


comprehensive oncological audit strategy based on the available literature.

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Thyroid cancer clinicians' views and experiences of delayed treatment during the COVID-19 pandemic: an international cross-sectional survey

In March 2020, the World Health Organization declared the coronavirus outbreak a global pandemic.¹ Since then, countries worldwide have taken unprecedented measures in response to the outbreak and its demand on healthcare resources. One strategy has been delaying non-urgent surgery—one example being surgery for low-risk thyroid cancer. However, there are currently no data to inform how clinicians discuss and manage delayed treatment due to reasons beyond their own or the patients' control or decision-making.² During the pandemic, patients with lower risk thyroid cancer may have had to 'sit' with knowledge of their cancer for a prolonged period of time while awaiting surgery. For patients with higher risk cancers, surgical treatments including completion thyroidectomy, radioactive iodine (RAI) therapy and use of systemic therapies may also have been delayed. The aim of this study was to quantitatively examine the views and experiences of clinicians managing patients with thyroid cancer before and during the COVID-19 pandemic.

The study recruited thyroid cancer surgeons and endocrinologists who managed patients during the COVID-19 pandemic with ethics approval from the University of Sydney. Clinicians were invited to participate through email from the membership of the Australian New Zealand Endocrine Surgeons; Endocrine Society of Australia; Australian Society of Otolaryngology, Head and Neck Surgery; Asian Association of Endocrine Surgeons; and The American Thyroid Association. Data were collected between July and November 2020. The survey was administered through the online platform Qualtrics and took <10 min to complete. Quantitative analyses were carried out using Stata/IC v16 (StataCorp LP, USA). Descriptive statistics summarised the sample characteristics and the proportion of clinicians endorsing items on types of treatments delayed, worry about delays in treatment, and confidence in discussing delays in treatment. Multivariable linear regression models were used to examine the association of demographic and clinical practice characteristics with

comfort delaying treatment generally, and specifically during the COVID-19 pandemic (controlling for comfort in general). Two-tailed p-values less than .05 were considered statistically significant.

Of 269 clinicians who consented and began the survey, 199 completed it and were included in the analysis (Table 1). The main treatment clinicians reported being delayed during the COVID-19 pandemic was thyroidectomy ($n = 114$; 57.3%), followed by surveillance imaging ($n = 100$; 50.3%), hemi-thyroidectomy ($n = 92$; 46.2%), adjuvant RAI ($n = 87$; 43.7%), therapeutic RAI for metastatic or recurrent disease ($n = 40$; 20.1%) and systemic therapies ($n = 14$; 7.0%). Only 10.6% ($n = 21$) of clinicians reported not delaying any treatments. The majority of these ($n = 12$; 57.1%) were from Australia and New Zealand.

For all types of thyroid cancer, when asked on a 5-point Likert scale (from very much to not at all) whether clinicians were 'worried about having to delay treatment for their patients' during the COVID-19 pandemic, 48 (24.1%) reported being very much or quite a bit worried, 127 (63.8%) reported being somewhat or a little bit worried and 24 (12.1%) reported being not at all worried. The most common reported reason for clinician worry was patient anxiety ($n = 54$; 27.1%). Only 27 clinicians (13.6%) reported they were themselves worried about disease progression and seven clinicians (3.5%) reported worry that their patient may need more invasive

treatments after treatment delay. Practice and financial implications were mentioned only by seven (3.5%) and three (1.5%) clinicians, respectively.

Focusing on low-risk thyroid cancer, in general (not during the COVID-19 pandemic), 72.9% ($n = 145$) of clinicians reported being very or quite comfortable (on a 5-point Likert scale) delaying surgery or other treatments for patients. Table 2 outlines the reasons clinicians gave for their level of comfort. Mean scores for level of comfort (not comfortable at all to very comfortable, scale 0–10) about delaying surgery or other treatments for patients with low-risk thyroid cancer, and now (during the COVID-19 pandemic), were 6.60 (SD 2.62) and 6.61 (SD 2.60), respectively. Level of comfort delaying in general, and delaying now, were extremely positively correlated ($r_{198} = 0.91$, $p < 0.001$). Clinicians' comfort with delaying treatment differed by region of practice ($p < 0.0001$) and clinical specialty ($p = 0.0002$) with greater comfort reported in North/South America and by endocrinologists compared to surgeons (Table S1).

While this survey only provides a snapshot of thyroid clinicians' views and experiences regarding delayed treatment, specifically surgery, it demonstrates that worry was not excessive and may indicate a growing appreciation of the shift towards active surveillance for those with low-risk thyroid cancer. We found clinicians were most worried about patient anxiety, with only a small proportion of clinicians being worried about the risk of disease progression and the need for more invasive treatments. This suggests that while clinicians understand thyroid cancer biology, some still find it difficult to explain this to patients, or feel patients will find it difficult to accept.^{3,4} Although temporarily delaying treatment is different to management through active surveillance, these internationally based findings provide insights into how clinicians offer treatment choices for thyroid cancer. It will be of interest to see if treatment delays and clinician experience with delays related to the pandemic alter patient management choices and patient-reported concerns, and affect attitudes to treatment in the future.

Table 1 Clinician characteristics

Characteristic ($n = 199$)	No. of clinicians, n (%)
Region	
United States	83 (41.7)
Australia/New Zealand	62 (31.2)
North/South America (other than United States)	9 (4.5)
Europe/Middle East	23 (11.6)
Asia	22 (11.1)
Specialty	
Surgeon	107 (53.8)
Endocrinologist	81 (40.7)
Other [†]	11 (5.5)
Years of experience	
<10	53 (26.7)
10–19	75 (37.7)
20–29	37 (18.6)
30+	34 (17.1)
Number of thyroid cancer patients/month	
<10	95 (47.7)
10–19	45 (22.6)
20–29	20 (10.1)
30–39	13 (6.5)
40–49	4 (2.0)
50+	22 (11.1)
Practice setting	
Academic (US)	77 (38.7)
Public only	29 (14.6)
Private only	41 (20.6)
Both public and private	50 (25.1)
Other	2 (1.0)
Gender	
Male	124 (62.3)
Female	73 (36.7)
Other/prefer not to say	2 (1.0)

[†]Including nuclear medicine physician, radiation oncologist and endocrine nurse.

Table 2 Clinician comfort for delaying treatment[†]

	n (%)
Comfortable	
Evidence from peer-reviewed studies	115 (57.8)
Previous professional experience	114 (57.3)
Current clinical guidelines	110 (55.3)
Support from practice/hospital/clinic/colleagues	61 (30.7)
Patient preference	24 (12.1)
Just a feeling I have	8 (4.0)
Not comfortable	
Patients not comfortable with it	31 (15.6)
Risk of progression or metastases	19 (9.5)
Lack of current evidence	11 (5.5)
Current clinical guidelines	11 (5.5)
Never thought about delaying or not providing immediate treatment	10 (5.0)
Little to no previous experience	7 (3.5)
Lack of support from practice/hospital/clinic/colleagues	2 (1.0)

[†]Response options were provided, and clinicians could choose more than one response.

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Author contributions

Brooke Nickel: Conceptualization; data curation; formal analysis; methodology; project administration; writing - original draft. **Julie Miller:** Conceptualization; methodology; project administration; resources; writing-review & editing. **Erin Cvejic:** Data curation; formal analysis; methodology; writing-review & editing. **Matti Gild:** Methodology; project administration; resources; writing-review & editing. **Daron Cope:** Data curation; methodology; writing-review & editing. **Rachael Dodd:** Data curation; formal analysis; methodology; writing-review & editing. **Kirsten McCaffery:** Conceptualization; supervision; writing-review & editing. **Anthony Glover:** Conceptualization; formal analysis; methodology; project administration; resources; supervision; writing-review & editing.

Data availability statement

The dataset is available from the corresponding author on reasonable request.


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Supporting information

Additional Supporting Information may be found in the online version of this article at the publisher's web-site:

Table S1. Simple (unadjusted) and multivariable (adjusted) linear regression of clinician comfort in general with delaying treatment.

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Otolaryngology-head and neck surgery patient information leaflets produced by the Royal Australasian College of Surgeons: time for a re-think?

Introduction

Patient information leaflets (PILs) are important tools that help to educate patients about their health, and so can be useful in gaining informed consent for surgery. Face-to-face discussion between doctor and patient is essential, but PILs allow patients to reflect and understand their options outside of the consultation. PILs empower patients with autonomy in the decision-making of their health care.

PILs should therefore provide unbiased, accurate and reliable information, and be written at a reading level appropriate for the target population.

Studies have demonstrated that PILs are often too complex to read, difficult for patients to understand and the content can be of variable quality.^{1,2} This may have negative implications in Australia and New Zealand (NZ), where sizable proportions have below average literacy skills.³ PILs that are written at higher