NPS MEDICINEWISE

THYROID DISORDERS
When and what to test

Practice Review
MBS data
September 2019

For more information about this Practice Review and how to interpret your data, see ***nps.org.au/mbs-thyroid***

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DHS1
Dr Sam Sample
Sample Street
SAMPLE ABC 1234

26 September 2019

Dear Dr Sample,

NPS MedicineWise supports clinicians in professional development and continuing quality improvement, with a focus on quality use of medicines and medical tests. The enclosed MBS data provide you with an opportunity to reflect on your practice and your requests for thyroid tests and imaging compared to those of your peers.

Knowing when and what to test remains a challenge
GPs have a critical role in optimising practice when testing for suspected thyroid disorders and monitoring thyroid conditions. GPs ordered approximately 90% of all thyroid stimulating hormone (TSH) tests and 75% of thyroid function tests (TFTs) in 2014–15.[1] The number of requests for thyroid tests continues to increase in Australia and in 2017–18, 7.7 million thyroid tests were performed, at a cost to Medicare of $186 million.[2] While thyroid tests may seem safe, the harms of overtesting, such as generating patient anxiety and cost, also need to be considered.

TSH alone should be the first-line test for patients with suspected thyroid disorder
TFTs (TSH+T3 and/or T4) are only recommended after abnormal TSH results unless investigating certain conditions eg, pituitary conditions.[3,4] For the majority of patients, T4 testing can be safely avoided without increasing the risk of missing thyroid disorders.[5]

Thyroid ultrasounds are only required for people with goitre or palpable thyroid nodules
Unless there are visible or palpable thyroid nodules, thyroid ultrasounds are not recommended for routine investigation of abnormal TFTs.[6] Thyroid ultrasounds performed in the absence of goitre or palpable thyroid nodules are likely to identify clinically insignificant nodules. Most thyroid nodules are benign.[7]

GPs have expressed a need for an easy-to-follow algorithm
Enclosed you will find the NPS MedicineWise thyroid disorder testing algorithm to support you in your investigations of suspected thyroid disorders in adults. We hope you will find this resource helpful in your daily practice.

Learn more
Our national program, *Managing thyroid conditions in primary care*, provides further resources for GPs such as the *MedicineWise News - Thyroid disease: challenges in primary care.* These can be found at **nps.org.au/professionals/thyroid-testing-imaging-and-medicines**

Yours sincerely,

Steve Morris
Chief Executive Officer
NPS MedicineWise

Your MBS data are provided confidentially to you only and are intended for personal reflection on your practice.
Data are not used for any regulatory purposes.

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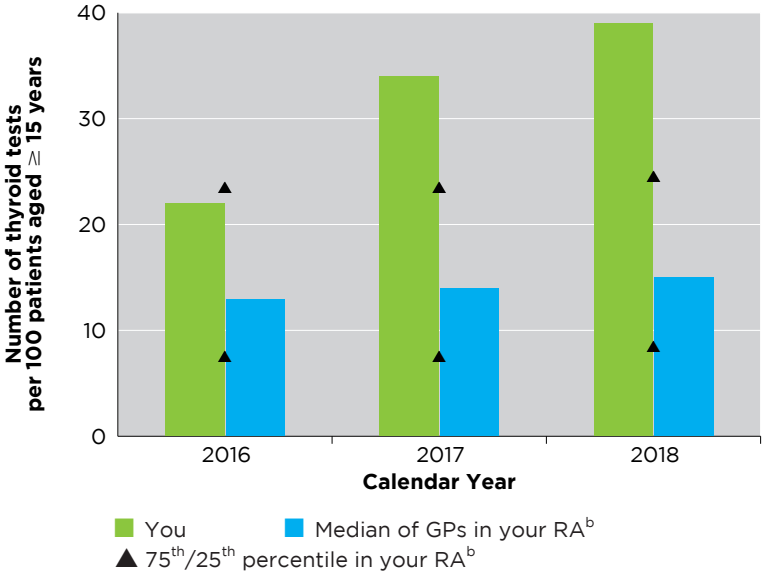
Your confidential MBS data

NPS MedicineWise provides this information for your reflection only. The data are from the Department of Human Services (DHS) and include all requests for thyroid tests and imaging (neck ultrasounds) that were performed for your patients aged ≥ 15 years. The indications for testing and imaging referrals cannot be determined from MBS data. Consider the data in relation to your patients and their indications for pathology and imaging.

How have your requests for thyroid tests changed over time?



Points for reflection

- The number of patients receiving thyroid tests (TSH and/or TFTs) in Australia has increased by 5.7% per year from 2012–17.[3]
- TSH tests should not be used as a screening test for thyroid disorders in asymptomatic patients.[3]
- Reserve TSH tests for patients who have a known or clinically suspected thyroid disorder, or those patients at high risk for example, with:[4]
  - family history of thyroid disorder
  - medicines that may affect thyroid function such as amiodarone, lithium
  - autoimmune disease
  - type 1 diabetes.

RACGP, through Choosing Wisely Australia, recommends:

Don't test thyroid function as population screening for asymptomatic patients

choosingwisely.org.au/recommendations/racgp

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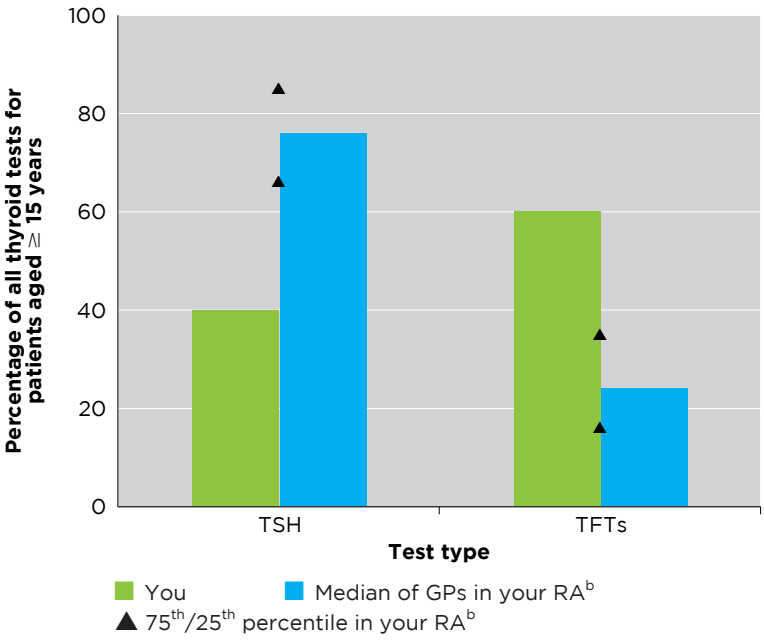
What percentage of your thyroid tests were for TSH alone in 2018?



Points for reflection

- Measure TSH alone as the first step to investigate suspected thyroid disorder.[3,6]
- If TSH levels are normal, a primary thyroid disorder is unlikely and further TFTs are usually not needed.[6]
- T4 testing may be safely avoided for over 90% of patients by ordering T4 tests only after abnormal TSH results.[5]

Note: Due to rounding, percentages may not total 100%

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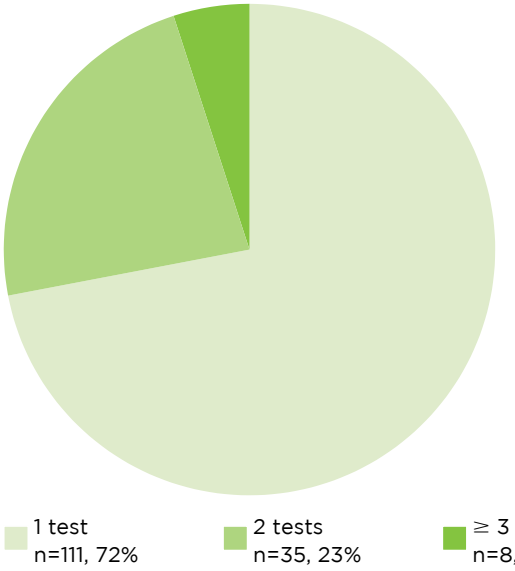
Did your patients receive multiple TSH tests in 2018?



Points for reflection

- Further TSH testing within 12 months of a normal result is usually not necessary unless clinical circumstances change.[1]
- Additional monitoring is recommended for patients with borderline results who may have subclinical thyroid disorder.[4]
  (See algorithm for details)
- Use patient symptoms and other clinical indicators to guide decisions on further testing.

Note: Due to rounding, percentages may not total 100%. n = number of TSH tests (TSH tests requested as part of TFTs are not included in this chart).

How many of your patients had neck ultrasounds in 2018?

	n	%
In 2018, of all your patients who received a thyroid test, how many also received a neck ultrasound?	22	9

Note: The indication for neck ultrasound cannot be determined from MBS data, however thyroid examination appears to be the main reason for requesting neck ultrasound.[3]

Points for reflection

- Neck ultrasounds are only recommended to assess goitre or palpable thyroid nodules after a clinical examination,[7] even in the presence of abnormal TFT results.[6]
- Unnecessary ultrasounds may identify benign, clinically insignificant cancers.[7] These small, low-risk cancers have a very low risk of harm if untreated.[3]
- The harms of detecting small low-risk cancers, eg, the psychological burden of a cancer diagnosis and adverse effects of treatment, may outweigh the benefits.[3]
- Ask yourself: is a thyroid ultrasound required and will it add valuable information or affect management?

Familiarise yourself with recent changes to the requirements for requests for diagnostic imaging services, found at MBS online. The MBS explanatory notes (Category 5 note IN.0.1) have been updated to support quality referrals for imaging by GPs. See **www9.health.gov.au/mbs**

The Endocrine Society of Australia, through Choosing Wisely Australia, recommends:

Don't routinely order a thyroid ultrasound in patients with abnormal thyroid function tests if there is no palpable abnormality of the thyroid gland.

choosingwisely.org.au/recommendations/esa

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What does this mean for me?

- What patient factors, eg symptoms, do I consider before requesting a thyroid test?
- Do I only request a TSH test in the first instance for my patients with suspected thyroid disorder?
- Am I ordering repeat TSH tests for my patients too early or too often?
- Do I always check for goitre or palpable nodules by neck examination before requesting thyroid ultrasounds?

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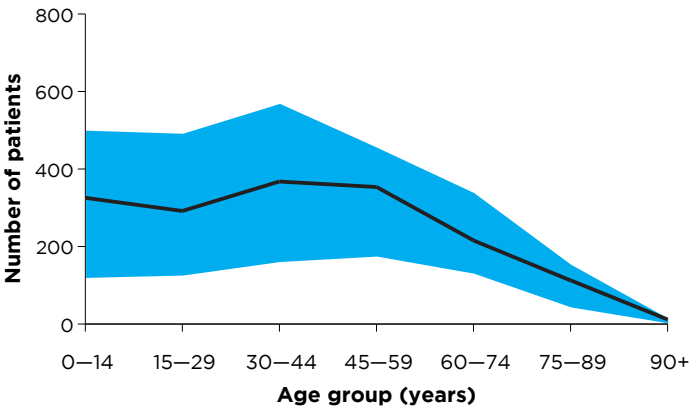
Practice profile

This practice profile is provided to help you interpret your referral data.
Your RA[b] peer group is Major city

Age profile of your patients

1 January 2018 to 31 December 2018



The black line represents the age profile of your patients. The shaded area lies between the 25th and 75th percentile for GPs in your RA.[b]

Your Medicare patients and concession card holders

1 April 2018 to 30 June 2018

Patients	You	Median of GPs in your RA[b]
Total Medicare	**700**	**669**
Concession card holders Includes those reaching Safety Net	**158**	**162**

Data from a 3-month period that represent patient mix have been provided. Department of Veterans' Affairs health card holders are not included.

Notes

a. Data shown are an aggregate of all your provider locations.
b. The comparator group 'RA' includes all general practitioners currently located in a similar geographical location.

References

1. Medicare Benefits Schedule Review Taskforce. First report from the pathology Clinical Committee - Endocrine Tests, 2017. https://www1.health.gov.au/internet/main/publishing.nsf/Content/0B3A33115E51BFA2CA2581C200711212/$File/Report%20from%20the%20Pathology%20Clinical%20Committee%20-%20Endocrine%20Tests%20-%20public%20consultation.pdf (accessed 14 June 2019).
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3. Australian Commission on Safety and Quality in Health Care and Australian Institute of Health and Welfare. The third Australian atlas of healthcare variation. Sydney ACSQHC, 2018. https://www.safetyandquality.gov.au/wp-content/uploads/2018/12/The-Third-Australian-Atlas-of-Healthcare-Variation-2018.pdf (accessed 12 June 2019).
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5. Schneider C, Feller M, Bauer DC, et al. Initial evaluation of thyroid dysfunction - Are simultaneous TSH and fT4 tests necessary? PLoS One 2018;13:e0196631. https://www.ncbi.nlm.nih.gov/pubmed/29709030
6. Bone and Metabolism Expert Group. Therapeutic Guidelines: Thyroid disorders. West Melbourne: Therapeutic Guidelines Ltd, 2019, https://tgldcdp.tg.org.au/viewTopic?topicfile=thyroid-disorders-overview#toc_d1e103 (accessed 25 June 2019).
7. Durante C, Grani G, Lamartina L, et al. The diagnosis and management of thyroid nodules: a review. JAMA 2018;319:914-24. https://www.ncbi.nlm.nih.gov/pubmed/29509871.

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Log in to your Health Professional Online Services (HPOS) account **https://www.humanservices.gov.au/organisations/health-professionals/services/medicare/hpos**

Send your full name, provider number and new preferred mailing address to **provider.registration@humanservices.gov.au** from a personal email address that clearly identifies you, or is the email address stored on the Medicare Provider Directory.

Contact us
For queries about your data or any of this information, contact NPS MedicineWise:

02 8217 8700 **info@nps.org.au**

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