Lab monitoring tests not always ordered per recommendations

Study urges improvement in physicians’ inconsistent record of ordering lab tests

Why does one physician in a walk-in practice order laboratory monitoring tests for patients more often than a colleague working down the hallway? Which factors influence the use of these important tests that can help doctors ensure that high-risk drugs are prescribed safely? Clues to these questions lie in the age and general health of the patient, and whether the doctor is a specialist or not, says Shira Fischer of the Beth Israel Deaconess Medical Center in Boston. She is the lead author of a study¹ which appears in the Journal of General Internal Medicine², published by Springer.

Laboratory tests help doctors to monitor the condition of their patients, and to ensure that prescribed drugs work effectively and safely in treating high-risk conditions. However, these are not always performed, even in cases where such tests are advised before a new round of medicines can be dispensed. This can lead to medical errors and influence patient safety, as was highlighted in the US Institute of Medicine’s report “To Err is Human.” There are no US national guidelines about appropriate laboratory monitoring, and experts do not agree on the appropriate standards of monitoring.

To ascertain the factors that influence how and when physicians order laboratory tests, Fischer and her colleagues conducted research at the Meyers Primary Care Institute in Massachusetts, studying the electronic medical records of 31,417 patients and 278 providers in a large multispecialty New England group practice. The study includes information about prescriptions for 34 high-risk conditions and their 60 associated tests.

For recommended tests, the rate of physician ordering varies greatly, with for example almost all patients taking potassium receiving an order for a potassium level (95 percent) but less than half of patients on Lithium receiving orders for a blood count (42 percent) or creatinine level (49 percent), as is recommended. Tests measured yearly (for example, Digoxin level) were more likely to be ordered than those required more often (for example, AST/ALT levels in patients on Rifampin).

Specialists are more likely to order the recommended tests for the medications used in the study than primary care providers. Older patients, men and people already using other medications are also tested more regularly. Younger patients and people who do not often visit doctors seldom received test orders. Younger physicians and those who are familiar with the testing guidelines associated with a specific medication are also more likely to use laboratory tests to monitor their patients.

The researchers also found that the so-called “black box warnings”* on certain medications regularly alert practitioners to the need to run associated tests. These warnings can be required by the US Food and Drug Administration and are the strongest ones around in prescription drug labeling. Even so, not everyone takes heed of them.

“Interventions to improve laboratory monitoring should focus on areas with the greatest potential for improvement, such as providers who do not prescribe medication much, or those who prescribe medication to healthier and younger patients, or once-off walk-in patients,” advises Fischer, who believes it is worthwhile to provide “black box warnings” on medications shown to be highest-risk to educate physicians about the importance of laboratory monitoring.

*Warnings, formatted with a ‘box’ or border around the text, that appear on the package insert for certain prescription drugs.
References:
2. The *Journal of General Internal Medicine* is the official Journal of the Society of General Internal Medicine.

The full-text article is available to journalists on request.
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