



Authors
Clarence Tan, Inpatient Operations
Cynthia Chia, Human Resource

**Advisors** 

**Dr Kenneth Wu**, General Manager, Raffles Hospital **Lilian Yew**, Director of Inpatient Operations

# Simple and Effective Way to Automate Staff Claims Processing

### **BACKGROUND TO PROBLEM**

- In Raffles Hospital, Inpatient Wards process about 8300 staff claims every 4 weeks. These claims (shifts and meals allowances) are manually entered by each staff.
- The manual keying of claims is a very labour intensive job that is prone to human errors. There is no proper overall control as staff could enter any amount without any system check.
- It is the responsibility of the ward manager to ensure that staff claims are correctly entered before approving Finance Department to release payment. This leads to a bottleneck for staff to receive timely payments. Overall, there is a productivity loss of about \$3000 per month for both the staff and managers.

#### **OBJECTIVES**

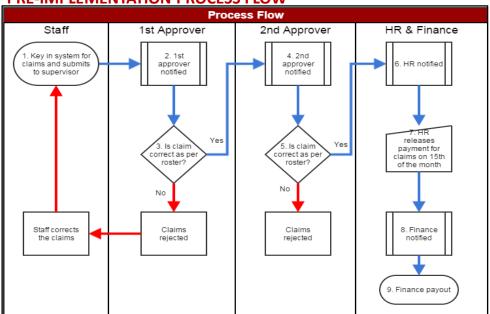
Ensuring timely payment of allowances to all staff by:

- Enhancing the claims system via automation and linkage of staff's roster to payment
- · Identifying possible failure modes and its effect on the process.
- · Reducing the time for staff to enter their claims and erroneous claims made

### **METHODOLOGY**

- Time motion study was done following the entire process from staff's claims to supervisors' approval, to identify the time taken and the overall productivity loss.
- Failure Modes and Effect Analysis (FMEA) framework was used to evaluate the need to enhance the existing e-claims system. This allowed us to identify possible process defects and productivity losses.

# PRE-IMPLEMENTATION PROCESS FLOW



# FMEA FRAMEWORK

Failure Mode	Failure Causes	Failure Effects	*RPN
1 <sup>st</sup> and 2 <sup>nd</sup> approver missing erroneous claims	<ul> <li>Each 1st approver on average is incharge of about 20 staff with an average of 34 claims each staff.</li> <li>2nd approver is in-charge of about 45 staff.</li> </ul>	<ul> <li>The department may over-pay staff thus affecting its financial health.</li> <li>Staff may under-claim leading to disputes and dissatisfaction.</li> </ul>	448
Wrongly claim amount	<ul> <li>Each claim type amount must be entered manually.</li> <li>Overtime pay pro-rated which requires calculation by staff.</li> <li>Misinterpretation of HR claims policy.</li> </ul>	Staff needs to re-submit claims. If approver fails to spot errors, the staff may under or over claim.	392
Staff misses claims submission deadline and submits late	<ul> <li>Staff may overlook the deadline.</li> <li>Approvers may not be able to remind the staff on time.</li> </ul>	Approver is required to track back previous roster to verify the claims.	252
Submission of staff claims at different times	<ul> <li>System does not control by when the staff must enter the claims.</li> </ul>	<ul> <li>It makes it hard for the approver to track which staff is lagging behind the claims. This may result in delayed payment.</li> </ul>	160
Wrong claim type	Staff selected the wrong category.	Approver to reject claims over doubts of the claim.	90
Rejected claims still entered wrong	Manual correction by staff is subject to human error	<ul> <li>Staff and the approver to go through the entire process again. The approver has to check through the claims again.</li> </ul>	36

\*RPN = Severity X Occurrence X Detectability (Each Score: 1-10)

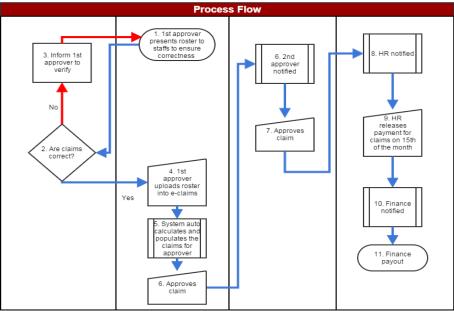
# RECOMMENDED ACTIONS AND IMPLEMENTATION

Failure Mode Actions to reduce occurrence			
1st & 2nd approver miss erroneous claims	<ul> <li>Actions to reduce occurrence</li> <li>An automated system to read and auto-populate the claims from the ward's roster.</li> </ul>		
Wrongly claim amount	<ul> <li>Automate the claim amount by the claim code by maintaining backend with effective date of claim changes.</li> <li>Strict HR policy rules base run by system.</li> </ul>		
Staff misses claims submission deadline and submits late	<ul> <li>Submission of the finalised roster to the system once the roster cycle has been completed.</li> </ul>		
Submission of staff at different times	<ul> <li>Submission of the finalised roster to the system once the roster cycle has been completed.</li> <li>Reminder of the approver to check the claims by the 15th of the month.</li> </ul>		
Wrong claim type	<ul> <li>Automate the claim type by the claim code.</li> </ul>		
Rejected claims still entered wrongly	<ul> <li>An automated system to read and auto-populate the claims from the ward's roster.</li> </ul>		

#### **ANALYSIS AND SOLUTION**

- After reviewing all the possible defects and potential productivity losses, it was decided that the claims system could be enhanced via automation of staff claims through the staff's roster.
- The claims system was enhanced to enable the system to read the staff roster in excel sheet format. The system then converts the shift codes into claims along with the meal allowances and overtime.

## POST-IMPLEMENTATION PROCESS FLOW



#### **RESULT**

- Before the implementation, the wards were losing over \$3000 worth of productivity each month. This was recovered through an investment of \$6000 to enhance the claim system.
- With the automation, staff feedback was positive with overwhelming results of >90% satisfaction (as compared to 42% previously) for the entire claim process.
- After the implementation, none of the staff are required to claim manually for their shifts and meals allowances.
- Erroneous claims have greatly reduced by 95% due to the system's high accurancy of calculation. The overall time taken for the entire process to be completed has been reduced by over 92%.

# **CONCLUSION**

- In summary: Creating a direct link between the roster and the claim system is the key to this automation process. This was achieved without overhauling the entire claims system. This process had reduced both the redundancy and duplication of effort by all staff, hence, increasing staff productivity.
- **Next Step:** This automation of staff claim will be rolled out in phases to other areas in Raffles Medical Group.