
Pathology and Laboratory Medicine Memorandum

To: NSH Physicians, Nurse Practitioners, Health Service Directors and Laboratories

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Subject: Implementation of Reflex 'Free Thyroid Hormone' Testing Strategy

Commencing April 29, 2021 TSH/FT4/FT3 will be subject to the utilization rules outlined below

Pathology and Laboratory Medicine is implementing Reflex 'Free Thyroid Hormone' Testing provincially. Choosing Wisely Canada recommendations, endorsed by the Canadian Society of Endocrinology and Metabolism, advise against ordering multiple tests for the initial investigation of patients with suspected non-neoplastic thyroid disease. TSH is the test of choice for screening and monitoring most patients, including those on therapy for known thyroid dysfunction. FT4 or FT3 testing does not typically provide additional clinical value for patients who have a normal TSH result.

The following rules have been implemented for thyroid function testing to ensure appropriateness of testing and include the reflex addition of FT4 and/or FT3 to patient samples according to the TSH value. For patients equal to or greater than 14 years of age:

- TSH values that are either below the lower end or above the upper end of the adult reference interval will have FT4 added.
- TSH values of <0.1 mIU/L will additionally have FT3 added
- TSH values that fall within the reference interval will not have FT4 or FT3 tested, even if requested, unless '**DO NOT CANCEL**' has been indicated clearly on the requisition form beside the required test.

The exceptions to the above scenario in which the '**DO NOT CANCEL**' option may be used are:

- In patients with known or clinically suspected central (pituitary or hypothalamic) hypothyroidism. In this case TSH may be inappropriately normal in the setting of a low FT4. The prevalence of this condition is very low, ranging from 1:20,000 to 1:80,000 in the general population.
- Screening for thyroid disorders during pregnancy.
- If there are concerns for over-treatment in early stages of managing hyperthyroidism.

These values have been reached in consensus with the division of Endocrinology at Central Zone and current guidelines. Due to difference in patient population, both maternal and pediatric, the IWK will not adopt this practice.

If you have any questions or concerns, please contact Dr. Elnenaei at (902)473-5194