



Are Pragmatic Literature Reviews Used for Economics Reviews in NICE HTA Submissions and How Are They Received?

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INTRODUCTION

Economic evaluation is important in decision making in healthcare systems and requires appropriate methods for identifying relevant data including parameter inputs. In the UK, the National Institute for Health and Care Excellence (NICE) requires that “relevant” cost-effectiveness studies and health-related quality-of-life (HRQoL) data are identified using “systematic” and “transparent” searches and that cost and healthcare resource use (CHRU) data are “identified systematically”. Systematic literature reviews (SLRs) can be resource intensive and time consuming and this study aims to help determine whether the SLR approach is an efficient use of limited resources:

“To what degree are pragmatic methods already used in economics SLRs for NICE HTA submissions and how are they treated by the Evidence Assessment Groups (EAGs) that critique submissions?”

Furthermore, we report if artificial intelligence (AI) methods are reported as being used to help automate some processes, as part of a pragmatic approach. In August 2024, NICE published a position statement saying AI should be used judiciously.

METHODS

We reviewed what methods companies submitting to NICE claimed to use in their economics reviews (n=22 Technology Appraisals (TAs)) (systematic versus other), whether their methodologies reflected this (n=21 reviews in the 7 most recently published TAs whose full review methods were accessible), what effect this had on how TAs were appraised, and what this may mean for acceptability of future methods. An opportunistic sample of consecutive company submission documents for NICE TAs (1 March to 18 June 2024) were retrieved. One reviewer assessed whether the described methodologies for each review of economic evaluations (EEs), HRQoL and CHRU data, were described as SLRs or other and how these were appraised.

RESULTS

20 single TAs (STAs) described using SLRs to identify EEs and HRQoL (Figure 1). 19 of these STAs described using SLRs for CHRU data. 1 STA submission did not describe a CHRU SLR, instead using reference costs and a targeted pragmatic review of similar models to inform the company developed model. The EAG did not comment on this approach in its critique. 2 TAs were rapid assessments, meaning that SLRs were not feasible. Instead, a pragmatic approach used evidence from 2 living reviews.

The 7 most recently published TAs took pragmatic approaches by limiting CHRU SLRs by publication date and study country (n=1) or by publication date (n=5, 4 of which used prioritisation of the included studies by country). Search methods were not reported as being limited due to a pragmatic approach being needed. Number of reviewers used varied between review stages (Figure 2). Double independent reviewers was used for record selection in all SLRs (Figure 2A). Single reviewer with checking was preferred at data extraction though also was not reported in 1 case (the EAG did not comment on this omission) (Figure 2B). For quality assessment, the reporting and methods was mixed (Figure 2C). No SLRs explicitly reported using AI.

Figure 1: Reviews Description

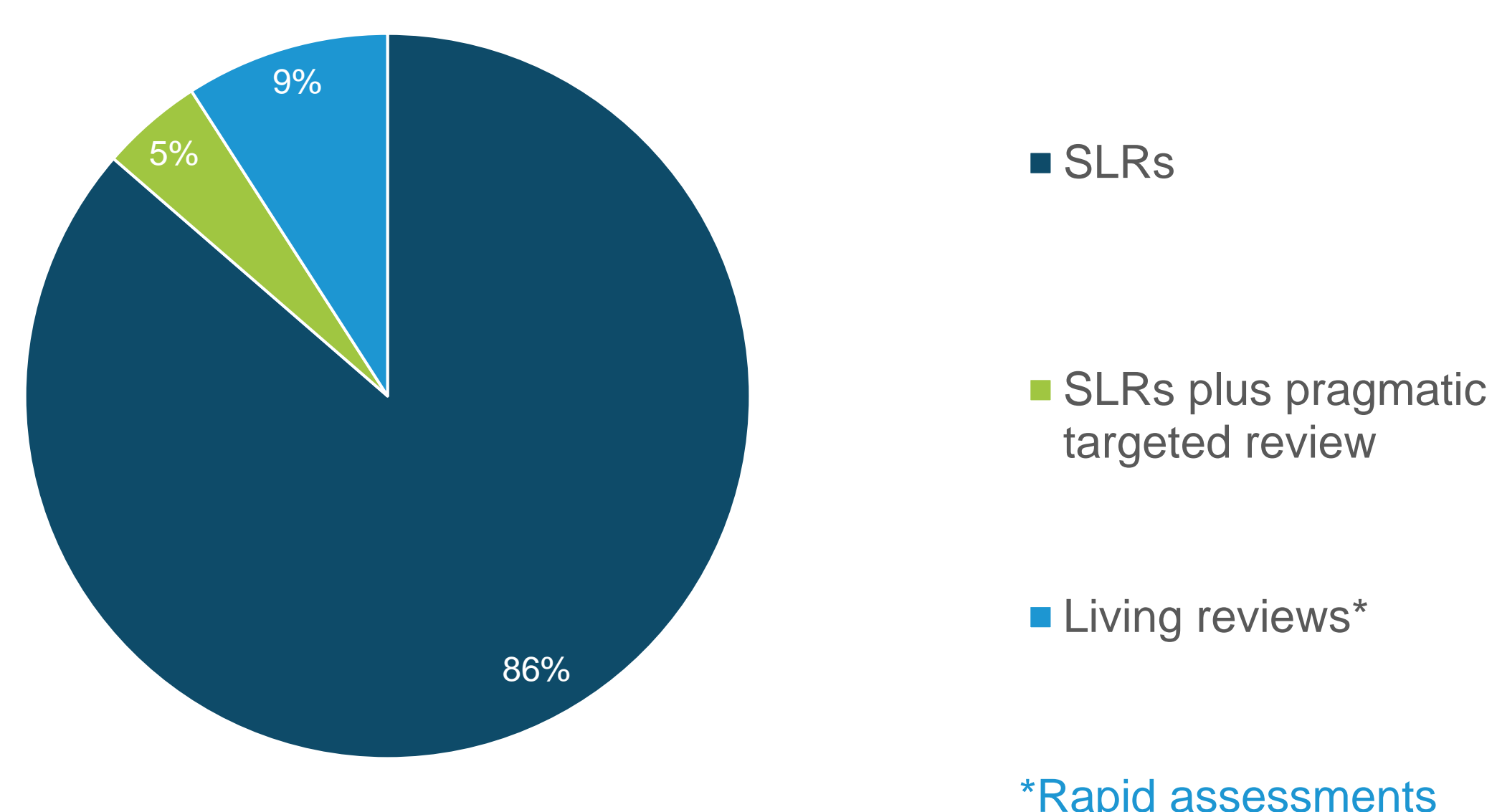
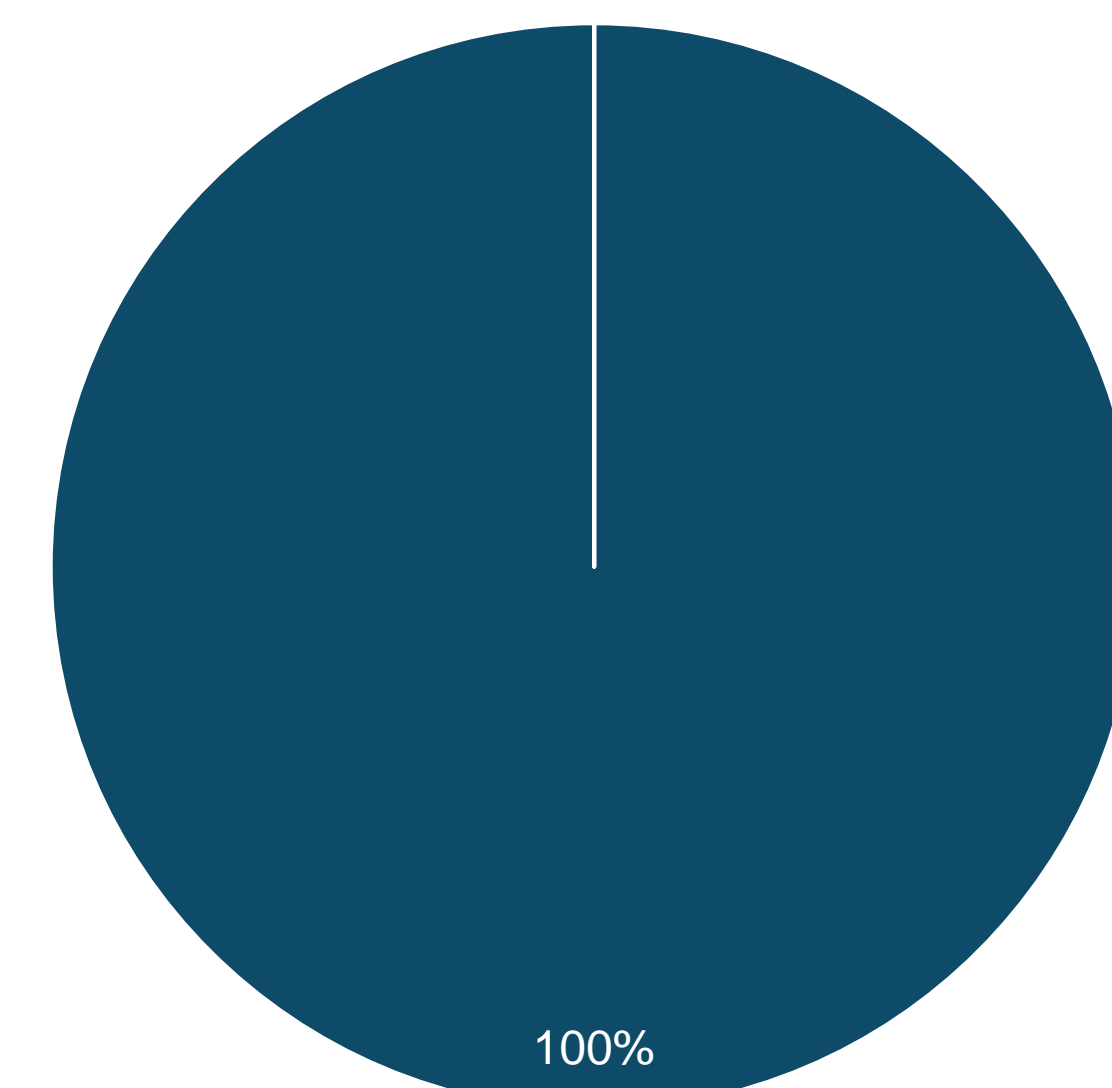


Figure 2: Number of Reviewers Used

2A: Record Selection

- Double independent reviewers
- Single reviewer with checking

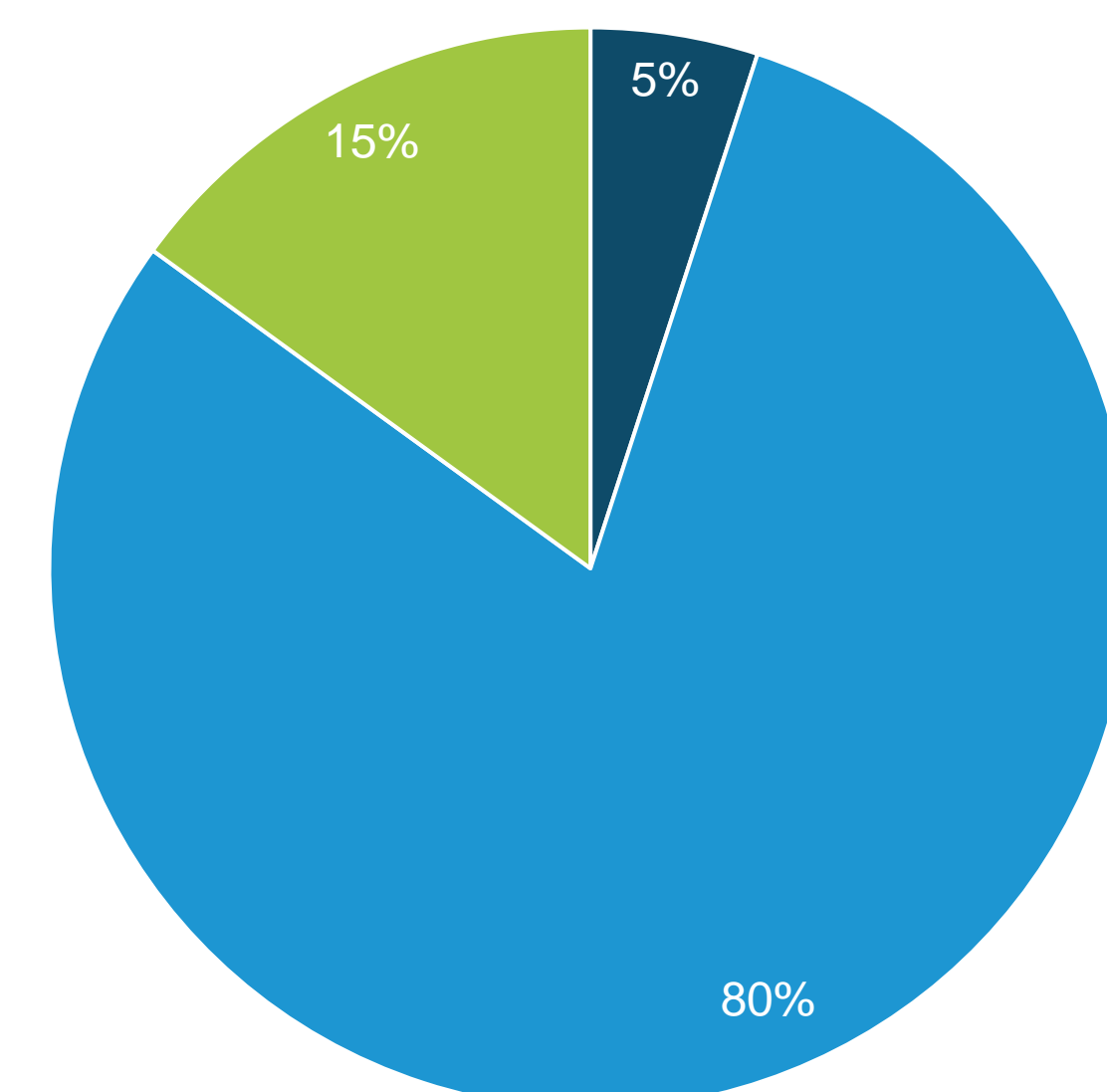


EAG Insight

No EAG reported concerns where the number of reviewers was *not* double independent for any stage of any SLR.

2B: Data Extraction

- Double independent reviewers
- Single reviewer with checking
- NR

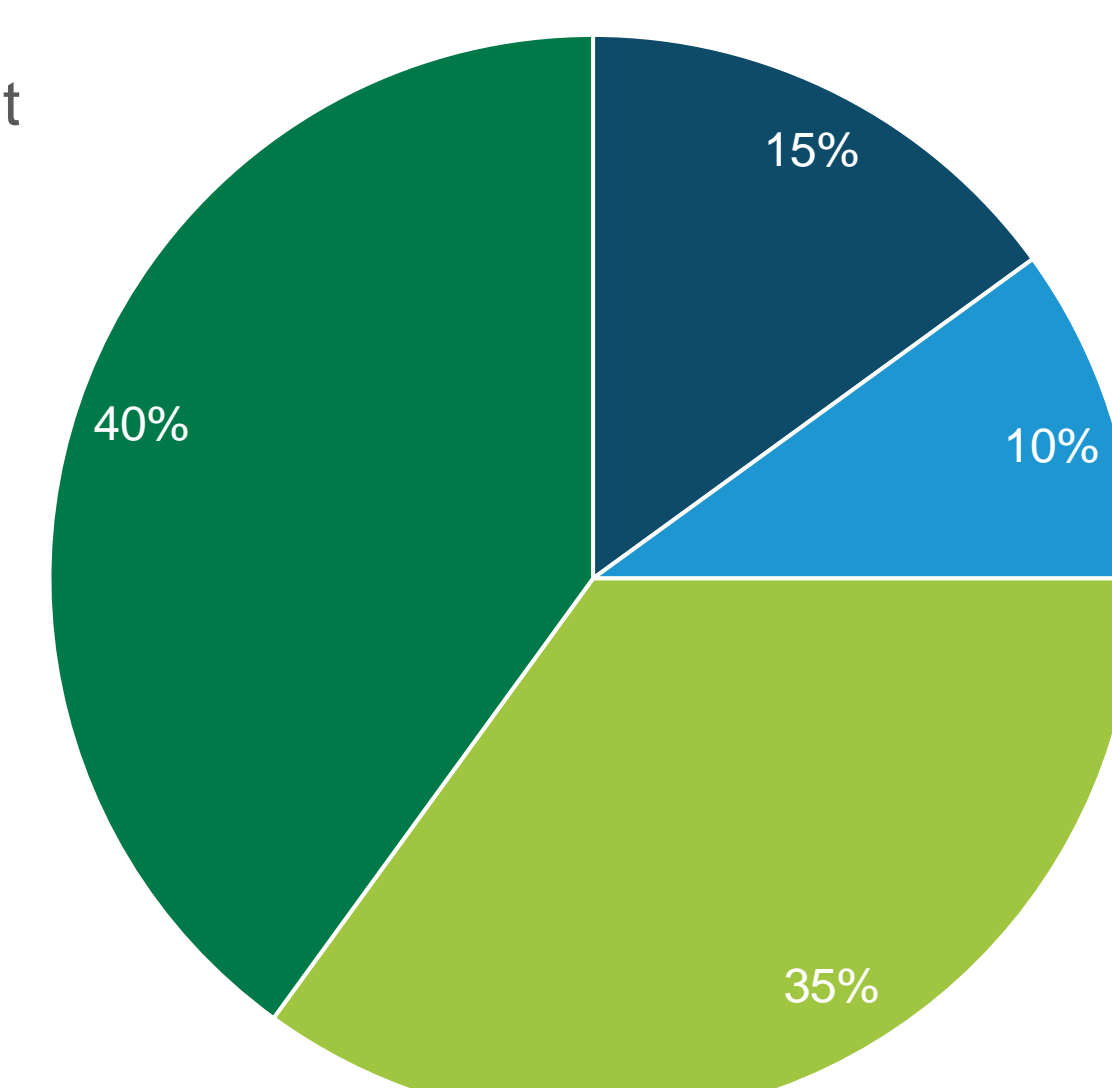


EAG Insight

Where the company in one TA did not report the number of reviewers used for data extraction, no mention was made of this omission by the EAG.

2C: Quality Assessment

- Double independent reviewers
- Single reviewer with checking
- NR
- QA was not undertaken



EAG Insight

Where QA was not undertaken for HRQoL and CHRU SLRs, this was not criticised by the EAGs and 1 EAG deemed it appropriate not to.

CONCLUSIONS

Economics reviews in NICE TAs continue to mostly be SLRs despite no explicit requirement for this. However, there is a degree of pragmatism used: only 1 SLR used two independent reviewers for data extraction and date and country limits (and prioritisation of included studies) were applied in some SLRs. AI is not being explicitly reported as being used. We identified no explicit criticism from 4 different EAGs where a pragmatic approach was taken.

Because SLRs expend large resources, this research suggests that a carefully considered pragmatic approach could be sufficient to identify relevant data using transparent and replicable methods. Advances in reviewing – for example the integration of AI in record selection or data extraction – may help to bridge the gap and make companies more comfortable in using a more pragmatic approach to reviews for highly valuable TA submissions.

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