and very carefully attached many lines to dialysate containers which were hung up quite high and connected to the cycler machine. Finally the main line was attached to the patient, who languished under a pile of sterile drapes. The whole connection process took close to an hour.

I am not sure how long the dialysis took but he was certainly still connected by the end of my shift at 11 pm (no 2400 hour clocks in those days).

Another prominent memory, probably due to the frequency with which it occurred, was the overflowing of the sluice in the pan room. Most of these patients were anuric for heavens sake so how could so many bed pans need scrubbing? The enormous, ancient sluice sink, used mainly for soaking bed-pans took ages to fill. It was customary to turn on hot water taps to fill the sink and of course this took so long that it was usually only remembered as the water was seen seeping onto the carpet from the pan room, half an hour later. Thankfully peritoneal dialysis effluent was poured down an old ceramic drain, so the carpet stains were usually only from water!

The Charge Nurse was an enthusiastically and friendly as even then she tried to recruit nurses for future renal roles. I remember the entire staff there being supportive and encouraging with their teaching programs. But especially I liked the patients. I liked how we got to know them, treat them and finally send them home and perhaps not see them for a while; but the nature of renal illness dictated that they returned to us before too long, and then at least there was a familiarity which could be family like.

Unfortunately, by 1983 Sydney Hospital began its decline as a major teaching hospital. Many of its unique medical and surgical units were distributed to other hospitals. The renal unit was transferred to the Royal North Shore Hospital, and from those initial pioneering times the kidney transplant tally from both institutions was over 880 by the turn of the new century.

To this day my admiration for what renal patients endure has never waned, and from those humble Ward 17 beginnings it has always been a privilege getting to know the many wonderful, friendly and grumpy, stoical and irritable, brave and ultimately long suffering people who become renal patients.

Dialysis at Guys in the 1970s


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Abstract

Dialysis in the 1970s in Guys Hospital in London involved Dyalade B3 machines, plate dialysers, shunts and manual transmembrane pressure calculations. Patients were dialysed in beds, had haemoglobin of 70 and were very rarely over 65 years old.

The heparin was injected into a bag of normal saline then, after a separate heparin bolus was given through the arterial needle and dialysis commenced, you would have to stand with a stopwatch to time the drips and turn a black wheel to alter the rate of the pump accordingly.

Nursing in the renal ward

Although I am now working in Australia my early memories at Guys in the 1970s were influential in my dialysis nursing journey. In 1977 I had been watching the registered nurses from Bostock House, the haemodialysis unit, come into the ward to dialyse the acutely ill patients and had admired their skill in managing these massive and complex looking machines. It was partly due to these impressive nurses that I searched for a hospital where I could study for my registration and thus join them in years to come. However, after much searching with the support of my supervisor Liz Winder, it seemed that no hospital would take me because of my lack of ‘O’ levels. Liz then asked ‘So, what do you want to do now?’ I said ‘I would love to try haemodialysis, it looked so interesting.’ To my astonishment she agreed to allow me to fill a vacant position, making me the only enrolled nurse to be employed in the unit.

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I well remember my first day, standing in the doorway and watching all the girls running around setting up machines. I recall thinking that this was a mistake I will NEVER learn how to do this, it is way to complicated. I’d better go back to the ward and stop thinking I can handle things like this. Luckily, I was taken under the wing of Heather, one of the ‘Sisters’ (nurse unit manager) who taught me all the basics about setting up machines, needling, starting, running and terminating a dialysis treatment. Now to the real nitty gritty. It was OH, so different in those days!

The first machine I was trained on was a Dyalade B3. They had no integrated blood or heparin pump and the bubble trap was held on to a metal rod just under the dialyser with whatever tape was at hand. In fact, the only connection between the machine and the blood circuit was a venous pressure monitor. The blood and heparin were pumped by two red Watson Marlow pumps that stood on the top of each dialysis machine. The heparin was injected into a bag of normal saline then, after a separate heparin bolus was given through the arterial line (yes, air…………) and use a stopwatch to time how long it took to get from the injection port to the tape and that way we knew how fast it was going in nls per minute. My recollection is that we ran most patients at 200 nls/min.

Patients dialysed for eight hours on long Gambro flat plate dialysers. The shape of these dialysers later changed and became shorter with the corners cut off to improve blood flow. These dialysers became known as ‘coffins’ because of their appearance.

Access was primarily provided via arteriovenous fistulae with a fair number of arteriovenous shunts thrown in for good measure. I was used to de-clotting shunts on the ward so this was not something that presented a problem for me in the dialysis unit.

The patients had beds rather than chairs to rest on and the dialysate lines were much longer than today although they may have had a much narrower bore. I recall patients frequently moving off their beds and going to their neighbour and sitting down for a chat.

Transmembrane pressure (TMP) was certainly used but it was artificially created by the staff, not calculated by the dialysis machine. There was a knob on the machine that would be used to create ‘suck’ by kinking the return dialysate line inside the machine and thus causing back pressure. Also we would apply a gate clamp to the venous line to again cause some back pressure in the dialyser. The combination of venous pressure and ‘suck’ negative pressure was our TMP.

Blood transfusions were a regular event as this was well before erythropoiesis stimulating agents (ESA). It still amazes me how well most of the patients functioned with haemoglobin of around 60–70, which is what we transfused them up to.

Most patients were young, meaning under 65 years of age. Our first 65 year old caused quite a stir but did amazingly well, always seemed happy and had a good quality of life for about a year while on haemodialysis.

When we went to the wards to provide acute treatment things were quite different. There we used Travenol RSP machines and they were to stay in use for quite some time in my dialysis career. They were old when I started training but were easy to use and the coil dialysers gave a good ‘tight’ (low heparin or heparin free) dialysis. They rarely seemed to clot. The dialysate was made by staff attaching a hose to a tap and pouring tap water into a large tank and then adding powders and liquids of potassium, acetate and other assorted goodies. The conductivity was then checked with a metre. It was easier to add more water than to add more powders so we would aim initially for too high a conductivity rather than too low. Once a correct reading was obtained, the dialysate was pumped up to the ‘header tank’ where it was warmed and passed through the dialyser which had a rather attractive water fall appearance (especially if there was a blood leak…….).

As much as there were some very good dialysers, I do have a very vivid memory of walking into the unit for a late shift and seeing a nurse standing on a chair with a mop over his head, wiping the ceiling. A coil had exploded sending blood and dialysate everywhere. In my second haemodialysis job I was introduced to the Kiil dialyser which was by that time used almost exclusively for home haemodialysis patients although there were enough of them in the chronic unit to keep the staff knowledge base up. I was taught how to strip and rebuild a Kiil by the AKAs (artificial kidney assistants) who were employed by many units. Building a Kiil could be a strangely soothing job although frustrating if you had forgotten to put the blood ports in or to cut the holes for the dialysate flow in which case it would not pass its pressure test.

Home patients, of which there were quite a number when compared to the in centre patients, dialysed overnight thrice weekly. This way many of them held
down a job. If they had no spare room to
dialyse in, a porta-cabin was dropped into
the back garden and water and electricity
connected.

As I progressed through the years of my
dialysis career in the United Kingdom
the machines became more refined and
automated. I recall the Lucas machines we
used at Guys, they came in a very attractive
blue or orange colour and more up to date
Dyalades where home patients could leave
the lines and dialyser on the machine, clean
them out with water, then sterilise them
and be ready to rinse and reuse. Then came
the Cobes and the Gambros.

On reflection, our patients survived
despite us rather than because of us, and I
have to say that it has been a privilege to
have been working in dialysis for so long
and to have the experiences I have had.

There is even a degree of envy toward
those who have been around about
10–15 years longer than me. What tales
they have to tell! I sometimes feel sorry
for staff coming new to dialysis where
everything is computerised and worked
out for them. However, I know that if
they are still around in 20–30 years, they
will be looking at the youngsters and
saying "you don't know you are born,
why, in my day".

Abstract
This paper describes renal nursing of people receiving haemodialysis and peritoneal
dialysis in Sydney in the 1970s.

Most patients vomited during and after dialysis and suffered headaches and severe cramps

Renal nursing in 1974 when I started
at Sydney Hospital was challenging but
very satisfying. Patients were young,
often yellow and very sick. Nobody over
the age of 60 years received dialysis as
there were only six machines! Imagine
a renal ward without Erythropoietin,
beta blockers or angiotensin-converting
enzyme (ACE) inhibitors.

In 1974, Ward 17 at Sydney Hospital had
a Nightingale style renal and haematology
ward, with a verandah off it which
housed the six haemodialysis machines.
Team nursing occurred with a registered
nurse and two student nurses (usually
a 3rd year and a 1st year) responsible for
14 patients, including two patients in
reverse barrier nursing and a laminar
flow bed because of chemotherapy for
haematological conditions. Another
registered nurse and one student nurse
were responsible for the other 10 patients,
including one who was being reverse
barrier nursed. Student nurses were
trained by the hospitals with blocks of
time put aside for teaching. During this
teaching time the wards were minus those
nursing hours. A postgraduate six month
renal course commenced at Sydney
Hospital in 1972. My student nurse
training had provided me with minimal
renal knowledge (that I remembered) so I
enjoyed doing this course in 1974.

Hypertensive crises were common
with encephalopathy and patients often
experienced fits. Hypertensive patients

Analgesic nephropathy was rife. Patients
presented and re-presented with sloughed
papillae and obstructed ureters, with the
Bex/Vincent powders in their lockers,