Digitalization of Registration Form for Isolation patients using FormSG @Children's Emergency (CE)

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Introduction

At CE, the registration of patient will be performed face-to-face by Admissions Patient Service Associate (PSA) at the registration counter. However, due to risk of exposure to Emerging infectious disease, this process was not appropriate for isolation patients. Manual forms were used to capture information required for registration. However this had brought about multiple issues and challenges which lead the team to explore the utility of Online registration form using FormSG (a secured government website for digital forms) to capture registration information for this group of isolation patients.

Current workflow

1. Nurse hand over hardcopy registration form to patient

Issues:
- non-clinical workload for nurses
- Disease transmission
- Not environment friendly

2. Caregiver complete the form and pass back to nurse

Issues:
- Incomplete information provided
- Illegible handwriting
- Lack of ID as these cannot be attached to the form

3. Nurse fax the form to Registration counter

Issues:
- fax machine jam/ no paper
- Fax line jam or line issue
- time wasted

4. Admissions PSA receive the fax and register with the inputs on the form

Issues:
- Time wasted as multiple verification needs to be done
- Registration done with missing information

Objectives

1. To reduce the non-clinical workload of the nurses by reducing administrative tasks.
2. To improve the accuracy of patient and caregiver information captured.
3. To improve information flow and overcome logistic issues.
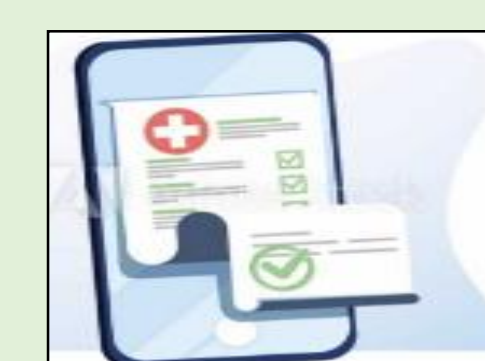4. Be environmental friendly by saving papers.
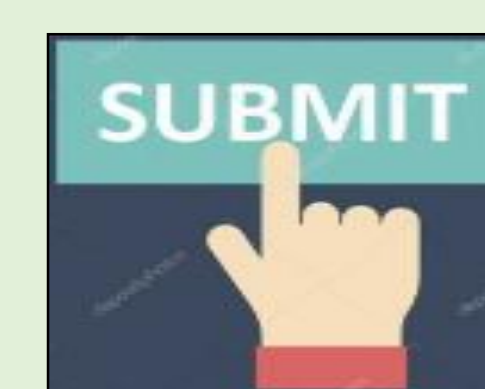
Methodology

1. Created an online form with reference to the hardcopy patient registration form on FormSG.
2. Generated a QR code and printed it for display at Annex.
3. Nurse will get caregivers to scan the QR code with their mobile device to access to the online form.
4. Caregivers will complete and attach the identification document(s) to submit.
5. Submission is sent to a common email which PSA will retrieve and verify to register.

1. Scan

2. Complete

3. Submit

Results

1. Streamlined registration process reduced non-clinical workload, allowing nurses to focus on patient's care.
2. Verification can be done via the online form, with the attached ID to eliminate risk of wrong registration.
3. With the elimination of faxing and checking back to verify information, it has reduced the registration time taken from 5 mins to 3 mins per case. The saving for registration time taken is 2 mins. Based on 4000 cases processed, the time saving is 133 hours.
4. From November 20 to April 21, there is a total saving of 4000 A4 papers, equivalent to 8 reams of A4 papers.

Conclusion

Since the implementation of the online form, the usage has been increasing consistently. Hardcopies are still in use to cater to caregivers without mobile device or data plan.

Tapping on this success, similar concept is introduced for PUQ (Person Under Quarantine) patients at ward who are admitted directly which ward nurses will pass the QR code for patients to scan and complete the online form for admissions on 7th June 2021.

Usage of Online Forms

(Bar chart showing usage from Nov-20 to Apr-21, y-axis from 0 to 1200)