Guidelines for Medical Laboratory Testing

Quality of Care NL

In the COVID-19 era, it is particularly important to optimize laboratory testing. The following guidelines from Choosing Wisely Canada and other sources are provided to support this endeavour. Click the source after each guideline to read more.

1. Screening and Chronic Disease Testing

A. Don't do annual screening blood tests unless directly indicated by the risk profile of the patient. (Choosing Wisely Canada)

B. In the frail elderly, don't order screening or routine chronic disease testing just because a blood draw is being done. (Choosing Wisely Canada)

C. Don't order baseline laboratory studies (complete blood count, coagulation testing, or serum biochemistry) for asymptomatic patients undergoing low risk non-cardiac surgery. (Choosing Wisely Canada)

Quality of Care NL advises using clinical judgement in deciding the frequency of chronic disease testing. In patients with mild, non-progressive chronic disease, testing could be undertaken 1-2 times/year, and in severe progressive chronic disease, coordination of care may help to avoid duplication.

2. Thyroid Tests

A. Don't use Free T4 or T3 to screen for hypothyroidism or to monitor and adjust levothyroxine (T4) dose in patients with known primary hypothyroidism, unless the patient has suspected or known pituitary or hypothalamic disease. (Choosing Wisely Canada)

B. Don't order thyroid function tests in asymptomatic patients. (Choosing Wisely Canada)

Quality of Care NL advises that in stable asymptomatic patients on levothyroxine, order TSH 1-2 times/year.

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3. HbA1c

A. In many adults 65 years or older, moderate control of diabetes is generally better, with the aim of achieving glycemic control between 7.0 and 8.5, depending on life expectancy. (Choosing Wisely Canada)

Consequently, Quality of Care NL advises that less HbAIC testing is required compared to in insulin dependent diabetes.

4. Specific Tests

A. Don't request uric acid as part of the routine evaluation of cardiovascular risk, obesity or diabetes. (Choosing Wisely Canada)
B. Testing creatine kinase and ALT levels at baseline on statin initiation or for monitoring is not required; perform CK as clinically indicated. (College of Family Physicians of Canada)
C. In patients established on lipid lowering therapy, routine monitoring of lipid profiles is not required. (College of Family Physicians of Canada)
D. Screening of the general population for iron deficiency is not indicated. (Ontario Association of Medical Laboratories)

Quality of Care NL advises that in anemic patients, ferritin testing should be done, and in female patients of reproductive age with normal hemoglobin and MCV/MCHC, ferritin testing would be reasonable if oral iron would be prescribed for hypoferritinemia.

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4. Specific Tests (continued)

E. Don't routinely measure Vitamin D in low risk adults. (Choosing Wisely Canada)

F. Don't order ANA as a screening test in patients without specific signs or symptoms of systemic lupus erythematosus (SLE) or another connective tissue disease (CTD). (Choosing Wisely Canada)

G. Don't request a serum protein electrophoresis in asymptomatic patients in the absence of otherwise unexplained hypercalcemia, renal insufficiency, anemia or lytic bone lesions. (Choosing Wisely Canada)

5. INR

A. In patients on warfarin with a stable INR, many patients are monitored once monthly. Very stable patients can be monitored as infrequently as every 12 weeks. (Thrombosis Canada)

Unstable INR is often related to overly frequent monitoring or to excessively large dose adjustments.