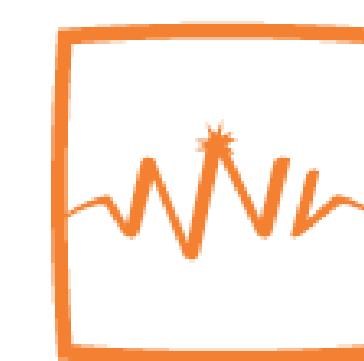




**Singapore Healthcare
Management 2019**

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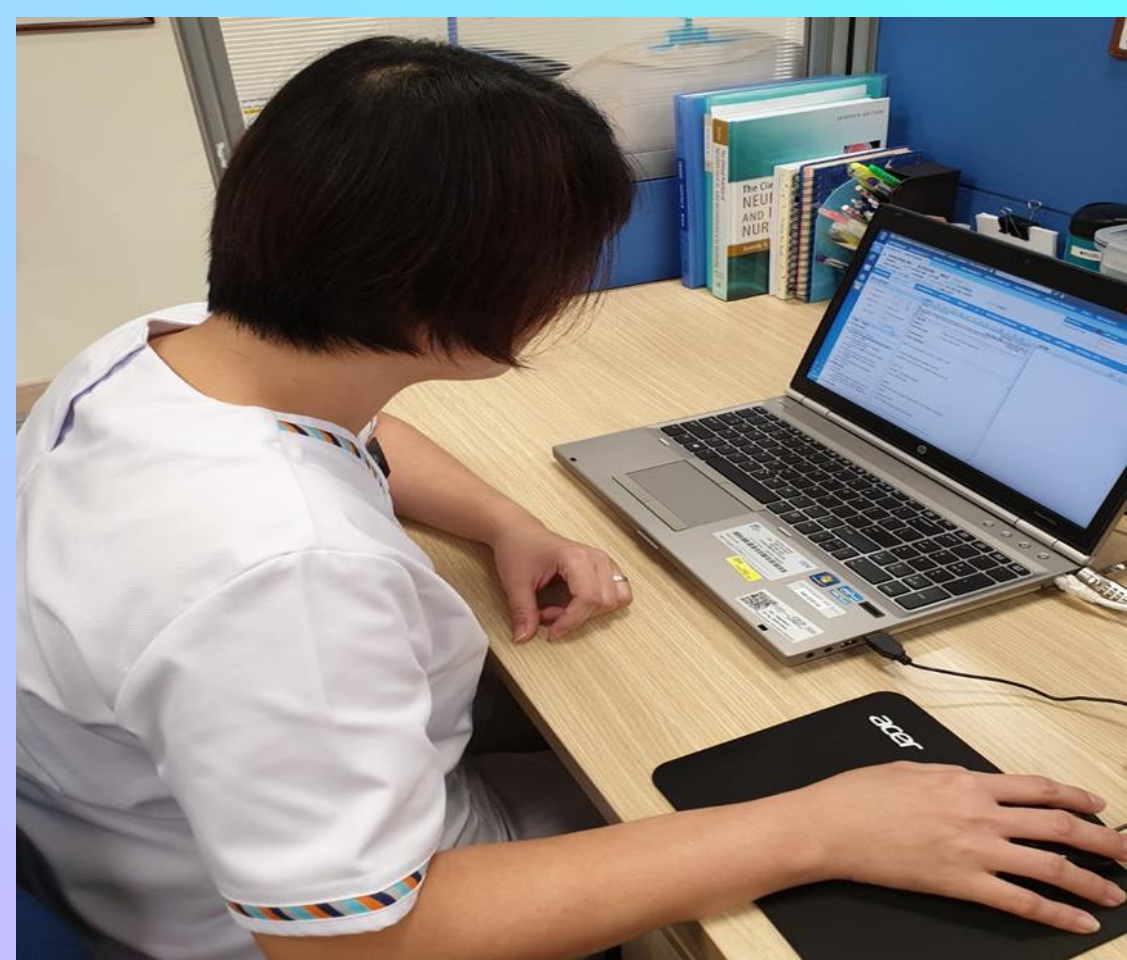
**National
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SingHealth

BACKGROUND

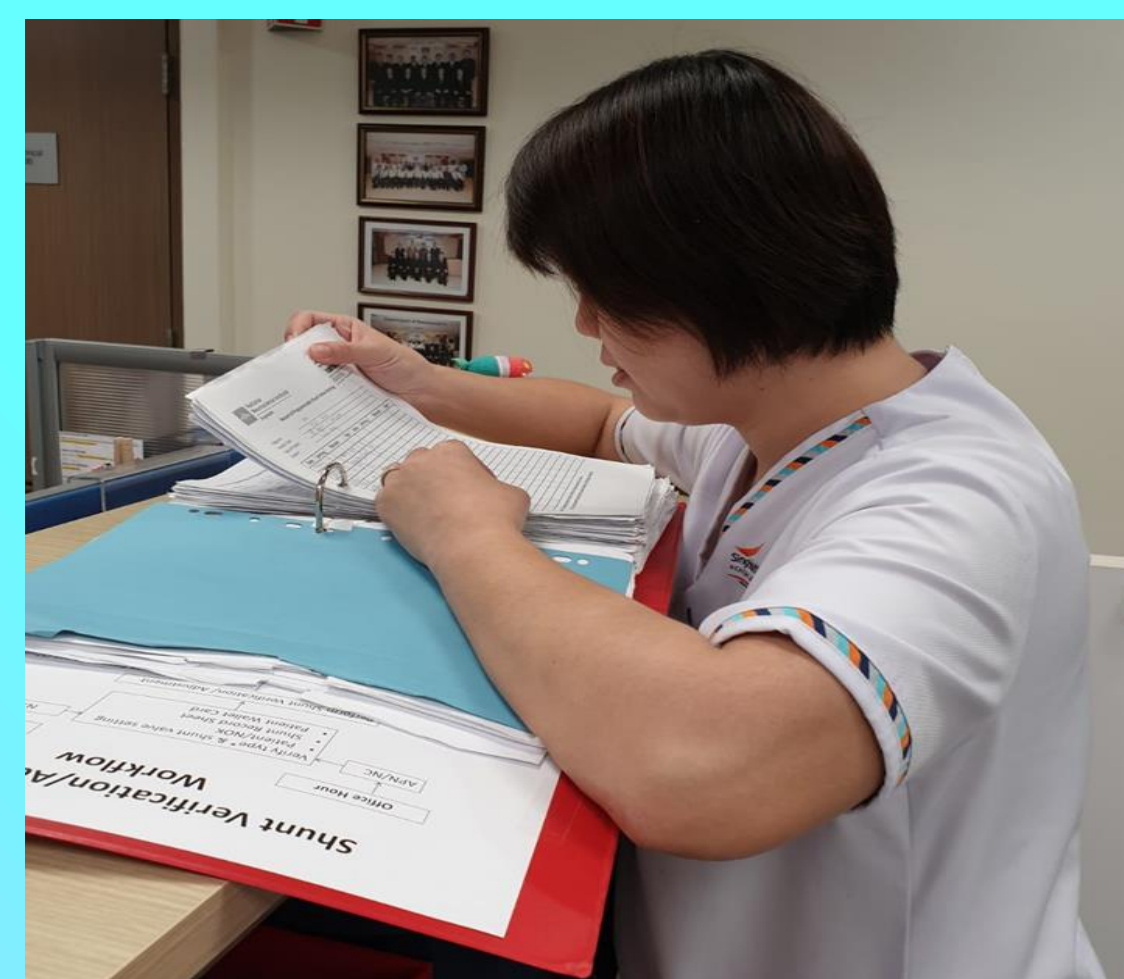
Programmable shunt valves are increasingly being used in the treatment of hydrocephalus. The valve setting can change when exposed to high magnetic fields which occur during an MRI scan and needs to be verified by trained personnel post MRI.

Prior to verification, patient electronic medical records (CPSS 2) and hardcopy records (kept in the Neurosurgery Office) need to be searched for patient last shunt setting.

Current Process



Verify electronic
medical records

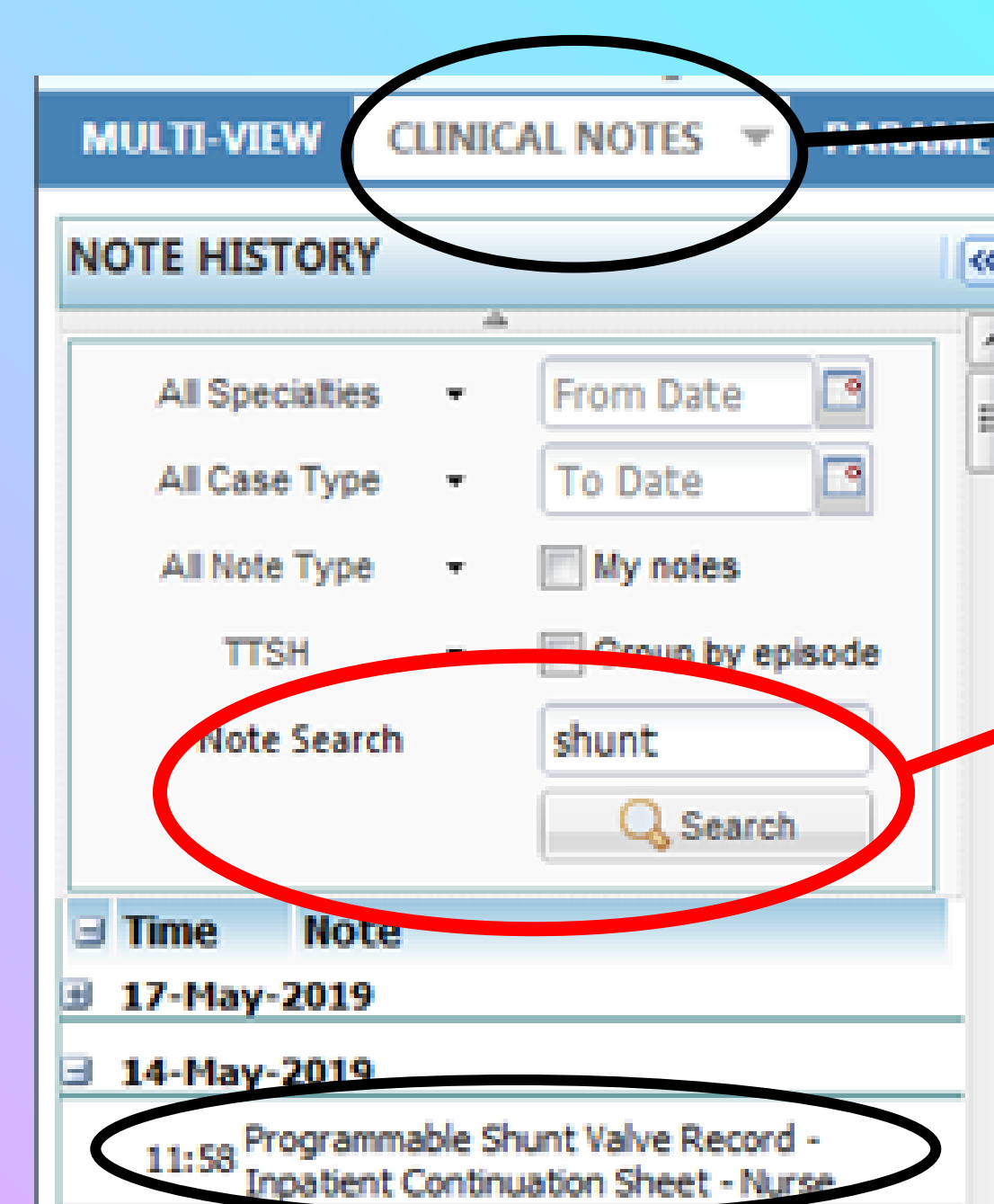


Verify hardcopy

Root cause analysis

1. Difficult to retrieve electronic record as no standardized heading
2. Prone for error as there may have multiple episodes of documentation discrepancy between the electronic and hardcopy records
3. Time consuming: 20min

Improved Process



Go to CPSS 2, Click
CLINICAL NOTES'

Type 'Shunt' in the
'NOTE SEARCH' function

**Single 'E' shunt
record**

**Per
Request**

**Time saving
19mins**

**20
Requests
Per Month**

**Time
saving
380mins**

(Content of Electronic
Records)

AIM

- To reduce the turnaround time to less than 5 minutes;
- To maintain a single electronic shunt source record to enhance reliability.

METHODOLOGY

A team of Neurosurgery Doctors and Nurses did a root cause analysis in February 2018 and identified measures to improve the documentation and retrieval process.

A new programmable shunt documentation template with a standardized heading "shunt" in the hospital electronic medical record for 5 new patients was piloted in March 2018.

CONCLUSION

This simple and easy implementable hospital wide documentation has resulted in a reliable process which improves patient safety & productivity of nurses, doctors and MRI staff.

RESULTS

With the improved process, any staff with access to the hospital electronic medical record can type "shunt" in the note search function to retrieve the record and the process takes less than 1 minute. This resulted in time savings of 380 minutes for an average 20 requests for programmable shunt verification per month.

The significant improvement results from the pilot study led to the migration of 534 existing patients' and subsequent new patients shunt record to this new electronic documentation since October 2018.

MRI staffs and clinicians can now access any patients electronic programmable shunt records without the need to contact the trained personnel to verify the paper record and this enhances patient safety with improved timeliness of care.