Project Title

ED Virtual Ward (Interim)

Project Lead and Members

Project lead: Dr Gary Choa

Project members: Dr Esther Tan, Joyce Loke, Foo Jia Ming, NGEMR GC/ASAP, ED/IP Clinicians, ED Nurses, Pharmacy, Radiology

Organisation(s) Involved

Ng Teng Fong General Hospital

Healthcare Family Group Involved in this Project

Medical, Nursing

Applicable Specialty or Discipline

Emergency Medicine, Operations, Medical Informatics

Aims

Our aim is to create an interim ED Virtual Ward for lodger patients to be admitted in so that the patients would qualify for the inpatient subsidies, then utilise their Medisave /Insurance claims This will help patients to qualify for the inpatient subsidy framework, reduce the time spent on the manual submission from 3 days to 5 minutes, and the related complaints down to 0.

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Lessons Learnt

ED/IP Clinicians, ED Nursing Leads and PSAs were engaged to ensure that the criteria for the ED Virtual Ward is adhered to ED Nurses and PSAs will help to verify the qualification of the inpatient subsidy framework (ED stay 8 hours from admit order) and ensure Medisave/Insurance claims are submitted.

Conclusion

See poster appended/ below

Project Category

Care & Process Redesign

Quality Improvement, Workflow Redesign

Keywords

ED Virtual Ward, Lodger Patients, Bill Size

Name and Email of Project Contact Person(s)

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ED VIRTUAL WARD (INTERIM)

MEMBERS: DR GARY CHOA, DR ESTHER TAN, JOYCE LOKE, FOO JIA MING, NGEMR GC/ASAP, ED/IP CLINICIANS, ED NURSES, PHARMACY, RADIOLOGY

- ❑ SAFETY
- ❑ QUALITY
- ✓ PATIENT EXPERIENCE
- ✓ PRODUCTIVITY
- ❑ COST

Define Problem, Set Aim

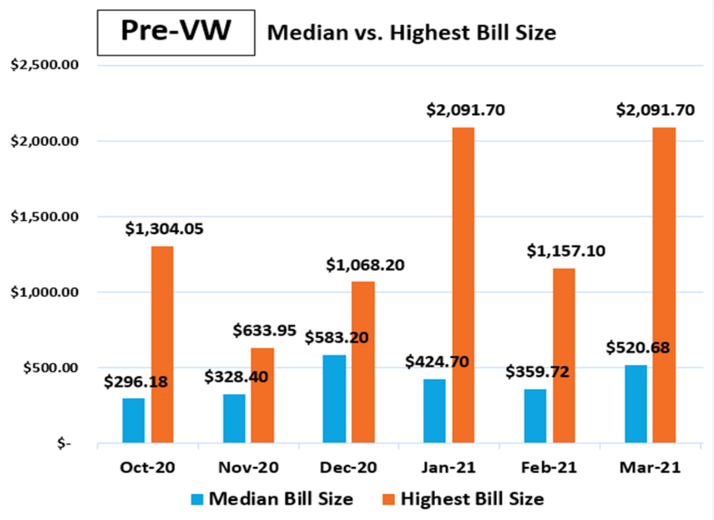
Between Oct 2020 to Mar 2021, there had been 50 complaints on the high bill size for the lodger patient's stay in ED, for inpatient services and medications are rendered (e.g. CT scans, lab tests) and charged at private rate as the patients are not admitted and does not quality for the inpatient subsidy framework. Due to the long bed wait time (est. 12-30hrs), Inpatient Doctors will assess and discharge based on the patients' improved condition. With that, only manual submissions can be made over to Business Office for CPF Board approval, which takes 3 days to settle each case (claim limit of $450-550). The highest bill size encountered can be at most est. $2,000.

Hence, our aim is to create an interim ED Virtual Ward for lodger patients to be admitted in so that the patients would qualify for the inpatient subsidies, then utilise their Medisave/Insurance claims. This will help patients to qualify for the inpatient subsidy framework, reduce the time spent on the manual submission from 3 days to 5 minutes, and the related complaints down to 0.

Establish Measures

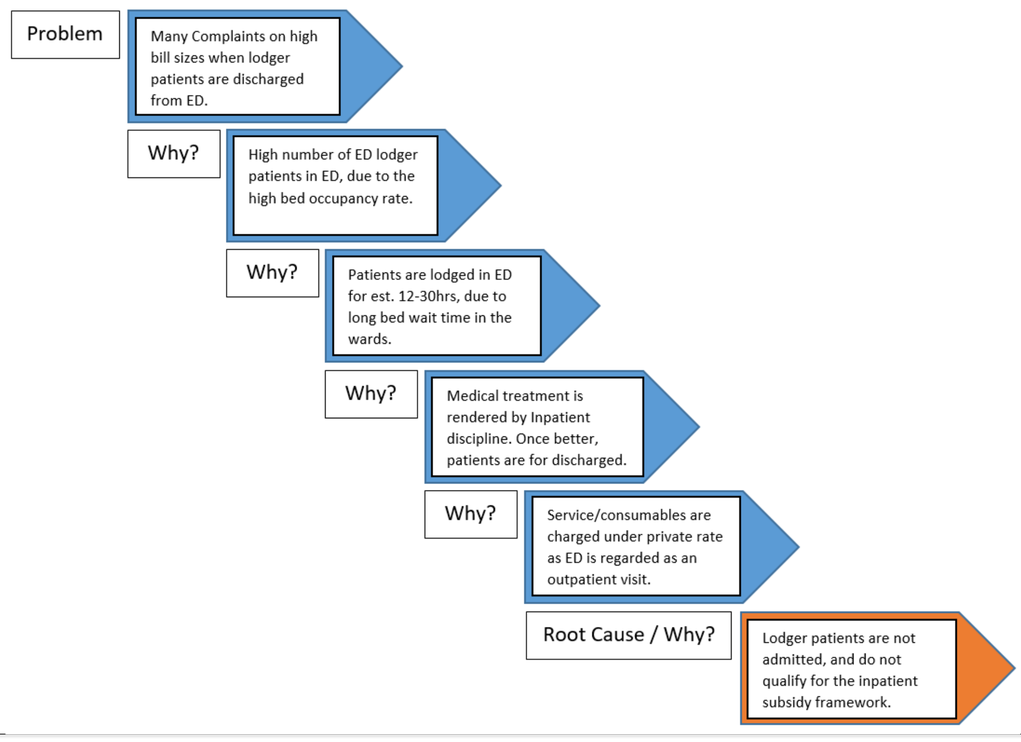
Our measures are based on these 3 key factors, 1) the number of billing complaints, 2) the median bill size for ED lodger patients, and 3) the highest bill size.

Item	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21
No. of Billing Complain	7	3	5	8	8	19
No. of DC Lodgers*	10	3	27	33	43	70



Analyse Problem

The key problem that ED Ops were facing is the many complaints on the high bill size from the ED lodger patients and their NOKs. Thus, the root cause was uncovered using the "5 Whys" method, which is that lodger patients are not admitted to be qualified under the inpatient subsidy framework and financial claims.



Select Changes

	CURRENT	SOLUTION 1	SOLUTION 2 (SELECTED)
Method	Manual Medisave/Insurance Claim to Business Office	Adopt TTSH ED Virtual Ward Model via NGEMR	Utilise Existing NGEMR ED Build to Admit ED Lodger Patients (as the Interim ED Virtual Ward)
Pros	• Ensure patients are able to make Medisave/ Insurance Claims	• ED patient will be under an Inpatient encounter after admit order • Patients will qualify for inpatient subsidy framework when admitted	• Patients will qualify for inpatient subsidy framework when admitted
Cons	• Time-consuming for both ED Ops and BO • May miss out cases when patients bypass PSAs	• NGEMR ED Virtual Ward Model not live yet, posing a risk for potential/ unknown issues in EPIC	• Requires NGEMR Advance Mode to amend patient event log (limited users)

Test & Implement Changes

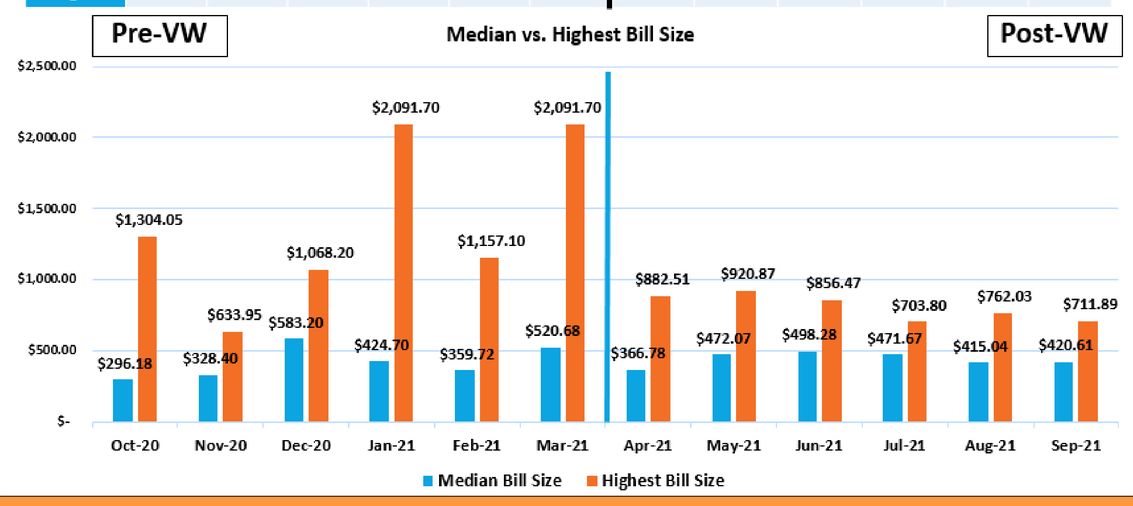
CYCLE	PLAN	DO	STUDY	ACT
1	On March 2022, ED Ops had to discuss with the hospital stakeholders through the whole patient journey to cover every encounter with the relevant departments. This is to identify the different areas of testing respectively.	Stakeholders are engaged to undergo the system testing in EPIC/SAP, to admit an ED patient into the virtual ward with relevant services/ charges (e.g., x-rays, scans, consumables). The testing was successful and the new workflow went live on 5 April 2022.	On 12 April 2022, ED Ops realized that the charges were not captured correctly in the patients' inpatient bills. ED Ops is required to retrigger the admit disposition in EPIC to allow the charges to flow correctly in SAP.	The bills now reflect correctly, with the applied inpatient subsidy framework Previous affected bills were amended by BO. No further charging issue was faced from 12 April 2022 onwards.

Results

Measures	1) No. of Complaints	2) Median Bill Size	3) Highest Bill Size
Improvements	**Reduced by 70%:** Oct 20 to Mar 21 – 50 Apr 21 to Sep 21 - 15	**Within $350-500 (after subsidies)**, fully claimable via MSV/Insurance	**Reduced by est. 42%,** due the inpatient subsidies

Lodger Data from October 2020 to September 2021

Item	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21	Apr 21	May 21	Jun 21	Jul 21	Aug 21	Sep 21
No. of Billing Complain	7	3	5	8	8	19	8*	3*	0	0	1	3
No. of DC Lodgers*	10	3	27	33	43	70	100	37	22	64	70	138



Spread Changes, Learning Points

ED/IP Clinicians, ED Nursing Leads and PSAs were engaged to ensure that the criteria for the ED Virtual Ward is adhered to. ED Nurses and PSAs will help to verify the qualification of the inpatient subsidy framework (ED stay > 8 hours from admit order) and ensure Medisave/Insurance claims are submitted.

The hospital would aim to adopt the TTSH ED Virtual Ward Model for automation of the admission process, i.e. once the admit order is raised, ED patients will be admitted to the virtual ward.

Ng Teng Fong General Hospital

Jurong Community Hospital