

NTFGH ED MO Audit with Russell-GPT

What is Stupid?
 Why is it Stupid?


In our Emergency Department (ED), we required 4 Medical Officers (MOs) and 1 senior clinician to spend at least 30 hours each quarter manually auditing 100 – 120 clinical notes to ensure appropriate MO documentation. This process was problematic because of the following issues:


- 1. Time-Consuming for Multiple Staff:** An administrative staff first generates a list of notes from EPIC to be audited. Both MOs and senior clinicians then invest significant administrative time, outside of their clinical work.
- 2. Limited Audit Coverage:** Despite the effort required, only a small sample of notes (<1%) were reviewed each quarter and does not fully reflect the quality of the MO's documentation.
- 3. Lack of standardisation:** As there are 5 auditors in the team, it is difficult to fully standardise the quality of the audit.
- 4. Minimal Actionable Feedback:** Lack of computational support hindered ability to identify trends or areas needing improvement.


What was Implemented?


Maximizing Efficiency in ED Documentation Audits with RUSSELL-GPT 🤖

We utilized RUSSELL-GPT, a generative AI tool available on the NUHS intranet, to automate the initial audit process. Through specialized prompt development and batch processing capabilities, we achieved:


Reduced Time Consumption
 Automation decreased routine audit time for all clinicians, enabling focus on patient care


Expanded Audit Coverage
 Monthly audits of all 20 MOs enabled comprehensive analysis


Enhanced Insight Generation
 AI handling initial scoring allowed focus on key findings and actionable feedback


Provided Faster Feedback
 Monthly audits enabled timely issue identification and feedback distribution

Impact

- Time Savings:** Reduced manual audit time from around 30 man-hours per quarter to around 5 hours, inclusive of time needed to extract patient notes from EPIC and review of LLM output to ensure accuracy, potentially saving approximately 100 man-hours annually for both MOs and senior clinician.
- Enhanced Efficiency and Effectiveness:** Doubled audit coverage from 5 notes documented per MO to 10 notes, representing about 20% of their clinical documentation over a 2-week period, while reducing audit time by over 80%.
- Optimized Clinician Focus:** Freed clinicians to concentrate on patient care and critical audit analysis rather than routine tasks, improving job satisfaction and reducing stress.
- Scalability:** AI-driven process easily accommodates increased audit frequency and volume without requiring additional clinician time.

NTFGH ED MO Audit Team and NTFGH Health Services Research & Analytics Department

Maximizing Efficiency in ED Documentation Audits with RUSSELL-GPT

Automated audit process using RUSSELL-GPT to evaluate the quality of Emergency Department Medical Officer clinical notes, streamlining audits to support capacity scaling while enhancing analysis with insights.

- **Significant Time Savings:** By eliminating manual audits, we estimate **saving over 100 hours of clinician and administrator's time annually**, allowing focus on patient care and other critical audits instead.
- **Enhanced Audit Effectiveness:** Expanded audit coverage to include more audited notes per MO every quarter. Currently, the number of notes audited are already double that of notes audited in previous quarters. This allows for a more comprehensive analysis of MOs' performance.
- **Generating Actionable Insights:** Trends and insights generated from large database combined with senior clinician expertise enable targeted improvements in MO's documentation. Increased frequency of audits allow close monitoring of progress after feedback.



Dr Koh Yiwen

Dr Ng Wei Ming

Dr Carmen Goh

NUHS Get Rid of “Stupid” Stuff Success Story

Streamlined Endoscopy Pre-Procedure Calls with Auto SMS reminder and App Integration

What is Stupid? Why is it Stupid?

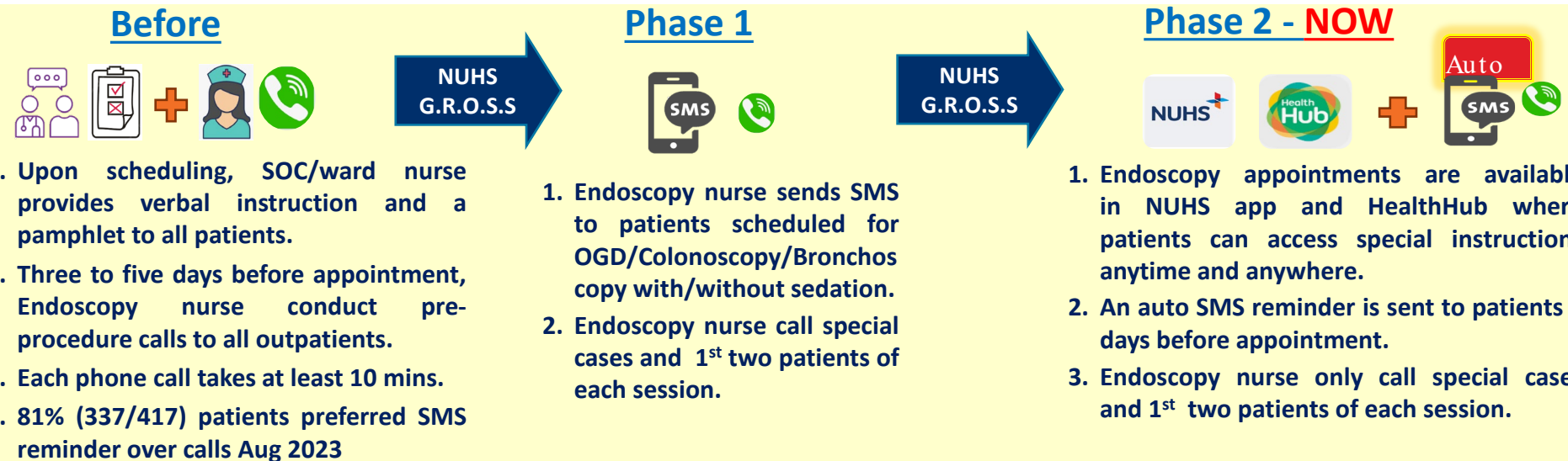
Endoscopy nurses call all out-patients to remind them of their appointment details and pre-procedure instructions. This practice is time-consuming and inefficient.

Challenges

- Patients already received the instruction during scheduling.
- Patients were annoyed by the calls
- Nurses wasted time reiterating details patients already have.
- Despite the call, some patients still forgot key steps like fasting.
- Patient need to refer to hardcopy for appt date, time and instructions.

What was Implemented?

1. Streamlined pre-call to special group of patients only (from Nov 2023).
2. Auto SMS reminder sent to patient (Wef 25 Feb 2025).
3. Endoscopy appt with instructions integrated with NUHS app and HealthHub (Wef 25 Feb 2025).



Impact

- **Time saved: 588 hours annually** (10 mins x 3640 out-patients, based on Feb 2025 out-patient volume and reduced 14 calls daily).
- **Staff satisfaction and better productivity:** Increased from **75% -> 90% -> 100%**, allowing staff to focus on patient care
- **Patient satisfaction: 79% ->100%**, patients were satisfied with reminder received. Nil adverse events reported.
- **Do less, achieve more: improved patient experience and more convenient and accessible for patients** as they can view appointment & instructions and request rescheduling via the NUHS App / HealthHub anytime anywhere.
- **Implemented across NUHS with NHG cluster going to adopt.**

NTFGH Endoscopy

Streamlined Endoscopy Pre-Procedure Calls with Auto SMS reminder and App Integration

1. Streamlined pre-call to special group of patients only
 2. Auto SMS reminder sent to patient
 3. Endoscopy appt with instructions integrated with NUHS app and HealthHub
- 588 hours saved annually
 - Improved staff satisfaction and productivity



ANC Xing Lijia, SSN Teo Lily, SSN Zhang Ying, SNM Zhang Rong, SEN Kamisah Binte Mahat, ANC Ma Xueyun, ANC Wang Caihong