

# Rosa Robot

## Information for patients having Total Knee Replacement (TKR) surgery

### Who is this leaflet for?

The aim of this leaflet is to provide information to patients on robotic assisted total knee replacement surgery. This leaflet explains what the Rosa Robot looks like, how it is operated by the surgeon, why it is being used by the Trust, and patient benefits (how they will be measured and what they are).

This leaflet is to be read in conjunction with the Total Knee Replacement patient information leaflet, which gives more detail on preparing for surgery as well as aftercare. This leaflet will be provided to you by your care team along with any other supporting information required.

### What is Rosa and what does it stand for?

ROSA stands for Robotic Surgical Assistant. Knee replacement techniques over recent years have experienced many improvements. The Rosa Robot has refined surgery processes as it provides real time data, which helps the surgeon assess the state of the soft tissues, enabling better positioning of the knee implant. The Rosa Robot is a prime example of how technology is altering the way that joint replacement surgery is being performed.

### Why is the Rosa Robot being used?

The Royal Cornwall Hospitals NHS Trust wishes to provide the best possible outcomes for its patients. It is for this reason that the Trust has decided to invest in the provision of robotic assisted surgery.

### What does the Rosa Robot look like?

The Rosa Robot comprises of two units as shown in the picture below.



- On the left – this is the robotic unit comprising of a compact robotic arm and a touchscreen
- On the right – this is the optical unit with a touchscreen.

Each unit is positioned on either side of the operating table.

## **What are the benefits of using the Rosa Robot for my surgery?**

It is important that a precise knee implant fit is provided to patients, not only for your comfort but also for your overall experience following surgery. The Rosa Robot uses data collected before your surgery (pre-operative), as well as during your surgery (perioperative). This gives your surgeon detailed information about your individual anatomy, which enables him or her to make informed decisions to tailor your surgery to your anatomy for the best possible outcome.

As well as improving the overall experience and outcomes for our patients the Rosa Robot system offers the following potential advantages:

- CT scans are not always needed, which means less exposure by patients to radiation. A series of X-rays are used to create a 3-dimensional (3D) model of your knee anatomy. This enables the surgeon to plan many specifics regarding your knee replacement surgery prior to it being undertaken.
- There is increased accuracy when placing the knee implant compared with traditional knee replacement techniques (presently done through use of the surgeon's eye). This can result in a more natural feeling knee after surgery.
- There is potential for better long term outcomes such as reduced pain, reduced length of stay, and a reduced number of patients requiring revision surgery.

## **Does the Rosa Robot perform the procedure?**

No, the Rosa Robot does not operate on its own and only moves when prompted to do so by the surgeon.

## **What happens during my operation?**

The surgeon remains in the operating room for the entire duration of your surgery. The surgeon remains in control and makes all incisions and resections. The Rosa Robot assists the surgeon with the bony resections as well as assessing the state of the soft tissues to facilitate positioning of the knee implant. The surgeon will use the robotic arm to remove any diseased bone and cartilage before inserting the knee implant.

If you move during your surgery the Rosa Robot is able to tell and can adjust the information it provides to your surgeon. Throughout the procedure the Rosa Robot also provides the surgeon with data about your knee. This, in conjunction with your surgeon's skills, enables them to know how to position your knee implant.

## **Are patients specifically selected for robotic surgery?**

No. Patients will be taken from the Trust's existing waiting lists for total knee replacements so there is no specific selection process.

## **Is the Rosa Robot being used elsewhere in the NHS?**

Yes, the company that manufacture the Rosa Robot, Zimmer Biomet, who the Trust is working in partnership with, have confirmed that a number of NHS Trusts have ordered, or are using the Rosa Robot.

## **How many Rosa Robots does the Trust have?**

The Trust has one Rosa Robot and it is located at St Michael's Hospital, Hayle, which is the Trust's main Orthopaedic Centre.

## **Is the Rosa Robot being used for any other type of surgery?**

Not at present. The Trust aims to use the Rosa Robot for one year and then review patients' outcomes. If the anticipated benefits to patients are achieved then the Trust will look at the possibility of using the Rosa Robot to assist surgeons with other forms of orthopaedic surgery, for example, partial knee replacements, hip replacements, and shoulder replacements.

## **What training have the surgeons had in using the robot?**

Rest assured that the surgeons have received comprehensive bespoke training through Zimmer Biomet and have been assessed by a clinical advisor to ensure that they meet the required competency requirements.

## **What testing has the robot had so I know it is safe?**

The robot has been installed and fully tested by a specialist engineer. Under the terms of the contract with Zimmer Biomet the robot is serviced every 90 days.

## **What happens if the robot fails during my surgery?**

Patient procedures will continue without the use of the Rosa Robot if it requires maintenance. If for any reason the Rosa Robot fails during surgery then the surgeon will revert back to completing the procedure 'by eye' as they would have done prior to the Rosa Robot being available.

## **How are patient benefits measured?**

The App (MyMobility) can be downloaded onto an Android or Smartphone device. This App helps patients to prepare for their surgery and provides support with post-operative recovery. The App also collects data and enables patients to communicate confidentially with their care team. Remotely monitoring patients in this way reduces the need for visits to the hospital for face to face appointments.

## **What if I don't have an Android or Smartphone device?**

You will be offered a 'coach' facility arrangement whereby the App can be downloaded by a relative or friend who can support you with inputting your information.

## **What if I don't have someone that I can 'coach' with?**

Your care team will discuss with you alternative ways that you can be supported.

## **Will I get information on how to register for the MyMobility App?**

Yes. You will receive a patient information leaflet produced by Zimmer Biomet, which provides full instructions on how to register and download the App. Support will also be provided to you by the Trust – this is usually through the team that schedule you for your surgery.

## **How do I access the App?**

Once you are enrolled by the hospital for a robotic assisted TKR you will receive a text message. This will allow you to download the App (from the Apple App Store or Google Play Store) depending on the device that you have. You can set up your account through the use of a username and password or you can use face or touch identification if you prefer.

## **Any questions?**

Your care team will be able to answer any further questions that you may have so please do not hesitate ask them at any point during your pathway.

If you would like this leaflet in large print, braille, audio version or in another language, please contact the General Office on 01872 252690

