Efficacy of electronic discharge summaries:
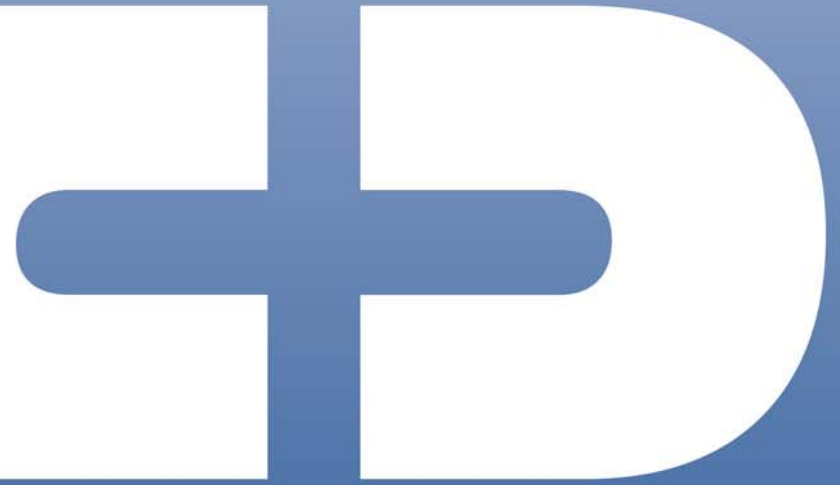
A case study demonstrating early results at two hospitals

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Paper objectives

Does the conversion to an electronic discharge summary improve clinical outcomes through an improvement in:

1. Delivery

2. Quality

3. Speed

The paper world

Categories	Paper	Electronic
Quality of document (carbon copy vs. printed)	✖	✔
Readability (handwriting vs. print)	✖	✔
Delivery (arrival at GP)	✖	✔
Timeliness	✖	✔
Accessibility	✔	✖
Speed to complete	✔	✖

The electronic world

- The system used for comparison, the Enterprise Discharge Summary (EDS), is a web-based discharge summary with the ability to pull information from various source systems including:

    – Patient Administration

    – Pathology

    – Operating Theatres

    – Medications

- The discharge summary is able to be sent to GPs and post-discharge healthcare providers electronically directly into practice software

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The Discharge Summary journey

Queensland Health Doctor

Queensland Health Encryption

Queensland Health Doctor distributes the Discharge Summary
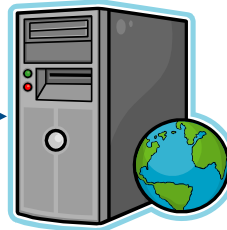
Encrypts the message and sends it to the Messaging Agent in HL7

Messaging Agent

The Messaging Agent sends the message to the GP Software

GP

GP Server

The GP locates the Discharge Summary in their holding file or elsewhere and accesses the information

The GP server receives the Discharge Summary and decrypts it with Messaging Agent software

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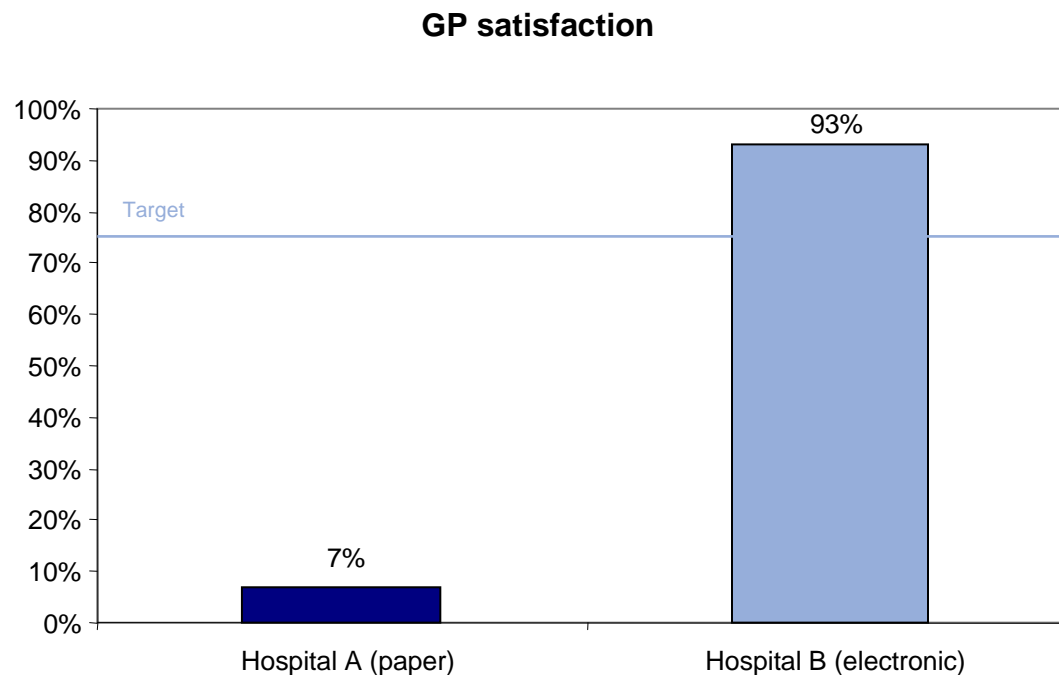Queensland
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Delivery

Measure 1: *Percentage of admissions with a discharge summary completed which make it to the end user (the GP)*
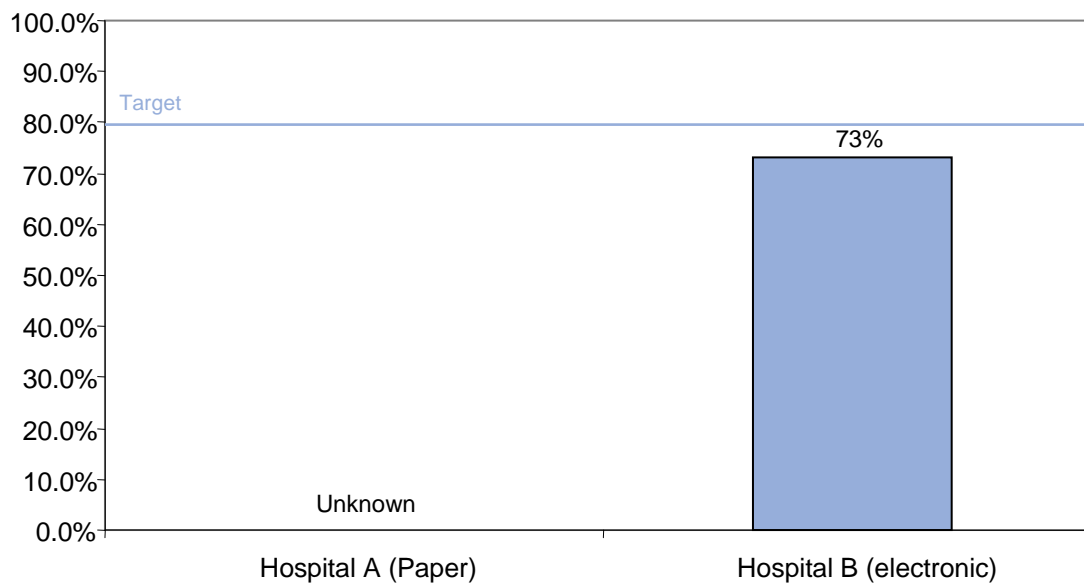
Percentage of GPs who receive a discharge summary
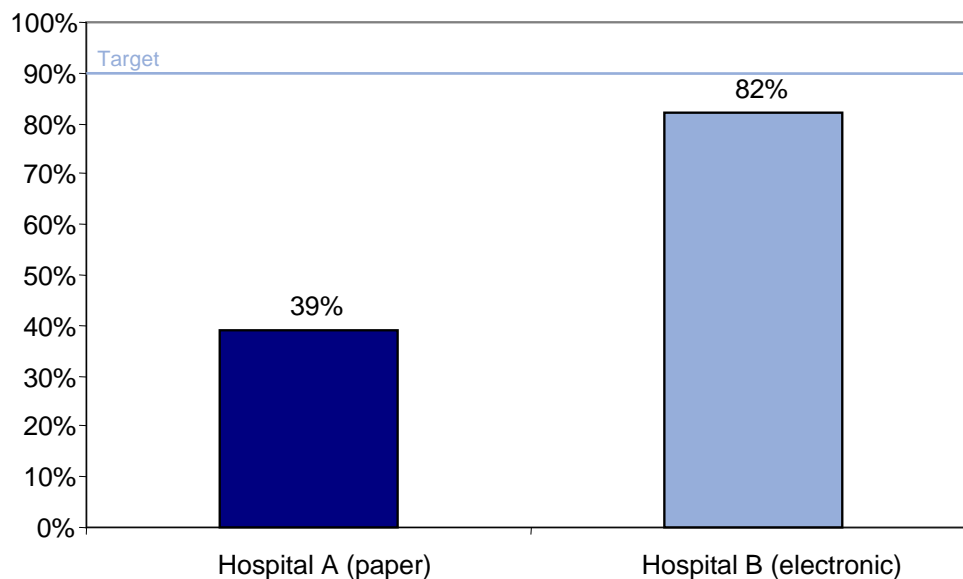
Quality

Measure 2: GP satisfaction with the current discharge summary

GP satisfaction

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Speed

Measure 3: *The speed at which the summary is completed upon a patient's discharge from hospital*

Percentage of discharge summaries completed within 48 hours

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Implications

Delivery – electronic summaries *actually* make it to the GP – they are less likely to get lost in:

- Administration
- Australia Post, or the
- Ether.

Quality – electronic summaries are more legible, timely and relevant than paper-based summaries.

Speed – inconclusive given lack of baseline data to indicate an increase in speed, though strongly supported through qualitative evidence.

Another way of saying it …

"I received my first [electronic discharge summary] today less than 24hrs after my patient's discharge from the hospital … it takes the care we can provide to our patients to a new level. It also reduces dramatically duplication of radiology and pathology investigations."

- "Hospital A" GP

Additional evidence

Results of six month audit in Hospital A which was completed post the submission of this paper.

Hospital A
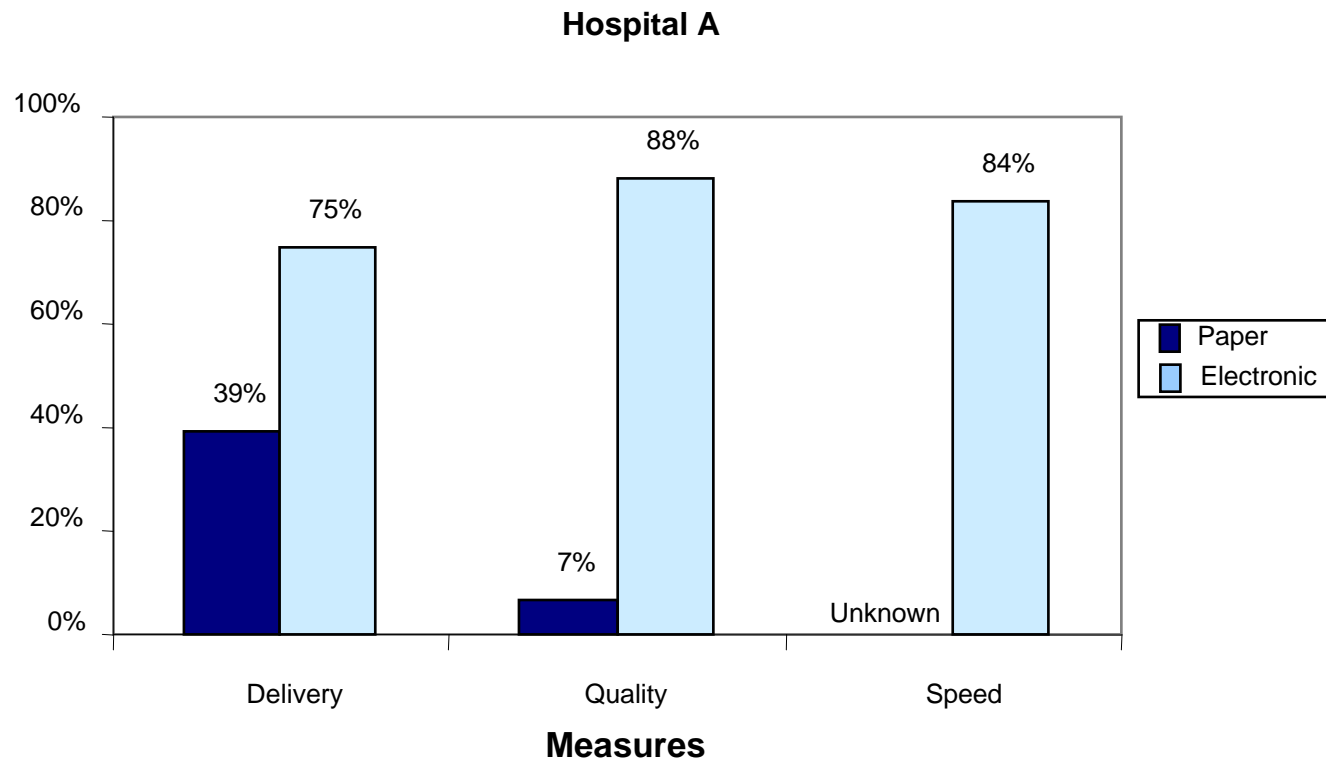
Conclusion

The conversion to an electronic discharge summary improves clinical outcomes through an improvement in:

- Delivery

- Quality

- Speed (supported through qualitative evidence).

The increase in results is not solely attributed to technological improvement – also of critical importance are:

- Clinical Leadership

- Business process integration

- Change management.

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