

Appropriate Use of Laboratory Tests -
Free thyroxine (FT4)
English summary

Une production de l'Institut national
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et en services sociaux (INESSS)

SUMMARY

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Introduction

The testing of free thyroxine (FT4) raises issues concerning its relevance due to the sometimes complex and specific clinical situations in which its use is justified. In Québec, the number of FT4 tests performed has slightly decreased over the past ten years. The objective of this work is to develop a guidance sheet on appropriate use in order to reduce the volume of low-value procedures within Quebec's healthcare system.

Methodology

A literature review on the indications and recommendations related to FT4 testing was conducted using the INESSS rapid review methodology. Healthcare professionals provided experiential and contextual knowledge specific to Québec.

Results

After the analysis of the information gathered and an iterative process involving stakeholders, the following non-indications and indications were formulated:

FT4 testing **is not indicated** as :

- a routine test or for screening thyroid dysfunction in asymptomatic persons;
- a first-line test:
 - for diagnosing primary thyroid dysfunction;
 - for monitoring primary hypothyroidism.

FT4 testing **may be indicated**:

- in cases of suspected or for the diagnosis and follow-up of:
 - central hypothyroidism (pituitary disorder);
 - thyroid hormone resistance syndrome;
- for initial monitoring of hyperthyroidism treatment;
- for monitoring untreated subclinical hyperthyroidism in children;
- as a second-line test, if the TSH level is abnormal*, for the assessment of thyroid function, particularly in:
 - evaluating severity and monitoring hypothyroidism or hyperthyroidism;
 - neonatal screening.

- * FT4 testing may be considered despite a normal TSH level in cases of strong clinical suspicion based on specific, clear, and persistent symptoms of hypothyroidism or hyperthyroidism.

Conclusion

The guidance sheet that was developed aims to engage, guide, and support healthcare professionals in promoting the appropriate use of FT4 testing. It may thus contribute to reduce the annual number of test requests and associated costs and workload, while also generating a positive environmental impact.

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