HealthLink Messaging Technology

Universally available, cost effective healthcare messaging
The HealthLink Messaging System
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HealthLink is the leading healthcare system integrator in Australasia, sending more than 80 million clinical messages annually between approximately 30,000 healthcare practitioners.

Today the average New Zealand general practice uses HealthLink to exchange information with more than 70 other healthcare provider organisations every month. These figures are growing steadily each year due to the realisation by clinicians that electronic communication is a simple, reliable, low cost way to share information with a large number of parties connected to the HealthLink network.

Providers utilise the HealthLink Messaging System (HMS) to send information securely to and from any number of databases and applications. HealthLink provides the messaging interface that enables the creating, sending, receiving and reading of messages. Designed to suit the whole range of healthcare providers from GP practices and specialists, to large hospitals, from pathology and radiology providers to allied health, HMS keeps message exchange simple and consistent across the healthcare spectrum. Most commonly, providers use HMS for the exchange of pathology and radiology reports as well as referrals, status reports and discharge summaries (known as RSD).

Greater efficiency and effectiveness
International studies have shown that 30% of clinicians’ time can be spent on managing patient information. By exchanging information electronically, healthcare providers become more efficient and are able to improve their quality of care. The HealthLink Messaging System reduces the time and costs involved with paper handling, distribution and duplication. Seamlessly integrating with over 120 different clinical and IT systems, HMS reduces the amount of time that practitioners waste on unproductive tasks and improves the quality of information provided as patients move across the healthcare delivery continuum. By delivering better quality, more reliable information, HMS mitigates risk for providers while increasing patient safety. Clinicians and healthcare administrators can focus on the things that matter most – patient care, efficiency and effectiveness.

Improved security and reliability
HMS is fully standards compliant, meeting security and messaging standards in New Zealand and Australia, including Health Level Seven (HL7), an international standard for the electronic exchange of clinical data. HealthLink guarantees delivery of secure and encrypted messages and provides high capacity infrastructure to handle large volumes of messages. Message acknowledgements are only generated once the message is actually imported into the recipient’s clinical system (e.g. electronic medical record system) and successfully processed by it.

Connectivity
HealthLink has played a key role in developing and implementing the Australian Government’s secure message delivery (SMD) specification. Use of SMD enables HealthLink’s clients to send and receive information from other secure messaging services.

Access to Australasia’s largest healthcare messaging network
HealthLink offers access to the largest healthcare messaging network in Australia and New Zealand. This means providers can achieve a seamless exchange of information with other parties within the healthcare sector. Laboratory and radiology customers can build their businesses by reaching new referrers who are connected via the HealthLink network.

Free, expert technical support
Robust technical support makes an enormous difference to users both in the early stages of a system’s introduction and when unanticipated technical questions arise. HealthLink operates Australasia’s premiere eHealth operational support facility, providing customers with free technical support by telephone and email, every business day from 8am until 5pm. Secure remote desktop support is readily available and, where required, onsite support can be facilitated.

Let’s take a look at how the HealthLink Messaging System works…
The HealthLink Messaging System (HMS) can be used to send messages between GPs and laboratories, radiologists, specialists, allied health providers and hospitals.

A clinical message is created by the sender’s computer system (e.g. GP, laboratory, radiologist, specialist, allied health provider or hospital). It is checked for conformance with the relevant messaging standard before being digitally signed, encrypted and transmitted to a secure server where it is stored.

The HealthLink server is then polled by the recipient (e.g. GP, laboratory, radiologist, specialist, allied health provider or hospital). The recipient downloads the message onto their electronic medical record system (EMR) and throughput is logged by HealthLink.

The recipient’s EMR accepts the digital signature and decrypts the message, checking for conformance with the relevant messaging standard. It delivers the message to the recipient’s inbox and extracts the relevant information, inserting it into the patient’s record. Finally, the EMR creates a positive (or negative) acknowledgement of receipt which HealthLink then sends back to the sender’s system.
What does a message look like?

The HL7 standard defines a set of flexible information guidelines that various healthcare provider software applications can use to communicate, or ‘interface’, with each other when they send or receive information.

Here is an example of an HL7 message where the patient has visited a laboratory and given a blood sample for testing.

```
MSH |~\&|DELPHIC|simonchl|LABRESULTS|simonchl|201411241135|ORU|2.1
MSA ||2131048523
PID | |FVR7188|Gooch^Susan|19950412|F
PV1 | | 0 ""
OBR | |06/HT4114001206\NMHLAB|0012\"General Chemistry\"|0|201407291017|F
| |1|2131088523
PID | | 0 ""
PV1 | | 0 ""
OBR | | 1|06/HT4114001206\NMHLAB|0012\"General Chemistry\"|0|201407291017|F
| | 2|2131088523
PV1 | | 0 ""
OBR | | 3|06/HT4114001206\NMHLAB|0012\"General Chemistry\"|0|201407291017|F
| | 4|2131088523
PV1 | | 0 ""
OBR | | 5|06/HT4114001206\NMHLAB|0012\"General Chemistry\"|0|201407291017|F
| | 6|2131088523
PV1 | | 0 ""
OBR | | 7|06/HT4114001206\NMHLAB|0012\"General Chemistry\"|0|201407291017|F
| | 8|2131088523
PV1 | | 0 ""
OBR | | 9|06/HT4114001206\NMHLAB|0012\"General Chemistry\"|0|201407291017|F
```

The structured format of the message enables the EMR to carry out some valuable functions:

- The results above can be stored for future reference in the patient’s record within the EMR.
- The EMR can detect any abnormal or acute results, such as the alkaline result highlighted above.
- When future laboratory tests are carried out the current and previous results can be compared and tabulated for the GP to review any trends in the patient’s health.

Health Level Seven (HL7) is an international standard for the electronic exchange of clinical and administrative data between the computer systems of multiple healthcare provider organisations. HL7 is used very widely with HL7 standards bodies operating in more than 20 countries, including New Zealand and Australia.

HealthLink Messaging – it’s not email!

HealthLink does NOT use email as the transport mechanism for clinical document transfer. Email, otherwise known as SMTP (Simple Mail Transfer Protocol), is not recommended as a means of clinical message transfer. SMTP does not provide the level of manageability, assurance and reliability that is consistent with current industry standards.

What is ‘store and forward’?

The HealthLink Messaging System uses store and forward technology, which means that HealthLink stores the message centrally on a web-based server, removing the need for the sender and recipient to be connected to the network simultaneously. (This is unlike HealthLink SmartForms technology, which can also send messages in real time.) Store and forward removes providers’ uncertainty and the inconvenience of worrying about whether or not the recipient is online at the time they are sending a message. The message is delivered as soon as the recipient is ready to receive it. It is an ideal way to send messages and documents, regardless of the recipient’s geographical location or time zone.
HealthLink offers a range of messaging service packages that can be tailored to suit the needs of every hospital, radiology and pathology provider. Contact HealthLink for an obligation-free evaluation of your needs.

### HealthLink Messaging - a timeline

Improving GP communication with the rest of the health sector is a cost effective means of improving health system performance and lifting the quality of patient care provided. The HealthLink Messaging System (HMS) is the quality benchmark. Used far more than any other clinical messaging system in Australasia, HMS has been continually updated and improved upon for more than 20 years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tr>
<td>1993</td>
<td>One of the world’s first electronic messaging systems catering to the healthcare sector, the HealthLink Messaging System (HMS) was pioneered before widespread use of the internet. The service began by delivering pathology results to New Zealand general practices.</td>
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<td>1996</td>
<td>Discharge summaries and specialist letters were launched in several New Zealand regions.</td>
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<td>1998</td>
<td>HealthLink became New Zealand’s largest private network (in any sector).</td>
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<td>2000</td>
<td>HealthLink was used by all New Zealand GPs and entered the Australian market with the signing of its first Australian customer, Gold Coast Medical Imaging.</td>
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<td>2015 and beyond</td>
<td>Today, HealthLink is trusted by more than 30,000 healthcare practitioners to send over 80 million messages annually. Providers in New Zealand, Australia, the Pacific Islands and Canada use HealthLink to exchange patient information quickly, reliably and securely. All of New Zealand’s hospitals use HealthLink for their referrals, status reports and discharge summaries (known as RSD) and HealthLink offers the largest pathology reporting network in the world. HealthLink continues to invest substantial time and resources into its service roadmap in order to meet the changing needs of customers and to continue improving healthcare communication into the future.</td>
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