Nephrology in Lancaster County 1995 -2015

By Laurence E. Carroll MD, FASN, FNKF

Picking up the history of Lancaster Nephrology from Dr. John Schubert, I've first chosen to attach two documents that I have composed: first, a history of our private practice Nephrology Associates of Lancaster doing business as Hypertension Kidney Specialists (HKS) in which he later joined me; and second a retrospect I did upon retirement in December 2011 for LGH's "Progress Notes". (Appendix A & B)

Having read Dr. John and Eileen Schubert's diligent account, I'd like to review the growth and changes in the past 20 years since his retirement in 1996. The dialysis population was modest in 1977, when I came, about 40 patients with over half of them on home hemodialysis. Hemodialysis treatments took 6 hours and, for those not on home hemodialysis, we had two shifts at the LGH dialysis unit. It was open approximately 8-12 hours, 7 days a-week (I think we only had one shift per weekend day). There were few if any diabetics, the disease which would fuel the subsequent growth of the dialysis population to over 500+ in Lancaster County and about 450,000 nationally. Continuous Ambulatory Peritoneal Dialysis became an accepted modality in the 1980s and our home hemodialysis population dwindled as patients switched to that modality or got transplanted. Patients got older and sicker, type II diabetics making up 30-40% of the total patient population. The healthiest patients with pre-End Stage Renal Disease (pre-ESRD) or, Stage 4 Chronic Kidney Disease (CKD), as it came to be known in 2002 with the National Kidney Foundation's "Kidney Disease Outcome Quality Initiative" (KDOQI), got pre-emptive kidney transplants. Many good candidates in earlier years would forgo a transplant because of the 50% failure rate; but with the emergence of Calcineurin Inhibitors: first Cyclosporin, approved for use 1983, and later Tacrolimus (FK-506), kidney transplants had a >90% early success rate especially with living related donors.

The HKS nephrology practice grew. Hospital census for the practice grew to 30 to 40 patients. We added partners and started covering the dialysis unit at Community Hospital. We interested LGH and Ephrata Community Hospitals in creating a dialysis unit in Denver PA, but later due to the Federal government's need to limit medical spending, that unit closed as would Community Hospital's. With the need to provide dialysis beds for the eastern part of Lancaster County, HKS entered into a limited partnership with a small national for profit dialysis firm (PDI) and opened a unit at King Street as well as reopening the one in Denver. About this same time a small dialysis unit was opened in Elizabethtown by Hershey Medical Center nephrologists and Gambro, a large for profit dialysis company. With Federal dollars tightening eventually all of these dialysis units would become wholly owned, or in limited partnership, by DaVita, the largest national for-profit company.

Over these years dialysis treatments improved though mortality rates were still about 20% annually. Treatment times were usually 3-4 hours. Dialyzers, the artificial kidney itself, improved. Blood flows and dialysate flows increased. Access monitoring and interventional radiology smoothed the overall course. Use of central venous catheters (CVCs), which was a "god send" to patients needing acute dialysis, became discouraged because of the infection related morbidity and mortality. The use of

arterio-venous fistulas (AVFs) became a national treatment goal ("The Fistula First Initiative"). Locally Dr. John Schubert had championed AVFs early on with almost 100% AVFs in the LGH population when I got there in 1977. There were perhaps still one or two patients with Scribner shunts in which we used a Fogarty arterial balloon catheter to open clotted shunts in the dialysis unit. Subsequently HKS has been a regional leader in AVF accesses with over 70% AVFs in their current dialysis population, a good 10-20% above national averages.

Chronic Kidney Disease (CKD) became more evident at earlier stages as an estimated GFR was added to every Basic Metabolic Panel (BMP) in the 2000s. This led to earlier referrals and hopefully AVFs created months ahead of the need for dialysis initiation. It also led to a closer relationship to the cardiologists with their need to use potentially kidney harming radio-contrast dyes, as well as the recognition that CKD is usually associated with a worse cardiac prognosis. That connection had already been appreciated by Dr Lawrence Bonchek and his colleagues when they had brought open heart surgery to LGH and had helped to increase our stature and presence in the Critical Care Units (CCUs). In the latter, Continuous Ultrafiltration Machines were added to treat hypotensive Acute Kidney Injury (AKI). Acute Peritoneal Dialysis had been abandoned as a treatment option in the 1990s.

The HKS practice became a big user of Erythropoetin as it became available first in the dialysis units and later in our out-patients with CKD. We also became frequent users of oral and IV iron. Other common nephrology treatment included ACE inhibitors and ARBs, vitamin D replacement, and of course phosphate binders. The history of the latter treatments is humbling as we started with Al+++ containing binders that produced bone disease and dementia, changed to Ca++ binders that aggravate vascular disease, and finally are using non Ca++ binders, as well as new calcimimetic drugs that turn off parathyroid hormone (PTH).

All of these treatments had been encumbered by a lack of randomized control trials or adequate study size, and with an unfortunate need to rely on observational studies which are often eventually proved erroneous.

One aspect of nephrology care that has become clear (as our patients have gotten older and sicker) is the need for a conservative option. HKS started pre-dialysis or ESRD education in recent years led by Jim Groff DO and Jen Groff CRNP. Besides teaching about dialysis modalities and transplant, they covered the need for advance directives and the benefit of hospice support if so called "renal replacement therapy" is not chosen. Also it has become a standard practice to refer any patient to hospice if dialysis is discontinued.

A final effect of government restrictions on reimbursement ("bundling" of the dialysis services) led to LGH selling their Health Campus unit, the largest in Lancaster County, to DaVita in 2012. ESRD was first and until recently the only disease associated condition automatically covered by Medicare (Amyotrophic Lateral Sclerosis (ALS) is now also). The ESRD cost has grown greater than originally estimated and in 2012 was $28.6 billion dollars or 5.6% of Medicare costs for 1% of its total population. Even with that, Medicare only covers 3/4 of total US ESRD expenses.

Appendix A: Hypertension and Kidney Specialists' Practice History

Hypertension and Kidney Specialists was started in 1980 when Laurence E. Carroll, M. D., left the employment of Lancaster General Hospital to start a solo practice of Internal Medicine and Nephrology. The practice was incorporated in 1981, and subsequently changed its name to Nephrology Associates of Lancaster in 1982 when John Schubert, M.D., joined the practice.

The practice initially saw patients at 719 North Duke Street and subsequently moved to 439 North Duke Street where it remained until moving to the Lancaster General Health Campus in the fall of 1998. In 1989, the practice added Marc H. Weiner, M. D., who succeeded Dr. Schubert as the Medical Director of the Lancaster General Hospital Renal Dialysis units in the fall of 1994. Dr. Schubert retired from full-time practice in October of 1995 and subsequently retired completely in the summer of 1996.

The practice grew with the addition of Charles H. Rodenberger, M. D., in April 1996, and combined with the practice of Jeffrey N. Levine, D. O., in July 1996, who had practiced at Community Hospital since the 1980′s and was the longtime Director of the Community Hospital Renal Dialysis Unit.

Susan K. Ciampaglia, D.O., joined the practice in August 1997. James A. Groff, D.O., joined the practice In September 2001. Jeffrey L. Martin, M.D., followed in June 2003. Doreen Bett, D.O. joined the practice in August 2009, followed by Rajiv Sharma, M.D. in 2011. David Somerman joined the practice in the summer of 2013.

In 2001, Hypertension and Kidney Specialists welcomed its first certified registered nurse practitioner when Jennifer Groff joined the practice. Over the next couple of years, the practice continued to grow. Cheryl Good joined the practice in 2013, and Anne Pryzbylkowski and Kathryn Couch in 2014.

Together our physicians and nurse practitioners have grown to a group of providers who are recognized for excellence, sought for teaching appointments, research collaborations, directorships, and comprehensive medical evaluation. Our Providers practice in an environment of teamwork and integrity. They remain committed to a coordinated, partnership approach to patient care.

Appendix B: Dr. Laurence E. Carroll reflects on 35 years with LGH

1/17/2012 – When I joined Lancaster General Hospital 35 years ago as an employed physician, I was in a distinct minority. Private practice was the predominant model for members of the Medical Staff.

Three years later, I started my own practice— Hypertension Kidney Specialists – and worked there for the next three decades. Over that time, LGH added a variety of services including an open heart surgery program, trauma services and palliative care just to name a few. For those of you who are interested in a detailed history of clinical program development at LGH, there are recordings on the Journal of Lancaster General Hospital (JLGH) website that are wonderful resources.

Over time, while we lost the camaraderie of the doctors' lunchroom, we now have electronic mediums like Progress Notes, as well as the JLGH and the Family Practice Family Newsletter (formerly called the "Yellow Journal") to bind us together. They are great examples of our new "electronic age" of communication. Though our new Electronic Health Record may initially decrease efficiency in the exam room, it fosters greater collaboration and coordination among providers in a variety of facilities.

I began in 2011 teaching 3rd year Drexel Med students who have ambulatory medicine clerkships at LGH. I've really returned to where I started, since my initial duties at LGH included attending on the family practice "ward medical service." Teaching offers an additional dimension of professional fulfillment. It also offers the opportunity to introduce young doctors to our Lancaster community which so many of us have enjoyed over the years.

Thanks to my associates at Hypertension Kidney Specialists and my other colleagues at LGH for all their support and help. As Harry Truman's mother reportedly told him, I leave you with: "Always do right, it will gratify some and astonish the rest!"