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Sufficient Uptake of Highly Specialised Technologies?

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Richard Macaulay Vice President, Global Pricing & Market Access, PRECISIONadvisors

Richard is responsible for the growth and development of consultative, analytic, and data services supporting life science products' commercial performance. Our team excels at understanding the ever-changing and complex healthcare market and helping clients solve issues including access strategy, stakeholder mapping, value communication, strategic pricing, and product positioning.

Agenda

1	**Why** do medicines for very rare diseases pose HTA **challenges**?
2	How have NICE tried to **address** this via the HST pathway?
3	What have been the **HST outcomes** to date
4	How does the HST approach **compare to other countries**

Health Technology Assessment (HTA) for medicines that treat very rare, specialised conditions can be very challenging for payers

Payer value drivers and hurdles in highly specialised indications

- Unmet need
- Rare indications

- Limited evidence
- High price points

NICE introduced a Highly Specialised Technology (HST) pathway in 2013 for the appraisal of healthcare interventions for rare and neglected diseases

NICE HST Criteria – all seven of which must apply*

1. Treatment will usually be **concentrated in very few NHS centres**
2. Target patient group is **distinct for clinical reasons**
3. **Chronic** and severely disabling condition
4. Used **exclusively** in the context of a highly specialised service
5. Likely to have a **very high acquisition cost**
6. Potential for **life-long use**
7. Significant **need for national commissioning**

* There is a NICE methods review ongoing and criteria may change in 2022

The HST framework recognizes challenges in demonstrating clinical and cost effectiveness for therapies for very rare diseases

NICE HST Evaluation Framework

Key distinction vs. the standard STA evaluation: Willingness to pay (/QALY)

STA	HST
£20,000 – £30,000	£100,000 – £300,000

Other distinctions vs. the standard STA evaluation

STA	HST
Solely on incremental clinical and cost-effectiveness	Consideration of the impact **beyond direct health benefits**

This research evaluates the number of HSTs appraised to date and the actual number of patients treated under this NICE pathway

Research objectives & methodology

Identify any therapy appraised under the **HST pathway** (to 25-Jun-2021)

(from the NICE website)

Key information extracted

(including: recommendations, dates, disease incidence/prevalence estimates)

Compared with actual **prescribing/usage data**

Provided by NHSE via a FoI request in April 2021

NICE have published 14 HST guidance – all of which were 'recommended'

HST – Outcomes

Date	INN	Brand	Indication	Outcome
28/01/2015	Eculizumab	Soliris	aHUS	Recommended
16/12/2015	Elosulfase alfa	Vimizim	Morquio syndrome	Recommended
21/07/2016	Ataluren	Translarna	nm-DMD	Recommended
23/02/2017	Migalastat	Galafold	Fabry disease	Recommended
28/06/2017	Eliglustat	Cerdelga	Gaucher's disease	Recommended
02/08/2017	Asfotase alfa	Strensiq	Hypo-phosphatasia	Recommended
08/02/2018	CD34+ ADA cells	Strimvelis	ADA-SCID	Recommended
10/10/2018	Burosumab	Crysvita	X-linked hypo-phosphataemia	Recommended
22/05/2019	Inotersen	Tegsedi	hATTR	Recommended
14/08/2019	Patisiran	Onpattro	hATTR	Recommended
09/10/2019	Voretigene neparvovec	Luxturna	Inherited retinal dystrophy	Recommended
27/11/2019	Cerliponase alfa	Brineura	CLN2	Recommended
21/10/2020	Volanesorsen	Waylivra	FCS	Recommended
24/02/2021	Metreleptin	Myalept	Congenital leptin deficiency	Recommended

These HST recommendations came an average of 21.4 months post-EC-approval

HST – Time from EC-authorization to NICE recommendation

HST Date	INN	Brand	Indication	EC-approval	Time EC => NICE (months)
28/01/2015	Eculizumab	Soliris	aHUS	24/11/2011	**38.1**
16/12/2015	Elosulfase alfa	Vimizim	Morquio syndrome	27/04/2014	**19.6**
21/07/2016	Ataluren	Translarna	nm-DMD	31/07/2014	**23.7**
23/02/2017	Migalastat	Galafold	Fabry disease	25/05/2016	**9.0**
28/06/2017	Eliglustat	Cerdelga	Gaucher's disease	19/01/2015	**29.3**
02/08/2017	Asfotase alfa	Strensiq	Hypo-phosphatasia	28/08/2015	**23.2**
08/02/2018	CD34+ ADA cells	Strimvelis	ADA-SCID	26/05/2016	**20.5**
10/10/2018	Burosumab	Crysvita	X-linked hypo-phosphataemia	19/02/2018	**7.7**
22/05/2019	Inotersen	Tegsedi	hATTR	06/07/2018	**10.5**
14/08/2019	Patisiran	Onpattro	hATTR	27/08/2018	**11.6**
09/10/2019	Voretigene neparvovec	Luxturna	Inherited retinal dystrophy	22/11/2018	**10.5**
27/11/2019	Cerliponase alfa	Brineura	CLN2	30/05/2017	**29.9**
21/10/2020	Volanesorsen	Waylivra	FCS	03/05/2019	**17.6**
24/02/2021	Metreleptin	Myalept	Congenital leptin deficiency	29/07/2018	**30.9**

~1,254 patients have been treated with an HST

HST – Numbers predicted as eligible vs. numbers treated

HST Date	INN	Brand	Indication	Number of patients	
				Predicted	Treated
28/01/2015	Eculizumab	Soliris	aHUS	N/A	373
16/12/2015	Elosulfase alfa	Vimizim	Morquio syndrome	103	107
21/07/2016	Ataluren	Translarna	nm-DMD	N/A	111
23/02/2017	Migalastat	Galafold	Fabry disease	142	229
28/06/2017	Eliglustat	Cerdelga	Gaucher's disease	50-100	<10
02/08/2017	Asfotase alfa	Strensiq	Hypo-phosphatasia	4 to 28	35
08/02/2018	CD34+ ADA cells	Strimvelis	ADA-SCID	N/A	0
10/10/2018	Burosumab	Crysvita	X-linked hypo-phosphataemia	250	195
22/05/2019	Inotersen	Tegsedi	hATTR	150	30
14/08/2019	Patisiran	Onpattro	hATTR	150	85
09/10/2019	Voretigene neparvovec	Luxturna	Inherited retinal dystrophy	86	30
27/11/2019	Cerliponase alfa	Brineura	CLN2	36-62	23
21/10/2020	Volanesorsen	Waylivra	FCS	80-100	16
24/02/2021	Metreleptin	Myalept	Congenital leptin deficiency	<200	<10

Usage vs. predicted	Greater	Lesser	N/A

Three distinct approaches to incentivise ultra-orphan access were identified

Different ultra-orphan medicines P&R incentives

1

Deferred HTA
Conditional access with re-assessment

2

HTA exemption
Provided under budget impact threshold

3

Preferential P&R
Higher ICER thresholds

Preferential access incentives for drugs for very rare diseases is a compelling HTA strategy, but may risk delaying access (compared with other strategies)

Summary and conclusion

Ultra-orphan medicines pose **significant payer/HTA challenges** due to their benefits for patients with very severe disease being only supported by limited clinical data at launch

Some HTAs have **introduced reimbursement incentives** for orphan/ultra-orphan medicines, including HTA exemptions, deferred HTAs or preferential consideration

The NICE approach leverages a **distinct HST process** that uses a higher willingness to pay threshold and considering a broader range of benefits beyond direct health improvement

Whilst the HST process has supported access for **14 therapies**, these recommendations have come over **20 months post-EC approval,** and some have **not** converted this into meaningful **patient access**

THANK YOU!

we look forward to staying in touch

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