



National Joint Registry

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Working for patients, driving forward quality



HIPS



KNEES



ANKLES



ELBOWS



SHOULDERS



PROMs

Implant and unit-level activity and outcomes

14th Annual Report

2017

National Joint Registry
for England, Wales,
Northern Ireland and
the Isle of Man

Part 4

4.1 Implant
performance

The implant scrutiny group reports Level 1 outlier implants to the MHRA. Since the committee's formation in 2009 there have been four hip stems, five hip acetabular components and 19 hip stem/cup combinations reported. Six knee brands have been notified.

An implant is considered to be a Level 1 outlier when its Patient Time Incident Rate (PTIR) is more than twice the PTIR of the group, allowing for confidence intervals. These are shown as the number of revisions per 100 patient-years. As of March 2015, we have started to identify the best performing implants, these would have a PTIR less than half that of their group, allowing for confidence intervals.

Hip implant performance

Table 1 Level 1 outlier stems reported to MHRA.

Stem name	Numbers implanted	Latest PTIR	Notified as outlier	Last implanted
ASR	2,885	2.97	2010	July 2010
Corin Proxima	105	2.31	2011	September 2009
S-ROM Cementless stem	3,100	1.51	2011	March 2017
S-ROM Cementless MoM*	1,041	2.90	2011	May 2015

*S-ROM Cementless stem with MoM articulation - ASR socket, Pinnacle with MoM liner or Ultima cup

Table 2 Level 1 outlier acetabular components reported to MHRA.

Cup name	Numbers implanted	Latest PTIR	Notified as outlier	Last implanted
ASR	6,181	4.16	2010	July 2010
Ultima MoM cup	192	1.90	2010	December 2006
M2A 38	1,479	2.79	2014	June 2011
Delta One TT	214	2.61	2015	March 2017
Trabecular Metal Revision Shell	272	1.74	2017	March 2017

Table 3 Level 1 outlier stem/cup combinations.

Combination	Latest PTIR	Notified as outlier	Last implanted
ASR Resurfacing Head ASR Resurfacing Cup	2.96	2010	July 2010
Metafix Stem Cormet 2000 Resurfacing Cup	2.91	2010	February 2011
CPT Adept Resurfacing Cup	3.42	2011	May 2010
Corail ASR Resurfacing Cup	5.59	2011	June 2010
CPT BHR Resurfacing Cup	2.57	2011	September 2010
Accolade Mitch TRH Cup	2.80	2011	January 2011
Summit Cementless Stem ASR Resurfacing Cup	4.51	2012	August 2009
CPT Durom Resurfacing Cup	2.47	2012	September 2009
S-Rom Cementless Stem ASR Resurfacing Cup	4.42	2012	February 2010
CPCS BHR Resurfacing Cup	1.40	2012	May 2010
Anthology BHR Resurfacing Cup	3.22	2012	August 2011
SL-Plus Cementless Stem Cormet 2000 Resurfacing Cup	2.22	2013	April 2010
Bimetric Cementless Stem M2A 38	1.89	2014	June 2011

**Table 3 (continued)**

Combination	Latest PTIR	Notified as outlier	Last implanted
Corin Proxima Cormet 2000 Resurfacing Cup	2.39	2015	September 2009
Synergy stem BHR cup	1.75	2016	May 2011
CPT Exceed ABT Cemented	2.81	2017	February 2017
Exeter V40 Trabecular Metal Revision Shell	2.14	2017	March 2017

Note: Combinations which no longer have a PTIR falling in to the outlier category are not shown.

Best performing hip implants

There are no hip implants or combinations performing statistically less than half their expected PTIR.

Knee implant performance

Table 4 Level 1 outlier implants reported to MHRA. All of these implants have been discontinued.

Knee brand	Latest PTIR	Notified as outlier	Last implanted
JRI bicondylar	1.83	2009	June 2010
Tack	1.70	2009	August 2008
St Leger	1.49	2011	August 2005
Journey Deuce	3.04	2014	June 2013
SLK Evo	1.63	2016	April 2013
Journey Oxinium	1.07	2017	July 2016

Best performing knee implants

There are no knee implants performing statistically less than half their expected PTIR.



Part 4

4.2 Unit
performance

This section shows indicators for hip and knee joint replacement procedures by Trust, Local Health Board and unit (hospital). This was first included in 2012 and is part of the Government's transparency agenda. It is based on procedures carried out during the 2016 calendar year and submitted to the NJR by 28 February 2017.

Note: Part Four information (excluding outlier analysis) is based on the actual operation date (1 January 2016 to 31 December 2016) whereas data in Part One is based on the date the procedure was submitted (1 April 2016 to 31 March 2017).



Part 4

4.3 Unit
outlier analysis
methodology

Unit outlier analysis covers all primary procedures performed from 1 April 2003 to 1 March 2017.

The outlier analyses made use of funnel plots from statistical process control methodology. These aim to distinguish normal variation between units (which is to be expected) from unusual differences (termed 'special cause' variation), which may indicate the need for further investigation. Funnel plots enable units of different sizes to be compared; performance indicators based on smaller numbers of patients will have greater variability and this in turn is reflected by wider control limits.

Summary of the methodology for unit revision rates:

- The standardised revision ratio (SRR) is plotted against the number of expected revisions. The SRR is the total number of revisions divided by the number of expected revisions for that unit's caseload in respect of the age group, gender and the diagnosis of the patients. If the SRR is 1, the number of revisions is compatible with the number expected for that unit
- Control limits for funnel plots are normally set at 95% and 99.8% (approximates to 2 or 3 standard deviations). Our normal six-monthly review process focuses on those above the upper limit of the latter. One might expect, however, that one in 500 would be outside the 99.8% limits (above or below) just by chance. In the following table we have highlighted in red (1) units above the upper of the 99.8% control limits. Previously we have reported on those units above the 99.99% control limits but this has been removed from this year's report

Please note for the data in following table:

Compliance, Consent and Linkability are:

- Red if lower than 80%
- Amber if equal to or greater than 80% and lower than 95%
- Green if 95% or more

- Linkability for some hospitals will be lower than expected if they have private patients from outside England and Wales
- Part Four data covers procedures carried out between 1 January 2016 and 31 December 2016

Outlier analyses are:

- Red if units are above the upper of the 99.8% control limits (approximates to 3 standard deviations (SDs))

The table uses the following footnotes:

1 Compliance (NHS Trust/Local Health Board Only) - the percentage of cases submitted to the NJR compared to HES/PEDW.

2 Consent Rate - percentage of cases submitted to the NJR with patient consent confirmed.

3 Linkability - the proportion of records which include a valid patient's NHS number compared with the number of procedures recorded on the NJR.

4 Outliers with respect to 90-day mortality following primary operations performed from 2003 onwards. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

5 Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

6 Outliers with respect to revisions (at any time) following primary operations performed from 2012 onwards [from 1 March 2012 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

7 Data for hospitals are excluded as there is no tracing service for units in Northern Ireland.

8 Compliance figures were unavailable.

Summary of the methodology for unit 90-day mortality rates:

- The standardised mortality ratio (SMR) is plotted against number of expected deaths. The SMR is the number of actual deaths within 90 days of primary joint replacement divided by the number of expected deaths in this period. The number of expected deaths has been calculated after adjustment for patient characteristics (age, gender and ASA grade of patients). Analysis for hips has excluded operations undertaken for trauma, failed hemi-arthroplasty and, since November 2014 (when recording of this began), hips implanted for metastatic cancer

- Control limits are as for revisions above

Any units identified as potential outliers in Part Four have been notified. All units are provided with an Annual Clinical Report and additionally have access to an online NJR Management Feedback system which is updated annually.

In earlier Annual Reports, the NJR have reported outlying hospitals based on all cases submitted to the NJR since April 2003. To reflect changes in hospital practices and component use, the NJR now also reports outlying hospitals based on only the last five years of primary operation data. This five year cut off of data excludes from analysis the majority of withdrawn outlier implants, and metal on metal total hip replacements, and thus better represents contemporary practice.

Trust/Local Health Board/Company	Compliance						Linkability						Outliers: Hips						Outliers: Knees						
	NHS Trust/Local Health Board Only ¹		No. of Procedures 2016		No. of Consultants 2016		Consent Rate (%) 2016 ²		Linkability (%) 2016 ³		Average ASA Grade 2016		Percentage Male Patients 2016		Average Age At Operation 2016		90-day Mortality ⁴		Revision rate since 2003 ⁵		90-day Mortality ⁴		Revision rate since 2003 ⁵		Revision rate since 2012 ⁶
Abertawe Bro Morgannwg University Health Board	92%																								
Morriston Hospital	769	10	98%	99%	2.1	40%	69.6																		
Neath Port Talbot Hospital	119	7	94%	99%	1.9	41%	67.7																		
Princess Of Wales Hospital	311	11	67%	98%	2.1	45%	70.3																		
Aintree University Hospitals NHS Foundation Trust	89%																								
Aintree University Hospital Sefton Suite	21	4	90%	95%	1.9	40%	65.8																		
University Hospital Aintree	632	17	97%	99%	2.1	44%	66.6																		
Airedale NHS Foundation Trust	97%																								
Airedale General Hospital	548	9	85%	96%	2.3	41%	71.8																		
Aneurin Bevan Health Board	111%																								
Nevill Hall Hospital	704	9	98%	100%	2.3	43%	70.2																		
Royal Gwent Hospital	336	15	98%	100%	2.5	38%	70.6																		
St Woolos Hospital	736	19	75%	98%	2.0	44%	68.2																		
Ysbyty Ystrad Fawr	4	2	100%	100%	1.8	50%	62.7																		
Ashford And St Peter's Hospitals NHS Foundation Trust	99%																								
Ashford Hospital	797	15	88%	100%	1.9	39%	70.2																		
St Peter's Hospital	129	13	100%	100%	2.3	37%	73.3																		
Barking Havering And Redbridge University Hospitals NHS Trust	80%																								

Compliance, consent and linkability are red if lower than 80%, green if 95% or more and amber in between

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⁷ Data for hospitals are excluded as there is no tracing service for units in Northern Ireland.

⁸ Compliance figures were unavailable.

Hospital	Compliance						Outliers: Hips						Outliers: Knees					
	Trust/Local Health Board/Company	Compliance (NHS Trust/Local Health Board Only) ¹	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2012 ⁵	90-day Mortality ⁴	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2012 ⁶	
King George Hospital		494	12	90%	100%	2.3	37%	71.7										
Queens Hospital		62	12	47%	90%	2.5	39%	76.3										
Barnsley Hospital NHS Foundation Trust	93%																	
Barnsley District General Hospital	605	8	85%	99%	2.2	44%	68.7											
Barts Health NHS Trust	92%																	
Gateway Surgical Centre	473	20	100%	99%	2.0	40%	66.5											
Newham General Hospital	4	3	100%	100%	2.5	25%	73.2											
The Royal London Hospital	256	16	99%	99%	2.4	40%	66.4											
Whipps Cross University Hospital	336	10	99%	98%	2.3	37%	71.5											
Basildon And Thurrock University Hospitals NHS Foundation Trust	94%																	
Basildon University Hospital	607	12	86%	100%	2.3	40%	70.4											
Bedford Hospital NHS Trust	83%																	
Bedford Hospital South Wing	306	8	93%	100%	2.3	43%	71.8											
Belfast HSC Trust	N/A ⁷																	
Musgrave Park Hospital	2611	31	99%	N/A ⁷	2.1	N/A ⁷	N/A ⁷											
Royal Victoria Hospital	174	16	89%	N/A ⁷	2.5	N/A ⁷	N/A ⁷											
Betsi Cadwaladr University Health Board	109%																	
Abergele Hospital	416	9	57%	99%	2.0	40%	70.8											

Compliance, consent and linkability are red if lower than 80%, green if 95% or more and amber in between

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⁷ Data for hospitals are excluded as there is no tracing service for units in Northern Ireland.

⁸ Compliance figures were unavailable.

Hospital	Compliance (NHS Trust/Local Health Board Only) ¹						Outliers: Hips						Outliers: Knees					
	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2012 ⁶	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶		
Glan Clwyd General Hospital	65	7	43%	98%	2.4	47%	71.9											
Wrexham Maelor Hospital	395	12	98%	98%	2.3	42%	70.5											
Ysbyty Gwynedd	752	11	93%	98%	2.2	44%	69.8											
Blackpool Teaching Hospitals NHS Foundation Trust	87%																	
Blackpool Victoria Hospital	680	12	83%	100%	2.1	44%	70.7											
Bradford Teaching Hospitals NHS Foundation Trust	N/A ⁸																	
Bradford Royal Infirmary	517	10	95%	99%	2.1	42%	67.7											
Brighton And Sussex University Hospitals NHS Trust	94%																	
Princess Royal Hospital	210	15	53%	99%	2.6	35%	74.2											
Royal Sussex County Hospital	13	5	15%	92%	2.5	42%	73.3											
Sussex Orthopaedic NHS Treatment Centre	971	19	96%	100%	2.2	39%	69.9											
Buckinghamshire Healthcare NHS Trust	90%																	
Stoke Mandeville Hospital	46	8	65%	72%	2.1	24%	72.3											
Wycombe Hospital	672	11	94%	94%	2.1	40%	69.9											
Burton Hospitals NHS Foundation Trust	86%																	
Queens Hospital Burton Upon Trent	686	9	95%	99%	2.3	40%	70.1											
Calderdale And Huddersfield NHS Foundation Trust	93%																	

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Hospital	Compliance (NHS Trust/Local Health Board Only) ¹						Outliers: Hips						Outliers: Knees					
	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2012 ⁶	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶		
Calderdale Royal Hospital	818	16	91%	99%	2.2	42%	69.8											
Huddersfield Royal Infirmary	24	7	75%	92%	2.3	14%	68.9											
Cambridge University Hospitals NHS Foundation Trust	77%																	
Addenbrooke's Hospital	916	19	79%	99%	2.3	41%	69.9											
Cardiff and Vale University Health Board	109%																	
Llandough Hospital	1391	19	97%	97%	2.1	41%	68.6											
University Hospital of Wales	18	7	100%	100%	2.4	17%	69.8											
Central Manchester University Hospitals NHS Foundation Trust	150%																	
Manchester Royal Infirmary	111	14	62%	95%	2.7	42%	66.0											
Trafford General Hospital	971	33	84%	97%	2.1	44%	67.7											
Chelsea And Westminster Hospital NHS Foundation Trust	95%																	
Chelsea & Westminster Hospital	343	9	91%	99%	2.0	38%	68.5											
West Middlesex University Hospital	339	8	100%	100%	2.1	41%	70.4											
Chesterfield Royal Hospital NHS Foundation Trust	93%																	
Chesterfield Royal Hospital	798	11	93%	98%	2.1	42%	69.5											
City Hospitals Sunderland NHS Foundation Trust	91%																	
Sunderland Royal Hospital	973	14	98%	99%	2.2	45%	68.1											

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Hospital	Compliance						Linkability						Outliers: Hips					
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Colchester Hospital University NHS Foundation Trust	94%	13	89%	100%	2.2	42%	72.1											
Colchester General Hospital	68%																	
COUNTESS OF CHESTER HOSPITAL FOUNDATION TRUST	92%	6	99%	99%	2.2	40%	72.1											
COUNTY DURHAM AND DARLINGTON NHS FOUNDATION TRUST	86%	20	90%	100%	1.9	42%	67.5											
BISHOP AUCKLAND HOSPITAL	64%	11	64%	93%	2.5	41%	69.6											
DARLINGTON MEMORIAL HOSPITAL	77	10	79%	97%	2.3	48%	71.3											
UNIVERSITY HOSPITAL OF NORTH DURHAM	312																	
CROYDON HEALTH SERVICES NHS TRUST	31	7	65%	97%	2.3	40%	74.9											
CROYDON UNIVERSITY HOSPITAL	113%																	
CWM TAF HEALTH BOARD	190	6	99%	99%	2.2	44%	68.3											
PRINCE CHARLES HOSPITAL	269	9	100%	100%	2.3	41%	68.9											
THE ROYAL GLAMORGAN HOSPITAL	85%																	
DARTFORD AND GRAVESEND NHS TRUST	703	10	100%	100%	2.2	40%	71.5											
DARENT VALLEY HOSPITAL	302	7	100%	100%	2.0	47%	66.6											
QUEEN MARY'S HOSPITAL STD CUP	90%																	
DERBY HOSPITALS NHS FOUNDATION TRUST	1984	20	92%	96%	2.2	41%	69.8											
ROYAL DERBY HOSPITAL																		

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⁶ Data for hospitals are excluded as there is no tracing service for units in Northern Ireland.

⁷ Compliance figures were unavailable.

Hospital	Compliance (NHS Trust/Local Health Board Only) ¹						Outliers: Hips						Outliers: Knees					
	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶		
Doncaster And Bassettlaw Hospitals NHS Foundation Trust	37%																	
Bassettlaw Hospital	188	5	95%	96%	2.4	44%	69.1											
Doncaster Royal Infirmary	319	11	97%	99%	2.4	45%	70.3											
Dorset County Hospital NHS Foundation Trust	94%																	
Dorset County Hospital	681	10	98%	99%	2.1	42%	70.7											
East And North Hertfordshire NHS Trust	82%																	
Lister Hospital	135	15	56%	100%	2.4	25%	75.0											
Lister Treatment Centre	569	16	96%	99%	2.2	41%	70.9											
East Cheshire NHS Trust	95%																	
Macclesfield District General Hospital	493	7	94%	100%	2.1	41%	70.5											
East Kent Hospitals University NHS Foundation Trust	80%																	
Queen Elizabeth The Queen Mother Hospital	673	9	90%	96%	2.2	39%	71.2											
William Harvey Hospital (Ashford)	1114	15	95%	97%	2.2	42%	70.3											
East Lancashire Hospitals NHS Trust	92%																	
Burnley General Hospital	735	20	98%	98%	2.1	40%	70.2											
Royal Blackburn Infirmary	44	12	39%	98%	2.7	44%	72.5											

Compliance, consent and linkability are red if lower than 80%, green if 95% or more and amber in between

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		Outliers: Hips						Outliers: Knees						
Hospital	Compliance (NHS Trust/Local Health Board Only) ¹	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶
East Sussex Healthcare NHS Trust	163%	525	14	95%	96%	2.2	38%	72.1						1
Conquest Hospital		407	6	97%	97%	2.3	43%	72.4						
Eastbourne District General Hospital														
Epsom And St Helier University Hospitals NHS Trust	84%													
Epsom Hospital		11	1	82%	100%	2.6	0%	73.1						
St Helier Hospital		2	2	100%	100%	2.0	0%	74.2						
The Elective Orthopaedic Centre		3059	34	99%	99%	2.1	38%	69.9						
Frimley Park NHS Foundation Trust	147%													
Frimley Park Hospital		1142	18	99%	99%	2.0	40%	69.7						
Heatherwood Hospital		782	11	97%	98%	2.0	37%	69.8						
Wexham Park Hospital		228	10	85%	95%	2.4	40%	73.8						
Gateshead Health NHS Foundation Trust	86%													
The North East NHS Surgery Centre		1156	15	99%	99%	2.2	43%	68.0						
George Elliot Hospital NHS Trust	99%													
George Elliot Hospital - Acute Services		539	7	93%	99%	2.1	42%	69.8						
Gloucestershire Hospitals NHS Foundation Trust	87%													
Cheltenham General Hospital		978	19	69%	100%	2.1	41%	71.7						
Gloucestershire Royal Hospital		810	15	86%	100%	2.2	43%	71.8						

Compliance, consent and linkability are red if lower than 80%, green if 95% or more and amber in between

¹ Compliance (NHS Trust/Local Health Board Only) - the percentage of cases submitted to the NJR compared to HES/PEDW.

² Consent Rate - percentage of cases submitted to the NJR with patient consent confirmed.

³ Linkability - the proportion of records which include a valid patient's NHS number compared with the number of procedures recorded on the NJR.

⁴ Outliers with respect to 90-day mortality following primary operations performed from 2003 onwards. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

⁵ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

⁶ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

⁷ Data for hospitals are excluded as there is no tracing service for units in Northern Ireland.

⁸ Compliance figures were unavailable.

Trust/Local Health Board/Company	Compliance (NHS Trust/Local Health Board Only) ¹						Outliers: Hips						Outliers: Knees					
	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2012 ⁶	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶		
Great Western Hospitals NHS Foundation Trust	78%	18	93%	98%	2.1	43%	68.6											
The Great Western Hospital	1139	18	93%	98%	2.1	43%	68.6											
Guy's And St Thomas' NHS Foundation Trust	83%	3	5%	45%	2.1	36%	63.6											
Guy's Hospital	773	17	77%	93%	2.1	36%	63.6											
St Thomas' Hospital	20	3	5%	45%	2.2	56%	72.7											
Hampshire Hospitals NHS Foundation Trust	90%																	
Basingstoke And North Hampshire Hospital	897	15	85%	98%	2.1	41%	70.5											
Royal Hampshire County Hospital	504	9	91%	97%	2.1	42%	71.5											
Harrogate And District NHS Foundation Trust	77%	9	81%	96%	2.0	42%	69.7											
Heart Of England NHS Foundation Trust	70%	19	38%	99%	2.3	37%	71.4											
Good Hope Hospital	470	22	22%	98%	2.2	44%	69.6											
Heartlands Hospital	929	6	99%	99%	2.2	41%	70.5											
Solihull Hospital																		
Hinchinbrooke Health Care NHS Trust	94%																	
Hinchinbrooke Hospital	924																	
Homerton University Hospital NHS Foundation Trust	98%																	

Compliance, consent and linkability are red if lower than 80%, green if 95% or more and amber in between¹ Compliance (NHS Trust/Local Health Board Only) - the percentage of cases submitted to the NJR compared to HES/PEDW.² Consent Rate - percentage of cases submitted to the NJR with patient consent confirmed.³ Linkability - the proportion of records which include a valid patient's NHS number compared with the number of procedures recorded on the NJR.⁴ Outliers with respect to 90-day mortality following primary operations performed from 2003 onwards. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).⁵ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).⁶ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).⁷ Data for hospitals are excluded as there is no tracing service for units in Northern Ireland.⁸ Compliance figures were unavailable.

		Outliers: Hips						Outliers: Knees						
Hospital	Compliance (NHS Trust/Local Health Board Only) ¹	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Average Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶
Homerton University Hospital NHS Trust		183	9	91%	97%	2.2	33%	65.6		1	1			
Hull And East Yorkshire Hospitals														
Castle Hill Hospital		1178	23	93%	94%	2.2	44%	69.1						
Hull Royal Infirmary		29	13	86%	86%	2.0	24%	72.7						
Hywel Dda Health Board														
Bronglais General Hospital		253	3	99%	100%	2.3	43%	70.9						
Prince Philip Hospital		386	9	99%	100%	1.9	48%	67.8						
West Wales General Hospital		38	9	100%	97%	2.2	35%	72.7						
Withybush General Hospital		407	7	98%	99%	2.2	40%	69.6						
Imperial College Healthcare NHS Trust														
Charing Cross Hospital		559	19	96%	98%	2.2	37%	68.7						
St Mary's Hospital		20	8	15%	95%	2.4	16%	70.9						
Ipswich Hospital		701	11	99%	99%	2.2	42%	70.9						
Isle of Man Secondary Healthcare Directorate			N/A ⁸											
Noble's Hospital		301	4	98%	99%	1.9	43%	68.5						
Isle Of Wight NHS Trust			103%											

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² Consent Rate - percentage of cases submitted to the NJR with patient consent confirmed.

³ Linkability - the proportion of records which include a valid patient's NHS number compared with the number of procedures recorded on the NJR.

⁴ Outliers with respect to 90-day mortality following primary operations performed from 2003 onwards. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

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⁷ Data for hospitals are excluded as there is no tracing service for units in Northern Ireland.

⁸ Compliance figures were unavailable.

Hospital	Compliance (NHS Trust/Local Health Board Only) ¹		Consent Rate (%) 2016 ²		Linkability (%) 2016 ³		Average ASA Grade 2016		Percentage Male Patients 2016		Average Age At Operation 2016		90-day Mortality ⁴		Outliers: Hips		Outliers: Knees	
	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2012 ⁶	Revision rate since 2003 ⁵	90-day Mortality ⁴	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶		
St Mary's Hospital	556	6	100%	100%	2.2	37%	70.8											
James Page University Hospitals NHS Foundation Trust			96%															
James Page University Hospital	594	6	85%	97%	2.3	44%	70.9										1	
Kettering General Hospital NHS Foundation Trust			92%															
Kettering General Hospital	502	9	90%	98%	2.3	38%	70.5											
King's College Hospital NHS Foundation Trust			63%															
King's College Hospital (Denmark Hill)	127	13	100%	100%	2.1	33%	68.3											
Orpington Hospital	732	26	100%	99%	2.1	41%	70.0											
Princess Royal University Hospital	68	10	54%	76%	2.6	50%	75.4											
Kingston Hospital NHS Foundation Trust			111%															
Kingston Hospital	41	11	63%	90%	2.2	24%	72.6											
Lancashire Teaching Hospitals NHS Foundation Trust			97%															
Chorley and South Ribble Hospital	606	15	100%	100%	2.4	45%	70.2											
Royal Preston Hospital	59	8	100%	98%	2.5	31%	74.1											
Leeds Teaching Hospitals NHS Trust			45%															

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⁸ Compliance figures were unavailable.

Hospital	Compliance NHS Trust/Local Health Board Only ¹		Outliers: Hips				Outliers: Knees				
	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	90-day Mortality ⁴	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶
Chapel Allerton Hospital	400	17	88%	100%	2.2	37%	68.8				
Leeds General Infirmary	3	1	100%	100%	2.3	0%	81.9				
Lewisham and Greenwich NHS Trust	87%										
Queen Elizabeth Hospital Woolwich	83	8	48%	99%	2.3	35%	73.5				
Riverside Treatment Centre	436	16	74%	86%	2.1	37%	69.2				
University Hospital Lewisham	16	5	88%	100%	2.0	69%	68.6				
London North West Healthcare NHS Trust	97%										
Central Middlesex Hospital	685	19	97%	99%	2.1	35%	69.7				
Ealing Hospital	3	2	100%	100%	2.3	33%	59.2				
Northwick Park Hospital	17	5	47%	94%	2.5	19%	81.4				
Luton And Dunstable Hospital NHS Foundation Trust	97%										
Luton & Dunstable Hospital	651	16	100%	100%	2.3	36%	71.5				
Maidstone And Tunbridge Wells NHS Trust	96%										
Maidstone District General Hospital	10	3	100%	100%	2.1	60%	71.0				
The Tunbridge Wells Hospital	556	15	98%	99%	2.3	41%	72.2				
Medway NHS Foundation Trust	70%										
Medway Maritime Hospital	502	10	70%	98%	2.4	41%	70.6				

Compliance, consent and linkability are red if lower than 80%, green if 95% or more and amber in between

¹ Compliance (NHS Trust/Local Health Board Only) - the percentage of cases submitted to the NJR compared to HES/PEDW.

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⁷ Data for hospitals are excluded as there is no tracing service for units in Northern Ireland.

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		Outliers: Hips						Outliers: Knees														
		Compliance (NHS Trust/Local Health Board Only)			Consent Rate (%) 2016 ²			Linkability (%) 2016 ³			Average Age At Operation 2016			90-day Mortality ⁴			Revision rate since 2003 ⁵			Revision rate since 2012 ⁶		
Hospital	No. of Procedures 2016	No. of Consultants 2016	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶		
Mid Cheshire Hospitals NHS Foundation Trust	97%	830	10	100%	100%	2.1	42%	70.7														
Leighton Hospital	91%	768	11	86%	98%	2.3	43%	70.8														
Broomfield Hospital	91%	323	8	97%	98%	2.1	41%	69.2														
Mid Yorkshire Hospitals NHS Trust	91%	266	14	88%	98%	2.4	39%	70.7														
Dewsbury and District Hospital	91%	427	9	98%	98%	2.1	45%	68.1														
Pinderfields General Hospital	86%	483	9	91%	98%	2.1	38%	69.3														
Pontefract Elective Unit (Treatment Centre)	86%	1119	20	99%	100%	2.4	43%	71.9														
Milton Keynes Hospital NHS Foundation Trust	98%	304	10	98%	99%	2.3	41%	72.1	-1													
Norfolk And Norwich University Hospitals NHS Foundation Trust	73%	1622	33	91%	98%	2.3	40%	69.9														
Norfolk & Norwich Hospital	68%	Northampton General Hospital (Acute)	1622	95%																		
Northampton General Hospital NHS Trust	68%	North Bristol NHS Trust	1622	95%																		
Southmead Hospital	68%	North Cumbria University Hospitals NHS Trust	1622	95%																		

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Hospital	Compliance (NHS Trust/Local Health Board Only) ¹		Outliers: Hips				Outliers: Knees			
	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2012 ⁵	90-day Mortality ⁴	Revision rate since 2012 ⁶
Cumberland Infirmary	341	16	77%	96%	2.4	34%	73.4			
West Cumberland Hospital	463	16	86%	99%	2.2	42%	71.0			1
Northern Devon Healthcare NHS Trust	97%									
North Devon District Hospital	718	8	93%	98%	2.1	41%	71.0			
Northern Lincolnshire And Goole Hospitals NHS Foundation Trust	78%									
Diana Princess Of Wales Hospital	375	7	89%	99%	2.3	39%	71.0			
Goole and District Hospital (Acute)	200	4	93%	99%	2.2	49%	68.5			
Scaunthorpe General Hospital	198	5	95%	98%	2.4	36%	70.0			
North Middlesex University Hospital NHS Trust	93%									
North Middlesex Hospital	336	12	100%	98%	2.3	29%	70.1			
North Tees And Hartlepool NHS Foundation Trust	92%									
University Hospital Of Hartlepool	683	9	100%	100%	2.1	45%	67.6			1
University Hospital Of North Tees	133	11	65%	86%	2.5	43%	72.4			1
Northumbria Healthcare NHS Foundation Trust	99%									
Hexham General Hospital	901	19	99%	99%	1.9	42%	68.9			
North Tyneside General Hospital	852	19	99%	99%	2.0	48%	68.2			
Northumbria Specialist Emergency Care Hospital	223	19	55%	98%	2.5	46%	73.9			

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Hospital	Compliance, Consent and Linkability						Outliers: Hips						Outliers: Knees					
	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶		
Wansbeck Hospital	973	16	95%	97%	2.0	47%	68.5											
Nottingham University Hospitals NHS Trust	96%																	
Nottingham City Hospital	1904	17	97%	99%	2.1	40%	68.9											
Queens Medical Centre Nottingham University Hospital	67	12	87%	96%	2.3	34%	68.3											
Oxford University Hospitals NHS Trust	71%																	
Horton General Hospital	23	4	91%	96%	2.3	32%	73.3											
John Radcliffe Hospital	33	4	100%	97%	2.3	31%	69.9											
Nuffield Orthopaedic Centre	1963	21	87%	96%	2.2	40%	69.6											
Pennine Acute Hospitals NHS Trust	86%																	
Fairfield General Hospital	676	18	95%	100%	2.1	43%	68.6											
North Manchester General Hospital	593	15	97%	100%	2.3	38%	69.0											
Royal Oldham Hospital	219	10	99%	99%	2.5	44%	69.7											
Peterborough And Stamford Hospitals NHS Foundation Trust	94%																	
Peterborough City Hospital	955	16	93%	95%	2.3	43%	70.4											
Plymouth Hospitals NHS Trust	88%																	
Derriford Hospital	959	17	92%	97%	2.3	43%	69.9											
Poole Hospital NHS Foundation Trust	104%																	
Poole Hospital	169	12	80%	82%	2.5	32%	75.3											

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⁶ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

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⁸ Compliance figures were unavailable.

Hospital	Compliance (NHS Trust/Local Health Board Only) ¹		Consent Rate (%) ² 2016 ²		Linkability (%) ³ 2016 ³		Average ASA Grade 2016		Percentage Male Patients 2016		Average Age At Operation 2016		90-day Mortality ⁴		Outliers: Hips		Outliers: Knees	
	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) ³ 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶		
Portsmouth Hospitals NHS Trust	91%	1571	28	100%	100%	2.1	42%	70.8										
Queen Alexandra Hospital	90%	3038	27	93%	99%	2.1	43%	69.4										
Robert Jones And Agnes Hunt Orthopaedic Hospital NHS Foundation Trust	89%	1204	25	92%	97%	2.2	41%	70.7										
Robert Jones & Agnes Hunt Orthopaedic Hospital	97%	509	11	89%	89%	2.4	40%	69.0										
Royal Berkshire Hospital	88%	408	19	81%	96%	2.5	45%	72.3	1									
Royal Bolton Hospital	88%	647	18	94%	98%	2.0	41%	67.3	1									
Royal Cornwall Hospitals NHS Trust	97%	1497	16	98%	98%	2.1	43%	70.3										
Royal Devon And Exeter NHS Foundation Trust	102%	27	7	74%	96%	2.3	27%	74.5										
Royal Free London NHS Foundation Trust		499	15	75%	91%	2.2	34%	71.1										
Barnet Hospital		426	7	99%	99%	2.2	35%	69.5										
Chase Farm Hospital																		
The Royal Free Hospital																		

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Hospital	Compliance (NHS Trust/Local Health Board Only) ¹						Outliers: Hips						Outliers: Knees					
	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2012 ⁶	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶		
Royal Liverpool And Broadgreen University Hospitals NHS Trust	92%	759	18	84%	99%	2.3	39%	67.7									1	
Broadgreen Hospital		115	16	45%	98%	2.7	34%	72.6										
Royal National Orthopaedic Hospital NHS Trust	76%	1177	26	86%	98%	2.0	40%	63.4										
The Royal National Orthopaedic Hospital (Stanmore)		N/A ⁸																
Royal Surrey County Hospital NHS Foundation Trust		282	11	100%	100%	2.0	37%	69.4										
Royal United Hospital Bath NHS Trust	77%	770	17	95%	99%	2.3	42%	71.2										
Royal United Hospital		Salford Royal NHS Foundation Trust	16%															
Salford Royal		83	12	59%	65%	2.7	43%	70.3										
Salisbury NHS Foundation Trust	101%	612	12	94%	94%	2.1	39%	72.3	1									
Salisbury District Hospital		Sandwell And West Birmingham Hospitals NHS Trust	92%															
City Hospital		Sandwell General Hospital																
	506	13	93%	98%	2.1	39%	69.9											

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¹ Compliance (NHS Trust/Local Health Board Only) - the percentage of cases submitted to the NJR compared to HES/PEDW.

² Consent Rate - percentage of cases submitted to the NJR with patient consent confirmed.

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⁸ Compliance figures were unavailable.

Hospital	Compliance (NHS Trust/Local Health Board Only) ¹						Outliers: Hips						Outliers: Knees					
	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶		
Sheffield Teaching Hospitals NHS Foundation Trust	54%	554	20	88%	99%	2.4	48%	68.2										
Northern General Hospital	846	15	94%	100%	2.2	40%	67.9											
Royal Hallamshire Hospital																		
Sherwood Forest Hospitals NHS Foundation Trust	92%	852	16	97%	99%	2.2	43%	68.2										
Kings Mill Hospital																		
Shrewsbury and Telford Hospital NHS Trust	57%	43	6	93%	100%	2.3	35%	71.1										
Royal Shrewsbury Hospital	299	7	100%	99%	2.2	47%	71.0											
The Princess Royal Hospital																		
South Devon Healthcare NHS Foundation Trust	71%	790	17	78%	96%	2.3	45%	72.4										
Torbay Hospital																		
South Eastern HSC Trust	N/A ⁷	74	8	86%	N/A ⁷	2.4	N/A ⁷	N/A ⁷										
Ulster Hospital Dundonald																		
Southend University Hospital NHS Foundation Trust	61%	475	15	78%	100%	2.2	42%	72.7										
Southend Hospital																		
Southern HSC Trust	N/A ⁷	463	8	90%	N/A ⁷	2.2	N/A ⁷	N/A ⁷										
Craigavon Area Hospital																		
Southport And Ormskirk Hospital NHS Trust	96%																	

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	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2012 ⁶	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶		
Ormskirk & District General Hospital	379	11	87%	100%	2.0	43%	70.0											
Southport and Formby District General Hospital	36	7	83%	100%	2.2	39%	72.8											
South Tees Hospitals NHS Foundation Trust	95%																	
Friarage Hospital	863	17	100%	100%	2.1	43%	69.6											
The James Cook University Hospital	905	18	99%	100%	2.2	43%	69.0											
South Tyneside NHS Foundation Trust	90%																	
South Tyneside District Hospital	249	7	81%	100%	2.2	47%	71.3											
South Warwickshire NHS Foundation Trust	82%																	
Warwick Hospital	929	12	96%	98%	2.1	40%	70.3											
St George's Healthcare NHS Trust	88%																	
St George's Hospital (Tooting)	110	12	100%	98%	2.7	39%	71.3											
St Helens And Knowsley Hospitals NHS Trust	93%																	
Whiston Hospital	849	12	79%	98%	2.3	44%	69.4											
Stockport NHS Foundation Trust	91%																	
Stepping Hill Hospital	816	11	98%	98%	2.2	42%	70.8											
Surrey And Sussex Healthcare NHS Trust	74%																	
East Surrey Hospital	418	14	73%	96%	2.2	39%	72.2											
Tameside Hospital NHS Foundation Trust	75%																	
Tameside General Hospital	395	12	99%	99%	2.3	41%	70.1											

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	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶		
Taunton And Somerset NHS Foundation Trust	85%	10	100%	100%	2.3	42%	72.8											
Musgrove Park Hospital	731	9	95%	100%	2.3	40%	70.8											
The Dudley Group Of Hospitals NHS Foundation Trust	852	13	93%	100%	2.3	43%	73.8											
Russells Hall Hospital	269	11	47%	96%	2.5	37%	69.4											
The Hillingdon Hospital NHS Foundation Trust	562	14	86%	88%	2.0	43%	70.2											
Hillingdon Hospital	1186	14	99%	99%	2.3	40%	68.4											
Mount Vernon Treatment Centre	79	13	61%	90%	2.4	25%	71.3											
The Newcastle Upon Tyne Hospitals NHS Foundation Trust	616	10	88%	97%	2.1	44%	71.7											
Freeman Hospital	662	9	97%	99%	2.4	44%	69.2											
The Royal Victoria Infirmary	697	14	98%	98%	2.1	41%	70.2											
The Princess Alexandra Hospital NHS Trust	90%																	
Princess Alexandra Hospital																		
The Queen Elizabeth Hospital King's Lynn NHS Foundation Trust																		
The Queen Elizabeth Hospital																		
The Rotherham NHS Foundation Trust																		
Rotherham District General Hospital																		
The Royal Bournemouth And Christchurch Hospitals NHS Foundation Trust																		

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⁵ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

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Trust/Local Health Board/Company	Compliance (NHS Trust/Local Health Board Only) ¹						Outliers: Hips						Outliers: Knees					
	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶		
Royal Bournemouth Hospital	1889	13	93%	99%	2.0	40%	71.4											
The Royal Orthopaedic Hospital NHS Foundation Trust			92%															
Royal Orthopaedic Hospital	1772	25	96%	96%	2.0	45%	66.4											
The Royal Wolverhampton Hospitals NHS Trust			99%															
Cannock Chase Hospital	919	17	98%	99%	2.0	42%	69.1											
New Cross Hospital	171	15	98%	99%	2.6	41%	74.0											
The Whittington Hospital NHS Trust			66%															
The Whittington Hospital	345	7	95%	99%	2.0	40%	68.2											
United Lincolnshire Hospitals NHS Trust			82%															
County Hospital Louth	157	10	99%	99%	1.8	49%	66.4											
Grantham and District Hospital	400	6	92%	99%	2.1	36%	71.1											
Lincoln County Hospital	411	15	87%	96%	2.3	35%	72.2											
Pilgrim Hospital	411	13	89%	99%	2.3	42%	70.9											
University College London Hospitals NHS Foundation Trust			93%															
University College Hospital	733	13	67%	91%	2.1	33%	63.5											
University Hospital Birmingham NHS Trust			75%															
Queen Elizabeth Hospital Birmingham	60	6	68%	90%	2.3	41%	69.8											
University Hospital Of South Manchester NHS Foundation Trust			76%															

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		Outliers: Hips						Outliers: Knees														
Trust/Local Health Board/Company		Compliance (NHS Trust/Local Health Board Only) ¹			Consent Rate (%) 2016 ²			Linkability (%) 2016 ³			Average Age At Operation 2016			Percentage Male Patients 2016			Average Age At Operation 2016			Percentage Male Patients 2016		
Hospital	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Male Patients 2016	Average 90-day Mortality ⁴	Male Patients 2016	Average 90-day Mortality ⁴	Male Patients 2016	Average 90-day Mortality ⁴	Male Patients 2016	Average 90-day Mortality ⁴	Male Patients 2016	Average 90-day Mortality ⁴	Male Patients 2016	Average 90-day Mortality ⁴	Male Patients 2016	Average 90-day Mortality ⁴	Male Patients 2016	Average 90-day Mortality ⁴	
Wythenshawe Hospital	528	11	98%	100%	2.4	37%	70.7															
University Hospitals Bristol NHS Foundation Trust		87%																				
Bristol Royal Hospital for Children	37	9	84%	84%	2.4	32%	73.3															
University Hospitals Coventry And Warwickshire NHS Trust		91%																				
Hospital Of St Cross	1211	20	98%	98%	2.0	39%	68.3															
University Hospital (Coventry)	387	23	99%	99%	2.6	42%	71.5															
University Hospitals Of Leicester NHS Trust		88%																				
Leicester General Hospital	1898	25	95%	100%	2.3	40%	69.6															
University Hospitals Of Morecambe Bay NHS Foundation Trust		77%																				
Furness General Hospital	337	9	98%	99%	2.2	43%	70.2															
Royal Lancaster Infirmary	339	13	99%	100%	2.4	40%	72.8															
Westmorland General Hospital	535	14	100%	97%	1.9	39%	69.0															
University Hospitals Of North Midlands NHS Trust		66%																				
County Hospital	407	16	98%	99%	2.3	38%	69.4															
Royal Stoke University Hospital	529	18	80%	100%	2.3	42%	70.8															
University Hospital Southampton NHS Foundation Trust		90%																				

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Trust/Local Health Board/Company	Outliers: Hips						Outliers: Knees						
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Southampton General Hospital	996	27	94%	98%	2.2	36%	70.1			1		1	
Walsall Healthcare NHS Trust	94%												
Manor Hospital	462	9	100%	98%	2.1	41%	69.4						
Warrington and Halton Hospitals NHS Foundation Trust	93%												
The Cheshire and Merseyside Treatment Centre	747	10	95%	94%	2.0	38%	68.5						
Warrington Hospital	76	10	91%	92%	2.8	44%	71.9						
Western HSC Trust	N/A ⁷												
Altnagelvin Area Hospital	471	11	96%	N/A ⁷	2.2	N/A ⁷	N/A ⁷						
Western Sussex Hospitals NHS Trust	88%												
St Richard's Hospital	1386	22	95%	100%	2.3	40%	72.5						
Worthing Hospital	15	3	33%	87%	2.5	54%	73.0						
West Hertfordshire Hospitals NHS Trust	93%												
St Albans City Hospital	865	9	89%	97%	2.0	39%	69.1						
Watford General Hospital	264	9	79%	97%	2.7	39%	73.5						
Weston Area Health NHS Trust	88%												
Weston General Hospital	507	9	92%	92%	2.2	45%	71.1						
West Suffolk Hospitals NHS Trust	83%												
West Suffolk Hospital	881	11	98%	100%	2.1	43%	71.3						
Wirral University Teaching Hospital NHS Foundation Trust	94%												

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Arrowe Park Hospital	535	14	92%	98%	2.5	41%	72.4											
Clatterbridge Hospital	697	14	98%	99%	1.9	37%	68.0											
Worcestershire Acute Hospitals NHS Trust	90%																	
Alexandra Hospital	874	17	99%	100%	2.2	41%	71.5											
Kidderminster Treatment Centre	133	6	97%	96%	2.0	36%	70.0											
Worcestershire Royal Hospital	98	8	85%	98%	2.2	27%	73.6											
Wrightington Wigan And Leigh NHS Foundation Trust	98%																	
Royal Albert Edward Infirmary	19	9	100%	100%	2.5	26%	73.8											
Wrightington Hospital	3114	36	99%	99%	2.1	45%	67.1											
Wye Valley NHS Trust	82%																	
Hereford County Hospital	578	11	100%	100%	2.1	40%	70.6											
Yeovil District Hospital NHS Foundation Trust	49%																	
Yeovil District Hospital	418	8	89%	100%	2.2	41%	70.7											
York Teaching Hospital NHS Foundation Trust	93%																	
Bridlington and District Hospital	836	12	97%	99%	2.2	43%	70.0											
Scarborough General Hospital	71	6	97%	94%	2.5	28%	76.4											
York Hospital	692	15	87%	99%	2.4	43%	72.5											
3iFiveTwo Group																		

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		No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶
Kingsbridge Private Hospital (Belfast)		112	5	63%	N/A ⁷	1.8	N/A ⁷	N/A ⁷						
Aspen Healthcare Limited														
Clairemont Hospital (South Yorkshire)		833	24	70%	95%	1.9	44%	68.2						
Highgate Hospital (London)		59	10	98%	97%	1.9	32%	68.6						
Holly House Hospital (Essex)		332	14	92%	97%	2.0	42%	69.0						
Parkside Hospital (Greater London)		143	11	97%	82%	1.8	42%	68.5						
Bentenden Healthcare Society														
Benenden Hospital (Kent)		664	15	93%	93%	1.9	43%	70.2						
BMI Healthcare														
BMI Alexandra Hospital Cheadle (Cheshire)		815	39	100%	95%	2.1	44%	68.0						
BMI Bath Clinic (Avon)		269	8	99%	98%	1.9	40%	68.8						
BMI Beardwood Private Hospital (Lancashire)		263	14	94%	99%	2.2	43%	70.0						
BMI Bishops Wood Hospital (Middlesex)		279	9	97%	92%	1.8	45%	69.9						
BMI Blackheath Hospital (Greater London)		122	12	66%	93%	2.0	34%	67.5						
BMI Bury St Edmunds (Suffolk)		351	7	97%	98%	2.0	45%	70.1						
BMI Chaucer Hospital (Kent)		120	11	95%	97%	2.1	36%	71.6						
BMI Chelmsfield Park Hospital (Kent)		167	6	100%	97%	2.0	49%	69.7						
BMI Clementine Churchill Hospital (Middlesex)		348	23	88%	94%	1.9	34%	68.9						

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Hospital	Compliance (NHS Trust/Local Health Board Only) ¹		Outliers: Hips				Outliers: Knees				
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BMI Coombe Wing (Surrey)	11	3	0%	100%	2.1	55%	67.8				
BMI Esperance (East Sussex)	213	5	92%	96%	1.9	39%	69.9		1		
BMI Fawkham Manor Hospital (Kent)	148	7	100%	97%	2.0	47%	67.6				
BMI Garden Hospital (Greater London)	71	6	97%	97%	2.3	38%	68.5				
BMI Gisburne Park Hospital (Lancashire)	140	12	98%	97%	2.1	46%	67.7		1		
BMI Goring Hall Hospital (West Sussex)	909	10	97%	99%	2.0	42%	70.3		1		
BMI Hampshire Clinic (Hampshire)	298	10	88%	94%	2.0	43%	69.0				
BMI Harrogate (North Yorkshire)	415	8	96%	95%	1.9	44%	68.6				
BMI Highfield Hospital (Lancashire)	620	24	94%	86%	2.1	45%	67.5				
BMI Huddersfield (West Yorkshire)	440	8	100%	100%	2.1	45%	69.7				
BMI Kings Oak Hospital (Middlesex)	189	14	95%	89%	1.9	42%	70.2				
BMI Lancaster (Lancashire)	166	8	100%	100%	1.8	39%	69.5				
BMI Lincoln (Lincolnshire)	382	9	95%	100%	2.0	40%	69.4				
BMI Manor Hospital (Bedfordshire)	189	7	100%	96%	2.0	37%	68.6				
BMI Mount Alvernia Hospital (Surrey)	170	8	89%	91%	1.8	41%	68.4				
BMI Princess Margaret (Berkshire)	170	14	99%	94%	1.8	49%	66.7				
BMI Priory Hospital (West Midlands)	415	19	98%	92%	1.9	50%	65.5				
BMI Ridgeway Hospital (Wiltshire)	396	10	97%	95%	1.8	43%	67.6				
BMI Runnymede Hospital (Surrey)	290	11	100%	90%	1.8	45%	68.5				

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Hospital	Trust/Local Health Board/Company Compliance (NHS Trust/Local Health Board Only) ¹	Outliers: Hips						Outliers: Knees						
		No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶
BMI Sandringham Hospital (Norfolk)	273	6	98%	98%	2.2	47%	70.0							
BMI Sarum Road Hospital (Hampshire)	204	8	84%	93%	1.9	41%	71.1			1				
BMI Saxon Clinic (Buckinghamshire)	245	5	89%	92%	1.9	43%	68.4							
BMI Shelburne Hospital (Buckinghamshire)	111	5	63%	76%	1.9	46%	68.6							
BMI Shirley Oaks Hospital (Surrey)	25	6	24%	100%	2.1	40%	67.3							
BMI The Beaumont Hospital (Lancashire)	145	11	100%	100%	2.0	44%	67.0							
BMI The Cavel Hospital (Middlesex)	252	12	100%	80%	2.9	45%	69.8							
BMI The Chiltern (Buckinghamshire)	398	9	96%	92%	2.0	38%	69.0							
BMI The Droitwich Spa Hospital (Worcestershire)	535	16	99%	99%	2.0	45%	68.9							
BMI The Edgbaston Hospital (West Midlands)	451	22	84%	75%	1.8	56%	65.0							
BMI The Harbour Hospital (Dorset)	250	7	94%	94%	2.1	45%	71.4							
BMI The London Independent Hospital (Greater London)	94	12	91%	93%	2.0	41%	67.3							
BMI The Meriden Hospital (West Midlands)	415	16	100%	98%	1.9	41%	66.5							
BMI The Park Hospital (Nottinghamshire)	554	17	83%	96%	2.0	47%	67.7							
BMI The Sloane Hospital (Kent)	71	7	35%	93%	2.1	30%	72.0							
BMI The Somerfield Hospital (Kent)	315	10	99%	97%	2.1	44%	67.2	1						
BMI The South Cheshire Private Hospital (Cheshire)	135	10	100%	99%	1.8	41%	69.0							
BMI Thornbury Hospital (South Yorkshire)	778	25	99%	97%	1.9	48%	67.4							

Compliance, consent and linkability are red if lower than 80%, green if 95% or more and amber in between

¹ Compliance (NHS Trust/Local Health Board Only) - the percentage of cases submitted to the NJR compared to HES/PEDW.

² Consent Rate - percentage of cases submitted to the NJR with patient consent confirmed.

³ Linkability - the proportion of records which include a valid patient's NHS number compared with the number of procedures recorded on the NJR.

⁴ Outliers with respect to 90-day mortality following primary operations performed from 2003 onwards. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

⁵ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

⁶ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

⁷ Data for hospitals are excluded as there is no tracing service for units in Northern Ireland.

⁸ Compliance figures were unavailable.

Hospital	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Percentage ASA Grade 2016	Average Age At Operation 2016	Outliers: Hips			Outliers: Knees		
							Male Patients 2016	90-day Mortality ⁴	Revision rate since 2012 ⁵	Male Patients 2016	90-day Mortality ⁴	Revision rate since 2012 ⁵
BMI Three Shires Hospital (Northamptonshire)	682	11	99%	98%	2.0	45%	68.1					
BMI Wimborne Hospital (Dorset)	158	10	100%	100%	2.0	32%	73.5					
BMI Woodlands Hospital (County Durham)	463	9	59%	82%	2.0	41%	71.0					
Care UK												
Barbrough NHS Treatment Centre (Derbyshire)	1903	11	100%	100%	2.0	44%	69.2					
Emersons Green NHS Treatment Centre (Avon)	1471	11	100%	100%	1.9	42%	68.9					
North East London NHS Treatment Centre (Essex)	494	6	100%	100%	2.2	41%	70.4					
Peninsula NHS Treatment Centre (Devon)	798	7	97%	99%	1.9	42%	69.1					
Shepton Mallet Treatment Centre (Somerset)	908	9	100%	100%	1.9	43%	70.2					
Southampton NHS Treatment Centre (Hampshire)	457	5	98%	99%	2.0	35%	68.0					
Circle												
Circle Bath Hospital (Avon)	1018	14	85%	97%	1.8	43%	68.0					
Circle Reading (Berkshire)	613	18	88%	98%	1.8	43%	66.7					
Nottingham NHS Treatment Centre (Nottinghamshire)	435	7	95%	96%	2.3	46%	69.2					
Bupa Group												

Compliance, consent and linkability are red if lower than 80%, green if 95% or more and amber in between¹ Compliance (NHS Trust/Local Health Board Only) - the percentage of cases submitted to the NJR compared to HES/PEDW.² Consent Rate - percentage of cases submitted to the NJR with patient consent confirmed.³ Linkability - the proportion of records which include a valid patient's NHS number compared with the number of procedures recorded on the NJR.⁴ Outliers with respect to 90-day mortality following primary operations performed from 2003 onwards. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).⁵ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).⁶ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).⁷ Data for hospitals are excluded as there is no tracing service for units in Northern Ireland.⁸ Compliance figures were unavailable.

		Outliers: Hips						Outliers: Knees						
Hospital	Compliance (NHS Trust/Local Health Board Only) ¹	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	90-day Mortality ⁴	Revision rate since 2012 ⁶	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶
Bupa Cromwell Hospital (Greater London)	143	13	87%	59%	1.8	52%	67.7							
East Kent Medical Services Ltd	412	4	96%	98%	2.0	40%	68.5							
Spencer Private Hospitals - Margate (Kent)														
Fairfield Hospital	263	11	98%	98%	2.1	48%	66.8							
Foscote Court (Banbury) Trust Limited														
Foscote Private Hospital (Oxfordshire)	84	3	99%	99%	1.9	48%	70.0							
HCA International Ltd														
London Bridge Hospital (London)	285	23	90%	67%	1.8	45%	63.1							
The Lister Hospital (London)	100	14	72%	60%	2.0	40%	65.4							
The Princess Grace Hospital (London)	422	17	63%	69%	1.9	46%	66.1							
The Wellington Hospital (London)	112	14	95%	79%	1.8	45%	62.3							
Healthcare Management Trust														
Sancta Maria Hospital (West Glamorgan)	338	7	99%	96%	2.0	42%	69.2							
St Hugh's Hospital (North East Lincolnshire)	562	14	100%	100%	2.1	44%	69.4							
Horder Healthcare														
Horder Healthcare (East Sussex)	2236	15	99%	99%	1.9	40%	70.7							
The McIndoe Centre (West Sussex)	8	1	100%	100%	2.0	38%	71.8							
Hospital Of St John And St Elizabeth														

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¹ Compliance (NHS Trust/Local Health Board Only) - the percentage of cases submitted to the NJR compared to the NJR/PEDW.

² Consent Rate - percentage of cases submitted to the NJR with patient consent confirmed.

³ Linkability - the proportion of records which include a valid patient's NHS number compared with the number of procedures recorded on the NJR.

⁴ Outliers with respect to 90-day mortality following primary operations performed from 2003 onwards. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

⁵ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

⁶ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

⁷ Data for hospitals are excluded as there is no tracing service for units in Northern Ireland.

⁸ Compliance figures were unavailable.

Hospital	Compliance (NHS Trust/Local Health Board Only) ¹	Outliers: Hips						Outliers: Knees					
		No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	90-day Mortality ⁴	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶
Hospital of St John And St Elizabeth (Greater London)	149	18	93%	73%	2.0	44%	69.8						
Kent Institute of Medicine and Surgery (Kent)	779	25	100%	99%	2.1	44%	68.0						
King Edward VII Hospital Sister Agnes	628	15	76%	59%	1.9	45%	68.5						
King Edward VII Hospital Sister Agnes (Greater London)	127	5	97%	N/A ⁷	1.9	N/A ⁷	N/A ⁷						
North West Independent Hospital (County Londonderry)	273	7	100%	93%	2.0	38%	73.1						
Nuffield Health	330	10	100%	97%	1.9	43%	68.6						
Nuffield Health Bournemouth Hospital (Dorset)	92	7	78%	93%	2.1	40%	69.4						
Nuffield Health Brentwood Hospital (Essex)	218	12	99%	98%	1.9	47%	68.6						
Nuffield Health Brighton Hospital (East Sussex)	387	14	99%	98%	1.9	44%	69.1						
Nuffield Health Bristol Hospital (Avon)	231	10	92%	96%	1.9	41%	69.9						
Nuffield Health Cambridge Hospital (Cambridgeshire)	464	8	80%	94%	1.9	39%	70.8						
Nuffield Health Cheltenham Hospital (Gloucestershire)													
Nuffield Health Chichester Hospital (West Sussex)													

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² Consent Rate - percentage of cases submitted to the NJR with patient consent confirmed.

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⁴ Outliers with respect to 90-day mortality following primary operations performed from 2003 onwards. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

⁵ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

⁶ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

⁷ Data for hospitals are excluded as there is no tracing service for units in Northern Ireland.

⁸ Compliance figures were unavailable.

Hospital	Compliance (NHS Trust/Local Health Board Only) ¹	Outliers: Hips						Outliers: Knees					
		No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2012 ⁵	90-day Mortality ⁴	Revision rate since 2003 ⁶	Revision rate since 2012 ⁶
Nuffield Health Derby Hospital (Derbyshire)	965	16	96%	95%	1.9	46%	67.3						
Nuffield Health Exeter Hospital (Devon)	639	11	100%	96%	1.9	42%	69.9						
Nuffield Health Guildford Hospital (Surrey)	148	7	97%	93%	1.9	45%	69.9						
Nuffield Health Haywards Heath Hospital (West Sussex)	173	5	92%	96%	1.8	39%	69.0						
Nuffield Health Hereford Hospital (Herefordshire)	493	8	93%	99%	1.9	42%	71.1						
Nuffield Health Ipswich Hospital (Suffolk)	340	7	100%	95%	2.0	40%	71.7						
Nuffield Health Leeds Hospital (West Yorkshire)	716	21	85%	98%	1.9	45%	67.2						
Nuffield Health Leicester Hospital (Leicestershire)	410	14	94%	99%	2.0	47%	68.0						
Nuffield Health Newcastle-upon-Tyne Hospital (Tyne & Wear)	751	20	100%	99%	1.7	46%	65.6						
Nuffield Health North Staffordshire Hospital (Staffordshire)	608	10	96%	91%	2.0	45%	68.9						
Nuffield Health Plymouth Hospital (Devon)	470	9	100%	99%	1.9	49%	67.7						
Nuffield Health Shrewsbury Hospital (Shropshire)	129	10	100%	98%	1.8	41%	68.1						
Nuffield Health Taunton Hospital (Somerset)	444	10	97%	94%	2.0	43%	69.9						
Nuffield Health Tees Hospital (Cleveland)	719	12	99%	100%	1.9	48%	66.8	1					
Nuffield Health The Grosvenor Hospital (Cheshire)	381	8	99%	99%	1.9	46%	69.3						

Compliance, consent and linkability are red if lower than 80%, green if 95% or more and amber in between

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Hospital	Compliance (NHS Trust/Local Health Board Only) ¹		Outliers: Hips				Outliers: Knees				
	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Average Age At Operation 2016	Percentage Male Patients 2016	Revision rate since 2003 ⁵	90-day Mortality ⁴	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶
Nuffield Health The Manor Hospital (Oxfordshire)	577	13	92%	89%	1.9	46%	67.7				
Nuffield Health Tunbridge Wells Hospital (Kent)	178	3	78%	95%	2.0	44%	70.5				
Nuffield Health Warwickshire Hospital (Warwickshire)	567	20	85%	87%	1.9	48%	67.5				
Nuffield Health Wessex Hospital (Hampshire)	456	17	99%	96%	1.8	43%	67.7				
Nuffield Health Woking Hospital (Surrey)	142	9	96%	98%	1.8	41%	69.5				
Nuffield Health Wolverhampton Hospital (West Midlands)	382	10	100%	99%	1.9	42%	69.5				
Nuffield Health York Hospital (North Yorkshire)	484	8	97%	95%	1.8	49%	69.0				
Vale Hospital (Glamorgan)	396	11	97%	97%	1.9	44%	68.5				
One Ashford Healthcare Ltd	218	14	100%	99%	2.0	34%	69.9				
Orthopaedic Spine and Specialist Hospital (Cambridgeshire)	49	1	94%	98%	2.1	42%	69.9				
Ramsay Health Care											
Ashtead Hospital (Surrey)	311	8	100%	99%	1.9	47%	70.4				
Duchy Hospital (Cornwall)	1158	12	74%	82%	1.8	46%	69.4				
Euxton Hall Hospital (Lancashire)	344	12	100%	100%	2.0	43%	67.7				
Fitzwilliam Hospital (Cambridgeshire)	901	15	99%	99%	2.0	42%	69.0				

Compliance, consent and linkability are red if lower than 80%, green if 95% or more and amber in between¹ Compliance (NHS Trust/Local Health Board Only) - the percentage of cases submitted to the NJR compared to HES/PEDW.² Consent Rate - percentage of cases submitted to the NJR with patient consent confirmed.³ Linkability - the proportion of records which include a valid patient's NHS number compared with the number of procedures recorded on the NJR.⁴ Outliers with respect to 90-day mortality following primary operations performed from 2003 onwards. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).⁵ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).⁶ Data for hospitals are excluded as there is no tracing service for units in Northern Ireland.⁷ Compliance figures were unavailable.

Hospital	Compliance (NHS Trust/Local Health Board Only) ¹	Outliers: Hips						Outliers: Knees					
		No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	90-day Mortality ⁴	Revision rate since 2012 ⁶	Revision rate since 2012 ⁶
Fulwood Hall Hospital (Lancashire)	776	10	100%	100%	2.0	44%	68.1						
Mount Stuart Hospital (Devon)	425	12	99%	97%	1.9	43%	68.9						
New Hall Hospital (Wiltshire)	502	7	94%	98%	1.7	44%	68.8	1					
North Downs Hospital (Surrey)	315	10	100%	96%	1.8	40%	69.6	1					
Nottingham Woodthorpe Hospital (Nottinghamshire)	593	18	99%	99%	2.1	43%	68.3						
Oaklands Hospital (Lancashire)	533	15	100%	100%	1.9	45%	67.1						
Oaks Hospital (Essex)	483	9	100%	99%	1.8	41%	69.1						
Park Hill Hospital (South Yorkshire)	576	10	100%	99%	2.1	40%	68.7						
Pinehill Hospital (Hertfordshire)	477	12	94%	99%	1.8	42%	68.5						
Renacres Hall Hospital (Lancashire)	405	10	100%	100%	1.9	45%	68.9						
Rivers Hospital (Hertfordshire)	467	7	95%	93%	1.8	41%	67.9						
Rowley Hall Hospital (Staffordshire)	292	8	100%	99%	2.0	45%	70.4						
Springfield Hospital (Essex)	806	12	95%	97%	2.1	45%	68.9						
The Berkshire Independent Hospital (Berkshire)	156	8	96%	97%	2.0	38%	70.6						
The Yorkshire Clinic (West Yorkshire)	936	16	91%	95%	2.0	41%	68.2						
West Midlands Hospital (West Midlands)	245	7	100%	98%	2.1	49%	69.7						
Winfield Hospital (Gloucestershire)	456	7	99%	99%	1.9	47%	67.8						
Woodland Hospital (Northamptonshire)	872	8	90%	96%	2.0	38%	67.9						
Clifton Park Hospital (North Yorkshire)	878	10	98%	98%	1.9	42%	68.9	1					

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² Consent Rate - percentage of cases submitted to the NJR with patient consent confirmed.

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Hospital	Compliance (NHS Trust/Local Health Board Only) ¹	Outliers: Hips						Outliers: Knees					
		No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Average Age At Operation 2016	Percentage Male Patients 2016	Revision rate since 2003 ⁵	90-day Mortality ⁴	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵
Horton NHS Treatment Centre (Oxfordshire)	944	10	100%	100%	2.2	42%	69.7						1
Spire Healthcare													
Dunedin Hospital (Berkshire)	110	8	100%	95%	1.7	42%	69.6						
Elland Hospital (West Yorkshire)	504	14	100%	100%	2.1	45%	68.5						
Fylde Coast Hospital (Lancashire)	448	12	83%	89%	1.8	45%	68.3						
Methley Park Hospital (West Yorkshire)	406	9	100%	99%	2.0	45%	67.2						
Regency Hospital (Cheshire)	350	8	99%	99%	2.0	40%	70.7						
Spire Alexandra Hospital (Kent)	346	11	97%	98%	2.2	40%	69.2						
Spire Bristol Hospital (Avon)	1077	23	100%	99%	1.9	42%	67.3						
Spire Bushey Hospital (Hertfordshire)	617	23	87%	90%	1.8	38%	66.8						
Spire Cambridge Lea Hospital (Cambridgeshire)	608	18	100%	100%	1.8	46%	67.5						
Spire Cardiff Hospital (Glamorgan)	388	16	98%	98%	2.1	44%	68.4						
Spire Cheshire Hospital (Cheshire)	496	16	100%	96%	2.0	43%	67.4						
Spire Clare Park Hospital (Surrey)	328	9	72%	96%	1.8	45%	67.3						
Spire Gatwick Park Hospital (Surrey)	522	9	97%	98%	1.9	38%	68.3						
Spire Harpenden Hospital (Hertfordshire)	668	21	98%	96%	2.0	42%	68.4						
Spire Hartwood Hospital (Essex)	393	17	100%	96%	1.9	41%	68.1						
Spire Hull and East Riding Hospital (East Yorkshire)	1063	20	98%	96%	2.0	43%	68.4						
Spire Leeds Hospital (West Yorkshire)	478	17	99%	98%	1.9	39%	68.4						

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Hospital	Compliance (NHS Trust/Local Health Board Only) ¹	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Percentage Male Patients 2016	Average Age At Operation 2016	Outliers: Hips			Outliers: Knees		
								90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶
Spire Leicester Hospital (Leicestershire)	707	16	99%	99%	2.0	43%	69.1						
Spire Little Aston Hospital (West Midlands)	462	23	100%	99%	1.9	43%	69.0						
Spire Liverpool Hospital (Merseyside)	418	8	100%	99%	2.0	45%	67.1						
Spire Manchester Hospital (Lancashire)	307	17	92%	95%	1.9	45%	63.6						
Spire Montefiore Hospital (East Sussex)	581	10	89%	91%	1.9	38%	69.7						
Spire Murrayfield Hospital (Merseyside)	495	9	100%	99%	1.9	40%	68.3						
Spire Norwich Hospital (Norfolk)	1157	12	95%	97%	1.9	45%	69.5						
Spire Parkway Hospital (West Midlands)	536	11	97%	99%	1.8	42%	68.9						
Spire Portsmouth Hospital (Hampshire)	793	13	100%	98%	1.9	42%	68.6						
Spire Roding Hospital (Essex)	188	11	96%	97%	2.0	48%	67.5						
Spire Southampton Hospital (Hampshire)	1150	17	97%	92%	1.8	41%	67.2						
Spire South Bank Hospital (Worcestershire)	446	10	98%	98%	1.8	45%	69.7						
Spire Sussex Hospital (East Sussex)	476	7	100%	98%	2.0	40%	69.1						
Spire Thames Valley (Berkshire)	114	6	99%	94%	1.9	42%	69.3						
Spire Tunbridge Wells Hospital (Kent)	264	6	100%	98%	1.8	47%	69.8						
Spire Washington Hospital (Tyne & Wear)	781	21	99%	98%	1.9	43%	66.8						
Spire Wellesley Hospital (Essex)	577	9	97%	96%	1.9	37%	69.8						
Spire Yale Hospital (Wrexham)	446	13	98%	97%	1.9	45%	70.5						
St Anthony's (Surrey)	351	13	84%	74%	2.1	44%	68.9						
St Josephs Hospital													

Compliance, consent and linkability are red if lower than 80%, green if 95% or more and amber in between

¹ Compliance (NHS Trust/Local Health Board Only) - the percentage of cases submitted to the NJR compared to the NJR/PEDW.

² Consent Rate - percentage of cases submitted to the NJR with patient consent confirmed.

³ Linkability - the proportion of records which include a valid patient's NHS number compared with the number of procedures recorded on the NJR.

⁴ Outliers with respect to 90-day mortality following primary operations performed from 2003 onwards. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

⁵ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

⁶ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

⁷ Data for hospitals are excluded as there is no tracing service for units in Northern Ireland.

⁸ Compliance figures were unavailable.

Hospital	Compliance (NHS Trust/Local Health Board Only) ¹					Outliers: Hips					Outliers: Knees		
	No. of Procedures 2016	No. of Consultants 2016	Consent Rate (%) 2016 ²	Linkability (%) 2016 ³	Average ASA Grade 2016	Percentage Male Patients 2016	Average Age At Operation 2016	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶	90-day Mortality ⁴	Revision rate since 2003 ⁵	Revision rate since 2012 ⁶
St. Josephs Hospital (Gwent)	257	11	91%	95%	2.0	41%	68.6						
The London Clinic	206	8	100%	72%	1.7	41%	60.0						
The New Victoria Hospital Limited													
The New Victoria Hospital (Surrey)	115	6	97%	91%	2.0	30%	70.3						
The Ulster Independent Clinic													
Ulster Independent Clinic (Belfast)	586	18	99%	N/A ⁷	1.9	N/A ⁷	N/A ⁷						

Please note for the data in following table:

Compliance, Consent and Linkability are:

 Red if lower than 80%

 Amber if equal to or greater than 80% and lower than 95%

 Green if 95% or more

- Linkability for some hospitals will be lower than expected if they have private patients from outside England and Wales
- Part Four data covers procedures carried out between 1 January 2016 and 31 December 2016

Outlier analyses are:

 Red if units are above the upper of the 99.8% control limits (approximates to 3 standard deviations (SDs))

Compliance, consent and linkability are red if lower than 80%, green if 95% or more and amber in between

¹ Compliance (NHS Trust/Local Health Board Only) - the percentage of cases submitted to the NJR compared to HES/PEDW.

² Consent Rate - percentage of cases submitted to the NJR with patient consent confirmed.

³ Linkability - the proportion of records which include a valid patient's NHS number compared with the number of procedures recorded on the NJR.

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⁵ Outliers with respect to revisions (at any time) following primary operations performed from 2003 onwards [from 1 April 2003 to 1 March 2017 inclusive]. Units above the upper of the 99.8% control limits (approx 3 SDs) are flagged in red (1).

⁶ Data for hospitals are excluded as there is no tracing service for units in Northern Ireland.

⁷ Compliance figures were unavailable.