The United Kingdom Thyroid Multi-Disciplinary Team; a National Survey of Services and Comparison to Guidelines.

Key Points:

1. We have identified ambiguity in the current guidance on thyroid MDT's, and have also found nationwide variation in compliance with this.
2. We recommend:
    a. All thyroid surgeons should complete a minimum of 20 thyroid procedures per year, and this should also form part of surgeons' annual appraisal.
    b. All surgeons should contribute data to UKRETS (unless prevented by local legal frameworks) and this should form part of surgeons' annual appraisal and be audited by individual MDT's and regional cancer networks.
    c. Thyroid MDT's should be held weekly where possible, with a minimum frequency of fortnightly.
    d. The core membership of a thyroid MDT (stand alone and joint) should include thyroid surgeons, specialist radiology, endocrinology, nuclear medicine, nurse specialists, histopathology +/- cytology and clinical oncology.

Key words

Thyroid, Multi-Disciplinary Team, Guidelines, Surgery, Frequency, National, Cancer, Survey.

Main Body

Objectives

We assessed the provision of thyroid multi-disciplinary team (MDT) services in the United Kingdom (UK), compared these to guidance, and made recommendations from our findings.

Design

A Cross-sectional survey (Figure 1.) was sent via email to 175 NHS organisations' freedom of information act (FOIA) e-mail addresses in May 2018. Data was requested between the 1st January to 31st December 2017, respondents were given one month to complete. The study population was determined by the number of complete responses. Where conflicting information was provided, such as from multiple trusts that share one MDT, bias was eliminated using data provided by the trust which hosts MDT's. Data collection was done in accordance with STROBE statements[1]. We have no conflicts of interest to disclose.

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Settings

Guidance for the operating of the thyroid MDT in the UK is presented by the National Cancer Peer Review Programme (NCPR), British Thyroid Association (BTA) and the British Association of Thyroid and Endocrine Surgeons (BAETS). The NCPR guidelines focus on the structure and set up of the thyroid MDT[2], BTA concentrates on the treatment of thyroid disease[3] while BAETS supports the regular audit of thyroid surgeons through the UK Registry of Endocrine and Thyroid Surgery (UKRETS) [4] and sets the standard for a minimum of 20 procedures per annum per surgeon[5].

The NCPR guidance varies depending on whether the thyroid MDT functions as a standalone MDT, or jointly with the upper aerodigestive tract (UAT) MDT, particularly when examining the guidance on the core membership and frequency of MDT's.

The recommended core membership for joint MDT's includes 3 surgeons, 2 clinical oncologists +/- medical oncology, histopathology +/- cytopathology, radiology, clinical nurse specialist and restorative dentistry and meetings should be held weekly[2]. For standalone MDT's the core membership includes the addition of endocrinology and nuclear medicine and does not require restorative dentistry, and meetings should occur at an "agreed frequency"[2]. The current guidance lacks clarity as to whether joint meetings are expected to include the additional core members of the standalone thyroid meetings and the stipulation of "agreed frequency" is ambiguous. The introduction of the NHS England 28 day 'Faster Diagnosis Standard' in April 2020[6] requires delivery of faster outcomes and supports the need to clarify current guidance on MDT frequency.

Participants

NHS organisations, thyroid surgeons, thyroid MDT's.

Main Outcome measures

Outcomes can be found in figure 1.

Results

Number of Thyroid Surgeons and Specialty

Of the 175 NHS organisations that were contacted, 152 responded with 138 complete questionnaires, 37 were excluded (23 non responders and 14 incomplete questionnaires). The responses covered a total of 297 surgeons performing thyroid surgery in the UK. Of the 138 complete responses, 104 (75%) organisations provide thyroid surgical services with an average of 3 surgeons performing thyroid operations in each organisation.

Seven surgical specialties undertake thyroid surgery being; otolaryngology (66%), general (21%), endocrine (9%), oral and maxillofacial surgeons (OMFS) (2%), paediatric (1%), vascular (<1%), breast (<1%) and renal (<1%).

Thyroid Surgeons Operative Numbers

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Individual surgeons perform an average of 35 procedures per year, with endocrine surgeons performing the most procedures averaging 64 procedures per year each.

Of the 297 surgeons included in the analysis, 194 (65%) perform more than 20 procedures per year. Endocrine has the highest percentage of surgeons performing more than 20 procedures per year at 81%, followed by otolaryngology (67%), general surgeons (62%), OMFS (33%) and other specialties (25%) (Figure 2.).

Contribution to UKRETS

63% of surgeons (179 of 284) contribute to UKRETS, endocrine have the highest percentage at 88%, followed by general surgeons (61%), otolaryngology (57%), OMFS (50%) and other specialties (44%) (figure 3.). Northern Ireland was excluded from this analysis due to local legal frameworks restricting access to the registry.

Membership of MDT According to Specialty

Examining each surgical specialty, 92% of endocrine surgeons are core MDT members, followed by 76% of otolaryngologists, 67% of OMFS and 60% of general surgeons.

MDT Association and Frequency

Data was gathered on 45 MDT's. Data for England is presented separately as the 28 day 'Faster Diagnosis Standard' is only applicable here.

62% (28 of 45) of UK thyroid MDT's are standalone, 24% are adjacent to the UAT MDT and 11% are within the UAT MDT. 2% of MDT's classed themselves as a tumour study group. 63% (10 of 16) of joint UAT/thyroid MDT's in the UK meet weekly, 25% fortnightly, 6% twice a month and 6% monthly (every four to five weeks). 56% (15 of 27) of standalone meetings in the UK meet weekly, 22% fortnightly, and 22% monthly.

In England 67% (10 of 15) of joint UAT/ thyroid MDT's meet weekly, 20% fortnightly, 7% twice a month and 7% monthly. 62% (13 of 21) of standalone thyroid MDT's in England met weekly, 24% fortnightly, 5% twice monthly and 10% monthly.

Cases Discussed at MDT

69% (31 of 45) always discuss intermediate risk groups in UK thyroid MDT's, 24% are sometimes discussed and 7% are never discussed. 98% always discuss high risk cases and 2% sometimes discuss high risk cases. 100% always discuss confirmed postoperative cancer cases.

Core Membership and MDT Composition

100% of standalone thyroid MDT's had radiology as a core member, 89% had surgeons and histopathology, 86% had oncology, and 11% had cytology. The NCPR additional requirement of endocrinology and nuclear medicine was met 57% and 21% of the time respectively. Of the joint thyroid MDT's (either adjacent to or within the UAT MDT); 100% had a surgeon, oncologist and radiology present as core members, 81% has histopathology, 56% had endocrinology, 13% had cytology and 6% had nuclear medicine as core members (figure 4.).

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Conclusions

Examining compliance of thyroid MDT's in the UK to guidelines has highlighted areas for improvement. Furthermore the lack of clarity in guidance has resulted in broad variation in MDT frequency and core membership.

No surgical specialty met the BAETS recommended minimum of 20 procedures per year for all surgeons in that specialty. Data taken from UKRETS suggests a higher surgeon volume is correlated with improved outcomes[7]. To improve compliance we suggest meeting guidelines becomes compulsory and is reviewed at annual appraisal and be audited by individual MDT's and regional cancer networks.

Overall 63% of all surgeons contributed to the UKRETS audit, with significant variation between specialties. We recommend further investigation examining possible barriers towards all surgeons contributing data. Making this part of annual appraisal may help increase compliance.

There is ambiguity in regards to the NCPR guidelines on the recommended frequency of standalone MDT's. We found the majority of UK MDT's are standalone (62%) and 44% meet less than weekly, compared to 37% of joint MDT's. In England, where the 28 day 'Faster Diagnosis Standard' applies, 33% of joint MDT's and 38% of standalone MDT's meet less than weekly, with a total of 16% of all MDTs (standalone and joint) meeting monthly. Compliance with this standard will be difficult to achieve with a less than weekly frequency and almost impossible with a monthly frequency. Our recommendation would be for a uniform guideline for all thyroid MDT's to meet weekly, or if this is not possible due to resources then a minimum of fortnightly.

Further ambiguity within the NCPR guidelines on how standalone and joint meetings may vary in core membership is also reflected in the data with both standalone and Joint MDTs lacking compliance with all core membership requirements. In standalone thyroid MDT's only one of 8 specialties (radiology) were consistently represented as core members, furthermore the NCPR recommended addition of endocrinology and nuclear medicine were only represented 57% and 21% of the time. In joint meetings (adjacent or within the UAT MDT) there was compliance with guidelines for three of the 8 required core members (surgeons, radiologists and oncologists). Interestingly 56% of joint MDT's have endocrine core members where there is no stipulation in the guidance for this. Overall there seems to be little acknowledgment in practice of the guidance on core membership and how this may vary between joint and standalone thyroid MDT's. We would encourage simplifying the current guidance to minimise confusion and ensure better compliance. We suggest all thyroid MDT's (standalone and joint) core membership includes; thyroid surgeons, specialist radiology, endocrinology, nuclear medicine, nurse specialists, histopathology +/- cytology and clinical oncology.

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References

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Data availability:

Available from the corresponding author upon reasonable request.

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