

Pharmacists involved in stroke prevention

October 9 2014, by Suzi Phillips

Many community pharmacists can now manage anticoagulant levels for people, using testing and evaluation done at the pharmacy.

This service is expected to reduce demands on busy medical practices and improve access and convenience for patients.

The most common anticoagulant used is [warfarin](#) and people on this need regular testing (using a test known as INR) to ensure its anticoagulant effects stay within a safe range that reduces the risk of strokes but does not provoke spontaneous bleeds. Warfarin's effects can be influenced by a number of variables, such as infection or diet.

A computer-based evaluation system for affordable testing at the pharmacy is an opportunity for pharmacists to provide an extra service to the public, says Professor John Shaw from the School of Pharmacy at the University of Auckland.

Using a finger-prick blood-test, a series of interview questions and a computer-based dose-adjustment system, pharmacists are able to give people immediate feedback on their warfarin and adjust the dosage if necessary.

In a recent study to determine the effectiveness of the new service by pharmacies, findings showed that [pharmacist](#) testing with computerised decision support was safe and effective and resulted in significant improvements in the "time in the therapeutic range" (TTR) for warfarin, which is a measure of the effectiveness of anticoagulation.

The study enrolled 693 patients (mostly males over 65 with atrial fibrillation) and investigated the TTR, the time above and below the range, the number and proportion of results outside efficacy and safety thresholds, and a comparison of pharmacist-led care with the traditional GP-led care.

"The mean TTR was 78 percent and one group showed an increase in mean TTR from 62 percent under GP-led care to 78 percent under pharmacist-led care," says Professor Shaw. "This reflected a reduction in the times above and below the range and the mean TTR improved from 71 percent to 84 percent."

"Our results supported wider adoption of this model of collaborative care," he says.

Traditional testing to monitor a patient's warfarin levels is for them to go to their doctor or local laboratory centre and have a venous blood test done which is then analysed by a laboratory with results phoned to the GP for their decision on continuation dose.

The doctor, or often the practice nurse, then decided whether the patient needed to increase or decrease their warfarin dose and would contact them with this information.

"In that process there are several points when things can go wrong, such as time delays in reporting by the lab or the doctor to the patient," says Professor Shaw.

The new system was developed in a partnership between the University of Auckland, the Pharmaceutical Society of NZ, Roche Diagnostics (makers of the coagulation machine that analyses the finger-prick to test strip result), and Palmerston haematologist, Dr Paul Harper and his son, Joe, who developed the computer programme, INR Online®.

The test results from the coagulation machine are fed into the computer programme that has population data and previous test data for that patient. This is displayed on the computer screen so that both patient and pharmacist can see the result and previous results immediately. Once the pharmacist has the INR Online results, they can determine whether to continue or change the dosage. A printout of the continuation dose and reminder of next appointment is given to the patient.

"This is a much better process than one that takes two to three days and can be subject to delays and miscommunication between the parties," says Professor Shaw. "The new pharmacist-led care can take five minutes from the time the patient enters the pharmacy - for the whole process."

The research was a result of a grant from Health Workforce New Zealand to investigate new pharmacy led services, and was piloted in 15 pharmacies nationwide, both rural and urban, and in different socio-economic areas.

"It was a challenging change to make because warfarin is a prescription medicine that has to be issued by registered prescribers," he says. "It's a radical departure that required delegated authority from the patient's GP, and has never been done before by pharmacists. The fact that it's a true collaboration between pharmacy and general practice has great benefits for all parties involved, especially the patients."

"We had to set up the trial very carefully with pharmacists trained in the technology and testing, and we had to get ethical approval because it was moving outside the normal range of their practice," says Professor Shaw.

"We showed that this service works to improve the TTR for the patient to levels which are almost unprecedented in the international literature outside of specialist anticoagulation clinics."

A follow-up survey was done of all the participants in the trial (patients, pharmacists, doctors and practice nurses) to see if the new anticoagulant management practice was acceptable to all the parties.

"The response was overwhelmingly positive with most people supporting the concept, and especially the reduction in waiting time for the test result," says Professor Shaw. "Patients can see the test results immediately and are more engaged with their own therapy."

A minority of doctors and nurses did still not trust the pharmacists to do the testing properly, but most people were happy with the service, and patients were particularly happy that they did not have to give a venous blood test each time.

"Pharmacists loved it and especially liked being taken seriously as health professionals, given responsibility and challenge, and being part of patient care," he says.

Since the study was completed, the Community Pharmacist-led Anticoagulation Monitoring Service (CPAMS) has been rolled out nationally, and an ever-increasing number of patients are able to access this new collaborative model of care.

Provided by University of Auckland

Citation: Pharmacists involved in stroke prevention (2014, October 9) retrieved 3 May 2024 from <https://medicalxpress.com/news/2014-10-pharmacists-involved.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.