

Adherence to blood thinner best with pharmacist management, researcher says

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Patients are more likely to take a new type of blood thinner correctly and without missing doses when they are managed by pharmacists, rather than only by doctors or nurses, according to a study co-authored by a researcher at the Stanford University School of Medicine.

Mintu Turakhia, MD, assistant professor of medicine at Stanford, and fellow researchers studied a new treatment for [atrial fibrillation](#), a dangerous heart disorder that increases the risk of stroke and blood clots. The treatment, a drug called dabigatran, is one of a new class of twice-daily oral medications. A paper describing the findings will be published April 14 in the *Journal of the American Medical Association*.

Researchers found that Veterans Health Administration [patients](#) who got their [prescriptions](#) for the medication filled by VHA pharmacists who educated them about the drug and monitored them on a regular basis were 80 percent more likely to adhere to medication guidelines than those who didn't receive this kind of support.

"The new oral anticoagulants, such as dabigatran, represent the biggest medical change in in the delivery of care for a-fib patients," said Turakhia, the senior author of the study. "Before, the only option we had for patients was warfarin, which is cumbersome and requires blood testing once or more per month."

Monitoring leads to better adherence

Because these new drugs come in fixed doses and patients taking them don't need to undergo regular blood tests, health-care professionals assumed that the drugs wouldn't need to be monitored. What this study shows is that when the drug was delivered by pharmacists who provided an increased level of patient monitoring, patient adherence greatly improved.

"Although pharmacist-led management of these new drugs is uncommon in the U.S., the findings make the case that it is still important and can ultimately impact clinical outcomes," Turakhia said.

Since the first of the new drugs was approved by the Federal Drug Administration in 2010, physicians have been increasingly prescribing them in place of warfarin, an anticoagulant that has been used to treat a-fib for 50 years, Turakhia said. Evidence shows that the new drugs work at least as well as warfarin, and cause less bleeding—but only when taken correctly. "This is important because even missing a few doses can lead to acute events such as stroke," he said. "How well you take the [new drugs](#) largely determines your treatment benefit."

The new oral anticoagulants are popular with many patients because they require no monthly lab visits to measure their levels in the blood. Patients are instead simply sent home from the pharmacy with the pills.

Alternative to warfarin

"Among my patients, I used to get asked about alternatives to warfarin a dozen times a week," Turakhia said. "Many of them were unhappy with the need for regular, often lifelong blood testing."

Atrial fibrillation, a type of heart arrhythmia, is a common and growing problem in the United States that affects at least 3 million people. Due to rising rates of obesity and hypertension, that number is increasing, and

more people at a younger age are developing the disorder. A-fib may result in symptoms such as palpitations, racing heart, shortness of breath and fatigue. An irregular heartbeat leads to poor blood flow, which puts patients at a high risk of stroke.

The introduction of these new [blood thinners](#) has been a major change in the treatment plan for many of these patients.

According to the FDA, from its approval in October 2010 through August 2012, about 3.7 million prescriptions for dabigatran (Pradaxa) were dispensed, and approximately 725,000 patients received a dispensed prescription from U.S. outpatient retail pharmacies.

Heart researchers became concerned when studies began showing that patients were not adhering as well to treatment guidelines with this new blood thinner, in some cases crippling the treatment's effectiveness, Turakhia said.

Puzzled by this, researchers set out to determine if this lack of adherence could be explained by where patients were filling their prescriptions for the medication. They looked at Veterans Health Administration sites where 20 or more outpatients had dabigatran prescriptions filled between 2010 and 2012.

"Surprisingly, we found that treatment adherence varied not by individual, but by site," said Turakhia, who is also a cardiac electrophysiologist with Stanford Health Care and the Veterans Affairs Palo Alto Health Care System. "We didn't expect to see that much variation by site." Next, researchers conducted in-depth telephone interviews with the managers, usually pharmacists, at 41 of these pharmacy sites.

"We rolled up our sleeves and looked at what each site was doing,"

Turakhia said.

Benefits of supportive pharmacist

At the sites with the highest [patient adherence](#), there was usually a pharmacist actively educating patients on [medication adherence](#), reviewing any possible drug interactions, and following up to make sure patients were taking the medication when they were supposed to and that prescriptions were being refilled on time.

The sites with patients who had the highest adherence levels had some key features in common, among them this type of "pharmacist-led patient management."

"We determined there was a high level of scrutiny and review to make sure patients were getting the drugs," Turakhia said. "There was a lot of consideration of the dose, interaction with chronic kidney disease and review to make sure that patients should be getting these drugs."

The study's results suggest that an unintended side effect of a-fib patients switching to the new blood thinner medications may be poorer adherence to medication guidelines because most patients no longer make routine visits to a laboratory that may have offered similar patient support, Turakhia said.

"This finding challenges the entire framework of health-care delivery of these new agents," Turakhia said. "These medicines were pitched as easier for patients and for health-care providers." Since patients are no longer required to visit labs regularly, as with warfarin, in most cases the physician alone, or with the help of practice nurses, is now solely responsible for checking on adherence.

Most doctors and their offices don't have a system in place to verify how

well patients take their medication and to anticipate refills and get patient their refills promptly before medications run out.

"We're suggesting that greater structured management of these patients, beyond the doctor just prescribing medications for them, is a good idea," Turakhia said. "Extra support, like that provided in the VA anticoagulation clinics with supportive pharmacist care, greatly improves medication [adherence](#)."

More information: *Journal of the American Medical Association*, doi:10.1001/jama.2015.2761

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