

THE RENAL UNIT
Leicester General Hospital
1974-2004

Preface

The Renal Unit at Leicester General Hospital was established on 1st January 1974 with the appointment of Dr John Walls as the first Consultant Nephrologist in Leicestershire. Originally called the Leicestershire Area Renal Unit, the name was changed to the Department of Nephrology in the 1980s reflecting its broader work as both a clinical and research unit involved in all aspects of kidney disease. Following the death of then Professor John Walls in 2001 it was renamed in his honour as The John Walls Renal Unit.

This short history is dedicated to all those people who have touched the unit – both staff and patients – who are no longer with us. Their names are unfortunately too numerous to mention separately, but without them, the unit could not have progressed and grown over the years.

Written by Toni Smith MBE, former chief nurse on the unit, with additional material from Kevin Harris and John Feehally, consultant nephrologists.

The John Walls Renal Unit, Leicester General Hospital

Introduction

Up to the early 1970's there were no facilities in Leicestershire for the treatment of people with kidney disease. People with kidney problems even those needing long term treatment for kidney failure had to travel to Sheffield or Cambridge.

In 1974 a Renal Unit was established in Leicester, and was based from the beginning at Leicester General Hospital. Originally established for Leicestershire people, the catchments area for the new Renal Unit to steadily expanded to include those from parts of Lincolnshire, Nottinghamshire, Warwickshire and Northamptonshire .

Once open, the number of patients attending the unit grew with alarming speed, and the Leicester Renal Unit becoming one of the biggest in the UK, offering a comprehensive range of treatments for kidney disease.

The success of the unit is rooted in the co-operation and close working patterns of all members of the multiprofessional team. These staff includes doctors, surgeons, nurses, renal pharmacists, dietitians, physiotherapists, occupational therapists, psychologists transplant co-ordinates, technicians, computer operators, secretaries, and ward clerks, domestic staff and managers. Staff changes over the years, and the unit has gone from strength to strength, new staff bringing in new ideas, and old staff 'keeping in touch' and often returning after a time away.

The Haemodialysis Unit - 1980's

THE FIRST DECADE 1974-1984

Dr. John Walls took up post as the first Consultant Nephrologist to the Leicestershire hospitals, on 1st January 1974, and was charged with establishing a renal unit at Leicester General Hospital.

Outpatient Renal Clinics were set up at the Leicester General. Referrals soon came in from within the hospitals and from general practitioners and 'business' became brisk.

Building of the haemodialysis unit had already begun but was not yet completed. Dr Walls, appointed a renal technician, Peter Walton, who took charge of all equipment required for haemodialysis, and assisted in the commissioning of the haemodialysis unit.

In March 1974, the first patient was identified with end stage renal failure, who needed immediate dialysis. The haemodialysis unit was still not commissioned, nor a renal ward established. However, a bed was obtained on a medical ward (then ward 2 which in 2004 is the Coronary Care Unit)

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and the first dialysis was performed by Dr. Walls, assisted by Peter Walton and nurses from ward 2, on 17th June 1974. A haemodialysis machine was borrowed from Sheffield for this first treatment, as our own machines had not arrived.

Beds in the hospital, were fully utilized, and so it was decided to allocate 2 beds for renal patients on each of 3 wards, and within a period of 18 months it became obvious that a more permanent arrangement was needed.

Meanwhile, the haemodialysis unit was completed and opened in July 1974. It consisted of 10 stations and was supported by 2 technicians. By the end of that year, 14 patients were attending on a regular basis. One patient, ~~Pamela Gardner~~, was trained to undertake the dialysis herself, and a dialysis machine was installed at home. With assistance from her spouse, on 6th December 1974 the first home haemodialysis was undertaken.

Ward 6 (which in 1987 became ward 15 when the hospital re-numbered the wards) was a female medical ward. It was re-allocated and converted to a renal ward. The renal ward opened in 1977, and consisted of 15 beds – 9 on the open ward with a partition along the center of the ward, and 6 cubicles, each with a sink and dialysis facilities. Male and female patients were nursed and treated on opposite sides of the partition in the main ward, when possible.

Transplantation

With the appointment of Professor Peter Bell as Leicester's first Professor of Surgery in 1974 a programme for kidney transplantation was also established and thereafter the nephrology and transplant services have worked extremely closely together for the benefit of patients.

The first kidney transplant in Leicester was performed at Leicester General Hospital on 7th February 1975. The surgery was undertaken by Professor Bell and the late Mr. Richard Wood [then lecturer in surgery in Leicester and later Profess of Surgery at St Bartholomew's Hospital, London, and Sheffield]

Potential transplant recipients were brought in by ambulance or by their own transport, to the ward from home by way of a phone call from the unit staff – usually a doctor – and once arrived, the process of cross matching the patient o check suitability of the kidney was organised whilst the patient underwent a dialysis in preparation for theatre. A cubicle in ward 6 was prepared by totally scrubbing the walls and floor, and a change of curtains was also deemed necessary. The patient was then bathed in 'Hibiscrub', including hair washing, and on return from theatre, was isolated with reverse barrier nursing in a cubicle for at least 2 weeks following the operation. Close relatives only, were allowed to don gowns, hats and masks to visit into the cubicle. All dialysis requirements were undertaken in the cubicle and food was served on disposable plates with disposable cutlery. [These extensive precautions are no longer deemed necessary in modern kidney transplantation.

By the end of 1975, five transplants had been performed. By the end of the first 10 years, (end of 1983.) there were 68 patients with a functioning transplant on the programme.

| Year end | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 |
|-------------|------|------|------|------|------|------|------|------|------|
| Transplants | 5 | 6 | 13 | 18 | 10 | 17 | 14 | 29 | 42 |
| Total prog | | | | | | | | 42 | 68 |

10-Year Growth of Transplant Programme

Early Haemodialysis Equipment and Treatment

The 1970's

Dylade II haemodialysis machines and re-usable Kiil dialysers were the first equipment used in the unit, using acetate-based dialysis fluid, and by the end of that first year, the unit was already regularly providing dialysis for 13 patients as well as one patient at home.

Dialysate was delivered to the unit in bulk, and the nurses working on the unit replenished each machine with dialysate after each patient treatment ended. Delivery and storage of the dialysate was in large tanks in the loft of the building, and piped down to the ground floor, with an outlet tap to allow the decanting process. (Many times the tap was left running when the nurse was called away in emergency, resulting in a flood of fluid in the store room).

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Two patients per 24 hours used each station. Most patients were able to transport themselves to the unit, and commenced the first shift at 08.00. The dialysis was anything between 6 and 10 hours duration, depending on the individual needs, and patients were given meals, served at the bedside / chair-side whilst treatment continued.

The majority of patients attended the unit three times per week, and being a small unit, it yielded a friendly and informal atmosphere. The second shift was overnight, the patients arriving around 9pm, and often sleeping through the night whilst the dialysis took place. Patients were offered a choice between a bed and a reclining chair, but for overnight treatment most preferred a bed. These patients were given breakfast before setting off for home. Many of these patients held down a full time job, and went from the unit straight to work.

On arrival at the unit, patients were taught to 'line and prime' their own machines, and afterwards were asked to clear the disposable lines, and wash the equipment. Nurses were not expected to have the machines ready, but had more of a teaching and support role. A partner often assisted patients, usually a spouse or parent, and nurses were engaged to teach and prepare these patients for dialysis at home. It was the intention, at this time, that most patients starting haemodialysis would eventually undertake the treatment in their own homes.

By the end of the second year (1975) there were already 17 patients dialysing at home, and a further 23 patients on the unit, many in the process of being trained for home.

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As the dialysis was a slow, gently process, patients were well able to continue their everyday life. They were encouraged to 'build' their own Kiil dialysers, a tedious job at the best of times, but following an eight-hour dialysis, it was certainly not a popular task. 'Building' involved dismantling the Kiil by removing the boards of the Kiil and replacing the membranes, and then the re-building. The newly built Kiil then had to be 'tested' for leaks, by air pressure, and it was then allowed to stand for five minutes to ensure that the seals were airtight, and finally filling the airspace with formaldehyde. The Kiils were then stored until the next patients visit. Each patient was allocated a Kiil, which was kept for that patient until it was no longer required (death or transplantation being the reasons). Kiils had to be re-built after 3 uses, and after each of the first two uses, they were rinsed for 10 minutes with treated water before finally being filled with formaldehyde and stored. Before each dialysis, the Kiil was thoroughly rinsed by attaching the port to a treated water system, which was left running for at least 5 minutes. It was rinsed a second time with saline before attaching the patient for treatment. Patients soon became familiar with the process and were able to carry out this procedure for themselves.

During dialysis, patients were weighed at regular intervals at the bedside, and some 'weigh beds' were installed, which allowed the patient's weight loss to be monitored without the need to get off the bed. One had to remember not to add blankets or pillows onto the bed, without re-setting the patient bed weight!

The patients were also taught to take and record their own blood pressure, weight, and temperature, pre and post dialysis. They were given a plastic box in which to keep their allocated clamps, thermometer and sphygmomanometer. They were issued with a chart on arrival to enable

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them to monitor and record their progress. As there were no computers, details from each dialysis was transferred onto a master chart, held in the patient's notes.

The fact that most patients were so self-caring may be a reflection on the selection process, which at this time allowed only those patients with a good chance of prolonged survival, and possible candidates for home dialysis, to be taken on to the programme.

Nurse's uniform for the haemodialysis unit was operating theatre clothes, (which were discarded to the laundry after each shift) and each nurse was allocated a pair of clogs. All visitors to the unit were expected to don disposable gowns, and overshoes, which were available at all entrances to the unit. Standard nurses uniforms were introduced in 1987, and at the same time, the need for gowns and overshoes for visitors were abandoned.

The 1980's

In 1983/1984 the Kill dialyses were finally made obsolete in favor of disposable dialysers, and Dylade machines were all replaced by the more sophisticated Gambro AK10's. The last patient to use the Dylade II was a home dialysis patient. Acetate remained the standard dialysis buffer.

During the 1980's, as an alternative to haemodialysis, haemofiltration was also introduced, but as this was considerably more expensive than the standard treatment, it was only used for patients intolerant to acetate dialysis. This treatment was widely used for patients in the Intensive Care situation, and a more sophisticated form is still used as standard for acutely ill patients today. Haemofiltration was steadily replaced by bicarbonate dialysis as the alternative to acetate, in the late 1980's and early 1990's. In

2004 bicarbonate dialysis remains the standard dialysis technique used in the unit.

Later, more sophisticated Gambro machines were introduced which were able to monitor weight / fluid loss during treatment, thus negating the need for the bulky weigh beds which had until then been a feature of the unit

Renal Unit Surgical Theatre

From the 1970's to the early 1990's the renal unit had its own operating theatre, staffed by the renal unit nurses. The operators were nephrologists and members of the transplant surgery team. It was used initially for the formation of vascular access for haemodialysis, including arteriovenous fistulae, arteriovenous shunts as well as insertion of temporary vascular access catheters. The theatre was purpose built, and fully equipped with all the modern surgical requirements of the day. All procedures were carried out under local anaesthesia, and anaesthetists were not required to be present.

When CAPD was introduced in 1980, the theatre was utilized for the insertion of the CAPD catheters under local anesthetic..

The theatre was converted to a storeroom in the early 1990's, when all surgical procedures were undertaken by surgeons in the main hospital theatres.

Isolation Dialysis

Haemodialysis was carried out in isolation for patients with hepatitis B or other infective problems. At first these treatments were performed in the cubicles on Ward 6. This was inconvenient once the patient was

discharged home, so in 1987, an additional area was built in the haemodialysis unit which included two isolation rooms, purpose built for outpatient use. At this time, the Kiil dialysers were no longer in use, and so it was the storage area for Kiils that was taken over for this purpose. The conversion was a 2 stationed isolation unit, complete with its own entrance from the car park area. Being away from the main dialysis area, continuous observation of the patients by the nursing staff proved to be a problem, so with the upgrade of the unit in 1997 the isolation cubicles were included into the main unit area as it is today.

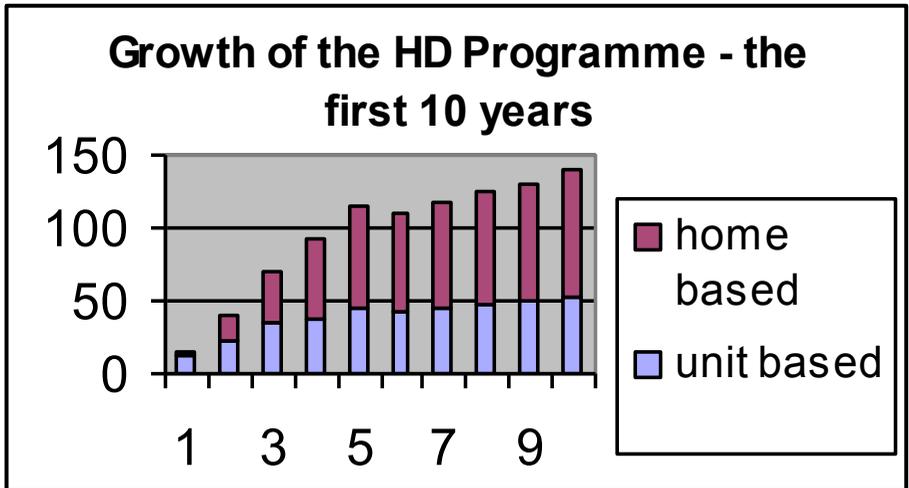
The Growth of the Haemodialysis Programme

The haemodialysis programme has maintained a steady growth over the 25 years. However, the home dialysis programme reached a peak in the 10th year after opening, when there were 88 patients carrying out their dialysis at home. At this time there were also 53 unit-based patients, thus giving a total of 141 patients in all maintained on haemodialysis. (See Fig 1)

Eight technicians were employed to service and maintain the dialysis equipment. Working on the ward and unit, the total number of nurses was 43.5 whole time equivalents (wte) and it was another 5 years before a second consultant was appointed in 1988.

| Year End | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Unit Based | 13 | 23 | 35 | 37 | 44 | 42 | 45 | 48 | 50 |
| Home HD | 1 | 17 | 35 | 56 | 70 | 68 | 73 | 76 | 79 |
| Total HD prog | 14 | 40 | 70 | 93 | 114 | 110 | 118 | 124 | 129 |

Fig 1



Peritoneal Dialysis

Intermittent Peritoneal Dialysis (IPD)

Peritoneal dialysis was used as a temporary treatment for most patients presenting with chronic renal failure and sometimes for acute patients also, from the earliest days of the unit. This treatment was carried out as Intermittent Peritoneal Dialysis (IPD), and this period of patient treatment was used to stabilize and assess the suitability for permanent haemodialysis treatment.

IPD was carried out in the ward environment, using PD fluid contained in glass bottles. A temporary catheter, made from semi-rigid plastic tubing, was inserted into the patient's abdomen and secured by a suture and sticky surgical tape. The patient was dialysed using a 'Y' connection of tubing, to two bottles of dialysate fluid, which were drained into the patient's abdominal cavity, left in situ for ½ hour before being drained out. The connection spike to the bottle was through a rubber bung, which was often pierced with scissors from the nurse's own use! (The result of this procedure was that many patients contracted peritonitis, which was treated with oral antibiotics).

Once the patient was stabilized and the blood chemistry was within acceptable limits, the catheter was removed and the patient discharged home, to be supervised by the doctors in outpatients.

This procedure would be repeated usually on a fortnightly to monthly basis, according to the individual needs, and one treatment would last for around 4 or 5 days, nurses changing the dialysate on an hourly basis for 24 hours a day. This was time consuming for nurses, expensive for the hospital due to the use of in-patient facilities, but a successful treatment prior to being

accepted onto the haemodialysis programme. It was almost looked upon as a procedure to 'earn' a place on the haemodialysis unit. It was not popular, but served as a valuable form of dialysis for some patients at that time.

Continuous Ambulatory Peritoneal Dialysis (CAPD)

It was in 1979 that the Unit treated the first CAPD patient. This treatment, was first carried out in the USA in 1976, and in the UK in Newcastle-upon-Tyne in 1978.

At a time when the haemodialysis unit was overwhelmed with more patients than could be considered for treatment, CAPD provided an available alternative for the large numbers of patients now coming forward for dialysis treatment..

Since the dialysis fluid was now in plastic bags the patient could 'wear' the empty bag connected to the catheter, concealed under their clothing.

The soft silastic catheter was inserted into the abdomen of the patient by the nephrologist, usually in the Haemodialysis Unit Theatre, using local anaesthetic. To ensure the patency of the catheter, several fluid exchanges would be made whilst in theatre, and the patient would then be transferred to the ward where the nurses would continue the treatment for 24 hours. In the early days, the treatment continued without a break, but as more knowledge was gained, the catheter was capped off to aid healing of the abdominal wound. This new treatment was established with the team work of both doctors and nurses, and within two years most of the technical problems had been solved. However, as with IPD the main complication remained (and still remains) peritonitis.

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Treatment of peritonitis has changed over the years, and patients are now taught to administer their own antibiotics. At first, all patients with peritonitis were admitted and the treatment was given by the doctors and nurses. It was very quickly learned that this approach was 'blocking' too many beds, which by the end of the first era, was already at saturation point.

At first the procedure for the exchange of the bag was a daunting sight, with the patient being asked to don a disposable gown [figure..] (we now wonder why), disposable gloves, and mask. The nurse was expected to wear gloves and mask also. In an attempt to combat these infections, many 'exchange devices' were introduced to aid the patient to change the bag of fluid, from a simple mechanical device, to the UV device, but the real break-through for CAPD came in the 1990's with the introduction of the 'Y' disconnect system, allowing the draining off of fluid and the draining in of fluid without a disconnection during the process. The great advantage to the patient was that the long line and bag were no longer 'worn' concealed beneath the clothes., the catheter being capped off between exchanges.

From its introduction, CAPD grew rapidly. The early patients were all under 65 years of age, as older patients were deemed to be unsuitable for treatment, as were diabetics and other chronic conditions. Treating the younger population with CAPD soon led to practical variations including the introduction of Automated Peritoneal Dialysis (APD), at that time known as Continuous Cycling Peritoneal Dialysis (CCPD), which used simple machines to automatically exchange bags overnight leaving the patient free during the day. These machines were simple in design, but they worked well, but were not able to monitor the patient's fluid status as do the present day machines. Using these machines, the patient was able to dialyse overnight, leaving the daytime free for work or play! Of the five patients at

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home on PD treatment at the end of 1979, 3 were using these machines. Leicester was the first UK unit to widely use this method of peritoneal dialysis for home patients, and became a reference area for other units.

It was in 1980 that the need for a dedicated peritoneal dialysis nurse was recognized, as well as a designated area in which to train the growing number of patients. In 1980, a CAPD training room was built with access to ward 15. Patients were admitted for treatment, catheters inserted and the patients were kept in the ward until they were sufficiently trained to allow them to carry out the treatment at home. At first, this often took 3 weeks as there was only one nurse for this purpose. Ward nurses were trained to do the exchanges for the patient, but did not train the patient, which was the specialist task of the PD nurse. By 1986 a team of nurses was designated for training PD patients, and a conversion of a storeroom into a training room, with the old training room being used for PD storage.

During this time, there were no nurses visiting dialysis patients in the community, and so the CAPD patients (and the home HD patients) were brought back to the unit when complications occurred at home. Occasionally, the nurse would undertake a home visit to ascertain the suitability of the home for the treatment, but this was an exception rather than the rule.

Over the first 10 years of the opening of the unit, following the introduction of CAPD in 1979, the programme grew rapidly, and as the procedures improved, so more complicated referrals were accepted. By the end of 1983 (only 4 years after the introduction of CAPD) there were 49 patients

on the CAPD programme carrying out the dialysis at home. Many more had of course been trained during that time, but were lost to the CAPD programme because they had received a transplant, transferred to HD or had died.

| Year End | 1979 | 1980 | 1981 | 1982 | 1983 |
|---|------|------|------|------|------|
| Patients taken onto PD Programme | 5 | 13 | 17 | 26 | 30 |
| APD (included) | | 3 | 11 | 11 | 5 |
| Total PD Programme | 5 | 5 | 10 | 18 | 49 |

Home Deliveries

From the outset of home treatment, there was an obvious need for supplies delivery to home patients. For home haemodialysis, a home dialysis administrator was employed, who was responsible for the home supplies for haemodialysis as well as home conversions for the installation of dialysis equipment. The deliveries were made to the patient's homes by a hospital van, and a warehouse was set up in the old mortuary building at LGH, now an Education and Training Centre. Patients were asked to request supplies as and when they were needed. The arrangement worked well, until CAPD was introduced.

CAPD deliveries were bulky and heavy. A week's supply of fluid for a typical patient weighed 60kg and so a new arrangement for deliveries was introduced in the mid 1980's through a commercial arrangement with Unicare. At first this was only for CAPD patients, but once established, was soon utilized for haemodialysis home deliveries also. This firm later became the main supplier, not only for home deliveries but also for the hospital's renal supplies.

THE SECOND DECADE 1984 – 1994

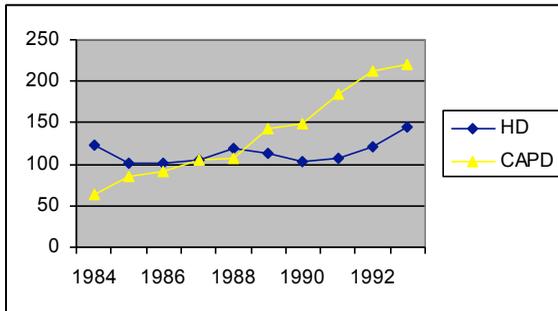
By 1984, the total number of patients on the dialysis programme was 186,

| | |
|--------------------------|----|
| Unit based Haemodialysis | 51 |
| Home Haemodialysis | 72 |
| CAPD | 63 |

The unit was accepting 65 new patients per year for treatment, and patients were now freely moving from one type of dialysis to another. The flow was inevitably more from CAPD to HD due to the failure of treatment resulting from peritonitis, which as yet was not under control. Transplantation was accounting for a drop out from dialysis of only around 45 per year. However, the unit was now taking on older patients, and in 1984, 9 patients were accepted onto CAPD who were over 65 years of age. This took a dramatic advance in the following year to 20 patients.

| | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 |
|--------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Unit HD | 51 | 45 | 52 | 56 | 71 | 83 | 79 | 88 | 92 | 132 |
| Home HD | 72 | 57 | 49 | 49 | 48 | 31 | 24 | 22 | 29 | 30 |
| CAPD | 63 | 86 | 92 | 106 | 108 | 142 | 149 | 185 | 212 | 221 |
| Pts over 65 | 9 | 20 | 18 | 25 | 27 | 34 | 27 | 33 | 37 | 41 |
| Total Prog | 186 | 188 | 193 | 211 | 227 | 256 | 252 | 293 | 333 | 366 |

Growth of Dialysis Programme



A Comparison of the Growth of CAPD and HD over the second decade

Transplantation 1984 – 1994

Whilst the number of transplants performed, peaked in 1986 at 51 for the year, the pool of transplanted patients who required regular monitoring gradually increased, as did those dialysis patients on the waiting list. With the improved anti-rejection drugs, and a greater understanding of the recipients, transplantation became more successful.

| | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|-------------|------|------|------|------|------|------|------|------|------|
| Tx per year | 48 | 38 | 51 | 39 | 38 | 51 | 37 | 35 | 35 |

add 1993-4 figures

| | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Total | | | | | | | | | | | | | |
| Prog | 104 | 124 | 162 | 178 | 212 | 224 | 240 | 250 | 271 | 294 | 322 | 332 | 353 |

Increase in the number of consultant nephrologists

For fourteen years from 1974-1988 Dr John Walls ran the unit single handed. The enormous expansion of the work of the unit meant this was no

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longer tenable. Dr John Feehally, Lecturer and Honorary Senior Registrar on the unit was appointed as a second consultant in 1988 followed in 1991 by a third consultant, Dr Kevin Harris and in 1994, Dr Graham Warwick. Both Dr Harris and Dr Warwick were also familiar with the unit, having worked previously in Leicester as Registrar and Senior House Officer respectively.

Work beyond Leicester

From 1976 Dr Walls had travelled to Lincoln and Boston once a month to run outpatient clinics for patients with renal problems, and these were soon increased to fortnightly and then weekly clinics. Dr Feehally took over the Boston clinic in 1980, and a further clinic was opened in Kettering in 1990, run first by Dr Walls and then after his appointment by Dr Harris.

But until 1998 all patients in the areas served by Lincoln, Boston and Kettering still had to travel to Leicester if they required regular haemodialysis. The goal of the further expansion of the unit was to develop services in areas distant from Leicester so that eventually patients could receive more of their treatment close to home, but recognising that patients would still need to travel to Leicester for transplant and other more specialized aspects of care. While this would soon need the appointment of consultant staff and identification of beds, the crucial first step was the establishment of satellite dialysis facilities. The Regional Medical Officer [the late Dr James Scott] was a strong supporter of the strategy and a crucial ally in ensuring the funds were found to build and run satellite units.

Haemodialysis Satellite Units

1988 was therefore a memorable year as it also saw the opening of Leicester's first satellite unit in a portacabin in the grounds of Lincoln County Hospital. It was officially opened by the popular TV actor, Bill Maynard (Greengrass in Heartbeat) **in May 1988**. It consisted of 6 stations, and catered for patients residing in the Lincoln area who were unable to dialyse at home. Staffing was by nurses, with Dr Walls making a weekly visit whilst in the hospital for the outpatient clinic. At first the stations were used only once per day, but quickly were utilized twice and later three times daily. Any problem that arose, the patient would be brought to Leicester.

This arrangement continued until 1992 when the stations were expanded to cater for 8 patients, and the unit expanded to open extra days per week to cater for the expanding workload.

By 1986, the renal ward [ward 15] was no longer sufficient for needs. More often there as many renal patients in other wards as 'outliers' than there were patients on ward 15. The ward and patients were decanted into another ward for 6 months during 1987, whilst ward 15 was re-configured. The result was a 5 bedded high dependency area, located in the cubicle area, complete with a nurse station, and an 18 bedded renal ward (3 x 6 bedded bays) and a 9 bedded transplant area.

The 5 bedded High Dependency Unit was later moved to its present location in what was then the patient's day room.

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Each area was given a complement of nurses. The opening took place in April 1987. There was also an upgrade of such facilities and treatment areas, patient day room facilities and storage areas. This was a great success, and visitors came from many renal units to see the new premises. The cost of this refurbishment was in excess of £1 million

Leicester Haemodialysis Unit Upgrade

Even with the opening of the Lincoln Satellite Unit in 1988, there was still a need for expansion of the Leicester Unit. Arrangements were made to move the unit to Ward 2 for a 6 month period whilst the work was carried out. The result was an expansion from 10 to 17 stations, a purpose built 2 stationed isolation unit and improved storage within the unit theatre area. The new unit was opened in 1988

Community Nursing

By 1984, there were 186 patients on the dialysis programme, of which only 51 were unit based haemodialysis patients. This put a great strain on the resources of the doctors and nursing staff as well as ambulances, often bringing patients back to the unit for problems which could be sorted out by a home nurse visit. In 1985, a home dialysis nurse was appointed, with the remit of 'supporting the patients and their dialysis in the community'.

This was an enormous success, with the result that over the following 5 years the department was developed into a team of four nurses covering a home dialysis population of over 250 patients.

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The community nurses were also able to assess the home situation for possible later home dialysis, which reduced the time taken on the unit for preparation of the patient before discharge. What was at first deemed as a luxury soon became an invaluable asset and necessity.

Transplant Games – Leicester July 1989

‘A Victory for Sport and Life’ was the headline in the Leicester Mercury, when the Leicester Renal Unit hosted the 12th Transplant Games. The games attracted 500

transplant patients from 47 transplant centers in Britain and around 400 supporters and were all housed in student halls of residence in Oadby. It took a year of hard work and planning by staff working on the Unit, and within the hospital, resulting in a highly successful weekend of events.

The Opening Parade at Aylestone Athletic Stadium

The events included in the games, which catered for all tastes, were from ‘wellie-whanging’ to serious track and field events.

The serious events included snooker at Willie Thorne’s snooker club, badminton and table tennis at Aylestone Leisure Centre, squash at Leicester Squash Club, and swimming gala at St Margaret’s Baths. The children’s swimming gala was held at Aylestone Swimming Baths. Golf was a popular event, being held at Leicester Golf Club. The cycling event around the country roads of Leicestershire on a warm summer evening was another great success.

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The event also featured Britain's youngest heart transplant patient. There were special events organized for the children, which included a visit to the Farm Park at Gartree and a party with magicians and games at Aylestone Leisure Centre.

Leicester took the third spot behind teams from Leeds and Cambridge for the Volleyball event, but a Leicester patient, John Newcombe won gold in the men's mini-marathon. Vin Murray, at the age of 68 years, took part in the golf, and Martin Priestnall won the gold medal in the Putt and Shot event.

The whole event concluded with a Gala Dinner held at the De Montfort Hall, Leicester, when over 1000 participants and organisers enjoyed an evening together. The unit continues to participate in the Transplant games, held up and down the country on an annual basis. The Leicester Kidney Patients Association supported the funding for the patients to attend. The most successful events for the Leicester patients were usually volleyball, golf, snooker and running. In 1985, a large group of patients and staff competed in Edinburgh.

Christmas on the Unit

Christmas on the renal unit was always a very happy time. Over the first years, the staff worked hard to ensure that all patients were dialysed up to Christmas Eve, giving everyone a chance of time at home with the family. However, latterly, as the haemodialysis unit became busier, this was no longer possible, and patients were expected to come in 'for business as usual' during the whole Christmas break. On the wards, it was always different matter, with work continuing through the holiday. In fact it was

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often more busy than normal, with transplants arising from Christmas travel.

Over the first 15 years of the unit, the consultants joined in the fun by dressing up in fancy dress and arriving to 'carve and serve the turkey' for the patients at lunchtime. However, with new laws regarding the serving and storage of hot food on wards, this had to be abandoned in favour of plated meals. It was a great shame when this tradition was abandoned, as the informal party atmosphere was well received and remembered by the patients.

Management of the Renal Unit

The ever-increasing size of the unit required more formal management structures. Dr John Walls remained in charge of the unit and became its first Clinical Director when such positions were created with reorganization of hospital management in 1992. , A Business Manager was appointed to deal with day to day administrative matters, and a Nurse Manager took charge of the ever-growing nursing staff..

Nursing

From the onset of the opening in 1974, nurses were employed both on the renal ward (ward 6) and on the haemodialysis unit, and were rotated around at intervals to enable them to keep abreast with new techniques. A head nurse in charge of the whole establishment has been in place throughout, and the role has differed very little, except that the 'title' has changed many times. In the early days, the head nurse was 'Assistant

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Director of Nursing Services (ADNS), wore a uniform and was directly responsible to the Director of Nursing Services for the Hospital. It then became fashionable to have General Managers, responsible for two or three departments, this tier being between the senior nurse and the director of nursing. By 1989, the ADNS was called the Nurse Manager, and in 1993 the title changed again to Senior Nurse Manager.

By 1983, the department still supported an establishment of only 43 nurses to staff the haemodialysis unit and ward 15 (the old ward 6). With the continuing expansion of services, more nurses were added to the pool, and by the end of 1996 the nurse establishment was up to 136. This included the staff working in the satellite units, who remained the responsibility of the Leicester Senior Nurse. (The Lincoln Unit nurses were originally the responsibility of the Lincoln County Hospital, however the management was transferred to Leicester in 1989).

Prior to the 1987 government re-grading of all nurses, the haemodialysis unit had 5 sisters working together, and the ward had 2 nurses at that level. Following the grading process, which came about at the same time as the opening of the new ward 15, there was just one head nurse for each area. After a great deal of negotiation with Charles Frear School of Nursing, the Renal Nursing Course started in Leicester in 1988. Working closely with the College, and by combining the role of the Education Practitioner, the ENB 136 course was and still is a very successful project, with many nurses from Leicester participating. This brought in nurses from other units also.

Technicians

The role of the renal technicians has gradually evolved. At the peak of home haemodialysis, in the early 1980's, the 88 home HD patients were supported by 8 technicians. The decline of the home haemodialysis programme, together with more sophisticated machines and technical advancement, the technical support required became less. However, with the onset of machines for peritoneal dialysis, as well as the expanding satellite units, the renal technicians remains key part of the unit's work.

Staffing Levels compared to Patient Numbers

| | 1983 | 1988 | 1992 | 1996 |
|-------------------|------|------|------|------|
| Consultants | 1 | 1 | 3 | 6 |
| Nurses | 43 | 81 | 92 | 136 |
| Technicians | 8 | 5 | 5 | 5 |
| Dialysis Patients | 190 | 227 | 333 | 471 |

Support Staff Facilities

With the expanding of facilities to support the ever-increasing workload of patients attending the unit, it was inevitable that more space was required for support staff. More space for doctors, secretarial staff and research laboratories culminated in the building of a large administrative block that consisted of offices and research laboratories in 198(?)

Research in the Renal Unit

From the establishment of the unit Dr Walls established a culture where research could flourish alongside clinical work. At first the emphasis was on

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establishing the clinical service, but by the second decade he led a push to establish a firm research base. Renal research laboratories were funded by the NHS and staff was recruited who shared Dr Walls' vision of combining excellent clinical care with high quality research. Excellence in clinical research was encouraged from all grades of staff and presentation from the Leicester Unit became a regular feature of national and international meetings including the Renal Association, the American Society of Nephrology, and the European Dialysis and Transplant Nurses Association..

Laboratory research also continues to flourish.

The research reputation of the unit is maintained. Dr Walls was appointed an Honorary Professor at the University of Leicester Medical School in 1990, as was Dr Feehally in 1999. The Raine Award, given annually for the last ten years by the Renal Association to a leading young researcher has been awarded to three members of the Leicester team - Nigel Brunskill, Steve Harper [now in Bristol] and Alice Smith.

THE THIRD DECADE 1994-2004

The overall strategic plan for the Leicester Renal Unit and its environs had been set and the third decade of the unit saw rapid expansion within that framework, with gradual easing of some of the pressure on staff and facilities at Leicester. The expansion of haemodialysis into satellite units was met with enthusiasm from the patients, who could now receive treatment without the long journey to Leicester.

It was agreed that renal services throughout the 'patch' should be developed and run as a network making possible the complex commissioning of services required in the changing NHS, and ensuring expansion occurred in a consistent and planned way. This was led by Dr Walls who remained clinical director from the inception of the unit until his untimely death in 2001, and is now led by Dr Harris.

Peterborough

The second satellite unit was opened by the Duchess of Gloucester at Peterborough in 1995. This unit was supported from the outset, by the appointment of a Consultant Nephrologist, Dr Chandra Mistry, based at Peterborough District Hospital., where the 10 stationed unit was in a converted ward. Renal Clinics were then set up at Peterborough by Dr Mistry, which helped considerably in maintaining the workload in Leicester.

Northamptonshire

The third satellite unit was opened in Kettering In 1996, in a converted ward, at Kettering General Hospital, At first Dr Sue Carr, appointed the fifth consultant nephrologist in Leicester, in 1995 took over the Kettering clinic

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and supported the satellite unit. But in 2000 Dr Rob Preston was appointed as consultant nephrologist in Kettering and took over responsibility for the local services.

In 2003, the Leicestershire, Northamptonshire & Rutland Strategic Health Authority decided a further realignment so that renal services for the whole of Northamptonshire would be developed under the auspices of the Leicester network. The renal service in Northampton including the satellite unit at Harborough Lodge were therefore transferred, with the appointment of Dr Warren Pickering as consultant nephrologist to work with Dr Preston in developing the Northamptonshire service.

Lincolnshire

In 2000 Dr Jane Little was appointed consultant nephrologist at Lincoln. She took over the Lincoln and Boston clinics, and a major rebuilding programme at Lincoln County Hospital gave the opportunity to replace the Lincoln 'portacabin' unit with a new expanded unit with 14 stations, opened in 2000.

Another satellite unit will open in Boston in 2005, and it is expected a second consultant will be appointed in Lincolnshire in the near future.

Leicester

Even with the steady increase in satellite units there was a continuing need for additional facilities for Leicester patients as the number of HD patients continued to grow. In 1997 the unit was again moved out, this time utilizing space on the newly transformed ward 15 and a portacabin on the renal car park area, whilst the unit was once more expanded to its present size of 30 stations, with increased isolation facilities.

Loughborough

The disadvantage for patients who lived in the north of the county and had considerable distances to travel to dialyse at Leicester General Hospital became increasingly apparent, and so plans were made for a satellite unit based in Loughborough Hospital. With generous support from the British Kidney Patients Association a 14 station unit was opened in 2002. Dr James Medcalf was also appointed in 2002 as the sixth consultant nephrologist and took responsibility for the Loughborough unit.

Community Nursing

The great success of our community nursing team was now built on with a further expansion of both the size of the team and the roles they undertake – which now include pre-dialysis counselling, anaemia management, post-transplant advice, oversight of the day case unit where many patient attended for minor procedures or outpatient treatments; as well as home support for CAPD and home HD patients. The expanding range of clinical care taken on by nursing staff is a feature of the approach being taken to the optimal care of the large number of patients with kidney disease for whom the unit is now responsible.

The personal contribution of Professor John Walls to the development of the Leicester Renal Unit

For 14 years John Walls worked as a single-handed consultant nephrologist in Leicester, and through his remarkable drive and enthusiasm

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was able to establish what is now one of the largest renal units in the UK, not only recognised for the scale and quality of the clinical care it provides but also with an internationally recognised teaching and academic reputation. The first stage of his work was to develop a nephrology service from almost nothing. As this story tells, when he arrived his resources comprised only two in-patient beds and no dialysis facilities; yet within a decade he had established a full dialysis and nephrology service for a population of 2 million people. His success was achieved through a clear, single-minded vision based on his commitment to patients. As many former colleagues at LGH will attest, when clinical colleagues and administrators did not always share his vision he was an unrelenting and skilful negotiator adept at securing the resources he needed. John set the most meticulous standards of clinical care which influenced many junior doctors to pursue a career in nephrology. The creation of the clinical renal unit would be achievement enough for many people, but as it was becoming established, John set out to develop alongside it a research unit to match it. He recruited clinicians and scientists whose research interests and expertise complemented his own to build a strong and broad-based research programme, including laboratory and clinical research, and involving scientists, doctors, nurses and other clinical staff. John Walls was made Honorary Professor of Nephrology in the University of Leicester in 1990.

Young nephrologists have come to spend time in Leicester training in clinical work or research from many parts of the world including India, Malaysia, Nigeria, Turkey, Greece, Switzerland, France, Australia and New Zealand.

. An International Society for Nephrology John Walls Visiting Fellowship has been established in memory of him to support such visits.

Leicester Kidney Patients Association (LKPA)

The Leicester Renal Unit has been greatly supported by the LKPA almost from the onset of the opening. A group of patients decided that they would raise money for the Unit and for the Patients attending. Many events were organised by the patients, and the money was used to help the needy patients, and it was also able to give money, over the years, in support of the medical research, which is ongoing in the department. Money was also raised to support some building expansions.

In the late 1980's, the LKPA was able to pay for holidays for around 30 renal patients and their families in Norfolk, and these families were accompanied by nurses from the unit. This was organised for three consecutive years, and then the patients decided that they would rather go abroad, so help was given for patients so to do.

There were many fundraising events, and the LKPA owned a van, which not only used for fund raising, but also for advertising and distributing Transplant Donor Cards. It could be seen at all the major shows and events around Leicestershire and Lincolnshire in the 1980's and early 1990's.

There was a great deal of support also from various companies around Leicester, eager to make the LKPA their 'good cause' for the year. The unit and patients were always grateful for their support, and consultants and nurses spent many evenings with patients, at presentation evenings for this good cause.

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Notable chairmen of the LKPA have been Jack Matthews, who did a great deal with the local and national media in promoting the needs of renal patients, Bob Hall, who arranged many memorable outings for the patients and the present chairman, Geoffrey Hogg, who continues to serve the association.

I'm Very Well, Thank You

*There's nothing whatsoever the
matter with me,*

*I'm just as healthy as healthy can
be.*

*I've got arthritis in both my knees
And when I talk, I talk with a
wheeze.*

*But my pulse is weak and my
blood is thin,*

*But I'm awfully well for the shape
I'm in.*

*I've got arch supports on both my
feet*

*Or I wouldn't be able to walk down
the street.*

*Sleep is denied me every night,
But when I wake in the morning I
find I'm alright*

*But my memory's going and my
head's in a spin*

*But I'm awfully well for the shape
I'm in.*

*The moral is this as my tale I
unfold*

*For you and for me, who are all
growing old*

*It's better to say 'I'm alright' with a
grin*

*Than let folks know the shape
you're in.*

*But how do I know that my youth is
all spent?*

*Well, my get up and go has got up
and went!*

*But I really don't mind as I think
with a grin*

*Of all the grand places my get-up
has been.*

Old age is golden I've heard it said

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*But I wonder sometimes when I
get out of bed*

*With my ears in a drawer and my
teeth in a cup*

*And my Eyes on the what-not until
I get up.*

*Ere sleep overtakes me I think to
myself*

*'Is there anything else I should put
on the shelf?'*

*When I was little my slippers were
red;*

*I could kick both my heels right
over my head.*

*When I was older my slippers were
blue;*

*JACK MATTHEWS (Past Chairman of the Leicester Kidney Patients
Association)*

*I could dance Quadrilles & Lancers
the whole night through.*

*Now I am old my slippers are
black.*

*I limp into town and I puff my way
back;*

*I drop into a chair and gather my
wits*

*I pick up the "Mercury" and read
the "Obits"*

*If my name isn't there I know I'm
not dead*

*So I have a good breakfast and go
back to bed.*

Written in 1985

Some Landmarks of The Renal Unit and Staff Successes

The Staff working at the Renal Unit have always had a high profile for excellence in the field of Renal Medicine. Medical staff have given lectures and papers world-wide, and nurses are Internationally recognised for the good practices, which are standard within the unit.

- 1974 - unit opened
- 1975 - first transplant
- 1979 – first patients on CAPD
- 1986 - patient Lynn Burbage received The Ruth Lupton Award for outstanding effort and achievement. She was presented with the award at a ceremony at the NFKPA in Exeter by Simon Weston
- 1987 - Volleyball team win gold medal at Transplant games
- 1988 - ENB 136 renal course for Nurses commenced in Leicester
- 1993 - Renal Nurse Jenny Bell was awarded 'Nurse of the Year' by the Leicester Mercury
- 1989 - Leicester hosted the Transplant Games
- 1990 Dr John Walls given an Honorary Chair in Nephrology by the University of Leicester
- 1993 - Dr Bryan Williams was named 'Doctor of the Year' sponsored by BUPA in a ceremony in London, by The Duchess of Kent, for his research work in diabetes in kidney failure.
- 1995-98 - Professor John Walls is President of The Renal Association
- 1996 - Anne Keogh, Home Care Nurse, became President of the European Dialysis and Transplant Nurses Association / European Renal Care Association. (EDTNA/ERCA)

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- 1997 - Senior Nurse Toni Smith was awarded the MBE in the Queen's New Year's Honour List for 'Services to Nursing'
- 1997 a book 'Renal Nursing' was published in conjunction with the Royal College of Nurses, edited by Toni Smith, with several members of staff from the Renal Unit contributing chapters.
- 1999 Dr John Feehally given an Honorary Chair in Renal Medicin by the University of Leicester
- 1999 Gemma Bircher, Renal Dietetics Manager, became President of the EDTNA/ERCA
- 2001 - Auxiliary Nurse Sheila Evans was awarded the MBE in the Queens New Years Honour List, She was the longest serving member of staff, (excluding Professor John Walls), and had assisted at the first renal clinic in 1974.