

# The Role of the Pharmacist in Protecting Patients' Heart Waves

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## Objective

To explore the significant role pharmacists play in potentially preventing medication misadventure through a case-study.

## Clinical Features

MC, an 83-year-old female, presented with a seven-day history of shortness of breath following a recent admission with pneumonia. MCs relevant medical history includes bronchiectasis, renal impairment and congestive cardiac failure (CCF). MC was diagnosed with fluid overload secondary to CCF and a concurrent acute kidney injury (AKI).

## Pharmacist Intervention and Case Progress

Pharmacist conducted a best possible medication history which determined MCs CCF medications to include frusemide and nebivolol.

The patient was inadvertently also charted verapamil slow-release 240mg without clear indication due to an eMeds error of charting a previous medication list in the system.

The pharmacist identified, documented and discussed this error with the treating team who decided not to act upon the advice and the patient received this regimen for 2-days.



The combination of this moderate dose of verapamil with the beta-blocker and acute-on-chronic renal impairment caused MCs heart rate to drop to 40 beats-per-minute. Despite multiple atropine boluses and an up-titrating isoprenaline infusion MC became unresponsive. MC was intubated with transcutaneous pacing and transferred to intensive care 48-hours after this event. She was later palliated due to extensive end organ failure.

## Conclusion

This case-study highlights the pertinent role pharmacists play in identifying medication errors and interactions as medication specialists in multidisciplinary care teams. The negative outcome for MC foregrounds the importance of mutual respect, clear communication and professional relationships between pharmacists and doctors to ensure healthcare that promotes optimum patient outcomes. This case also highlights the potential for medication misadventure introduced with eMeds.

## Literature Review

Verapamil is indicated for the treatment of tachyarrhythmia, angina and hypertension. The Australian Medicines Handbook recommends avoiding the combination of verapamil with beta-blockers unless under specialist supervision due to the risk of severe bradycardia. Whilst verapamil is not indicated specifically for the treatment of CCF, if a patient does require this combination the Heart Foundation Heart Failure Guidelines highlight the requirement to remove calcium-channel blockers from patients with AKI or hypotension with preference being given to continuing their beta-blockers.



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