

# Royal Prince Alfred Hospital dialysis from the 1960s to the 2000s.

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## Abstract

The Royal Prince Alfred Hospital (RPA) renal unit opened in 1965 with the first haemodialysis performed in June 1967. The first home training patient was undertaken in 1971. Peritoneal dialysis began in the 1960s for patients with acute renal failure or those patients with chronic renal failure but no access. The first patient to learn continuous ambulatory peritoneal dialysis was in 1978 with nine patients trained in the first year. In 1994 the RPA Renal Unit combined with the Concord Renal Unit to become the Statewide Renal Service (SRS) and in 2009 is the third largest renal service in Australia.

*During this first 15 months the complications included two air embolisms (after which glass bottles for any infusions were banned), 23 coil ruptures and one episode of sepsis associated with an external shunt*

## Background

Royal Prince Alfred (RPA) Hospital is in Camperdown, adjacent to the University of Sydney. The Renal Unit at RPA began in 1965 under the leadership of Dr John Sands. In 1994 the RPA Renal Unit combined with the Concord Renal Unit to become the Statewide Renal Service (SRS) and is now the 3rd largest renal unit in Australia.

## Haemodialysis

The first haemodialysis at RPA was performed in June 1967 in a small annex of the hospital which housed 3 machines (see below Picture 1). The first patient dialysed was a female aged 28 with chronic pyelonephritis who had 33 dialysis sessions before she received a renal transplant. In the first 15 months of operation 31 patients (18 male and 13 female) were dialysed for a total of 530 sessions.

The first machine ("Travenol" twin coil recirculating single pass) had been purchased in May 1967 at a cost of just under \$3000. As we continue to do now, the machines are all named, and our first three machines were called "Mo", "Larry", and "Curly"!

The machines were cleaned, primed and dismantled in a work room to the side by a

technician and nursing staff. The primed machines were then wheeled next to the patient's bed for dialysis. The staff who worked in this unit said it was very patient focused – both patient and nurses felt they were at the beginning of something exciting and real bonds were forged. Staff found the days both challenging and fun.

The unit operated from 6:30am to midnight with each session of dialysis taking between 5½ to 6½ hours twice a week i.e. the unit was only open for 4 days a week. The unit is now open 6 days a week 7am – 10pm and the patients receive 3 x 5 hours dialyses per week

Nurses worked four 10 hour shifts. Now the in-centre unit's full time staff work five 8 hour shifts and part time staff as required. Most patients had a Brescia shunt or a modified Scribner shunt (Tiller et al, 1969). No vascular catheters were around then.

The program began with an honorary physician, one registrar and one nurse. The nursing staff quickly rose to four nursing staff and one nurse's aid. Move to 2009 and the unit now has six staff specialists, four registrars, a social worker, an occupational therapist, a pharmacist, a dietitian and 3 technicians. How times have changed?

## Key Words

history, kidney, renal, nursing, dialysis, transplant



The cost per patient per year was said to be \$4820. (Tiller et al, 1969). Today the cost is approximately \$60,000 per patient, per year (Cass et al. 2006).

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Connecting patients to the machines. Initially all patients suffered a low grade dermatitis with the use of alcoholic chlorhexidine. When the solution was changed to a 0.5% aqueous solution there were no further episodes of dermatitis. Hypotension and hypertension were common complications of haemodialysis. However, the treatment was sometimes a bit different (see below Picture 5).

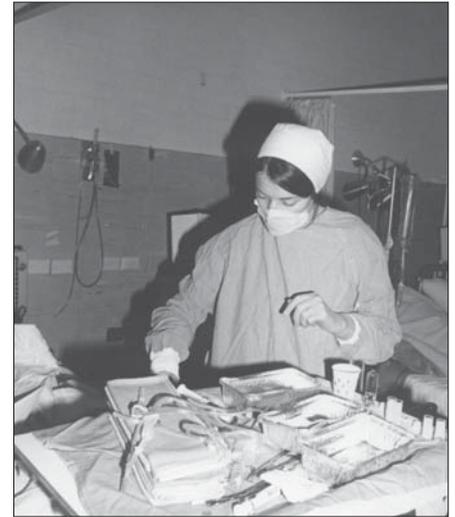
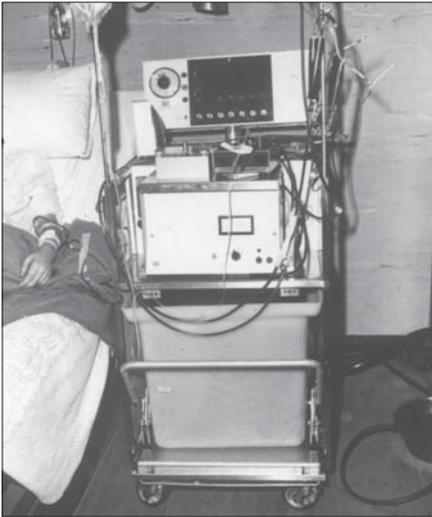
Home training began in the 1970s. In 1971, a Nebo miner, was the first patient at RPA to learn to set up his machine and connect himself (see below Picture 6). He traveled by train from Wollongong twice a week to do so. Two other patients were trained to perform home haemodialysis that year. The current unit now supports over 130 home haemodialysis patients.

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In the 70s, the unit grew and moved to 'slightly' bigger premises (see on the right Pictures 7 and 8). Now the unit had 11 machines but dialysis was still only done twice a week but over 3 shifts – night duty had begun!

**Peritoneal Dialysis**

Peritoneal Dialysis began at RPA in the 1960s and was usually for patients with ARF or those patients with chronic renal failure but no access. The first patient to learn CAPD was in 1978 with nine patients trained in the first year. Patients were trained as in-patients in the annex originally used for the first haemodialysis. Today patients are trained as outpatients in the satellite centre located near the main hospital.

**RPAH dialysis 2009**

RPAH now cares for over 200 haemodialysis patients. The in-centre unit has 11 machines and performs



dialysis on approximately 40 patients per week. There is also a satellite unit - Building 12 - that has 33 machines and performs dialysis on approximately 120 patients per week. . Building 12 also houses the home training unit for both haemodialysis and peritoneal dialysis caring more than 200 patients at home. The unit has also expanded to such an extent that it cares for patients in Dubbo, Griffith, Wagga Wagga, Goulburn and Moruya. It really is a Statewide Renal Service and no



longer do patients have to travel such long distances, i.e. from Wollongong, to have their life saving treatment.

**References**

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