The HTA Landscape of Orphan Products in the UK between 2019 and 2024

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Introduction

Approximately 300 million people globally are affected by one of the 7,000 estimated rare diseases. To address challenges caused by small patient populations, regulatory agencies have provided incentives, such as the orphan designation. However, the high uncertainty around the data for orphan products remains challenging for health technology assessment (HTA) agencies.

Objective

To investigate the assessment of orphan new active substances (NASs) by UK HTA agencies: NICE (National Institute for Health and Care Excellence, England) and SMC (Scottish Medicines Consortium, Scotland).

Methods

Regulatory submission and approval dates: extracted submission and approval dates from EMA and MHRA reports.

HTA submission and recommendation dates: extracted from HTA reports or requested directly from NICE and SMC for 1st HTA recommendations.

Orphan designation: collected from EMA and MHRA reports.

Highly specialised technology and ultra-orphan pathway: specific review processes for very rare conditions by NICE and SMC, respectively.

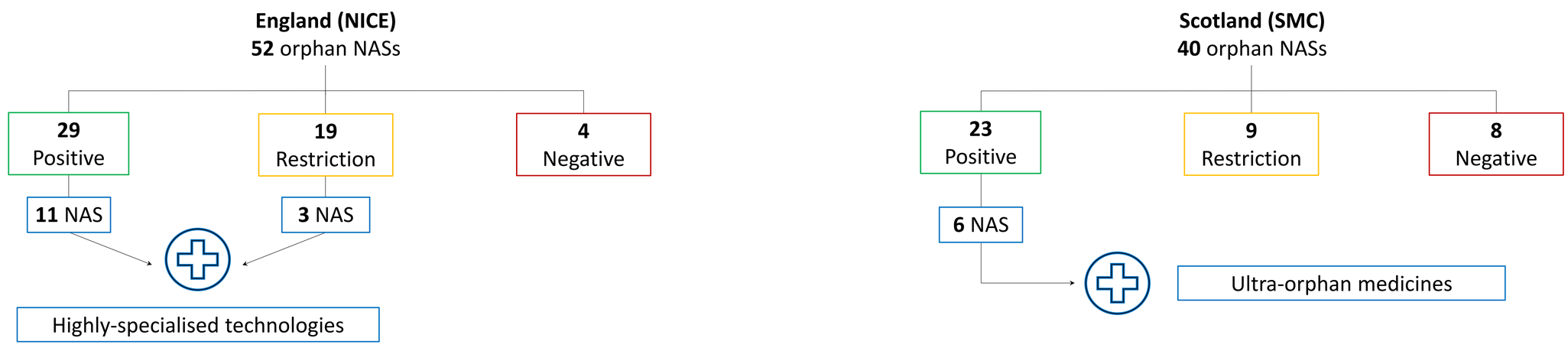
Special access pathways: processes by NICE and SMC to provide earlier or conditional access to specific medicines.

HTA outcome (positive, positive with restrictions, and negative): collected from NICE and SMC reports.

Results

- We identified 52 NICE and 40 SMC first recommendations for orphan NASs between 2019 and 2024 (Figure 1).
- In **England**, 48 NASs received a positive/positive with restrictions outcome (92%), and 14 NASs of these underwent the highly specialised technology pathway (29%).
- In **Scotland**, 32 orphan NASs received a positive/positive with restrictions outcome (80%). Six of the NASs with positive outcomes underwent the ultra-orphan pathway (19%).
- For **non-orphan** NASs, the proportion of positive/positive with restriction outcomes was higher than for orphan NASs (95% vs 92%, NICE; 89% vs 80%, SMC) (Figure not shown).

Fig 1. HTA outcome and funding mechanisms of orphan products (1st HTA recommendation between 2019–2024)



In both England and Scotland, the HTA assessment median time was longer for orphan NASs compared to non-orphan products (Figure 2).

The Patient Access Scheme (PAS) was applied to the majority of orphan product recommendations in England and Scotland (67% and 85% of orphan NASs, respectively) (Figure 3). Eight products reviewed by NICE and two by SMC did not undergo a special access pathway.

Fig 2. Timing from EMA submission to 1st HTA recommendation

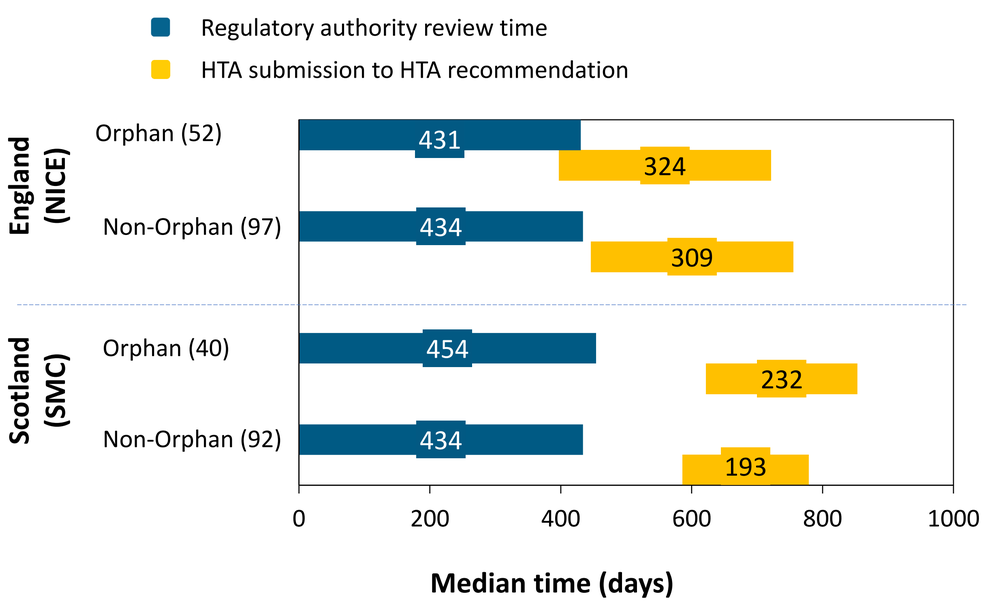
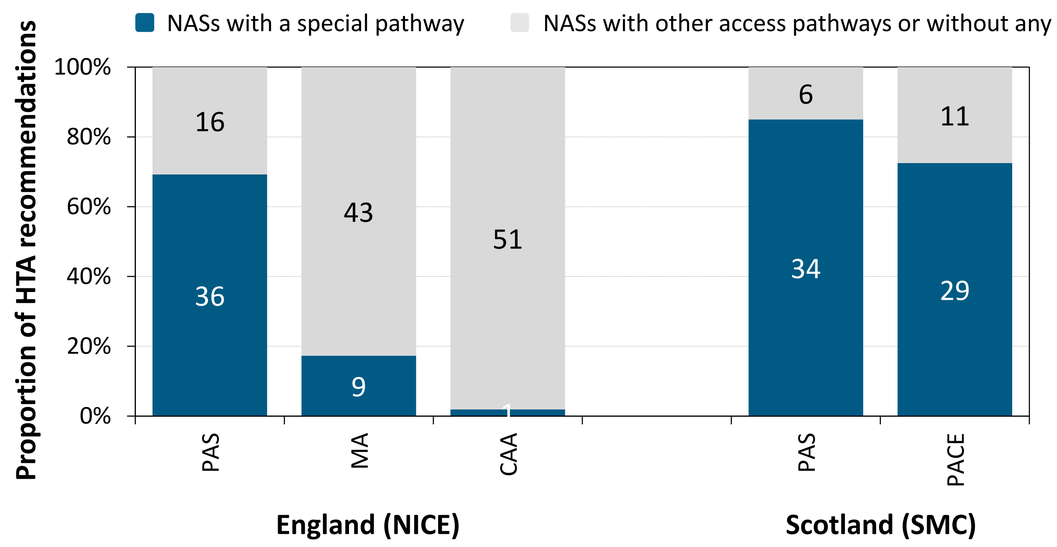


Fig 3. Proportion of orphan products with special access pathways



Definitions:
CAA: Commercial Access Agreement
MA: Managed Access
PACE: Patient and Clinician Engagement
PAS: Patient Access Scheme

Note: NASs can undergo multiple access pathways, thus they may appear in more than one category.

Conclusion

- A high proportion of NICE and SMC orphan NASs received a positive or positive with restrictions HTA outcome, many of which underwent the PAS. Nevertheless, this HTA outcome proportion was lower for orphan than for non-orphan NASs.
- The median assessment time for orphan NASs was longer than for non-orphans, which may be due to the need for specific access pathways.

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Mission: To identify and apply scientific principles for the purpose of advancing regulatory and HTA policies and processes in developing and facilitating access to pharmaceutical products.

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