Variability in Time to Decision (TtD) among NICE and CADTH Health Technology Assessments (HTA)

Poster #HTA73

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Background

- Health technology assessment agencies such as the National Institute of Health and Care Excellence (NICE) and the Canadian Agency for Drugs and Technologies in Health (CADTH) are responsible for reviewing and providing reimbursement recommendations for therapeutic interventions in the United Kingdom and Canada, respectively.
- The time to decision (TtD) from these HTA agencies directly impacts patient care through access to new therapies.

Objective

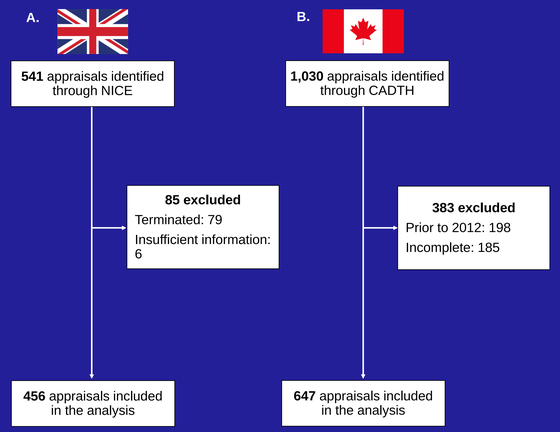
- The objective of this review was to assess variability in review time of appraisals from NICE and CADTH across different submission types, indications, and over time.

Methods

- NICE and CADTH websites were searched for recommendations published in the last 10 years (January 1, 2012 to November 8, 2022). The start date was defined as manufacturer submission date, and where unavailable, date of final scope publication. The end date was defined as publication of guidance (NICE) and issue of final recommendation (CADTH).

Results

Figure 1. Flow diagram of included appraisals for NICE (A) and CADTH (B)



Abbreviations: CADTH, Canadian Agency for Drugs and Technologies in Health; NICE, National Institute for Health and Care Excellence

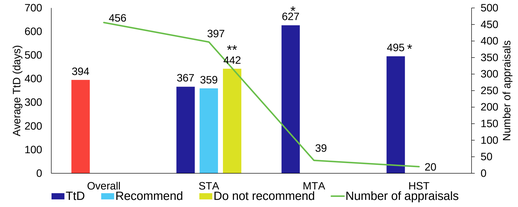
Results (cont.)

NICE

TtD time for STAs was shorter than for MTAs and HSTs

- Among 456 NICE appraisals, average TtD (days [range]) was significantly longer for multiple technology appraisals (MTA; p<0.001) and highly specialized technologies (HST; (p=0.011) compared with single technologies appraisals (STA) (Figure 2).
- STAs with positive recommendations had significantly shorter TtD than those with negative recommendations (359 days vs 442 days, respectively; p=0.03).

Figure 2. NICE number of appraisals and TtD among types of assessments

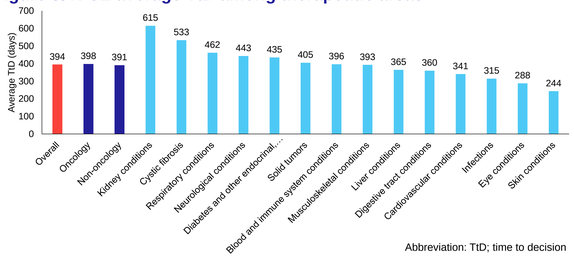


*Student's t-test, p-value <0.05 compared with STA TtD; **Student's t-test p-value<0.05 compared with STA, recommended TtD; Abbreviations: HST, highly specialized technology; MTA, multiple technology appraisal; STA, single technology appraisal; TtD, time to decision

TtD did not differ between oncology and non-oncology indications

- No significant difference was observed between oncology and non-oncology indications; certain therapeutic areas experienced longer TtD (Figure 3).

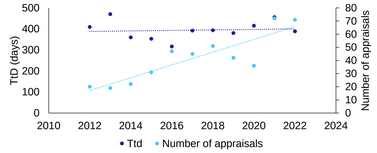
Figure 3. NICE average TtD among therapeutic areas



Abbreviation: TtD; time to decision

- Despite a significant increase in the number of appraisals reviewed, the TtD remained relatively constant over time (Figure 4).
- NICE reviewed 20.1% of STAs and 18.9% of MTAs within minimum expected timeframes of 238 days and 350 days, respectively.

Figure 4. NICE appraisals and TtD over time



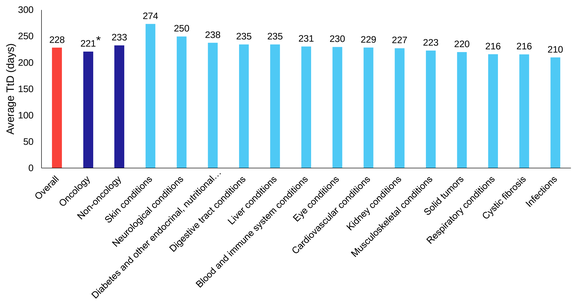
Abbreviation: TtD; time to decision

CADTH

Non-oncology indications required a longer TtD

- Among 647 CADTH appraisals, TtD was 228 days (114–707) with non-oncology indications requiring a longer TtD of 233 days (114–707) compared with oncology appraisals (p=0.02).
- Therapeutic areas with the longest TtD were neurological (250 days) and skin conditions (274 days) (Figure 5).

Figure 5. CADTH average TtD among therapeutic areas

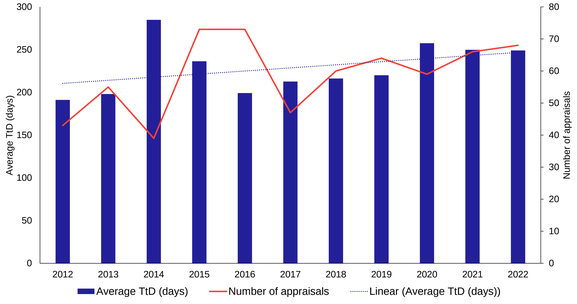


*Student's t-test, p-value <0.05 compared with non-oncology TtD; Abbreviations: TtD, time to decision

Number of appraisals and TtD increased over the years

- Among CADTH appraisals, both the number of appraisals and TtD (p<0.001) increased from 2012 to 2022 (Figure 5).
- CADTH reviewed 18.2% submissions within the target of 180 calendar days.

Figure 6. CADTH appraisals and TtD over time

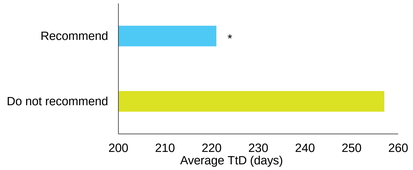


Abbreviation: TtD, time to decision

Recommended appraisals have shorter TtD

Figure 7. TtD based on CADTH recommendation status

- Appraisals with a positive recommendation averaged a TtD of 221 days (143–539).
- Appraisals that received a "not recommended" status had an average TtD of 257 days (160–541), which was significantly longer than those that received a "maybe" recommendation (p<0.001).



*Student's t-test, p-value <0.001 compared with do not recommend TtD
Abbreviations: TtD, time to decision

Limitations and Discussion

- A limitation of this analysis is the overestimation of review times given broad inclusion criteria and missing data for some appraisals.
- Similar to an earlier report from the Office of Health Economics, less than one-third of STA and MTA appraisals met the target timeframes among NICE appraisals.[1] Reasons for delays were not investigated.
- There was variability in TtD among different indications in both CADTH and NICE appraisals. While skin conditions had the longest TtD in CADTH, skin conditions had the lowest TtD in NICE.

Conclusions

- Between 2012 and 2022, NICE averaged 394 days to review appraisals, while CADTH review time was shorter, for an average of 228 days.
- Restricted decisions were associated with longer process times, potentially leading to delay of the evaluations from NICE or CADTH within their target timeframes.
- Appraisals in oncology had shorter TtD in CADTH but not in NICE. Other therapeutic areas may require longer TtD.
- While the number of appraisals increased over time, this only impacted the TtD among CADTH appraisals; TtD remained relatively constant among NICE appraisals
- A more advanced statistical technique could be used to confirm the current findings.

References

1.O'Neill P, Devlin N, Puig-Peiro R. (2012). Time Trends in NICE HTA Decisions. OHE Consulting.

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Presented at ISPOR US | Boston, MA | May 7–10, 2023

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