IBHRE INTERNATIONAL BOARD OF HEART RHYTHM EXAMINERS

CARDIAC DEVICE REMOTE MONITORING SPECIALIST

(CDRMS)

Certification Exam Overview & Content Outline

CARDIAC DEVICE REMOTE MONITORING SPECIALIST (CDRMS)

The CDRMS examination validates the competency and skill level of practitioners who use Remote Patient Monitoring (RPM) in caring for patients suffering with chronic cardiac disorder.

Eligibility Criteria

Applicants for the CDRMS certification examination must demonstrate that they meet the following eligibility criteria as they apply to cardiac implantable electronic device (CIED) remote monitoring. The required experience as noted below may be obtained by performing remote monitoring, or in-person evaluations. This includes exposure to pacemakers, implantable cardioverter defibrillators, and subcutaneous cardiac rhythm monitoring devices (aka. implantable loop recorder). Exposure to all major manufacturer's devices is highly encouraged.

Those who already hold a valid Certified Cardiac Device Specialist (CCDS) credential are not encouraged to sit for this examination, as the CCDS credential is a higher-level certification.

For additional information on the CDRMS eligibility criteria and documentation requirements, visit the CDRMS Exam Eligibility Policy online.

Examination Specifications

NAME OF CREDENTIAL	Cardiac Device Remote Monitoring Specialist (CDRMS)
CERTIFICATION-ISSUING BODY	International Board of Heart Rhythm Examiners (IBHRE)
DESIGNATION AWARDED	CDRMS
LEVEL OF PROFICIENCY	Specialty Certification
TARGET POPULATION	Allied professionals involved in remote monitoring of CIEDs
PROGRAM PURPOSE	This examination validates the competency and skill level of practitioners who use Remote Patient Monitoring (RPM) in caring for patients suffering with chronic cardiac disorder.
NUMBER OF ITEMS	135 items (scored)
EXAM ADMINISTRATION TIME	210 minutes
EXAM FORMAT	Multiple-choice
EXAM DELIVERY	Computer-based at testing centers
EXAM CONTENT OUTLINE DATE	Completed April 2025Effective December 2025

CDRMS
Exam Weighting by Topic Area

(Click below to review a specific topic area.)

Topic Area	
1. Rhythm Recognition	38%
2. Device & Lead Function	36%
3. Remote Service Management	12%
4. Diagnostic Monitoring	8%
5. Device Technology	6%

CDRMS Exam Outline

TOPIC AREA	PERCENTAGE OF TOTAL SCORE
1. Rhythm Recognition	**38%**
A. Interpret rhythm strips to detect heart rhythm abnormalities	17%
1. Atrial fibrillation/Atrial flutter	
a. Bradycardia-tachycardia	
b. Rapid ventricular response	
2. Ventricular tachycardias	
a. Polymorphic	
b. Monomorphic	
c. Torsades de pointes	
d. Nonsustained	
e. Sustained	
3. Supraventricular tachycardias	
a. Atrial tachycardia	
b. Reentrant atrial tachycardia	
4. Sinus tachycardias	
5. AV block	
a. Mobitz I AV block	
b. Mobitz 2 AV block	
c. Complete	
6. Normal sinus, junctional, aberrancy, PVC, PAC	
7. Sinus arrhythmia	
a. Sinus pause/arrest	
b. Nocturnal pause	
8. VA conduction	

9. Artifacts	
a. EMI	
b. Undersensing	
c. Oversensing	
d. Myopotentials	
e. Fusion / pseudofusion / pseudo-pseudofusion	
B. Interpret Intracardiac EGM / ILR recordings to detect heart rhythm abnormalities	20%
1. Atrial fibrillation, Atrial flutter	
2. Ventricular tachycardias	
a. Polymorphic	
b. Monomorphic	
c. Torsades de pointes	
d. Nonsustained	
e. Sustained	
f. 1:1 VA conduction	
g. Dual tachycardia	
3. Far-field electrogram	
4. Supraventricular tachycardias	
a. Atrial tachycardia	
b. AV node reentrant tachycardia	
c. Long R-P tachycardia	
5. Sinus tachycardia	
6. AV block	
a. Mobitz 1	
b. Mobitz 2	
c. Complete	
7. Normal sinus, sinus arrhythmia, junctional, aberrancy, PVC, PAC	

8. Sinus arrhythmia	
a. Sinus pause/arrest	
b. Nocturnal pause	
9. VA conduction	
10. Artifacts	
a. EMI	
b. Undersensing	
c. Oversensing	
d. Myopotentials	
11. Triggered ventricular pacing	
12. T-wave oversensing	
13. Pacemaker-mediated tachycardia	
C. Identify 12-lead ECG findings	1%
1. Bundle branch block	
2. CRT pacing	
2. Device & Lead Function	**36%**
A. Evaluate device timing cycles and modes	8%
1. PVARP	
2. Blanking period	
3. Safety pacing	
4. Mode recognition	
5. CRT timing	
6. Synch AV, adaptive bi-V	
7. Upper rate behavior	
8. AV hysteresis	
9. Rate hysteresis	
10. Minimized RV pacing algorithms	
11. PMT algorithms	
12. Micra AV	

B. Detect device and lead malfunctions	15%
1. Loss of capture	
a. Physiologic	
b. Nonphysiologic	
c. Capture management	
2. Lead failure	
a. Fracture	
b. Physiologic threshold increase	
c. Insulation failure	
d. Polarity/lead safety switch	
e. High-voltage/low-voltage	
3. Undersensing	
a. Inappropriate tracking	
b. Physiologic loss of capture (atrial, ventricular)	
4. Oversensing	
a. Far-field	
b. EMI	
c. Myopotentials	
d. T-wave	
e. Inappropriate mode switching	
f. Lead integrity alert	
g. Loose set screw	
C. Identify ICD-Specific Function	13%
1. Detection/discrimination	
a. Sudden onset	
b. Rate stability	
c. Morphology/wavelet	
d. 1:1 VA association	

e. PR relationship	
f. Detection zones	
g. High-rate timeout	
h. Aborted shocks/redetection	
i. Detection duration	
j. Subcutaneous ICD	
k. EV ICD	
2. Tachycardia therapies	
a. Shock therapy (effective/ineffective, DFT)	
b. Ventricle and atrial ATP algorithms (burst, ramp, etc)	
c. Failure to detect	
d. Dynamic therapy	
3. Remote Service Management	**12%**
A. Manage connectivity	1%
1. Manual vs automatic	
2. Troubleshooting	
B. Manage alerts	3%
1. Diagnosis-based alert settings	
2. Actionable device/lead issues	
3. Actionable rhythm issues	
4. Tachycardia therapies disabled	
C. Manage battery follow-up	4%
1. ERI/recommended replacement time (RRT)	
2. EOL	
3. Transmission interval	
4. Capacitor reform time	
5. Battery voltage curve	
D. Manage advisory follow-up, Key advisories, including:	4%

1. Boston minute ventilation oversensing	
2. St. Jude battery depletion	
3. Boston low-voltage capacitor failure	
4. Boston Scientific Safety Reset Recall	
5. Medtronic AX>B	
4. Diagnostic Monitoring	8%
A. Interpret heart failure data and CRT diagnostics	2%
1. Heart failure diagnostics	
2. CRT pacing percentage	
3. Effective CRT	
B. Evaluate cardiac rhythm & rate	6%
1. Graph interpretation	
2. Atrial fibrillation/oral anti-coagulation	
3. Duration of monitoring statistics	
4. Histogram/diagnostic graphics interpretation	
5. Atrial fibrillation/rapid response	
6. Ventricular tachyarrhythmias	
7. Change in pacing percentage	
8. Management of symptomatic episodes	
5. Device Technology	6%
A. Evaluate rate response sensors	2%
1. Activity	
2. Minute ventilation	
3. Closed loop stimulation	
B. Apply basic electronic & energy concepts ate response sensors	4%
1. Ohm's Law	
2. Strength duration curve	
3. Battery impedance	

4. Pacing polarities (LV vectors, high-voltage leads, brady leads)	
6. MRI safe modes	

About IBHRE

Since 1985, IBHRE has been internationally recognized as a certifying board that offers competency certification to physicians, nurses, and other allied professionals. The Board has certified over 17,000 distinguished heart rhythm professionals in more than 70 countries around the globe. Our certification is the official recognition of achievement, expertise, and clinical judgement in the specialty practice of cardiac rhythm device therapy and electrophysiology.

Accredited by ANAB - ANSI National Accreditation Board, IBHRE certification programs develop and measure competencies in cardiac pacing, electrophysiology, and device remote monitoring.

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Developed December 5, 2025