How not to miss the diagnosis – an electronic solution

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Background

Waitemata District Health Board completes approximately 20,000 outpatient appointments each month and demand continues to grow. We need to understand the reasons for and outcomes of our outpatient appointments to better manage our resources and service quality. Clinician-confirmed diagnoses are critical to our understanding.

Our rheumatology outpatient service recognised the value of adding a clinician's diagnosis to their paper outcome forms. They trialled a paper outcome form with the diagnosis included, but this was difficult to expand to other services as it was complex for administrators to manage. In addition, the paper-based process was associated with risks that included lost forms, poor form legibility and errors associated with duplicate data entry.

Opportunity

The e-Outcome form proof of concept was a collaborative project between Waitemata District Health Board and Orion Health as part of the existing Innovation Partnership.

The project is part of a broader initiative to better understand outpatient follow up practice and manage demand across our Outpatient Services.

Method

"Every appointment has a reason, every reason has an outcome and every outcome is actioned".

The scope of this project was to develop, implement and evaluate an electronic version of the paper outcome form – including diagnosis - with our Rheumatology Service.

7 doctors   2 nurses   6 administrators

- Staggered roll out was used with training at the point of use
- Evaluation to understand
  - impact on administrative workflow,
  - impact on clinical workflow and
  - data capture and extraction.

Results

| 680 Outpatient visits during 11 weeks | → | 463 Outpatient appointments with e-Outcome form (69%) | → | 451 outcome forms completed by booking and scheduling |

Impact on workflow

- The form reduced the number of administrative steps from eight to six steps by eliminating processing of paper forms
- The administrative burden on clinicians increased as the e-Outcome form took five minutes to complete compared to 1-2 mins taken using paper

Data capture and extraction

We extracted reason (diagnosis) and administrative outcome (eg follow up) from the e-Outcome form

Rheumatology diagnoses recorded on e-Outcome form during proof of concept

Rheumatology outcomes recorded on e-Outcome form during proof of concept

Benefits

✓ electronic visibility of diagnosis
✓ improved communication between clinicians and administrative staff
✓ better visibility and access to forms

Areas for development

- reduce number of clicks in form
- improve screen layout
- pre-populate with patient encounter number

"It's certainly made bookings more accurate and timely – especially for short interval appointments" *Rheumatologist*

"all the data was there and I also got to review the diagnosis …it was quite useful" *Administrator*

"helps to eliminate the sheer number of emails between clerk and clinician" *Rheumatologist*
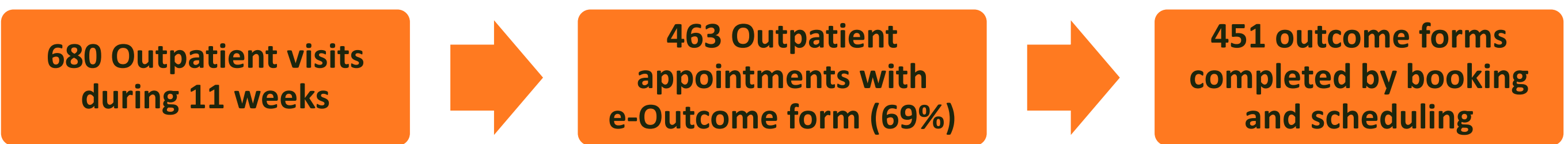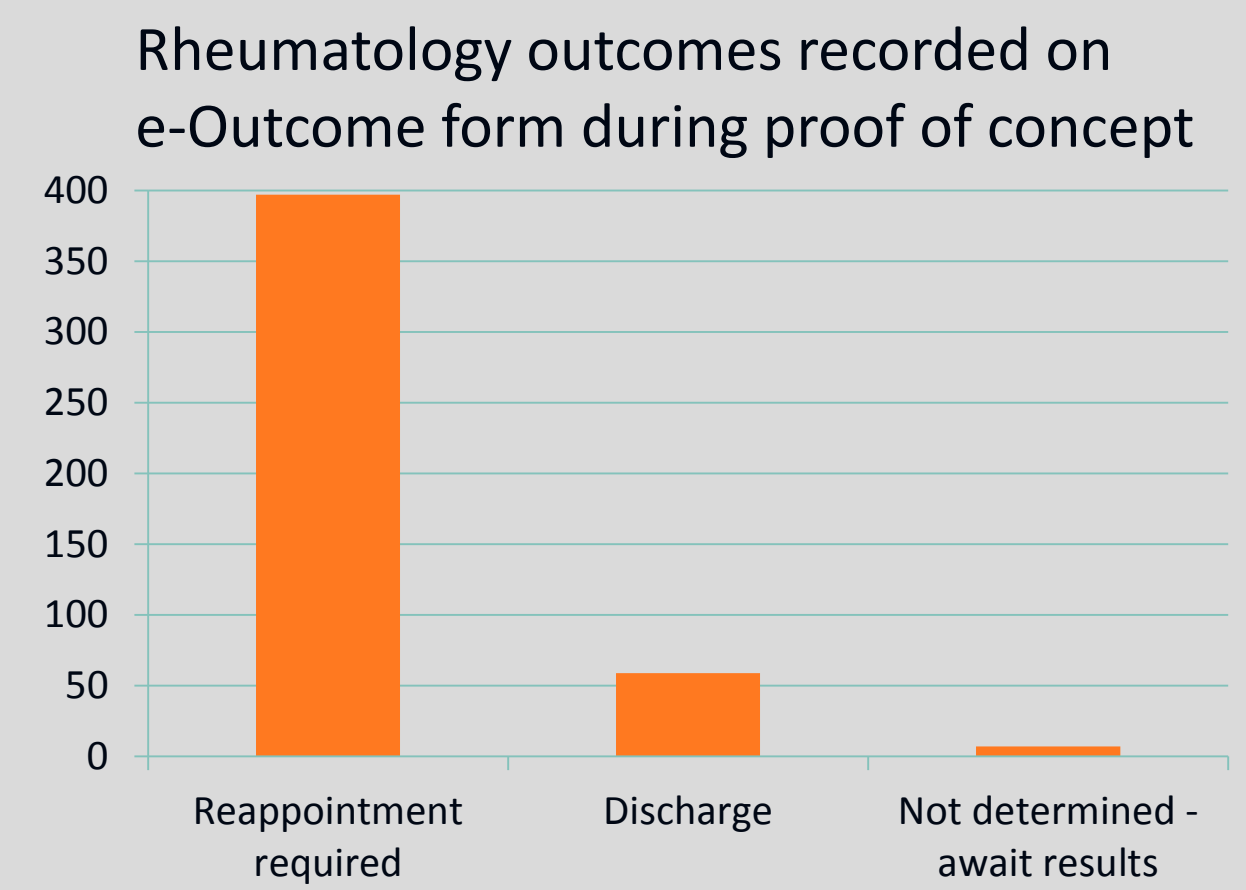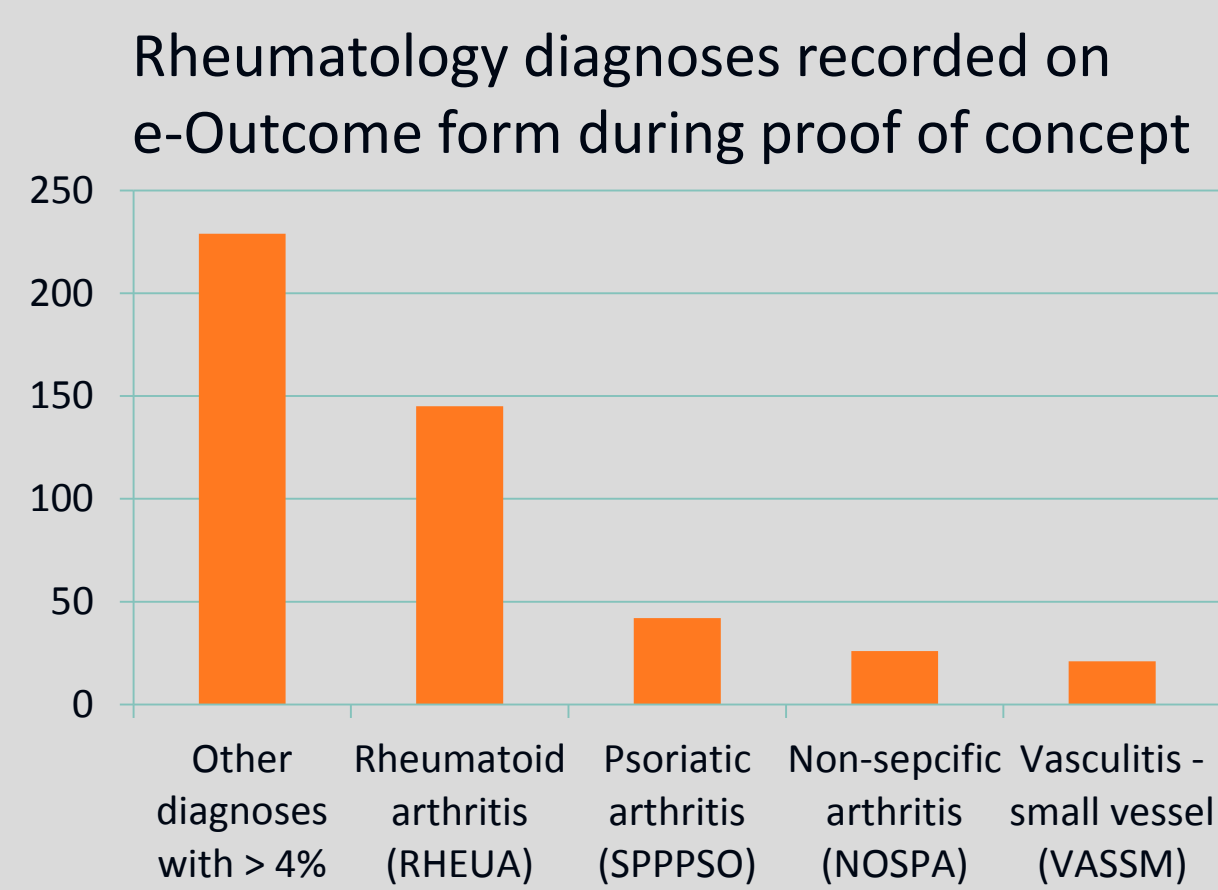
Conclusion

Clinicians and administrative staff support this electronic version of the paper outcome form in principle, but not in its current state. The form needs to be:

- intuitive, easy to use and viewable on a single screen without horizontal scrolling
- integrated with our patient administration system (i.PM) to enable pre-population of data
- as quick and easy to complete as possible (given that the paper form only takes seconds to complete) and involve as few clicks as possible

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