

Minimizing Inappropriate Thyroid Function Testing

A QI Initiative | SUNY Upstate Medical University

WHY DOES THIS MATTER?

Ordering multiple thyroid tests simultaneously leads to unnecessary costs and potentially inappropriate management changes. Sequential testing is recommended: order TSH first, then reflex to additional tests based on result

THE PROBLEM AT UPSTATE (FY 2024)

13,021

TSH Orders

5,203

Free T4 Orders

\$8 M+

Annual thyroid testing Cost

Half of free T4 orders were placed without a preceding abnormal TSH, suggesting they were potentially avoidable per ATA guidelines.

CURRENT vs. RECOMMENDED TESTING

CURRENT

- Multiple tests ordered simultaneously
- Total T4 & TPO Ab in reflex panel
- No decision-support prompts
- High rate of non-indicated FT4 orders

RECOMMENDED

- TSH first → reflex FT4 if TSH elevated and FT4 + Total T3 if TSH is suppressed
- Remove Total T4 and TPO Ab in reflex panel
- Clinical indication-driven order panel

NEW THYROID TESTING ALGORITHM

STEP 1: Order TSH (Initial Screen)

TSH ELEVATED

→ Reflex to Free T4

TSH SUPPRESSED

→ Reflex FT4 + Total T3

Additional tests (FT3, Total T4, antibodies) may be ordered separately if clinically indicated

NEW THYROID ORDER PANEL

Thyroid Testing

- Clinical suspicion of thyroid condition (Thyroid Function Algorithm)
- Follow up primary hypothyroidism (TSH)
- Follow up secondary hypothyroidism (T4 free)
- Follow up primary hyperthyroidism (TSH, T4 free, T3 total)
- Follow up secondary hyperthyroidism (TSH, T4 free, T3 total)
- Other thyroid testing

OurPractice Advisory - Adtorders, Betty

Thyroid Testing



The American Thyroid Association (ATA) recommends ordering only TSH as the initial screening test for thyroid disorders.

LAB8954 Thyroid Function Algorithm is preferred. TSH is tested initially, and if that result indicates the need for further testing, Free T4 and/or Total T3 will reflex without intervention.

Perform the following actions

Remove the following orders

Remove: TSH
ONCE, today at 1740, For 1 occurrence Blood, Blood, Venous, Tier 1 (all credentialed providers)

Apply the following

Order: Thyroid Testing Clinical Decision Making

Dismiss and continue

I choose not to use decision tree

✓ Accept (2)

✗ Cancel