One step for medication safety

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Warfarin dispensing in community pharmacies

Check the safety of dispensing processes – use the six questions to review your processes

Background and evidence

Warfarin is a high-risk medicine because it has a narrow therapeutic index, interacts with some medicines and foods, and requires monitoring.

Warfarin is the most frequent cause of adverse drug events in New Zealand.[1] It was implicated in 6.1 percent of the total adverse drug events identified in a recent New Zealand study using the adverse drug event trigger tool.[2]

Errors have been identified at all stages of the medication management process: prescribing, administration, dispensing and monitoring. While dispensing is not the only activity that can result in errors, it is unquestionable that errors at this stage can cause or contribute to errors at other stages of the medication management process.

The information given to patients and patient involvement in the management of their own warfarin therapy is critical to successful therapy. The warfarin education resources developed by Counties Manukau Health are useful tools, particularly the pictorial flipchart for patients with English as a second language. The resources are available at: **www.countiesmanukau.health.nz/warfarin/warfarin_education_process.htm**.

- Watch Gary Edwards' warfarin story – **www.open.hqsc.govt.nz/medication/publications-and-resources/publication/2030**
- Watch John Smith's warfarin story – **www.open.hqsc.govt.nz/medication/publications-and-resources/publication/1859**

Community pharmacy can contribute to the safe management of warfarin and a reduction in harm associated with the medicine. Some community pharmacies already participate in the Community Pharmacy Anticoagulation Management Service (CPAMS), and are regularly testing INRs and communicating with their patients and prescribers. Those pharmacies will have updated their systems and processes when that service was initiated.

1 bpacNZ. Clinical audit: Safe and effective use of Warfarin. URL: www.bpac.org.nz/Audits/warfarin-use.aspx.

2 Seddon M, Jackson A, Cameron C et al. The adverse drug event collaborative: a joint venture to measure medication-related patient harm. *NZMJ* 25 January 2013 Vol 126: 9–20.

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The activity:

To reduce the risk of warfarin-related adverse drug events and help promote patient safety, the Health Quality & Safety Commission's Medication Safety team is asking community pharmacies to check dispensing and patient management systems for warfarin and any patient information resources provided to patients. This simple six-question data collection tool is designed to help community pharmacies evaluate the current situation that exists for staff and patients.

Pharmacy	
Medicine management: warfarin	**eg**
1. When warfarin is dispensed, do you ask the patient when their last INR test was done and what the result was?	Y/N
2. Does your dispensing system highlight the interaction of warfarin with antibiotics and antifungals?	Y/N
3. When selling over-the-counter medicines or herbal products that are known to interact with warfarin, do your standard operating procedures include a question about what other medicines a patient is taking? Are herbal medicines flagged on the stock card in the computer to prompt a question about warfarin when selling the product?	Y/N Y/N
4. For the last two warfarin prescriptions dispensed, did you: - check whether your patient had multiple strengths of warfarin? - check they understood what each strength was and how many they needed to take for their current dose? - include the tablet colour on the label?	Y/N Y/N Y/N Y/N Y/N Y/N
5. Do you stock the warfarin red book and check that patients on warfarin have a copy?	Y/N
6. Do you update the dose recorded in the red book?	Y/N

Reviewing your results

Patients who have experienced warfarin-related adverse drug events have emphasised the importance of INR monitoring in preventing their adverse events. Until they had the adverse event they did not appreciate how important going for their INR blood tests was in monitoring the effectiveness of warfarin.

The patient stories in the background section demonstrate that patients do not always understand the importance of INR monitoring.

One of the commonest incidents reported in hospitals is patients being admitted with failed warfarin therapy due to an interaction between warfarin and either a prescribed antibiotic or antifungal, or sometimes an antifungal purchased over the counter. Alcohol and alternative medicines are also involved in high or low INR results.

Patients often receive a multitude of information leaflets on their condition and their medicines. They need to be given information but it is important that the messages given are clear and consistent. Take into account health literacy when giving patients information. When patients new to warfarin receive their first lot of tablets, identify and highlight the key messages they need for safe use of the medicine. Use the teach back method to check people have understood those key messages. A helpful resource is the Commission's guide, *Three steps to better health literacy* – **www.hqsc.govt.nz/our-programmes/consumer-engagement/publications-and-resources/publication/1386**.

With thanks to the Patient Safety First Campaign for permission to use the one step approach