




# Reducing Unnecessary IV Tramadol Infusions in Emergency Department (ED)

What is Stupid? Why is it Stupid?	What was Implemented?							
<p>Intravenous (IV) tramadol infusions are being unnecessarily overused compared to IV bolus administration for patients requiring IV tramadol in the ED. This disproportionate and often unwarranted use of infusions has led to several concerning consequences:</p> <ol style="list-style-type: none"> <li><b>Increase in Nursing time spent</b> on drug administration</li> <li>Increase in cost of consumables incurred to department <b>without clear clinical benefit</b></li> <li>Generates <b>unnecessary medical/ plastic waste</b></li> </ol> <p>The unnecessary use of IV tramadol infusions represents a systemic inefficiency and has broader implications for sustainability and cost-effectiveness in healthcare delivery.</p>	<h2 style="text-align: center;">Empowering Staff and Optimising IV Tramadol Administration from Infusion to Bolus Method to Enables Efficient and Sustainable Care.</h2> <table border="0" style="width: 100%; text-align: center;"> <tr> <td style="width: 45%;"><b>Before</b></td> <td style="width: 10%;"></td> <td style="width: 45%;"><b>Now</b></td> </tr> <tr> <td> <ol style="list-style-type: none"> <li><b>Physician Resource Misallocation and Under-utilisation of Nursing Expertise:</b> IV Bolus drugs are administered by ED doctors</li> <li><b>Estimated Nursing time taken for each patients that requires IV Tramadol Infusion = 12 minutes</b></li> </ol> </td> <td></td> <td> <ol style="list-style-type: none"> <li><b>Corrected misunderstandings about perceived benefits and efficacy of Tramadol Infusions + EMR modification</b> → Encourage prescription of Bolus IV Tramadol instead of Infusion.</li> <li><b>Nurse Empowerment in Bolus IV Tramadol Administration</b> → Bolus IV Tramadol are now administered by ED Nurses instead of Doctors</li> </ol> </td> </tr> </table>		<b>Before</b>		<b>Now</b>	<ol style="list-style-type: none"> <li><b>Physician Resource Misallocation and Under-utilisation of Nursing Expertise:</b> IV Bolus drugs are administered by ED doctors</li> <li><b>Estimated Nursing time taken for each patients that requires IV Tramadol Infusion = 12 minutes</b></li> </ol>		<ol style="list-style-type: none"> <li><b>Corrected misunderstandings about perceived benefits and efficacy of Tramadol Infusions + EMR modification</b> → Encourage prescription of Bolus IV Tramadol instead of Infusion.</li> <li><b>Nurse Empowerment in Bolus IV Tramadol Administration</b> → Bolus IV Tramadol are now administered by ED Nurses instead of Doctors</li> </ol>
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	<p><b>Impact</b></p> <ul style="list-style-type: none"> <li><b>Reduced nursing time to administer medication:</b> ~1,223 minutes monthly (~16% reduction) based on 12 mins per tramadol IV infusion and 5 mins per tramadol IV bolus</li> <li><b>Cost Savings: \$3,172 monthly</b> (~\$38,000 per year) based on estimated \$4.48 cost savings for each IV Tramadol infusion replaced with bolus</li> <li><b>High Scalability:</b> This can be scaled for usage for ANY institution or department prescribing IV Tramadol for patients. Team is exploring the reduction of unnecessary IV infusion for other commonly prescribe medications e.g.: IV paracetamol to optimise medication management within ED</li> </ul>							

**#1061** NTFGH Emergency Medicine

# Reducing Unnecessary IV Tramadol Infusions in Emergency Department

Empowering Staff and Optimising IV Tramadol Administration from Infusion to Bolus Method to Enable Efficient and Sustainable Care.

- **Reduced nursing time to administer medication: ~1,223 minutes monthly (~16% reduction)**
- **Cost Savings: \$38,000 annually based on estimated \$4.48 cost savings for each IV Tramadol infusion replaced with bolus**



L to R : Ng Kai Xin, Tan Yen Yen, Lee Xiao Yun, Jessica Lee, Dr Goh Shaojie

**NUHS Get Rid of “Stupid” Stuff Success Story**

# First in NUHS: Revolutionising Organisational Documentation through AI integration and Transformative Digital Excellence

What is Stupid?  
Why is it Stupid?

No standardised, scalable method for producing consistent, high-quality minutes efficiently.

1. Manual, fragmented workflow

- Transcription from recording → Shortlisting key notes → Drafting → Checking tenses and paragraph structure

2. High cognitive load

- Requires constant interpretation, structuring and rewriting

3. Time-intensive

- Up to 8 hours per meeting

4. Inconsistent Quality

- Variability across writers, formats, & meeting types

What was Implemented?



Integrated Tools:

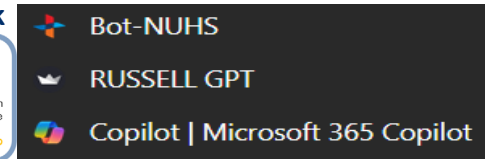


Prompt Engineering Framework

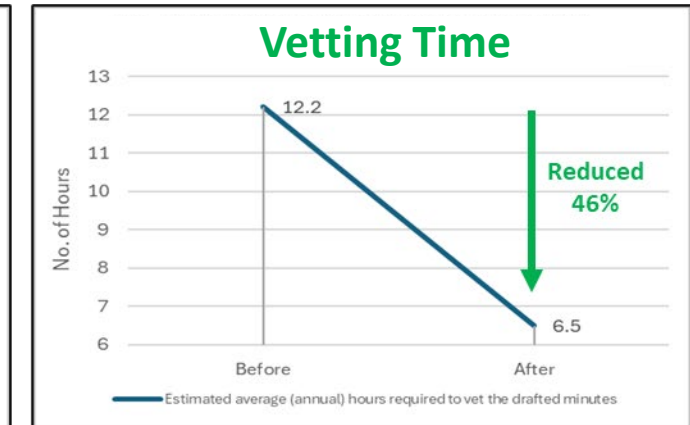
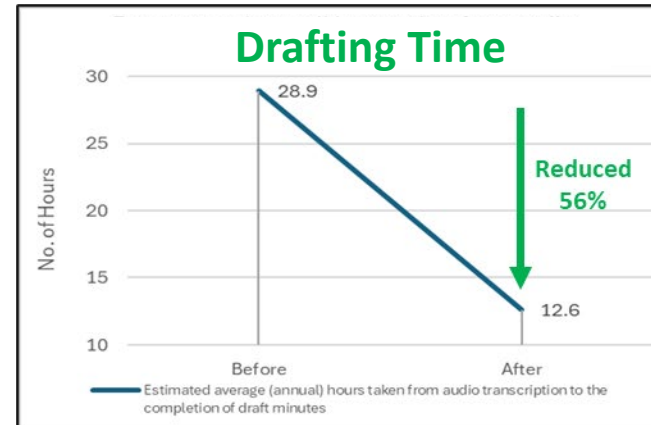
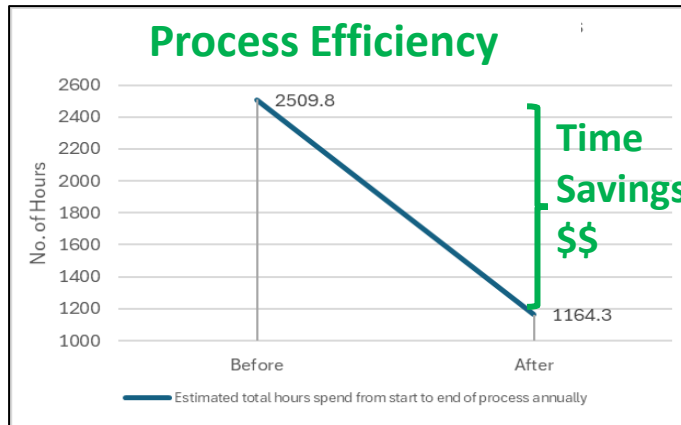
Minutes Writing (Committee Meeting)  
Download prompt for generating formal meeting minutes for committee meetings.

Minutes Writing (General)  
Download prompt for generating standard meeting minutes for meetings.

Minutes Writing (Point Form)  
Download prompt for generating meeting notes in point forms with actionable items.



Structured, Reusable prompts tailored to:  
Committee Meetings, General Meetings and Short Notes Meeting



Impact

- **>53%\* of time savings annually** (equivalent to **major manpower cost avoidance**) – significant reduction across all process stages
- Standardised, Consistent, High-quality and Accurate outputs
- Reduced dependency on individual skill levels
- **Faster** turnaround that **improved faster decision making.**
- **Scaling success across NUHS through various avenues:**
  - Developing self-service learning model – expending JHC homemade training material access on AI awareness onto eLearn for cross-institutional learning
  - Replication strategy – Collaboration through G.R.O.S.S. copycat campaign
  - Embedded system integration – Collaboration with Bot-NUHS to embed specifically crafted prompts onto Bot-NUHS for easier access

\* $[(2509.8-1164.3)/2509.8] \times 100\% = 53.609\%$

#1063 NTFGH DTT

# Revolutionising Organisational Documentation through AI integration and Transformative Digital Excellence

Created Structured, Reusable prompts tailored to: Committee Meetings, General Meetings and Short Notes Meeting

- >53%\* of time savings annually (equivalent to major manpower cost avoidance) – significant reduction across all process stages
- Standardised, Consistent, High-quality and Accurate outputs leading to Reduced Dependency on individual skill levels



## NTFGH Digital Think Tank Team

L to R : Joshua Goh, Jan Lim, Tan Yi Jia, Kristeen Peh, Mildren Chui, Jonathan Yeo, Jeremy Tan, Kelvin Lew, and Ng Yan Jun

**NUHS Get Rid of “Stupid” Stuff Success Story**