

Publication of provisional Patient Related Outcome Measures
(Oxford Hip and Oxford Knee Score) for the reporting period 1st
July 2017 to 30th June 2018

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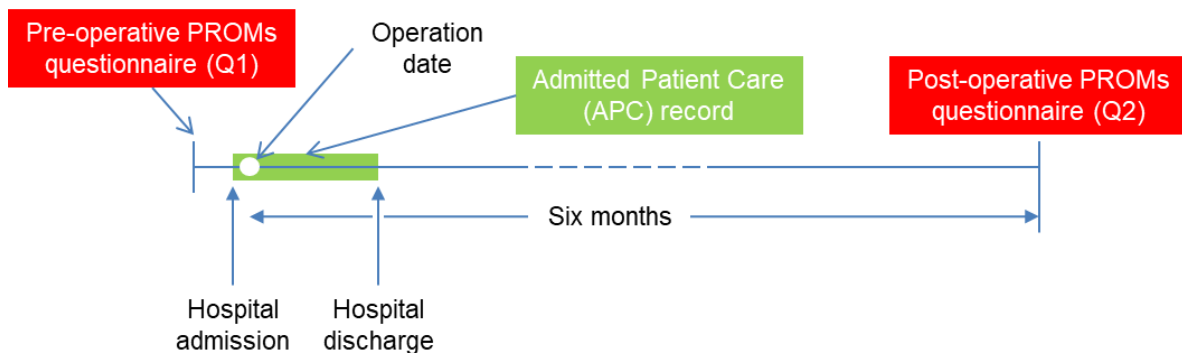
1 Executive Summary

PHIN is publishing information about Patient Reported Outcome Measures (PROMs) based on data received from UK private providers, as required by the Competition and Markets Authority Private Healthcare Market Investigation Order 2014 (*as amended*).

PROMs are a critical component of assessing whether healthcare services are improving the health of patients. Unlike process measures, which focus on issues such as productivity and adherence to standards, PROMs attempt to capture whether the services provided actually improve patients' sense of their own health and well-being in terms of their ability to complete various activities, mood, level of fatigue or pain.

PHIN's initial publication of PROMs measures is based on two instruments; Oxford Hip Score (for primary or revision hip replacement) and Oxford Knee Score (for primary or revision knee replacement). Each comprises a short 12-item patient-reported questionnaire used to assess function and pain. The questions relate to Activities of Daily Living and is completed by the patient once before their operation and, again, six months after. Both questions are scored¹ and the differences between the two forms the basis of PROMs measures (Figure 1).

Figure 1: Diagrammatic representation of the PROMs data collection process



The publication of this information represents only one dimension of the wider work of PHIN in reporting outcomes from UK private healthcare facilities² and is the first time such information has been published.

For the reporting period 1st July 2017 to 30th June 2018, out of 579 individual private provider sites required to submit data to PHIN under the CMA Order, by the data freeze date³ Table 1 details the number of these sites for whom PROMs measures could be published.

¹ Scoring is based on Oxford University Innovation's propriety methodology.

² Any facility providing privately-funded healthcare services on an inpatient, day-case and/or outpatient basis, and may include a NHS Private Patient Unit.

³ For the current PROMs reporting period this was the 19th November 2019.



Table 1: Count of the number of provider sites for whom PROMs measures could be published for the period 1st July 2017 to 30th June 2018

Procedure	Publication status	Number of Sites
Hip replacement (primary)	Sites for which PROMS could be published	108 / 579
Hip replacement (revision)	Sites for which PROMS could be published	1 / 579
Knee replacement (primary)	Sites for which PROMS could be published	98 / 579
Knee replacement (revision)	Sites for which PROMS could be published	0 / 579

1.1 Hip Replacement

The submitted data comprised 14,984 primary and 652, revision hip placements. PROMs response rates were, respectively, 17.0% and 10.1%. Overall, 98.8% of primary hip patients reported an improvement in their health status (provider site range: 100% to 66.7%) and 87.9% for revision hip patients (provider site volumes published for one site only). - Table 2.

Table 2: Results for hip replacement

Procedure	Eligible Procedure	Total responses	Response rate	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved
Hip replacement (primary)	14,984	2,549	17.0%	1.0%	0.2%	98.8%
Hip replacement (revision)	652	66	10.1%	10.6%	1.5%	87.9%

1.2 Knee Replacement

The submitted data comprised 12,333 primary and 465, revision knee placements. PROMs response rates were, respectively, 15.4% and 11.4%. Overall, 95.3% of primary knee patients reported an improvement in their health status (provider site range: 100% to 75.0%) and 84.9% for revision knee patients (provider site volumes too small to publish individual values) - Table 3.

Table 3: Results for knee replacement

Procedure	Eligible Procedure	Total responses	Response rate	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved
Knee replacement (primary)	12,333	1,899	15.4%	4.1%	0.6%	95.3%
Knee replacement (revision)	465	53	11.4%	13.2%	1.9%	84.9%



2 Introduction

All providers of admitted, privately-funded healthcare in the UK are required by the Competition and Markets Authority Private Healthcare Market Investigation Order 2014 (as amended) to submit data on activity, safety and quality to the Private Healthcare Information Network (PHIN).

The Order also requires PHIN to publish this data on a public web site in the form of performance measures. This report describes the publication for of these measures, referred to by the Order as “*procedure-specific measures of improvement in health outcomes*”.

The measure is based on Patient Reported Outcome Measures (PROMs) associated with hip and knee replacement surgery (both primary and revision) for patients who were discharged from hospital during the period **1st July 2017 to 30th June 2018**.

2.1 Background

For the purposes of measuring improvement in health outcome following hip and knee replacement surgery PHIN has chosen to use two procedure-specific PROMs instruments, the Oxford Hip Score (OHS) and the Oxford Knee Score (OKS)⁴. These PROMs are paired questionnaires which ask the patient about their symptoms, comorbidities and overall activities of daily living. One questionnaire is completed before surgery and the other one six months after surgery. Comparing the results of the two provides an indication of how health and well-being may have altered (improved, no change or worsened) as the result of the operation.

The OHS and OKS PROMs have been collected by all providers of NHS funded care (including where care was provided in a private hospital) since 2009 and published by NHS Digital⁵ biannually at national (England), provider (Trust) and Clinical Commissioning Group level. This is the first publication of PROMs related measures for privately funded care.

2.2 Case Mix Adjustment

Case mix adjustment aims to counteract some of the variabilities in the patient population treated by a surgeon or hospital which may impact on the degree of improvement that may be achieved by the treatment. The NHS’s publication of hip and knee PROMs uses an adjustment method which was developed based on an NHS patient population. Initial analysis to evaluate the suitability of this method for use with PHIN’s private patient population has indicated that the characteristics between the two may be sufficiently different such that the NHS model, in its current form, is unsuitable for use with a private patient cohort. As such, it is PHIN’s view that the risk of publishing potentially misleading information

⁴ <https://innovation.ox.ac.uk/outcome-measures/oxford-hip-score-ohs/>

⁵ <https://digital.nhs.uk/data-and-information/data-tools-and-services/data-services/patient-reported-outcome-measures-proms>



resulting from use of an unsuitable adjustment model outweighs the benefits. To avoid this risk the initial publication of PROMs measures at hospital level will be based on the Oxford Hip and Knee Scores and will simply show the percentage of patients who reported that their health had improved following treatment i.e. their post-operative score was greater than their pre-operative score.

2.3 Notes on the provisional nature of the data

The figures contained in this document are based on data submitted by private providers to PHIN on or before the 19th November 2019 (data freeze date). As additional data may subsequently be submitted by providers, all data must be considered provisional and subject to change.



3 PHIN’s ability to publish PROMs measures

For the purposes of measure publication each eligible procedure (as captured with the based on the Admitted Patient Care⁶ (APC) record and based on the list of eligible procedures published by NHS Digital) must be linkable to its corresponding pre and post-operative, procedure-specific questionnaire. This is necessary to confirm the procedure indicated on the questionnaires match the procedure recorded in the APC record.

Provider sites fall into one of six publication categories depending on the number of hip and knee operations they undertook during the reporting period and the completeness of their PROMs data (i.e. a Q1 questionnaire that a score can be calculated from, a Q2 questionnaire that is linked to the Q1 questionnaire for which a score can be calculated is designated a complete paired record) and the number of PROMs eligible procedure that the hospital has performed. This leads to the categories as described in Table 4.

Table 4: Publication status definitions for PROMs measures

Publication Status	Definition
Sites for which PROMS could be reported	<ol style="list-style-type: none"> 1) A minimum of six Admitted Patient Care (APC) records for each provider has been received, each of which: <ol style="list-style-type: none"> a. includes the procedure-relevant OPCS (operation) codes (based on the list published by NHS Digital); b. is a private admission; c. contains a discharge date falling within the relevant reporting period; and d. has passed all relevant standard PHIN data validation checks. 2) A sufficiently complete⁷ pre-operative (Q1) PROMs questionnaire that can be linked to the APC record⁸. 3) A sufficiently complete post-operative (Q2) PROMs questionnaire that can be linked to the same APC record as the Q1.
Percentage suppressed for disclosure control	Where a provider has undertaken five or

⁶ Admitted Patient Care is activity which takes place in a hospital setting where the admission is planned (elective) and the patient either spends at least one night in hospital (an inpatient) or is treated and discharged on the same day (a day case).

⁷ Each questionnaire contains twelve procedure-specific questions. As long as the patient has completed ten of these questions, the remaining two can be populated based on the average response score of the other ten.

⁸ Record linkage is based on matching the Provider, the Provider Spell Number and the Episode Order number.



Publication Status	Definition
as five or fewer responses	fewer operations in the reporting period its data is not published as this may be disclosive and breach patient confidentiality.
Number of procedures below current threshold for PROMS reporting.	These hospitals have undertaken fewer than 100 operations in this period and is below the current threshold for PROMs reporting
Insufficient data supplied	These hospitals have not provided sufficient data as required. Fewer than 5 responses have been submitted, and the hospital has greater than 100 eligible procedures within the reporting period
Required PROMs data not supplied	No complete questionnaires have been submitted, and these hospitals have greater than 100 eligible procedures within the reporting period
No <procedure type> procedures reported in the period	No hip or knee replacement procedures present within the APC data for the reporting period, therefore no measure publication required or possible

Table 5 describes the publication status of all 579 hospital sites which currently submit data to PHIN under the CMA Order. As not all of these hospitals will undertake hip or knee replacement surgery, or do so only in relatively small numbers (less than 100 cases annually), not all sites will have publishable PROMs measures.

Table 5: Ability to publish PROMs percentage of patients improved for hip and knee replacements data across the private sector (1st July 2017 to 30th June 2018).

Procedure	Publication status	Number of Sites
Hip replacement (primary)	Sites for which PROMS could be reported	108
Hip replacement (primary)	Percentage suppressed for disclosure control as 5 or fewer responses	45
Hip replacement (primary)	Number of procedures below current threshold for PROMS reporting	71
Hip replacement (primary)	Insufficient data supplied	1
Hip replacement (primary)	Required PROMs data not supplied	9
Hip replacement (primary)	No hip replacement (primary) procedures reported in the period	345
Hip replacement (primary)	Total	579
Hip replacement (revision)	Sites for which PROMS could be reported	1



Procedure	Publication status	Number of Sites
Hip replacement (revision)	Percentage suppressed for disclosure control as 5 or fewer responses	37
Hip replacement (revision)	Number of procedures below current threshold for PROMS reporting	114
Hip replacement (revision)	Insufficient data supplied	0
Hip replacement (revision)	Required PROMs data not supplied	0
Hip replacement (revision)	No hip replacement (revision) procedures reported in the period	427
Hip replacement (revision)	Total	579
Knee replacement (primary)	Sites for which PROMS could be reported	98
Knee replacement (primary)	Percentage suppressed for disclosure control as 5 or fewer responses	49
Knee replacement (primary)	Number of procedures below current threshold for PROMS reporting	76
Knee replacement (primary)	Insufficient data supplied	4
Knee replacement (primary)	No required PROMs data supplied	2
Knee replacement (primary)	No knee replacement (primary) procedures reported in the period	350
Knee replacement (primary)	Total	579
Knee replacement (revision)	Sites for which PROMS could be reported	0
Knee replacement (revision)	Percentage suppressed for disclosure control as 5 or fewer responses	34
Knee replacement (revision)	Number of procedures below current threshold for PROMS reporting	96



Procedure	Publication status	Number of Sites
Knee replacement (revision)	Insufficient data supplied	0
Knee replacement (revision)	Required PROMs data not supplied	0
Knee replacement (revision)	No knee replacement (revision) procedures reported in the period	449
Knee replacement (revision)	Total	579



4 Rules and caveats to the published measures

There are a number of rules and caveats associated with the data that PHIN uses for measure publication based on how the data are provided to PHIN. These must be considered when exploring the PROMs measures to ensure they are interpreted correctly.

Table 6: PROMs measures rules and caveats

Summary	Technical detail (where needed)				
General notes					
<p>Providers who have undertaken 100 or more of the specific eligible procedure type within the relevant publication period (see below) are above the current threshold for PROMs reporting and are required to submit PROMs for these patients to PHIN for publication.</p>	<p>Although providers who have undertaken fewer than 100 procedures within the publication period are not required to submit PROMs, they may choose to do so, in which case, subject to submission of a minimum of 6 cases, the data will be published.</p> <p>For providers who have undertaken fewer than 100 procedures within the publication period and are below the current threshold for PROMs reporting, this is reflected in the messaging published for this measure.</p> <p>If a provider does perform more than 100 procedures and does not submit data to PHIN this is reflected with different messaging to highlight that this provider should be submitting data to PHIN for the PROMs.</p>				
<p>PHIN will be publishing the percentage of patients improved, worsened and unchanged as well as the number of responses (matched Q1 and Q2 score) for Oxford Hip Score (OHS) and Oxford Knee Score (OKS). This approach is consistent with that already used by NHS Digital on behalf of NHS organisations.</p>					
<p>PHIN will be publishing PROMs data for hip and knee replacement procedures (primary and revision), defined as qualifying for a PROM based on NHS Digital's list of eligible OPCS (procedure) codes.</p>	<p>PROMs data will be published at hospital level and will only appear on the PHIN website where the user has selected one of the following qualifying procedure groups (shown together with the corresponding PROM).</p> <table border="1"> <thead> <tr> <th>PHIN Procedure Group</th> <th>PROM</th> </tr> </thead> <tbody> <tr> <td>Hip Replacement (primary)</td> <td>OHS</td> </tr> </tbody> </table>	PHIN Procedure Group	PROM	Hip Replacement (primary)	OHS
PHIN Procedure Group	PROM				
Hip Replacement (primary)	OHS				



	<table border="1"> <tr> <td>Hip Replacement (revision)</td> <td>OHS</td> </tr> <tr> <td>Knee Replacement (primary)</td> <td>OKS</td> </tr> <tr> <td>Knee Replacement (primary – unicompartmental)</td> <td>OKS</td> </tr> <tr> <td>Knee Replacement (primary – patellofemoral)</td> <td>OKS</td> </tr> <tr> <td>Knee Replacement (revision)</td> <td>OKS</td> </tr> </table> <p>N.B. User selection of any of the three primary knee replacement groups will result in the same data being shown.</p>	Hip Replacement (revision)	OHS	Knee Replacement (primary)	OKS	Knee Replacement (primary – unicompartmental)	OKS	Knee Replacement (primary – patellofemoral)	OKS	Knee Replacement (revision)	OKS
Hip Replacement (revision)	OHS										
Knee Replacement (primary)	OKS										
Knee Replacement (primary – unicompartmental)	OKS										
Knee Replacement (primary – patellofemoral)	OKS										
Knee Replacement (revision)	OKS										
Data published is not case-mix adjusted.	PHIN’s publication of PROMs data based on a patient’s health status as having improved, not changed or got worse is based on the NHS Digital methodology, which does not include any form of case mix adjustment.										
Data publication considerations											
The OHS and OKS measures are based on data that has been submitted directly by private providers to PHIN. The CMA Order ⁹ places an obligation on the providers to provide PHIN with information that is “sufficiently detailed and complete” for PHIN to be able to publish accurate information.	<p>PHIN publishes information on the assumption that providers have submitted records which are both complete and accurate.</p> <p>Publication of this PROMs measure requires PHIN being able to link together records for the same patient that relate to their stay in hospital (the Admitted Patient Care record), the results of their pre-operative questionnaire (Q1) and the results of their post-operative questionnaire (Q2). Deficiencies or inaccuracies in any of these data will prevent publication of data for this patient and may result in a partial view of a hospital’s performance.</p>										
In order to account for the amount of time it takes to collect and process paired PROMs questionnaires, PHIN will publish PROMs measures twelve months in arrears of the most recent reporting period for its other measures.	<p>For all OHS and OKS:</p> <ul style="list-style-type: none"> • The discharge date must occur within the published reporting period. • Because post-operative questionnaire data is collected no earlier than six months after surgery the published reporting period for PROMs is 12 months behind the latest reporting period. 										

⁹ Private Healthcare Market Investigation Order 2014 (as amended)



	<ul style="list-style-type: none"> Any data submitted after the appropriate PHIN data freeze will not appear (even if it relates to events or activity during the published reporting period).
Data validations	
Both PROMs questionnaire records must link back to the PROMs Core record which also must link to a valid APC record.	Each PROMs Core, Pre-Operative, Post-Operative and APC record for the same patient should include matching values in the PROVIDER, PROVSPNUM and EPIORDER fields. This enables each record to be linked and the records validated with respect to each other. If it is not possible to link these records together the PROMs data is deemed to be invalid and is not published.
Only information relating to private patients is published. This comprises privately funded care in both independent sites and NHS PPUs and excludes NHS-funded care.	<p>Only PROMs records that link to APC records where ADMINCAT = 2 (private) are included.</p> <p>PROMs data on NHS-funded care (including that delivered by independent organisations) is required for reporting directly to NHS Digital and is available to the public via the NHS Digital website.</p>
PHIN does not currently publish any information based on APC records containing any of a list of proscribed procedures and diagnoses, which NHS Digital has deemed “sensitive”. This is in line with NHS Digital policy and is something PHIN has currently decided to adhere to. This means that if an APC record associated with a PROM contains one of these codes the PROM information will not be included for publication.	NHS Digital 2016: Submitting Anonymous and Sensitive Records to SUS
PHIN does not publish information relating to outpatient activity.	Outpatient activity is excluded from the CMA Order. Private providers do not send outpatient information to PHIN.
PHIN only publishes PROMs measures where the questionnaire completion dates are in line with standard methods published by NHS Digital .	For hip and knee PROMs this means only PROMs records with a valid Q1 completed date before the procedure date, AND a valid Q2 completed date which is at least 6 months after the procedure date will be included.
Disclosure control	
Small numbers of PROMs responses are published in line with NHS reporting	PHIN will apply the same reporting standard.



standards for small number suppression.	
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5 Hip PROM: Oxford Hip Score

5.1 Definition

The Oxford Hip Score (OHS) is a short 12-item patient-reported PROMs used to assess function and pain with patients undergoing a total hip replacement (THR) – both primary replacement and revision surgery. The questions relate to Activities of Daily Living and are filled in by the patient to eliminate inter-observer bias. The questionnaire is carried out by the patient twice, pre- and post-operatively in order to calculate patient outcomes post-surgery.

The score was designed and developed by researchers within the Nuffield Department of Population Health at the University of Oxford in association with surgical colleagues at the Nuffield Orthopaedic Centre and has been well validated.

The score comprises of twelve multiple choice questions relating to the patient’s experience of pain, ease of joint movement and ease of undertaking normal domestic activities. Each question is scored with the score decreasing as the reported symptoms increase. Each of the 12 questions are scored in the same way with the score decreasing as the reported symptoms increase, i.e. become worse (from four least/no symptoms to zero representing the greatest severity). The individual scores are then added together to provide a single score with 0 indicating the worst possible and 48 indicating the highest possible score. This is undertaken pre- and post-operation and the score for each is calculated. This allows the improvement, or indeed worsening, of symptoms to be quantified.

5.2 PHIN Publication of PROMs

PHIN’s initial publication of the Oxford Knee Score will comprise of the number of responses and the percentage improvement in the score.

5.3 Results

Table 8 and Table 9 only contain information for provider sites where a percentage change in patient reported outcome could be calculated.

Table 7: UK rates for privately funded hip replacements – only sites who have submitted complete PROMs and APC data are included (1st July 2017 to 30th June 2018)

Procedure	Eligible Procedure	Total responses	Response rate	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved
Hip replacement (primary)	14,984	2,549	17.0%	1.0%	0.2%	98.8%
Hip replacement (revision)	652	66	10.1%	10.6%	1.5%	87.9%



Table 8: Hip replacement (primary) patient reported changes in health status by provider site (1st July 2017 to 30th June 2018)

Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
Benenden Hospital Trust	Benenden Hospital	IND	108	8	0.0%	0.0%	100.0%	0	0	8
BMI Healthcare	BMI Bath Clinic	IND	43	9	0.0%	0.0%	100.0%	0	0	9
BMI Healthcare	BMI Bishops Wood Hospital	IND	82	11	0.0%	0.0%	100.0%	0	0	11
BMI Healthcare	BMI Chelsfield Park Hospital	IND	83	10	10.0%	0.0%	90.0%	1	0	9
BMI Healthcare	BMI Goring Hall Hospital	IND	142	52	1.9%	0.0%	98.1%	1	0	51
BMI Healthcare	BMI Mount Alvernia Hospital	IND	139	30	0.0%	0.0%	100.0%	0	0	30
BMI Healthcare	BMI St Edmunds Hospital	IND	61	21	4.8%	0.0%	95.2%	1	0	20
BMI Healthcare	BMI The Alexandra Hospital	IND	232	71	0.0%	0.0%	100.0%	0	0	71
BMI Healthcare	BMI The Beaumont Hospital	IND	26	6	0.0%	0.0%	100.0%	0	0	6



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
BMI Healthcare	BMI The Blackheath Hospital	IND	65	10	0.0%	0.0%	100.0%	0	0	10
BMI Healthcare	BMI The Chaucer Hospital	IND	56	23	4.3%	0.0%	95.7%	1	0	22
BMI Healthcare	BMI The Chiltern Hospital	IND	190	73	0.0%	0.0%	100.0%	0	0	73
BMI Healthcare	BMI The Clementine Churchill Hospital	IND	68	7	0.0%	0.0%	100.0%	0	0	7
BMI Healthcare	BMI The Droitwich Spa Hospital	IND	89	12	0.0%	0.0%	100.0%	0	0	12
BMI Healthcare	BMI The Duchy Hospital	IND	86	17	0.0%	0.0%	100.0%	0	0	17
BMI Healthcare	BMI The Edgbaston Hospital	IND	76	14	0.0%	0.0%	100.0%	0	0	14
BMI Healthcare	BMI The Esperance Hospital	IND	21	6	0.0%	0.0%	100.0%	0	0	6



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
BMI Healthcare	BMI The Hampshire Clinic	IND	76	25	0.0%	0.0%	100.0%	0	0	25
BMI Healthcare	BMI The Harbour Hospital	IND	77	9	0.0%	0.0%	100.0%	0	0	9
BMI Healthcare	BMI The Lancaster Hospital	IND	28	10	0.0%	0.0%	100.0%	0	0	10
BMI Healthcare	BMI The Lincoln Hospital	IND	49	12	0.0%	0.0%	100.0%	0	0	12
BMI Healthcare	BMI The Manor Hospital	IND	56	13	0.0%	0.0%	100.0%	0	0	13
BMI Healthcare	BMI The Meriden Hospital	IND	110	20	0.0%	0.0%	100.0%	0	0	20
BMI Healthcare	BMI The Park Hospital	IND	145	21	0.0%	0.0%	100.0%	0	0	21
BMI Healthcare	BMI The Princess Margaret Hospital	IND	83	20	10.0%	0.0%	90.0%	2	0	18
BMI Healthcare	BMI The Priory Hospital	IND	60	9	11.1%	0.0%	88.9%	1	0	8



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
BMI Healthcare	BMI The Ridgeway Hospital	IND	94	36	0.0%	0.0%	100.0%	0	0	36
BMI Healthcare	BMI The Runnymede Hospital	IND	93	30	3.3%	0.0%	96.7%	1	0	29
BMI Healthcare	BMI The Sandringham Hospital	IND	24	6	0.0%	0.0%	100.0%	0	0	6
BMI Healthcare	BMI The Saxon Clinic	IND	89	26	3.8%	3.8%	92.3%	1	1	24
BMI Healthcare	BMI The Sloane Hospital	IND	39	16	0.0%	0.0%	100.0%	0	0	16
BMI Healthcare	BMI The Somerfield Hospital	IND	22	6	0.0%	0.0%	100.0%	0	0	6
BMI Healthcare	BMI The South Cheshire Private Hospital	IND	34	14	0.0%	0.0%	100.0%	0	0	14
BMI Healthcare	BMI The Winterbourne Hospital	IND	110	21	0.0%	0.0%	100.0%	0	0	21



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
BMI Healthcare	BMI Thornbury Hospital	IND	68	17	0.0%	0.0%	100.0%	0	0	17
BMI Healthcare	BMI Three Shires Hospital	IND	119	26	3.8%	0.0%	96.2%	1	0	25
BMI Healthcare	BMI Woodlands Hospital	IND	88	13	0.0%	0.0%	100.0%	0	0	13
Circle Health	Circle Bath	IND	114	9	0.0%	0.0%	100.0%	0	0	9
Circle Health	Circle Reading Hospital	IND	146	6	0.0%	0.0%	100.0%	0	0	6
HCA International	Lister Hospital	IND	126	43	0.0%	0.0%	100.0%	0	0	43
HCA International	London Bridge Hospital	IND	139	24	0.0%	0.0%	100.0%	0	0	24
HCA International	Princess Grace Hospital	IND	221	56	0.0%	0.0%	100.0%	0	0	56
HCA International	The Wellington Hospital	IND	90	18	0.0%	0.0%	100.0%	0	0	18
Horder Healthcare	The Horder Centre	IND	144	52	0.0%	0.0%	100.0%	0	0	52
Hospital Of St John And St Elizabeth	Hospital of St John & St Elizabeth	IND	74	11	9.1%	0.0%	90.9%	1	0	10
KIMS Hospital	KIMS Hospital	IND	121	72	1.4%	0.0%	98.6%	1	0	71



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
King Edward VII's Hospital	King Edward VII's Hospital	IND	273	11	0.0%	9.1%	90.9%	0	1	10
Nuffield Health	Nuffield Health Bournemouth Hospital	IND	175	26	3.8%	0.0%	96.2%	1	0	25
Nuffield Health	Nuffield Health Bristol, The Chesterfield Hospital	IND	32	7	0.0%	0.0%	100.0%	0	0	7
Nuffield Health	Nuffield Health Cardiff Bay & Vale Hospitals	IND	195	9	0.0%	0.0%	100.0%	0	0	9
Nuffield Health	Nuffield Health Cheltenham Hospital	IND	109	11	0.0%	0.0%	100.0%	0	0	11
Nuffield Health	Nuffield Health Derby Hospital	IND	99	22	0.0%	0.0%	100.0%	0	0	22
Nuffield Health	Nuffield Health Exeter Hospital	IND	226	34	2.9%	0.0%	97.1%	1	0	33
Nuffield Health	Nuffield Health Guildford Hospital	IND	86	10	0.0%	0.0%	100.0%	0	0	10



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
Nuffield Health	Nuffield Health Hereford Hospital	IND	107	22	0.0%	0.0%	100.0%	0	0	22
Nuffield Health	Nuffield Health Ipswich Hospital	IND	157	18	0.0%	0.0%	100.0%	0	0	18
Nuffield Health	Nuffield Health Leeds Hospital	IND	104	10	0.0%	0.0%	100.0%	0	0	10
Nuffield Health	Nuffield Health Leicester Hospital	IND	74	8	0.0%	0.0%	100.0%	0	0	8
Nuffield Health	Nuffield Health Newcastle Upon Tyne Hospital	IND	143	16	0.0%	0.0%	100.0%	0	0	16
Nuffield Health	Nuffield Health Oxford, The Manor Hospital	IND	251	17	0.0%	0.0%	100.0%	0	0	17
Nuffield Health	Nuffield Health Plymouth Hospital	IND	88	16	6.3%	0.0%	93.8%	1	0	15
Nuffield Health	Nuffield Health Warwickshire Hospital	IND	173	22	4.5%	0.0%	95.5%	1	0	21



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
Nuffield Health	Nuffield Health Wessex Hospital	IND	159	27	0.0%	0.0%	100.0%	0	0	27
Nuffield Health	Nuffield Health York Hospital	IND	74	9	0.0%	0.0%	100.0%	0	0	9
One Healthcare Group Ltd	One Ashford Hospital	IND	90	54	0.0%	0.0%	100.0%	0	0	54
One Healthcare Group Ltd	One Hatfield Hospital	IND	27	10	0.0%	0.0%	100.0%	0	0	10
Ramsay Health Care UK	Ashtead Hospital	IND	54	22	0.0%	0.0%	100.0%	0	0	22
Ramsay Health Care UK	Duchy Hospital	IND	73	32	0.0%	0.0%	100.0%	0	0	32
Ramsay Health Care UK	Fitzwilliam Hospital	IND	60	19	0.0%	0.0%	100.0%	0	0	19
Ramsay Health Care UK	Mount Stuart Hospital	IND	62	26	0.0%	0.0%	100.0%	0	0	26



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
Ramsay Health Care UK	New Hall Hospital	IND	57	22	0.0%	0.0%	100.0%	0	0	22
Ramsay Health Care UK	Oaks Hospital	IND	107	16	0.0%	0.0%	100.0%	0	0	16
Ramsay Health Care UK	Pinehill Hospital	IND	69	28	0.0%	0.0%	100.0%	0	0	28
Ramsay Health Care UK	Rivers Hospital	IND	88	23	0.0%	0.0%	100.0%	0	0	23
Ramsay Health Care UK	Springfield Hospital	IND	106	60	0.0%	0.0%	100.0%	0	0	60
Ramsay Health Care UK	Winfield Hospital	IND	87	36	0.0%	0.0%	100.0%	0	0	36
Ramsay Health Care UK	Woodland Hospital	IND	50	6	0.0%	33.3%	66.7%	0	2	4
Ramsay Health Care UK	Yorkshire Clinic	IND	41	25	4.0%	0.0%	96.0%	1	0	24



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
Spire Healthcare	Spire Alexandra Hospital	IND	30	6	0.0%	0.0%	100.0%	0	0	6
Spire Healthcare	Spire Bristol Hospital	IND	121	15	0.0%	0.0%	100.0%	0	0	15
Spire Healthcare	Spire Bushey Hospital	IND	150	35	0.0%	0.0%	100.0%	0	0	35
Spire Healthcare	Spire Cambridge Lea Hospital	IND	166	29	0.0%	0.0%	100.0%	0	0	29
Spire Healthcare	Spire Cardiff Hospital	IND	146	38	2.6%	0.0%	97.4%	1	0	37
Spire Healthcare	Spire Clare Park Hospital	IND	101	17	0.0%	0.0%	100.0%	0	0	17
Spire Healthcare	Spire Gatwick Park Hospital	IND	57	10	0.0%	0.0%	100.0%	0	0	10
Spire Healthcare	Spire Harpenden Hospital	IND	104	21	0.0%	0.0%	100.0%	0	0	21
Spire Healthcare	Spire Hull & East Riding Hospital	IND	76	10	0.0%	0.0%	100.0%	0	0	10
Spire Healthcare	Spire Leicester Hospital	IND	99	21	0.0%	0.0%	100.0%	0	0	21



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
Spire Healthcare	Spire Little Aston Hospital	IND	90	15	0.0%	0.0%	100.0%	0	0	15
Spire Healthcare	Spire Manchester Hospital	IND	59	14	0.0%	0.0%	100.0%	0	0	14
Spire Healthcare	Spire Montefiore Hospital	IND	56	13	0.0%	7.7%	92.3%	0	1	12
Spire Healthcare	Spire Murrayfield Hospital Edinburgh	IND	398	62	0.0%	0.0%	100.0%	0	0	62
Spire Healthcare	Spire Norwich Hospital	IND	178	39	0.0%	0.0%	100.0%	0	0	39
Spire Healthcare	Spire Nottingham Hospital	IND	28	7	0.0%	0.0%	100.0%	0	0	7
Spire Healthcare	Spire Parkway Hospital	IND	84	8	0.0%	0.0%	100.0%	0	0	8
Spire Healthcare	Spire Portsmouth Hospital	IND	103	30	0.0%	0.0%	100.0%	0	0	30
Spire Healthcare	Spire Regency Hospital	IND	33	9	0.0%	0.0%	100.0%	0	0	9
Spire Healthcare	Spire South Bank Hospital	IND	128	18	5.6%	0.0%	94.4%	1	0	17



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
Spire Healthcare	Spire Southampton Hospital	IND	146	21	0.0%	0.0%	100.0%	0	0	21
Spire Healthcare	Spire St Anthony's Hospital	IND	137	21	4.8%	0.0%	95.2%	1	0	20
Spire Healthcare	Spire Sussex Hospital	IND	74	13	7.7%	0.0%	92.3%	1	0	12
Spire Healthcare	Spire Thames Valley Hospital	IND	52	12	0.0%	0.0%	100.0%	0	0	12
Spire Healthcare	Spire Washington Hospital	IND	48	13	0.0%	0.0%	100.0%	0	0	13
Spire Healthcare	Spire Wellesley Hospital	IND	74	17	5.9%	0.0%	94.1%	1	0	16
Spire Healthcare	Spire Yale Hospital	IND	220	51	3.9%	0.0%	96.1%	2	0	49
The London Clinic	The London Clinic	IND	191	30	0.0%	0.0%	100.0%	0	0	30



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
The Robert Jones And Agnes Hunt Orthopaedic Hospital NHS Foundation Trust	Robert Jones and Agnes Hunt Orthopaedic Hospital	NHS PPU	265	123	0.0%	0.0%	100.0%	0	0	123
University Hospitals of Derby and Burton NHS Foundation Trust	Royal Derby Hospital	NHS PPU	27	13	0.0%	0.0%	100.0%	0	0	13

Table 9: Hip replacement (revision) patient reported changes in health status by provider site (1st July 2017 to 30th June 2018)

Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
Ramsay Health Care UK	Springfield Hospital	IND	10	6	0.0%	0.0%	100.0%	0	0	6



6 Knee PROM: Oxford Knee Score

6.1 Definition

The Oxford Knee Score (OKS) is a short 12-item patient-reported PROMs used to assess function and pain with patients undergoing a total knee replacement (TKR) – both primary replacement and revision surgery. The questions relate to Activities of Daily Living and are filled in by the patient to eliminate inter-observer bias. The questionnaire is carried out by the patient twice, pre- and post-operatively in order to calculate patient outcomes post-surgery.

The score was designed and developed by researchers within the Nuffield Department of Population Health at the University of Oxford in association with surgical colleagues at the Nuffield Orthopaedic Centre and has been well validated.

The score comprises of twelve multiple choice questions relating to the patient’s experience of pain, ease of joint movement and ease of undertaking normal domestic activities. Each question is scored with the score decreasing as the reported symptoms increase. Each of the 12 questions are scored in the same way with the score decreasing as the reported symptoms increase, i.e. become worse (from four least/no symptoms to zero representing the greatest severity). The individual scores are then added together to provide a single score with 0 indicating the worst possible and 48 indicating the highest possible score. This is undertaken pre- and post-operation and the score for each is calculated. This allows the improvement, or indeed worsening, of symptoms to be quantified.

6.2 PHIN Publication of PROMs

PHIN’s initial publication of the Oxford Knee Score will comprise of the number of responses and the percentage improvement in the score.

6.3 Results

Table 11 and **Error! Reference source not found.** only contain information for provider sites where a percentage change in patient reported outcome could be calculated.

Table 10: UK rates for privately funded knee replacements – only sites who have submitted complete PROMs and APC data are included (1st July 2017 to 30th June 2018)

Procedure	Eligible Procedure	Total responses	Response rate	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved
Knee replacement (primary)	12,333	1,899	15.4%	4.1%	0.6%	95.3%
Knee replacement (revision)	465	53	11.4%	13.2%	1.9%	84.9%



Table 11: Knee replacement (primary) patient reported changes in health status by provider site (1st July 2017 to 30th June 2018)

Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
Benenden Hospital Trust	Benenden Hospital	IND	85	9	0.0%	0.0%	100.0%	0	0	9
BMI Healthcare	BMI Bath Clinic	IND	27	10	0.0%	0.0%	100.0%	0	0	10
BMI Healthcare	BMI Bishops Wood Hospital	IND	54	7	14.3%	0.0%	85.7%	1	0	6
BMI Healthcare	BMI Chelsfield Park Hospital	IND	71	12	0.0%	0.0%	100.0%	0	0	12
BMI Healthcare	BMI Goring Hall Hospital	IND	70	27	11.1%	3.7%	85.2%	3	1	23
BMI Healthcare	BMI St Edmunds Hospital	IND	28	7	14.3%	0.0%	85.7%	1	0	6
BMI Healthcare	BMI The Alexandra Hospital	IND	179	53	3.8%	1.9%	94.3%	2	1	50
BMI Healthcare	BMI The Blackheath Hospital	IND	45	10	0.0%	0.0%	100.0%	0	0	10



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
BMI Healthcare	BMI The Chaucer Hospital	IND	37	13	0.0%	0.0%	100.0%	0	0	13
BMI Healthcare	BMI The Chiltern Hospital	IND	150	65	1.5%	0.0%	98.5%	1	0	64
BMI Healthcare	BMI The Droitwich Spa Hospital	IND	48	15	13.3%	0.0%	86.7%	2	0	13
BMI Healthcare	BMI The Duchy Hospital	IND	42	9	0.0%	0.0%	100.0%	0	0	9
BMI Healthcare	BMI The Edgbaston Hospital	IND	35	9	0.0%	0.0%	100.0%	0	0	9
BMI Healthcare	BMI The Esperance Hospital	IND	29	8	12.5%	0.0%	87.5%	1	0	7
BMI Healthcare	BMI The Hampshire Clinic	IND	46	10	0.0%	0.0%	100.0%	0	0	10



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
BMI Healthcare	BMI The Harbour Hospital	IND	62	10	0.0%	0.0%	100.0%	0	0	10
BMI Healthcare	BMI The Lancaster Hospital	IND	51	15	13.3%	0.0%	86.7%	2	0	13
BMI Healthcare	BMI The Lincoln Hospital	IND	48	17	17.6%	0.0%	82.4%	3	0	14
BMI Healthcare	BMI The Manor Hospital	IND	44	9	0.0%	0.0%	100.0%	0	0	9
BMI Healthcare	BMI The Park Hospital	IND	125	19	10.5%	5.3%	84.2%	2	1	16
BMI Healthcare	BMI The Princess Margaret Hospital	IND	88	29	0.0%	3.4%	96.6%	0	1	28
BMI Healthcare	BMI The Priory Hospital	IND	127	14	0.0%	0.0%	100.0%	0	0	14
BMI Healthcare	BMI The Ridgeway Hospital	IND	79	22	9.1%	0.0%	90.9%	2	0	20



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
BMI Healthcare	BMI The Runnymede Hospital	IND	121	33	6.1%	0.0%	93.9%	2	0	31
BMI Healthcare	BMI The Saxon Clinic	IND	78	28	0.0%	0.0%	100.0%	0	0	28
BMI Healthcare	BMI The Sloane Hospital	IND	32	12	0.0%	0.0%	100.0%	0	0	12
BMI Healthcare	BMI The South Cheshire Private Hospital	IND	25	9	0.0%	0.0%	100.0%	0	0	9
BMI Healthcare	BMI The Winterbourne Hospital	IND	45	16	6.3%	0.0%	93.8%	1	0	15
BMI Healthcare	BMI Thornbury Hospital	IND	37	6	0.0%	0.0%	100.0%	0	0	6
BMI Healthcare	BMI Three Shires Hospital	IND	82	18	0.0%	0.0%	100.0%	0	0	18
Circle Health	Circle Bath	IND	135	6	0.0%	0.0%	100.0%	0	0	6
Circle Health	Circle Reading Hospital	IND	82	7	0.0%	0.0%	100.0%	0	0	7



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
HCA International	Lister Hospital	IND	61	28	10.7%	0.0%	89.3%	3	0	25
HCA International	London Bridge Hospital	IND	180	23	4.3%	0.0%	95.7%	1	0	22
HCA International	Princess Grace Hospital	IND	127	30	0.0%	0.0%	100.0%	0	0	30
KIMS Hospital	KIMS Hospital	IND	85	34	5.9%	2.9%	91.2%	2	1	31
Nuffield Health	Nuffield Health Bournemouth Hospital	IND	114	11	9.1%	9.1%	81.8%	1	1	9
Nuffield Health	Nuffield Health Bristol, The Chesterfield Hospital	IND	55	7	0.0%	0.0%	100.0%	0	0	7
Nuffield Health	Nuffield Health Cambridge Hospital	IND	58	9	0.0%	0.0%	100.0%	0	0	9
Nuffield Health	Nuffield Health Cardiff Bay & Vale Hospitals	IND	341	24	4.2%	0.0%	95.8%	1	0	23



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
Nuffield Health	Nuffield Health Cheltenham Hospital	IND	118	8	0.0%	0.0%	100.0%	0	0	8
Nuffield Health	Nuffield Health Chester, The Grosvenor Hospital	IND	48	6	0.0%	0.0%	100.0%	0	0	6
Nuffield Health	Nuffield Health Derby Hospital	IND	141	18	0.0%	0.0%	100.0%	0	0	18
Nuffield Health	Nuffield Health Exeter Hospital	IND	222	29	0.0%	0.0%	100.0%	0	0	29
Nuffield Health	Nuffield Health Guildford Hospital	IND	59	12	0.0%	0.0%	100.0%	0	0	12
Nuffield Health	Nuffield Health Hereford Hospital	IND	76	10	0.0%	0.0%	100.0%	0	0	10
Nuffield Health	Nuffield Health Ipswich Hospital	IND	134	11	0.0%	9.1%	90.9%	0	1	10



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
Nuffield Health	Nuffield Health Leeds Hospital	IND	83	6	16.7%	0.0%	83.3%	1	0	5
Nuffield Health	Nuffield Health Newcastle Upon Tyne Hospital	IND	113	11	18.2%	0.0%	81.8%	2	0	9
Nuffield Health	Nuffield Health Oxford, The Manor Hospital	IND	281	12	0.0%	0.0%	100.0%	0	0	12
Nuffield Health	Nuffield Health Plymouth Hospital	IND	68	10	0.0%	10.0%	90.0%	0	1	9
Nuffield Health	Nuffield Health Shrewsbury Hospital	IND	53	9	0.0%	0.0%	100.0%	0	0	9
Nuffield Health	Nuffield Health Warwickshire Hospital	IND	158	23	0.0%	0.0%	100.0%	0	0	23
Nuffield Health	Nuffield Health Wessex Hospital	IND	110	12	0.0%	0.0%	100.0%	0	0	12
Nuffield Health	Nuffield Health York Hospital	IND	69	7	0.0%	0.0%	100.0%	0	0	7



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
One Healthcare Group Ltd	One Ashford Hospital	IND	95	52	1.9%	0.0%	98.1%	1	0	51
Ramsay Health Care UK	Ashtead Hospital	IND	48	16	0.0%	0.0%	100.0%	0	0	16
Ramsay Health Care UK	Duchy Hospital	IND	71	38	5.3%	0.0%	94.7%	2	0	36
Ramsay Health Care UK	Fitzwilliam Hospital	IND	84	35	2.9%	0.0%	97.1%	1	0	34
Ramsay Health Care UK	Mount Stuart Hospital	IND	36	22	0.0%	0.0%	100.0%	0	0	22
Ramsay Health Care UK	New Hall Hospital	IND	31	16	0.0%	0.0%	100.0%	0	0	16
Ramsay Health Care UK	Oaks Hospital	IND	79	24	0.0%	0.0%	100.0%	0	0	24



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
Ramsay Health Care UK	Pinehill Hospital	IND	51	24	0.0%	0.0%	100.0%	0	0	24
Ramsay Health Care UK	Renacres Hospital	IND	25	7	0.0%	0.0%	100.0%	0	0	7
Ramsay Health Care UK	Rivers Hospital	IND	86	22	0.0%	0.0%	100.0%	0	0	22
Ramsay Health Care UK	Springfield Hospital	IND	144	68	1.5%	0.0%	98.5%	1	0	67
Ramsay Health Care UK	Winfield Hospital	IND	84	25	0.0%	0.0%	100.0%	0	0	25
Ramsay Health Care UK	Woodland Hospital	IND	56	6	0.0%	0.0%	100.0%	0	0	6
Ramsay Health Care UK	Yorkshire Clinic	IND	49	21	0.0%	0.0%	100.0%	0	0	21



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
Spire Healthcare	Spire Alexandra Hospital	IND	31	7	0.0%	0.0%	100.0%	0	0	7
Spire Healthcare	Spire Bristol Hospital	IND	108	16	6.3%	0.0%	93.8%	1	0	15
Spire Healthcare	Spire Bushey Hospital	IND	148	27	11.1%	0.0%	88.9%	3	0	24
Spire Healthcare	Spire Cambridge Lea Hospital	IND	90	8	12.5%	0.0%	87.5%	1	0	7
Spire Healthcare	Spire Cardiff Hospital	IND	97	17	0.0%	0.0%	100.0%	0	0	17
Spire Healthcare	Spire Cheshire Hospital	IND	68	7	0.0%	0.0%	100.0%	0	0	7
Spire Healthcare	Spire Clare Park Hospital	IND	88	21	9.5%	0.0%	90.5%	2	0	19
Spire Healthcare	Spire Gatwick Park Hospital	IND	62	12	0.0%	0.0%	100.0%	0	0	12
Spire Healthcare	Spire Hartwood Hospital	IND	104	7	14.3%	0.0%	85.7%	1	0	6



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
Spire Healthcare	Spire Hull & East Riding Hospital	IND	85	15	13.3%	0.0%	86.7%	2	0	13
Spire Healthcare	Spire Leicester Hospital	IND	130	29	0.0%	0.0%	100.0%	0	0	29
Spire Healthcare	Spire Little Aston Hospital	IND	62	12	0.0%	0.0%	100.0%	0	0	12
Spire Healthcare	Spire Manchester Hospital	IND	51	8	0.0%	0.0%	100.0%	0	0	8
Spire Healthcare	Spire Montefiore Hospital	IND	70	14	0.0%	0.0%	100.0%	0	0	14
Spire Healthcare	Spire Murrayfield Hospital Edinburgh	IND	249	38	2.6%	0.0%	97.4%	1	0	37
Spire Healthcare	Spire Norwich Hospital	IND	133	42	11.9%	0.0%	88.1%	5	0	37
Spire Healthcare	Spire Parkway Hospital	IND	70	6	16.7%	0.0%	83.3%	1	0	5



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
Spire Healthcare	Spire Portsmouth Hospital	IND	134	27	0.0%	3.7%	96.3%	0	1	26
Spire Healthcare	Spire South Bank Hospital	IND	94	10	0.0%	0.0%	100.0%	0	0	10
Spire Healthcare	Spire Southampton Hospital	IND	292	19	5.3%	0.0%	94.7%	1	0	18
Spire Healthcare	Spire St Anthony's Hospital	IND	78	12	0.0%	0.0%	100.0%	0	0	12
Spire Healthcare	Spire Sussex Hospital	IND	55	8	12.5%	12.5%	75.0%	1	1	6
Spire Healthcare	Spire Washington Hospital	IND	49	10	10.0%	0.0%	90.0%	1	0	9
Spire Healthcare	Spire Wellesley Hospital	IND	71	14	0.0%	0.0%	100.0%	0	0	14
Spire Healthcare	Spire Yale Hospital	IND	122	22	4.5%	0.0%	95.5%	1	0	21



Provider	Site	Sector	Eligible Procedure	Total responses	% of patients reported worsened	% of patients reported unchanged	% of patients reported improved	Patients reported worsened	Patients reported unchanged	Patients reported improved
The Foscoote Private Hospital	The Foscoote Private Hospital	IND	21	12	8.3%	0.0%	91.7%	1	0	11
The London Clinic	The London Clinic	IND	49	9	11.1%	0.0%	88.9%	1	0	8
The Robert Jones And Agnes Hunt Orthopaedic Hospital NHS Foundation Trust	Robert Jones and Agnes Hunt Orthopaedic Hospital	NHS PPU	114	60	5.0%	0.0%	95.0%	3	0	57
University Hospitals of Derby and Burton NHS Foundation Trust	Royal Derby Hospital	NHS PPU	28	6	0.0%	0.0%	100.0%	0	0	6

Note: Table 9 is omitted as there are no data available in this publication period.



7 Appendix A – Procedure Specific PROMs Questions

7.1 Oxford Hip Score¹⁰

Table 8: List of questions in Oxford Hip Score with responses that can be selected by patients

During the past 4 weeks	
How would you describe the pain you usually have in your hip?	None Very mild Mild Moderate Severe
Have you been trouble by pain from your hip in bed at night?	No nights Only 1 or 2 nights Some nights Most nights Every night
Have you had any sudden, severe pain (shooting, stabbing, or spasms) from your affected hip?	No nights Only 1 or 2 nights Some nights Most nights Every night
For how long have you been able to walk before the pain in your hip becomes severe (with or without a walking aid)?	No pain for 30 minutes or more 16 to 30 minutes 5-10 minutes Around the house only Not at all

¹⁰ The Oxford Hip Score questions are the intellectual property of Oxford University Innovation (<https://innovation.ox.ac.uk/outcome-measures/oxford-hip-score-ohs/>)



During the past 4 weeks	
Have you been able to climb a flight of stairs?	Yes, easily With little difficulty With moderate difficulty With extreme difficulty No, impossible
Have you been able to put on a pair of socks, stocking or tights?	Yes, easily With little difficulty With moderate difficulty With extreme difficulty No, impossible
After a meal (sat at a table), how painful has it been for you to stand up from a chair because of your hip?	Not at all painful Slightly painful Moderately painful Very painful Unbearable
Have you had any trouble getting in and out of a care or using public transportation because of your hip?	No trouble at all Very little trouble Moderate trouble Extreme difficulty Impossible to do
Have you had any trouble with washing and drying yourself (all over) because of your hip?	No trouble at all Very little trouble Moderate trouble Extreme difficulty Impossible to do
Could you do the household shopping on your own?	Yes, easily With little difficulty With moderate difficulty With extreme difficulty No, impossible



During the past 4 weeks

How much has pain from your hip interfered with your usual work, including housework?

- Not at all
- A little bit
- Moderately
- Greatly
- Totally



7.2 Oxford Knee Score¹¹

Table 9: List of questions in Oxford Knee Score with responses that can be selected by patients

During the past 4 weeks	
How would you describe the pain you usually have in your knee?	None Very mild Mild Moderate Severe
Have you had any trouble with washing and drying yourself (all over) because of your knee?	No trouble at all Very little trouble Moderate trouble Extreme difficulty Impossible to do
Have you had any trouble getting in and out of a car or using public transportation because of your knee (with or without a stick)?	No trouble at all Very little trouble Moderate trouble Extreme difficulty Impossible to do
For how long have you been able to walk before the pain in your knee becomes severe (with or without a walking aid)?	No pain for 60 minutes or more 16 to 60 minutes 5-15 minutes Around the house only Not at all
After a meal (sat at a table), how painful has it been for you to stand up from a chair because of your hip?	Not at all painful Slightly painful Moderately painful Very painful Unbearable

¹¹ The Oxford Knee Score questions are the intellectual property of Oxford University Innovation (<https://innovation.ox.ac.uk/outcome-measures/oxford-knee-score-oks/>)



During the past 4 weeks	
Have you been limping when walking, because of your knee?	Rarely/never Sometimes or just at first Often, not at first Most of the time All of the time
Could you kneel down and get up again afterwards?	Yes, easily With a little difficulty With moderate difficulty With extreme difficult No, impossible
Are you troubled by pain in your knee at night in bed?	Not at all Only one or two nights Some nights Most nights Every night
How much has pain from your hip interfered with your usual work, including housework?	Not at all A little bit Moderately Greatly Totally
Have you felt that your knee might suddenly “give way” or let you down?	Rarely/never Sometimes or just at first Often, not at first Most of the time All of the time
Could you do the household shopping on your own?	Yes, easily With little difficulty With moderate difficulty With extreme difficulty No, impossible



During the past 4 weeks

Could you walk down a flight of stairs?

Yes, easily

With little difficulty

With moderate difficulty

With extreme difficulty

No, impossible

