

# The Virtual Reality of Medication Error Reduction through Multidisciplinary Teamwork

Brown A<sup>1</sup>, Vu C<sup>1</sup>, Naqvi F<sup>1</sup>, Ali S<sup>1</sup>, Babu B<sup>1</sup>, Guy D<sup>1</sup>, Chellaram V<sup>1</sup>.

<sup>1</sup>Pharmacy Department, Northern Health, Epping, Victoria, Australia.

## BACKGROUND

The Virtual Emergency Department Early Treatment (VED-ET) service specialises in providing COVID-19 antiviral therapies to community patients through a telehealth platform. Prescribing antivirals is complex and prone to medication misadventure.

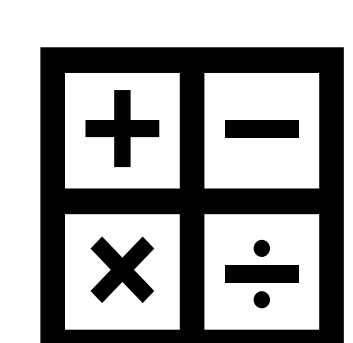
Practicing in a virtual platform introduces further risk for medication safety, as variations in health literacy and technology proficiency can affect the quality of medication reconciliation and counselling. The VED-ET care model follows a four-stage review process in which patients are consulted by both pharmacists and medical practitioners to reduce medication misadventure. (Fig. 1)

## AIM

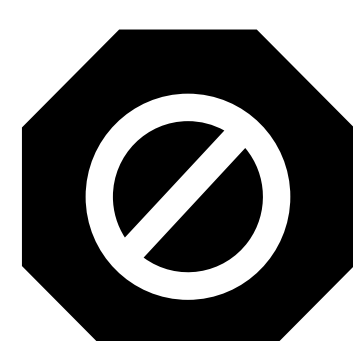
To ascertain and measure the impact of the multidisciplinary VED-ET model of care on patient safety by analysing medication errors reaching the patient.

## RESULTS

Of the 192 patient cases, 40 errors were identified. 85% of errors were detected and corrected in Stage 1 of the review process prior to reaching the patient. 6 errors (15%) reached the patient and 5 (83.3%) were detected and corrected by the pharmacy team in stages 3 and 4 of the review process. The nature of the corrected errors were incorrect dosing, contraindicated medications and patient adherence issues. Creatinine Clearance miscalculation (occurring post clinician pathology review in Stage 2) appeared to be the most prominent error, often identified and corrected in Stage 3. The singular error that reached the patient that was not corrected, was identified as a creatinine clearance miscalculation.



Creatinine Clearance Miscalculated 77%



Contraindicated Medications 3%



Patient Adherence Error 13%



Inappropriate Therapy Modification 7%

## DISCUSSION

The results highlight the strength of the multidisciplinary care model, and demonstrate the effectiveness of the team structure in reducing medication errors. This model supports learnings on common errors trends for quality improvement practices, and provides a template for future virtual team structures.

## CONCLUSION

The results of this study suggest that the VED-ET model of care is effective at supporting safe use of medicines. This collaborative healthcare structure could prove beneficial in services requiring patient follow-up and retaining engagement.

Figure 1: Four-Stage Pharmacy Review Process

Stage 1: Pharmacist contacts patient to determine eligibility and appropriateness for antiviral treatment.

Stage 2: A Medical/Nurse practitioner prescribes antiviral treatment with consideration of pharmacist review.

Stage 3: A pharmacist contacts the patient to counsel them on prescribed antiviral treatment.

Stage 4: A pharmacist contacts the patient during and after their antiviral therapy to monitor compliance, adverse events and safe use of medications.

## METHOD

A retrospective audit of the clinical care provided to patients who attended the VED-ET service between 1/11/22 and 30/11/22 was conducted. A total of 192 patient cases were reviewed, investigating if a medication error occurred, whether the error reached the patient, what stage of the review process was the error detected and which health discipline detected and corrected the error.

