



## FINAL REPORT

### Digital Health Workflow and Integration

*Please note: this report will be published on the RACP website,  
please do not include confidential information.*



Bio: Dr Aaron Gaekwad is an aspiring neurologist. He is currently the stroke fellow at Prince of Wales hospital in Sydney. He has interest in stroke and health informatics and has a CHIA certification.

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<b>Report Date</b>	14 <sup>th</sup> May 2021
<b>Report Title</b>	Stroke Workflow and Clinical Care Integration with an Online Stroke Clinical Platform

<b>Lay Summary:</b>  Please provide a brief, plain English summary of your Workflow or Integration example.	<p>Stroke is the leading cause of disability worldwide. Patients who have a stroke have complex needs from the time they present to hospital to the time after discharge. Gathering important patient information for someone who is having a stroke can be challenging as they may be unable to communicate due to the stroke.</p> <p>The Prince of Wales Hospital (POWH) comprehensive stroke unit has been integrating a stroke focused internet-based program to help doctors and other allied health staff care for stroke patients. We have also used current hospital systems such as electronic prescribing and use of the My Health Record (MHR) to ensure medications in stroke patients are safely and effectively administered.</p> <p>This internet- based program (named Scrawl®) is being used to complement our care to stroke patients by helping to choose the correct stroke medication at the correct dose, to effectively communicate with the whole stroke team about a stroke patients and to provide accurate communication to the general practitioner and other health professionals.</p>
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**Workflow and Integration Objectives:**

Please state the objective of this example and why you focussed on it.

Stroke care can be represented simply in the diagram below:



Figure 1: Stroke Care flow diagram

There are three main objectives for the integration of Scrawl® into the workflow of the staff on the stroke unit and the medical registrars after hours:

1. To improve acute stroke care through using Scrawl® which has an in-built clinical decision support tool to calculate dose of thrombolytic and to ensure thrombolysis is safely administered by prompting doctors to check for contra-indications through a patient history and use of the local electronic medical record (EMR) and use the My Health Record (Figure 2). Secondly, to create EMR stroke prescriptions to populate doses and dosage instructions (such as maximum dose and monitoring) for common parenteral antihypertensives in acute stroke care (Figure 3). We have focused on acute stroke care as medical registrars on after hours require support to make safe decisions about acute stroke care.

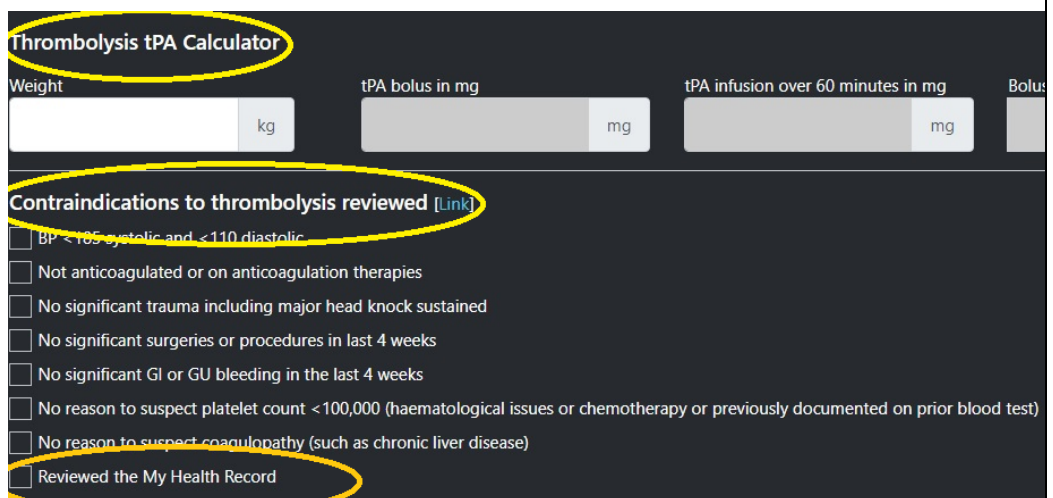


Figure 2: Scrawl® Thrombolysis calculator with medication safety prompts including MHR prompt

For hypertension:	
labetalol	10 - 20 mg, IV, Solution-Inj, every 5 minutes, PRN for hypertension - see co.. Target BP: SBP <180 and/or DBP <105. Do not use if heart rate < 60bpm
hydralazine	5 mg, IV, Solution-Inj, every 20 minutes, PRN for hypertension - see comme Target BP: SBP <180 and/or DBP <105. Inject over 1-2 minutes

Figure 3: EMR Antihypertensive in stroke prescription

2. To improve the Stroke Multi-disciplinary team (MDT) meeting using the Scrawl® MDT function to tailor for POWH specific allied health care and rehabilitation needs. In collaboration with the stroke team and the stroke unit allied health staff we have tailored Scrawl® MDT to reflect the specific care for each allied health MDT member in a simple to use

checkbox and free text format (Figure 4). Secondly, as a workflow example our stroke pharmacist is concurrently using MHR together with Scrawl® MDT to enhance MHR use for stroke unit care. We have focused on this aspect to improve MDT documentation and participation.

The screenshot shows a dark-themed form titled 'Team discussion'. It is organized into several sections, each with a list of checkboxes for different status options:

- Medical:**  Work in progress,  No active medical issues needing ongoing work up/management in hospital
- Speech path:**  Awaiting review,  Seen with ongoing input,  Reviewed and discharged,  Not involved/required
- Physio:**  Awaiting review,  Seen with ongoing input,  Reviewed and discharged,  Not involved/required
- OT:**  Awaiting review,  Seen with ongoing input,  Reviewed and discharged,  Not involved/required
- Overall progress:**  Not making great progress,  Generally improving,  More or less back to normal self,  Likely discharge back to previous residence,  Likely discharge back to previous residence with increased support,  RACF
- Summary:** A text input field.
- Likely to require formal rehab review:**  No,  Yes
- Estimated day of discharge:** A date picker field.
- Social Work:**  Awaiting review,  Seen with ongoing input,  Reviewed and discharged,  Not involved/required
- Pharmacy +:**  Awaiting review,  Medications reconciled and reviewed with issues identified

Figure 4: Scrawl® MDT tool showing tailored elements for each allied health group.

- To improve stroke ward care through Scrawl® by using the daily review function to populate a detailed note on stroke related care including neuroimaging findings, stroke mechanism and National Institute of Stroke Scale (NIHSS) score. Scrawl® will generate a discharge summary that has all details of the stroke admission that can be used for outpatient follow up and communication to the general practitioner (GP) (Figure 4). We have focused on using Scrawl® during stroke ward care as it will provide a time friendly and thorough note for stroke care communication when there previously was no stroke specific discharge summary.

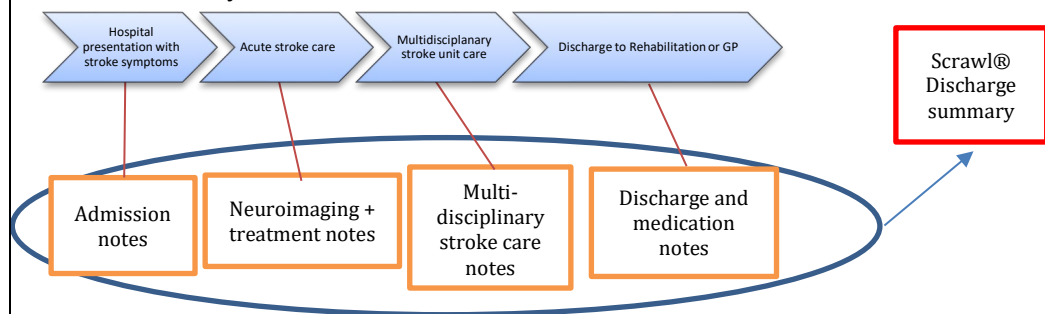



Figure 5: Showing how the Scrawl® discharge summary incorporates all elements of the stroke patient journey.

<p><b>Benefits &amp; Considerations</b> :</p> <p>Please outline the benefits and considerations in the use of My Health Record and/or related digital health initiatives in this example.</p>	<p>Use of an Online Stroke Clinical Platform (Scrawl®) has benefits for both the doctors using it and stroke patients. Benefits include:</p> <ol style="list-style-type: none"> <li>1. Improved acute care with clinical decision support for thrombolysis</li> <li>2. Support to engage doctors to use MHR</li> <li>3. Improved communication to GP and to other specialists through accurate and thorough Scrawl® discharge summary</li> <li>4. Improved ability to have a tailored, effective and collaborative Stroke MDT</li> </ol> <p>At this stage in its development an important consideration in the integration of Scrawl® to the POWH Stroke Unit is the requirement for on-going active use of the EMR and MHR by staff. Scrawl® is a complimentary IT platform and cannot be used in isolation at this stage. Implementation of Scrawl® requires a multi-modal approach with all staff stakeholders involved in its development and use. Scrawl® is not a prescribing program and concurrent EMR prescriptions have been developed to compliment Scrawl® so there is uniformity of approach for prescription of stroke therapies.</p>
<p><b>Additional Advice and Comments:</b></p> <p>Please list any items of interest which have arisen as a result of documenting this particular example.</p>	<p>Nil</p>
<p><b>Acknowledgements</b></p>	<p>Nil</p>

**Award Recipient Signature:**

I certify that the information supplied in this report is true and correct. I consent to enquiries made by the Royal Australasian College of Physicians to verify this information with any institution or individual.

Signature:  \_\_\_\_\_

**Please submit completed and signed report to:  
RACP/ADHA Digital Health Scholarship  
[engage@racp.edu.au](mailto:engage@racp.edu.au)**