



Provider line of sight table on report recommendations for submission to the funders

Please can the provider complete the following details to allow for ease of access and rapid review

Project and Title of report	National Audit of Cardiac Rhythm Management Devices and Ablation 2023 Summary Report (2021/22 data).
1. What is the report looking at/what is the project measuring?	All device (pacemakers, implantable cardioverter defibrillators and cardiac resynchronisation devices) and ablation procedures for the management of cardiac arrhythmias. The report describes procedures for cardiac rhythm management (CRM – devices and ablation) between 1st April 2021 and 31st March 2022 and looks at the data against a number of standards, describing safety, effectiveness and outcomes.
2. What countries are covered?	England and Wales
3. The number of previous projects (e.g. whether it is the 4 th project or if it is a continuous project)	Continuous; there have been 14 previous device reports and 12 previous ablation reports.
4. The date the data is related to (please include the start and end points – for example from 1 January 2016 to 1 October 2016)	1st April 2021 and 31st March 2022
5. Any links to NHS England/NHS Improvement objectives or professional work-plans (only if you are aware of any)	Results are also used by CQC and GIRFT

Please can the provider complete the below for each recommendation in the report

No.	Recommendation	Evidence in the report which underpins the recommendation	Current national audit benchmarking standard if there is one	Associated NHS payment levers or incentives	Guidance available (for example, NICE guideline)	% project result if the question previously asked by the project (date asked and result). If not asked before please
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						denote N/A. This is so that there is an indication of whether the result has increased or decreased and over what period of time
Rec 1	<p>Hospitals with poor data compliance should ensure that all members of the local CRM team comply with the requirements of the national audit dataset. Local training on the importance of each data field may be required.</p> <p>Centres failing to achieve the 90% goals (identified as red in their hospital reports) should require the clinical leads to analyse their poor performance. Although most submissions are made by allied health professionals, they are the responsibility of the consultants.</p>	<p>NACRM report: Section 3.2.</p> <p>Despite the pandemic, there has been a trend towards improvement in data completeness and validity.</p>	<p>Quality Standard 1: Hospitals should achieve $\geq 90\%$ completeness in each of 6 data domains for device and ablation procedures (completeness).</p> <p>Quality Standard 2: Hospitals should achieve $\geq 90\%$ validity in key data domains for device and ablation procedures.</p>	N/A	N/A	Overall, data completeness is improving, but some data domains are still poorly completed.
Rec 2	Data submission: centres with apparently very low volumes should engage with the validation process	NACRM report: Section 3.3.	Quality Standard 3 (Device Implants): BHRS Standards (2018) recommend that pacing	N/A	BHRS 2018 standards for devices	There are fewer lower volume

	<p>to ensure they are correctly represented. Device clinics should not submit records of follow-up patients they have 'inherited' from other implanting centres.</p> <p>The appropriateness and sustainability of centres with low volumes should be discussed locally and at a network level.</p>	<p>30/143 NHS adult hospitals failed to meet the standard of 80 device implants.</p> <p>40/97 NHS adult hospitals failed to meet the standard of 60 complex implants/upgrades</p> <p>49 hospitals reported ablation procedures. 38 met the standard. 2 NHS hospitals did not. 9 private / children's hospitals failed to document meeting the standard of 100 ablations/year.</p> <p>See Table 3.1 and Figures 3.1 and 3.2.</p>	<p>centres undertake a minimum of 80 pacemaker implants per year.</p> <p>Quality Standard 4 (Complex device Implants): BHRS Standards (2018) recommend that complex device centres undertake a minimum of 60 such procedures (ICD and CRT implant/upgrades) per year.</p> <p>Quality Standard 5 (Catheter ablation): BHRS Standards (2020) recommend that ablation centres undertake a minimum of 100 ablation procedures per year in total.</p> <p>Quality Standard 6 (complex/AF ablation): BHRS Standards (2020) recommend that centres undertaking AF ablation should perform a minimum of 50 such cases per year.</p>		<p>procedures and 2020 standards for ablation procedures</p>	<p>centres but still a number of NHS hospitals that do not meet the standards.</p>
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			<p>Quality Standard 7 (Pacemaker Implantation): The minimum volume for an implanting specialist is 35 total new/upgrade devices per year.</p> <p>Quality Standard 8 (Defibrillator / Cardiac Resynchronisation Therapy): For those who are non-CRT implanters, it is recommended that operators implant 60 devices per year, of which 30 must be new ICD implants or upgrades. If the operator implants CRT devices, again, 60 device implants per annum is recommended, of which 20 should be new CRT-P/D implants or upgrades. If the consultant is training an SpR they should perform a minimum of 30 ICD or CRT implants or upgrades per year, and 40 is desirable.</p> <p>Quality Standard 9 (All Ablation): An operator undertaking catheter ablation should perform at least 50 ablation procedures per year.</p>			
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			<p>Quality Standard 10 (Simple Ablation): An operator performing simple ablations should perform at least 25 simple ablations per year.</p> <p>Quality Standard 11 (Complex Ablation): For those undertaking complex procedures (generally AF ablation), the recommendation is at least 25 such procedures from a total of at least 50 procedures per year. ≥50 complex procedures are desirable. Operators performing single-shot atrial fibrillation ablation should be performing a minimum of 25 ablations using that technique each year.</p>			
Rec 3	<p>Consultants are reminded that submission of correct and complete data for procedures is their responsibility. Clinical directors should investigate whether low operator volumes result from poor data submission or genuinely low activity.</p> <p>Genuinely low-volume operators should be subject to close local audit for complications and decision-</p>	<p>NACRM report: Section 3.4.</p> <p>There is a rise in the number of operators reaching minimum volumes for devices (520 in 2021/22), but still fewer than in 2019/20 (550). Many</p>	<p>Quality Standard 7 (Pacemaker Implantation): The minimum volume for an implanting specialist is 35 total new/upgrade devices per year.</p> <p>Quality Standard 8 (Defibrillator/Cardiac Resynchronisation Therapy): For those who are non-CRT implanters, it is recommended</p>	N/A	BHRS 2018 standards for devices procedures and 2020 standards for ablation procedures	Many operators do not meet the current implant standards.



	<p>making, and the sustainability of their practice should be examined.</p>	<p>operators do not reach minimum standards.</p> <p>Similarly, there is a rise in those reaching minimum standards for ablation (212) but there are many low-volume operators.</p> <p>See Tables 3.2 and 3.3 and Figures</p>	<p>that operators implant 60 devices per year, of which 30 must be new ICD implants or upgrades.</p> <p>If the operator implants CRT devices, again, 60 device implants per annum is recommended, of which 20 should be new CRT-P/D implants or upgrades.</p> <p>If the consultant is training an SpR they should perform a minimum of 30 ICD or CRT implants or upgrades per year, and 40 is desirable.</p> <p>Quality Standard 9 (All Ablation):</p> <p>An operator undertaking catheter ablation should perform at least 50 ablation procedures per year.</p> <p>Quality Standard 10 (Simple Ablation): An operator performing simple ablations should perform at least 25 simple ablations per year.</p> <p>Quality Standard 11 (Complex Ablation): For those undertaking</p>			
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			<p>complex procedures (generally AF ablation), the recommendation is at least 25 such procedures from a total of at least 50 procedures per year. 50 or more complex procedures is desirable.</p> <p>Operators performing single-shot atrial fibrillation ablation should be performing a minimum of 25 ablations using that technique each year.</p>			
Rec 4	<p>High device re-intervention rates are a cause for concern and should prompt a more thorough review of practice in a centre. Both high and low re-intervention rates for ablation may be a cause for concern.</p> <p>For complex atrial ablation, centres with very low re-intervention rates are more likely a cause for concern.</p>	<p>See NACRM report: Section 3.6.</p> <p>For 'simple' ablations, one-year re-intervention rates averaged 3%. Four centres were above the 95% confidence interval, of which two were beyond the 99% confidence interval.</p> <p>The two-year re-intervention rate was 5.1%. Again, four centres were beyond the 95% confidence interval with two beyond the 99% confidence interval.</p>	<p>Quality Standard 16 (Pacemakers): The rate of re-interventions within a year of a first pacemaker implant should be below the 95% upper control limit (national mean + 2 standard errors).</p> <p>Quality Standard 17 (Complex Devices): The rate of reinterventions within a year of a first complex device (ICD or CRT) implant should be within the 95% control limit (national mean + 2 standard errors).</p>	N/A	BHRS 2018 standards for devices procedures and 2020 standards for ablation procedures	<p>Re-intervention rates in the year following first implants in 2020/21 of pacemakers and complex devices were 4.6% and 5.7% respectively. These values are fairly stable and in line with published data on complications</p>



		<p>For complex atrial procedures, the re-intervention rate at one year was 7.3%. Four centres were beyond the 95% confidence interval and none beyond the 99% centile.</p> <p>At two years, the rate was 13.3%. Only two centres were beyond the 95% confidence interval, and one of those was beyond the 99% centile. This is far below the rates of 20% or more seen in trials, suggesting that, perhaps, patients are not being followed up and listed for repeat ablation as often as they might be.</p> <p>For complex ventricular ablations, rates were similar at 8.2% at one year and 12.8% at two years. At one year, two centres were beyond the 95% centile but not beyond the 99%. At two</p>	<p>Quality Standard 18 (Catheter Ablation):</p> <p>The frequency with which patients undergo a repeat procedure (i.e. to the same or related target) within a year of catheter ablation should be within the 95% control limit (national mean + 2 standard errors).</p>			<p>from other countries</p> <p>Reintervention rates for atrial fibrillation plunged during the pandemic (1.9%) and have improved to 7.3%. This is still below the estimated rate of 20-40%.</p>
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		years, three centres were beyond the 95% centile.				
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