



Remote Monitoring

## The Heart Rhythm Charity

Promoting better understanding, diagnosis,  
treatment and quality of life for individuals  
with cardiac arrhythmias



Remote Follow-up and Remote Monitoring

[www.heartrhythmcharity.org.uk](http://www.heartrhythmcharity.org.uk)

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# Glossary of terms

## Arrhythmia

An abnormal heart rhythm.

## Defibrillation

The use of a higher energy shock to stop fast heart rhythms.

## ICD

Implantable Cardioverter Defibrillator.

Arrhythmia Alliance patient booklets are reviewed annually.

This booklet will be next updated January 2011.

if you have any comments or suggestions

please contact A-A.

## What is remote monitoring?

The term remote monitoring means exactly what it implies: monitoring your heart and implanted device while you are at home, and “remote” from the care-team at your hospital. Remote monitoring pacemakers and ICDs are equipped with a special transmitter. Using an integrated aerial, the implant automatically sends medical and technical information from your heart, to your doctor, arrhythmia nurse and the cardiac physiologists who are treating you. This allows your heart rhythm specialists to monitor your condition based on accurate, up-to-date clinical information at any time – not just when you are at the hospital. Remote monitoring will not replace the first visit after the device is implanted, which is important to check that the wound is well-healed, and you may still need to attend the clinic on an annual or 18-monthly basis. However, if all is well, and no problems are detected, it may take over the routine checks on your device, which relieves you and your care-team from having to attend to these checks at the hospital.

## How does remote monitoring work?

Information will be sent from your device via whatever transmission system you are linked to by arrangement with your implanting centre. This is usually on a 3 monthly basis but can also be done more or less frequently by arrangement. The information received at the centre will allow them to look at any changes that



may have occurred in your heart rhythm or with the battery and lead status. In order to send the signals from your ICD or pacemaker you will need a special transmitting device. This may look like a large mobile phone or may be a box which you will need to plug into your telephone line.

The type of transmitter you receive will depend on which company made your implantable device. Your implanting centre will provide you with full details of how to send transmissions.

The transmitter works similarly to a mobile phone and automatically forwards the data to a computerised server. The data is coded during transmission in order to maintain confidentiality. The pacing/ICD clinic staff is then able to view and evaluate the data on a special, secure internet site.

### Can remote monitoring be used with any ICD or pacemaker?

Pacemakers and ICDs are very complex medical devices and are subject to continual evaluation and improvement. Unfortunately, at the time of writing, not all devices have the option of remote monitoring.

Many centres are currently evaluating the possibility of using remote technology, but not all devices have this option. If your implanting centre is one of the evaluation centres, or is using devices with this facility, you may be offered the opportunity to have this function.



## The potential benefits of remote technology

Whether you are using remote monitoring or remote follow-up technology, your doctor, arrhythmia nurse and physiologist can be kept up-to-date about changes in your heart rhythm. This enables them to schedule your hospital appointments or your remote follow-up appointments as part of your follow-up regime.

Should you need to contact your follow up clinic because you are experiencing symptoms that cause you concern, they can evaluate your cardiac condition remotely and decide what course of action, if any, to take.

## Travelling and remote monitoring

You should contact your follow-up clinic if you are travelling abroad, as some of the remote monitoring systems use different telephone networks and so may not function in some countries. You may also choose not to take your remote monitor on holiday with you.

## Frequently asked questions (FAQ)

### Is remote monitoring safe?

Yes, remote monitoring/follow-up technology has been in use since 2000 and has been proven to be safe, secure and reliable.

### Do I still need to attend the usual follow-up clinics?

You may not need to attend as frequently as you do currently. However, you will still need to attend the follow-up clinic if any changes to your programmed settings are required or to perform certain measurements that may be necessary.

The interval between follow-ups is dependent on many factors, including your individual condition and the device implanted. It is very important that you attend all follow-up clinic appointments that may be recommended by the doctors, arrhythmia nurses and cardiac physiologists caring for you.

### Where should I place my transmitter?

Your implanting centre will give full instructions on where to put your transmitter and how to send any messages.

### Do I need any other equipment for remote monitoring / remote follow-up?

If you and your pacing/ICD clinic staff decide remote monitoring or remote follow-up may be beneficial to you, then it is possible that you can be enrolled today, or that you can have a device implanted with this capability. The aerial is hidden inside the device, therefore the implant will look and feel like any other.

In order to send the signals from your ICD or pacemaker you will need a special transmitting device. This may look like a mobile phone or a small box which you will need to plug into your telephone line.

### **Is there a risk the encrypted data will be mixed up?**

No. Your data cannot be mixed up during transmission. Your implant and transmitter are clearly allocated to each other using their respective serial numbers.

### **Is my data safe from unauthorized persons?**

Yes. Your cardiac physiologist/arrhythmia nurse/doctor views your data via the internet through a secured connection. The server and all systems have been CE certified and comply with the UK data protection act.

### **Will I be able to access the data myself?**

No. The information is only available to the medical team treating you; security measures ensure it is not accessible to anyone else.

### **Is there a danger from radiation during data transmission?**

No. The implant transmits data with an extremely low power on a frequency specially allocated to medical devices, so there is no danger.



## Useful websites

A list of useful sites can be found at:- [www.heartrhythmcharity.org.uk](http://www.heartrhythmcharity.org.uk) This list is not exhaustive and it is constantly evolving. If we have excluded anyone, please accept our sincerest apologies and be assured that as soon as the matter is brought to the attention of the [Arrhythmia Alliance](#), we will quickly act to ensure maximum inclusiveness in our endeavours.

If you wish to contact us direct please phone on +44 (0) 1789 450 787 or email [info@heartrhythmcharity.org.uk](mailto:info@heartrhythmcharity.org.uk)

Please feel free to discuss any concerns with your doctor, physiologist or specialist nurse, at any time.

## Further reading

The following list of Arrhythmia Alliance Patient booklets are available to download from our website or to order please call +44 (0) 1789 450 787.

- Arrhythmia Checklist - Could your heart rhythm problem be dangerous?
- Atrial Fibrillation (AF)
- AF Checklist
- Blackouts Checklist
- Bradycardia (Slow Heart Rhythm)
- CRT/ICD
- CRT Patient Information
- Catheter Ablation
- Drug Treatment for Heart Rhythm Disorders (Arrhythmias)
- Electrophysiology Studies
- Exercising with an ICD
- FAQs
- Genetic Testing for Inherited Heart Disorders
- Highlighting the Work of Arrhythmia Alliance
- ICD
- Implantable Device Recall
- Implantable Loop Recorder
- Long QT Syndrome
- National Service Framework Chapter 8
- CRT/Pacemaker
- Pacemaker
- Palpitation Checklist
- Remote Monitoring for ICDs
- Sudden Cardiac Arrest
- Supraventricular Tachycardia (SVT)
- Tachycardia (Fast Heart Rhythm)

Please help us to improve services for all those affected by arrhythmias and to save lives by making a donation today. Please complete the donation form below and return to PO Box 3697 Stratford upon Avon CV37 8YL or click on [www.heartrhythmcharity.org.uk](http://www.heartrhythmcharity.org.uk) and click the donate icon.

**Membership is free to individuals, however if you would like to make a DONATION please complete and return.**

I would like to make a donation to A-A and enclose:	£	
I have made a donation to A-A via PAYPAL at <a href="http://www.arrythmiaalliance.org.uk">www.arrythmiaalliance.org.uk</a> to the sum of:	£	
I have arranged a standing order from my Bank/ Building Society Account to A-A (min amount £10p.a.)	£	
Please tick here if you agree to Gift Aid your subscription/donation	<input type="checkbox"/>	Tick here

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Please allow Arrhythmia Alliance to claim an extra 28p for every £1 you donate at no cost to you. I want Arrhythmia Alliance to treat all donations I have made since 6 April 2000, and all donations I make from the date of this declaration until I notify you otherwise, as Gift Aid donations. I currently pay an amount of income tax and/or capital gains tax at least equal to the tax that Arrhythmia Alliance reclaims on my donations in the tax year. I may cancel this declaration at any time by notifying A-A. I will notify A-A if I change my address. Please note full details of Gift Aid tax relief are available from your local tax office in leaflet IR 65. If you pay tax at a higher rate you can claim further tax relief in your Self-Assessment tax return.

### Standing Order Authority

My Bank:

Bank Address:

Please Pay: A-A, Account: 02685818 Sort Code: 30-98-26, Lloyds TSB Plc, 22 Bridge St, Stratford upon Avon, CV37 6AG

The Sum of £/E/\$:	On (1st Date):	/	/ 200...
And after this, every:    Month / Year (delete)	Account No.:		
Sort Code:	Signature:		
Date:	Please hand this form in to your Bank		

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Card Type:	Expiry Date:
Card Number:	Amount of £/E/\$:
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Please remember these are general guidelines and individuals should always discuss their condition with their own doctor.

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