The DNA of Health IT Change Management

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Executive summary

Electronic Health Records (eHRs) represent a fundamental component of future healthcare delivery in Australia, however without adequate change management support of those who use eHRs, technology alone will fail.

The health industry in Australia is currently in transition both politically and technologically. From a technology perspective, individual specialities and/or practices are often highly electronic, but the core of the system itself is still very much tethered to the ubiquitous paper chart. Further, multiple electronic solutions exist for different settings and an adequate understanding of the integration of these systems is critical for future success.

Successful change results from understanding reactions from frontline stakeholders and addressing the challenge to realise the benefits. Systems must be configured for healthcare professionals, by healthcare professionals, with early and continued engagement across all stages of development and implementation. Clinicians and administrators need to participate in co-creating and leading the change. This paper will share PwC's experience with change management challenges associated with eHR's in Australia as seen from the individual perspectives of relevant professions – a **D**octor, **N**urse, **A**llied Health professional and Health **A**dministrator, the 'DNA' of health IT change management.

Introduction

Electronic Health Records (eHRs) are quickly becoming the rule rather than exception in Australian public and private healthcare, and stand to dramatically improve healthcare coordination as they overtake the paper-based medical chart. Two systems prominent on the eHR landscape are 1. electronic Medical Records (eMRs) and 2. the Personally Controlled Electronic Health Record (PCEHR):

1 An eMR is a computerised medical record created in an organisation that delivers care, such as a hospital or medical practitioner's office. eMRs tend to be a part of a secure stand-alone health information system that allows access to a patient's information to all medical staff within that setting. For example, a hospital based eMR is available to the authorised healthcare providers in that acute setting.

2 The Australian Personally Controlled Electronic Health Record (PCEHR) is a secure, electronic subset of a person's total health information, stored and shared in a network of connected systems. It will bring key health information from a number of different systems (including eMRs) together and present it in a single view, for those people who chose to opt-in to the system[1]. It can be accessed by that person, and their authorised healthcare providers. It is an emerging reference point for key medically relevant data that will progressively be more and more available as adoption increases over time.

"eMRs represent a monumental change transformation which can be measured in decades, rather than months or years. Australia is currently somewhere in the middle of that transformation – neither in a paper-world nor electronic."

The systems have a focus in different areas – eMRs in the public and private hospital setting and the PCEHR in primary care. However, there are areas of overlap resulting from the introduction and integration of both systems, two of which are emergency departments and specialist outpatients. This presents additional challenges and significant business practice implications for those who work in the intersecting areas. The private or public context of these business practices will also have some bearing on the nature of the change.

The introduction and adoption of these systems and others present a range of change management challenges and benefits to those involved. In our engagement with Department of Health and Ageing as the Benefits Evaluation Partner for PCEHR, we reviewed over 100 academic articles, showing benefit opportunities in key priority areas, for example medications management, viewing of shared data and communications (such as eReferrals and eDischarge). Studies conducted in other countries for business cases of eHealth such as Germany and Canada also showed significant benefits in these areas.

While this change will ultimately be positive (for a multitude of reasons including instant access to information[2], reduction in medication errors[3], reduced unnecessary tests[4], etc), there are many obstacles that will be encountered during their

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[1] Commonwealth of Australia 2011, eHealth: have your say – The personally controlled electronic health record (PCEHR) system, Consumer booklet, Department of Health and Ageing, Canberra.

[2] Smith, PC, Araya-Guerra, R et al 2005, Missing Clinical Information During Primary Care Visits, JAMA, 293(5):565-571

[3] Westbrook JI, Reckmann M, Li L, Runciman WB, Burke R, et al. (2012) Effects of Two Commercial Electronic Prescribing Systems on Prescribing Error Rates in Hospital In-Patients: A Before and After Study. PLoS Med 9(1):e1001164. Doi:10.1371/journal.pmed.1001164

[4] Deloitte 2008, National E-Health and Information Principal Committee National E-Health Strategy 30th September, 2008

implementation. The environment sees failure in 75% of implementations[5]. One dominant reason for this failure is inadequate change management; that is, the appropriate engagement of end users in system design and their understanding of how multiple systems interact with one another.

Industry Transition and Technological Transition

Transformation of the eHealth agenda across the public and private healthcare landscape is a key part of Australia's health reform[6]. With the increased focus by jurisdictions and private providers on creating departmental units to focus on the deployment and adoption of information technology, eHRs will be a key driver of broader clinical (and financial) reform across the country. Local solutions will be an important part of this environment and their successful integration with one another is critical to realise benefits. Benefits of improved care at reduced cost due to technological efficiency also have impediments to their realisation that need to be addressed such as levels of technology adoption, availability of funds to invest, and establishing a critical mass of information to be considered 'useful'.

This paper will help illustrate expected challenges to be encountered by the introduction of eHRs in multiple environments; it will explore the change management components of implementing an eMR and the PCEHR through the lens of those who will feel the daily effects most acutely: clinical and administrative staff. Specifically the paper will look at the perspective of a Doctor, Nurse, Allied Health professional and Health Administrator, highlighting:

1 Key change management challenges in relation to system acceptance and implementation

2 The likely scenarios faced when multiple systems, i.e. eMRs and the PCEHR exist alongside one another in a daily setting

3 Tangible benefits and efficiencies to be gained through the use of multiple systems.

EHRs are consistently implemented in a patchwork fashion due to their complexity, substantial capital and recurrent costs, and concerns about the impact on existing work practices from clinical and administrative stakeholders. Early and continued engagement of end users will ensure that solutions remain relevant and expected benefits are delivered; albeit through the endurance of significant changes to current work practices. Successful introduction of eHRs will involve a workforce that is engaged throughout all aspects of system development, and are aware of the relationships that multiple systems have with one another, including the appropriate use of each in different clinical settings. If such a scenario can be made a reality, all Australians, as patients and users of the system, will be the beneficiaries.

Change Management

Implementing a framework, such as PwC's Change Management Framework, that addresses all of the aforementioned areas is essential if tangible success is to be achieved. Sustained change, however, is achieved and evidenced only through sustained behaviour change. The journey of engagement, benefits identification, co-creation of solutions and co-ownership of the change journey are necessary steps to drive and help support sustained behaviour change.

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[5] Dawson, M. J & Jones, M. L 2007, Human Change Management: Herding Cats, PricewaterhouseCoopers.

[6] Commonwealth of Australia 2009, A Healthier Future For All Australians – Final Report of the National Health and Hospitals Reform Commission – June 2009, National Health and Hospitals Reform Commision.

1 Perspective of a Doctor

Siobhan Carroll
PwC Manager (Qualified Doctor)

"Doctors must be convinced that an eHR will not disrupt clinician's work practices, and therefore the quality of patient care... Resistance to change is present in every environment, but past experiences have shown clinical involvement in the design of the system will ensure a fit to local practices."

Change management challenges presented from system introduction

The care of the patient is every doctor's priority, and a team structure is at the core of a workflow which has been honed over many generations and works well[7]. Therefore, any technological advance which interrupts the established flow of patient care must be justified, introduced with the co-operation of clinical staff, and reflect their needs.

The change management undertaken before and during system implementation has been shown to have a major impact on how doctors view a computer system, and therefore their acceptance of it[8]. Previous experiences have shown that, despite their benefits, poorly implemented electronic health solutions, which do not respect the idiosyncrasies of a particular clinical environment, fail to prove their value, and may be withdrawn completely[9]. Every specialty team in every hospital has a unique routine, and individualised change management respects that, and caters to it.

Additional to their employment in teaching hospitals, most specialists treat patients in the private sector. In this environment, their role is more autonomous. The treating doctor makes his or her own decisions regarding care, and documents them him or herself. As is the case in General Practice (GP), these notes are kept in an isolated system, whether electronic, or paper-based.

It has previously been shown that doctors need to be convinced of the value of technology if they are to use it effectively[10]. This highlights the importance of identifying benefits, and imparting them to the doctors.

Resistance to change is present in every environment, but past experiences have shown that clinical involvement in the design of the system will ensure a fit to local practices, and provide champions for its long term benefits[11]. Local champions of the system, who understand local workflows, are key to its acceptance.

Coexistence of the PCEHR and the eMR in a clinical setting

Doctors are trained to examine a history, and to assess what they can see before them. It should also be acknowledged that there is no all-encompassing ICT solution which will contain all of the information provided from all forms of health provider. While both the PCEHR and eMRs will improve the current fragmentation of medical records,

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[7] Lium, J-T, Tjora, A & Faxvaag, A 2008, 'No paper, but the same routines: a qualitative exploration of experiences in two Norwegian hospital deprived of the paper based medical record' BMC Medical Informatics and Decision Making, vol. 8, no. 2.

[8] Massaro, TA 1993, 'Introducing physician order entry at a major academic medical center, part 1: impact on organizational culture and behaviour' Acad Med, vol.68, no.1, pp. 20-25.

[9] Scott, T, Rundall, TG, Vogt, TM & Hsu, J 2005, 'Kaiser Permanente's experience of implementing an electronic medical record: a qualitative study' BMJ, vol.331, pp: 1313-1316.

[10] Asaduzzaman, K & Western, M 2011, 'Does attitude matter in computer use in Australian general practice? A zero-inflated Poisson regression analysis' Health Information Management Journal, vol.40, no.2.

[11] Ash, JS, Gorman, PN, Lavelle, M, Payne, TH, Massaro, TA, Frantz, GL & Lyman, JA 2003 'A Cross-site Qualitative Study of Physician Order Entry' J Am Med Inform Assoc, vol.10, pp.188-200.

nothing replaces personal investigation, so doctors will continue to ask the same set of questions that they have always asked in order to interpret it themselves.

EHRs in both forms will improve the clinician's access to a baseline patient history. A new patient at an emergency department, or specialist outpatient department, for example, who has a PCEHR, but no history at that institution, and therefore no eMR, will no longer be a complete unknown.

While the hospital doctor may peruse the patient's PCEHR for key available information, they will then continue interacting with their local eMR, or paper notes. The degree of change to their current workflows, therefore, is unlikely to be significant.

However, as the nominated healthcare provider, the GP is considered the centralised point for compilation of patient information from all sources into the PCEHR. As a result, their administrative workload is likely to increase as they assume responsibility for the consolidation and cleansing of its contents. This will depend on the degree to which existing systems are integrated.

Expected benefits to be realised through system adoption and use

For doctors, the major benefit of the PCEHR will be the ability to view historical information on new patients. This promotes better-informed decision making, and saves on repetitive testing and examinations. However, this will only materialise over time, as it becomes a repository of information.

The benefits of electronic record keeping have already been realised by many GPs, such as legibility, improved information sharing, and time and cost-efficiency.

In Training Hospitals, the administrative tasks generally performed by junior doctors, such as orders entry, clinical note writing and history collation are performed more efficiently with an eMR. This, in turn, provides the Registrar and Consultant with the information required for timely decision making.

On a practical level, the automation of previously time-consuming administrative tasks will increase the time available to doctors for learning and involvement in patient care.

Similarly, accessing a patient's chart from any location has a major advantage for medical staff, in improved efficiency[12]. Currently, the doctor needs to physically locate the patient's chart in order to complete their paperwork. An eMR can be opened from any networked location, even when in use by another clinician.

Close consultation with senior doctors is required in order to communicate the personal benefits of each system[13]. For example, the benefit of improved legibility may be difficult to convey to a Consultant who only ever has to read his or her own notes, and has never learnt to type, but the ability to design a particular clinical note template for his/her Registrar to use, is widely appreciated.

There are significant benefits to doctors of converting to electronic medical record keeping. Such a conversion, however, requires an understanding of established structures to harness the support and co-operation of medical staff at every level.

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[12] Ash JS, et.al. (op.cit).

[13] Asaduzzaman K & Western, M (op.cit).

2 Perspective of a Nurse

Chris Norton
PwC Senior Manager
(Registered Nurse)

"Implementations of eHRs has to be based on evidence that is real to the nurse... the eHRs must be completed along with appropriate clinical services redesign to ensure there are increased efficiencies, improvements in quality of care and benefits realisation for the nursing profession."

Change management challenges presented from system introduction

We often watch change unfold and comment, "If only this had been better planned". It is widely accepted that the implementation of eHRs are a major undertaking and will significantly impact the future of nursing. The impending challenge is to create a culture within nursing that promotes change, in preparation for the implementation of these significant shifts in clinical workload. We must ensure that nurses are adequately engaged, to allow changes to be easier to understand and accept.

The challenge comes in gaining acceptance of a fundamental change to how nurses have delivered and recorded healthcare for decades. Direct patient care should consume the majority of a nurse's time; therefore they do not want a system that removes them from patient care. There are three central components that need to be addressed when implementing eHRs, and how nurses work, in order for the change to be successful:

1. The change needs to be evidence-based and in the best interest of the patient
2. In the case of an eMR the change needs to be driven by nurses and other clinicians, not health administrators
3. In the case of a PCEHR the change needs to be accepted by the healthcare consumer as a nurse will not go against his or her patient's wishes

Nurses have a very personal and practical role, and are therefore motivated to provide the best patient care. Nurses are not resistant to change in general, only change that is being forced on them. In fact, to ensure the provision of quality healthcare that is safe, accessible, responsive, efficient, effective, sustainable and appropriate, nurses and midwives need to regularly examine their practice, and where necessary, change it.

Many managers and hospital administrators fail to appreciate how the bureaucratic changes of recent times have caused nurses to become distrustful of health service managers. Cuts to nursing staff, increasing workloads, increasing paperwork, and ever-decreasing ancillary services are examples of the impetus for this mistrust.

To this end, the implementation of eHRs has to be based on evidence that is real to the nurse. Although the demonstration of this evidence needs to be completed through a number of methods, the most effective technique is actual observation. Therefore, engaging nurses, to provide sponsorship during the implementation of eHRs is of the highest importance.

Coexistence of the PCEHR and the eMR in a clinical setting

Nurses work across all of the acute, subacute, community, residential and primary care sectors. As such, nurses will be heavily involved in both the use and support of eHRs in all of those clinical settings. The nature of their employment dictates the interaction that nurses will have with eHRs. For example, nurses caring for healthcare consumers within an inpatient setting will primarily utilise the eMR as their medical record, while a nurse working within a primary care sector, will make use of the PCEHR.

Similar to GPs and independent Allied Health professionals, it is likely that nurses in the community, or primary care settings will have some responsibility for the maintenance of the PCEHR, to ensure the timeliness and accuracy of the information

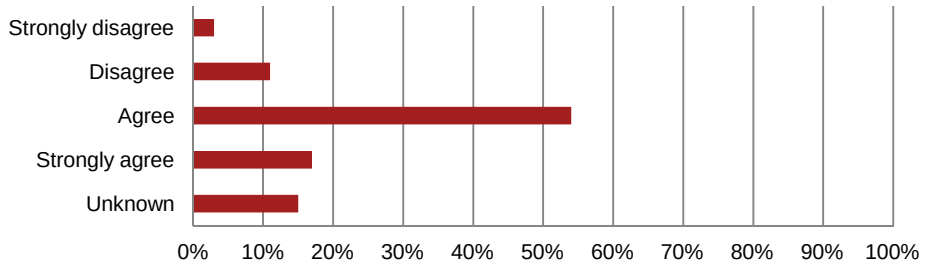
within it. It is likely that they will still rely on their primary eMR as the source of truth for their care provision.

Particular settings where it is likely that the coexistence of the PCEHR and eMR will impact an individual nurse are the emergency department, and specialist outpatient clinics. Nurses working in these areas will continue to use their current eMR, or paper chart, but will also need to familiarise themselves with the PCEHR to access background information, or provide updates to the record.

In essence, the successful coexistence of these two systems, to nurses, will rely on the implementation of the three central components of change management outlined above. If these are achieved it will make less of a difference if one, two or ten systems surround the care of the health care consumer.

Expected benefits to be realised through system adoption and use

There is anecdotal scepticism from nurses, regarding whether or not eHRs will make their delivery of patient care easier and more effective. However, a recent survey of over 1400 nurses on a client engagement found that they had an overall positive response to a proposed eMR. *71 percent of nurses either agreed or strongly agreed that the implementation of an eMR would be beneficial to their daily workflow*.[14]



Conversely, in the same survey, only 31 percent of these nurses agreed or strongly agreed when asked if they felt that the eMR was ready to be used in their workplace in its current form; a form that was already in use successfully in many similar healthcare facilities, thus reiterating the need for change management as a critical requirement for acceptance by the nursing profession.

Principal benefits of eHRs for the nursing profession include:

- Increased access to clinically relevant patient information
- Improvements in the level of consistency of patient care from nursing staff
- Improvements in handwriting translation and legibility of healthcare record
- Decision support and alert functionality.

Provided that the implementation of any eHRs are completed utilising adequate change management expertise, and take into account the three centrally important components mentioned as nursing change management challenges, then evidence suggests nurses should be valuable proponents of the change agenda.

[14] Source: Anonymised data from a PwC Client.

3 Perspective of an Allied Health professional

Elizabeth Mackenroth
PwC Senior Consultant
(Qualified Podiatrist)

"A common misconception is that consulting with general Allied Health representatives is adequate. In order to facilitate and achieve widespread adoption of IT initiatives, a specific and targeted consultation plan must be developed."

Change management challenges presented from system introduction

Allied Health professionals comprise 18% of the health workforce[15], but the disciplines identified under that banner are broad and varied, crossing multiple health care settings. Therefore, the opportunities and challenges that eHRs bring to the Allied Health profession are unique.

The need for extensive Allied Health consultation is vital in both eMR and PCEHR implementations. Historically, engagement and consultation regarding new initiatives or developments has not always been as effective with Allied Health professionals as with their medical and nursing colleagues. This is partly due to the variety and heterogeneous nature of disciplines, which are individually small and each with their own unique work practices, eHealth solutions, issues and challenges[16].

A common misconception is that consulting with a general Allied Health representative is adequate. In order to facilitate widespread adoption of IT initiatives, a targeted consultation plan must be developed. Such a plan must include engagement with numerous disciplines to understand their individual requirements and work practices, and therefore the effects of the introduction of eMRs and the PCEHR[17].

Considering that the majority of Allied Health professionals are employed in the community and private sectors (55% of the workforce[18]) a consultative approach is required in the case of the PCEHR. Without an understanding of the private Allied Health environment, key insights will be missed, and will jeopardise PCEHRs uptake.

Allied Health clinicians in the public sector must be reassured of any additional work demands and eMRs should support work practices, as oppose to the converse. The Allied Health workforce is not supported with the same benchmarking data that governs nursing and medical staffing. Consequently, the broader Allied Health discipline can be wary of new initiatives that may result in additional workload, especially in the absence of clearly articulated benefits. This is highly relevant for eMRs where potential duplication may occur, particularly around data capture. Linking eMRs with existing reporting and data systems will provide an undeniable incentive and encourage its early uptake and compliance.

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[15] Weitzman ER, Kaci L, Mandl KD Acceptability of a personally controlled health record in a community-based setting: implications for policy and design J Med Internet R es. 2009 Apr 29;11(2):e14.

[16] Commonwealth of Australia 2011, The eHealth readiness of Australia's Allied Health sector: Final report, Department of Health and Ageing, Canberra.

[17] Commonwealth of Australia (ibid)

[18] Allied Health Professionals Australia 2008, Allied Health in Australia: Priorities for health care reform; key professions and organisations, Ministerial, Allied Health Professions Australia, Melbourne.

Coexistence of the PCEHR and the eMR in a clinical setting

It is not uncommon for Allied Health professionals to work across multiple settings. The variability in working environments for individual practitioners places Allied Health professionals in a strong position to drive the adoption of eHealth initiatives, as they will understand and appreciate the current gaps in information flow which the eMR and PCEHR seek to bridge.

Although clinicians working across different locations and healthcare environments may be beneficial for change and adoption, it also raises the risk of change fatigue. A clear and combined communication and education strategy is necessary to explain the individual benefits offered by the PCEHR and the eMR. Without this, Allied Health professionals may not understand the differences between the two systems and may perceive them as opposing or overlapping, instead of complementary.

Expected benefits to be realised through system adoption and use

To facilitate successful eMR and PCEHR implementation a detailed benefits strategy will be necessary that is setting specific and which articulates both short and long term benefits. Poor communication of that vision will result in Allied Health professionals becoming disillusioned in the short term and potentially limit uptake.

The need to define and highlight the short term benefits to successfully engage Allied Health uptake of eHRs is essential. Short term benefits include the following:

- Increased access to up-to-date patient information
- Improved quality of care and treatment due to accessible information
- Improved communication between Allied Health Professionals and:
  - public and private hospitals
  - community agencies
  - the primary care sector
  - other multi-disciplinary team members.

Improved continuity of care and collaboration between multi-disciplinary team members is a significant benefit, as the flow of information between clinicians is not always complete or timely, particularly for complex and chronic disease patients[19][20].

EHRs will also provide increased visibility of the skills and expertise Allied Health professionals can provide. Recent studies have demonstrated that there are varying degrees of awareness in General Practitioners knowledge and understanding of different Allied Health professional roles and scope[21]. Improved communication and transparency of treatment and management plans will be beneficial in promoting collaboration, and educating other clinicians about the role of Allied Health professionals in patient care.

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[19] Commonwealth of Australia (op.cit)

[20] Perlin J, Kolodner R, Roswell R. 2004, The Veterans Health Administration: Quality, Value, Accountability, and Information as Transforming Strategies for Patient-Centred Care, American Jrnl of Managed Care, 10(Part 2):828-836

[21] Australian Health Workforce Advisory Committee 2006, The Australian Allied Health Workforce: An overview of workforce planning issues, Publication, Australian Health Workforce Advisory Committee, Sydney.

4 Perspective of an Administrator

Change management challenges presented from system introduction

Rebecca Norton
PwC Senior Manager (former Director of Community Health Information Management)

"Administrative groups are trained to deliver expertise wholly within a healthcare setting and as such will be every bit as impacted as their clinical colleagues... recognising these challenges and acknowledging the role that they play in the broader adoption process can build powerful allies and support through early adoption."

It is a telling sign that the *Australia's Health 2010*[22] report does not include administrative staff when referring to the 'health workforce'. Yet in terms of the change impact of the implementation of an eHR, this broad ranging group is often among the first impacted. Although the administrative element of the extended health workforce is comparatively small, they play a key role in the capture and management of health related information that supports care delivery on a daily basis. Beyond the front reception, the range of roles under the administrative banner (such as health information managers, clinical coders, ward clerks, medical records officers and practice managers) are positioned to be the centre point of support when the implementation teams have gone and business as usual reflects a new digital age in healthcare.

There is limited literature that deeply explores the impact of eHRs on the administrative workforce. The full extent of this impact is not likely to be well understood in advance of wide-spread implementation and will vary considerably depending on the healthcare setting. However, there are two key change management challenges that can be predicted:

1 *Apprehension that there will be no place for administrative functions in an electronic world.* It is a common misconception that an electronic environment will be one without human intervention. Striking at the heart of the individual's need for security, clear communication is required to build understanding of the change of roles rather than the replacement of duties.

2 *Administrative groups feel they are the forgotten workforce.* Professions such as Health Information Managers (HIMs) and Clinical Coders are trained to deliver expertise wholly within a healthcare setting and as such will be every bit as impacted as their clinical colleagues. Further administrative staff supporting wards, medical records, medical practices, and private clinics will experience significant change in the way they go about their daily tasks. From a change perspective, recognising these challenges and acknowledging the role that they play in the broader adoption process can build powerful allies and support through early adoption.

Coexistence of the PCEHR and the eMR in a clinical setting

To support clinical staff in the provision of safe and timely care, administrative staff within any healthcare setting have a common goal, matching the objectives of eHealth solutions – to provide the right information, to the right person, in the right place, at the right time. But what happens when the information to be relied upon comes from two alternative sources, one driven by the patient (PCEHR) and one driven by the clinician

[22] Australian Institute of Health and Welfare 23 June 2010, Australia's Health 2010, Report, Australian Institute of Health and Welfare, Canberra.

(eMR)? The question arises, how will conflicts of information be reconciled and what role will administrative staff have in validating conflicting GP details, multiple aliases and even linking records with the patient Individual Healthcare Identifier? It may well be that administrative staff find themselves in a default auditing role of non-clinical information as the two systems are implemented into the clinical setting.

In a world of PCEHR and eMR, where both healthcare providers and consumers contribute to the information contained within the health record, the complexities and legalities of information ownership becomes blurred. It is here that health information managers are poised to provide valuable input to assist with finding a resolution that addresses the concerns of a conservative and worried population.

Expected benefits to be realised through system adoption and use

In terms of the PCEHR there is potential for reduction in the degree of general health and demographic information that is required from patients, as well as a reduction in the degree of 'chasing' of information from other sources. Time and motion studies of administrative staff in healthcare settings reveal time and again the high degree of wastage on tasks such as searching for patient records and information (such as names and addresses) and duplication of statistical data entry[23].

Surveys conducted in 2003 with clinical coders[24] identified a number of potential benefits expected to be derived from the implementation and adoption of an eMR, including:

- Greater availability and easier access to information
- Improved legibility of records
- Increased involvement of clinicians in the coding process.

These benefits can be considered relevant to the administrative workforce more broadly, in addition to a perception of improved data quality and the potential to reduce the degree of manual tasks and streamline processes. Systematic process review and standardisation will be critical to creating the right environment for these benefits to be realised.

With administrative staff working side by side with patients and clinicians these systems are intended to support, they hold a prime position to be able to guide others through the change and adoption. Organisations that are able to achieve faster uptake and competency with their administrative workforce may derive great benefit from having a broader network of 'gurus' to help drive the eHealth agenda.

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[23] Grove, AL, Meredith, JO, Macintyre, M, Angelis, J & Neailey, K 2010, 'Lean implementation in primary care health visiting services in National Health Service UK' BMJ vol.19, pp:1-5.

[24] McKenzie, K, Walker, S & Lewis, MJ 2003, 'Building the Bridge to E-Coding' Health Information Management Association of Australia Conference 8-10 August 2003, Sydney.

5 Takeaways

The perspectives presented within this paper illustrate that the complexity of implementations of electronic Health Records cannot be underestimated. The introduction of systems including eMRs and the PCEHR will present a gradual shift in the way which healthcare is provided, and the requirement for a robust change framework to support this 'evolution' is a necessity to mitigate change fatigue. Electronic systems have the ability to revolutionise healthcare and bring benefits not only to end users, but an improvement in patient care and overall patient safety.

The future will see a move away from the paper chart in line with the national health reform agenda, and as the industry moves forward, so too will improvements in technology. Clinicians and healthcare administrators (the 'DNA') must be engaged throughout all aspects of system development and implementation, with system functionality and outputs required to reflect their individual needs. Staff must understand the correct use of multiple systems, including local solutions and their interaction with one another, to ensure implementations are not counterproductive and their introduction leads to positive outcomes for the patient.

While there is a general feeling of acceptance that electronic Health Records are the correct path into future medical practice, the examination of different craft groups shows some variations in their major concerns.

Areas of focus

Doctors *One-on-one consultation*	• Want early and continued consultation, that is focused on individual needs • Do not want IT changes to interrupt established clinical workflows, through increased time spent on 'administrative tasks' • May need to adjust expectations about the repository of clinical information immediately available, as many benefits are long term
Nurses *Your change leaders*	• Feel that bureaucratic change is often thrust upon them and need to be engaged and empowered to drive change themselves • Have concerns about a clinical information system taking away from their patient care time • Require evidence based examples of value in their own environment
Allied Health Professionals *Harness your early adopters*	• 'Catch 22'; Allied Health typically early adopters of technology, but historically not engaged early • Have concerns regarding the duplication of tasks and additional workloads, which need to be supported by clear benefit messages • Have an opportunity through eHRs for increased visibility of skills and expertise
Administrators *Build your support base*	• Require clear and honest explanations of changing roles • Are often the forgotten stakeholders • Can be up skilled and positioned to be champions that support the change process

Commonalities

Each group also share some common change management themes:

- There is a need to understand stakeholder concerns to the question: “How is this going to change my practice?”
- End users need to be engaged throughout all stages of system development, to ensure current work practices are integrated into the journey
- The change should be measured, monitored and understood as medicine is evidence-based – so should be the change to an electronic environment.

While none of these themes is particularly surprising; the challenge lies in the collection, understanding and management of this information to allow for a greater adoption of eHRs from clinical and administrative staff. Our experience has shown, that this can be achieved through a structured process utilising customisable toolkits which include a tailored benefits approach.

6 How, and when, to engage

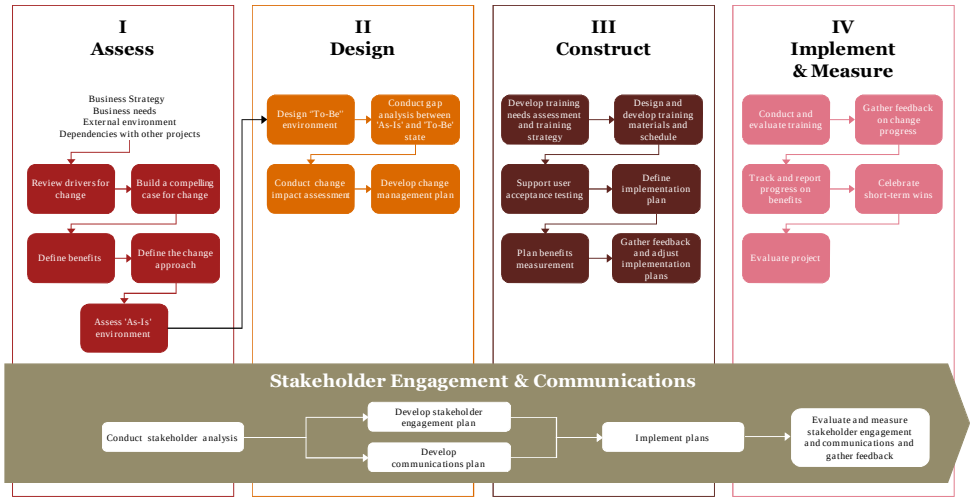
PwC's Change Management Framework, coupled with deep experience in the application of change management methodologies has resulted in a long and successful history of partnering in health services transformational change. Our analysis and previous experience illustrates that the involvement of end users (stakeholders) in all aspects of a project's lifecycle, is critical to its success. Similarly, the accurate and complete identification of the 'as-is' environment is necessary to ensure future processes are fit for purpose, and any change impacts can be identified.

The change management process will be hard, but the activities required to support any body of work must include adequate leadership, early and continued stakeholder engagement, an understanding of current practices, clearly identified benefits, be supported by appropriate training and meet the needs of end users. Without one or more of these elements, the risk of failure substantially increases.

A structured approach supports deep engagement with stakeholder groups to surface the challenging issues, allowing them to be appropriately engaged in the process, and ensuring end solutions are co-designed and relevant. It is essential that stakeholders assist from early diagnosis stages and help to define why these bodies of work are taking place, right through to implementation and evaluation of project outcomes.

PwC's Change Management Framework identifies the necessary activities and outputs to be delivered from the *Assessmen*t phase and commencement of a change program, through to *Implementation*, including evaluation of program outcomes. For further details of this approach please contact the authors.

PwC Change Management Framework



Toolkits

To allow for the structured collection, understanding and management of stakeholder requirements, PwC incorporates toolkits into existing processes to:

- Increase rigour by client project teams to ensure that project customers (eg clinicians and administrative staff) are properly engaged to lead the IT implementations

- Standardise change activities and processes to enable a common language and understanding to develop client staff and contractors
- Improve development of skills and knowledge in change management for client staff.

Benefits

Included in the toolkits is a comprehensive benefits approach which can be a critical differentiator that is often overlooked in the change journey. Given the length of time to realise benefits, they must be measured, managed and reported from the outset. Failure to do so leaves eHR programs vulnerable to valid criticism questioning delivery. This scenario is made very real by looking at the large eMR program in the United Kingdom (NPfIT), which could not sufficiently demonstrate benefits[25]. This combination of factors highlights an overall theme for eHRs: *the systems alone are of far less importance than consistent clinical leadership focusing on realising benefits from the outset.* An extract of both a benefits tracking report from a Health IT implementation and a subsequent extract from the benefits paper is provided. The research paper was co-written by PwC and the client.

Benefits Dashboard and report snapshot[26]

PwC is committed to supporting healthcare organisations with change management challenges. If you would like more information relating to this paper please contact the authors.

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[25] Randell, B et al 9 Sept 2010, The NHS's National Programme for Information Technology (NPfIT): A Dossier of Concerns.

[26] Forsythe, J, MacDonald, A, Wilhelm, E, Strachan, M & Evans, D 2010, 'Efficacy of Electronic Discharge Summaries: A Case Study Demonstrating Early Results at Two Hospitals' eJHI vol.6, no.1, e.8.

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He has worked in the health industry in New South Wales, Queensland and Western Australia.

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Siobhan is a Manager within our National Health Practice. As a Business Change Manager on the integrated electronic Medical Record Program (ieMR) for Queensland Health. Siobhan has been involved in consultation with medical staff for the build of the statewide system and preparing stakeholder engagement and communications for its first release.

With over 6 years consulting experience, Siobhan has led and participated in health projects in diverse settings, including a Private Hospital, Medical Indemnity Provider and Travel Insurance Company.

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Prior to this work, Elizabeth was involved in a Clinical Service Redesign project at the Royal Children's Hospital in Brisbane and state wide initiatives and projects in the area of Diabetes.

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Rebecca is a Senior Manager within our National Health Practice, with over 5 years experience in the health industry. Most recently, Rebecca worked as the Team Leader for the Benefits Evaluation Partner for the PCEHR Program, Rebecca is responsible for the monitoring and measurement of benefits realisation of the national program.

Rebecca is an experienced project manager who brings a combination of clinical redesign and information management know-how as a result of her work with teams in the acute, community and state wide health settings.

Rebecca holds a Bachelor of Business Management from University of Queensland, and is a current member of Health Informatics Society of Australia.

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