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Singapore General Hospital
SingHealth

PROJECT SPARK
SOLVING PHARMACY REWORK

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Introduction

- Pharmacy rework is the process of amending a prepared order (medication, quantity, dosing instructions or payment mode changes) due to patient request, inaccurate order taking or correction of near misses.
- Rework contributes to an unnecessary wastage of man hours and increases waiting time at the pharmacy.

Objective

- To identify and assess initiatives to reduce rework at SGH Blk 4 level 1 Outpatient Pharmacy so as to achieve resource optimization in terms of man-hours saving.

Methodology

- Type of rework and time spent were recorded onto a shared online Excel data collection form (shown below).
- Preliminary data (Aug 16) identified patient requests (45.6%) and billing-related issues (31.2%) as majority of the 500 rework cases.
- Corresponding initiatives were then implemented in two phases after identifying potential loopholes in the pharmacy workflow process.

Data Collection Form

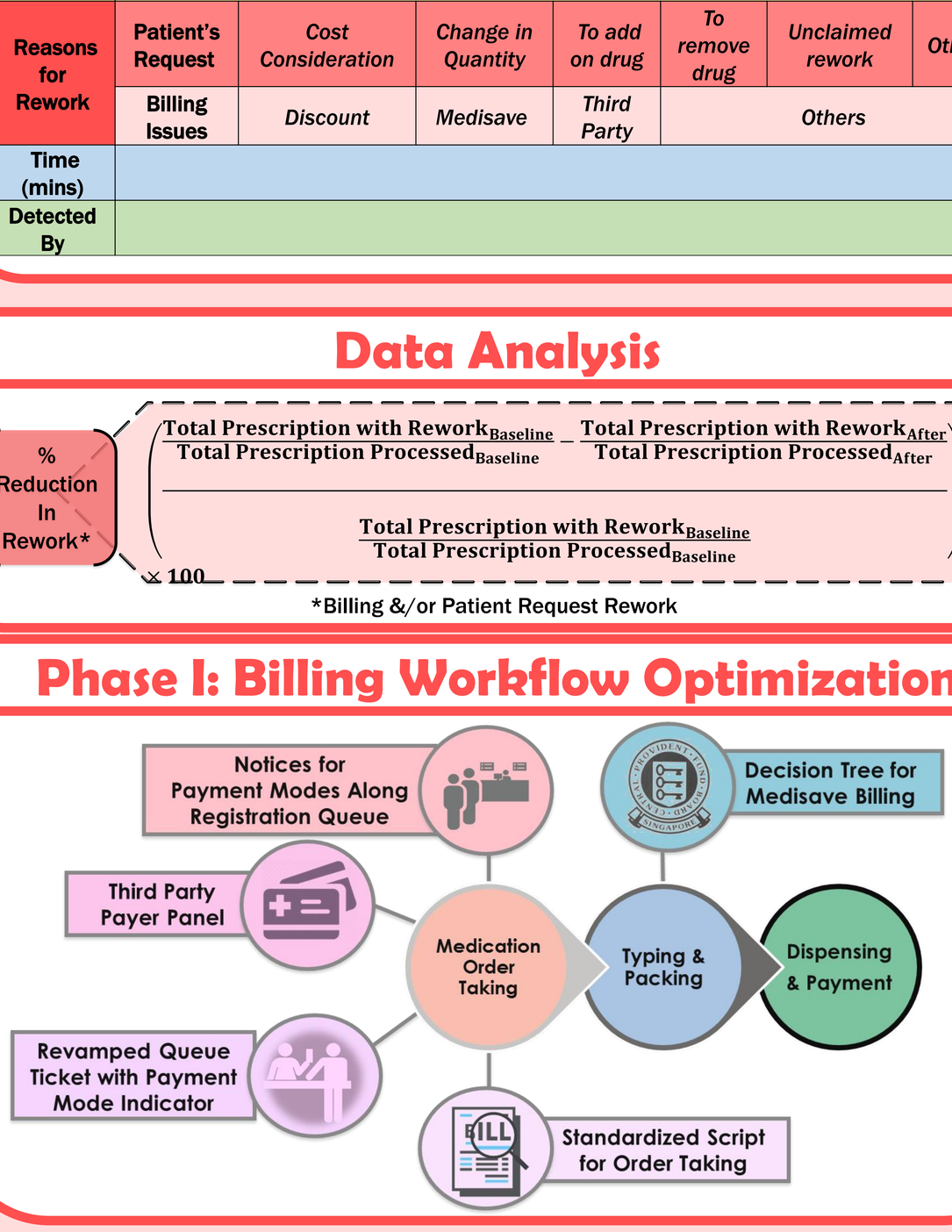
Date							
Queue No.							
Reasons for Rework	**Patient's Request**	*Cost Consideration*	*Change in Quantity*	*To add on drug*	*To remove drug*	*Unclaimed rework*	*Others*
	Billing Issues	*Discount*	*Medisave*	*Third Party*	*Others*		
Time (mins)							
Detected By							

Data Analysis

$$\%\ \text{Reduction In Rework*} = \left(\frac{\text{Total Prescription with Rework}_{\text{Baseline}}}{\text{Total Prescription Processed}_{\text{Baseline}}} - \frac{\text{Total Prescription with Rework}_{\text{After}}}{\text{Total Prescription Processed}_{\text{After}}}\right) \Big/ \frac{\text{Total Prescription with Rework}_{\text{Baseline}}}{\text{Total Prescription Processed}_{\text{Baseline}}} \times 100$$

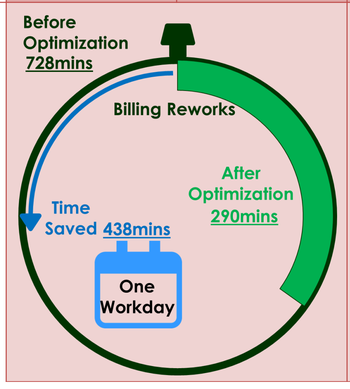
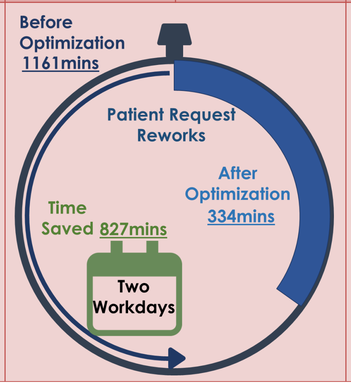
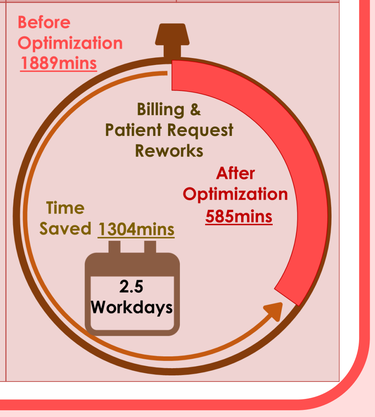
*Billing &/or Patient Request Rework

Phase I: Billing Workflow Optimization



Phase II: Patient Request Counter Workflow

Results

	Phase 1 (Billing Rework) 18 Jul 17 to Aug 17		Phase 2 (Patient Request Rework) 26 Jan 18 to 28 Feb 18		Phase 2 (Billing & Patient Request Rework) 26 Jan 18 to 28 Feb 18	
	Baseline (Billing)	**After (Billing)**	**Baseline (Patient Request)**	**After (Patient Request)**	**Baseline (Both)**	**After (Both)**
Total Prescription with Rework	156	51	228	99	384	154
Total Prescription Processed	13,562	14,457	13,562	15,511	13,562	15,511
% Reduction In Rework	**69.33%**		**62.03%**		**64.94%**	
Total Time Spent on Case (mins)	728	290	1161	334	1889	585
Absolute Time Saved						

Conclusion

- Rework contributes to an unnecessary waste of pharmacy resources, affects waiting time of patients and disrupts workflow in the pharmacy.
- Pharmacy workflow initiatives can be implemented to reduce rework, which in turn optimizes resource.
- Nonetheless, further studies should be done to investigate the sustainability of such initiatives, which is needed to maintain a positive long term effect on pharmacy operations.

Acknowledgement

- Special thanks to all SGH Blk 4 Level 1 Outpatient Pharmacy staff who assisted in the implementation of the workflow initiatives and data collection.