http://www.health.gov.au/internet/main/publishing.nsf/content/national+Ehealth+strategy>
- AIHW 2009 Australian Institute of Health and Welfare, *General practice activity in Australia*, 2008-09, <http://www.aihw.gov.au/publications/gep/gep-25-11013/gep-25-11013-c04.pdf>
- APA 2009 Australian Physiotherapy Association, *The Prevalence of Electronic Clinical Record Use Within Australian Private Physiotherapy Practice: A National Survey*, 2009.
- Ford 2003 Ford et al, *Managing networks*, 2003, <http://www.impgroup.org/uploads/papers/4198.pdf>
- NEHTA 2010-1 National E-Health Transition Authority, *Healthcare Identifiers Service Implementation Approach, V 1.0 – a draft for discussion*, 2010, <http://www.nehta.gov.au/connecting-australia/healthcare-identifiers>
- NEHTA 2010-2 National E-Health Transition Authority, *Implementation Of Healthcare Identifiers In Primary And Ambulatory Care, Issues Paper, V0.5*, 30/08/2010.
- NEHTA 2010-3 National E-Health Transition Authority, *NEHTA Blueprint, Version 1.0, Draft for Consultation*, 13 August 2010, <http://www.nehta.gov.au/about-us/nehta-blueprint>
- NEHTA 2010-4 National E-Health Transition Authority, *HI Service Concept of Operations, Version 2.0, Final release*, 8 June 2010, <http://www.nehta.gov.au/connecting-australia/healthcare-identifiers>

- NEHTA 2010-5 National E-Health Transition Authority, *Individual Healthcare Identifiers, Business Requirements, Version 1.00, Final release*, 23 November 2009, <http://www.nehta.gov.au/connecting-australia/healthcare-identifiers>
- NEHTA 2010-6 National E-Health Transition Authority, *Healthcare Provider Identifiers, Business Requirements, Version 1.00, Final Release*, 19 November 2009, <http://www.nehta.gov.au/connecting-australia/healthcare-identifiers>
- Protti 20089 Protti, D., *A Global View of Health IT Journeys: Common Challenges and Common Successes*, presentation to IAG 2009, September 24, 2009, <http://www.wales.nhs.uk/sites3/docmetadata.cfm?orgid=770&id=142625>
- RACGP 2010 Royal Australian College of General Practitioners National Expert Committee on Standards for General Practices, *RACGP Standards for General Practices, Draft 4th edition for Consultation*, 2010, [http://www.racgp.org.au/Content/NavigationMenu/PractitionerSupport/StandardsforGeneralPractices/4th\\_edition\\_RACGP\\_draft\\_standards.pdf](http://www.racgp.org.au/Content/NavigationMenu/PractitionerSupport/StandardsforGeneralPractices/4th_edition_RACGP_draft_standards.pdf)
- Stroetmann 2006 Stroetmann et al, *eHealth is Worth it: The economic benefits of implemented eHealth solutions at ten European sites*, European Commission, 2006, <http://www.ehealth-impact.org/download/documents/ehealthimpactsept2006.pdf>

## 12 Document management

This is a managed document. Modifications will be agreed in writing (including email) by the NEHTA Project Manager and Direkt Consulting prior to any changes being incorporated.

<b>Version</b>	<b>Date</b>	<b>Content/Changes</b>	<b>Author</b>
V0.1	28/09/2010	Initial draft	DR
V0.2	30/09/2010	Revised per feedback from R Hewitt & L Jones	DR
V0.5	22/11/2010	Revised per feedback from DoHA	DR
V0.6	19/1/2011	Revised per feedback from DOHA	NEHTA

Legend: DR David Rowlands, Director, Direkt Consulting Pty Ltd

## Attachment A – GP referrals

The survey of General Practice Activity in Australia during 2008-09 [AIHW 2009] indicated that the most frequent referrals from GPs were to specialists, followed by referrals to allied health services. Very few patients were referred to hospitals, to the hospital emergency department or to other medical services.

**Table 11.1: Summary of referrals and admissions**

Variable	Number	Rate per 100 encounters ( <i>n</i> = 96,688)	95% LCL	95% UCL	Rate per 100 problems ( <i>n</i> = 149,462)	95% LCL	95% UCL
At least one referral <sup>(a)</sup>	12,334	12.8	12.3	13.2	8.9	8.5	9.2
Referrals	13,251	13.7	13.2	14.2	8.9	8.6	9.2
Specialist	8,699	9.0	8.7	9.3	5.8	5.6	6.0
Allied health service	3,745	3.9	3.6	4.1	2.5	2.3	2.7
Hospital	317	0.3	0.3	0.4	0.2	0.2	0.2
Emergency department	199	0.2	0.2	0.2	0.1	0.1	0.2
Other medical services	48	0.0	0.0	0.1	0.0	0.0	0.0
Other referrals	243	0.3	0.2	0.3	0.2	0.1	0.2

(a) Rate per 100 problems for at least one referral is calculated using a numerator of number of individual problems with a referral (*n* = 13,228).

Note: LCL—lower confidence limit; UCL—upper confidence limit.

A referral is defined (for this survey) as the process by which the responsibility for part or all of the care of a patient is temporarily transferred to another health care provider. Only new referrals arising at the encounter were included (that is, continuations were not recorded). For each encounter, GPs could record up to two referrals. Referrals to hospital outpatient clinics and to other GPs were classified as referrals to other medical services.

There were 13,251 referrals made at a rate of 13.7 per 100 encounters. Table 11.2 (overleaf) shows the specialists and allied health service groups to whom GPs most often referred patients.

From these data, the most frequent referral destinations were as follows.

Referral Destination	Number of GP referrals	Percentage of GP referrals
Specialists in total	8,699	65.6
Allied Health in total	3,745	28.3
Physiotherapists	1,138	8.6
Surgeons	861	6.5
Psychologists	775	5.8
Orthopaedic surgeons	754	5.7
Dermatologists	698	5.3
<b>Total GP referrals</b>	<b>13251</b>	

Table 11.2: The most frequent referrals, by type

Professional/organisation	Number	Per cent of referrals	Per cent of referral group	Rate per 100 encounters (n = 96,688)	95% LCL	95% UCL
<b>Medical specialist</b>	<b>8,699</b>	<b>65.6</b>	<b>100.0</b>	<b>9.0</b>	<b>8.7</b>	<b>9.3</b>
Surgeon	861	6.9	9.9	0.9	0.8	1.0
Ophthalmologist	766	6.1	8.8	0.8	0.7	0.9
Orthopaedic surgeon	754	6.0	8.7	0.8	0.7	0.9
Dermatologist	698	5.6	8.0	0.7	0.7	0.8
Cardiologist	575	4.6	6.6	0.6	0.5	0.7
Ear, nose and throat	561	4.5	6.4	0.6	0.5	0.6
Gastroenterologist	523	4.2	6.0	0.5	0.5	0.6
Gynaecologist	516	4.1	5.9	0.5	0.5	0.6
Urologist	342	2.7	3.9	0.4	0.3	0.4
Neurologist	265	2.1	3.0	0.3	0.2	0.3
<i>Subtotal: top 10 specialist referrals</i>	<i>5,861</i>	<i>44.2</i>	<i>67.4</i>	—	—	—
<b>Allied health and other professionals</b>	<b>3,745</b>	<b>28.3</b>	<b>100.0</b>	<b>3.9</b>	<b>3.6</b>	<b>4.1</b>
Physiotherapy	1,138	9.1	30.4	1.2	1.1	1.3
Psychologist	775	6.2	20.7	0.8	0.7	0.9
Podiatrist/chiropract	341	2.7	9.1	0.4	0.3	0.4
Dietitian/nutritionist	230	1.8	6.1	0.2	0.2	0.3
Dentist	209	1.7	5.6	0.2	0.1	0.3
Audiologist/acoustic testing	105	0.8	2.8	0.1	0.1	0.1
Optometrist	75	0.6	2.0	0.1	0.1	0.1
Diabetes education	75	0.6	2.0	0.1	0.1	0.1
Breast clinic	70	0.6	1.9	0.1	0.0	0.1
Counsellor	61	0.5	1.6	0.1	0.0	0.1
<i>Subtotal: top 10 allied health referrals</i>	<i>3,079</i>	<i>24.6</i>	<i>82.2</i>	—	—	—
<i>Subtotal: all referrals listed</i>	<i>8,940</i>	<i>68.8</i>	—	—	—	—
<b>Total referrals</b>	<b>13,251</b>	<b>100.0</b>	—	<b>13.7</b>	<b>13.2</b>	<b>14.2</b>

Note: LCL—lower confidence limit; UCL—upper confidence limit.

## Attachment B – Patient safety incidents in general practice

The table below is reproduced from the ACSQHC's ACSHC 2010 discussion paper on Patient Safety In Primary Health Care [ACSHC 2010], but is originally sourced from Makeham MAB, Stromer S, Bridges-Webb C, Mira M, Saltman DC, Cooper C, et al. *Patient safety events reported in general practice: A taxonomy*, Quality and Safety in Health Care 2008; 17:53-57.

Error category	Number (% of total)
<b>1. Errors related to the processes of healthcare</b>	<b>365 (69.5)</b>
<b>1.1 Errors in practice and healthcare systems</b>	<b>112 (21.3)</b>
1.1.1 Errors relating to incorrect patient identification	12 (2.3)
1.1.2 Appointments and message handling errors	15 (2.9)
1.1.3 Patient record and filing system errors	28 (5.3)
1.1.4 Recall event and recall systems errors	25 (4.8)
1.1.5 Computer systems errors	6 (1.1)
1.1.6 Errors in the maintenance of a safe physical environment	6 (1.1)
1.1.7 Errors in provision of care after hours or inadequate staff coverage	7 (1.3)
1.1.8 Errors relating to patient confidentiality issues	3 (0.6)
1.1.9 Practice and healthcare systems errors not otherwise specified	10 (1.9)
<b>1.2 Investigation errors</b>	<b>65 (12.4)</b>
1.2.1 Errors relating to incorrect patient identification	7 (1.3)
1.2.2 Errors in the process of requesting investigations	12 (2.3)
1.2.3 Errors in the process of undertaking investigations	9 (1.7)
1.2.4 Errors in reporting processes or managing investigation reports	35 (6.7)
1.2.5 Investigation errors not otherwise specified	2 (0.4)
<b>1.3 Medication errors</b>	<b>107 (20.4)</b>
1.3.1 Electronic prescription writing or medication charting errors	31 (5.9)
1.3.2 Other prescription or medication charting errors	16 (3.1)
1.3.3 Medication dispensing and delivery errors	38 (7.2)
1.3.4 Patient self-administration of medication errors	11 (2.1)
1.3.5 Medication errors not otherwise specified	11 (2.1)
<b>1.4 Treatment errors (non-medication)</b>	<b>13 (2.5)</b>
1.4.1 Errors in the process of providing immunisations	11 (2.1)
1.4.2 Errors in the process of undertaking procedures	1 (0.2)
1.4.3 Non-medication treatment errors not otherwise specified	1 (0.2)
<b>1.5 Communication errors and process errors not otherwise specified</b>	<b>68 (12.9)</b>
1.5.1 Errors in general communication with patients	17 (3.2)
1.5.2 Hospital discharge and other hospital-based communication errors	31 (5.9)
1.5.3 Errors in referral to other healthcare providers	9 (1.7)
1.5.4 Errors in general communication with other healthcare providers	8 (1.5)
1.5.5 Communication and process errors not otherwise specified	3 (0.6)
<b>2. Errors related to the knowledge and skills of health professionals</b>	<b>160 (30.5)</b>
<b>2.1 Errors in diagnosis</b>	<b>62 (11.8)</b>
2.1.1 Errors in patient history taking	2 (0.4)
2.1.2 Errors in patient physical examination	11 (2.1)
2.1.3 Errors in investigations requested or their interpretation	27 (5.1)
2.1.4 Diagnosis-related errors not otherwise specified	22 (4.2)
<b>2.2 Errors in managing patient care</b>	<b>98 (18.7)</b>
2.2.1 Medication management errors	57 (10.9)
2.2.2 Knowledge or skills errors in undertaking immunisations	9 (1.7)
2.2.3 Knowledge or skills errors in undertaking procedures	13 (2.5)
2.2.4 Errors managing care not otherwise specified	19 (3.6)

Of the 365 recorded process of care issues, 19 (categories 1.1.1 and 1.2.1) explicitly concern patient identification – i.e. around 5%.

A further 130 (categories 1.1.2, 1.1.3, 1.2.2, 1.2.4, 1.5.2 and 1.5.3), or 31%, are errors in reporting / referring to other providers or patient record filing errors, which could also include identification issues.

# Attachment C – CapGemini’s Training Needs Analysis

HI SERVICE TRAINING NEEDS ANALYSIS												
Module #	Required Training			HI Service Roles								
	Source	Subject	Section #	All Users (Everyone / Representative)	Healthcare Individual	HI Service Operator (i.e. Receptionist, Administrator, Practice Staff, Hospital Admissions Clerk, MA Service Operator, eBusiness Service Centre, Call centre staff)	Senior HI Service Officer	Nominated Responsible Officer (Nominated individual within healthcare organisation)	Organisation Maintenance Officer (Nominated individual within healthcare organisation)	Trusted Data Source (TDS) Service Officer (Nominated individual in TDS org) (e. AHPRA, MA, DVA)	Healthcare Provider Individuals (i.e. Clinicians, health professionals, Allied Health Providers)	Compliance and Enforcement (Commonwealth Privacy Commissioners, State and Territory health information or other relevant regulators)
					Australian general public	Hospital non-specialists, Non-clinicians	Hospital non-specialists, Non-clinicians	Non-clinicians, Primary care practitioners, Hospital non-specialists, Specialists, Specialist-in-training, Other clinicians	Non-clinicians, Primary care practitioners, Hospital non-specialists, Specialists, Specialist-in-training, Other clinicians	Non-clinicians	Primary care practitioners, Specialists, Specialist-in-training, Other clinicians	
Concept_of_Operations_V1.0(1).pdf		Patient communication about IHIs and the HI Service	HI Service	X								
"		HPOS training/support (offered through on-line services)	HI Service			X	X				X	
"		User Guides / Quick Reference Guides (QRGs)	HI Service	X								
"		Procedures, Manuals and FAQs	HI Service			X	X	X	X	X	X	
"		Blended elearning package comprising conceptual information, instructional content, Knowledge Checks, Practical simulations and Quizzes for all scoped HI functions i.e. IHI, HPI-I, HPI-O.	HI Service			X	X	X	X	X	X	
"		Classroom 'Train-the-trainer' sessions	HI Service				X					
"		Facilitator lead (blended) end user training	HI Service			X		X	X	X	X	
"		Responding to system/service complaints and enquiries	HI Service			X	X	X	X			X
"		Understand purpose of verified and unverified IHI	IHI	X								
UC.010		Locate IHI	IHI			X	X					
UC.010		Associate IHI with patient record	IHI			X	X				X	
UC.010		Identify IHI status	IHI			X	X					
UC.010		Check accuracy of Trusted Data Source (TDS) identifier	IHI			X	X					
UC.011		Create a verified IHI	IHI			X	X				X	
UC.011		Create unverified IHI	IHI			X	X				X	
UC.021		Enrol healthcare individual in TDS	IHI			X	X					
UC.030		Identify need to update patient index with IHIs	IHI			X	X				X	
UC.030		Collate list of patient records for cross checking (batch search)	IHI			X	X				X	
UC.030		Initiate batch search	IHI			X	X				X	
UC.030		Understand information against patient index (including IHI, IHI status, DOB)	IHI			X	X				X	
UC.030		Understand batch search error message (no match or multiple possible matches)	IHI			X	X				X	
UC.031		Identifying duplicate, replica or status changes to IHIs (verified and unverified)	IHI			X	X				X	
UC.040		Identify individual	IHI			X	X				X	
UC.040		Locating multiple unverified IHIs	IHI			X	X					
UC.040		Change status of unverified IHIs to verified	IHI			X	X					
UC.040		Process multiple other unverified IHIs as duplicates	IHI			X	X					
UC.040		Issue IHI token (if required)	IHI			X	X					
UC.040		Understand why verified IHIs improve the level of confidence with which information associated to the IHI can be used	IHI	X								
UC.040		Advanced search capabilities	IHI	X								
UC.060		Create patient record for newborn	IHI			X	X				X	
UC.070		Creation of patient record for unknown patient	IHI			X	X				X	
UC.070		Creation of provisional IHI	IHI			X	X				X	
UC.070		Verify provisional IHI to verified and unverified IHI	IHI			X	X				X	
UC.070		Merge provisional IHI with an existing IHI	IHI			X	X				X	
UC.081		Check individual's identity & eligibility for pseudonymous IHI	IHI				X					
UC.081		Understand options & consequences of a pseudonym IHI	IHI				X					
UC.081		Create pseudonym IHI linked to existing IHI	IHI				X					
UC.081		Retire existing pseudonym	IHI				X					
UC.081		Relinquish existing IHI token	IHI				X					
UC.081		Issue IHI token for pseudonym	IHI				X					
UC.081		Understand how to safeguard a pseudonymous IHI	IHI				X					
UC.081		Merge pseudonymous IHI with primary IHI	IHI				X					
UC.083		Update verified IHI with alternate name (alias)	IHI			X	X				X	
UC.112		Confirm requirement for unverified IHI to be updated	IHI			X	X					
UC.112		Update unverified IHI	IHI			X	X					
UC.112		Understand why update to unverified IHI was unsuccessful	IHI			X	X					
UC.112		Identify that update to unverified IHI was successful	IHI			X	X					
UC.112		Access audit log	IHI		X							

UC.130	Provide evidence of legal entity	HPI-O					X	X				
UC.130	Present identification & authority to act on behalf of organisation	HPI-O					X	X				
UC.130	Validate evidence in support of registration	HPI-O			X	X						
UC.130	Check for existing HPI-O	HPI-O			X	X						
UC.130	Create 'seed' HPI-O	HPI-O			X	X						
UC.130	Reactivate 'seed' HPI-O	HPI-O			X	X						
UC.130	Update details of seed HPI-O	HPI-O			X	X						
UC.130	Establish Responsible Officer (RO) HI Service account	HPI-O			X	X						
UC.130	Add HPI-O to Provider Directory Service	HPI-O			X	X						
UC.130	Request issuance of digital certificate(s) for HPI-O	HPI-O			X	X						
UC.130	Receive notification of seed HPI-O and HI Service account information	HPI-O					X					
UC.131	Identify need to create new Organisation Maintenance Role (OMR)	HPI-O					X	X				
UC.131	Log onto HI Service Provider Portal	HPI-O					X	X				
UC.131	Enter details & create new HI Service account for nominated OMR	HPI-O					X	X				
UC.131	Receive OMR information	HPI-O					X	X				
UC.131	Maintain information associated with HPI-O	HPI-O					X	X				
UC.131	Create new network of HPI-Os	HPI-O					X	X				
UC.131	Nominate other OMRs and set privileges	HPI-O					X	X				
UC.131	Retire an HPI-O	HPI-O					X	X				
UC.131	Remove the link of a (subordinate) OMR from HPI-Os	HPI-O					X	X				
UC.131	Maintain links between the provider organisation and provider individuals	HPI-O					X	X				
UC.135	Provide detail of new network HPI-O	HPI-O					X	X				
UC.135	Nominate parent HPI-O	HPI-O					X	X				
UC.135	Register the network HPI-O with the Provider Directory Service (PDS)	HPI-O			X	X	X	X				
UC.135	Request delivery of HPI-O digital certificate	HPI-O					X	X				
UC.135	Identify notification that the networked HPI-O successfully created	HPI-O					X	X				
UC.136	Identify needs to apply changes to the primary HPI-O due to merger or acquisition	HPI-O					X					
UC.136	Provide evidence of authority to act on behalf of merged organisations	HPI-O					X					
UC.136	Change seed HPI-O of acquired organisation to a networked HPI-O	HPI-O			X	X						
UC.136	Link acquired HPI-O to primary seed HPI-O	HPI-O			X	X						
UC.136	Notify RO of changes made	HPI-O			X	X						
UC.136	Disable access for the RO of the acquired organisation	HPI-O			X	X						
UC.170	Select HPI-O for maintenance	HPI-O					X	X				
UC.170	Perform maintenance action and supply data	HPI-O					X	X				
UC.170	Update information associated to HPI-Os	HPI-O					X	X				
UC.170	Display information in HI PDS	HPI-O					X	X				
UC.170	Enable/disable access to electronic address for HPI-O	HPI-O					X	X				
UC.170	Change (update) HPI-O parent	HPI-O					X	X				
UC.172	Identify need to retire a seed HPI-O	HPI-O					X	X				
UC.172	Check HPI-O status	HPI-O			X	X						
UC.172	Remove all associated HPI-I to HPI-O links	HPI-O			X	X						
UC.172	Retire HI Service accounts for the RO and OMR	HPI-O			X	X						
UC.172	Remove related entries from HI PDS	HPI-O			X	X						
UC.172	Retire seed HPI-O and all networked HPI-Os	HPI-O			X	X						
UC.172	Request revocation of digital certificates	HPI-O			X	X						
UC.172	Identify notification that HPI-O(s) retired	HPI-O					X	X				
UC.173	Identify need to retire a network HPI-O	HPI-O					X	X				
UC.173	Select HPI-O to be retired and request retirement	HPI-O					X	X				
UC.173	Confirm request to retire HPI-O and all subordinate HPI-Os	HPI-O					X	X				
UC.173	Recognise notification of retired HPI-O	HPI-O					X	X				
UC.180	Understand what HPI-I is and purpose	HPI-I									X	
UC.180	Check for existing HPI-I	HPI-I			X	X					X	
UC.180	Identify no HPI-I exists for healthcare provider individual	HPI-I			X	X					X	
UC.180	Obtain/allocate HPI-I	HPI-I			X	X					X	
UC.180	Supply defined data set to HI Service	HPI-I									X	
UC.180	Update TDS record with HPI-I	HPI-I									X	
UC.180	Update information on existing HPI-I record	HPI-I									X	
UC.182	Provide evidence to support request for HPI-I or changes to details	HPI-I										X
UC.182	Check and verify evidence to support allocation on HPI-I	HPI-I									X	
UC.182	Request to add HPI-I to provider directory service	HPI-I									X	
UC.210	Agree to link an HPI-I with an HPI-O	HPI-I										X
UC.210	Request to link HPI-I with a located HPI-O in Provider Directory Service	HPI-I					X	X				
UC.210	Recognise notification of link created between HPI-O and HPI-I	HPI-I					X	X				
UC.220	Verify information that healthcare provider individual deceased	HPI-I					X	X				
UC.220	Locate HPI-I entries for healthcare provider individual	HPI-I					X	X				
UC.220	Remove HPI-I entries in Provider Directory Service (if any)	HPI-I					X	X				
UC.220	Remove links between HPI-I and any HPI-Os	HPI-I					X	X				
UC.220	Disable access for online portal	HPI-I					X	X				
UC.220	Retire HPI-I	HPI-I					X	X				
UC.220	Recognise confirmation of retirement	HPI-I					X	X				
UC.222	Logon to HI Service Provider Portal	HPI-I										X
UC.222	Maintain HPI-I details	HPI-I										X
UC.224	Recognise need to validate HPI-I	HPI-I			X	X	X	X				
UC.224	Submit HPI-I and other identifying information	HPI-I			X	X	X	X				
UC.224	Locate and provide HPI-I details	HPI-I			X	X	X	X				
UC.232	Request information about an organisation or healthcare provider individual	HPI-I										X
UC.232	Provide search parameters for browse	HPI-I										X
UC.232	Browse HI Provider Service Directory	HPI-I										X
UC.232	Refine HI Provider Service Directory search criteria	HPI-I										X
UC.232	View details of organisation or provider individual	HPI-I										X
UC.232	Request consent to download HI PDS information	HPI-I										X
UC.232	Download HI PDS information to provider directory	HPI-I										X

Target Market Training Marketing Engagement etc.xls	What the HI Service is, how it works and how it will affect stakeholders	HI Service		X	X	X				
"	Registration National Registration and Accreditation Scheme (NRAS), non NRAS	HI Service			X	X			X	
"	Data maintenance, data updating, software requirements	HI Service			X	X		X	X	
"	How to change existing technology to be in line with HI Service	HI Service			X	X		X	X	
"	Changes to business processes which will require stakeholders to have new skills	HI Service			X	X		X	X	
"	Data loading, data dictionary on data specs/standards to ensure data cleanliness	HI Service						X	X	
"	Purpose, benefits, upgrades, progress and future initiatives	HI Service	X						X	
FINAL Update Proposals HI Service Nov 08 (2).pdf	Commonwealth legislation	HI Service								X
"	Regulations or Mandatory Guidelines	HI Service								X
"	State and territory legislation	HI Service								X
"	Agreed governance arrangements	HI Service								X
"	Established functions of the Ministerial Council	HI Service								X