



Project Title

A Productivity Improvement Project on Generating Reports On The Compliance Of Documenting Estimated Discharge Dates

Project Lead and Members

Project lead: Grace Goh

Project members: Josephine Wong, Liew Mei Pheng, Marissa Tan, Dennis Ng,

Nathanael Tan, Shalini Menon

Organisation(s) Involved

Ng Teng Fong General Hospital

Healthcare Family Group Involved in this Project

Healthcare Administration

Applicable Specialty or Discipline

Healthcare Administrators

Project Period

Start date: Apr 2021

Completed date: Oct 2021

Aims

Which was not an efficient use of manpower. Hence, we embarked on this productivity project with the aim of reducing the time needed by 75% (from 4 hrs to 1 hr per week) within 6 months.

Background

See poster appended/below





Methods

See poster appended/below

Results

See poster appended/below

Lessons Learnt

Simple changes like the ones we did in this project is something everyone has the ability to make in our daily work. Substantial productivity and quality gains can be achieved, if we

- Actively seeking improvement to be able to do our job more efficiently and effectively
- Respectfully challenge status quo and overcome obstacles
- Leverage on technology and automation

Conclusion

See poster appended/below

Project Category

Technology

Digital Health, Data Analytics

Keywords

Automation, Tableau Data Visualisation, Data Analytics

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IMPOSSIBLE

DOING SOMETHING 8 TIMES FASTER ... AND MORE ACCURATELY

A PRODUCTIVITY IMPROVEMENT PROJECT ON GENERATING REPORTS ON THE COMPLIANCE OF DOCUMENTING ESTIMATED DISCHARGE DATES

☑ QUALITY☑ PRODUCTIVITY☑ COST

[Restricted, Non-sensitive]

What changed

MEMBERS: GRACE GOH**, LIEW MEI PHENG*, MARISSA TAN*, DENNIS NG*, NATHANAEL TAN* SHALINI MENON (IHIS), JOSEPHINE WONG**

[** FROM MEDICAL AFFAIRS (MA) DEPARTMENT; * FROM GROUP MEDICAL INFORMATICS (MI) DIVISION]

(1) Background

Some of us are members of the longstayers QI project team. One of the initiatives by the team is to ensure an expected discharge date (EDD) is established and documented for every patient in the pilot wards (C7, C8, C9) by Day 5. As part of establishing a feedback loop for compliance, a weekly performance report was sent to the ward doctors and case managers driving this initiative.

(2) Problem & Aim

What changed

It was time-consuming to generate the weekly reports and it took half a day every week or 0.1 FTE which was not an efficient use of manpower. Hence, we embarked on this productivity project with the aim of reducing the time needed by 75% (from 4 hrs to 1 hr per week) within 6 months. Our secondary aim was to improve accuracy by leveraging on technology and automation to minimize human errors.

(3) Interventions

Start State (19 Apr 2021)

What is was: Manual process, time consuming and prone to human errors (especially when typing patient particulars such as NRIC)

KEY PROCESS STEPS:

reduction

list.

(**NEW** Process Step 1') MI team built a report to extract the data directly from Epic system.

System data led to time-savings,

& reduced human errors

KEY PROCESS STEPS:

(Process Step 1') Continue to use Epic report to extract the data.

Automation led to further time-savings

extract t	he data dir	ect	ly
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	9220027310J 1.00124E+	11 55	58
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220027310J 1.00124E+11	. 55	SF	J	IWC8S	JWT8SB26	GERALD, Chua	NTFGH RESPIRATORY MEDICIN	31/07/2021	29/09/2021	31/07/2021	74
220057200J 1.00125E+11	52	85	1	WC8S	JWT85B04	ADRIAN, Mondry	NTFGH GENERAL MEDICINE	18/08/2021	13/10/2021	21/09/2021	56
220064666G 1.00125E+11	51	1	J	IWT9S	JWT9SB20	CHUAN GEE, Choo	NTFGH GENERAL MEDICINE	24/08/2021	19/10/2021	12/10/2021	50
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KEY PROCESS STEPS:

(Process Step 1a) View patient data in Epic patient

Exp Disch Date	•	Admission Date	Bed	Patient Name		NRI	0	LOS	Attending Clinician	Service
•		26/8/22	JWT7SB32	NI	N	TI	5005E	3	Soo Ling CHAN	NTFGH GENERAL MEDICINE
②		26/8/22	JWT7SB29	LE		S	3304C	4	Soo Ling CHAN	NTFGH GENERAL MEDICINE
9		28/8/22	JWT7SB27	LII		S	7743Z	1	Soo Ling CHAN	NTFGH GENERAL MEDICINE
⊗		28/8/22	JWT7SB21	MI AE S1		S	5040B	0	Lim LING CHOO	NTFGH GENERAL MEDICINE
•		26/8/22	JWT7SB11	JA SI		S			Soo Ling CHAN	NTFGH GENERAL MEDICINE
②		29/8/22	JWT7SB33	RAMisson		S	.4380B	0	Soo Ling CHAN	NTFGH GENERAL

(Process Step 1b) Transcribe patient data from Epic patient list to Excel manually.

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5											Hui Wen Chong
	01/09/20	21	C8	JWT8SB18		S	1	i4D	26/08/2021	369	Yee Szemen (08/09)
1											Lim Ling Choo
3	01/09/20	21	C8	JWT8SB25		S	6)0H	26/08/2021	369	Lim Ling Choo
5	01/09/20	21	C8	JWT8SB32		F	1	00L	24/08/2021	371	Lim Ling Choo
7	08/09/20	21	C8	JWT8SB07		S	(22E	28/08/2021	367	Yee Szemen
3	08/09/20	21	C8	JWT8SB08		S	8	LOD	03/09/2021	361	Hui Wen Chong
9	08/09/20	21	C8	JWT8SB13		S	(26B	31/08/2021	364	Yee Szemen
)	08/09/20	21	C8	JWT8SB14		S	(26C	02/09/2021	362	Yee Szemen
1	08/09/20	21	C8	JWT8SB16		S	(30Z	03/09/2021	361	Yee Szemen
2	08/09/20	21	C8	JWT8SB17		S	0	I5D	02/09/2021	362	Yee Szemen
3	08/09/20	21	C8	JWT8SB20		S	(76J	25/08/2021	370	Yee Szemen
4	08/09/20	21	C8	JWT8SB26		S:	1	36D	02/09/2021	362	Yee Szemen
5	08/09/20	21	C8	IM/TRSB31		S	(581	02/09/2021	362	Vac Szemen

(Process Step 2) Use Excel functions like filters and pivot tables to organize the data, so as to generate charts showing compliance rates and tables showing case level details of non- compliant cases.

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(Process Step 2) same as previous- use Excel functions to organize the data.

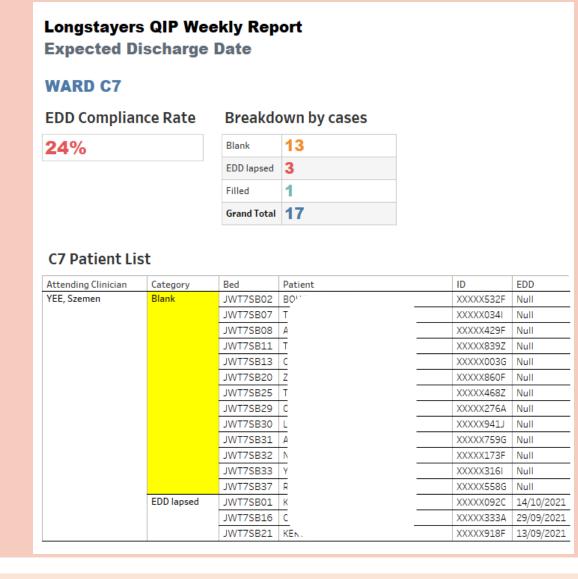
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Ward

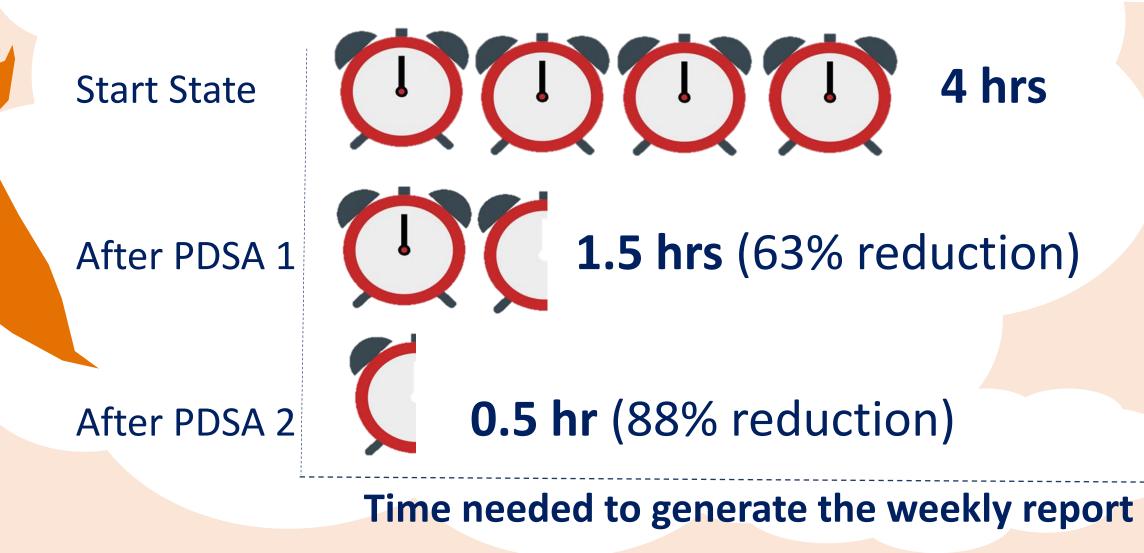
(**NEW** Process Step 2') Built a Tableau dashboard with calculations, such that charts showing compliance rates & tables showing info noncompliance cases are generated automatically.





(4) Outcome

The project aim of reducing the time needed by 75% (from 4 hrs to 1 hr) was achieved after 2 PSDA cycles. In fact, we did better in achieving a reduction of 88% (to just 0.5 hr)!



(5) Teamwork & Communication

Despite Covid-19 restrictions that limited physical meet ups, and despite belonging to different departments (MA and MI), we were able to come together to complete this productivity improvement project, which cannot be done by either department alone.

The doctors and nurses from the Longstayers project team also provided us with valuable feedback they received from their colleagues in the wards, and this allowed us to improve the report by making it more reader-friendly & visually appealing.

(6) Originality, Innovation & Creativity

This is a ground up effort, and it's the first time we used Tableau (a data visualisation software) as a productivity tool.

(7) Joy in Work

Knowing that the little changes we made has enabled us to do work ~10 times faster and more accurately brought us a lot of satisfaction that induced intrinsic joy.

The reports we generate using Tableau visually differentiated performance by colour (e.g. red is needs improvement, green is good) and each week we would celebrate green results while encouraging improvement for wards in the red zone.

(8) Transferability

Simple changes like the ones we did in this project is something everyone has the ability to make in our daily work. Substantial productivity and quality gains can be achieved, if we

- → Actively seeking improvement to be able to do our job more efficiently and effectively
- → Respectfully challenge status-quo and overcome obstacles
- Leverage on technology and automation

