

CRM Device Procedures 2018/19: 1-Year Reintervention Rates

Only first implants during 2018/19 have been counted as index procedures.

Each patient has been followed for 365 days to determine whether that patient has undergone any further pacemaker or complex device procedure (at the same Hospital or any other).

Reinterventions have been identified where either NHS No. or [Centre + Hospital No] recurs (the latter has been included in this year's audit to improve sensitivity). For each patient, only the first reintervention has been counted.

"Tier 1" centres submitted $\geq 90\%$ NHS Nos during both the index year (2018/19) and follow up (2019/20): their reintervention rates are considered credible.

"Tier 2" centres did not achieve sufficient NHS No. submission for their reintervention rates to be credible (the true rates are likely to be significantly higher): they are therefore greyed out and represented as hollow markers in the funnel chart of the report.

Centres coloured pink have significantly very high reintervention rates (≥ 3 SE above national mean); those coloured orange have rates ≥ 1.96 SE above national mean.

Centres coloured green have significantly low reintervention rates ≥ 2 SE below national mean.

In accordance with ONS guidance, exact data have been suppressed where case numbers are less than 3, to ensure anonymity of the patient data included in the reporting.

Hospital	Hospital code	Region	Category	NHS No Completeness %			New Pacemaker Implants		New ICD/CRT Implants		
				Completeness NHS No 2018-19	Completeness NHS No 2019-20	>90% NHS No	Tier	PM index cases	PPM reintervention %	Complex index cases	Complex reintervention %
Addenbrookes Hospital	ADD	England	NHS Adult	99.5	99.5	1	Tier 1	227	3.52	99	2.02
Aintree University Hospital	FAZ	England	NHS Adult	98.1	98.2	1	Tier 1	228	1.75	0	0
Airedale General Hospital	AIR	England	NHS Adult	99.7	99.1	1	Tier 1	176	2.84	55	7.27
Alder Hey Hospital	ACH	England	Children's	95.1	91.9	1	Tier 1	17	0	6	0
Arrowe Park Hospital	WIR	England	NHS Adult	100	100	1	Tier 1	214	3.27	0	0
Barnet General Hospital	BNT	England	NHS Adult	99.5	99	1	Tier 1	297	3.7	116	4.31
Barnsley Hospital	BAR	England	NHS Adult	100	100	1	Tier 1	95	1.05	0	0
Barts & The London	BAL	England	NHS Adult	99.5	98.4	1	Tier 1	872	6.31	525	7.24
Basildon Hospital	BAS	England	NHS Adult	99.8	99.9	1	Tier 1	412	7.77	314	5.1
Basingstoke & North Hampshire Hospital	NHH	England	NHS Adult	100	100	1	Tier 1	269	6.32	84	4.76
Bedford Hospital	BED	England	NHS Adult	100	100	1	Tier 1	139	5.04	0	0
Birmingham Children's Hospital	BCH	England	Children's	97.7	100	1	Tier 1	9	0	<3	0
Birmingham City Hospital	DUD	England	NHS Adult	96.1	99.7	1	Tier 1	174	4.6	79	5.06
Blackpool Victoria Hospital	VIC	England	NHS Adult	96.7	89.3	0	Tier 2	279	6.81	232	3.45
BMI The Alexandra Hospital	AHM	England	Private	1.6	2.8	0	Tier 2	26	3.85	5	0
BMI The Meriden Hospital	BMI	England	Private	0	0	0	Tier 2	7	0	3	0
Bradford Royal Infirmary	BRD	England	NHS Adult	99.7	100	1	Tier 1	156	5.13	64	3.12
Bristol Royal Hospital for Children	BRC	England	Children's	100	100	1	Tier 1	3	0	0	0
Bristol Royal Infirmary	BRI	England	NHS Adult	97.1	99.7	1	Tier 1	314	5.73	167	5.39
Bronglais General Hospital	BRG	Wales	NHS Adult	88.9	100	0	Tier 2	0	0	0	0
Broomfield Hospital	BFH	England	NHS Adult	100	100	1	Tier 1	129	1.55	0	0
Calderdale Royal Hospital	RHI	England	NHS Adult	99.5	100	1	Tier 1	189	4.23	82	6.1
Castle Hill Hospital	CHH	England	NHS Adult	98.3	99.4	1	Tier 1	29	0	8	0
Central Middlesex Hospital	CMH	England	NHS Adult	99	96.8	1	Tier 1	34	2.94	0	0
Cheltenham General Hospital	CHG	England	NHS Adult	99.7	99.4	1	Tier 1	328	3.66	111	4.5
Chesterfield Royal Hospital	CHE	England	NHS Adult	100	99.5	1	Tier 1	154	4.55	0	0

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Colchester General Hospital	COL	England	NHS Adult	97.9	81.6	0	Tier 2	306	3.59	<3	0
Conquest Hospital	CGH	England	NHS Adult	98.9	100	1	Tier 1	147	4.76	12	0
Countess of Chester Hospital	COC	England	NHS Adult	100	100	1	Tier 1	259	1.93	0	0
County Hospital Hereford	HCH	England	NHS Adult	100	100	1	Tier 1	104	2.88	14	0
Cromwell Hospital	CRO	England	Private	0	0	0	Tier 2	17	0	11	0
Croydon University Hospital	MAY	England	NHS Adult	28.5	100	0	Tier 2	137	2.19	66	3.03
Cumberland Infirmary	CMI	England	NHS Adult	100	98.2	1	Tier 1	163	3.07	0	0
Darent Valley Hospital	DVH	England	NHS Adult	98.2	97.4	1	Tier 1	206	3.4	<3	0
Darlington Memorial Hospital	DAR	England	NHS Adult	99.8	100	1	Tier 1	230	0.87	0	0
Derriford Hospital	PLY	England	NHS Adult	99.5	98.8	1	Tier 1	354	7.34	51	7.84
Diana, Princess of Wales Hospital Grimsby	GGH	England	NHS Adult	100	100	1	Tier 1	170	3.53	16	6.25
Doncaster Royal Infirmary	DID	England	NHS Adult	100	100	1	Tier 1	239	6.28	0	0
Dorset County Hospital	WDH	England	NHS Adult	99.8	99.5	1	Tier 1	225	4.44	56	12.5
Duchy Hospital, Truro	DUC	England	Private	100	100	1	Tier 1	61	4.92	16	6.25
Ealing Hospital	EAL	England	NHS Adult	99	99.1	1	Tier 1	41	0	0	0
East Surrey Hospital	ESU	England	NHS Adult	99.5	98.9	1	Tier 1	312	3.21	39	0
Eastbourne District General Hospital	DGE	England	NHS Adult	98.9	99.6	1	Tier 1	41	4.88	8	12.5
Edinburgh Royal Infirmary	ERI	Scotland	NHS Adult	95.9	98.7	1	Tier 1	0	0	0	0
Epsom Hospital	EPS	England	NHS Adult	99.1	100	1	Tier 1	24	0	0	0
Evelina Children's Hospital	GUY	England	Private	81.8	97.5	0	Tier 2	0	0	3	0
Exeter Heart	EXH	England	Private	7.4	8	0	Tier 2	20	0	4	0
Fairfield General Hospital	BRY	England	NHS Adult	100	100	1	Tier 1	274	4.74	139	5.04
Forth Valley Royal	FVH	Scotland	NHS Adult	96.5	87	0	Tier 2	21	4.76	7	0
Freeman Hospital Newcastle	FRE	England	NHS Adult	99.3	99.7	1	Tier 1	243	5.76	217	9.68
Frenchay Hospital	FRY	England	NHS Adult	95.2	76.1	0	Tier 2	137	3.65	8	0
Frimley Park Hospital	FRM	England	NHS Adult	99.6	99.1	1	Tier 1	226	4.42	69	7.25
George Eliot Hospital	NUN	England	NHS Adult	98.3	96.5	1	Tier 1	91	3.3	0	0
Glan Clwyd District General Hospital	CLW	Wales	NHS Adult	98.4	100	1	Tier 1	67	5.97	0	0
Glangwili General Hospital	WWG	Wales	NHS Adult	88.7	96.8	0	Tier 2	244	2.46	0	0
Glenfield Hospital	GRL	England	NHS Adult	100	100	1	Tier 1	721	3.33	252	5.56
Gloucestershire Royal Hospital	GLO	England	NHS Adult	100	100	1	Tier 1	<3	0	0	0
Golden Jubilee Hospital	GJH	Scotland	NHS Adult	0.9	5.1	0	Tier 2	22	0	125	2.4
Good Hope Hospital	GHS	England	NHS Adult	99.7	99.6	1	Tier 1	225	5.78	245	10.2
Grantham & District Hospital	GRA	England	NHS Adult	100	100	1	Tier 1	0	0	0	0
Great Ormond Street Hospital	GOS	England	Children's	91.1	91.5	1	Tier 1	15	20	<3	0
Gwynedd Hospital	GWY	Wales	NHS Adult	91	97.2	1	Tier 1	133	6.77	7	0
Hammersmith Hospital	HAM	England	NHS Adult	96.7	98.1	1	Tier 1	428	4.44	169	4.14
Harefield Hospital	HH	England	NHS Adult	98.7	99.2	1	Tier 1	200	6.5	154	6.49
Harley Street Clinic	HSC	England	Private	0	0	0	Tier 2	72	1.39	25	4
Harrogate District Hospital	HAR	England	NHS Adult	100	100	1	Tier 1	84	1.19	<3	0

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Hospital of St Cross	RUG	England	NHS Adult	0	98.1	0	Tier 2	0	0	0	0
Huddersfield Royal Infirmary	HUD	England	NHS Adult	91.7	100	1	Tier 1	29	3.45	20	15
John Radcliffe Hospital	RAD	England	NHS Adult	93.8	96.6	1	Tier 1	469	5.12	233	7.3
Kent Institute Of Medicine & Surgery	KIM	England	Private	0	0	0	Tier 2	43	0	13	0
Kettering General Hospital	KGH	England	NHS Adult	100	99.2	1	Tier 1	137	5.11	83	4.82
King George Hospital Goodmayes	KGG	England	NHS Adult	100	100	1	Tier 1	244	3.28	0	0
Kings College Hospital	KCH	England	NHS Adult	98.9	98.9	1	Tier 1	227	4.41	133	9.02
Kings Mill Hospital	KMH	England	NHS Adult	100	100	1	Tier 1	172	1.74	117	2.56
Kingston Hospital	KTH	England	NHS Adult	100	100	1	Tier 1	157	0	0	0
Leeds General Infirmary	LGI	England	NHS Adult	99.5	99.9	1	Tier 1	425	4.24	202	3.96
Lincoln County Hospital	LIN	England	NHS Adult	100	100	1	Tier 1	238	5.04	53	3.77
Liverpool Heart & Chest Hospital	BHL	England	NHS Adult	99.7	99.8	1	Tier 1	414	3.62	570	4.74
London Bridge Hospital	LBH	England	Private	2.3	0.6	0	Tier 2	67	1.49	19	0
London Independent Hospital	IND	England	Private	46.4	56.5	0	Tier 2	11	0	4	0
Luton & Dunstable Hospital	LDH	England	NHS Adult	100	100	1	Tier 1	151	5.3	0	0
Maelor Hospital Wrexham	WRX	Wales	NHS Adult	96.3	96.6	1	Tier 1	51	1.96	22	0
Maidstone Hospital	MAI	England	NHS Adult	99.7	99.4	1	Tier 1	155	5.81	52	11.54
Manchester Royal Infirmary	MRI	England	NHS Adult	97.1	99.2	1	Tier 1	271	4.8	169	7.1
Medway Maritime Hospital	MDW	England	NHS Adult	89.8	87	0	Tier 2	226	3.54	75	8
Milton Keynes Hospital	MKH	England	NHS Adult	98.8	94.4	1	Tier 1	145	4.83	37	2.7
Monklands District General Hospital	MDG	Scotland	NHS Adult	0	0	0	Tier 2	37	2.7	5	0
Morrison Hospital	MOR	Wales	NHS Adult	99.6	99	1	Tier 1	333	6.01	153	7.84
Musgrove Park Hospital	MPH	England	NHS Adult	97.6	95.3	1	Tier 1	321	6.54	52	7.69
New Cross Hospital (Wolverhampton Heart Centre)	NCR	England	NHS Adult	99.6	100	1	Tier 1	343	9.91	116	5.17
Norfolk & Norwich University Hospital	NOR	England	NHS Adult	99.8	99.7	1	Tier 1	675	3.85	171	6.43
North Devon District Hospital	NDD	England	NHS Adult	91.6	90.1	1	Tier 1	43	0	9	0
North Middlesex University Hospital	NMH	England	NHS Adult	92.4	64.5	0	Tier 2	37	0	<3	0
Northampton General Hospital	NTH	England	NHS Adult	85.2	100	0	Tier 2	87	2.3	18	5.56
Northern General Hospital Sheffield	NGS	England	NHS Adult	100	100	1	Tier 1	493	4.06	225	5.78
Northwick Park Hospital	NPH	England	NHS Adult	95.6	93.7	1	Tier 1	212	6.13	14	0
Nottingham City Hospital	CHN	England	NHS Adult	99.6	99.7	1	Tier 1	414	5.8	151	4.64
Papworth Hospital	PAP	England	NHS Adult	100	100	1	Tier 1	589	4.58	71	2.82
Peterborough City Hospital	PET	England	NHS Adult	99.7	97.3	1	Tier 1	262	3.82	0	0
Pinderfields General Hospital	PIN	England	NHS Adult	100	99.5	1	Tier 1	251	1.2	110	3.64
Poole Hospital	PGH	England	NHS Adult	100	100	1	Tier 1	135	8.15	0	0
Prince Charles Hospital	PCH	Wales	NHS Adult	94.2	96	1	Tier 1	146	0	0	0
Princess Alexandra Hospital Harlow	PAH	England	NHS Adult	100	100	1	Tier 1	156	0	0	0
Princess Of Wales Hospital	POW	Wales	NHS Adult	100	100	1	Tier 1	85	5.88	9	0
Princess Royal Hospital Telford	TLF	England	NHS Adult	98.9	96	1	Tier 1	216	0.93	77	2.6
Queen Alexandra Hospital	QAP	England	NHS Adult	99.8	99.9	1	Tier 1	378	5.29	157	8.28

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Queen Elizabeth Hospital Birmingham	QEB	England	NHS Adult	98.5	99.4	1	Tier 1	265	9.81	165	12.12
Queen Elizabeth Hospital Gateshead	QEG	England	NHS Adult	88.9	88.4	0	Tier 2	111	1.8	0	0
Queen Elizabeth Hospital Greenwich	GWH	England	NHS Adult	99.7	99.2	1	Tier 1	192	6.25	33	9.09
Queen Elizabeth The Queen Mother Hospital	QEQ	England	NHS Adult	95.6	90.4	1	Tier 1	269	2.6	48	12.5
Queens Hospital Burton	BRT	England	NHS Adult	99.5	97.9	1	Tier 1	67	0	0	0
Rotherham Hospital	ROT	England	NHS Adult	100	100	1	Tier 1	197	3.05	77	9.09
Royal Albert Edward Infirmary	AEI	England	NHS Adult	97.4	95.4	1	Tier 1	104	6.73	0	0
Royal Berkshire Hospital	BHR	England	NHS Adult	99.6	99.6	1	Tier 1	267	5.62	79	5.06
Royal Blackburn Hospital	BLA	England	NHS Adult	99.1	99.1	1	Tier 1	290	3.79	67	4.48
Royal Bolton Hospital	BOL	England	NHS Adult	98.2	100	1	Tier 1	113	4.42	119	6.72
Royal Bournemouth Hospital	BOU	England	NHS Adult	99.7	100	1	Tier 1	256	3.91	127	7.09
Royal Brompton Hospital	NHB	England	NHS Adult	94.7	93	1	Tier 1	256	7.81	228	7.89
Royal Cornwall Hospital	RCH	England	NHS Adult	100	99.6	1	Tier 1	225	5.33	124	4.84
Royal Derby Hospital	DER	England	NHS Adult	99.8	100	1	Tier 1	219	5.48	134	1.49
Royal Devon & Exeter Hospital	RDE	England	NHS Adult	99	98.9	1	Tier 1	459	6.1	125	14.4
Royal Glamorgan Hospital	RGH	Wales	NHS Adult	99.3	96.9	1	Tier 1	168	1.19	42	4.76
Royal Liverpool University Hospital	RLU	England	NHS Adult	97.7	96.4	1	Tier 1	92	0	0	0
Royal Preston Hospital	RPH	England	NHS Adult	99.7	99.4	1	Tier 1	202	6.93	0	0
Royal Surrey County Hospital	RSU	England	NHS Adult	98.3	97.6	1	Tier 1	178	3.37	45	11.11
Royal Sussex County Hospital	RSC	England	NHS Adult	99.8	99.8	1	Tier 1	234	2.14	101	4.95
Royal United Hospital Bath	BAT	England	NHS Adult	0	99.9	0	Tier 2	0	0	0	0
Russells Hall Hospital	RUS	England	NHS Adult	96.6	88.6	0	Tier 2	143	2.1	73	6.85
Salford Royal Hospital	SLF	England	NHS Adult	100	99.2	1	Tier 1	122	0	0	0
Salisbury District Hospital	SAL	England	NHS Adult	100	99.6	1	Tier 1	167	3.59	66	6.06
Scarborough Hospital	SCA	England	NHS Adult	89.1	94.8	0	Tier 2	152	1.32	0	0
Scunthorpe General Hospital	SCU	England	NHS Adult	100	100	1	Tier 1	106	3.77	0	0
South Tyneside District Hospital	STD	England	NHS Adult	95.4	88.8	0	Tier 2	87	0	0	0
Southampton General Hospital	SGH	England	NHS Adult	99.8	98.3	1	Tier 1	444	7.21	200	7
Southend University Hospital	SEH	England	NHS Adult	98.9	100	1	Tier 1	168	4.76	0	0
Southmead Hospital	BSM	England	NHS Adult	0	100	0	Tier 2	0	0	0	0
Spire Bristol	GHB	England	Private	2	2.6	0	Tier 2	16	0	3	0
Spire Hospital Cardiff	SPC	Wales	Private	25	50	0	Tier 2	4	0	0	0
Spire Hull & East Riding Hospital	HBP	England	Private	41.7	54.5	0	Tier 2	4	0	<3	0
Spire Nottingham Hospital	SPN	England	Private	0	2.9	0	Tier 2	4	0	4	0
Spire Southampton Hospital	CBS	England	Private	50	76.2	0	Tier 2	4	0	<3	0
St Anthony's Hospital	ANT	England	Private	0	0	0	Tier 2	36	2.78	8	0
St George's Hospital	GEO	England	NHS Adult	99.9	98.7	1	Tier 1	402	4.98	269	10.41
St Marys Hospital Isle of Wight	IOW	England	NHS Adult	88.6	92.4	0	Tier 2	47	2.13	0	0
St Peter's Hospital	SPH	England	NHS Adult	99.6	99.2	1	Tier 1	207	1.93	63	4.76
St Richard's Hospital	STR	England	NHS Adult	94.7	94.8	1	Tier 1	188	2.13	41	0

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St Thomas' Hospital	STH	England	NHS Adult	99.5	97.3		1 Tier 1	286	8.39	182	4.95
Stepping Hill Hospital	SHH	England	NHS Adult	99.5	100		1 Tier 1	82	2.44	0	0
Sunderland Royal Hospital	SUN	England	NHS Adult	98.9	98.9		1 Tier 1	113	0	0	0
Tameside Hospital	TGA	England	NHS Adult	96	92.4		1 Tier 1	120	2.5	0	0
The Alexandra Hospital	RED	England	Private	100	100		1 Tier 1	0	0	0	0
The Great Western Hospital	PMS	England	NHS Adult	100	99.1		1 Tier 1	225	5.33	132	11.36
The Ipswich Hospital	IPS	England	NHS Adult	100	100		1 Tier 1	362	5.52	0	0
The James Cook University Hospital	SCM	England	NHS Adult	99.8	99.8		1 Tier 1	332	3.01	170	4.12
The Princess Royal University Hospital Bromley	BRO	England	NHS Adult	100	99.4		1 Tier 1	28	3.57	0	0
The York Hospital	YDH	England	NHS Adult	97.5	97.9		1 Tier 1	224	3.57	90	7.78
Torbay Hospital	TOR	England	NHS Adult	99.8	99.8		1 Tier 1	180	2.78	71	26.76
University Hospital Coventry	WAL	England	NHS Adult	99.9	99.4		1 Tier 1	284	6.34	149	6.71
University Hospital Of Hartlepool	HGH	England	NHS Adult	100	100		1 Tier 1	177	1.13	34	0
University Hospital of North Staffs	STO	England	NHS Adult	99.5	96.5		1 Tier 1	733	4.23	339	3.83
University Hospital of North Tees	NTG	England	NHS Adult	100	100		1 Tier 1	0	0	<3	0
University Hospital of Wales	UHW	Wales	NHS Adult	91.2	79.2		0 Tier 2	329	5.17	269	5.95
Victoria Hospital Kirkcaldy	KIR	Scotland	NHS Adult	98.3	97.6		1 Tier 1	140	2.14	40	0
Walsall Manor Hospital	WMH	England	NHS Adult	99	97.5		1 Tier 1	118	2.54	34	0
Wansbeck General Hospital	ASH	England	NHS Adult	97.2	97.5		1 Tier 1	273	2.93	76	1.32
Warrington Hospital	WDG	England	NHS Adult	100	99.1		1 Tier 1	117	3.42	0	0
Warwick Hospital	WAR	England	NHS Adult	96.5	95.6		1 Tier 1	166	4.22	38	2.63
Watford General Hospital	WAT	England	NHS Adult	98.2	96.9		1 Tier 1	272	3.68	63	3.17
Wellington Hospital North	HHW	England	Private	3.8	1.8		0 Tier 2	76	11.84	10	0
West Suffolk Hospital	WSH	England	NHS Adult	100	100		1 Tier 1	83	0	0	0
Westmoreland General Hospital	WGK	England	NHS Adult	94.8	95.2		1 Tier 1	147	3.4	20	0
Weston General Hospital	WGH	England	NHS Adult	100	100		1 Tier 1	21	0	0	0
Wexham Park Hospital	WEX	England	NHS Adult	99.4	93.1		1 Tier 1	212	4.72	41	9.76
Whiston Hospital	WHI	England	NHS Adult	98.8	91.3		1 Tier 1	51	1.96	<3	0
William Harvey Hospital	WHH	England	NHS Adult	85.6	91.1		0 Tier 2	248	2.42	62	4.84
Wishaw General Hospital	WIS	Scotland	NHS Adult	92.2	100		1 Tier 1	76	2.63	<3	0
Worcestershire Royal Hospital	WRC	England	NHS Adult	100	99.4		1 Tier 1	271	2.95	121	4.13
Worthing Hospital	WRG	England	NHS Adult	100	100		1 Tier 1	183	4.37	126	3.17
Wycombe Hospital	AMG	England	NHS Adult	100	99.7		1 Tier 1	204	1.96	40	0
Wythenshawe Hospital	WYT	England	NHS Adult	99.9	100		1 Tier 1	274	5.11	252	5.56
Yeovil District Hospital	YEO	England	NHS Adult	98.6	97		1 Tier 1	156	0	<3	0
Yorkshire Clinic	YKC	England	Private	85.7	40		0 Tier 2	3	0	0	0

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