Health Technology Assessment Guidance In The United Kingdom: Addressing Issues Specific To Medical Devices

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Abbreviations

EAC—External Assessment Centre; **HTA**—health technology assessment; **MTEP**—Medical Technologies Evaluation Programme; **NHS**—National Health Service; **NICE**—National Institute for Health and Care Excellence; **TA**—technology appraisal; **UK**—United Kingdom.

Objective

- The aim of this study was to evaluate published NICE HTA guidance for medical devices and diagnostics, and in particular, to better understand the key challenges faced by stakeholders when submitting an **economic evaluation** to the MTEP.

Background

- The NICE TA process for pharmaceuticals is clearly defined.
- The NICE MTEP program was launched in 2009 to evaluate new and innovative medical devices and diagnostic with the aim of supporting the NHS in the efficient uptake of cost-saving or cost-neutral technologies.[1]

Methods

- All available MTEP evaluations were downloaded from the NICE website in November 2020.
- First, to obtain an impression of the NICE MTEP submission landscape, key characteristics of each appraisal were identified and extracted in line with the framework proposed by Blüher 2020.[2]
- Second, challenges to stakeholders' economic analyses raised by the reviewing committee (that is, the EAC), were assessed and categorized into groups for all submissions.

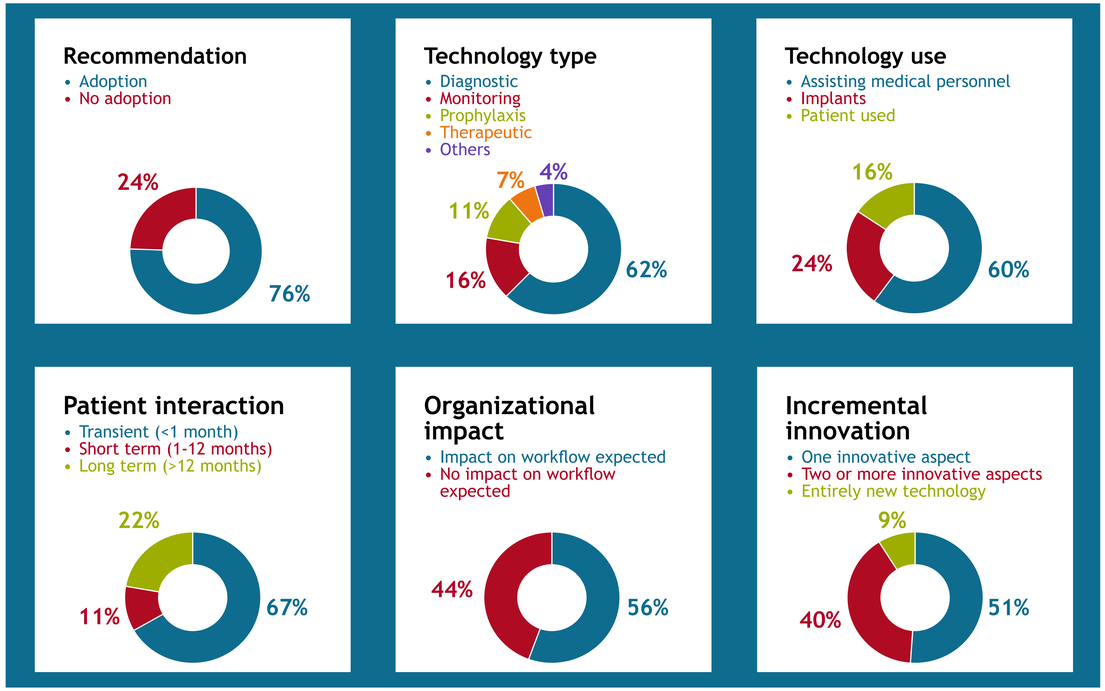

Figure 1 Medical technologies submitted to MTEP landscape - **Recommendation:** The overall outcome of each MTEP submission. **Technology type:** The way in which a technology is used. **Technology use:** Who operates the technology. **Patient interaction:** Duration of patient-technology interaction. **Organizational impact:** Does the technology have implications for the overall work flow (learning curve, changes to the processes). **Incremental innovation:** Is the technology a detail improvement or a major innovation.

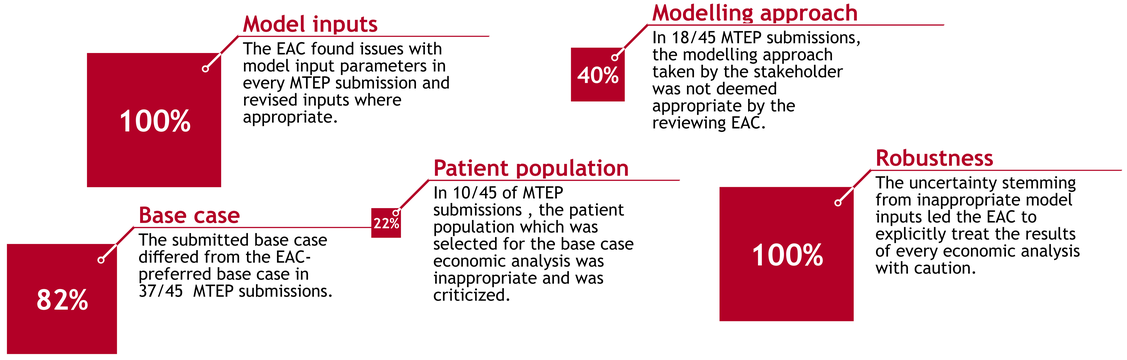

Figure 2 Key EAC criticisms of the economic evaluations submitted to MTEP.

Results

- Between November 2009 and October 2020 only 45 medical technologies have been appraised through the NICE MTEP program (in comparison to 415 parmaceutical TAs).
- **Figure 1** summarizes the key extracted characteristics of these MTEP submissions.
- **Figure 2** provides a summary of the key critiques of stakeholders' economic analyses as well as the frequency with which critiques were raised.
  - 18 submissions (40%) used a health-economic model which the EAC deemed to be inappropriate for decision making.
  - Model inputs and assumptions were criticized in every submission. In 37 submissions (82%), the EAC revised the stakeholders' base case.

Discussion

- Despite the launch of the MTEP process, medical-device and diagnostic HTA is not well established and is underutilized by stakeholders (45 MTEP versus 415 TAs).
- There were very few highly innovative technologies; most included one or two incremental improvements to existing technologies.

Conclusion

- The EAC review may change expected cost savings in the submitted economic analysis.
- Stakeholders wishing to submit to MTEP must explore uncertainties using robust methods for parametric sensitivity analyses in their economic analyses.

References

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2. Blüher M, Saunders SJ, Mittard V, Torrejon Torres R, Davis JA, Saunders R. Critical Review of European Health-Economic Guidelines for the Health Technology Assessment of Medical Devices. Frontiers in Medicine. 2019;6(278).

Disclosure

SG, SJS, MB, RTT and AHH are employees of Coreva Scientific.
RS is the owner of Coreva Scientific.