Integrated Impact Assessment Report for Clinical Commissioning Policies			
Policy Reference Number	ID007		
Policy Title	Selexipag for the treatment of Pulmonary Arterial Hypertension (PAH) Proposal **for routine commission** (ref A3.1)		
Lead Commissioner	Ursula Peaple	**Clinical Lead**	Gerry Coghlan
Finance Lead	Jacqui Low	**Analytical Lead**	Click here to enter text.

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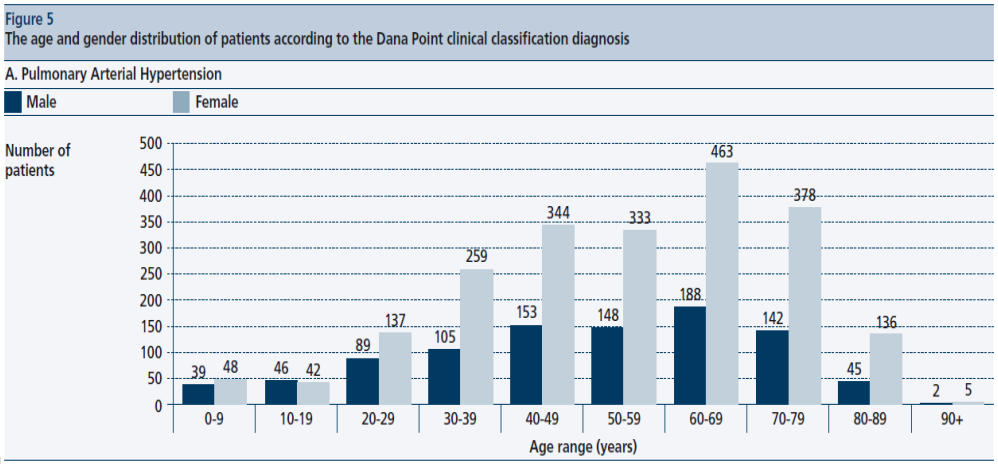
About this Impact Assessment: instructions for completion and explanatory notes
• Each section is divided into themes. • Each theme sets out a number of questions. • All questions are answered by selecting a drop down option or including free text. • Free text boxes are provided to enable succinct relevant commentary to be added which explains the rationale for response or assumption. Please limit responses to 3 sentences of explanatory text. • Data in this document is either drawn from one of the relevant policy documents or a source for the information is provided. • Where assumptions are included where data is not available, this is specified.

Section A - Activity Impact	
A1 Current Patient Population & Demography / Growth	
A1.1 Prevalence of the disease/condition.	Data from a previous National Audit of Pulmonary Hypertension estimated that PAH has a diagnosed prevalence of 2,657 patients within an active specialist centre in England (The 6th Annual National Audit of Pulmonary Hypertension (PH) 2015). *Source: Policy Proposition section 6*
A1.2 Number of patients currently eligible for the treatment according to the proposed policy commissioning criteria.	The number of people currently eligible for treatment is around 530. From the prevalent population of 2,657 people, the following estimates are assumed: • 58.4% of people have pulmonary arterial hypertension (PAH) that is idiopathic, heritable, associated with connective tissue disorders or associated with corrected simple coronary heart disease; of whom: • 73% are people who have functional class III (although with treatment some patients will move to FC II and gradually move back to FC III in the longer term at a rate of approximately 10% a year. Therefore the prevalence of FC III in clinical practice may be closer to 50%); • 70% of people are currently receiving a dual therapy. • 67% are insufficiently controlled on dual therapy. This gives a potential eligible population of 531 people. The PWG indicated a third of this group would have a cardiac or respiratory comorbidity which would preclude treatment with selexipag. This reduces the figure to around 350 people. *Source: Company submission table 12 p63, adjusted for updated company submission and PWG opinion.* Figures per section 6 of the policy proposition.

<table>
<tr><td>A1.3 Age group for which the treatment is proposed according to the policy commissioning criteria.</td><td><u>Adults</u>
Please specify
Selexipag is licensed for use in adults (over 18 years).</td></tr>
<tr><td>A1.4 Age distribution of the patient population eligible according to the proposed policy commissioning criteria</td><td> 

Source: National Audit of Pulmonary Hypertension 2013. Note: these data are from the United Kingdom, Channel, Islands, Gibraltar and Isle of Man</td></tr>
<tr><td>A1.5 How is the population currently distributed geographically?</td><td><u>Unevenly</u>
If unevenly, estimate regional distribution by %:
<table><tr><td>North</td><td>35%</td></tr><tr><td>Midlands & East</td><td>18%</td></tr><tr><td>London</td><td>47%</td></tr><tr><td>South</td><td>0</td></tr></table>Based on the National Audit of Pulmonary Hypertension 8th Annual report, April 2016 to March 2017. Table R1: Number of active patients by specialist centre. <u>Please note</u>: this does not represent where patients live,</td></tr>
</table>

<table>
<tr><td></td><td>but where treatment occurs. It is assumed specialist centres cover the geographical distribution of patients in the absence of other data.</td></tr>
<tr><td colspan="2">A2 Future Patient Population & Demography</td></tr>
<tr><td>A2.1 Projected changes in the disease/condition epidemiology, such as incidence or prevalence (prior to applying the new policy) in 2, 5, and 10 years?</td><td><u>Increasing</u>

<table><tr><td>Change in epidemiology</td><td>Year 2</td><td>Year 5</td><td>Year 10</td></tr><tr><td>Prevalence</td><td>3,148</td><td>4,640</td><td>7,192</td></tr><tr><td>Incidence</td><td>494</td><td>504</td><td>521</td></tr><tr><td>Total adults eligible for selexipag</td><td>488</td><td>689</td><td>1,033</td></tr></table>
Source: Resource impact template based on prevalence and incidence assumptions.</td></tr>
<tr><td>A2.2 Are there likely to be changes in demography of the patient population and would this impact on activity/outcomes?</td><td><u>No</u>

Source: Policy Proposition section 6/other</td></tr>
<tr><td>A2.3 Expected net increase or decrease in the number of patients who will be eligible for the service, according to the proposed service specification commissioning criteria, per year in years 2-5 and 10?</td><td><table><tr><td>YR2 +/-</td><td>+66</td></tr><tr><td>YR3 +/-</td><td>+133</td></tr><tr><td>YR4 +/-</td><td>+200</td></tr><tr><td>YR5 +/-</td><td>+267</td></tr><tr><td>YR10 +/-</td><td>+612</td></tr></table>Source: Company submission and policy proposition</td></tr>
</table>

<table>
<tr><td>Are these numbers in line with ONS growth assumptions for the age specific population? If not please justify the growth assumptions made.</td><td><u>Yes</u>
The starting population from which prevalence and incidence are calculated is from ONS projected population figures to 2027/28 (10 years). The model then applies the relevant assumptions to arrive at the eligible population (see A1.2 above).</td></tr>
<tr><td colspan="2">A3 Activity</td></tr>
<tr><td>A3.1 What is the purpose of new policy?</td><td><u>Revise existing policy (expand or restrict an existing treatment threshold / Add an additional line of treatment / stage of treatment</u>
The purpose of the new policy is to commission selexipag for people eligible for treatment as described in A1.2 above.</td></tr>
<tr><td>A3.2 What is the annual activity associated with the existing pathway for the eligible population?</td><td>The estimated annual number of people who are functional class III (FCIII) and receiving targeted treatments as part of a dual therapy regimen is estimated to be:
<table><tr><td>Year 1</td><td>939</td></tr><tr><td>Year 2</td><td>1,087</td></tr><tr><td>Year 5</td><td>1,535</td></tr><tr><td>Year 10</td><td>2,302</td></tr></table>
Source: Resource impact template based on company submission (figures per row 26 ‘Assumptions input’ page).
This is total population who are FCIII receiving a dual therapy each year.</td></tr>
<tr><td>A3.3 What is the estimated annual activity associated with the proposed policy proposition pathway for the eligible population?</td><td>The estimated additional annual activity for people eligible to receive selexipag as part of a triple therapy regimen are:</td></tr>
</table>

Year 1	69
Year 2	183
Year 5	157
Year 10	102

Source: *Resource impact template based on company submission and clinical expert opinion (figures per row 61 'Assumptions input' page.*

The estimates take into account people treated from the prevalent and incident populations. Selexipag uptake is profiled over time according to company estimates and clinical opinion. Company estimates are used to estimate people who discontinue treatment each year due to adverse events / early withdrawal from treatment. The modelling approach also takes into account a maximum 2 year treatment duration with selexipag. This is based on clinical experience of PWG members. The figures are reducing because people are assumed to receive treatment with selexipag for two years. Once the majority of the prevalent population are treated, the incident population are the people starting treatment each year and incident population numbers are smaller.

A3.4 What is the estimated annual activity associated with the next best alternative comparator pathway for the eligible population? If the only alternative is the existing pathway, please state 'not applicable' and move to A4.

For people with FC III PAH that has not responded to dual therapy with an ERA and a PDE-5 inhibitor, NHS England's Commissioning Policy: Targeted Therapies for use in Pulmonary Hypertension in Adults. 2015 states that a prostanoid is routinely commissioned (in exceptional circumstances a prostanoid may be given as monotherapy instead of dual therapy if the person is acutely unwell and requires hospital treatment). Between 2009 and 2016 only 10% of people with FC III PAH received a prostanoid at any point before death (The 7th Annual National Audit of Pulmonary Hypertension 2017).

NHS England's policy Riociguat for Pulmonary Arterial Hypertension states that people with FC III PAH who have failed to respond to a PDE-5

	inhibitor and an ERA can also be prescribed riociguat and an ERA. The company for selexipag state that, as the vast majority of people with PAH receive a PDE 5, whereas and riociguat is contraindicated in combination with a PDE5, riociguat is not a widely used agent. The 7th Annual National Audit of Pulmonary Hypertension 2017 shows that there were 73 drug prescriptions for riociguat in 2016.
A4 Existing Patient Pathway	
A4.1 **Existing pathway:** Describe the relevant currently routinely commissioned: • Treatment or intervention • Patient pathway • Eligibility and/or uptake estimates.	The main treatment for people with PAH is medicines directed at the pulmonary vasculature (blood vessels connecting the heart and the lungs). People with PAH should also be provided with general measures of support, such as advice about general activities and adapting to living with the disease, and psychosocial support (for example counselling). In addition, people with PAH can also be offered adjunctive treatments (that is, treatments given in addition to the main treatment) including anticoagulants (to help prevent blood clots, which people with PAH are at increased risk of) and oxygen therapy. As PAH is a disease that worsens over time and eventually causes early death, the overall goal of treatment is to treat the underlying changes in the blood vessel to reduce the afterload (strain) on the heart with an aim of improving the function of the heart and symptoms. There are a number of additional treatments which may then be offered. Current treatments include the following, which can be given either alone or in combination: • Calcium channel blockers (CCBs). CCBs restrict how much calcium can enter cells in the body. Reducing the amount of calcium entering the muscle cells in the blood vessels causes them to relax which allows the arteries to widen and help to lower blood pressure. This treatment is only appropriate for a very small minority of people

with PAH. Less than 10% of patients benefit from these drugs and inappropriate use can make patients worse.

- Phosphodiesterase-type 5 (PDE-5) inhibitors. PDE-5 is a type of enzyme found in blood vessel walls that helps control blood flow to the pulmonary arteries. PDE-5 inhibitors stop these enzymes from working properly which helps the blood vessels to relax, increasing blood flow to the lungs, and lowering blood pressure.
- Endothelin receptor antagonists (ERAs). In people with PH the body produces too much endothelin, which causes the blood vessels to constrict (become narrower), which can increase blood pressure. ERAs reduce the amount of endothelin in the blood.
- Prostaglandins. Prostaglandin is a substance produced in the body that causes the blood vessels in the lungs to dilate (become wider). Artificial prostaglandins can therefore help dilate the blood vessels in lungs, improving the amount of blood pumped around the body and oxygen in the blood, and can also help slow scarring and cell growth in the blood vessels of the lungs.
- Soluble guanylate cyclase stimulators. Soluble guanylate cyclase is an enzyme that acts as a receptor (that is, it receives chemical signals) for nitric oxide (a gas in the body that helps with pressure in the pulmonary artery). Stimulating this receptor causes blood vessels to relax and widen.

Lung transplantation may be considered for patients who do not benefit from drug therapies.

Patient pathway

Patients are referred to a PH service by a consultant physician (typically cardiology or respiratory but also from other services including haematology, rheumatology, infectious disease) where PAH is suspected as a cause of symptoms. A multi-disciplinary team (MDT) discuss and develop an individualised management plan, and a member of the MDT will be present with the patient when the final diagnosis is discussed.

If appropriate, disease-targeted therapy will only be initiated by the PH centre, which is responsible for monitoring and ensuring the safe, long-term prescribing of continuing treatments, where required.

NHS England's Commissioning Policy: Targeted Therapies for use in Pulmonary Hypertension in Adults. 2015 and Riociguat for Pulmonary Arterial Hypertension outlines current eligibility for treatment for:

- PDE-5 inhibitors
- ERAs
- Soluble Guanylate Cyclase Stimulators (SCGS)
- Prostanoids

Please note that the routine commissioning of selexipag as described in section 8 does not affect the commissioning positions of the disease-targeted therapies or combinations in NHS England's Commissioning Policy: Targeted Therapies for use in Pulmonary Hypertension in Adults. 2015 and Riociguat for Pulmonary Arterial Hypertension.

Typically, any new therapy or change in regimen is reviewed at three months and then every three to six months as an outpatient. Patients treated with disease targeted therapy will have lifelong follow up within the pulmonary hypertension service. The pulmonary hypertension centre will identify those patients suitable for shared care and ensure effective communication with shared care centres to plan patient reviews. Patients will be reviewed at least once each year by the visiting pulmonary hypertension specialist or at the pulmonary hypertension centre.

First line treatment
For first line treatment, NHS England's Commissioning Policy: Targeted Therapies for use in Pulmonary Hypertension in Adults. 2015 states that PDE-5 inhibitors are routinely commissioned, or an ERA may be used if a PDE-5 inhibitor is not clinically appropriate.

Second line treatment
For second line treatment, NHS England's Commissioning Policy: Targeted Therapies for use in Pulmonary Hypertension in Adults. 2015 states that if a person has not responded to a trial of therapy of adequate dose or duration (typically eight to twelve weeks) or people cannot tolerate one of the oral treatments (PDE-5 inhibitor or an ERA), they should try the alternative oral monotherapy. If people have disease that initially responded but then either deteriorated or did not respond adequately, they may be considered for dual therapy.

NHS England's policy Riociguat for Pulmonary Arterial Hypertension states that riociguat can also be considered for people with FC III PAH who are contraindicated to a PDE-5 inhibitor, or as an alternative to ERA.

Third line treatment
For people with FC III PAH that has not responded to dual therapy with an ERA and a PDE-5 inhibitor, NHS England's Commissioning Policy: Targeted Therapies for use in Pulmonary Hypertension in Adults. 2015 states that a prostanoid is routinely commissioned (in exceptional circumstances a prostanoid may be given as monotherapy instead of dual therapy if the person is acutely unwell and requires hospital treatment). NHS England's policy Riociguat for Pulmonary Arterial Hypertension states that people with FC III PAH who have failed to respond to a PDE-5 inhibitor and an ERA can also be prescribed riociguat and an ERA.

Selexipag will provide an oral alternative to a continuous infusion or inhaled prostanoid for people with FC III PAH that has not responded to treatment. Selexipag will provide an additional option for those for whom a non-oral treatment is not appropriate, for example people with disabilities or issues with manual dexterity which mean they are unable to administer injectable treatments. It will be commissioned in combination with a PDE-5 inhibitor and an ERA.

	Uptake estimates for current treatment options are given in A3.2 above and analysed by treatment in the resource impact template. *Source:* Policy proposition section 9
A4.2. What are the current treatment access and stopping criteria?	For current treatment access criteria please see A4.1 above. Stopping criteria: The continued use of targeted therapies will be reviewed on a regular basis. The key factors influencing the cessation of treatment will be: Poor/no response to treatment; Successful transplantation surgery; Clinically relevant side effects; Drug therapies may also be withdrawn "at the end of life" phase. NHS England's Commissioning Policy: Targeted Therapies for use in Pulmonary Hypertension in Adults. 2015 and Riociguat for Pulmonary Arterial Hypertension outlines current treatment access and stopping criteria for PDE-5 inhibitors, ERAs, SCGS and prostanoids. . *Source:* Policy proposition section 3.
A4.3 What percentage of the total eligible population is expected to: a) Be clinically assessed for treatment b) Be considered to meet an exclusion criteria following assessment c) Choose to initiate treatment d) Comply with treatment e) Complete treatment?	a) 100% b) 58.4% (idiopathic, heritable and connective tissue disorders PAH; 73% of whom are functional class III% c) 70% d) 100% e) 100% *Source:* Company submission part 3 table 12 amended for update from company on (a) people assessed to meet aetiologies (from 56% to 58.4%).

A5 Comparator (next best alternative treatment) Patient Pathway (NB: comparator/next best alternative does not refer to current pathway but to an alternative option)	
A5.1 **Next best comparator**: Is there another 'next best' alternative treatment which is a relevant comparator? *If yes, describe relevant* • *Treatment or intervention* • *Patient pathway* • *Actual or estimated eligibility and uptake*	or people with FC III PAH that has not responded to dual therapy with an ERA and a PDE-5 inhibitor, NHS England's Commissioning Policy: Targeted Therapies for use in Pulmonary Hypertension in Adults. 2015 states that a prostanoid is routinely commissioned (in exceptional circumstances a prostanoid may be given as monotherapy instead of dual therapy if the person is acutely unwell and requires hospital treatment). Between 2009 and 2016 only 10% of people with FC III PAH received a prostanoid at any point before death (The 7th Annual National Audit of Pulmonary Hypertension 2017). NHS England's policy Riociguat for Pulmonary Arterial Hypertension states that people with FC III PAH who have failed to respond to a PDE-5 inhibitor and an ERA can also be prescribed riociguat and an ERA. The company for selexipag state that, as the vast majority of people with PAH receive a PDE 5, whereas and riociguat is contraindicated in combination with a PDE5, riociguat is not a widely used agent. The 7th Annual National Audit of Pulmonary Hypertension 2017 shows that there were 73 drug prescriptions for riociguat in 2016.
A5.2 What percentage of the total eligible population is estimated to: a) Be clinically assessed for treatment b) Be considered to meet an exclusion criteria following assessment c) Choose to initiate treatment d) Comply with treatment e) Complete treatment?	*a)* 100% b) 58.4% (idiopathic, heritable and connective tissue disorders PAH; 73% of whom are functional class III% c) 10% prostanoid, <10% riociguat (based on 73 drug prescriptions in 2016, see A5.1) d) The company for selexipag state that adherence to iloprost was reported to be 81%. Figures not given for riociguat however as an oral tablet it is assumed there would be no issues with compliance.

	e) The company for selexipag report that discontinuation from iloprost was 59% in the RESPIRE trial. The licence for riociguat reports that around 3% of people in trials for riociguat had an adverse event that led to discontinuation.
A6 New Patient Pathway	
A6.1 What percentage of the total eligible population is expected to: a) Be clinically assessed for treatment b) Be considered to meet an exclusion criteria following assessment c) Choose to initiate treatment d) Comply with treatment e) Complete treatment?	a) 100% b) 58.4% of whom 73% are functional class III c) 70% are on a dual therapy of whom 67% are insufficiently controlled d) 100% e) 81.4% (18.6% discontinue treatment) Uptake of selexipag is estimated to be 20% in year 1 increasing to 90% by year 4 18.6% cease treatment each year due to adverse events or early withdrawal from treatment; The maximum treatment duration with selexipag is estimated to be two years (mid-point of 1 and 3 years experienced by clinical experts). *Source:* *Per A4.3 / A5.2 above with uptake assumptions based on company / clinical experts. Discontinuation rate per company submission table13 p65.*
A6.2 Specify the nature and duration of the proposed new treatment or intervention.	**Life long** *Source:* Clinical expert opinion -*Treatment continued for as long as there is a clinical*

	response. There is no cure for PAH. It is a disease with poor prognosis, with 48% of people surviving for only 4 years after diagnosis (National Audit of Pulmonary Hypertension 8th Annual Report). “
A7 Treatment Setting	
A7.1 How is this treatment delivered to the patient?	*Select all that apply:* Emergency/Urgent care attendance ☐ Acute Trust: inpatient ☐ Acute Trust: day patient ☐ Acute Trust: outpatient ☒ Mental Health provider: inpatient ☐ Mental Health provider: outpatient ☐ Community setting ☐ Homecare ☒ Other ☐ Selexipag can be initiated in an outpatient setting. The initiation of selexipag treatment could be managed (as an example) via a shared care provider working closely with the specialist centre. This will be determined by the model for each centre and the degree of shared care development. Selexipag is an oral tablet which can be taken at home, therefore after dose titration, treatment would usually be for homecare delivery. Most of the UK specialist centres use a home delivery service to efficiently deliver targeted therapy and any associated ancillary products (syringes, pumps

<table>
<tr><td></td><td>etc.) to the patient’s home.</td></tr>
<tr><td>A7.2 What is the current number of contracted providers for the eligible population by region?</td><td><table><tr><td>NORTH</td><td>2</td></tr><tr><td>MIDLANDS & EAST</td><td>1</td></tr><tr><td>LONDON</td><td>3</td></tr><tr><td>SOUTH</td><td>0</td></tr></table>There are currently six specialist centres in England designated to provide PH services for adults. These are included by region above. According to service specification A11/S/b, there are 18 shared care providers.</td></tr>
<tr><td>A7.3 Does the proposition require a change of delivery setting or capacity requirements?</td><td><u>No</u>
:</td></tr>
<tr><td colspan="2">A8 Coding</td></tr>
<tr><td>A8.1 Specify the datasets used to record the new patient pathway activity.

*expected to be populated for all commissioned activity</td><td><table><tr><td>Aggregate Contract Monitoring *</td><td>☐</td></tr><tr><td>Patient level contract monitoring</td><td>☐</td></tr><tr><td>Patient level drugs dataset</td><td>☐</td></tr><tr><td>Patient level devices dataset</td><td>☐</td></tr><tr><td>Devices supply chain reconciliation dataset</td><td>☐</td></tr></table></td></tr>
</table>

	<table><tr><td>Secondary Usage Service (SUS+)</td><td>☐</td></tr><tr><td>Mental Health Services DataSet (MHSDS)</td><td>☐</td></tr><tr><td>National Return**</td><td>☐</td></tr><tr><td>Clinical Database**</td><td>☒</td></tr><tr><td>Other**</td><td>☒</td></tr></table>**If National Return, Clinical database or other selected, please specify: Selexipag is a high cost drug excluded from tariff. The dataset used to record activity would be the high cost drug dataset for routine commissioning. The National Audit of Pulmonary Hypertension (annual reports) provide data on the number of drug prescriptions for each drug including monotherapy and combination therapy.
A8.2 Specify how the activity related to the new patient pathway will be identified.	<table><tr><td>OPCS v4.8</td><td>☐</td></tr><tr><td>ICD10</td><td>☒</td></tr><tr><td>Treatment function code</td><td>☐</td></tr><tr><td>Main Speciality code</td><td>☐</td></tr><tr><td>HRG</td><td>☐</td></tr><tr><td>SNOMED</td><td>☐</td></tr><tr><td>Clinical coding / terming methodology used by clinical profession</td><td>☐</td></tr></table>
A8.3 **Identification Rules for Drugs:** How are drug costs captured?	**<u>Already specified in current NHS England Drugs List document</u>** If the drug has already been specified in the current NHS England Drug List please specify drug name and drug indication: Selexipag – Pulmonary arterial hypertension (not routinely commissioned)

<table>
<tr><td></td><td>NHSE policy 160017P</td></tr>
<tr><td>A8.4 Identification Rules for Devices:
How are device costs captured?</td><td><u>Not applicable</u></td></tr>
<tr><td>A8.5 Identification Rules for Activity:
How are activity costs captured?</td><td><u>Not captured by an existing specialised service line</u>

If the activity is not captured please specify whether the proposed identification rules have been documented and agreed with the Identification Rules team.</td></tr>
<tr><td colspan="2">A9 Monitoring</td></tr>
<tr><td>A9.1 Contracts
Specify any new or revised data flow or data collection requirements, needed for inclusion in the NHS Standard Contract Information Schedule.</td><td><u>None</u></td></tr>
<tr><td>A9.2 Excluded Drugs and Devices (not covered by the Zero Cost Model)
For treatments which are tariff excluded drugs or devices not covered by the Zero Cost Model, specify the pharmacy or device monitoring required, for example reporting or use of prior approval systems.</td><td><table><tr><td>Drugs or Device MDS</td><td>☐</td></tr><tr><td>Blueteq</td><td>☐</td></tr><tr><td>Other prior approval</td><td>☒</td></tr></table>Please specify: NHSE clinical commissioning policy: National policy for targeted therapies for the treatment of PAH in adults (2014) - criteria for commissioning and audit requirements for specialist centres. Only designated centres are able to initiate treatment with a disease targeted</td></tr>
</table>

	medicine. Each centre is required to provide monthly monitoring information for national database recording.
A9.3 **Business intelligence** Is there potential for duplicate reporting?	**No**
A9.4 **Contract monitoring** Is this part of routine contract monitoring?	**No**
A9.5 **Dashboard reporting** Specify whether a dashboard exists for the proposed intervention?	**No**
A9.6 **NICE reporting** Are there any directly applicable NICE or equivalent quality standards which need to be monitored in association with the new policy?	**No**
Section B - Service Impact	
B1 Service Organisation	
B1.1 Describe how the service is currently organised? (i.e. tertiary centres, networked provision etc.)	There are six tertiary PAH centres that provide diagnosis, intervention and support to people with PAH. Only these centres are able to initiate disease targeted treatments. Designated PH centres will work with shared care centres to deliver specialist care *Source: NHS England clinical commissioning policy: National policy for targeted therapies for the treatment of pulmonary arterial hypertension in adults (2014) and NHS England Pulmonary Hypertension Shared Care*

<table>
<tr><td></td><td>(Adult (2013))</td></tr>
<tr><td>B1.2 Will the proposition change the way the commissioned service is organised?</td><td><u>No</u></td></tr>
<tr><td>B1.3 Will the proposition require a new approach to the organisation of care?</td><td><u>No change to delivery of care</u></td></tr>
<tr><td colspan="2">B2 Geography & Access</td></tr>
<tr><td>B2.1 Where do current referrals come from?</td><td><table><tr><td>GP</td><td>☐</td></tr><tr><td>Secondary care</td><td>☒</td></tr><tr><td>Tertiary care</td><td>☒</td></tr><tr><td>Other</td><td>☐</td></tr></table>Please specify:
Current referrals come from consultant physicians, typically cardiology and respiratory consultants in secondary care. Occasionally referrals come from other specialities including haematology, rheumatology and infectious diseases.</td></tr>
<tr><td>B2.2 What impact will the new policy have on the sources of referral?</td><td><u>No impact</u></td></tr>
<tr><td>B2.3 Is the new policy likely to improve equity of access?</td><td><u>Increase</u></td></tr>
</table>

	Selexipag will offer an additional option for people who would not be able to receive a non-oral treatment.
B2.4 Is the new policy likely to improve equality of access and/or outcomes?	**Increase** Please specify: Selexipag is currently not routinely commissioned. People who are not well managed on existing treatments would have a further targeted treatment option, administered orally. *Source: PWG*
B3 Implementation	
B3.1 Will commissioning or provider action be required before implementation of the proposition can occur?	**No action required**
B3.2 **Time to implementation:** Is a lead-in time required prior to implementation?	**No - go to B3.4**
B3.3 **Time to implementation:** If lead-in time is required prior to implementation, will an interim plan for implementation be required?	**No - go to B3.4**
B3.4 Is a change in provider physical infrastructure required?	**No**
B3.5 Is a change in provider staffing required?	**No**

B3.6 Are there new clinical dependency and/or adjacency requirements that would need to be in place?	**No**
B3.7 Are there changes in the support services that need to be in place?	**No**
B3.8 Is there a change in provider and/or inter-provider governance required? (e.g. ODN arrangements / prime contractor)	**No**
B3.9 Is there likely to be either an increase or decrease in the number of commissioned providers? If yes, specify the current and estimated number of providers required in each region	**No change**
B3.10 Specify how revised provision will be secured by NHS England as the responsible commissioner.	

Publication and notification of new policy	☒
Market intervention required	☐
Competitive selection process to secure increase or decrease provider configuration	☐
Price-based selection process to maximise cost effectiveness	☐
Any qualified provider	☐
National Commercial Agreements e.g. drugs, devices	☐
Procurement	☐
Other	☐

	Please specify: Click here to enter text.
B4 Place-based Commissioning	
B4.1 Is this service currently subject to, or planned for, place-based commissioning arrangements? (e.g. future CCG lead, devolved commissioning arrangements, STPs)	**No**
Section C - Finance Impact	
C1 Tariff/Pricing	
C1.1 How is the service contracted and/or charged? Only specify for the relevant section of the patient pathway	

Drugs	Not separately charged – part of local or national tariffs	☐
	Excluded from tariff – pass through	☐
	Excluded from tariff - other	☒
Devices	Not separately charged – part of local or national tariffs	☐
	Excluded from tariff (excluding ZCM) – pass through	☐
	Excluded from tariff (excluding ZCM) – other	☐
	Via Zero Cost Model	☐
Activity	Paid entirely by National Tariffs	☒
	Paid entirely by Local Tariffs	☐
	Partially paid by National Tariffs	☐

<table>
<tr><td></td><td><table>
<tr><td></td><td>Partially paid by Local Tariffs</td><td>☐</td></tr>
<tr><td></td><td>Part/fully paid under a Block arrangement</td><td>☐</td></tr>
<tr><td></td><td>Part/fully paid under Pass-Through arrangements</td><td>☐</td></tr>
<tr><td></td><td>Part/fully paid under Other arrangements</td><td>☐</td></tr>
</table></td></tr>
<tr><td>C1.2 Drug Costs
Where not included in national or local tariffs, list each drug or combination, dosage, quantity, list price including VAT if applicable and any other key information e.g. Chemotherapy Regime.
NB discounted prices or local prices must not be included as these are subject to commercial confidentiality and must not be disclosed.</td><td>Titration pack:
Tablet strength 200mcg
Pack size: Carton of 140 film-coated tablets
NHS list price per pack £8,400 incl VAT (applicable as initiated in outpatient setting)
Maintenance packs
Tablet strength: 200mcg, 400mcg, 600mcg, 800mcg, 1,000 mcg, 1,200 mcg, 1,400 mcg and 1,600mcg
Pack size all strengths: Carton 60 film-coated tablets
NHS list price per pack £3,000 (delivered to the home no VAT applicable)
Estimated average annual cost per person (list price) £41,400 (including £1,400 VAT)</td></tr>
<tr><td>C1.3 Device Costs
Where not included in national or local tariff, list each element of the excluded device, quantity, list or expected price including VAT if applicable and any other key information.
NB: Discounted prices or local prices must not be included as these are subject to commercial confidentiality and must not be disclosed.</td><td>N/A</td></tr>
<tr><td>C1.4 Activity Costs covered by National Tariffs
List all the HRG codes, HRG descriptions, national tariffs (excluding</td><td>No significant additional activity costs anticipated. Current applicable National Tariffs are given in the table below. It is anticipated that during</td></tr>
</table>

<table>
<tr><td>MFF), volume and other key costs (e.g. specialist top up %)</td><td>treatment initiation, a person would visit more frequently (weekly) until stabilised on their treatment (people are expected to be stabilised within the first 4 weeks of treatment). Follow up is then required on a monthly basis. Assuming 4 visits in month 1 and a monthly visit in subsequent months, the total cost of monitoring per year ranges from £1,263 - £1,524.
National tariffs 2017/18 & 2018/19
<table>
<tr><th>Treatment function code / description</th><th>Tariff (first attendance WF01B) £</th><th>Tariff (follow up attendance WF01A) £</th></tr>
<tr><td>320 Cardiology</td><td>157</td><td>79</td></tr>
<tr><td>340 Respiratory medicine</td><td>208</td><td>94</td></tr>
</table></td></tr>
<tr><td>C1.5 Activity Costs covered by Local Tariff
List all the HRGs (if applicable), HRG or local description, estimated average tariff, volume and any other key costs. Also indicate whether the Local Tariff(s) is/are newly proposed or established and if newly proposed how is has been derived, validated and tested.</td><td>N/A</td></tr>
<tr><td>C1.6 Other Activity Costs not covered by National or Local Tariff
Include descriptions and estimates of all key costs.</td><td>N/A</td></tr>
<tr><td>C1.7 Are there any prior approval mechanisms required either during implementation or permanently?</td><td><u>No</u>
Please specify: Treatment is currently only initiated by specialist centres in accordance with NHS clinical commissioning policy.</td></tr>
<tr><td colspan="2">C2 Average Cost per Patient</td></tr>
</table>

C2.1 What is the estimated cost per patient to NHS England, in years 1-5, including follow-up where required?

Are there any changes expected in year 6-10 which would impact the model?

	Average drug cost per year per person £	Monitoring & follow up cost £	Total annual cost per person £
YR1	40,000	1,394	£41,394
YR2	40,000	1,394	£41,394
YR3	40,000	1,394	£41,394
YR4	40,000	1,394	£41,394
YR5	40,000	1,394	£41,394

The average drug cost per person includes initial titration cost averaged over 2 years. This is used in the resource impact template for simplicity because of variables such as discontinuation from adverse effects and time on treatment (2 years).

Follow up and monitoring is in an outpatient setting (see C1.4 above – mid-point used from range £1,263-£1,524). It is not anticipated that follow up and monitoring costs will change significantly over time or have significant cost impact over and above the monitoring and follow up needed with current PDE5i and ERA therapies used in standard care (per PWG meeting discussion 14.11.2017).

C3 Overall Cost Impact of this Policy to NHS England

C3.1 Specify the budget impact of the proposal on NHS England in relation to the relevant pathway.

Cost pressure

Please specify:

The table below shows the estimated resource impact in years 1, 2, 5 and 10 including VAT. These resource impact excludes monitoring and follow up costs and adverse events costs which are not identified as being significantly different to current treatment options (per PWG meeting

<table>
<tr><td></td><td>14.11.2017).

Estimated budget impact – list prices<table><tr><td>Year</td><td>£000s</td></tr><tr><td>1</td><td>1,396</td></tr><tr><td>2</td><td>8,767</td></tr><tr><td>5</td><td>6,301</td></tr><tr><td>10</td><td>4,116</td></tr></table>NB VAT applies to first 4 weeks of treatment which is initiated in an outpatient setting until the person is stabilised. The estimates given in the table above apply 4 weeks of VAT to people initiating treatment with selexipag in each of the years shown above.</td></tr>
<tr><td>C3.2 If the budget impact on NHS England cannot be identified set out the reasons why this cannot be measured.</td><td>Not applicable – please see C3.1.</td></tr>
<tr><td>C3.3 If the activity is subject to a change of commissioning responsibility, from CCG to NHS England, has a methodology for the transfer of funds been identified, and calculated?</td><td>Not applicable – no change in commissioning responsibility.</td></tr>
<tr><td colspan="2">C4 Overall cost impact of this policy to the NHS as a whole</td></tr>
<tr><td>C4.1 Specify the budget impact of the proposal on other parts of the NHS.</td><td>Budget impact for CCGs:
<u>No impact on CCGs</u>
Budget impact for providers:
<u>Cost neutral</u></td></tr>
</table>

	The treatment cost of selexipag falls within NHS specialised commissioning and would be commissioned by NHSE.
C4.2 Taking into account responses to C3.1 and C4.1, specify the budget impact to the NHS as a whole.	**Cost pressure** The figures in C3.1 show that there is a resource impact to the commissioner (NHS England) from implementing the policy. The cost of selexipag and other treatments are at list prices, therefore the actual resource impact is likely to be lower. Selexipag works in a similar way to the currently available treatments known as prostaglandins. However, selexipag can be taken as an oral tablet, whereas the current prostaglandins have to be administered either via continuous infusion, or by inhaling it using a special device. The PWG discussed there may be some savings from reduced infections due to intravenous administration which could lead to sepsis. These are unlikely to be significant due to the small numbers of people treated using this method.
C4.3 Where the budget impact is unknown set out the reasons why this cannot be measured	Not applicable – budget impact shown in C3.1
C4.4 Are there likely to be any costs or savings for non-NHS commissioners and/or public sector funders?	**Yes** Please specify: Access to the right treatments can diminish greatly the impact of PH, and lessen the dependence on carers and spouses. There will also be less impact on the welfare system.
C5 Funding	
C5.1 Where a cost pressure is indicated, state known source of funds for investment, where identified, e.g. decommissioning less	CPAG prioritisation reserve.

clinically or cost-effective services.	
C6 Financial Risks Associated with Implementing this Policy	
C6.1 What are the material financial risks to implementing this policy?	There is some uncertainty around treatment duration. A further risk is the diagnosed annual incidence of PAH. There is variation in published studies and in National Audit data. This is a key driver in the resource impact.
C6.2 How can these risks be mitigated?	The National Audit of Pulmonary Hypertension (NHS digital) could be used to ensure selexipag is used at the correct point in the pathway, and trend data could be used to assess the number of people continuing treatment each year. Data on annual number of PAH cases diagnosed could be regularly collected from National Audits from each of the specialist centres. A trend analysis could then be derived to forecast future incidence. Also a fixed price in addition to a discount could be agreed.
C6.3 What scenarios (differential assumptions) have been explicitly tested to generate best case, worst case and most likely total cost scenarios?	The scenario for profile of uptake of selexipag over time was queried with the company and clinical experts. The scenario used is based on input from clinical experts. For predicted annual incidence, the latest National Audit data for PAH has been used supported by clinical expert opinion.
C6.4 What scenario has been approved and why?	The scenario approved is based on input from clinical experts and National Audit data from NHS digital (see C6.4 above). These are to be tested further with input from stakeholders at consultation.

C7 Value for Money	
C7.1 What published evidence is available that the treatment is cost effective as evidenced in the evidence review?	**A cost-effectiveness evidence review has not been undertaken.**
C7.2 Has other data been identified through the service specification development relevant to the assessment of value for money?	Available pricing data suggests the treatment is equivalent cost compared to current/comparator treatment ☐ Available pricing data suggests the treatment is lower cost compared to current/comparator treatment ☐ Available clinical practice data suggests the new treatment has the potential to improve value for money ☐ Other data has been identified ☐ No data has been identified ☐ The data supports a high level of certainty about the impact on value ☐ The data does not support a high level of certainty about the impact on value ☒ Please specify: Click here to enter text.
C8 Cost Profile	
C8.1 Are there non-recurrent capital or revenue costs associated with this policy?	**No**

C8.2 If yes, confirm the source of funds to meet these costs.	Not applicable