

An Innovative IT Initiative

The Docmail Project

A joint initiative between the Illawarra Division of General Practice and the Illawarra Area Health Service, funded by the Department of Health and Aged Care

(August 1999 – August 2000)



**Illawarra Division
of General Practice**



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1. PURPOSE

This report was prepared by the Illawarra Division of General Practice (IDGP) for the Australian Divisions of General Practice (ADGP) and Department of Health and Aged Care (DHAC).

The report summarises the processes involved in implementing an innovative patient information notification and retrieval system more commonly known as “Docmail”, and associated issues that arose with its development and implementation.

The report has been designed as a useful reference for DHAC, ADGP, Divisions of General Practice and Area Health Services.

The report focuses on General Practice, timely transfer of patient information, data collection methods and processes, General Practitioners, AHS issues and electronic communication.

This report addresses the rationale for the project, the interventions realised, outcomes achieved (evaluation), discussion of key issues and lists recommendations.

2. EXECUTIVE SUMMARY

The Docmail Project was a joint initiative between the IAHS and the IDGP, funded by the DHAC through the innovative funding pool, round one.

Docmail is a computer program designed to retrieve specific patient information from the Hospital Patient Admission System, place that information into an appropriate format and transfer the information to the patient's nominated GP (via fax or e-mail). Data transferred to GPs include the patient's date of proposed booking, admission date, admission ward, change of ward, and discharge date.

The Docmail program was implemented into all 9 IAHS hospitals and 96 Illawarra GPs purchased an IAHS e-mail account in order to receive Docmail messages via e-mail. In addition, 46 Illawarra GPs receive Docmail via fax, with 40 Shoalhaven GPs also receiving Docmail via fax.

Many Illawarra GPs were in a unique position having just participated in the Illawarra Coordinated Care Trial, thus being computerised and familiar with e-mail.

Numerous key areas were identified and actions implemented to ensure the project remained sustainable post project whilst meeting the needs of the target groups and stakeholders. Needs were identified and quality assurance processes were implemented.

In addition to achieving successful implementation Docmail influenced a number of further initiatives such as the e-mailing of discharge summaries from The Wollongong Hospital and access to patient history on the IAHS Intranet.

Processes have been implemented to improve communications between Illawarra Consultants and GPs by providing access to GP e-mail addresses.

Challenges and opportunities at a local, state and national level have been documented.

3. BACKGROUND

Prior to funding being received to implement Docmail the IAHS and IDGP held informal discussions over a period of 3 years to determine the possibility of implementing the Docfacs program into IAHS hospitals. Docfacs was a computer program designed, like Docmail, to retrieve specific patient information from the Hospital admissions system and send to the appropriate GP via fax or e-mail. MacAvoy Computing was commissioned by NSW Health to support Docfacs. A desire to implement the e-mail version of Docfacs was shared between the IDGP and IAHS. For multiple reasons including a lack of resources to coordinate the implementation, little progress was made until the opportunity arose through the DHAC innovation funding pool to employ the necessary resources to implement the program.

The IDGP was successful in its application to implement the Docmail project, which was a joint initiative between the Illawarra Area Health Service (IAHS), (See Appendix 1) and the Illawarra Division of General Practice (IDGP) (See Appendix 2).

The timeframe for the Docmail project was 12 months, (August 1999 – August 2000).

The aim of the project was,

“To improve the continuum of care across the hospital community interface by delivering to the appropriate General Practitioner quality inpatient information in a timely and secure manner”.

The objectives were:

- 1. To deliver identified patient information to identified GPs electronically.*
- 2. To adequately represent the needs of all local stakeholders and ensure maintenance of the quality control cycle.*
- 3. To disseminate evaluation findings to other Divisions and Area Health Services to assist further implementation.*

The deliverables to be achieved were:

- 1. Detail GP needs re information to be included on Docmail transcript.*
- 2. Audit current IT systems within the IAHS for possibility of inclusion in DOCMAIL transcript.*
- 3. Liaison with Docmail consortium for necessary changes to the Docmail protocols.*
- 4. Evaluate and make necessary changes as part of the quality control cycle.*
- 5. Launch Docmail to GPs.*
- 6. Document process for dissemination.*
- 7. Disseminate findings as per funding requirements.*

The Docmail Steering Committee was formed to guide the to project.

It is important to differentiate between the Docmail project and the Docmail program. The Docmail project consists of all factors both Information Technology (IT) related and non-IT relevant to the development, implementation and sustainability of Docmail. Such issues may include information management, policies and procedures that effect the implementation of the Docmail program. The Docmail program refers to the software development.

4. PROJECT RATIONALE

At the beginning of the project there was no mechanism in place for GPs (who have been nominated by the patient at the point of admission) to be notified when their patient had an episode of care in an IAHS Hospital. The GP relied on the patient to present post discharge to general practice or alternatively, for a family member to notify the GP of the admission. The “Docmail” program had the potential of providing GPs with this information without relying on the intermediary process.

Docmail provided an avenue for improved data access, which in turn can improve care for patients. This view is consistent with the NSW Health Information Privacy Code of Practice (IPCOP), which states,

“ if clinical information is not readily available to providers of health services, the care or interests of clients/patients may be compromised” (NSW Health 1998 pg 16).

The Illawarra Division of General Practice (IDGP) had been a key stakeholder in the implementation of the Illawarra Coordinated Care Trial (ICCT). The trial saw 45% of Illawarra GPs utilise a computer for clinical practice as well as a personalised e-mail account. This allowed the equipment required for Docmail and the associated costs to remain minimal as many GPs had already computerised due to the ICCT. This provided a sound basis to progress with the Docmail initiative.

The IAHS and IDGP have experienced a collaborative partnership for a number of years and were once again united in their approach to electronic information transfer being the way of the future. There was no NSW Area Health Service fully utilising the Docmail (e-mail component) communications with GPs. This gave the Illawarra the opportunity to prototype processes and procedures to achieve timely and functional electronic information delivery between hospitals and GPs for the betterment of ongoing patient care.

The introduction of the Practice Incentive Program (PIP) payment for electronic prescribing, modem, and e-mail account coincided with the implementation of Docmail, thus was an incentive for GPs to progress with Docmail.

Much discussion has been initiated Australia wide relevant to improving the integration of health services. Docmail has the potential to improve the integration of patient care by including the GP in the Hospital/ Acute care cycle (through improved provision of patient information). This also recognises GPs as being central to primary healthcare, which is consistent with the IDGP mission:

“to provide the framework to enhance the role of the General Practitioner in order that General Practice is recognised to be the cornerstone of primary health care service delivery to the benefit of the Illawarra community”.

5. INTERVENTION

5.1 Program Development Stage

In order to advance to the implementation stage, a number of processes were to be undertaken in the program development stage. These included the formation of the Steering Committee, development of the project plan, IT set up at both the IDGP and IAHS, and the pilot phase of the program. The program development stage occurred prior to August 1999.

5.1.1 The Formation of the Steering Committee

The Steering Committee was formed with representatives from both the IAHS and the IDGP (see Appendix 3). The role of the Steering Committee was to guide the project towards successful implementation and sustainability. The Steering Committee was committed in its approach to achieve this aim and agreed to meet bi-monthly.

5.1.2 The Project Plan

The Docmail project plan was developed in order to progress the project to successful implementation and sustainability. The plan was distributed to the members of the Docmail Steering Committee for review and approval prior to its contents being progressed.

5.1.3 Setup Phase – IDGP GPs

For GPs to receive Docmail they were required to have an e-mail account within the Department of Health network. The IAHS was nominated and agreed to become the host for the email accounts. The IDGP assisted GPs in the Division to establish the Internet accessible e-mail hosted by the IAHS.

The IDGP took responsibility for:

- e-mail account establishment fees
- Installation of Microsoft Outlook Express
- One-to-one training in the use of e-mail

The IDGP took financial responsibility for and ownership of:

- Vet anti-virus software
- Microsoft Exchange Client Access Licences

GPs accessing DOCMail were required to:

- be a member of the IDGP,
- have access to a computer and modem and phone line, and
- pay a \$50 fee (pre GST) to cover the first year of e-mail use.

The GP also paid for dial up access if they did not previously have access.

The response rate exceeded expectation, with 57 of a possible 196 IDGP members having purchased an IAHS e-mail account within eight weeks of the offer. This number rose to 96 over the implementation period of the project.

Reasons for the uptake

It can be concluded that factors contributing to the uptake of the project by GPs were:

The project coincided with the Federal Government's Practice Incentive Program (PIP) payment for modem and e-mail access.

80% of the initial respondents (in the first 8 weeks) were participants on the Illawarra Coordinated Care Trial (ICCT). As part of the ICCT these GPs had been using Intranet e-mail and therefore were already computerised and familiar with email applications.

The offer from the IAHS through the Division to provide Internet Services was an attractive offer to many GPs who were confused about the choices for local internet service providers. An external ISP could not be used for Docmail, making the offer more attractive.

The IAHS e-mail facility provided internal access to 15,000 health recipients and full external e-mail capability. The IAHS also gave GPs an authoritative e-mail address ie; @iahs.nsw.gov.au.

Administration of the Set up of Docmail

The IDGP provided the IAHS with an updated listing of GPs and their demographic details in order for the Hospital Patient Admission System (HOSPAS) GP list to be updated accordingly. This was to assist the admission staff in selecting the correct GP at the point of admission. HOSPAS is the data system used by IAHS hospitals to record and store admission data.

E-mail addresses were assigned to the GP demographic details on the E-mail server in order to reduce the potential administration tasks for the HOSPAS administrator(s). Initially, the addresses were activated as GPs purchased the e-mail account. However, due to investigations of the privacy legislation, all pre-loaded unused accounts were deleted in order to meet these requirements.

The dial-in access point for GPs was initially set up by the IDGP using 10 IDGP modems. Due to hardware failures with the modems and the closing of the ICCT, the dial up access point was moved to the ICCT modems located at the Wollongong Hospital. Although these modems were purchased by the ICCT and Community Health (IAHS), IAHS ISD maintained and covered support costs of this hardware.

A formalised process was developed and implemented to coordinate the creation of dial up access and e-mail accounts. The process developed was as follows:

- **Forms**

Application forms were introduced as an audit trail between each of the parties involved. IDGP modified the existing IAHS application forms for e-mail accounts and for dial up access to ensure suitability for General

Practice. GPs were required to complete the application forms before processing could begin (see Appendix 4).

- **Payment**

When payment for yearly e-mail use was received by the IDGP, the GP's application form was forwarded to IAHS.

- **Processing**

IAHS setup the e-mail account and the security for dialin access.

- **Outcome**

The IDGP received confirmation from IAHS through the IAHS ISD on-line helpdesk system, that the e-mail access was activated. If the procedures were not followed the forms were returned to the IDGP for adjustment before processing could continue.

- **E-mail account naming standards**

The e-mail account name falls in line with the IAHS naming convention being LastnameFirstinitial@iahs.nsw.gov.au eg SmithJ@iahs.nsw.gov.au. The directory service listing at IAHS has a display name that is prefixed by Dr so the medical practitioner, Dr John Smith, could be easily identified when searching the directory service. Dr was not included in the e-mail name because many GPs felt this might encourage the sending of unsolicited e-mail to them if they could be identified as General Practitioners.

- **Password allocation**

The IDGP allocated passwords (through random numeric generation) for GP access to the IAHS network. Random numeric passwords avoided the potential issues with upper and lower case characters. It is common for passwords to be forgotten and the IDGP help desk is the first point of contact for GPs with dialup problems. It was logical for the IDGP to be the password facilitator.

- **Minimal changes to the GP desktop**

Time for staff to access the GPs computers is minimal due to the long working hours of surgeries. Setup of the e-mail program on the GP desktop was planned to have minimal intervention once the program was installed. Server naming standards (ie; SMTP.idgp.org.au/POP3.idgp.org.au) were introduced so that the e-mail service could be hosted anywhere on the health network with no impact on the GP desktop setup.

- **Authentication process for GPs dialup to access e-mail**

IAHS has a strict policy on who has access to their network. The network manager at the Information Services Department (ISD) of the IAHS was contracted to configure the IDGP router used for GPs' dialup access to IAHS. The dialin authentication server is administered by IAHS ISD. IAHS administration of GP access was in keeping with their policies.

- Selection of e-mail client software, Microsoft Outlook Express**
 IDGP assessed the e-mail programs in the marketplace and selected Microsoft Outlook Express for the following reasons:
 - Simplicity i.e. checking of new e-mail occurred automatically
 - Free Internet Explorer was included
 - The program ran on older computers
 - IDGP staff were familiar with the product.
 Software was required to be installed on the majority of GPs computers. IDGP felt GPs would use e-mail more often if the e-mail program was user-friendly.
- Development and publication of e-mail training notes**
 The IDGP provides GPs with one to two hours of one-to-one training on how to use e-mail. Reception staff were encouraged to participate and were sometimes present at the training sessions. Handouts summarising how to use Outlook Express were developed and made available to GPs.
- Account payment process including billing and receipting at the IDGP and IAHS**
 IAHS have a fee structure for creation and use of e-mail accounts. IAHS bulk bills IDGP for the account fees and IDGP manage the payments from and receipting to GPs.
- Helpdesk and system administration of Docmail**
 Prior to the Docmail program being rewritten by the IAHS, the IDGP conducted the daily administration of the program. A decision was made by the Docmail Steering Committee for each hospital to be responsible for fixing any data entry errors. Each hospital nominated a staff member to be responsible for this daily administration task. This is discussed in more detail further in this report. The Docmail Steering Committee also made the decision to offer Bulli hospital (the hospital involved in the pilot phase) funding to conduct additional Docmail administration tasks. The business manager from Bulli Hospital accepted the role of Docmail administrator. Following the implementation of the new Docmail program and staff training at each hospital the responsibility for Docmail administration was allocated accordingly.

5.1.4 Setup Phase - IAHS

IAHS had been discussing Docfacs since 1996 and had set up Docfacs for testing in the middle of 1998. During this time IAHS:

- installed the first version of Docfacs for the pilot project, and
- Installed the year 2000 compliant version in October 1999.

The latest version of HOSPAS had also been implemented which allows for GP e-mail addresses to be attached to the GP demographics and the patient consent flag in HOSPAS. Two staff members from ISD have a working knowledge of the Docfacs software and thus were the first point of contact for the IDGP during the development and early implementation phase of Docmail. Both of these staff members played a large part in the rewriting of Docmail, which occurred in the implementation phase of the project.

IAHS ISD was involved in meetings held at the Department of Health to discuss the future development of Docmail. In attendance at these meetings were representatives from other NSW Area Health Services who were interested in or had implemented the first version of Docfacs. It was agreed by all attendees that a "Docmail" Consortium was to be formed and would be the way forward for Docmail and/or Docfacs. This consortium was formed in late October (11 Area Health services committed) and will ensure the implementation of the Docmail program as developed by the Illawarra partnership over half of the State of NSW.

Administration processes

- **Forms**

Application forms were required for ISD to create e-mail accounts. ISD assisted with the design and implementation of specialised GP forms for e-mail and dialin access.

- **Setup of Docfacs**

Docfacs was a generalised program that accommodated either e-mail or faxing facilities. IAHS ISD modified the Docfacs templates, used as the basis for the e-mail transcript, to include the IAHS specific headers and footers for the messages. The Docfacs setup parameters were entered by ISD staff and were administered by the IDGP.

- **System administration**

For the Docmail system to be sustainable and reliable, the following operations were administered by the IAHS:

- creation of e-mail accounts and dialin access for GPs
- daily backup of e-mail accounts
- virus scanning of all e-mail
- maintenance of the security software for dialin accounts
- installation of Docmail upgrades and enhancements
- liaison with the potential consortium group and software development company to discuss Docmail implementation issues

- **Infrastructure**

The IAHS was responsible for:

- maintenance and security of the e-mail server
- maintenance and upgrade of the modems used for dialin access
- firewall protection

Following frequent software issues the IAHS ISD was given the responsibility of re-writing the Docfacs/Docmail program to improve maintainability, functionality and useability. This is documented further in this report.

5.1.5 The Pilot Phase

In November 1998, IDGP convened a series of meetings with staff from IAHS ISD and Bulli Hospital admissions to discuss a pilot implementation of Docfacs. Bulli staff were supportive of the process and the IAHS ISD arranged on-site Docfacs training for Bulli admissions staff. IAHS installed a

version of Docfacs and had setup the parameters of the program for operation in the Illawarra.

16 GPs were asked by the IDGP to participate in the pilot. The majority of the nominated GPs had previously approached IAHS about the possibility of being notified of patient admissions. Each GP was participating in the ICCT. The trial had provided GPs with a PC, modem, dialup access to the IAHS network and an e-mail account on the ICCT e-mail server. There was no additional infrastructure needed for the GPs to participate in the pilot.

Bulli hospital was selected because;

- the staff were keen to proceed with the pilot,
- the majority of the nominated GPs were in the Bulli area, and
- Bulli is a small hospital so the number of Docfacs messages that would be sent to GPs to be small and manageable.

The pilot showed that e-mail could be sent to a GP when their patient was booked, admitted or discharged from hospital. The admission staff at Bulli hospital were responsible for checking that the messages were successfully sent to the nominated GP and for correcting data entry errors. ISD provided training for Bulli Hospital staff in the operation of the Docfacs program and instructed on how to correct GP details and resend the unsent messages.

5.2 Implementation Phase

The project plan was rewritten to focus on the lessons learnt from the pilot phase (See Appendix 5). The following areas were identified as high priority focus areas for the implementation period following the set up phase.

- Identification of GP information needs.
- Including additional information in the new Docmail message
- Increasing the number of GPs online receiving Docmail
- GP training
- Responsibility for Docmail ongoing administration allocated and established
- Ensuring data integrity through:
 - Processes employed to reduce the data entry errors at the point of admission
 - Implementing processes to ensure GP details are frequently updated at the hospital end.
- Identification and implications of current privacy legislation.
- Security systems and confidentiality issues identified.
- TQM Processes employed to ensure continuous improvement of the project
- Software development
- Disseminate information to other Divisions and AHS as requested.
- Expanding Docmail user (recipient) base.

5.2.1 Identification of GP information needs

A survey was developed, implemented and evaluated in order to identify GP needs in relation to most preferred patient hospital information to be included on a Docmail message, (See Appendix 6). The survey was e-mailed to GPs who had already purchased an IAHS e-mail account and faxed to the remaining GP members. The GPs were asked to list the 6 items (types of patient information) they most wanted included on a Docmail message. The six most requested items in order of most requested to least requested were:

- 1 Discharge Prescriptions
- 2 & 3 Management plan post discharge: Investigations performed
- 4 & 5 Pathology results: Date of discharge
- 6 Diagnosis (unspecified)

5.2.2 Including additional information on the Docmail message

Having identified the most preferred information to be included on a Docmail message by GPs, the Division held numerous meetings with key health professionals from Radiology, Pharmacy, Pathology and Nuclear Medicine. The meetings were held to determine the viability of including patient information from these departments in the Docmail message.

Department of Radiology

Discussions were held with the Director of Radiology at the Wollongong Hospital in relation to including Radiology information on Docmail. The Radiology Department were hoping to implement a new data system which would allow information to be made accessible to GPs. Therefore discussions

for enhancing the current data system in use were put on hold, awaiting implementation of the new system, which did not occur during the life of the Docmail project.

Department of Pharmacy

The Pharmacy Department had recently replaced their data system with a new computer program, STOCCA. The functionality to record medication lists electronically was available within STOCCA however the Pharmacy Department did not have the human resources available and processes in place to input the lists electronically into STOCCA. In addition the program did not have the facility to e-mail information to external bodies such as GPs. The STOCCA Steering Committee was approached by the Division to consider developing this enhancement but the issue of incomplete medication lists being recorded electronically in STOCCA was to be rectified before information could be e-mailed. This issue has not been rectified during the life of the Docmail project.

Department of Pathology

Discussions were held with the Director of Pathology from the Wollongong Hospital to establish whether pathology information could be included on the Docmail message. Whilst the Pathology Department was very keen to progress with the initiatives, they were planning to implement a new data system (Détente). The introduction of Détente to the Pathology Department was deferred due to implementation problems at another NSW AHS Pathology Department. This delayed the inclusion of pathology information in Docmail. Thus the introduction of this new system has not progressed to implementation in the Illawarra.

Department of Nuclear Medicine

Nuclear Medicine utilises the Hospital Reporting (HOSREP) program to store patient information. The functionality of HOSREP is such that it does not contain the facility to attach text to an e-mail message. To access this information a program would need to be developed similar to Docmail, which had the functionality to extract information from HOSREP then e-mail to GPs. Presently, this issue has not been pursued due to funding restrictions and the seemingly “band-aid” approach that this task may bring.

5.2.3 Increasing number of GPs online

A number of promotional strategies were employed to increase the number of GPs online. All strategies proved effective with interest being received following each strategy’s implementation.

Monthly newsletter articles were written and included in the IDGP Newsletter “GP News” (See Appendix 7). The articles aimed to keep GPs up to date with Docmail’s progress for the given period as well as reaching GPs still unaware of Docmail. Interest was also received from Consultants who had read the articles.

Individual letters were sent to GPs to inform them Docmail was available to them and identified the information available on a Docmail message.

The Division sought advice from United Medical Protection outlining the medico - legal implications on a GP receiving patient information via e-mail. The advice received was disseminated to GP members. The amount of e-mail accounts purchased increased following this dissemination.

The survey sent to GPs to identify their information needs proved to be an effective marketing strategy with much interest received by the Division following the survey implementation.

The initial policy of the IAHS and IDGP was to encourage electronic communication between GPs and other service providers. After the first six months of this project it became apparent that some GPs were not choosing to computerise. The decision was made by the Docmail Steering Committee to allow GPs to receive Docmail via either fax or e-mail (faxing was a request of the IAHS), GPs were sent correspondence (See Appendix 8) offering the receipt of Docmail via fax or e-mail and discharge summaries via fax or e-mail. This offer was attractive to GPs who were interested in receiving Docmail messages but were hesitant in purchasing an IAHS e-mail account. Much interest was again received following this promotional strategy with 45 GPs agreeing to receive Docmail via fax within a fortnight of the offer being made. This strategy also increased the number of GPs receiving Docmail via e-mail.

A pamphlet outlining what Docmail was and what it offered was developed (See Appendix 9) for dissemination to GPs by IDGP IT helpdesk staff during surgery visits.

5.2.4 GP training

One-to-one training in the use of e-mail was offered to all GPs who purchased an IAHS e-mail account. 95% of the 96 GPs who purchased an account received the one-to-one training. 100% of the GPs were allocated the e-mail training notes (See Appendix 10). The 5% of GPs who did not participate in the one-to-one training were already proficient in e-mail use.

The IDGP held regular GP/PC and e-mail training nights (usually 1 night per week). Internet and e-mail training sessions were incorporated into the training nights.

5.2.5 Responsibility for Docmail administration accepted

Essential to Docmail sustainability post project was ongoing Docmail administration. An invitation was submitted to Bulli Hospital to take on this role. Bulli hospital was chosen in recognition of the valuable contribution they made to the project during the pilot phase. The invitation was accepted by Bulli Hospital to administer Docmail. Bulli hospital accepted the role, which consisted of; quality assurance processes (checking errors), providing feedback to hospital staff, and ensuring hospital site administrators were checking the automated reports on a regular basis. The Bulli administrator provided monthly reports to the IDGP to report on tasks undertaken for the

period and associated issues. Specific administration tasks were outlined in an administration guide (See Appendix 11).

5.2.6 Ensuring data integrity (staff training)

Measures were taken to ensure data integrity. Processes have been implemented at each hospital site for nominated hospital staff to be notified of Docmail messages not sent due to the GP name being entered incorrectly at the point of admission. The nominated staff person ensures the GP details are corrected either by themselves or by the staff member who made the error. The nominated staff person is notified of mistakes via an automated report, listing messages not sent due to GP details entered at admission not matching a GP in the HOSPAS LMO table.

Whilst the report generated from the Docmail program is fully automated, (automatically sent daily to the nominated staff persons' printer) the hospital staff attended training sessions to be instructed to manually generate the report from the Docmail program manually (See Appendix 12). Thus, if printer problems occurred the reports could still be produced.

Education sessions were held with all staff who enter admission details across all Area Health hospitals. The education sessions consisted of an overview of the Docmail program and its relevance to data entry and correct data collection and entry procedures were outlined (See Appendix 13). These sessions were held in order to ensure all staff were up to date with correct data entry procedures in order to reduce the number of data entry errors at the point of admission.

Having implemented both of the above strategies, data entry errors at the point of admission in relation to GP details decreased from 8% to 2%.

Actions were developed to ensure a process for updating GP details for elective surgery patients between booking and admission dates were taken. Correspondence was sent to the Director of Monitoring and Evaluation at NSW Health, requesting the standardised letter to all elective surgery patients prior to admission to check they still want to have the surgery, be changed to include a section stating the recorded GP and whether this has changed since booking.

5.2.7 Identifying current privacy legislation

Essential to the success of Docmail was to ensure that the project complied with the Information Privacy Code of Practice (IPCOP) (See Appendix 14). The Docmail Project has developed and implemented processes to satisfy relevant principles and has also been successful in identifying issues which challenge the validity of some of these principles.

The Division has developed a disclaimer, which is attached at the end of each Docmail message to inform GPs of what to do if they receive a Docmail message in which they are not the intended recipient. The disclaimer informs the GP to delete the information and inform the sender.

5.2.8 Security and confidentiality issues

A high priority of the Docmail project was to ensure appropriate security and confidentiality were achieved.

The IAHS was chosen to be the host for the GP e-mail accounts as it was necessary for the ISP to be on the Department of Health Network. This ensured information remained within the IAHS network as only GPs with an IAHS e-mail account receive Docmail messages.

The information transferred to the GP utilises “push” technology, ie; the information is sent to the receiver. The only information in which the GP can select to browse is accessed through a hyperlink contained within the Docmail message (an example of “pull” technology). As this link provides an access point into the IAHS Intranet a GP authentication process has been developed. This involves the GP identifying their Username and password once they have attempted to access the link. This link takes the GP to additional information contained on the IAHS Intranet (such as history of patient admissions, current GP inpatient list).

For a GP to receive Docmail via e-mail they should be accredited to the IAHS, ensuring that GPs who have access to the IAHS Intranet have fulfilled IAHS screening criteria.

In relation to the GPs receiving Docmail via fax, the GP does not have to be accredited with the IAHS, as there is no link back into the IAHS network through the provision of faxes. However steps have been taken to ensure the fax outlet is secure.

Processes were developed and implemented at the hospital site to gain patient consent prior to the Docmail message being sent.

5.2.9 TQM Processes implemented to ensure continuous improvement

To ensure all facets of the project were continuously improving, a number of strategies were employed to identify areas requiring further attention and improvement.

A survey was developed, implemented and evaluated to identify GP satisfaction levels with the Docmail program and processes (See Appendix 15). The GP respondents suggested improvements that could be made to better meet their needs. The inclusion of clinical information was by far the most suggested item. The survey also identified areas GPs perceived as being barriers to frequently checking their e-mail messages. This information was valuable in determining ways of improving the Docmail process to better reach desired outcomes.

A survey was developed and disseminated to the staff at each hospital responsible for checking the Docmail automated reports displaying data entry errors at the point of admission (See Appendix 16). The survey aimed to

identify any problems the staff were having with completing the daily checks. No major problems were cited.

A survey was developed and disseminated to the Docmail administrator at Bulli Hospital in order to identify any areas requiring further attention from an administrative perspective (See Appendix 17). A number of areas were identified and further explored. In addition to the survey the Docmail administrator provided regular reports to the IDGP Docmail Project Coordinator outlining any issues for the given period (See Appendix 22). This report was used to highlight areas requiring further development.

Telephone sample checks were conducted with GPs to ensure they were not experiencing any problems with the Docmail program, and to check the receipt of the information was adequate.

5.2.10 Software Development

The Docmail Program

The Docmail program is an automated computer program designed to retrieve specific patient information from the Hospital Patient Admission System (HOSPAS), place that information into an appropriate format and e-mail to the nominated GP.

The original program, Docfacts, was a product of Hunter Area Health service. There were many program problems, which would have proven costly to rectify. As a result the IAHS chose to rewrite the program to better meet the needs of GPs and the AHS.

The program was successfully rewritten along with the associated documentation (user and technical guides).

Current interest has noted 11 Area health services within NSW have agreed to form a consortium to implement this program.

5.2.11 Disseminate information to other Divisions and AHS

The IDGP was invited to present the Docmail project at the ADGP National Divisions Forum in August 2000. The presentation consisted of an overview of the project, (including an example of the Docmail message and its associate links), the outcomes of the project at that point in time, the barriers experienced during the project and issues essential for Docmail implementation. This proved a beneficial process with much interest and positive feedback received by the IDGP from other Divisions following the conference. A copy of the presentation (See Appendix 18) was requested from all Divisions who contacted the Division to show their respective AHS.

Over the life of the project the IDGP received enquiries from a number of Divisions and AHS interested in Docmail implementation and issues. Enquiries were received from:

- Central West Division of General Practice
- Western Sydney Division of General Practice
- West Melbourne Division of General Practice

- South East NSW Division of General Practice
- Shoalhaven Division of General Practice
- Murrumbidgee Division of General Practice
- Knox Division of General Practice
- New Children's Hospital
- South Western Sydney Area Health Service.

Further enquiries were received from Hunter Rural Division of General Practice and Central Coast Division of General Practice.

5.2.12 Expanding the Docmail user (recipient) base

A feasibility study was conducted to identify the possibility of expanding the recipients of Docmail to include other health professionals. The other health professionals included in the study were Community Health, The Ambulatory Community Care Team (TACCT), and Consultants.

The results of the study showed GPs are interested in receiving patient information via e-mail from other organisations as well as public hospitals. 74% of GP respondents would like to receive patient information via e-mail from Community Health and TACCT. 78% of GP respondents would like to receive patient information via e-mail from Consultants. 70% of GP respondents would like to receive patient information via e-mail from local Private Hospitals and 4% of GP respondents would like to receive patient information from other organisations.

6. EVALUATION AND ACHIEVEMENTS

The Docmail project identified a number of objectives and deliverables to be achieved throughout the life of the project. The achievements realised are documented in the evaluation component of this report. The evaluation was divided into Process, Impact and Outcome evaluation. Sustainability was also an important component of the project's evaluation in order to determine if the project would remain sustainable post project.

6.1 Process Evaluation

To ensure the project was continually improving and reaching the target group, process evaluation strategies were developed. The objectives and indicators used to measure the project's progress are outlined in the table below along with the achieved outcomes.

Objective	Indicators	Data Collection Methods	Outcome
To ensure the project reaches the target group	<ul style="list-style-type: none"> No. of GPs receiving Docmail messages 	<ul style="list-style-type: none"> Log of GPs online and GPs receiving Docmail via fax 	<ul style="list-style-type: none"> 96 (42%) Illawarra GPs online receiving Docmail via e-mail 45 Illawarra GPs receiving Docmail via fax (20%) 40 GPs within the Shoalhaven region receiving Docmail via fax
	<ul style="list-style-type: none"> No of Docmail messages being generated to GPs 	<ul style="list-style-type: none"> Log of Docmail messages 	<ul style="list-style-type: none"> On average, 9890 Docmail messages sent to GPs per month 95% of all admissions generate a Docmail
	<ul style="list-style-type: none"> No of GPs regularly checking their e-mail 	<ul style="list-style-type: none"> GP Satisfaction survey 	<ul style="list-style-type: none"> 78% of GP respondents check their e-mail daily

	<ul style="list-style-type: none"> No. of hospitals generating Docmail messages 	<ul style="list-style-type: none"> Log of Hospitals 	<ul style="list-style-type: none"> 13% of GP respondents check their e-mail weekly All 9 IAHS Hospitals generate Docmail messages (100%)
<p>To ensure participants (stakeholders) are satisfied with the project</p>	<p>GP satisfaction</p> <ul style="list-style-type: none"> % of GPs better informed of their patients health status % of GPs whose needs were met % of GPs who find Docmail information useful <p>Hospital staff satisfaction</p> <ul style="list-style-type: none"> % of staff who were satisfied with the project processes 	<ul style="list-style-type: none"> GP satisfaction survey “as above” “as above” Hospital staff satisfaction survey 	<ul style="list-style-type: none"> 83% of GP respondents felt better informed of their patients health status 52% of GP respondents needs were met 96% of GP respondents found the information contained in Docmail useful 75% of staff felt satisfied with the processes
	<p>Docmail administrator satisfaction</p> <ul style="list-style-type: none"> Docmail administrator satisfaction with the administration requirements 	<ul style="list-style-type: none"> Administrator satisfaction survey 	<ul style="list-style-type: none"> Docmail administrator satisfied with the administration processes.
<p>To ensure all activities outlined in the project plan have been</p>	<ul style="list-style-type: none"> No. of activities implemented 	<ul style="list-style-type: none"> Audit of Project plan activities 	<ul style="list-style-type: none"> All activities as outlined in the project plan have been

<p>implemented</p>			<p>progressed.</p>
<p>To ensure all components of the program are of good quality</p>	<ul style="list-style-type: none"> • Monthly Docmail reports submitted to the IDGP from the Docmail Administrator reporting on program and process issues • No. of staff trained in correct data entry • No. of staff trained to check Docmail automated reports • Decrease in data entry errors at the point of admission • Processes in place to update patient records 	<ul style="list-style-type: none"> • Monthly Reports • Log of staff training • Log of staff training • Report from Docmail program / monthly audit • Log of processes 	<ul style="list-style-type: none"> • Reports submitted monthly which identified program and administration issues that were then addressed. • 94% of hospital Admissions staff were trained in correct data entry procedures • 100% of nominated hospital staff were trained to check the Docmail automated reports • Data entry errors have decreased from 8% to 2% over the life of the project • Correspondence sent to NSW Health to consider developing a process to update GP details for elective patients between booking and admission

	<ul style="list-style-type: none"> GP needs identified (to identify where the project should progress) No. of hospital staff satisfied with the quality of the Docmail processes 	<ul style="list-style-type: none"> GP information needs survey GP satisfaction survey Hospital staff satisfaction survey 	<ul style="list-style-type: none"> Information most wanted by GPs to be included on Docmail identified GP needs in relation to receiving Docmail messages identified. 75% of hospital staff are satisfied with the quality of the Docmail processes
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Impact Evaluation

The following table outlines the Docmail project objectives and the indicators used to measure the outcomes, in order to determine the impact of the Docmail project.

Objective	Indicators	Data Collection Method	Outcome
To deliver identified patient information to GPs electronically.	<ul style="list-style-type: none"> No. of GPs on-line (Receiving Docmail messages and discharge summaries via fax and e-mail). 	<ul style="list-style-type: none"> Log of GPs. 	<ul style="list-style-type: none"> 96 GPs receiving Docmail via e-mail 45 Illawarra and 40 Shoalhaven GPs receiving Docmail via fax (181 total GP reach)
	<ul style="list-style-type: none"> No. of hospitals generating Docmail 	<ul style="list-style-type: none"> Log of hospitals program 	

<p>messages.</p> <ul style="list-style-type: none"> No. of messages being generated electronically. 	<p>set to run from.</p> <ul style="list-style-type: none"> Log (audit from) IAHS ISD. 	<ul style="list-style-type: none"> All 9 IAHS hospitals generating Docmail messages (100%). Average of 989 Docmail messages are delivered per month
<p>To adequately represent the needs of all local stakeholders and ensure maintenance of the quality control cycle.</p>	<ul style="list-style-type: none"> GP needs identified. Hospital staff needs identified. 	<ul style="list-style-type: none"> Collated results from GP needs survey identified (see Appendix 19). Needs in relation to Docmail procedures identified and utilised in development of Docmail administration process.
<ul style="list-style-type: none"> Stakeholders needs identified. 	<ul style="list-style-type: none"> Steering Committee Meeting Minutes. 	<ul style="list-style-type: none"> Needs documented and action taken as required.
<ul style="list-style-type: none"> Quality assurance processes. 	<ul style="list-style-type: none"> Log of staff training in correct data entry. 	<ul style="list-style-type: none"> 94% of admissions staff trained in correct data entry.

	<ul style="list-style-type: none"> • Reports submitted monthly to IDGP • GP, Hospital staff and Docmail Administrator satisfaction levels measured 	<ul style="list-style-type: none"> • QA audit report from Docmail Administrator. • Satisfaction level surveys. 	
<p>To disseminate evaluation findings to other Divisions and Area Health Services to assist further implementation.</p>	<ul style="list-style-type: none"> • No. of Divisions / AHS information has been disseminated to. • No. of AHS who have rolled out the IAHS version of Docmail. • No. of AHS committed to roll out the IAHS version of Docmail. • Conference presentations. • Reports published to the web. 	<ul style="list-style-type: none"> • Log of enquiries. • IAHS records • NSW Health Docfacs meeting minutes. • Divisional records • Log of reports published 	<ul style="list-style-type: none"> • Nine formal enquiries received by the IDGP • One AHS (SWSAHS) is testing Docmail • 11AHS communicated commitment at the Docfacs meeting with NSW Health • Invited paper at National Divisions Forum. Presentation completed • Three monthly reports available on IDGP web site as well as final report.

6.3 Outcome evaluation

The aim of the Docmail project was to deliver quality inpatient information to the appropriate GP in a timely and secure manner. This outcome was achieved with 96 Illawarra GPs receiving quality patient information from the IAHS via e-mail. 989 Docmail messages on average are delivered to Illawarra GPs per month. This outcome was also achieved as a result of improved communication between the IDGP and IAHS. Future initiatives between the participant organisations are currently being progressed following the success of the Docmail project.

6.4 Sustainability

The following table outlines the sustainability issues that were to be rectified by the end of the implementation phase of the project.

Objective	Action taken (Outcome)
Responsibility for Docmail Administration	<ul style="list-style-type: none"> Bulli Hospital accepted the role as the main Docmail administrator. Processes have been implemented to ensure the Docmail Administration is conducted (mandated by IAHS Administration)
Identify Administration requirements and areas of responsibility	<ul style="list-style-type: none"> Administration guide developed (see Appendix 11) outlining Docmail system administration guidelines for the Docmail Administrator, HOSPAS Administrator and the IAHS ISD
Process for updating GP details developed	<ul style="list-style-type: none"> The IDGP will provide the HOSPAS Administrator with updated GP details at agreed periods
Ensuring data entry errors at the point of admission are corrected regularly	<ul style="list-style-type: none"> Nominated site administrators at each IAHS hospital receive an automated Docmail report daily, which displays Data entry errors at the point of admission. The site administrators correct the errors in the HOSPAS system
Procedure developed to administrate a GP coming on-line	<ul style="list-style-type: none"> Procedures developed for the IDGP to follow to facilitate a GP coming on line (see Appendix 20) as procedures for facilitation a GP to receive Docmail via fax (see Appendix 21)

6.5 Additional achievements

In addition to achieving outcomes directly related to the project objectives, the Docmail project was successful in achieving additional outcomes. Below is a list of the additional achievements realised through Docmail.

- *The e-mailing of discharge summaries from the Wollongong Hospital (TWH).* Prior to the implementation of Docmail discharge summaries from TWH were posted to GPs. The Docmail project was successful in identifying the potential of e-mailing discharge summaries to GPs via the GP IAHS e-mail account. IDGP GPs were given the option of receiving discharge summaries from TWH via fax or e-mail. Discussions are being held within the IAHS to extend this service to other IAHS hospitals.
- *Consultants communicating via e-mail with IDGP GPs.* The IDGP made available to Illawarra Consultants a list of GP e-mail addresses in order to communicate freely and timely via e-mail. In addition one Consultant has purchased an IAHS e-mail account in order to communicate more freely to GPs and to have access to available information on the IAHS network.
- *The Docmail program was implemented within all 9 IAHS hospitals.* Initially Docmail was only to be implemented in the 6 Northern Illawarra Hospitals. As it was implemented within the Southern Illawarra, GPs from the Shoalhaven area (which the Shoalhaven Division of General Practice covers) were able to receive Docmail (via fax), which expanded the user base of Docmail.
- *An investigation into the accuracy of medication information on discharge summaries was conducted.* Highlighted through the Docmail project was the importance of data integrity. Following the investigation of the accuracy of medication lists on discharge summaries, the IDGP and IAHS are reviewing the processes involved in recording medication lists, to improve the integrity of this information.
- *Roll out of Docmail Statewide.* Following the successful implementation of Docmail within the Illawarra, progressions are being made to implement Docmail Statewide. NSW Health are holding Docmail meetings to form a Docmail Consortium to assist the roll out of Docmail. Docmail is currently being tested in the South Western Sydney Area Health Service (SWSAHS), and at the last meeting, 11 area health services committed to this initiative (approx. half of NSW area health services).
- *A formalised process for GP accreditation to the IAHS was developed.* In order for GPs to purchase an IAHS e-mail account a process was to be developed to ensure those GPs were accredited to the IAHS. The reason being that e-mail provides an access point into the IAHS network, therefore only GPs accredited to the IAHS can access AHS data.
- *An IAHS/ IDGP Information Management Committee was established.* As a result of this initiative, a continuing committee has been established to further other joint projects in the Illawarra.

7. DISCUSSION – KEY ISSUES

The implementation of Docmail highlighted a number of key issues requiring further discussion. The following issues indicate the essential components to developing a successful project partnership such as the Docmail project.

A collaborative partnership between the Division and Area Health Service

Essential for the successful implementation of Docmail is a collaborative partnership between the local Division and AHS. Without the support of either of these groups the program cannot be successfully implemented. The Docmail program retrieves information from the AHS and is located at the AHS. The Division is essential as the coordinator between IAHS and local GPs. This partnership and successful implementation is reliant upon excellent communication being maintained between all groups, throughout the implementation of Docmail.

Docmail administration

As discussed previously in this report, responsibility for ongoing Docmail administration must be accepted for Docmail to remain sustainable. The tasks involved and the relevant timeframes should be determined and agreed upon. This also involves the checking of the daily-automated Docmail reports by the hospital. Responsibility for checking the reports pertaining to each hospital must be allocated. Whether each hospital will check the reports relevant to their hospital or whether there will be one centralised role for completing this task is a decision for each Area to make. Similarly, responsibility for correcting data entry errors at the point of admission, that are identified from the Docmail automated reports, is a task for allocation.

Stakeholders to be informed of Docmail

Imperative to the successful implementation of Docmail is effective communication between all stakeholders. Stakeholders in the Docmail project included: admissions staff, medical records staff, IAHS executive staff, IAHS ISD staff, IDGP staff and IDGP GPs. In the initial stages of Docmail implementation, some stakeholders were not informed that Docmail had been initiated. This raised instant barriers between stakeholders, which potentially could have made further implementation difficult. Through substantial communication and negotiation this barrier was overcome. This was a good learning experience for the Docmail project as it highlighted the need for effective communication as well as the importance of communicating to all levels of the organisation, from executive staff to on the ground staff.

Benefits of Docmail

There are a number of benefits provided by Docmail for a GP.

The link to additional information, which displays all previous admissions for the patients as far back as three years, assists in the delineation of patterns that may be occurring with patients admitting to hospital.

Receiving Docmail messages keeps the GP in the hospital link. Prior to Docmail, once a patient entered the hospital system the GP did not receive information until after the patient was discharged (through the discharge summary). Through Docmail the GP can be kept up to date with what is happening with a patient whilst admitted. Potentially this can also improve relationships between the GP and the patient as the GP is better informed of their patient's current health status.

Docmail messages are transferred directly to the GP. Thus the GP no longer relies on intermediary processes such as the patient presenting to the clinic (post admission) or a family member informing the GP. Therefore the GP is receiving the information first hand, which decreases the likelihood of misinformation being relayed to the GP.

Faxing v's e-mail

E-mailing Docmail messages as opposed to faxing Docmail messages requires further discussion. Whilst the IDGP has recommended both the faxing and e-mailing of Docmail messages there are a number of benefits for e-mailing over faxing.

In relation to ongoing Docmail administration faxing is more resource intensive than e-mail. The Docmail administrator at Bulli hospital has reported that time spent on Docmail administration would be 95% pertaining to fax and 5% pertaining to e-mail. Faxing is more resource intensive at the GP end in relation to paper generation. For a practice which has a high patient turnover, this can create problems with copious amounts of paper being used by incoming fax Docmail messages and the fax line being held up (busy) with incoming Docmail faxes.

In addition, receiving Docmail messages via e-mail allows GPs to utilise the links to additional information. Receiving Docmail via fax does not allow this function.

However, e-mail requires the GP to have a PC, modem, phone line, e-mail account with the IAHS. Most GPs would have a fax machine.

The Big Picture

Docmail is a step towards improved information sharing between GPs and Hospitals. If integration of health care is to be achieved initiatives such as Docmail should be progressed.

Barriers to Docmail implementation

A number of barriers were experienced during the implementation of Docmail.

As discussed previously a failure to inform all stakeholders of Docmail implementation raised instant barriers which initially delayed further progression of the project.

Limited functionality and replacement of data systems used within the IAHS prevented the inclusion of clinical information throughout the life of the project.

GPs unfamiliar with e-mail were initially reluctant to purchase an IAHS e-mail account, hence effective marketing strategies were essential.

Prior to the dissemination of correspondence outlining the medico-legal obligation on GPs receiving patient information via e-mail, some GPs were concerned of the legal implications of receiving Docmail messages via e-mail.

Docmail implementation within NSW

Initially Docmail was to be implemented in the Northern IAHS hospitals only, (covering Helensburg to Gerroa), as the IDGP boundaries cover the Northern Illawarra only. The decision was made to implement Docmail within the Southern Illawarra hospitals. Two main reasons contributed to the decision being made to expand the implementation. Firstly, the IAHS covers both Northern and Southern Illawarra. Secondly, much of the Northern Illawarra community holidays in the Southern Illawarra area and therefore may be admitted to Southern Illawarra hospitals. Implementing Docmail into the Southern Illawarra Hospitals allows Northern Illawarra GPs to be notified of admissions to Southern hospitals.

GP Needs

The GPs' satisfaction survey showed that 52% of GP respondents felt their needs had been met in relation to Docmail, while 17% were undecided and 26% felt their needs have not been fully met. Whilst 43% of GPs felt their needs were either not met or were undecided it is important to note that 96% of GPs felt Docmail is useful.

Possible reasons for GP needs not being fully met are:

- As the project only began 12 months ago the program is still very new and much program development is required in order to fully meet GP needs. This could not be achieved within such a short time frame and without additional funds for program enhancements.
- Docmail messages do not contain clinical information. Evident from the GP survey was the need from GPs to electronically access patient's clinical information.
- An expectation of more information exchange was communicated through the responses of the GP satisfaction survey.

GP population / participants

The Illawarra GPs were in a unique position to participate in the Docmail project for a number of reasons.

Firstly many were participants in the Illawarra Coordinated Care Trial and therefore were computerised and familiar with Internet and e-mail access. However, an interesting point to note was that 63 of the 96 GPs (65%) at the conclusion of the project were former ICCT GPs. This would indicate the changes in the computerisation of Illawarra GPs.

The Illawarra Division was in a position to assist GPs to purchase the IAHS e-mail accounts by purchasing and holding required licences. This reduced costs for the GPs, which removed barriers for participating on the Docmail project. IDGP staff were available for additional training in the use of e-mail and intranet, installation of e-mail and the use of web browsing software, and general Helpdesk support.

8. CHALLENGES AND OPPORTUNITIES

A number of challenges and opportunities exist at a Local, State and National level regarding the implementation of Docmail. The IDGP have identified the following challenges and opportunities and recommend they be considered when determining the future of Docmail.

8.1 Local Challenges and Opportunities

- The Docmail program relies on correct data entry at the point of admission. A challenge of the project was to institute change management at the hospital end in relation to data collection and management processes. This involves hospital staff collecting patient admission details and seeking permission from patients to send the information to their nominated GP. The challenge being selecting a manageable process which satisfies the needs of the project and the hospital staff. Whilst the challenge exists, so too does the opportunity to improve data integrity at the point of admission. Having successfully implemented such processes in the Illawarra we have seen a reduction in data entry errors at the point of admission from 8% to 2% over the life of the Docmail project. A necessity for the future of Docmail is an ongoing audit process to ensure data integrity.
- The successful implementation of the Docmail program is reliant upon a collaborative partnership between GPs, the Division of General Practice and the Area Health Service. The challenge being, implementing a new concept, which requires system change for all three groups, but which satisfies all three. The opportunity exists not only for improved relationships but also for future initiatives to be progressed. Future initiatives have already begun to be progressed in the Illawarra following the successful implementation of the Docmail project.
- The Docmail project was reliant upon GPs purchasing a specific e-mail account. The challenge being to effectively communicate the benefits to GPs in order to receive patient information via Docmail messages. By marketing Docmail, GPs become aware of the benefits e-mail communication can provide. The opportunity then exists to expand the information being e-mailed to GPs.

8.2 State (NSW) Challenges and Opportunities

- Developing methods or systems to provide effective communication between hospitals and GPs is a definite challenge facing most of NSW. Docmail provides a channel for improving GP/Hospital communications through the automated transfer of patient hospital information to GPs via fax or e-mail. A challenge facing NSW Area Health Services and Divisions is choosing the most appropriate system. The challenge currently facing NSW Health is forming a Docmail Consortium to support the Docmail program. The opportunities in doing so will include improved GP/Hospital communications and potentially improved GP/Hospital relationships. Uniformity across many Area Health Services would be of great significance.

- The recent NSW Health Council Report has identified in its findings the importance of linking various parts of the health system in the delivery of patient care. The Docmail project has taken the first step towards achieving this aim by formally linking GPs and hospitals. Many challenges are faced in expanding the link to include other health professionals such as further system change and program development. The opportunities in doing so, is improved delivery of patient care through improved communication links. The Docmail project began this challenge by offering Consultants access to a list of GP e-mail addresses in order to communicate more freely.
- A challenge for the Docmail Consortium is to prioritise further development of the Docmail program. The Docmail project has identified the need to enhance the Docmail program to include additional patient information such as clinical information (pharmacy, pathology and radiology).

8.3 National Challenges and Opportunities

- A taskforce has been established to identify the possibility of developing a National EHR. The challenges faced during the implementation of the Docmail program would be similar to the challenges faced in producing a National EHR. The practical issues documented in this final Docmail report would be advantageous for the EHR taskforce in determining the progress of the EHR. While there is the challenge of satisfying privacy and confidentiality requirements the opportunity exists to provide data protection by user authentication, firewalls, audit trails, redundancy and system backups. Docmail has laid a platform for guiding policy and current technologies toward offering better security than traditional paper records. The successful implementation of the Docmail project has questioned the validity of current privacy legislation and highlights further development of such legislation as a necessity.

Report - General Practice Innovations Pool

Project Title: Patient Information Retrieval and Notification System
Division/SBO: Illawarra Division of General Practice
Reference Number: 2/14 (office use)
Contact/Project Officer: Andrew Dalley
Duration of Project: 12 months Value of Project: \$152 308
Funds received: \$108,519.00 (71.25%)

Paym ent No.	Description of Outcomes for the period	Indicators (outcomes achieved) during the period	Period of Activity	Progress to Date
1	<p>Contract Signing</p> <p>1. Licenses purchased</p> <p>2. Human resources and management structures in place</p>	<p>Funding contract signed by both parties</p> <p>1. 100% compliance with licensing legislation</p> <p>2. responsibilities for stakeholders affirmed</p>	<p>One month</p> <p>3 months to: 1.12.99</p>	<p>Achieved. IDGP Signed contract and forwarded to ADGP</p> <p>1. A total of 60 licenses have been purchased to date. The further 40 will be purchased as GP e-mail accounts are activated.</p> <p>2. All responsibilities have been identified, as have human resources. There</p>

	<p>4. GPs needs identified</p> <p>5. 1st Project report for 3 mths</p>	<p>3. project plan reviewed and approved by stakeholders</p> <p>4. GP needs documented</p> <p>5. Report completed as per ADGP contract</p>	<p>3 months to: 1.3.00</p>	<p>has been some delay in achieving this outcome, although this has now been rectified with the employment of the necessary human resources</p> <p>3. The project plan has been reviewed by all stakeholders, and the successes to date noted in this report (see section above).</p> <p>4. GPs needs were assessed and documented. The results were as reflected in Appendix 3</p> <p>5. Report compiled</p>
<p>2</p>	<p>1. GP details updated</p> <p>2. Admission staff are trained in operation of</p>	<p>1. 100% GPs with correct details (on audit)</p> <p>2. 80% of staff trained in Docmail (2 from 6 hospitals)</p>		<p>1. Continuously being initiated.</p> <p>3. Staff training arrangements are being made with all 9</p>

	<p>Docmail in two from six hospitals</p> <p>3. Docmail system operational in two from six hospitals</p> <p>4. Participating GPs are accredited to the IAHS</p> <p>5. GPs are trained in the use of e-mail</p>	<p>3. No. of Docmail e-mails in log (2 from 6 hospitals)</p> <p>4. 100% of participating GPs complete documentation for Accreditation</p> <p>5. 25% of participating GPs complete training</p>	<p>IAHS hospitals. There have been some delays in achieving this outcome, as discussed in report. The issues causing the delays are being overcome and training is to begin in early March.</p> <p>One hospital has been trained and this hospital will play a lead role in the training of the other hospitals.</p> <p>3. The Docmail system is operational from nine IAHS hospitals (both Northern and Southern Illawarra Hospitals).</p> <p>4. IDGP Board has assessed and approved position. Position has been presented to IAHS. (See Appendix 9).</p> <p>5. 94% of participating GPs have completed one-to-one e-mail training. 100% of participating GPs have been given e-mail training notes.</p>
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<p>6. E-mail accounts established for participating GPs.</p> <p>7. 2nd progress report for 6 months</p>	<p>6. 100% of participating GPs have e-mail accounts established. Currently 75 GPs with e-mail.</p> <p>7. Report compiled.</p>		<p>6. 100% of participating GPs have e-mail accounts</p> <p>7. 2nd progress report completed as per ADGP contract</p>	<p>6. 100% of participating GPs have e-mail accounts established. Currently 75 GPs with e-mail.</p> <p>7. Report compiled.</p>
<p>3</p> <p>1. Admission staff are trained in operation of Docmail in four from six hospitals.</p> <p>2. Docmail system operational in four from six hospitals.</p> <p>3.GPs are trained in the use of e-mail.</p> <p>4. Audit of Docmail role-out from 2 hospitals.</p> <p>5. 3rd project report for 9 months.</p>	<p>1. 94% of staff trained in Docmail from all 9 IAHS hospitals. 71% first hand and 21% second hand (see report).</p> <p>2. Docmail is operational from all 9 IAHS Hospitals (both Northern and Southern Illawarra hospitals).</p> <p>3. 95% of participating GPs have completed the one – one training. 100% of GPs have been given the training notes.</p> <p>4. On average 3% of data entry errors per day.</p> <p>5. Report complied.</p>	<p>3 months to 1:6:00</p>	<p>1. 80% of staff trained in Docmail (4 from 6 hospitals).</p> <p>2. No. of Docmail messages in log (4 from 6 hospitals).</p> <p>3. 50% of participating GPs complete training.</p> <p>4. Results from audit report actioned.</p> <p>5. 3rd project report completed as per ADGP contract.</p>	<p>1. 80% of staff trained in Docmail (4 from 6 hospitals).</p> <p>2. No. of Docmail messages in log (4 from 6 hospitals).</p> <p>3. 50% of participating GPs complete training.</p> <p>4. Results from audit report actioned.</p> <p>5. 3rd project report completed as per ADGP contract.</p>

<p>4</p>	<p>Final Report / Outcomes for Period 4:</p> <ol style="list-style-type: none"> Admission staff are trained in operation of Docmail in six from six hospitals. Docmail system operational in six from six hospitals Strategy developed to address GPs identified needs Report of activities completed Dissemination strategy completed 	<ol style="list-style-type: none"> 80% of staff trained in Docmail (6 from 6 hospitals) No. of Docmail e-mails in log (6 from 6 hospitals) Strategies developed and an action plan identified Report available for dissemination Dissemination strategy actioned 	<p>3 months to 1.9.00</p>	<ol style="list-style-type: none"> 94% of staff trained in Docmail from all 9 IAHS hospitals. 71% first hand and 21% second hand. In September 2000, 9890 Docmail messages were successfully delivered to GPs Recommendation has been made to DHAC to further enhance the Docmail program to meet GP identified needs Report completed and available on the IDGP web page Dissemination strategy implemented (see attached final report)
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