



Digitalization of CVM reviews – A seamless way to improve patient safety, reduce PDPA violations, and improve end-user satisfaction



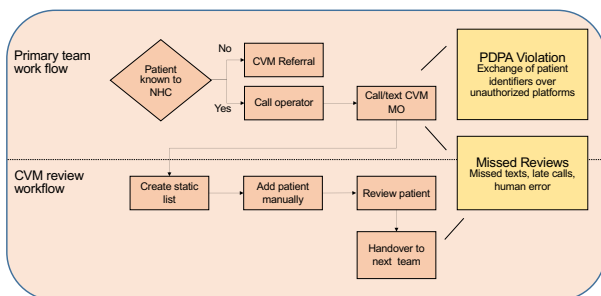
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Bang D, Chandok GS, Internal Medicine, SingHealth
Anbalakan K, Chew KM, Teik LS, National Heart Center Singapore

BACKGROUND

The National Heart Centre Singapore (NHCS) Cardiovascular Medicine (CVM) reviews comprise of CVM-consult for patients, on follow-up with NHCS, currently admitted under other disciplines. On an average, there are about 500 CVM review requests per month.

Making a review request is a tedious and informal process explained in Flowchart 1. Through systematic surveys, we found multiple occasions of missed reviews and patient PDPA (Personal Data Protection Act) violations.



Flowchart 1: Pre-intervention process of making CVM review requests

OBJECTIVE

To eliminate PDPA violations and missed reviews, during CVM consults, over a period of 6 months, by finding a fit-for-purpose, sustainable and replicable solution to address observed shortcomings.

METHODOLOGY/ INTERVENTION

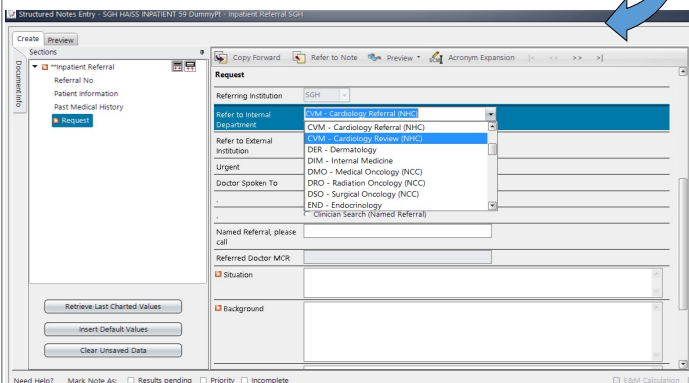
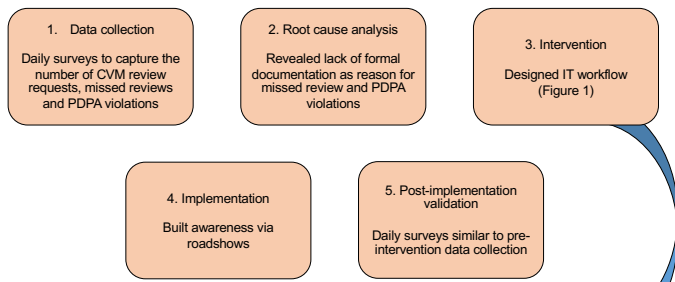


Fig. 1: Addition of Cardiology Review in the dropdown menu under inpatient referrals

RESULTS

- Reduction in Missed reviews:** Pre-intervention we found that patient identifiers were shared over unauthorized platforms about 49% of the times. There were also about 7 missed reviews per month (1.4%) pre-intervention. Post-intervention, there was only 1 missed review per month (0.2%) (Fig. 2A).
- Reduction in patient PDPA violations:** from 49.3% pre-intervention to 7.2% post-intervention (Fig. 2B).

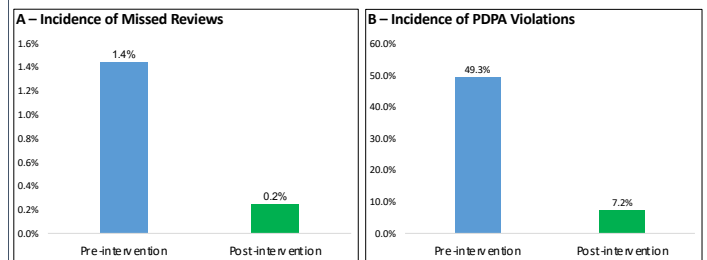


Fig 2: Overall percentage of missed reviews (A) and PDPA violations (B), pre & post-intervention

- Improved end-user satisfaction:** percentage of Cardiology MOs finding the review system efficient increased from 44.8% to 80%, after roll out (Fig 3).

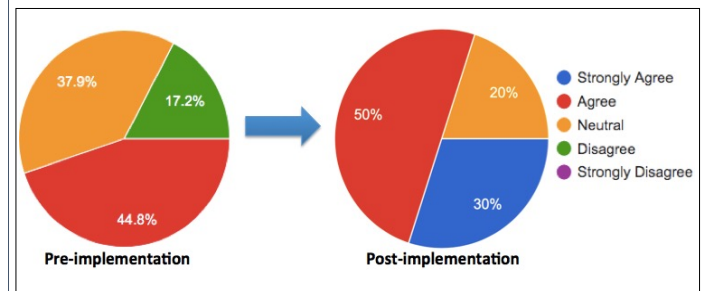


Fig 3: Pre vs. Post implementation survey response of CVM MOs to the statement “the current system of cardiology reviews is efficient”

Although not measured in dollars, an unintended outcome of the electronic workflow was the avoidance of NHCS revenue leakage through better record keeping of reviews.

CONCLUSION

The electronic CVM review workflow has been widely adopted and well received across SGH, since its inception in April 2020. As shown above, it has significantly reduced missed reviews and PDPA violations, while achieving end user satisfaction.

The results show how a small tactical intervention, with minimal investment, can lead to better patient outcomes, improved patient data privacy and reduced healthcare costs.

Future direction: This intervention is a sustainable solution with the potential to be expanded to other departments and hospitals that are currently using offline/informal review workflows.

ACKNOWLEDGEMENT

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