Day in the life of a Renal Technician

The renal technicians at Morriston Hospital repair and maintain the equipment used to treat patients who need dialysis. These are patients whose kidneys aren’t working properly, and so they need a machine to remove waste products from their blood.

The renal technicians are part of Medical Equipment Management (MEMS) which in turn is part of the Department of Medical Physics & Clinical Engineering (MPCE).

The team of five renal technicians work behind the scenes to make sure that all the machines are working as they should. They install any new equipment and repair and service existing machines.

Ivor Davies, Senior Renal Technician (pictured), said:

“I really enjoy my job. Even though our role is technical, not clinical, I still believe that we have an important part to play in patient care.

“We service each machine in the renal department every six months to make sure it is in tip top condition for the patients to use. We also maintain the equipment and are called to repair any problems that may occur.

“Each morning we inspect all the equipment in the two renal units at the hospital to make sure everything is working correctly, and if not, we repair it. During the day, if the staff discover a problem, they call us immediately so we can take a look at the machine to assess the problem. Some faults are external and do not affect the way the machine is functioning, so we can repair them on the spot.

“However, sometimes the problem may be internal. In these cases, we need to determine whether or not it is safe for the
patient to continue with the treatment. If it is, we repair it as soon as they have finished. If not, the machine is stopped and we repair it as soon as it safe to do so.”

The team take responsibility for the dialysis machines in the intensive care unit, responding to calls from staff when the machine isn’t working correctly. This can be at any time of the day or night, as a member of the team is on call outside of office hours.

If the problem does occur out of hours, the technician will talk the member of staff through what to do if possible, or arrange a time for the team to repair it. If necessary, the on call technician will come straight in.

Some patients are able to receive dialyse themselves at home as they sleep. The renal technician team meet with the renal nurses once a month to discuss new patients who have been referred for the programme.

Once a patient has started their training, and the nurses are happy they will be able to self care, the renal technician team visit a patient’s home to check it is suitable to have a dialysis machine set up.

Andrew Long, Chief Renal Technician, said:

“During our first site visit, we take a look at different elements which could affect a patient’s suitability to dialyse at home. We check their flooring and electric and water supplies to make sure it is compatible for the machine. If they aren’t, we arrange for the necessary changes to be made.

“Once a patient nears the end of their training, we then set the machine up in their home. We plug in and attach everything, and programme in their prescription. We take a renal nurse with us, and before we leave, we ask the patient to test the machine to make sure they are happy.

“I really enjoy my job, and helping people receive treatment at home is one of the highlights. Dialysis is extremely time-consuming, as patients have to visit the hospital a few days a week for several hours at a time. Anything we can do to help them regain their independence is a job well done for us.”

The team continue to support the patient once the machine is up and running. As well as being on call for the hospital, the team are also on call
for patients, so there is always someone they can call if an error code appears or alarm sounds.

If it is a simple problem or a user error, they will talk the patient through what to do. If the machine needs repairing, they will arrange a time either that day or the following one when they will come out. If they can repair it there and then, they will, if not they will give them a replacement and bring the broken one back to the workshop to repair.

As the renal unit at Morriston Hospital is the regional centre for South West Wales, the team support patients dialysing at home from Bridgend to Pembroke, and as far north as Machynlleth.

Andrew added:

“There are two other important areas which are part of our role; water and waste.

“Only pure water can be used in dialysis, which means that ordinary tap water supplies have to be filtered before they are used. At the hospital, we have a specialist water treatment facility which purifies the water supply before it reaches the renal unit; samples are taken on a regular basis to make sure that the water complies to national guidelines. For patients who receive dialysis at home, we fit special filters to clean their water, which we check each time we service the machine.

“An individual drainage system is also set up in patients’ homes to ensure all the waste is removed. Sometimes these can become blocked, and stop the machine from working effectively. When this happens, we need to get it unblocked as quickly as possible, which often means going to the patient’s home ourselves to do the job.”