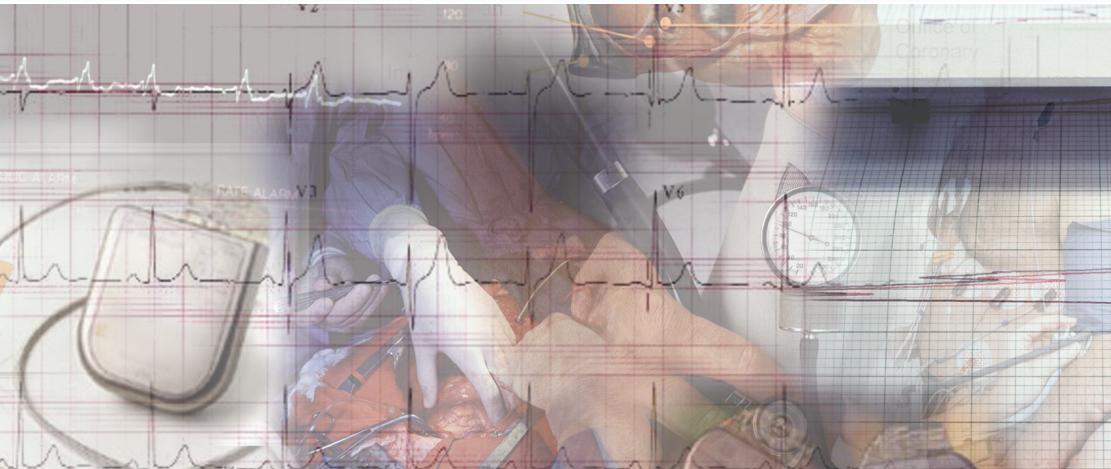# Arrhythmia Alliance

The Heart Rhythm Charity

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

Remote Monitoring Of ICDs & Pacemakers Patient Information

Introduction

This booklet is intended for use by people who have, or are about to have, an Implantable Cardiovertor Defibrillator (ICD) or pacemaker implanted, which has a remote monitoring function. It may also be useful for the family and carers of these patients. This booklet gives a brief explanation of how remote monitoring works. It may also be useful to obtain copies of the booklets Pacemaker Patient Information or ICD Patient Information for more information about the implant procedure and implants themselves.

The information in this booklet should be used in addition to the information given to you by your doctors, nurses and cardiac physiologists. If you have any questions about any of the information given in this booklet, please ask your nurse, doctor or cardiac physiologist.

Contents

Glossary of technical terms used

Arrhythmia   -   an abnormal heart rhythm

Defibrillation   -   the use of a higher energy shock to stop fast heart rhythms

What is remote monitoring?

The term remote monitoring means exactly what it implies: monitoring your heart and implanted device while you are at home.

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 and the cardiac physiologists who are treating you. This allows your doctor to monitor your condition based on accurate up-to-date clinical information at any time – not just when you are at the hospital.

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 possibilities for using remote monitoring 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.

Do I need other equipment for remote monitoring?

If your doctor decides remote monitoring may be beneficial for you then you will receive a special implant with an integrated aerial. This aerial is hidden inside the implant, 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 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 implant. If needed your implanting centre will provide you with full details of how to send transmissions.

How does remote monitoring work?

Information will be sent from your implant via whatever transmission system you are linked to by arrangement with your implanting centre. This may be daily, monthly or by arrangement. The information received at the centre will allow them to look at details of any changes that may have occurred with your heart rhythm or with the battery and lead status.

The transmitter works similarly to a mobile phone and automatically forwards the data to a computerised server. The data is coded during transmission. Your doctor is then able to view and evaluate the data on a special, secure internet site.

Frequently asked questions (FAQ)

Is remote monitoring safe?
Yes, remote monitoring has been in use since the year 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 currently do 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 dependant 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 and cardiac physiologists/nurses caring for you.

The remote monitoring facility is limited to transmitting the data from your implant to the clinic only at the moment. You will therefore still need to attend the follow-up clinic if you need any changes to your programmed settings or to do certain measurements that may be necessary. You may not however have to attend as frequently as you currently do.

Where should I place my transmitter?

You will be given full instructions on where to put your transmitter and how to send any messages by your implanting centre.

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

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

Is my data safe from unauthorized persons?

Yes. Your 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.

The potential benefits of remote monitoring

Thanks to the regular flow of data, your doctor and physiologist are always kept up to date about any changes in your heart rhythm. This enables them to schedule your hospital appointments for your individual needs.

Should you need to contact your doctor because you are experiencing symptoms that cause you concern, they can evaluate your cardiac condition from remote monitoring data collected over the previous days and weeks and then decide what course of action to take, if any.

Travelling and remote monitoring

You should always contact the cardiac physiologist treating you regarding taking your remote monitoring system abroad. Also inform them if you are going to be travelling to a country with a different time zone, so he or she may change the time of message transmission if necessary.

Useful websites

If you have access to the internet you may find the following websites useful:

www.arrhythmiaalliance.org.uk

www.biotronik.com

www.bostonscientific.com

www.medtronic.com

www.sjm.com

Executive Committee

*Please remember these are general guidelines and individuals
should always discuss their condition with their own doctor.*

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