

High Volume of Thyroid Testing in NL

Choosing Wisely Canada Recommendation

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.

Practice Points

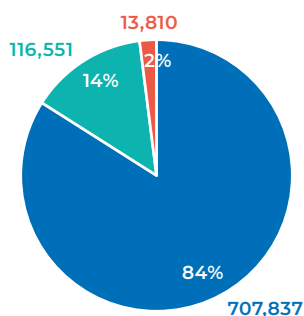
1. In most people, a normal Thyroid Stimulating Hormone (TSH) indicates either a normal endogenous thyroid function or an adequate T4 replacement dose.
2. TSH only becomes unreliable in patients with known or suspected pituitary or hypothalamic disease when TSH cannot respond physiologically to altered T4 or T3.
3. In stable patients, TSH needs to be monitored no more often than every six months.
4. Costs per test are: TSH: \$10, T4: \$12, and T3: \$9.

Methods

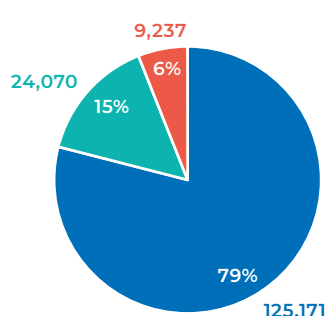
1. All TSH, T4, and T3 tests undertaken in NL from 1 Apr 2014 – 31 Mar 2019 (5 years) were analysed by year, age, sex, and clinician who ordered the test.

Results

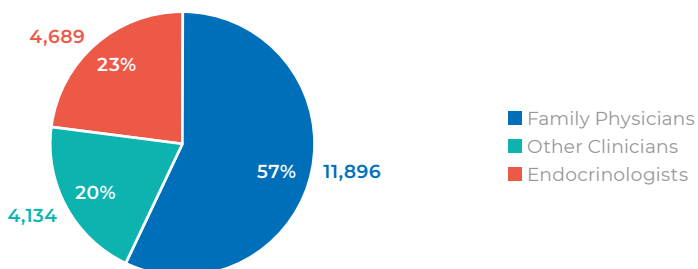
Number of TSH Tests by Specialty



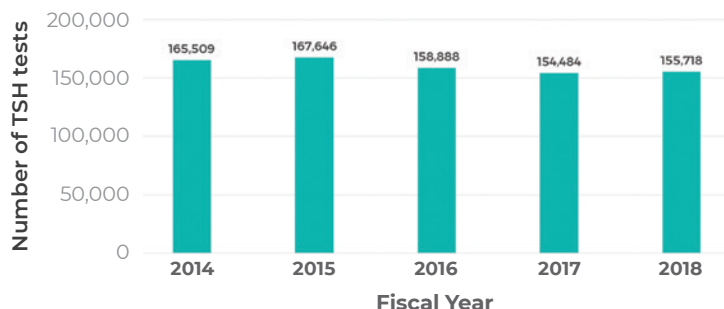
Number of T4 Tests by Specialty



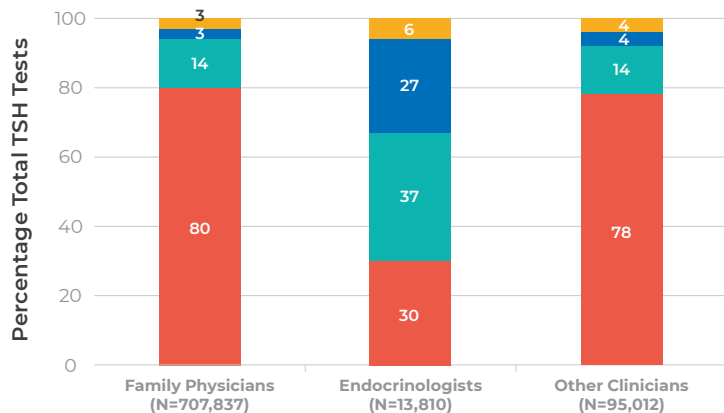
Number of T3 Tests by Specialty



Number of TSH Tests per Fiscal Year



Percentage of TSH Tests Paired With T4/T3 by Result



- In 2018 7,464 (6.6%) of all patients who had TSH tests performed (N=113,702) had five or more tests.

Conclusions

1. T4 and T3 ordering is frequently coupled with TSH testing. This is usually unnecessary as reflex testing for T4 within laboratories is undertaken in patients with an abnormal TSH.
2. In patients with known or suspected pituitary or hypothalamic disease the order for T4 or T3 should contain this information.
3. The number of patients receiving five or more TSH tests per year is high.