Briefing Paper for Surrey Heartlands Integrated Care System (ICS) Area Prescribing Committee (APC)

NICE Technology Appraisals: Local implementation

NICE TA Guidance	NICE TA758 Solriamfetol for treating excessive daytime sleepiness caused by narcolepsy		
Available at	**https://www.nice.org.uk/guidance/ta758**		
Date of issue	5 January 2022	**Implementation deadline**	5 April 2022 (3 months from date of publication)

Medicine details	
Name, brand name	Solriamfetol (Sunosi)
Manufacturer	Jazz Pharmaceuticals
Licensed indication	**www.medicines.org.uk** – [accessed 10/01/2022 at 16:31] Sunosi is indicated to improve wakefulness and reduce excessive daytime sleepiness in adult patients with narcolepsy (with or without cataplexy).
Formulation	Film-coated tablet (tablet)
Usual dosage	**www.medicines.org.uk** – [accessed 10/01/2022 at 16:31] Narcolepsy The recommended starting dose is 75 mg once daily, upon awakening. If clinically indicated in patients with more severe levels of sleepiness, a starting dose of 150 mg may be considered. Depending on clinical response, the dose can be titrated to a higher level by doubling the dose at intervals of at least 3 days, with a recommended maximum daily dose of 150 mg once daily.
NICE recommended dosage/schedule	As above

Disease and potential patient group	
Brief description of disease	**www.patient.co.uk** **Narcolepsy and Cataplexy** Narcolepsy is a long-term (chronic) problem that affects your sleep. You feel excessively tired during the daytime but have disturbed night-time sleep. You can also have sleep attacks where you fall asleep during the day without any warning. Many people with narcolepsy also have cataplexy. This is a condition in which you have sudden loss of control over some of your muscles. Narcolepsy is usually diagnosed by monitoring you while you sleep in a special sleep laboratory. There is no cure for narcolepsy. However, various treatments are available that can help to control your symptoms. These include stimulant medicines to stop you feeling so sleepy.

	What are the symptoms of narcolepsy? **Excessive daytime sleepiness** This is the main symptom. You need to have been experiencing this for at least three months for the diagnosis to be made. It is normal to become a little sleepy during boring situations - for example, whilst you are sitting on the sofa watching TV in the evenings. However, if you have narcolepsy, you feel sleepy a lot of the time. The sleepiness is severe and often occurs in situations where you are more active - for example, whilst driving, talking or eating. You have no control over the sleepiness, and you can have sleep attacks where you fall asleep with no warning. These sleep attacks or naps can happen a number of times a day and can last from a few minutes to an hour. You usually feel refreshed when you wake up but can soon become sleepy again. **Cataplexy** About 7 in 10 people with narcolepsy also have cataplexy. In cataplexy, you suddenly lose the strength and control in some of your muscles whilst you are awake. For example, it can mean that you suddenly nod your head, your knees may suddenly give way, you may drop something that you are holding, or, in extreme cases, you may suddenly fall to the ground. Emotions such as laughter, elation and anger can trigger cataplexy. You still have awareness during the attacks. They usually last for under a minute, but they can happen several times a day. Sometimes you can have twitching of your muscles during an attack and some people confuse this with epilepsy.
Potential patient numbers per 100,000	**www.nice.org.uk** [accessed on 10/01/2022 at 16:45] Committee papers **Epidemiology of narcolepsy** Data on the incidence and prevalence of narcolepsy in the UK are extremely limited. The NHS webpage on narcolepsy and Narcolepsy UK webpage estimate that 30,000 people in the UK have narcolepsy, equating to **40 per 100,000 population.** This value is believed to be derived from a European survey in which approximately 19,000 randomly selected members of the general population were surveyed by telephone and those that met ICSD criteria for a narcolepsy diagnosis (cataplexy and excessive daytime sleepiness (EDS)) were tagged as having narcolepsy. Although this methodology is flawed, missing true diagnostic testing such as through sleep studies, this value is broadly consistent with other EU estimates of 25–50 per 100,000 population.

SUMMARY

NICE recommendation www.nice.org.uk

1. Recommendations

1.1. Solriamfetol is recommended as an option for treating excessive daytime sleepiness in adults with narcolepsy with or without cataplexy. This is only if modafinil and either dexamfetamine or methylphenidate have not worked well enough or are not suitable.

1.2. This recommendation is not intended to affect treatment with solriamfetol that was started in the NHS before this guidance was published. People having treatment outside this recommendation may continue without change to the funding

arrangements in place for them before this guidance was published, until they and their NHS clinician consider it appropriate to stop.

Why the committee made these recommendations

Excessive daytime sleepiness caused by narcolepsy is usually first treated with modafinil, then dexamfetamine or methylphenidate. Availability of other treatments such as sodium oxybate and pitolisant varies in clinics across England. If available, they're normally used after modafinil and dexamfetamine or methylphenidate.

Clinical trial evidence shows that solriamfetol reduces excessive daytime sleepiness compared with placebo. It does not show a difference in quality of life but this is not certain because of the way that quality of life was assessed in the trial. There is no data comparing solriamfetol with dexamfetamine or methylphenidate. And there is no direct data comparing it with sodium oxybate or pitolisant. There is some indirect data but it is from only a small number of short trials. So solriamfetol's clinical effectiveness compared with these treatments is uncertain.

The cost-effectiveness estimates for solriamfetol compared with dexamfetamine or methylphenidate are highly uncertain, because they were based only on assumptions. And they're likely to be higher than what NICE normally considers acceptable. But solriamfetol is cost effective compared with pitolisant and sodium oxybate. So solriamfetol is recommended if modafinil and dexamfetamine or methylphenidate have not worked well enough or are not suitable to control excessive daytime sleepiness caused by narcolepsy.

Cost implications*

**NICE funding requirements are based on Quality Adjusted Life Years (QALY) threshold. If there is evidence that the incremental cost rises above this threshold in the future, the APC may reconsider the commissioning status.*

Cost of product: The list price for solriamfetol is £177.52 for a 75 mg 28-day pack and £248.64 for a 150 mg 28-day pack (BNF online accessed 16/02/2022).
Costs may vary in different settings because of negotiated procurement discounts.

Annual cost per patient: (dependant on dose prescribed according to patient response)

- 75mg daily = £2314/year
- 150mg daily = £3241

Has dose escalation been considered as part of the NICE costing template? *N/A*

Costing information/100,000 population and per CCG:

Place	Nov 21 list size	Cost per 100,000 population (using NICE estimate of £9k per 100,0000
SURREY DOWNS PLACE	315,102	£28,359
GUILDFORD AND WAVERLEY PLACE	231,209	£20,808
NORTHWEST SURREY PLACE	385,217	£34,669
EAST SURREY PLACE	191,172	£17,205

Resource impact statement [accessed on NICE website 16/02/2022]

No significant resource impact is anticipated

NICE has recommended solriamfetol for treating excessive daytime sleepiness in adults with narcolepsy with or without cataplexy only if modafinil and either dexamfetamine or methylphenidate have not worked well enough or are not suitable.

This recommendation is not intended to affect treatment with solriamfetol that was started in the NHS before the guidance was published. People having treatment outside this recommendation may continue without change to the funding arrangements in place for them before this guidance was published, until they and their NHS clinician consider it appropriate to stop.

We do not expect this guidance to have a significant impact on resources; that is, the resource impact of implementing the recommendations in England will be less than £5 million per year in England (or approximately £9,000 per 100,000 population, based on a population for England of 56.3 m people).

This is because the technology is a further treatment option and the overall cost of treatment will be similar.

Solriamfetol is commissioned by integrated care systems/clinical commissioning groups. Providers are NHS hospital trusts.

Availability of PAS and details (if appropriate): *No*

Availability of homecare service (if appropriate): *No*

Alternative treatments

Other NICE recommended products: None for this indication

Options not reviewed by NICE but used in standard practice:

STANDARD TREATMENTS (first & second line)

Modafinil, dexamfetamine & methylphenidate (or lisdexamphetamine)

- AMBER shared care traffic light status at QVH – off label with no specific APC recommendation but included in the QVH pathway on the PAD

Sussex commissioners have recently (December 2021) reviewed and approved shared care for modafinil for use in narcolepsy. Both dexamfetamine & methylphenidate are included in the RMOC shared care reviews and so these have not been reviewed to date.
Primary care prescribers will be provided with a shared care guideline by QVH if the sleep specialists initiate the treatments above and if shared care is requested.

Third line Treatments

RED traffic light status for both treatments for Surrey Heartlands CCG patients

Sodium Oxybate 180ml pack (special container) – Oral Solution

Agreed by APC in 2010 and then again in 2019 (December) following an advisory statement from the RMOC

Sodium oxybate is a schedule 2 controlled drug.

Guys and St Thomas's (Tertiary Centre)
AMBER traffic light status for Sodium Oxybate and a shared care document is available here:
South East London joint formulary
https://www.selondonjointmedicinesformulary.nhs.uk/chaptersSubDetails.asp?FormularySectionID=4&SubSectionRef=04.01.01&SubSectionID=H100&drugmatch=1090

Queen Victoria Hospital (East Grinstead) – Tertiary Centre
AMBER traffic light status for Sodium Oxybate and a shared care document is available here:

NHS Crawley and NHS Horsham and Mid Sussex CCG Formulary
http://www.chmsformulary.nhs.uk/chaptersSubDetails.asp?FormularySectionID=4&SubSectionRef=04.01.01&SubSectionID=H100&drugmatch=1090#1090

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Pitolisant (Wakix) – Tablets
Agreed by APC in August 2019. The pathway below was agreed at the same time. Both tertiary centres above have pitolisant as a RED traffic light status

N:B - Information from Queen Victoria Hospital (local sleep centre) is that the first 4 months of treatment are provided free of charge to the trust

Cost per patient (per year) for 3rd line treatments

Drug	Formulation	Cost
Sodium Oxybate	Liquid	**Cost per 180ml oral solution is £360 (vat not included)** • Cost per year at lower dose (4.5ml twice during the night) - £ 6,840 • Cost per year at highest dose (9ml twice during the night) - £13,320
Pitolisant	Tablet	**Cost per 30 tablets 4.5mg & 18mg is £310 (vat not included)** • Cost per year at lower dose (4.5mg per day) - £ 3770 • Cost per year at highest dose (36mg per day) - £7420
Solriamfetol	Tablet	**Cost per 28 day pack 75mg (£177.52) & 150mg (£248.64)** • Cost per year at lower dose 75mg daily = £2314 • Cost per year at lower dose 150mg daily = £3241

Information from surrounding areas

Information from South West London (in relation to Solriamfetol)

Host commissioners are South East London CCG who will implement the NICE TA for solriamfetol, South West London will follow host commissioners lead for implementation.

Information from NHS Sussex Commissioners (in relation to Solriamfetol)
To note that the host commissioners for the local sleep centre is NHS Sussex Commissioners who have given solriamfetol a RED traffic light status to date (February 2022 – See correspondence below)

Impact to patients

- *Information directly from the patient experts when NICE considered solriamfetol as follows:* **www.nice.org.uk**
    - The patient experts said that narcolepsy can be unpredictable, because symptoms and treatment effectiveness can differ significantly from person to person. They also said that the condition was difficult to manage with current treatments and that a new treatment option would be welcomed. Another treatment option will be welcomed by patients

Impact to primary care prescribers

- Solriamfetol is a payment by Results excluded treatment and treatment will remain with the specialist teams at this time.
- Primary care prescribers should ensure that patient medication records include any medicine for which prescribing remains the responsibility of secondary or tertiary care. This will ensure that GP records, which are accessed by other healthcare providers, are a true and accurate reflection of the patient's medication.

Impact to secondary care

- To set up appropriate supply routes to patients
- Appropriate clinical review processes
- Use of Blueteq system to register funding application
- Ensure appropriate and timely communication to patient and the patients primary care prescriber.

Impact to CCGs

- Additional option to current treatment pathway
- NICE state that this drug does not add further cost impact on resources
- Blueteq form to be published

Implementation

- Additional treatment option to be included in the current (agreed) treatment pathway, alongside sodium oxybate and pitolisant
- Blueteq form to be published on database.

Modes of action for drugs used at last line in pathway below:
www.medicines.org.uk [accessed on 16/02/2022]

Sodium oxybate is a central nervous system depressant which reduces excessive daytime sleepiness and cataplexy in patients with narcolepsy and modifies sleep architecture reducing fragmented night-time sleep. The precise mechanism by which sodium oxybate produces an effect is unknown, however sodium oxybate is thought to act by promoting slow (delta) wave sleep and consolidating night-time sleep.

Pitolisant is a potent, orally active histamine H3-receptor antagonist/inverse agonist which, via its blockade of histamine auto-receptors enhances the activity of brain histaminergic neurons, a major arousal system with widespread projections to the whole brain.

In the paper presented to the APC in August 2019 from the QVH specialist team noted that:

- In patients suffering from narcolepsy with or without cataplexy, pitolisant improves the level and duration of wakefulness and daytime alertness assessed by objective measures of ability to sustain wakefulness and attention.

Solriamfetol

The mechanism(s) of solriamfetol to improve wakefulness in patients with excessive daytime sleepiness associated with narcolepsy or obstructive sleep apnea has not been fully characterised. However, its efficacy could be mediated through its activity as a dopamine and norepinephrine reuptake inhibitor (DNRI).

Recommendation to APC

PbRe: Yes

Recommended traffic light status (see attached guidelines):

- RED traffic light status proposed in line with traffic light status for other treatments for the same indication within the commissioned pathway (sodium oxybate & pitolisant). Solriamfetol cannot be provided in primary care and is a hospital only product currently (BNF accessed 24/03/2022)

- Solriamfetol will be considered at the same place in the pathway as sodium oxybate & pitolisant. (see emails to Sussex Commissioners below)

For future APC consideration

- The pathway will be updated by QVH in conjunction with their host commissioners (Sussex commissioners) and will be brought back to the APC for adopting
- Shared care documents agreed by the host commissioners of this tertiary service will be brought back to the APC for adopting.

Additional comments:

- Blueteq form is attached below and the specialist teams will be required to complete these forms prior to initiation

References:

1. **www.nice.org.uk https://www.nice.org.uk/guidance/ta758** Solriamfetol for treating excessive daytime sleepiness caused by narcolepsy

2. **www.medicines.org.uk** [accessed on 16/02/2022] Solriamfetol, sodium oxybate & pitolisant

3. **www.patient.co.uk** [accessed on 16/02/2022] Narcolepsy & Cataplexy

Prepared by:

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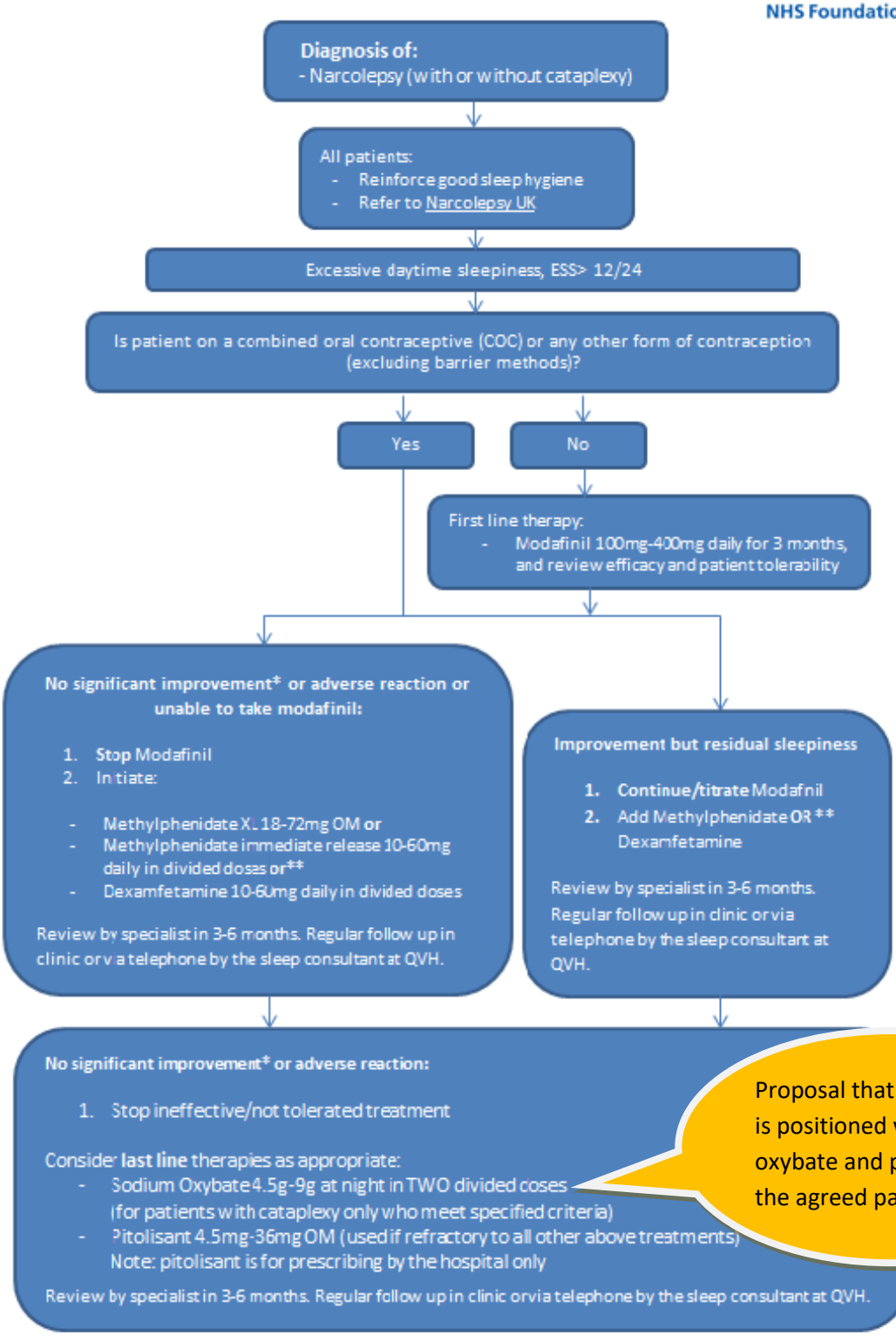
Declaration of Interest: None

Date: 16/02/2022

VERSION CONTROL SHEET

Version	Date	Author	Status	Comment
v.1	*16/02/2022*	*Clare Johns*	*DRAFT*	*Out for consultation to colleagues in pharmaceutical commissioning*
v.2				

NHS
Queen Victoria Hospital
NHS Foundation Trust



*A significant improvement is a change in ESS of 3 or more
**Methylphenidate and Dexamfetamine should NOT be prescribe concomitantly

This pathway has been adapted from SEL pathway for excessive daytime sleepiness due to narcolepsy, approved 08/2018

PROPOSED BLUETEQ TICK BOX FORMS

Initiation - SOLRIAMFETOL (monotherapy) for the treatment of Narcolepsy with or without Cataplexy	
Please indicate whether patient meets the following NICE criteria:	**Please tick**
1. The patient is 18 years of age or over.	○ Yes ○ No
2. Patient has documented evidence of narcolepsy with or without cataplexy.	○ Yes ○ No
3. Treatment with modafinil and either dexamfetamine or methylphenidate has not worked well enough or treatment is not suitable. Treatment / Reason for stopping [ ] / [ ] [ ] / [ ] [ ] / [ ] [ ] Treatment with modafinil, dexamfetamine or methylphenidate is not suitable. Provide information here: [ ]	
4. Please confirm the baseline Excessive Daytime Sleepiness Score (EDS) (EDS >12/24) [ ]	
5. FOR INFORMATION	

Approval will be provided for an initial 12 weeks (based on information from NICE TA clinical evidence), if all criteria above are met. Funding will only be re approved if there has been a significant improvement in ESS score of 3 points or more from baseline. **TO NOTE: Based in information in NICE guidance, clinical experts noted that a response to treatment is normally defined by consulting with the patient, not just by ESS reduction** Combination treatment (with sodium oxybate or pitolisant) will not be routinely funded and if combination treatment is considered clinically appropriate, an individual funding request (IFR) will need to be completed by the specialist for consideration of commissioner funding.	

Continuation - SOLRIAMFETOL (monotherapy) for the treatment of Narcolepsy with or without Cataplexy	
Please indicate whether patient meets the following NICE criteria:	**Please tick**
1. I herewith provide you with the requested information: Current EDS score (no more than 3 months old) | Date EDS taken |	
2. Is there an improvement in current EDS score by more than or equal to 3 points compared to baseline?	○ Yes ○ No
3. FOR INFORMATION **Funding will be approved at 12 monthly intervals if response to treatment is maintained.** Combination treatment (with sodium oxybate or pitolisant) will not be routinely funded and if combination treatment is considered clinically appropriate, an individual funding request (IFR) will need to be completed by the specialist for consideration of commissioner funding.	