

# North Queensland nephrology pioneers

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## Abstract

In 1970 the first renal unit in Queensland outside the Brisbane was established in Rockhampton. The early challenging pioneering days are summarised.

Technology and issues of distance were challenges in the vast regional distances of North Queensland.

*In many aspects we often feel we are out in the wilderness, but perhaps when working in dialysis the wilderness is a not such a bad place to be.*

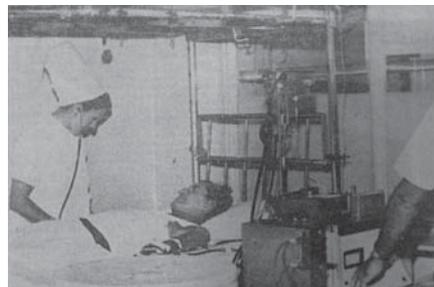
Although both haemodialysis and peritoneal dialysis had been performed in World War II, developments in plastics technology were required to enable better access to treatment. When Dr JCA Dique performed the first dialysis in Australia at the Brisbane General Hospital in 1954, no one could have imagined the current dialysis services in Queensland. It was a further 14 years before developments in vascular access surgery enabled the first chronic dialysis unit to be established. In Queensland this was at the Princess Alexandra Hospital (PAH) in 1969. By 1970 the first unit outside the Brisbane was established in Rockhampton.

In the meantime, Dr Ross Parisi, a urologist in Townsville, had become interested in dialysis, partly to support his patients around their urological surgery. Dialysis machines were not forthcoming from the Queensland Government so he instituted the technique of ileal loop dialysis. This process involved isolating a length of the small bowel within the peritoneal cavity, and with two stoma on the abdomen wall. Solutions were then run in at the top end and came out

of the bottom end; the technique also gave a little help with fluid removal. It was however by no means a substitute for haemodialysis. Dr Robert Stephen, a local anaesthetist, assisted in this novel procedure which kept patients alive, and relatively well.

According to newspaper reports of the time Dr Wilhelm Kolff of Utah, showed interest in the Townsville research and made a gift of one of his a rotating drum machines, which was used for dialysis of these and other patients. A formal dialysis unit was finally established in Townsville in 1972, with a new machine purchased for the purpose, although the drum was still in use at that time.

The nurses in the dialysis unit, one of whom has just recently retired,



## Key Words

history, kidney, renal, dialysis

went to Rockhampton to train to do dialysis, a radical move for the time, as all advanced nursing training was undertaken in Brisbane.

The Dialysis Unit ran, with only these few nurses and with remote supervision provided by nephrologists/ physicians from Princess Alexandra Hospital (PAH) from 1972 to 1977. At this time Dr Peter de Jersey, formally from PAH, opened his private practice in Townsville and took up a position three mornings a week at the Townsville General Hospital (TGH) as the Renal Physician. At this time there were 12 patients undergoing Haemodialysis, 11 of whom had analgesic nephropathy, a disease rarely seen today. Both Travenol bath machines and Drake Willock 4015 machines were used in Townsville until the constant flooding of the unit from the old coil baths became so dangerous underfoot, the then Charge Nurse, Mrs Betty Menzies, took a series of photos to demonstrate to the administration the extent of the problem, which allowed the then newer Drake - Willock 4215 machines to be purchased.

When I commenced work in the unit in 1981, the unit had grown to 32 chronic haemodialysis patients, supported the intensive care unit (ICU) with haemodialysis and intermittent peritoneal dialysis. At that time there were eight nurses in the unit (charge nurse, 4 registered nurses (RN) and 3 enrolled nurses (EN)). In addition, the unit supported three home haemodialysis

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patients who had been trained in Brisbane. It was an exciting time as we were about to commence training the first patients for the new continuous ambulatory peritoneal dialysis (CAPD) therapy. We had copies of Moncrief's article which had been published in 1976 describing this technique and the Travenol (now Baxter) nurse, Penny Horner, from Melbourne, had been to provide education and discuss equipment and delivery, so we were ready to go. Once the CAPD program started an additional EN was employed, although the RN's were to do most of the initial education and supervision.

The first CAPD patients were trained and sent home but the major error made in establishing a PD program was the lack of a home visiting service. As the procedure was very simple the initial evidence suggested that home visiting would not be required and patients would attend clinics at the renal unit and/or the renal physician. Many urban units still operate this way. It did not occur to us that patients in remote areas (up to 1500 kms away) may not wish to fully inform us about their

living arrangements, or that they may be embarrassed by our middle class assumptions. Consequently our first peritonitis related death 2 years later, involved a lady who was doing CAPD in her dirt floored humpy. Her husband pumped the water brought it into the house and was pouring water from the bucket for her to wash her hands. We had educated them well, "it really should be running water not in a basin for washing your hands", so he made sure it was. The couple lived on a small farm, outside Charters Towers (150km from Townsville). This tragedy had a profound effect on the staff, the unit and the consequently the program. Home assessments and visits were included into the program, hard fought funds found, and the start of a very successful rural and remote outreach service began. A clinical nurse and part time dietician solely responsible for outreach were employed in 1996 and by 2001 more than half the 90 patients under the care of the unit were home on peritoneal dialysis.

Transplantation in Queensland was, and still is, all undertaken at PAH. When legislation allowing living donors was enacted in 1981 the first transplant done later that year was that of an indigenous Townsville dialysis patient who received a kidney from his brother. The satellite unit in Cairns was established in 1984 with 4 chairs, becoming a fully fledged unit with its own nephrologist in 1992. The Mackay Satellite was established in



Dr Peter de Jersey and Wendy Washington

1988 and has only recently employed a Nephrologist to cover the service. The Home Hill Satellite was established in 1993 and still functions in that capacity. The local Townsville Satellite was started in 1996 and has moved and grown to 11 chairs and is co-located with the still growing Home therapies service. As small unit on Palm Island opened in 2002 and 8 chairs in Mt Isa opened in 2003.

Area still covered by Townsville Dialysis Unit shown in dark blue



Today the Townsville renal service has over 200 patients, with around 80 of these at home or in totally self care sites in remote areas. While it was hoped to get a higher percentage home, the major issues related to increasing the home patient numbers are the lack of a good and dependable water supply and inadequate housing in many outback communities. Different approaches have been found and satellite units contain many to allow them to be closer to home. We have been able to limit the number of the clients in the Townsville Hospital Unit at less than a third of the total number on dialysis. In many aspects we often feel we are out in the wilderness, but perhaps when working in dialysis the wilderness is a not such a bad place to be.