Information systems study – ehealth – assignment

Business

eHealth Introduction For the purpose of our report we have chose the Department of Health and Ageing’s eHealth system. This choice differs slightly from the instructions of the assignment as eHealth is not a current information system – i. e. it is still being designed and implemented. The key motivation behind decision was we assumed management would much rather a report on a new and upcoming system than one they would most probably already know about.

If we have to write a report to management, they don’t need analysis of their current systems, they should know them – so we have decided to why to provide some analysis on a system currently being implemented. Choosing eHealth gave us greater scope for the inclusion of our own considerations and analysis, which is most evident in the rich picture and transaction process diagrams that we have created. Conversely, one drawback of this choice was the need for assumption was heightened.

We have detailed our assumptions in this report also. eHealth Background “ e-Health is the electronic management of health information to deliver safer, more efficient, better quality healthcare. The Australian Government is fully committed to e-Health and has allocated $188+ million to help facilitate the transition of paper-based clinical record keeping to electronic means for better information exchange” . E-health falls within a nation wide movement for change in the health sector.

The key drivers for this movement seek to improve the safety, reliability, accessibility and quality of patient information. eHealth is a proposition which seeks to create a standardised electronic health information service

for all in the health sector. It will provide a variety of information that is currently stored entirely in folders and paper. E-Health main task is to reduce costs while increasing the speed and accessibility of this information while furthering the security surrounding this sensitive information. Health in the News eHealth has been an issue firmly fixed in the public eye for a long period of time. Much like Centerlink's Smart Card project, eHealth has political drivers constantly pushing its implementation. Calls for its implementation span as far back as the early 2000s as evidenced by Health Minister Tony Abbott's description for its need: ".. an electronic health record, communicated electronically among health care providers, would mean safer, better, more convenient and more efficient health care.

For doctors and other professionals, it means less repetitive taking of histories; for governments and other funders, it means less duplication of diagnostic tests; for patients, it means more access to their health records and more capacity to manage their own health; for everyone, it means fewer potentially disastrous mistakes because of avoidable ignorance". eHealth is still currently entrenched within the public eye. As recent as September 2007 " a strategic workshop discussing the challenge of implementing a rational e-health system in Australia was held in Parliament House, Canberra" .

Among other things this workshop provided a forum for dialogue on a recently released discussion paper of ideas central to the establishment of eHealth as an information system. The specific discussion paper was entitled " E-Health and the Transformation of Healthcare" and it discussed the cost to the nation and the individual of continuing with Australia's current disjointed chronic health care system. The paper contended that " improved knowledge

sharing and better care plan management for patients with chronic diseases could generate direct savings to the health care system of $1. 5billion per annum.

Savings to the community from associated non-healthcare costs are of the same order. ” e-Health Aims eHealth is an information system that aims to provide a centralised store of health records to support the Australian health sector. Specifically the information system seeks to improve the safety, reliability, accessibility and quality of patient information. Through creating a standardised electronic health information service for all in the health sector the system aims to confer the benefits of cost reduction, minimised information loss, and increases in service delivery efficiency within the Health sector.

Although eHealth is still in the design and implementation stage, it is envisaged that it will become a nation wide interconnected system, allowing all medical staff alike to access and update patient’s information in real time. Rich Picture Diagram of eHealth Our interpretation of the eHealth system in a Rich Picture format is set out below. Roles within eHealth With the end aim being a nationwide system, it is safe to assume that roles within eHealth will be large in number and wide ranging in nature. In the (medical sector) participant sense Doctors, Nurses, Chemists will play a role in using and updating the system.

Being a technology based system one would expect backend I. T staff to maintain and update the system as required. Examples of I. T related roles that would be required include Data Entry clerks, Helpdesk staff, Network

and Systems Administrators and Systems Analysts. Furthermore, being a current implementation one can see the need for I. T implementation staff including Business Analysts, Project Managers and Systems Architects. One of the key goals of the interface is to provide national access to health records. Thus we have assumed information transfer would be carried out electronically of the internet.

Given that unauthorised access to Health records presents a security and privacy issue the need for I. T security becomes paramount. Therefore backend IT security infrastructure including encryption, fire walling etc would be required. This in itself creates the need for IT security staff including Network security analysts, security architects and the like. eHealth would provide value to a wide ranging set of Users. Doctors, Nurses and Chemists could use the real time access to Patient records to refine the provision of services whilst maintaining information accuracy and integrity.

Pharmaceutical Companies would use information from this system to alter production of medicine and alter supply of medicine to most aptly suit the needs of different localities. Furthermore the Government could use the information generated by this system to identify health trends and improve public health policy to better match the needs of the Australian public. The Information system as a whole would create widespread access to health records as needed, in real time. Information Requirements of eHealth

The information to be recorded against a Patient in eHealth would include any information that is deemed necessary in a medical and administrative sense. Obvious administrative requirements would include Patient name,

Contact details, Emergency numbers, and Next of kin contact. This data would allow the initiation of a Patient record within the systems as well as means of future contact. Medical information requirements would include Medicare number, Private provider (health fund) information, Blood type, Previous procedures, Previous conditions, Current conditions, Height, Weight, Dental records, Allergies, Medicines etc.

This would set a medical information base for each Patient. It is imperative to point out that the above base information requirements have been refined to guard against system over complication. Information overload will lead to a slow inefficient system, which is in direct opposition to one of the goals of the system. Over complication also leads to increased load on backend IT infrastructure which raises the cost of implementation and maintenance. Example Systems Applications of eHealth In differing circumstances eHealth would act as a MIS, EIS and DSS.

As an MIS (Management Information System) eHealth would assist Doctors and Nurses make decisions by providing them with information as needed. eHealth could represent an EIS (Executive Information System) to a Pharmaceutical company, assisting the tailoring of medical supplies on an as needed basis. As a Decision Support System eHealth would assist in various scenarios including allow for the rostering of medical staff, the scheduling of appointments in order of severity and even the ordering of supplies for a medical practice. Transaction Process Diagram

A representation of the ability of eHealth to adapt to a current day scenario is set out in the below transaction process: System innovations One of the

key systems innovations is the creation of a central store of medical records. As detailed this will have flow on affects of safety, reliability, accessibility and quality of patient information. Theoretically this will lead to efficiency in response and diagnosis times. The implementation also lends itself towards the much vaunted movement towards a paperless society. Paperless society ideology argues that this will lead to reduction of information loss and ease of information transfer.

As mentioned previously eHealth will a foster improvements in Pharmaceutical catering and accurate health policy creation in response to real time trends. Assumptions Given that eHealth is not a current information system we recognise we have made a few assumptions in the composition of this report. First and foremost we have assumed that various the usability features of the interface would be inherent. These include remote access to the interface through terminals would be allowed, speed of information transfer would be technically deliverable, and availability of training would exists to train users in the use of the interface.

We also assumed adequate systems security controls were enforceable. As previously mentioned we supposed information transfer would be carried out electronically over the internet, and unauthorised access to Health records presents a security and privacy issue, thus the need for I. T security becomes paramount. We recognise that systems security including both technical, (IT security), and administrative (access passwords, logins etc.) are an inherent requirement of the eHealth information system. Finally we have assumed that capital backing from the Government exists to see the project through in its entirety.

Given the complexity and scale of the implementation Government commitment is essential. Reference List Department of Health & Ageing, An E-Health Report Card – Speech Notes for the Australian Health Summit, 2007. @ http://www. health. gov. au/internet/ministers/publishing. nsf/Content/sp-yr07-ta-abbsp200807. htm? OpenDocument&yr= 2007&mth= 8 GAP LG solutions, Implementing a Rational E-Health System in Australia, 2007. @ http://gap. lgsolutions. com. au/e-Health_Workshop DoHA, DoHA external website: eHealth webpage, 2007. @ www. health. gov. au/e-Health