

INTERACTIVE AND RESPONSIVE MEDICATION RELATED DOCUMENTS

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Background

Historically, medication related documents, such as Drug Prescribing Guidelines, Clinical Guidelines and Medication Standing Orders, have been uploaded to an intranet as Portable Document Format (PDF) documents. This means they're static, unresponsive pages, with no user interaction available.



Gap

We identified a number of gaps:

- Clinicians were accessing the PDF document via the intranet, but then searching the internet for the appropriate calculator – dose calculator, eGFR etc.
- Google results for dose calculators and renal function calculators were not vetted for quality, resulting in clinicians accessing incorrect and inappropriate results.
- Clinicians were using mobile devices (phones, iPads) to access medication related documents, but had trouble viewing PDF documents on the smaller screen.
- Readers were having to scroll through all information to find the section of the document they wanted to view.



Results

The resulting documents were responsive to the size of the screen on which the documents were viewed. For example, we utilised a stacked menu for mobile phone screens smaller than 620px, but was displayed as a full responsive navigation bar along the top of screen when viewed on a larger screen.

To limit the amount of unnecessary information on display, accordion-style drop down sections were included, resulting in tailored information for each clinician. This reduced the amount of scrolling the viewer was required to perform and increased the usability of each document.

Dose calculators were coded directly into the medication document page to allow clinicians access to medication safety tools without the need to visit external internet sites, increasing the confidence in the information accessed.

Feedback received from users was overwhelmingly positive and enables future linking to mobile positive projects, such as Hospital Health Pathways, which allows junior medical officers access to fast and efficient evidence-based clinical information.

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Method

To address these issues, we designed a new format for district-wide medication related documents. Rather than a static PDF document, the information from each document was placed into a separate intranet page, utilising the flexibility and adaptability of the intranet through the use of:

- Hypertext Markup Language (HTML) for text
- Cascading Style Sheets (CSS) for styling
- JQuery for interactivity

Using coded web-based pages instead of PDF documents allows the addition of interactive features such as dose calculators and accordion style drop down boxes to minimise unnecessary information displayed.

The template design and coding was completed by two pharmacists using Adobe Dreamweaver for development and Squiz Matrix as the Content Management System which supports the health service intranet.



Future

Future work and direction for this project will include coding and/or embedding a range of different calculators, including:

- Dosage calculators for DOACs, enoxaparin and electrolyte replacement
- Therapeutic drug monitoring
- Corrected calcium
- Fracture Risk Assessment Tool (FRAX)

Although most calculators used within this project have been developed and coded into the document, it is possible to imbed already existing calculators from external sources, directly into the medication documents. External resources would need to be verified prior to use and approved by the Drug and Therapeutics Committee. The future of medication related documents, including Drug Prescribing Guidelines, Medication Standing Orders and Nurse/Midwife Initiated Medications requires interactivity and responsiveness to enable all clinicians' access to approved evidence-based information using their own preferred method of document access.



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