

UK National Screening Committee (UK NSC)

Screening for thyroid disease

Date: 07 March 2022

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Aim

To ask the UK National Screening Committee (UK NSC) to make a recommendation, based on the evidence presented in this document, whether or not screening for thyroid disease in non-pregnant, asymptomatic adults meets the UK NSC criteria for a systematic population screening programme.

Current Recommendation

The UK NSC does not currently recommend systematic population screening for thyroid disease in non-pregnant, asymptomatic adults. The Committee based this recommendation on the evidence provided by the 2018 review which was carried out by Solutions for Public Health.

The 2018 review found that the natural history of thyroid dysfunction is unclear and that it is still not possible to determine the proportion of patients with subclinical or overt thyroid dysfunction who will normalise without clinical intervention. Suitable test cut-off thresholds for screening the general population for subclinical or overt thyroid dysfunction had not yet been defined. Consensus on what constitutes healthy levels of the FT3, FT4 and TSH hormones had not been reached in the literature. Furthermore, the review noted that there is an overall lack of evidence to demonstrate the benefits of treatment for screen-detected subclinical and overt thyroid dysfunction.

Evidence Map

The 2021 evidence map was undertaken by Solutions for Public Health. Evidence maps are rapid evidence products which aim to gauge the volume and type of evidence relating to a specific topic. The aim of the 2021 evidence map was to address the gaps in the evidence from the 2018 review through the following questions:

- Has a test cut-off been identified which is suitable for population screening for overt and subclinical thyroid dysfunction?
- Does early initiation of treatment for overt and subclinical thyroid dysfunction following screening or at a pre-symptomatic stage provide better outcomes compared to initiation of treatment following clinical detection or at a symptomatic stage?

The findings of this evidence map provide the basis for discussion to support decision making on whether there is sufficient evidence to justify commissioning a more sustained review of the evidence on thyroid disease at the present time.

The 2021 evidence map concluded that whole population screening for thyroid disease in non-pregnant, asymptomatic adults should not be introduced in the UK and that the current recommendation should be retained. This is for the following reasons:

- no new evidence was found which reported on suitable test cut-offs for population screening
- a large volume of evidence was found on the treatment of subclinical hypothyroidism only. However, none of the studies included in this evidence map compared the early initiation of treatment to later treatment for overt and subclinical thyroid dysfunction. In addition, there was an absence of evidence on overt hypothyroidism, as well as in relation to subclinical and overt hyperthyroidism
- it is unlikely that a review of the available evidence in this area of treatment of subclinical hypothyroidism alone would lead to a change in the UK NSC's position
- on the basis of this evidence map, the volume and type of evidence related to screening for thyroid disease in non-pregnant, asymptomatic adults is currently insufficient to justify an update review at this stage and so should be re-considered in 3-years' time

Consultation

A three-month consultation was hosted on the UK NSC website. Direct emails were sent to 15 stakeholders. (Annex A)

The public consultation closed on 14 January 2022. The total number of consultation responses received was 2.

Comments were received from the following 2 stakeholders (see Annex B for comments):

- Royal College of General Practitioners (RCGP)
- A member of the public

The RCGP agreed with the conclusion of the evidence map and the reaffirmation of the current recommendation not to screen for thyroid disease, adding that primary care practitioners will continue to consider thyroid disease as a differential diagnosis when patients are symptomatic.

The member of the public shared their personal experience of living with the condition. The consultee outlined how the condition ran on both sides of the family and described the negative impact of a long diagnostic odyssey. The consultee thought that there should be testing in place for thyroid disease to enable managing the condition early, particularly family testing.

Response: the UK NSC is grateful to the stakeholders for their contribution to the consultation process. Currently the remit of the UK NSC does not include testing family members of people at risk of a condition (also known as cascade genetic screening), so the aim of this evidence map was to determine if in recent years new evidence had emerged to support a change to the current UK NSC recommendation on whole population screening for thyroid disease. Consequently, at present the findings of this evidence map are unlikely to impact the current recommendation on screening for thyroid disease as limited new evidence was identified to address existing gaps, in particular no new evidence was found which reported on suitable test cut-offs for population screening. Therefore, an evidence summary is not justified at the current time and the topic should be re-considered in 3-years' time.

Recommendation

The Committee is asked to approve the following recommendation:

A systematic population screening for thyroid disease in non-pregnant, asymptomatic adults is not recommended in the UK.

Annex A: List of Organisations Contacted

1. British Association of Endocrine and Thyroid Surgeons
2. British Thyroid Association
3. British Thyroid Foundation
4. Faculty of Public Health
5. PHE adult screening programmes
6. Royal College of General Practitioners
7. Royal College of Nursing
8. Royal College of Pathologists
9. Royal College of Physicians
10. Royal College of Physicians and Surgeons of Glasgow
11. Royal College of Physicians of Edinburgh
12. Royal Society of Medicine
13. Society for Endocrinology
14. Thyroid Patient UK
15. Thyroid UK

Annex B: Consultation Responses

Note: Personally identifiable information has been redacted from certain comments, where individuals have chosen not to have personal details made public.

1. Royal College of General Practitioners

Name: xxxx xxxx

Email: xxxx xxxx

Organisation: Royal College of General Practitioners

Role: xxxx xxxx

Condition: Thyroid disease

The RCGP agree with the conclusion that thyroid disorder should not be screened for. Primary care will continue to consider it as a differential diagnosis when patients are symptomatic.

2. Member of the public

Name: xxxx xxxx

Email: xxxx xxxx

Condition: Thyroid disease

Affected Comment:

It has run through both sides of my family, ours is the autoimmune version. I was tested for years, however the test misses many autoimmune cases as it only shows how much you have, not where in the body it actually is. My results were always “a little underactive, too low to treat” until a test revealed 90-92% was in my immune system, by then I was vastly obese. Family testing is a must, I got to 26 stone over 20 years until the test result and I started levothyroxine. Until then I was being treated for multiple different symptoms, all of those medications stopped after my thyroid meds began. Both thyroid tests are needed to detect autoimmune version within families. Many in ours were treated with medications for depression, throat infections, painkillers, yet the entire time it was thyroid disorder. One relative was even diagnosed wrongly as schizophrenic, now thankfully well for 3 years after thyroid diagnoses. All had had at least one thyroid test but no other test to confirm if indeed their body had use of the hormone. Both tests are needed.

Recommendation comment:

It should. In my case diagnoses revealed 6 other family cases, it is important. More and more people are born not knowing inherited issues that testing can reveal. Allowing you to manage your condition early.

Alternatives comment:

The sane approach would be to have one set of tests so a person's full precursors is known, that way they could adjust their lifestyle if they were high-risk for a particular thing or as in our case, notice symptoms and get treatment early saving countless costs, symptom medication in the long term.