

SUMMARY AND COMMENT | GENERAL MEDICINE, EMERGENCY MEDICINE, AMBULATORY MEDICINE, HOSPITAL MEDICINE

INFORMING PRACTICE

December 8, 2022

Reducing Unnecessary Ordering of T3 Tests

Allan S. Brett, MD, reviewing Krouss M et al. *Am J Med* 2022 Dec

Measuring triiodothyronine levels rarely is necessary; an electronic prompt decreased T3 orders by 50%.

Clinicians sometimes order multiple thyroid function tests at once (i.e., thyroid-stimulating hormone [TSH], thyroxine [T4], and triiodothyronine [T3]), when just one or two of these tests are clinically appropriate. In particular, T3 levels generally are helpful only for identifying so-called “T3 toxicosis” (i.e., hyperthyroidism with suppressed TSH but normal free T4). For the rare occasions when T3 measurement might be helpful, experts recommend total T3 rather than free T3, because the latter is more variable.

In this study, researchers studied the effect of an electronic “best practice advisory” that appeared when clinicians ordered total or free T3 levels at 10 hospitals and 11 ambulatory care centers in New York City. The advisory tells clinicians not to order free T3 routinely because it is unreliable and rarely changes management, and to order total T3 only for suspected hyperthyroidism if “TSH and free T4 don't correspond with the clinical picture.” Compared with the year before the intervention, T3 testing during the 9 postintervention months decreased by about 50% in both inpatient and outpatient settings. The decrease reflected both fewer initial orders and clinicians' cancellation of initial orders because of the electronic prompt.

COMMENT

Most of us don't get this advisory when we order thyroid tests, but this study still is instructive: It reminds us that indications for measuring T3 (and especially free T3) in routine practice are few and far between.

CITATIONS

Krouss M et al. Free the T3: Implementation of best practice advisory to reduce unnecessary orders. *Am J Med* 2022 Dec; 135:1437. (<https://doi.org/10.1016/j.amjmed.2022.07.018>)

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