

# **A History of Pediatrics in Tulsa & Eastern Oklahoma**

**Robert Kendall Endres, MD**

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# Introduction

This history will be an attempt to look at the story of the children of Tulsa and Eastern Oklahoma, the diseases and disorders that they encountered, and the physicians, specifically the Pediatricians and the Pediatric Sub-Specialists, who were there for them. It will chronicle some of the changes in the science and art of medicine as it pertains to children and as we Pediatricians lived it.

The following history will be broken down into three periods:

- The Early Years, from Oklahoma Statehood (1907) to the '40s and the end of World War II, covering Tulsa's early hospitals and physicians, and will touch on early medical care in the state.
- The Age of Specialization will cover the immediate years following World War II, and into the '70s, including the development of Pediatric Sub-Specialists.
- And finally, I will take a look at the period from the '70s to today. By the time you read this, it will probably be out of date. With the advent of the medical schools, Pediatric Sub-Specialists, changes in the way medical care is managed, and so on, it will have to be the subject of a new Pediatric history.

*My father, Otto Endres, a Captain in the Infantry, World War I, told me (when I got a little too full of myself), "Son, go hang your bugle in a tree and let the wind blow it". This history records the story of Pediatrics, but it also tells about some of the accomplishments of many of our Tulsa Physicians who did more than just practice medicine, so I will be the wind that blows the bugle for them.*

# TULSA'S EARLY YEARS

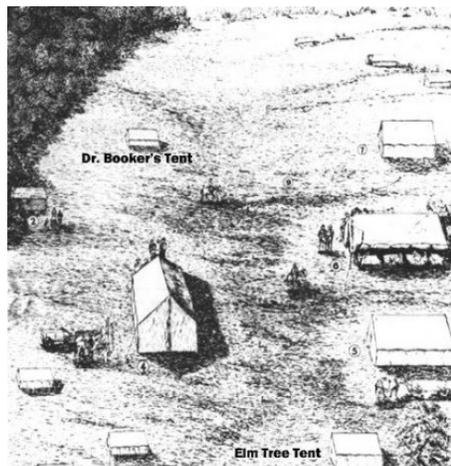
## The First baby

born in Tulsa, Oklahoma, was born in the Elm Tree Tent about 1882, not far from the tent that housed the first doctor in Tulsa, Dr. W.P. Booker.

## The City of Tulsa

It goes without saying that all history begins with a place, a location, a setting that brings together the people and events that shape that history. To tell the story of Pediatric care in Tulsa, you will need to see how Tulsa's early years gave way to where we are today; how Tulsa became a backdrop for those responsible for providing exceptional care of our children.

According to the Tulsa World's "Tulsa Times-A Pictorial History of The Early Years," (*World Publishing Company, Tulsa, OK, 1986, www.tulsaokhistory.com*), the first baby born in Tulsa, Oklahoma, was born in the Elm Tree Tent about 1882, not far from the tent that housed the first doctor in Tulsa, Dr. W. P. Booker. (Dr. Booker's tent was later moved to make way for Hall's store on what was later to become Main Street.)



By 1906, Dr. Fred S. Clinton, (who came to Indian Territory from Georgia in the 1870s), had opened the first

Tulsa hospital on 5<sup>th</sup> and Lawton as a result of an outbreak of Smallpox. From that time until the 1920s, child care was provided by the General Practitioners (GPs), the predecessors of today's Family Practice Specialists.

It would be interesting to know why these early day Pediatricians chose Tulsa as a place to start their practice. It is possible that they were attracted to Tulsa because of the emerging oil industry. Tulsa had a population of about 70,000 in 1920, and was growing quickly. Most businesses then were where downtown is today, with the borders extending from Lewis Avenue on the east to the Arkansas River on the west, and from 21<sup>st</sup> Street on the south to Pine Street on the north.

Central High School in downtown Tulsa was the only high school for white Tulsans, with Booker T. Washington High School covering north Tulsa, and Webster High School serving west Tulsa. There were five junior high schools. Kendall College, (now the University of Tulsa), played its football games on a field behind Lee Elementary on 21<sup>st</sup> Street.



Streetcars were the main form of transportation around town, starting in 1907 and disappearing in 1947. In 1912, an Interurban went from downtown Tulsa to Sand Springs, West Tulsa, Red Fork, Sapulpa, and Kiefer. Later, the Tulsa Rail went from downtown to the University of Tulsa campus, the fairgrounds, Brady Heights, and Owen Park. Bixby, Broken Arrow, Owasso, Turley,

Red Fork, Jenks, Sand Springs, Sapulpa, and Claremore were all nearby small towns.

Blue Cross Blue Shield Health Insurance started as the "Doctor's Plan" in 1941, and Mr. N. D. Helland was the Executive Director in the late 1940s, when the Tulsa County Medical Society (TCMS) held its meetings in the basement of the Blue Cross Blue Shield building. (TCMS, by the way, was started in 1907, just after Statehood.)



## The Early Hospitals

As mentioned, Tulsa's first hospital was the Tulsa Hospital. It began in 1900 as a result of a Smallpox epidemic and closed a year later. Dr. Fred C. Clinton remained steadfast in his efforts to have a hospital in Tulsa and after five years, in 1906, the Tulsa Hospital reopened at 5<sup>th</sup> and Lawton, (near where Tulsa Regional is now). He remained an outspoken proponent for better

public health facilities, water sewers, and fireproof buildings during his long medical career.



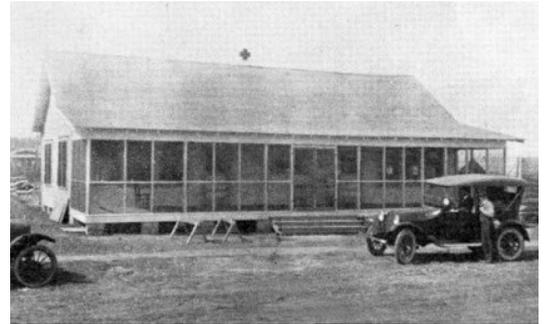
Morningside Hospital, under the guidance of Dolly McNulty, RN, was founded in 1918 at 5<sup>th</sup> and Boulder, in response to the Influenza epidemic of that same year.

During the 1921 Tulsa Race Riot, Morningside, along with Oklahoma Hospital, became the main drop-off

locations for victims of the riots. Due to the depression, Morningside was reorganized as a community hospital and renamed Hillcrest in 1939. *(The postcard above left is a photograph of Morningside from the late 1930s, probably just before it became Hillcrest.)*

After Tulsa Hospital closed, shortly after World War I, Dr. Clinton opened Oklahoma Hospital in 1916 at 9<sup>th</sup> and Jackson. Mrs. Henrietta Ziegler, who had opened the first School of Nursing at Tulsa Hospital, followed Dr. Clinton to Oklahoma Hospital and opened the second School of Nursing. This hospital went through several changes before closing shortly after St. John Hospital opened their doors in the mid 1920s.

In 1921, the American Red Cross opened the Maurice Willows Hospital in north Tulsa which was remodeled in 1932 and then transferred to a board of community representatives and renamed Moton Memorial Hospital in 1941. Due to aging equipment and facilities, it was closed in 1967.



Dr. Wade Sisler, the third Orthopedist in Oklahoma, (preceded by Dr. Kelly West and Dr. Earl McBride of Oklahoma City), came to Tulsa in 1929 and opened the Hospital for Bone and Joint Diseases. It later became Mercy Hospital at 807 S. Elgin, (where Home Depot now sits). Dr. Sisler did most of the surgery on the crippled children in Tulsa. It was during the Depression so reimbursement was slow or non-existent. He eventually joined with Junior League of Tulsa to start the Junior League Convalescent Children's Hospital at 5<sup>th</sup> and Cincinnati in 1926 to take care of the post-surgery rehabilitation of children and their physical therapy needs. This hospital eventually became the Children's Medical Center located at 58<sup>th</sup> and Lewis. None of the hospitals were air conditioned, nor were the cars the doctor's drove on their house calls.

By the time World War II came along, all Pediatric hospital care was done on the Pediatric floors of Oklahoma Osteopathic Hospital, Hillcrest Hospital, and St. John Hospital. Newborn babies were cared for in newborn nurseries attached to the Obstetrical departments. There were no

Neonatologists then, and the Children's Medical Center was functioning as a post Polio and surgical rehabilitation center.

## The Early Physicians

A review of Tulsa history reveals two physicians who might be considered Pediatricians and should be included in our history.

The first, **Dr. James E. Webb**, (1857-1929), came to Tulsa in 1900. He was born in Higginsville, MO, received his BS degree from the University of Missouri, and his MD from Ohio Medical College. He practiced in Missouri until 1900 when he moved to Tulsa. It was said that he loved children and was particularly successful in treating children's diseases. He was on the City Council, (when Oakland Cemetery was purchased by Tulsa), and also filled the position of Superintendent of Public Health. He became one of the original stockholders and first directors of the old First National Bank of Tulsa.

Dr. Webb's wife, Lydia Brummett, was the daughter of Thomas Brummett, a pioneer grocer in the city. James' father, William C. Webb, was also a physician. During the Civil War, he was a field surgeon, a Captain who was later promoted to Major with the Confederate Army. He was the personal physician to General Joe Shelby. After the war, he, Dr. Poe, and one other physician became the Medical Board west of the Mississippi River. Dr. James Webb died in 1929 at the age of 72 after a practice of 30 years.

The second, **Captain John Fred Capps, MD**, (1888-unk), got his BS from the University of Alabama and his MD from the University of Chicago in 1914. He Interned in Pediatrics at Cook County Hospital in Chicago for 18 months before coming to Tulsa where he started a general practice, although largely specializing in Pediatrics.

Dr. Capps joined the National Guard and was commissioned a 1<sup>st</sup> Lieutenant in February of 1916, before spending 10 months on the Mexican border, (chasing Pancho Villa), until March of 1917. His company, The Tulsa Ambulance Corps, was called into Federal service in August of 1917 and, after a couple of months at Fort Sill, was sent overseas as Ambulance Company #166 with the 42<sup>nd</sup> Division. This Division saw a lot of combat and John Capps was wounded once. He was promoted to the rank of Captain and received three citations in general order for Meritorious Service Under Fire.

Captain Capps returned home to Tulsa in March of 1919 and was appointed to the office of County Physician, returning, also, to his general practice. He married Rebecca McAlester, a granddaughter of Colonel James J. McAlester, a Confederate veteran of the Civil War, who was a pioneer coal operator in Oklahoma, and founded the city of McAlester. John and Rebecca had one son, John Fred Capps, Jr.

**Dr. Garabed A. Z. Garabedian**, (1888-1919)

An Armenian born in Constantinople, Turkey, Dr. Garabedian moved with his family to the United States in 1907 where he started college at the College of Sciences in Chicago, IL, graduating in 1910. He started medical school at Rush Medical College, Chicago, getting his MD in 1913. His Internship was at Ravenswood Hospital, (also in Chicago), and his Pediatric training was in the Department of Pediatrics at Rush Medical College from 1914 to 1918.

After moving to Tulsa in 1918, he started a Pediatric practice specializing in children's diseases with Dr. Hugh Graham, Sr., from 1928 to 1933, at which time Dr. Graham opened his own office out of his home. Garabedian was certified by the American Board of Pediatrics in August 1936.

Dr. Garabedian's wife, Estelle (Barakian), was an accomplished musician and was welcomed into the Tulsa Music Circle as a talented violinist. They lived a block north of Dr. Fred Clinton and his wife on the edge of town, 1315 South Boulder.

#### **Dr. Maurice Searle, (1893-1976)**

A search of the records of the Tulsa County Medical Society shows that Dr. Searle was the first Board Certified Pediatrician to come to Tulsa. A graduate of Jefferson Medical College in Philadelphia, class of 1920, he Interned at St. Joseph Hospital in Pittsburgh and then served a year as a Pediatric Extern in six Pediatric centers before coming to Tulsa in 1922. He was certified by the American Board of Pediatrics in 1936. He was on the board of the Tulsa County Medical Society from 1927 to 1936, and again from 1939 to 1948. He served as their President in 1938. He was also an original member of the Oklahoma State Board of Hospital Standards, as well as an original member of the board of the Children's Medical Center. He was very active in the National Foundation for Infantile Paralysis. He and his wife, Winifred, were still living in Tulsa at the time of his death.

#### **Dr. Killis Cheo "KC" Reese, (1893-1973)**

KC came to Tulsa in 1925. He was a graduate of Tulane Medical School in New Orleans in 1923, Interned at The University of Minnesota in Minneapolis, then took a year of Pediatrics from 1923 to 1924. After coming to Tulsa, he was instrumental in raising funds for St. John Hospital, which opened in 1926. KC had a long and active career, and was honored at his retirement by then Mayor James LaFortune who proclaimed the day, February 14, 1971, as the Killis Reese Day in Tulsa.

KC was said to be famous for his ability to prepare formulas for infants with the colic. He made house calls on the north side of Tulsa, as well as to the more affluent south side at any time he was needed. His advice to young physicians coming to town was to keep 10 patients in the hospital at all times, and by charging each \$10.00 a day, they would be able to take care of their overhead. What you made in your office, then, was profit. Try doing that today!

His memory of the children that he had seen in the past and their illnesses was phenomenal, but his record keeping left something to be desired. He died at the age of 80.

**Dr. Hugh C. Graham, Sr., (1896-1982)**

Dr. Graham moved to Tulsa in May of 1916 and became the bookkeeper at the YMCA downtown. He started at Henry Kendall College, taking classes in the morning and attending to his endeavors as bookkeeper at the "Y" in the afternoons. In April 1917, he enlisted in the US Army and, after completing his freshman year of college, reported for duty in May of that same year. He attended officer's candidate school, trained in the Infantry, and was commissioned a 2<sup>nd</sup> Lieutenant. He became an infantry instructor stationed at Camp Funston, KS, and promoted to 1<sup>st</sup> Lieutenant. He was discharged from the military in December 1918, returning to his studies at Henry Kendall College where he was a member of Pi Kappa Phi fraternity, graduating with a BA degree in 1921. (*Henry Kendall College became the University of Tulsa in 1920.*)

Dr. Graham started medical school at the University of Oklahoma, then transferred to the University of Chicago where he received his BS degree in 1923. He was a member of Phi Beta Pi medical fraternity and received his MD in 1925. He Interned at Highland Park Hospital in Chicago, and trained in Pediatrics with Isaac Arthur Abt, MD, professor of Diseases of Children at Northwestern University and Sarah Morris Children's Hospital. (*Abt was editor of Abt's Pediatrics and was the first President of the American Academy of Pediatrics.*)

Dr. Graham returned to Tulsa in 1928 and went into Pediatric practice with Dr. Garabedian until he opened his own office in 1933. His office was the first floor of his family's three-story home at the corner of 15<sup>th</sup> and Baltimore. He practiced there for several years before moving to an office at 1307 S. Main. At that time, most Tulsa medical doctors had their offices downtown at the Medical Arts Building.

Dr. Graham married Helen Marion Waggoner in 1928, a graduate of the University of Tulsa, class of '23, who had also done postgraduate studies at the University of Chicago. She was the first President of the Tulsa County Medical Auxiliary. They had two children, Margaret Anne and Hugh Jr.

Hugh, Sr., was a Diplomat of the American Board of Pediatrics and became a member of the American Academy of Pediatrics in 1934. In 1933, he was elected to the Tulsa Board of Education, serving two terms, then as President of the Board from 1939 to 1940, during the time that Will Rogers High School was dedicated and opened. The Tulsa World wrote a rather critical editorial about the Board's lack of foresight in building a high school *so far out in the country.*

In 1940, Dr. Graham was appointed to the Tulsa Board of Health, serving 23 years, and as Chair for six years. During this time, the city and the county joined to form the Tulsa City-County Board of Health. For many years

he served as an Adjunct Professor of Biology at the University of Tulsa and was honored as Distinguished Alumni of the university in 1973.

He served as Chief of Staff at both St. John Medical Center and Hillcrest Medical Center, and was very involved in the early days of Children's Medical Center when it was primarily a rehabilitation hospital for children with Rheumatic Fever. In 1952, Tulsa's first suburban shopping center, Utica Square, opened, along with the subsequent addition of Utica Square Medical Center. Dr. Graham moved his office there where he practiced until 1966.

His son, Hugh, Jr., also a Pediatrician and graduate of The University of Chicago, joined his father in practice in 1964. The two Dr. Graham's joined Glass Nelson Clinic in 1966. Hugh, Sr., continued in practice in the Pediatric department at that clinic into his late 70s. At the time of his retirement, he was made an honorary member of the medical staffs of both St. John Medical Center and Hillcrest Medical Center. There are many stories of his generosity to friends and patients alike, but one letter in particular stands out. Dr. Graham, Jr. received this letter dated February 26, 1994:

*Dear Dr. Graham,*

*I was watching the Olympics this week and enjoying them. I saw you on television and this caused me to remember a time in my past. Fifty years ago I was married to Lt. Jack Catlin who was in England waiting to go to France for D-Day. I was 19 years old and was expecting our first child. Our daughter, Karen, was born on February 2, 1944, during a snowstorm and my OB, Dr. L. Northrup suggested Dr. Graham be her Pediatrician. When your father saw Karen in his office to start her "baby shots," he said "I remember her just after her birth because she had hair growing like a curl in the middle of her forehead." He then recited the well-known poem. Four months later, my husband was killed in France. When I took Karen in for her next well-baby visit, Dr. Graham would not let me pay for her care. He said if her Daddy could give his life for his country, the least he could do was to care for his daughter. He continued to do this for some time, until I remarried and moved away. I want you to know that 50 years later, I still remember and deeply appreciate what he did for my daughter and me.*

*Sincerely, Betty Berger*

In 1940, his children began ice skating and he became an enthusiastic board member of the Tulsa Figure Skating Club. He was selected as an honorary member of the Board of Directors and he and his wife, Helen, became involved in encouraging young skaters to become more proficient at the sport. They were High Test judges for US Figure Skating for over 50 years.

As a member of the Tulsa Rotary Club, in the category of Medicine-Pediatrics, he had 40 years of perfect attendance.

Dr. Graham had a long, distinguished, and varied career in medicine, to his profession as a Pediatrician, and in service to the Tulsa community. He

retired in 1972 at the age of 77 and was named Doctor of the Year by the Tulsa County Medical Society that same year. He retained a keen interest in politics, especially in foreign affairs and, most of all, his vast knowledge and interest in colleges and universities. On an historic date he could have well chosen himself ...on the 11<sup>th</sup> hour of the 11<sup>th</sup> day of the 11<sup>th</sup> month...November 11, 1982, he died at the age of 86.

**Dr. David Underwood, (1898-1985)**

David graduated from Northwestern University Medical School, Chicago, IL, in 1925, followed by a Pediatric Residency at Children's Memorial Hospital from 1926 to 1927. He was Vice President of the Tulsa County Medical Society for one year, and served as an instructor in Pediatrics at the University of Oklahoma in 1927, moving to Tulsa in 1928.

**Dr. George Richard (Dick) Russell, (1899-1990)**

Dick was a graduate of the Medical College of Case Western Reserve in Cleveland, OH, in 1925. (He worked on a ranch in the Dakotas during the summers to pay his way through school.) He was a 1<sup>st</sup> Lieutenant in the Medical Reserve from 1925 to 1935. His Pediatric training was at the Children's Hospital in Cleveland and he was on the faculty of the Pediatric department of the Medical College from 1928 to 1933. It was during this time that he met his wife, Pauline, an RN from Mt. Sinai Hospital, while they were caring for a child with Diphtheria.

He was an Exchange Professor at the Marburg Kinderklinik in Marburg, Germany, 1928-1931. During this time, he did research on Ricketts and Vitamins A and D, at a time when not much was known about vitamins.

He came to Tulsa in 1933 to join Springer Clinic. Pauline was one of the founders of The Babies Milk Fund that raised funds for milk for pregnant mothers and furnished formula for their baby's first year. This program was discontinued when the government finally took over the problem. The group's remaining funds, some \$26,000, were given to The Little Light House, an organization dedicated to improving the lives of children with special needs and their families.

Dick retired from Springer Clinic in 1971, but during that time, he served as President of the Tulsa County Medical Society in 1957, and was on its Board of Trustees from 1952 to 1957. He was Chief of Staff at St. John Hospital in 1962 and was on the Board of Governors at St. John from 1956 to 1966. He was the first President of the Oklahoma Chapter of the American Academy of Pediatrics, holding that position for six years.

One of his early projects was to establish a source of milk for his preemies. He started a program that invited mothers whose babies were to be weaned from the breast, to continue to pump their breast milk and bottle it for the premature nursery. They were carefully chosen, tested, and educated in sterile techniques. The mothers received about \$1.00 per quart, (a good sum in those days), but, better than that, the babies got the best that

nature could provide. Improved formulas from the milk companies eventually resolved the need adequately.

When Dr. Russell retired from Springer Clinic, he went to work in Tulsa's north side newly developed Morton Clinic, an outgrowth of the old Moton Hospital on east Pine. He started as a Pediatrician, dedicated to improving the health of the children in that area, making sure they got their immunizations, and reducing the number of premature births and the high death rate of newborns. As a Clinical Professor of Pediatrics at the University of Oklahoma, he was able to involve Pediatric Interns and Residents to work in the clinic. With Dr. George Prothro, he established a prenatal care and educational program for teens. He was so successful, that he was made Medical Director of the clinic and held that position for eight years. He was so well liked that his accomplishments were recognized by naming a new 8,500 square foot Pediatric center after him.

Dr. Russell was always concerned about the economics of medicine, primarily how to make good medical care financially accessible to everyone. He had a "Year Plan" in the 1950s that provided newborn care, unlimited office calls, and all immunizations for the first year of life, for \$50.00. Hospitalization was extra, but was usually covered by hospital insurance. He was promoting prepaid health care long before any Health Maintenance Organization (HMO) was thought of. He had a unique ability to look into the future and anticipate the direction medicine was taking.

A few years before his retirement from Springer Clinic, he was discussing some of the economics of Pediatrics with his Pediatric partners. He told us that he had just finished looking at our bookings for the past year and noted that 80% of our income came from our office practice, and that 20% came from our hospitalized patients. He also noted that we were spending too much time in the hospital for what it was worth. This was long before the day of Hospitalists.

When interviewed by a reporter for the Tulsa World in 1979, he said, *"I'm the youngest octogenarian doctor in town. I was born in 1899 and if I live another 21 years, I'll have lived in three centuries."* That was not to be. Dick died in 1990 after a severe bout of Parkinson's. He was an avid tennis player and was on the courts well into his 70s. He was never without his trademark cigar.

#### **Dr. Anna "Luverne" Hayes, (1902-1965)**

Dr. Hayes was a graduate of the University of Michigan School of Medicine in 1926. She Interned at the University of Michigan Hospital in Ann Arbor from 1926 to 1928, and then spent a year in Pediatric Residency at the University of Illinois Research & Education Hospital, in Chicago, from 1928 to 1929. She was an instructor in Pediatrics at the University of Illinois from 1929 to 1932, then spent a year of Fellowship training at the University of Vienna in Austria, from 1932 to 1933. She came to Tulsa in 1933 where she practiced until 1944, at which time she joined the Navy.

Dr. Hayes was one of Tulsa's first women physicians, and also one of the Navy's few female medical officers. She was a Lieutenant Commander at the time of her retirement in 1945. She traveled extensively around the world. The Tulsa County Medical Society has a scholarship in her name. Her father was also a physician, practicing in Enid, Oklahoma, in 1914. Dr. Anna Hayes retired in 1958, and died in December 1965.

## Early Medical Care

Remember house calls? How about the "Doctor's Bag," loaded with an assortment of equipment such as needles and syringes, a stethoscope and an ophthalmoscope, and medications, such as cough syrups, pain medications, and epinephrine.

There were no cell phones or pagers. For hospitalized Pediatric patients, most fluids were given by clysis (subcutaneously) from glass containers through rubber tubing, and injections were given with reusable needles and syringes.

The nurses spent a lot of time sterilizing needles and syringes, and matching the barrels with the plungers, (both had serial numbers stamped on them for identification), as well as sharpening the needles for reuse. Disposable needles and syringes did not become universally available until 1956, at which time plastic bottles for blood and other fluids and plastic tubing, both disposable, came into general use.

The transmission of Hepatitis and HIV, as well as the development of plastics, made these changes imperative. T&As were often done in the doctor's office. Dental Caries was rampant and wouldn't subside until after the early 1940s when the benefit of fluorides began to be studied, and the almost universal improvement in the 1960s when water supplies were fluoridated. Antibiotics did not become available until the 1940s.

Dr. Dick Russell told me that during the war years, when there was a universal shortage of doctors, he saw as many as 100 children in his office during a 24-hour-day. Office calls were about \$3.00, and an average physicians income was close to \$24,000.00 a year. It cost \$50.00 to have a baby born at home, especially in the rural areas.

A Nelson's Pediatric Textbook, as well as a Gray's Anatomy, cost about \$9.00. Room and board for a medical student in Oklahoma City was about \$30.00 a month. A Chevy cost \$1,500-\$2,000, and a Cadillac about \$3,000. A school teacher made about \$2,400 a year. You could only make about .50¢ an hour waiting tables. Newspapers were .20¢ per week, or .80¢ per month, and a haircut was about .40¢. Tulsa, as well as much of the United States, didn't really recover from the Depression until well after World War II.



## NEWBORN CARE

Newborn care was really in its “infancy”. Most infants were breast fed and bottle feeding did not become popular until the war years when many young women entered the ranks of the employed. Dr. Ben Nicholson at the University of Oklahoma in the 1940s, taught his students to give the newborn infant a formula of 13 ounces of evaporated milk (Pet or Carnation) to 21 ounces of water with a certain amount of Karo syrup, changing to 13:19 at one month, 13:17 at two months, and 13:15 at three months, increasing Karo as you went along.

The premature baby got breast milk if it was available. Bottle feeding became so popular that fewer and fewer young women nursed their babies and the “art” of breast feeding fell into disrepute.

We then had to make a concerted effort to support breast feeding and in the 1950s and 60s, classes were held for new mothers on the importance of breast feeding. SMA, Similac and Enfamil were the big formula companies that made bottle feeding much easier than the old evaporated milk routine.

The Pediatrician was present for Cesarean deliveries. He would tie the cord, suction the baby, and maybe intubate to remove meconium if the baby was in distress. They also, later, did the circumcision on the boys.

Ophthalmia Neonatorum was prevented with silver nitrate drops. Dr. Crede of Leipzig, Germany, found, in 1881, that the use of a 2% solution of AgNO<sub>3</sub> in the eyes at birth would prevent blindness due to N. Gonorrhoea or Chlamydia Trachomatis. This procedure reduced the incidence of neonatal blindness by a factor of 30. From 1910 to 1940, the State Legislators made it mandatory to use silver nitrate after birth.

Cool nurseries were thought to be beneficial, but air conditioning was non-existent. Neonatologists were few and far between, rarely outside the teaching hospitals. The article on “Rape of the Phallus,” (*Morgan, WKC, The Rape of the Phallus, JAMA 1965; 193:123-4*), a diatribe against circumcisions, had yet to be written.

The care of the small premature infant was primarily the responsibility of the nursing staff. Feeding and fluids were often withheld for 48 to 72 hours because of the fear of aspiration. From the 1940s to the 1950s, the attitude was a hands-off approach. I remember seeing an unused Bloxsum Air Lock in the newborn nursery at the Barnes Maternity Hospital in St. Louis during my Pediatric Residency in 1953, and hearing our Pediatric Chief, Dr. Alexis Hartmann, stating that its prime purpose was *keeping peoples hands off the baby*.

If you have never seen a Bloxsum Air Lock, it looks like a little Iron Lung, a cylindrical steel chamber into which the baby was placed. The chamber was sealed, and 60% oxygen was infused under pressure. The pressure was then released suddenly, and the cycle was repeated at about one minute intervals. It was designed by Dr. A. P. Bloxsum at St. Joseph’s Hospital in Houston in 1950, and was falling out of favor by 1953. Critical studies by Virginia Apgar and Joseph Kreiselman in 1953, using the device on dogs, then further studies by Townsend in Rochester, New York, in 1954,

raised questions as to its usefulness. A final study at the John's Hopkins Hospitals by T. E. Reichelderfer and H. M. Vitowsky doing a randomized, controlled, clinical study between it and the isolette showed little difference in outcome and this spelled the demise of the Bloxsom Air Lock. Prior to this period, the general feeling was that if a small, apneic, depressed premature infant was "meant to live," it would survive the first 48 to 72 hours out of the womb. If it made it that far, then every effort was made to keep it going.

Another problem that faced these practitioners, was that of Hemorrhagic Disease of the newborn. In 1939, W. W. Waddell and DuPont Guerry showed the need for Vitamin K in preventing this disorder. A year later, the prophylactic use of Vitamin K in the newborn became routine. The American Academy of Pediatrics recommended a dose of 5 mg in 1954. A few years later, it was found that large doses of the synthetic Vitamin K could be toxic to the newborn, causing Kernicterus and Hyperbilirubinemia and Hemolytic Anemia. The Academy changed the recommended dose to 0.5 to 1.0 mg of the natural Vitamin K in 1961.

Infant incubators, manufactured by Air Shields, were developed in 1938 that could be better controlled for temperature and oxygen content. In 1942, Wilson reported that premature infants breathe with a more regular pattern if they were kept in an incubator with 70% oxygen. The babies did have more "regular" breathing, but by 1951, it was suspected that the high oxygen levels were the cause of Retrolental Fibroplasia (RLF), and by 1954, it was well documented and oxygen levels were reduced. RLF declined with oxygen levels of 40% or less, but there was a rise in babies with Hyaline Membrane Disease and the mortality rate went up on the preemies. Better methods of monitoring the oxygen levels with blood gases and skin sensors in the 1960s improved this outcome. Screening tests of the newborn for thyroid conditions, PKU and Cystic Fibrosis were unknown.

Puerperal Sepsis had been recognized since the days of Oliver Wendell Holmes, Dean at Harvard Medical School 1880, and the story of Ignaz Semmilweiss (who advocated hand washing with chlorinated soap in 1847), both of whom recognized that newborn infections could be iatrogenic, and both were advocates of hand washing to prevent the spread of infections. The problem was still with us in our nurseries in the 1940s. Epidemics of Staphylococcus Aureus infection occurred sporadically in nurseries throughout the country.

However, in 1948, a new bacteriostatic cleansing agent that was especially effective against Staphylococcal and other Gram positive organisms came out and was universally accepted. This pHisoHex soap contained hexachlorophene, a polyhalogenated compound. It was used to scrub before surgery, when we went into the nursery, before examining a newborn, and to give the newborn a bath after birth. It was hard on the hands, and after a few weeks of scrubbing, your knuckles would crack and bleed. In spite of that, it became a part of our medical "Rites and Rituals," a form of magic to ward off the evil spirits.

In the late 1950s, we began hearing some stories that pHisoHex soap could be a bad actor. There were stories of preemies and other infants that had been bathed in the soap now showing signs of absorbing the hexachlorophene through the skin and developing signs and symptoms of systemic toxicity – irritability, dermatitis, twitching, and convulsions. Some died and, at autopsy, showed brain lesions. In 1959, Curley and Hawk, research chemists, found that it caused cerebral swelling and brain damage in rats. In August of 1972, Jean D. Lockhart, MD, of the Bureau of Drugs, Food and Drug Administration, wrote an article in the August issue of Pediatrics entitled, “How Toxic is Hexachlorophene?” The Food and Drug Administration restricted the use of Hexachlorophene in 1972. Our journals were full of pros and cons relative to its dangers and benefits. A lot of us had a hard time accepting these changes but, by 1977, there was ample evidence that the toxic potential of the drug overwhelmed any benefits from its use. It could only be obtained on prescription by this time.

### **THE ADVENT OF ANTIBIOTICS**

Imagine practicing without antibiotics. The sulfonamides made their appearance in the 1930s with Prontosil in 1932 by the Bayer HG Company in Germany. The “Sulfa Craze” began at that time and Massingill produced an elixir that contained diethylene glycol that killed 100 people in the Fall of 1937. Dr. Homer Ruprecht, an Internist with Springer Clinic, and Dr. Ivo Nelson, a pathologist at St. John Hospital, reported on two of these deaths here in Tulsa.

Pneumonia was often a killer, as was blood poisoning. Furuncles and Carbuncles had to be lanced and drained. Osteomyelitis could lead to loss of a limb, and Meningitis could lead to death, if not to Mental Retardation. The sulfonamides were the first truly effective tool for these infections. By the 1940s, medical students were learning, in their pharmacology courses, about the differences between sulfanilamide, sulfamerazine, sulfadiazine, and sulfamethazine. Sometimes, they were combined to produce a “Triple Sulfa” in order to minimize some of their side effects. The medics (battalion aid men) of World War II learned to sprinkle sulfa powder in gun and shrapnel wounds on the battlefield.

Sir Alexander Fleming first discovered the antibiotic properties of the fungus *Penicillium Notatum* in 1928. However, it was Ernst Chain and Howard Florey who isolated the antibiotic substance and, with the help of Norman Heatley, were able to produce it in a usable form in 1945, for which they received the Nobel Prize.

As a sophomore medical student in 1945, at the University of Oklahoma, it was certainly an exciting discovery and one in which we in the medical profession would be able to accomplish much with in the years to come.

My wife, Esther, was a student nurse at St. Anthony’s Hospital in Oklahoma at the time and remembers making her rounds with a tray of syringes full of penicillin, giving it to patients, every four hours, in the upper

outer quadrant of the buttocks, IM, (“tremendous doses of 6,000 units in a single shot”).

A classic case of Pneumococcal Pneumonia was characterized by a quick onset of fever to 104° or more, headache, malaise and, sometimes, a cough. On the 7<sup>th</sup> day, the “crisis” occurred at which time the patient either died or quickly recovered the pneumonia resolving. Children were extremely susceptible to this bacteria, but it was also called the “old man’s friend.”

With the war going on, there was always a shortage of the drug and some institutions would collect the urine of patients who had received it, (penicillin is excreted by the kidneys), and process it to recover the drug. After the war, it became available in many forms, including oral, short acting, and long lasting (a dose of 1,200,000 units given once-a-month prophylaxis in Rheumatic Fever). There was even a Penicillin lozenge to suck on for sore throats. It was an inappropriate use, but widely used until people noted that they developed a black hairy tongue from its use. That treatment for sore throats didn’t last very long.

### **INFECTIOUS DISEASES**

Many of the children growing up during this period had frequent bouts of tonsillitis and middle ear infections. The Ear Nose & Throat (ENT) specialists, and many General Practitioners (GPs), were kept busy doing T&As, and mastoid operations were a common procedure until the advent of antibiotics. Meningitis and brain abscesses were a not uncommon complication of mastoid infections. It was a rare child that made it to adulthood with tonsils intact, and the deafness of that era was secondary to chronic middle ear infections, and not loud rock and roll music. Rheumatic Fever, with its frequent manifestations of Sydenham’s Chorea (St. Vitus Dance), Migratory Poly Arthritis, and Rheumatic Heart Disease, was relatively common. Charles H. R. Rammelkamp’s studies in the 1940s showed that 6% of children with untreated beta hemolytic streptococcal throat infections ended up with either Rheumatic Fever or a renal involvement of Acute Glomerular Nephritis.

A diagnosis of Scarlet Fever was enough for the Health Department to come to the patient’s home, quarantine the house, and let the world know by nailing a big 2' x 4' “Quarantine” sign on the front of the house. My father, a school teacher, had to move out of the house and take a room at the YMCA for two weeks until all of us kids recovered. After the quarantine period, the Health Department made another call, moved all of us out of the house and into the backyard, then fumigated the house for about three hours before letting us back in. It was only then that we were allowed to return to school. The skin on many of the children with Scarlet Fever would peel afterwards as if they had a severe sunburn. Rheumatic Fever, with severe carditis and permanent heart damage, was a not infrequent complication of Scarlet Fever.

Diphtheria was another common affliction of the age. In the 1920s, there were 100,000-200,000 cases per year, with 13,000-15,000 deaths. Between 1980 and 2000, the numbers had dropped to 52 cases, and from

2000 to 2007, to only five cases. The German, Emil Von Behring, developed an antitoxin in 1890, receiving the first Nobel Prize in Medicine that same year. He also developed the first vaccine in 1913. As mentioned previously, Dr. Dick Russell had some 25 children with diphtheria on his ward in Cleveland, Ohio, during his Residency, and that most had tracheotomies. This would have been some time between 1928 and 1933.

The pertussis organism was cultured by Jules Bordet and Octave Gengou in 1906. They also developed the first serology and a vaccine. Before vaccines were used, there was an average of 157 cases per 100,000 people in the United States. Consequently, whooping cough was another constant illness that these physicians had to contend with.

Tetanus, (or Lockjaw), has occurred sporadically in Tulsa, mostly secondary to puncture wounds. The first vaccines for Tetanus were developed in the 1890s but did not become part of the routine immunization schedule until the beginning of World War II, and in the form of DPT until 1942. I have seen one case of Neonatal Tetanus while taking my Pediatric Residency in St. Louis Children's Hospital when a newborn from the "boot heel" of Missouri was referred because the mid-wife who delivered the baby had "cauterized" the umbilical cord with horse manure. Another case was an 11-year-old boy who had stepped on a nail. He was kept in a "sleep mode" for about 21 days because the slightest noise, the closing of a door or the ringing of a telephone, would cause him to go into spasm with arms and legs outstretched, neck and back bowed, and just his heels and back of his head touching the bed. His chest muscles would become tight, he would stop breathing, turn blue, and then slowly return to his original position. He was fed with IVs and nasogastric feedings until he eventually recovered.

Of all the contagious diseases that the pioneer Pediatrician had to deal with, Polio must have been one of the worse. Hillcrest and St. John both had Polio wards and both had functioning iron lungs. The first iron lungs were developed in Boston in 1928 and became known as Drinker Respirators. Sister Elizabeth Kenny came from Australia to the United States in 1940 and spent 11 years in Minneapolis establishing a rehabilitation unit for Polio victims. Her treatment consisted of wrapping hot wool rags around the affected limbs, as well as physical rehabilitation.

Medical students, Interns, and Residents could go there to learn her treatment methods and have their expenses paid by the March of Dimes. The Junior League of Tulsa started the Convalescent Home for Crippled Children at 5<sup>th</sup> and Cincinnati in 1926, which then moved to 49<sup>th</sup> and Lewis in 1951, becoming the Children's Medical Center, taking care of crippled children and post-Polio patients.

Dr. Ian MacKenzie, an Orthopedist, was the acknowledged specialist for Polio at Hillcrest Hospital in those days. (He died in an auto accident in 1953.) One of the enigmas of the day was that a person could get Polio more than once. It would take time before the Virologists would be able to culture and define the different types of the Polio virus, and identify the three most common causes as Polio Virus Type 1, Type 2, and Type 3.

There was a period in Tulsa, during the 1930s, when the Health Department came out to the schools and put several drops of a disinfectant (silver nitrate) into each child's nostrils. During epidemic years, the schools and theaters were closed during the Summers. Landsteiner identified the Polio virus in 1908. The medical students of the 1940s learned to diagnose Polio by complaints of headaches, low grade fever, irritability, and sometimes a flaccid paralysis of the limbs. A lumbar puncture would show an elevated number of lymphocytes, and the spinal fluid protein would also be moderately elevated.

One of my classmates at Oklahoma University School of Medicine (Class of 1948) moved to Michigan after his Internship to go into general practice. He contracted Polio and died from complications.

The childhood diseases of Measles, Mumps, and Chicken Pox probably were the principal reasons for making a house call. The sickest of all children were those with Rubeola, the "Red Measles." High fevers to 104 degrees, cough, coryza, and conjunctivitis. The eyes became so inflamed that light hurt them and the parents were advised to keep the shades drawn. There was a classical erythematous maculopapular rash that, like most infections in children associated with a rash (except for Rocky Mountain Spotted Fever), would start on the head and face, then spread down and out. Koplic spots inside the mouth were diagnostic, but not always seen.

One argument that I used to have with Dr. Dick Russell, when we were partners, was whether or not to use aspirin, (this was in the pre-Reye's Syndrome days). His contention, as well as that of other physicians of his era, was that the fever helped the kids get over it quicker. I had not heard that, and felt that anything I could do to make the kids comfortable was all right.

The last case I saw was in November of 1993, when I was doing Locum Tenens in Carson City, Michigan. The Pediatric Residents in the hospital had asked for a consult, having never seen a case of the "hard measles" before. Rubella, the German or Three-Day Measles, was a relatively mild disease unless it involved a young lady in her first (organogenic) trimester of pregnancy. Deafness, mental retardation, or congenital heart disease could be the lot of the unborn child. Mumps, or Epidemic Parotitis, was also mild unless it involved a teenage boy, or a child in a family where the father had not had the Mumps. In that case, it could be a major problem. In those days, it was believed that immune globulin would protect the father or older child from getting Mumps and Mumps Orchitis.

Tuberculosis was still a problem during this era and every child had a TBC tine test or a Mantoux skin test for Tuberculosis. It was not uncommon for medical students to enter medical school with a negative skin test for tuberculosis, but to have a positive test on graduation.

Routine vaccinations for Smallpox was just a part of growing up, and as I recall, were done in the schools by the Tulsa City/County Health Department.

Diarrhea was a very real problem. Before the use of refrigerators, most households depended on ice boxes to keep milk and other foods from

spoiling. The Ice Man, with his horse-drawn ice wagon, came by on a regular basis to deliver ice to the home. The ice plant in Tulsa was on 6<sup>th</sup> and Wheeling. E Coli was considered a normal part of the flora of the bowel. (We did not know about 0157:H7 or 0111:B4 E Coli strains then.)

### **IMMUNIZATIONS**

It is interesting to remember that Smallpox was the first “vaccine” to be developed. We medical students learned about Edward Jenner who, upon observing that Milk Maids who had Cow Pox never developed Smallpox, took the pus from a patient with Cow Pox and inoculated a boy with the material. Six weeks later he exposed the child to a case of Smallpox and the boy did not develop the disease. (I don’t think they had Internal Review Boards back in those days!)

This practice became wide spread in England during the 1790s. Jenner later coined the word “vaccine” from the Latin for Cox Pox. (Variolae vaccinae - varioriole - pox + vaccinae, vaca Latin for cow.)

The vaccines for Rabies, Plague, Cholera, Typhoid, Diphtheria, Pertussis, Tetanus, Tuberculosis and Yellow Fever were developed and had all been discovered by 1935. The combination of DTP came in the 1940s. The Flu vaccines were just being developed in the 1950s. The physicians of this period were either giving the vaccines for Diphtheria, Tetanus, Pertussis and Smallpox, or were referring their patients to the local Health Department for the vaccines. If you were planning a trip overseas, you were wise to check with the Health Department to find out what immunizations you might need in that particular country, such as Cholera, Typhoid or Yellow Fever.

Tuberculosis was the leading cause of death in children under four years of age in the 1920s and was rampant in Japan after World War II. When I first arrived in Japan on my way to Korea in 1951, there was a truck that made the rounds of the neighborhoods in Tokyo picking up the bodies of those who had died of Tuberculosis during the night. When I returned to Japan a year later, this procedure had stopped because of better housing, nutrition, and perhaps the BCG Vaccine. Emperor Hirohito decreed an Immunization Law in Japan in 1948 which mandated that all people under the age of 25 get the BCG Vaccine if they were TBC Tine negative. This national policy was revised in 1951 to include all citizens under the age of 30, and again revised in 1974 to include all infants and children under 4 years of age. The rate dropped to such a degree that in 2003 it involved only infants under 6 months of age and no TBC Tine tests have been done routinely since.

The BCG Vaccine had been developed by the French Bacteriologist, Albert Calmette, and his associate, a Veterinarian, Camille Guerin, in 1908.

### **VITAMIN DEFICIENCIES**

Vitamin deficiencies had been recognized for some time, especially in sailors with scurvy, Beriberi in malnutrition, Rickets, etc. However, before 1900, most adults and their children obtained an adequate amount of the various vitamins in their diet only. In 1909, Vitamin A, or retinol, was discovered in

cod liver oil, and by 1912, Vitamin B1 (thiamin), and Vitamin C (ascorbic acid), had been defined. It was in 1918 that Vitamin D (calciferol) was also identified in cod liver oil. Consequently, the children growing up in the 1930s and 1940s were given a daily dose of cod liver oil and orange juice as routine practice. The vitamin deficiency diseases almost completely disappeared, but Rickets still showed up in x-ray conferences in the medical schools of the time.

At the present time, vitamins have been added to milk, cereals, bread and just about anything else that we take in. Advertising tells us that vitamins will prevent just about all kinds of diseases and will even cure diseases that we don't know we have. Fortunately, most excess vitamins, especially Vitamin C, will be excreted in the urine. Americans must have the most expensive urine in the world!

It should be noted that an excessive intake of vitamins can be toxic as early polar explorers discovered when they ate the livers of Polar Bears and died of Vitamin A toxicity. I also recall a two-year-old at St. Louis Children's Hospital with Vitamin A and D toxicity. The mother explained that the child was not eating well, so she just kept doubling the child's intake of cod liver oil. He came very close to dying.

We continue to have a few reported cases of vitamin intoxication each year, but the incidences are falling. Vitamin A has been found to be helpful in areas where there is malnutrition, in treating children with Measles, and Shigella infections.

### **MENTAL RETARDATION**

Mental retardation, in all its forms, was as frequent then as it is now. However, the approach to the developmentally disabled had yet to change. It was well into the 1950s before the medical schools began to change in their approach and stopped classifying the children according to Psychologist H. H. Goddard's rather arbitrary arrangement of Idiot (IQ <25), Imbecile (IQ 25-50), and Moron (IQ 50-70). The etiology of the mental retardation was identified in only about 6% of the cases. The rest were "unknown." Most children with developmental delays were "warehoused" in institutions at Vinita, Enid, and Paul's Valley. Few were kept at home and many times a child with Down's Syndrome would be put in a special nursery at birth to prevent the mother from "bonding" with the baby.

When Hissom first opened in 1961, it was a state-of-the-art facility with beautiful surroundings, great personnel including trained teachers, art therapists, physical therapists, psychologists, physicians and caretakers. Oklahoma, as is true of many other states and countries, gradually cut back on support and it eventually went the way of Vinita and Paul's Valley, finally closing its doors in 1993 after the State of Oklahoma lost a lawsuit filed by the parents of children at Hissom. The care of the Developmentally Disabled has been on a roller coaster between good care and criminal neglect over the centuries.

### **DENTAL CARIES**

Dental Caries was an epidemic problem before fluoridation. Trips to the dentist were routine and almost all kids had bad teeth. It was unusual to see a five-year-old with a good set of teeth in the 1940s and 50s. However, this state of affairs changed rapidly after research in the 1940s determined that fluorides could substantially reduce the incidence of Dental Caries. As I recall, this study was begun after observing that children in some cities in Texas had very few cavities. It was found that their water supply, from artesian wells, had a higher level of fluorides than other communities. Consequently, it was determined that a level of 1 part per million was effective and the PHS of the Federal Government set guidelines in 1962 of 0.7 - 1.2 ppm of fluorides in community drinking water. In 1945-1946 there were four communities with that level, and by 1992, 56% of the US population (of 14.4 million) were at that level. Another 10 million people lived in areas with natural fluorides at a concentration of >0.7 ppm. Almost all studies since then reveal a drop in the incidence of Dental Caries of at least 50%.

There were, and still are, people against the use of fluorides in drinking water. It has been blamed for heart attacks, cancer, brittle bones, crumbling teeth, lowered IQs and, I suspect, ADHD. When I recall the appearance of children's teeth before fluoridation and the kids we see today there is little question in my mind of its effectiveness.

### **DIABETES & OTHER ENDOCRINE DISORDERS**

Prior to the discovery of insulin by Frederick Banting and Charles Best in 1923, all children with Insulin Dependent Diabetes (also called Childhood Diabetes or Type 1 Diabetes) died within three to four years from onset with either Ketoacidosis, an intervening infection, or malnutrition. Management at this time depended on the amount of glucose in the urine as determined by the Ames Dextrostix and an occasional blood sugar done in the doctor's office. What "control" there was, was achieved with a single shot of short-acting insulin combined with a long-acting insulin given in the morning. With this method of management, it was not uncommon for children to develop Diabetic Ketoacidosis with a mortality rate of close to 20% in the best of hospitals. Type II, or the adult-onset type of Diabetes, in children was rare. Cretinism, PKU, and Galactosemia were metabolic and genetic diseases that would take another 10-20 years before NB screening tests would detect them before serious damage was done.

### **LEUKEMIA & OTHER MALIGNANCIES**

Leukemia and most other malignancies were pretty much a death sentence during this period. The average life expectancy of a child with leukemia was perhaps as much as 18 months. Blood transfusions were about all that the physician could offer the child.

# THE AGE OF SPECIALIZATION

## The City of Tulsa

The end of World War II saw many changes to the Tulsa economy as it went from a war footing of building B-24 Bombers to becoming the Oil Capitol of the World. Our population of 72,000 in 1920 doubled to 142,157 in 1940, and jumped again to 331,638 in by 1970. Our Pediatric physician population kept up. All of the hospitals increased in size and complexity.

Tulsa expanded rapidly. The Medical Arts Building on 6<sup>th</sup> Street downtown was demolished to make way for the new Petroleum Club. The movie theaters – The Ritz, Orpheum, Rialto, and Majestic – disappeared. New shopping centers sprang up citywide, such as Whittier Square at Lewis and Admiral, Utica Square at 21<sup>st</sup> and Utica, Southland and Southroads Mall at 41<sup>st</sup> and Yale, Woodland Hills Mall at 71<sup>st</sup> and Memorial, and a variety of shopping “communities” such as Brookside and Cherry Street.

Schools popped up like mushrooms after a rain with Will Rogers High School leading the way in 1940. A new Convention Center was built downtown as the Coliseum in 1925, (although it burned to the ground in 1952). Our lead in the petroleum industry began to give way to Houston and many of the major companies moved their headquarters and people to Texas. The health industry became the leading employer during this period.



## The health industry

became the leading employer during this period.

# Specialty Hospitals & Services

After World War II, then President Harry Truman was riding high and the push was on for Socialized Medicine. The AMA assessed each member \$50.00 to mount a successful campaign against the idea. With Truman's plan defeated, the need for more physicians and hospitals increased. As a result of compromises, the Hill-Burton Act of 1946 was passed, (with the blessing of the American Hospital Association), authorizing money to build hospitals based on population and per capita income, which favored rural areas.

It required a "reasonable amount" of free care or reduced charges. The hospitals were to be open to "All licensed in the Healing Arts" and permitted racial segregation. It also opened hospital emergency doors to anyone seeking medical help and subsequently required the hospitals to hire emergency room doctors. Political pressure in the 60s and 70s prohibited hospitals with emergency room features from denying treatment for those in critical condition.

**Moton Memorial Hospital**, first opened back in 1921 by the Red Cross as the Maurice Willows Hospital in North Tulsa. In 1941, the City of Tulsa replaced Willows with a new municipal hospital named Moton Memorial. It started going downhill after the desegregation of schools, buses, businesses and hospitals in the 1950s. Prior to this time, African-American physicians did not practice in Hillcrest, St. John, or the Oklahoma Osteopathic Hospital, and they had their own National Medical Association. With the exception of the Pediatric floors, our African-American citizen patients were segregated in all the hospitals.

With desegregation, however, this changed. By 1967, Moton was closed because of dilapidation of the facility and the equipment, and the fact that the physicians and their patients were now using the other hospitals, but reopened in 1968 as the Morton (not a misspelling) Health Center, operating as an ambulatory care center. The center was named after W. A. Morton, MD,



a prominent African-American physician with a distinguished record of service at Moton. In 2006, Morton Comprehensive Health Services, Inc., a 501(c)3 non-profit, moved to their new 60,000 square foot facility, and has since opened three satellite facilities.

**Hillcrest** began as Morningside Hospital in response to the Flu Epidemic of 1918, at 512 N Boulder. It moved to 12<sup>th</sup> and Utica in 1928 and became Hillcrest Hospital in 1939. Since then, it has continued to expand and even built a beautiful six-floor children's hospital with a generous donation from the Mabee Foundation. It was named the Mabee Children's



Hospital. Due to lack of funding for running the hospital, however, and the need of Hillcrest to use the facility for other specialties (Obstetrics and Internal Medicine), the children's hospital ultimately closed. Hillcrest also dropped its School of Nursing during this period.



In 1919, the Catholic Order of Sisters of the Sorrowful Mother purchased land at 21<sup>st</sup> and Utica for a hospital (to become **St. John**). Building was stop-n-go, depending on funding. Only two floors were completed when they accepted their first patients in 1924, with the remaining floors being completed by 1926.

*"Everybody was hot, but we had our own ice plant. So, in the operating room, we always had a basin with a hunk of ice in it and put a bath towel over it. We would ring it out and put it across the doctors' shoulders to keep them cool while they were operating. That was the cooling system we had. We had to use electric fans, which is certainly against technique. But, it was necessary for living. We operated at times with temperatures in the morning already at 104 degrees. The walls would not cool off because it was just so hot, because there was no air conditioning." (Interview with Sister Alfreda, 1980, Junior League of Tulsa.)*

St. John began an expansion program with both doctor's offices, parking garages, and a hospital tower in 1967 that replaced much of the original hospital. They also had dropped their School of Nursing by this time.

**Oklahoma Osteopathic Hospital** was started by the Osteopathic Founders Foundation established in 1943. They bought a hospital at 9<sup>th</sup> and Jackson that had originally opened in the mid 1920s by Dr. Ned Smith, a Psychiatrist, for nervous and mental disorders. It was renovated and modernized, opening in 1944. It combined Oklahoma State University and became an Osteopathic Medical School in 2006. At this time, it is the largest Osteopathic teaching center in the United States.

**The Children's Medical Center** on 48<sup>th</sup> and Yale outgrew its facilities and bought the Sinclair Research Building on the bypass between Yale and Sheridan on 51<sup>st</sup> Street. Their emphasis changed from convalescence and rehabilitation, to growth, developmental, metabolic, and neurological disorders.



**Doctors Hospital** was built at 23<sup>rd</sup> and Harvard as a small general hospital with an opening in August of 1966.

W. K Warren started **Saint Francis Hospital**, on 61<sup>st</sup> and Yale, which opened its doors in September of 1960 with 275 beds. Since then, it has continued to expand in size and services that now includes a cancer center, one of Tulsa's first intensive care units, and a first class neonatal center.



**Hissom Memorial Center** for children with mental retardation was opened in 1961, but closed by court order in 1993.

### **MEDICAL OFFICES & CLINICS**

Medical offices, including Springer Clinic originally located at 6<sup>th</sup> and Cincinnati, and Glass Nelson Clinic on 21<sup>st</sup> Street, moved out of the downtown area and closer to the hospitals during this period. The expansion of small single specialty clinics developed, as did many private offices.

### **THE EMERGENCY ROOM**

In these early years, the hospitals all had emergency rooms, catering to “emergencies.” Generally, you had to be brought to the hospital by ambulance, which in the early years, was a hearse provided by one of the funeral homes that responded to accidents and other emergencies. The driver and attendant were trained in First Aid. The EMSA (Emergency Medical Services Authority) program, with ambulances and trained EMS personnel, did not arrive in Tulsa until 1977.



Emergency room “walk-ins” were seen by a triage nurse and referred to their own physician or the physician was called to come to the emergency room to see the patient. Later, each hospital set up a roster of physicians “On Call” who were called by the emergency room nurse to see a patient that did not have a regular physician. Staff privileges required that you take your turn “On Call”. There were no helicopter pads nor life-flight helicopters. This was all to change by the time the 70s rolled around.

### **ASTP & V12 PROGRAMS**



When World War II started, the government recognized the need for more physicians for the Armed Forces. As a result, the Army Specialized Training Program (ASTP) and the V12 program (the Navy's version of ASTP) were created in 1942. The programs permitted many young men to finish their college education and get started in Medical School. This, plus the GI Bill, saw a big influx of

physicians with specialty training enter the ranks of the healing arts. (The shoulder patch for the ASTP, shown here, was referred to, jokingly, as a “flaming bed pan superimposed upon a gold brick!”)

As a consequence, we began to see a rise in the sub-specialties with Neonatologists, Cardiologists, Hematologists, Pulmonologists, Endocrinologists, Pediatric Surgeons, Ophthalmologists, Pediatric Psychiatrists, and Child Development specialists coming along in rapid succession.

#### **VETERANS**

Prior to the war, the majority of physicians did General Practice, which included some surgery, obstetrics, and the setting of bones and taking care of children. Tulsa had its specialists in many fields, including Pediatrics, but the majority were GPs. Many of these physicians were inducted into the Army at the beginning of the war and did not return to civilian life until 1945. Many felt quite insecure in planning to return to a civilian practice and consequently took advantage of the GI Bill of Rights to further their education in a specific field and become specialists. The Age of Specialization had really begun.

## **The Tulsa Pediatric Society & The American Academy of Pediatrics**

The same group of Pediatricians who helped design and plan the Mabee Children’s Hospital formed the beginning of the Tulsa Pediatric Society. This group also was the nucleus of the Oklahoma Chapter of the American Academy of Pediatrics, and elected Dr. Dick Russell as the first Chapter Chairman to the AAP in 1978. This was a new program adopted by the Academy and was designed to advise the AAP Board of Directors of issues of importance to the members of the Academy.

In addition to publishing a newsletter, “The OK Pediatrician”, the group started a Pediatric Colloquy (literally a coming-together to speak), that met on a regular basis. The evening before the meeting we would have a nice dinner and social get-together, wives included. The Colloquy was usually pretty concentrated, with speakers from Cleveland, St. Louis, Dallas, and Houston. These speakers were usually professors who taught where this group of Pediatricians had trained. We were privileged to have Dr. Caffey, of Radiology textbook fame, Dr. Alexis Hartmann from St. Louis, and others. Our speakers were famous professors usually sponsored by our friends from Enfamil and Similac.

When the medical school came to Tulsa and took over this program, the social part of it was carried on by a great group of our new sub-specialists, Dr. Jegathesian, Dr. Charlie Cooper, Dr. Gary Denslow, Dr. Steve

Miller, and Dr. Morgan, to name a few, who put on “The Fluid Rounds.” (Fluid Rounds is a term used to describe the ritual of making rounds on the Pediatric floors of our training hospitals in the evening when the day shift met with the night shift.) The first Fluid Rounds was at Copper Oaks, a small country club just south of 71<sup>st</sup> Street on Darlington. The next year, and for every year after that, it was held at the Cup Club, another small club with a pool and tennis courts, just south of Southern Hills on Birmingham Street. The Fluid Rounds were started in 1974 by Dr. Jegathesian as his way to express his appreciation to the referring physicians. When Dr. Cooper and Dr. Denslow came along, they joined him as hosts. The party was held between Christmas and New Years and was looked forward to by all of us. It was discontinued after Dr. Cooper passed away.

The Oklahoma Chapter of the AAP continued to grow and develop. Initially, we decided to pass the Chairmanship of the organization around the state in order to involve as many of our colleagues as possible. This plan has been successful with Dr. Dick Russell of Tulsa as our first Chair, followed by myself (Dr. Bob Endres, also of Tulsa), then Drs. Bob Herndon (Chickasha), Jake Jones (Shawnee), Emil Stratton (Muskogee), Jim Mayes (Oklahoma City), Bud Maguire (Tulsa), Don Wilber (Midwest City), Bob Block (Tulsa), Mary Anne McCaffree (Oklahoma City), Buck Wright (Stillwater), Ken Setter (Tulsa), and Michael Stratton (Muskogee). Each Chair served three years.

A review of past issues of our newsletter, “The OK Pediatrician”, reveals that the Pediatricians of the state have been quite active on behalf of the children of Oklahoma. Many have been actively involved with our camp for children with diabetes, Camp O’Leary, (later named Camp O’Leary/Kno Keto, and finally Camp Endres). We also had a day camp for the little ones under 9 years of age, and a Winter camp for the 14 and older kids, an idea that sprang from the fertile mind of Dr. Don Wilson when he came to Tulsa in 1980. Rick Cohen started out as a Pediatric Resident serving as camp physician and then as camp Medical Director. Tom Lera also served several years as camp Director.

Other areas of involvement included annual programs to obtain CME credits with excellent material and good attendance. These programs gave us an opportunity to get to know our colleagues, to socialize, and to plan for the future.

Out of these discussions came our lawsuit with the State of Oklahoma, Oklahoma v. Fogarty, that began in April 2004. We had some 35 physicians, Pediatricians and Pediatric Sub-Specialists, testifying on behalf of our class members and the children of Oklahoma who were Medicaid recipients and not receiving promised services.

Dr. Ken Setter was our Chapter Chairman during this period and as Dr. Mike Stratton, the new Chairman said, “Congratulations to Buck Wright, the Bullocks, and Mary Anne McCaffree! Mary Anne won the Abraham Jacobi Memorial Award, Buck was awarded the President’s Certificate for Outstanding Service, and Louis and Pat Bullock (our legal team) were commended for their work on the Medicaid lawsuit and given the AAP Child

Health Advocate Award. Oklahomans and their accomplishments were well represented at NCE.” We won the lawsuit but the state appealed and we lost the appeal. However, a lot was accomplished and we learned what we can do when we work together.

On January 18, 2004, Dr. Carden Johnston, President of the AAP at the time, came to Tulsa and met with Dr. Setter, Dr. Block, and Dr. Mark Fox (OU Med-Ped faculty member) to discuss ways to improve access to health care for the children in our country. The next day, he again met with the OKAAP Executive Committee, OJ Wilkinson of Muskogee, and several of our Pediatric Residents. The meeting was fruitful to both Dr. Johnston and our group.

## The Physicians

This next group of Pediatricians are those who came to Tulsa after World War II, many having served in one of the Armed Forces, and many who, after their service, used the GI Bill to go into a Residency in order to sharpen their skills that they felt had decreased during their service. These physicians were the forerunners of the specialists to come, and I feel were the precursors to the Age of Specialists. They are listed on the basis of when they came to Tulsa and Eastern Oklahoma. I asked each Pediatrician to give me an abbreviated CV, some information on their family, and any thoughts they may have as to what has been outstanding in the practice of Pediatrics during their experience and what lies ahead for all of us. The following is a synopsis of their remarks. Unfortunately, many did not reply, so we do not have a complete story of all the Pediatricians who are or have been in practice.

### **Dr. Walter F. Sethney (1912-1980)**

Walt got his Medical Degree from Columbia University College of Physicians and Surgeons in 1938. His Residency in Pediatrics was at Children’s Hospital in Detroit, MI, from 1939-1942. He was in private practice in Menominee, MI, from 1941-1942 when he entered the Army. Walt was in Africa from 1942-1946 and, upon discharge from the Army, came to Tulsa to practice. He arrived in the middle of a Polio epidemic and had some 126 cases. He received a Community Service Award from the Tulsa Chamber of Commerce for his work. Walt established the first Poison Control Center in Tulsa for which he also received the Sertoma Award. Walt retired in 1976.

### **Dr. Herschel J. Rubin (1912-1996)**

Herschel was a graduate of Hahnemann Medical College in Philadelphia in 1937. He Interned at Jameson Memorial Hospital in New Castle, PA, then did Pediatric Residencies at Willard Parker Hospital in New York (1938-1939), and Massachusetts General Hospital in Boston (1939-1940). He entered the Army in 1940 and was discharged with the rank of

Major in 1945. He returned to Massachusetts General Hospital for a refresher from 1945-1946 before coming to Tulsa in 1947.

Herschel was probably the first Pediatrician to streamline the practice of office Pediatrics. He brought in partners in order to cover when he was not available, and made use of "scribes" (assistants who recorded his comments on the patients chart so that all he had to do was sign it). His office was in a building that had formerly been a Safeway grocery store, across the street from St. John Hospital. The waiting room looked like a stable for cowboys, and the hallway walls had western scenes painted on them. Each exam room had its own motif, including a Roy Rogers Room and a Geronimo Room. Herschel's wife, Marjorie, was his office manager for many years.

Herschel was a Clinical Professor for the Pediatric departments at both the University of Oklahoma-Tulsa, and the ORU School of Medicine.

#### **Dr. Ray M. Wadsworth (1900-1990)**

Ray graduated from the University of Oklahoma School of Medicine in 1942. He took his Internship at Presbyterian Hospital in Chicago before entering the Army. He was discharged in 1946 with a Captaincy, and started his Pediatric Residency at St. Louis Children's Hospital in St. Louis. Ray came to Tulsa in 1948 where he practiced until his retirement.

He was Secretary-Treasurer of the TCMS in 1955, and their President from 1960-1961. He was Chairman of the Public Health Committee from 1952-1954, and was on the Advisory Board of the Salvation Army Home and Hospital. He took an active part in house staff education and was on the teaching staff at the School for Nurses at St. John Hospital.

Ray and his wife made a point of inviting each new Pediatrician to their home for dinner and talk. He went out of his way to make all newcomers feel welcomed. Everyone thought of Ray as a gentleman and a scholar.

#### **Dr. Gladys K. Dolan**

Gladys deserves special mention at this point. A graduate of Vassar College and Rush Medical School, she came to Tulsa after her Internship to join the Tulsa City-County Health Department in 1948. She left this position to become an attending at the Tulsa Children's Medical Center where she did a tremendous job until her retirement in 1962. Gladys died just two years later of a debilitating CNS disorder.

#### **Dr. James William White (1916- )**

James graduated from the University of Tennessee College of Medicine in Memphis in 1943 and Interned at St. Anthony's in Oklahoma City. He took Pediatric Residencies at Children's Hospital in Akron, OH, from 1946-1947, and Methodist Hospital in Memphis, from 1947-1948. He came to Tulsa in 1948 and practiced here until moving to Rogers, AR, in 1976.

**Dr. Mark H. Donovan (1912-1970)**

Mark received his BS from Notre Dame and his MD from St. Louis University Medical School in 1938. He then did his Pediatric Residency at St. Mary's Group of Hospitals in St. Louis from 1939-1941, and 1946-1947. He was in the Army from 1942-1946, discharged with the rank of Major. He practiced in Ada, OK, from 1949-1950, then came to Tulsa in 1950. During his time here he was with the Hugh Perry Clinic located at 227 E 5<sup>th</sup>, was a Pediatrician with the Tulsa City-County Health Department at Moton Health Center, was on the staff at the Children's Medical Center for a time, and did some solo practice. Mark died of a stroke in July of 1970, at the age of 57.

**Dr. Marion K. Ledbetter (1921-1985)**

Both Marion and his wife, Dixie, were natives of Clarksville, TX. He was a graduate of the University of Oklahoma School of Medicine in 1946, with an Internship in Methodist Hospital in Indianapolis, IN, from 1946-1947. He was in the Army Air Force in Biloxi, MS, from 1947-1949, with the Army Medical Corp as a Captain. After his service, he took a Pediatric Residency at the University of Arkansas in Little Rock, from 1948-1949, and State University of New York in Syracuse, from 1950-1951, coming to Tulsa in 1951 to practice Pediatrics.

He left Tulsa to start a Fellowship in Pediatric Cardiology. He did one year at Baylor University in Houston from 1956-1957, then two years at the Mayo Clinic in Rochester from 1957-1959, and finally completed his work in Cardiopulmonology in Buffalo, NY, from 1961-1963. He returned to Tulsa in 1963 as a Pediatric Cardiologist, becoming the Director of the Cardiac Laboratory at Hillcrest Hospital until 1968.

He left here to go to St. Mary's Hospital in Madison, WI, from 1968-1978, then to Neena, WI, from 1978-1979, and Rockford, IL, from 1979-1980. He returned to Tulsa once again to become a Professor and Vice Chairman of the Department of Pediatrics at Oral Roberts University Medical School. He was Board Certified by both the American Board of Pediatrics and the American Board of Cardiology. He was a member of the AAP, AMA, American College of Cardiologists, and the American College of Chest Physicians.

Marion was diagnosed with Lymphoma in 1980 but continued with the practice of medicine and teaching almost to the end of his life in 1985.

**Dr. Leonard L. Kishner (1919- )**

Len graduated from Marquette University Medical School (eventually becoming the University of Wisconsin) in 1946, then a 15-month rotating Internship at Michael Reese Hospital in Chicago, followed by a Pediatric Residency at The Sarah Morris Children's Hospital, (a part of Michael Reese Hospital), from 1946-1950.

He came to Tulsa in 1950 and practiced with Herschel Rubin until 1953, at which time he entered the Navy and served as a Lt. Commander at the San Diego Naval Hospital. He then returned to Tulsa in 1956 and took over the practice of Dr. Marion Ledbetter who had left Tulsa to pursue a

cardiology fellowship. Dr. Irv Braverman joined him and their group became known as Associated Pediatricians of Tulsa.

Eventually the group grew to include five physicians and, at one time or another, included Steve Adelson, David McGhee, Howard Scott, Fred Cohen, Jere Cravens, Pat Shah, Franz Moncada, and Denise Hunter. Len Worked with myself and Irv Braverman in the Rheumatic Fever Clinic at Children's Medical Center, and was also one of the first in Tulsa to do exchange transfusions. Dr. Marcella Steele, MD (wife of Dr. Homer Ruprecht), an anesthesiologist, was the Director of the Tulsa Public School Health Program and encouraged him to help with the program. When she retired, Dr. Kishner took over the program which he directed for 25 years. At one time he had 45 nurses working in the system, eventually sending half of them to Denver, CO, to become trained as Physician's Nurses Assistants (PNAs).

Len left the group in 1988 and began an ADHD clinic at the Medical School here in Tulsa. He received the William Gene Klingberg Faculty award for Excellence in Pediatric Ambulatory Teaching in 1996, from the Oklahoma University Medical School in recognition of his teaching abilities. He continued with this teaching clinic until January 2007. Len's wife, Blanche, was President of the Tulsa Auxiliary of the TCMS for a year and was a faithful volunteer for 30 years at the Tulsa Psychiatric Center.

**Dr. Loren V. Miller (1924- )**

Loren did his undergraduate and medical school training at Duke University Medical School in Durham, NC, graduating in 1947. He did his Residency at North Carolina Baptist Hospital in Winston-Salem, and finished at University Hospital in Oklahoma City in 1950. He served in the Air Force from 1951-1953, and was discharged with the rank of Captain in 1953. He came to Tulsa then where he settled into solo practice. Loren continues to practice and is a regular attendee at CME conferences.

**Dr. Hugh B. Spencer (1917-1985)**

Hugh went to Indiana University School of Medicine, Indianapolis, IN, graduating in 1950. His Residency was at the Indiana University Medical Center from 1951-1953. Hugh came to Tulsa that year and joined Walt Sethney. He retired in 1983. Hugh was an officer in the Army Administrative Corps from 1942-1946. He had a great love for Classical music and his love for photography was evident in some great pictures.

**Dr. Leon Horowitz (1925- )**

Leon was a combat infantryman from 1943-1945, in the European Theater of Operations, a POW of the Germans, and had four campaign ribbons. After his Army service, he went to New York University College, graduating Cum Laude, and was Phi Beta Kappa. He went to Medical School at New York University College of Medicine on the GI Bill, graduating in 1952. He Interned at Lennox Hill Hospital from 1952-1953, and then took his

Pediatric Residencies at Bellevue Hospital, NY, from 1953-1954, and at Lenox Hill Hospital, from 1954-1955.

Leon moved to Tulsa and joined Herschel Rubin in practice from 1955 until 1958. He left Tulsa to take an Allergy Fellowship at the Kaiser Foundation Hospital in San Francisco from 1958-1959, and at the University of Oklahoma Allergy Clinic from 1959-1961. He returned to Tulsa to become Tulsa's first Board Certified Pediatric Allergist in 1961. (Leon was the 37<sup>th</sup> physician to be certified by the Board.)

While here in Tulsa, Leon was very active in helping start the Tulsa Pediatric Society and our Pediatric Colloquy. He was able to bring in the famed Dr. Virginia Apgar to be one of our principal speakers at the Colloquy. He was also a major partner in the planning for the Mabee Children's Hospital at Hillcrest. He has been a volunteer physician in a Catholic Mission Clinic in Chichicastanago, Guatemala, was a volunteer in helping in the TCMS Polio campaign, as well as volunteering in doing school physicals, and physicals for kids going to Scout and Salvation Army camps.

Leon had a hobby of collecting masks. His wife, Betsy, was a well-known political activist here in Tulsa, running for Mayor of Tulsa on two occasions. Betsy died in May of 2009 at their retirement home in Southlake, TX. Leon is a Diplomat of the American Board of Pediatrics, American College of Allergists, and had been elected to the Cardiopulmonary Council of the American Heart Association. He retired and moved to Texas in July of 1993.

**Dr. George R. Krietmeyer (1955- )**

George received his MD from Washington University in St. Louis in 1951. He Interned at St. Louis County Hospital from 1951-1952, took his first year of Pediatrics at St. Louis City Hospital from 1952-1953, finished his Pediatric Residency at St. Louis Children's Hospital from 1953-1954. He moved to Tulsa in 1954, joining Dr. Herschel Rubin. This arrangement lasted for about a year after which he became a member of the Glass Nelson Clinic in Tulsa.

Now retired, he and his wife, Virginia, actively volunteer at the Gilcrease Museum of Art, as well as the Oklahoma Aquarium in Jenks.

**Dr. John C. Kramer (1926-2010)**

A graduate of Harvard Medical School, 1950, (at 24 years of age, one of the youngest Medical School graduates at that time), he started a Residency program that consisted of two years in Internal Medicine and one year in Pediatrics at University Hospitals of Cleveland. He was there from 1950-1953. During the summer, there was an outbreak of Polio and he was loaned to Cleveland City Hospital where he helped run a ward of Drinker Respirators (Iron Lungs) for children.

He married his wife, Billie Dunn, a Psychiatric RN, and was then drafted into the Army and eventually became the Chief of Pediatrics at Fort Monroe, VA. He achieved the rank of Captain. After his service, he returned to Cleveland's University Hospitals, Babies and Children's, for his last year of

training from 1955-1956. He was Chief Resident and Teaching Fellow at Case Western Reserve University, Cleveland. He then came to Tulsa and opened his Pediatric office with his father who did general practice and was also a corporate physician for American Airlines.

The next years were busy as Polio continued to be a serious problem and John was working with the respirator patients on the Polio Ward at Hillcrest Hospital. He served eight years as Chairman of the Pediatric Department, and another eight years as the Chair of Pharmacy. He was instrumental in helping Bryce Twitty, Administrator of Hillcrest, get the Mabee Children's Hospital off the ground. Mr. Twitty had obtained about \$8 million from the Mabee Foundation for this project. Several of the younger Pediatricians were very intimately involved with the hospital, and its design included the best ideas from many of the Children's Hospitals that these young physicians had come from. There was a floor for infants, for children with infectious diseases, for adolescents, for non-infectious disorders, and one for children with metabolic problems. Unfortunately, about \$6 million went for x-ray, heating and cooling, and other improvements, leaving only enough for the building and no operating costs. As the census fell, one floor was taken over for Ob, then another by Internal Medicine, and eventually all the floors were taken away, leaving Pediatrics in an entirely different part of the hospital. It was a lovely dream while it lasted! During this time, Dr. Don Pfeiffer, Dr. Hugh Graham, Jr., Dr. King, Dr. Al Brownlee, and several others took some or part of their Pediatric training there.

John and Dr. Don Pfeiffer started the first Child Abuse Program in the state, with the help of Dr. Leo Lowbeer, a Pathologist at Hillcrest. At the time, he and Dr. Pfeiffer were functioning as Hospitalists for Hillcrest, when the specialty wasn't even recognized as such then.

Dr. Kramer's legacy to medicine will probably best be remembered for what he has done for the child with Cystic Fibrosis. The life expectancy for these children before antibiotics and Pulmonologists was about four to six years. The early treatment consisted mainly of having the child lie across the side of the bed while the mother or physical therapist clapped the child's back to loosen the mucous and clear the lungs, the use of pancreatic granules, and antibiotics (to which the bugs quickly became resistant).

John got together with a group consisting of Dr. Terrence Carey, Jackie Reyes (Oklahoma City), Betinna Hilman (Shreveport, LA), and Louay Nassri (Ft. Smith, AR), that met every other month for a long weekend of concentrated study that led to all of them becoming Board Certified in the new Specialty of Pulmonology. I think that he was one of the first Board Certified Pediatric Pulmonologists in the country. Along the way, he became an infectious disease specialist and was instrumental in getting the FDA to make it more feasible for the drug companies to provide data on new drug doses for children when they were introduced. I can remember how excited we were when some of his patients reached adolescence and, as time went on, lived into their 20s and 30s.

John was also an orchid specialist, raising orchids in his two-story greenhouse. He was President of the Orchid Society of Tulsa for a period of time, traveled world-wide as an Accredited Orchid Judge and, in 1991, was the first recipient of the WW Wilson Award of the American Orchid Society. To top it all off, he met his wife, Billie, also an orchid buff, at a judged event.

**Dr. Robert K. Endres (1923- )**

Bob attended the University of Oklahoma Medical School, graduating in 1948. After a year of Internship, he did general practice in Sallisaw, OK, before entering the Army and spending a year in Korea, followed by a year in Japan, from 1951-1953. He then took a Pediatric Residency at St. Louis Children's Hospital from 1953-1955, followed by a year doing research in Pediatric Cardiology Fellowship at St. Louis Children's Hospital.

He moved to Tulsa in 1956 and joined Dr. Dick Russell at Springer Clinic. They were later joined by Drs. Al Brownlee, BJ Maguire, Del Gheen, and Pat Hughes. After Dr. Russell retired, the remaining Pediatricians resigned from Springer Clinic in 1976, forming Children's Clinic of Tulsa. They were then joined by Dr. James Lewis when Dr. Hughes went back to military service.

Bob was asked to chair a Diabetes Education Committee at Saint Francis Hospital in 1974, and in 1980 was asked to take over the Pediatric Section of the Diabetes Center that Dr. Bob Scott was developing at Saint Francis. He continued in this position until his retirement in 1993.

During this time, a summer camp for children with Diabetes, Camp O'Leary (named after the first camp Director, Tom O'Leary), was started in 1974 and, in 1980, when Dr. Don Wilson, Tulsa's first Pediatric Endocrinologist, came to town, started a winter camp for the 14-year-olds and older children with Diabetes, during which time they spent a long weekend of skiing in Colorado or New Mexico.

Bob served as Chairman of the Oklahoma Chapter of the American Academy of Pediatrics for six years, from 1967-1973, and Chairman of the Mass Polio Immunization Campaign of the TCMS, from 1962-1963. He was President of the Staff of Saint Francis in 1963, and was on the Board of Governors of Saint Francis for 20 years.

When he retired from The Saint Francis Diabetes Center in 1993, he joined Dr. Don Wilson doing endocrine disorders and diabetes until Don received a call to the Children's Hospital in Corpus Christie, TX. Bob then spent a few years doing Locum Tenens (with licenses to practice in seven states) until he was asked to teach in the outpatient clinic of the Pediatric Department of the University of Oklahoma Medical School-Tulsa, where he taught until his "final" retirement in 2003.

Bob's wife, Esther, was active as Director of Volunteers for the congregation of First Lutheran Church for ten years, and has also written four devotional books. She also founded both "Lutheran's Reaching Out" (dedicated to helping the developmentally disabled), and First Lutheran's Manna Bowl, feeding Tulsa's growing population of homeless families in the

1980s. Esther was also active in Babies Milk Fund and the Children's Medical Center Auxiliary. She is to be commended for being a mother of our five children, and putting up with me all these years!

**Dr. Irvin B. Braverman (1924-2008)**

Irv was a graduate of the University of Nebraska Medical School, Cum Laude, Class of 1949. He followed that with his Internship at the Wisconsin General Hospital in Madison before entering the Air Force in 1950 where he served as Flight Surgeon during the Korean War with the rank of Captain. After his military duty in 1952, he started a Residency in Pediatrics at The Children's Hospital in Chicago. He met his wife, Sylvia, (a Nebraska girl), in Chicago. They married in 1954 when he finished his Residency and moved to Santa Ana, CA, for a year. He then returned to Chicago to take a Fellowship in Pediatric Cardiology, getting a lot of experience in children with Rheumatic Heart Disease at La Rabida Hospital.

He and his family came to Tulsa in 1958 where he joined Dr. Kishner in doing general Pediatrics and Pediatric Cardiology. He had a congenital heart clinic at St. John Hospital where he read the EKGs and also attended a Rheumatic Fever Heart Disease Clinic at Children's Medical Center with me. We saw up to 20 patients once a month, and also followed children with RHD while they were convalescing at Children's Medical Center. Later, he and Dr. Jose Medina had a Pediatric clinic at Hillcrest.

Irv was active in the teaching program at the University of Oklahoma School of Medicine-Tulsa, giving lectures on congenital heart disease and reading Pediatric EKGs. He was a Clinical Professor of Pediatrics and received the William Gene Klingberg Faculty Award for Excellence in Pediatric Ambulatory Teaching. Irv was one of the first to successfully complete the AMAs Continuing Medical Education Certificate when it was first established.

He gave back to his community by being involved with several organizations, including St. Francis Hospice, Temple Israel's Adopt-A-School, and the Tulsa City-County Library Adult Literacy Program. Irv and his wife, Sylvia, were avid collectors of Inuit (Eskimo) art and eventually donated their entire collection to the Gilcrease Museum of Art.

**Dr. Marilyn Miles (1921- )**

Marilyn graduated from Albany Medical College, New York, in 1950. She was at the University of Michigan in Ann Arbor from 1952-1953, and came to Tulsa in 1958 where she practiced before moving to Georgia in 1960.

**Dr. Harold E. Goldman (1928- )**

Harold attended Tufts for his undergraduate work, graduating from Tufts Medical School in 1954. He Interned at University Hospital in Denver, 1954-1955, did his Pediatric Residency at Boston City Hospital 1955-1957, and took a year in Pediatric Neurology at Children's Medical Center in Boston from 1957-1958. Harold was a Clinical Associate Professor of Pediatric Neurology at Oral Roberts University School of Medicine in 1985-1986. He

was active at the Children's Medical Center and did Neurology consultations throughout eastern Oklahoma.

**Dr. William A. Betts, Jr. (1911-1997)**

A graduate of the University of Texas at Galveston in 1946, William did his Internship and first year of Residency in an army hospital from 1947-1949, before being sent to the Gorgas Hospital in the Canal Zone, Panama. He was a Captain in the Medical Corps.

Bill did his Pediatric Residency at City Hospital in Winston-Salem, NC, from 1949-1950, finishing at St. John in Tulsa, 1950-1951. He practiced Pediatrics in Houston from 1951-1960, then came to Tulsa in 1960 where he practiced until his retirement in 1997. Bill's wife, Alice Marie, was an RN. Bill was a Clinical Instructor in Pediatrics at Baylor while he was in practice in Houston. Before going to medical school, Bill taught Biology in the Texas public school system.

**Dr. James G. Coldwell (1930- )**

Jim attended the University of Oklahoma, class of 1955. His Internship was at Denver General Hospital, with a Residency in Pediatrics at St. Louis Children's Hospital from 1956-1958. In 1965 he took a year Fellowship at Johns Hopkins University School of Medicine on the handicapped child. Jim was a Captain in the Army from 1958-1960, moving to Tulsa in 1961 to become a specialist in Inherited Metabolic Disorders at the Children's Medical Center.

**Dr. John M. Hill (1932- )**

Although born in Memphis, TN, John graduated from The University of Oklahoma Medical School in 1958, doing his Internship and Pediatric Residency at Hillcrest Hospital in Tulsa from 1958-1961. He then entered the Army as a Captain and was stationed at Fort Sill in Lawton, OK, 1961-1963. He returned to Tulsa then and practiced in the Warren Building until 1971.

John decided that Pediatrics was not for him and returned to do a Residency in Pathology at Hillcrest Hospital in Tulsa. He is Board Certified in both Pediatrics and Pathology, and now practices as a Pathologist in McAlester, OK. He is a Senior Member of the Order of DeMolay and Chaplain in the Order of DeMolay.

**Dr. Stephen J. Adelson (1933- )**

After receiving his undergraduate degree from Cornell University, Stephen received his MD from Hahnemann Medical College in Philadelphia, class of 1959. He Interned at Minneapolis General Hospital, then continued with his Pediatric Residency from 1960-1962. He served in the Army at Fort Leonard Wood as a Captain from 1962-1964 after which he came to Tulsa and joined Kishner and Braverman in the practice of Pediatrics. He left that group to form a new group, Utica Park Clinic. Dr. Adelson was Chairman of the Tulsa City-County Board of Health in 1977.

**Dr. Donald R. Pfeifer (1934-2009)**

Don was a graduate of the University of Oklahoma School of Medicine, 1959. He Interned in Oklahoma City and then took his Pediatric Residency at Hillcrest Hospital in Tulsa from 1960-1962.

Don, Dr. Hugh Graham, Jr., and Dr. Don King, were the first to take a Residency at the Mabee Children's Hospital. He was with the USPHS as Lt. Commander, Senior Assistant Surgeon, at the White River, New Mexico Indian Reservation from 1962-1964. While there, Don had to treat an epidemic of Rubeola and, due to the lack of any natural immunity in the Indian tribes, lost six children to the disease.

He then practiced Pediatrics among the natives in Kailua, Hawaii, from 1964-1967, with the Kaiser Foundation. When asked why he left paradise to return to the States, he said that he had "rock fever". He explained that after you have been to a Luau, surfed, seen the volcanoes, and toured the islands, you found that the reality of paradise was that gas was twice as expensive than on the mainland, that you had to cross 4,000 miles of ocean to find a good college, and about 6,000 miles to attend family reunions on holidays.

He returned to the States, to Tulsa, in 1967 and became active at Hillcrest Hospital. He was Chief of Pediatrics in 1975 and, with Cathy Ayub, founded the At-Risk Parent Child Program. Later, that program merged with the Parent Child Center of Tulsa. Don was the first recipient of the Big Step Award in 2004, presented annually by the Parent Child Center. He was very active in their child abuse program and presented many seminars on the subject. He was probably one of Tulsa's first Hospitalists at Hillcrest Hospital.

**Dr. Joel K. Gist (1938- )**

Joel was a native of western Oklahoma. He attended The University of Oklahoma where he received both his undergraduate degree and his Medical Doctorate in 1964. Joel did his Internship and first year of his Pediatric Residency at St. John Hospital in Tulsa from 1964-1965, then finished his Residency at the Children's Medical Center in Dallas from 1966-1967. Joel then joined the services from 1967-1969 as Captain in the US Air Force, after which he came to Tulsa to practice. He was Board Certified in 1969, is a member of the American Academy of Pediatrics, and is a Clinical Professor at The University of Oklahoma-Tulsa, Department of Pediatrics. Joel has three daughters, three grandchildren, and enjoys his work with his church, spending time on the lake, gardening, and cooking.

**Dr. Charles Cooper (1939-2000)**

A native of Brooklyn, NY, he attended medical school at The University of Chicago, graduating in 1964. He took his Internship and two year Residency in Pediatrics at The Children's Hospital in Chicago, with a grant from the Wyeth Corporation. In 1968, he started a Pediatric Cardiology Fellowship at the National Institute of Health in Bethesda. The program moved to The University of California at LaJolla where he completed his training in 1969. During this period, his wife, Betty, a social worker, was

employed by the Lutheran Social Services in Chicago, helping with the placement of children for adoption and foster care. Charles entered the Air Force as a Major and was stationed with the 81<sup>st</sup> Medical Group at Keesler Air Force Base in Biloxi, MS.

Charles came to Tulsa in 1971 and was employed by St. John Hospital as a Pediatric Cardiologist, working with Dr. Wayne Neal. In 1973, he separated from this group and went into private practice, working at both St. John and Saint Francis Hospitals. He, Dr. Jegathesan, Dr. Denslow, and Dr. Miller started the famous "Pediatric Fluid Rounds" first at the Candlewood Club, and later at the Cup Club on 66<sup>th</sup> and Birmingham. The Fluid Rounds celebrated their 21<sup>st</sup> Anniversary in December of 1999.

Charles was one of the first Pediatric Cardiologists in Oklahoma and was a great resource to all of us. He started a support group, Parents of Children with Heart Disease. His cheerful help on our Pediatric heart problems has been greatly missed.

#### **Dr. Hugh Graham, Jr. (1925- )**

Hugh received his undergraduate degree from Harvard, then attended the Pritzker School of Medicine, University of Chicago, graduating in 1959. He obtained his Pediatric training at The University of Oklahoma and at the Mabee Children's Hospital. He then spent two years as a Pediatrician in the US Army, following which he moved to Tulsa to begin practice with his father, Hugh Graham, Sr. He has practiced in Tulsa since that time, with a special interest in Pediatric Allergy.

During his youth, Hugh was an ice skater, ranked third in the United States in singles men, (tenth in the world), and second in the US in pairs, skating with his sister, Margaret Anne, (fifth in the world). His interest in figure skating continued as an adult, serving as a judge at two Winter Olympic Games and as Team Leader for another. He was also President of the US Figure Skating Association from 1986-1989, and was inducted into the US Skating Hall of Fame in 2004. His wife, Jeannie, is an artist who is an owner of a Tulsa art gallery. Hugh and Jeannie have four children and six grandchildren. He has a keen interest in The University of Oklahoma sports, especially OU football to which he and Jeannie have season tickets.

I had the opportunity to see Hugh skate (a Harvard student at the time) at an exhibition in the 50s in Tulsa. It was a memorable exhibition.

#### **Dr. Bernard J. Maguire (1934- )**

A graduate of the University of Kansas in 1956, Bud attended the Medical School at the same University, receiving his MD in 1960. His Internship was at St. Francis Hospital in Wichita, KS, in 1961, and his Pediatric Residency was with the University of Oklahoma in Oklahoma City from 1962-1965. From 1961-1963, Bud served as a Lieutenant in the US Public Health Service in the Coast Guard, stationed in New London, CT. He came to Tulsa in 1965, joining Springer Clinic, later, in 1975, becoming a founding member of Children's Clinic of Tulsa, which became a part of

Warren Clinics in 1994. He then joined The University of Oklahoma, Tulsa Physicians group, as a Clinical Professor in 2001, teaching in the Pediatric Department until his retirement in 2006. He was well known for his knowledge of infectious diseases and the role of antibiotics, which he attributes to his working under Pete Riley during his Residency.

Bud has had an active career in medical matters. He was President of the Saint Francis Medical Staff from 1991-1992, a member of the Saint Francis Hospital Board of Directors from 1986-1994, on the Board of Directors of the Children's Medical Center from 1982-1987, and a member of the Admission Board of the University of Oklahoma Medical School from 1998-2001. He taught in the Pediatric Department, University of Oklahoma-Tulsa, from 1989-2006. During his term as President of the Oklahoma Chapter of the American Academy of Pediatrics from 1987-1990, our Chapter won the Wyeth Honorable Mention Award as Outstanding Chapter of the AAP in 1988 and in 1989.

Bud was also an avid tennis player and is an active golfer. He has found a new hobby in his retirement of writing poetry.

### **The Retired Physician**

*by Bernard J Maguire, MD*

A time to walk, not run,  
you will find more fun.  
A time to write poetry,  
not another script to the pharmacy.

Chance to watch children play,  
not in the sick bay.  
Wonder as you ponder the night sky,  
rather than an MRI.

A waiting room in disarray  
transforms into green fairways.  
Sleepless nights on call,  
changes to visions of gentle rainfall.

Rush to answer the pager's ring,  
now to hear the Meadowlark sing.  
Office paper cascade,  
becomes good books on parade.

Quietly listen, the Spirit will lead,  
find good soil to plant the seed.  
Enjoy each day, follow the sun,  
walk, not run.

**Dr. James A Murray (1936- )**

A graduate of St. Louis University School of Medicine, St. Louis, MO, in 1962, James did his residencies in Pediatrics at the National Naval Medical Center in Bethesda, MD, 1964-1966, and in Allergy at Baylor University School of Medicine and the McGovern Allergy Clinic from 1968 to 1970. He served in the US Navy from 1962 to 1968 as a Lt. Commander.

Dr. Murray came to Tulsa in 1970. His professional memberships include the American College of Allergy & Immunology, American Academy of Allergy & Immunology, and the Southwest Allergy Forum.

**Dr. Douglas W. Stewart (1960- )**

Doug was born in Tulsa and raised in Skiatook. He is a graduate of the Oklahoma College of Osteopathic Medicine and Surgery, class of 1985, and has the distinction of becoming one of the first Osteopathic physicians to join the faculty of the University of Oklahoma Medical School-Tulsa. He took his Pediatric Residency at OOH, completing his training in 1988 under Dr. G. Bovasso, DO, Dr. W. Kennedy, DO, and Dr. Stanley Grogg, DO. His neonatology was under Dr. James Marshall, DO. This was followed by rotations with Dr. Don Wilson, MD (Endocrinology), Dr. Charlie Cooper, MD (Pediatric Cardiology), and completed rotations with Dr. John Udall, MD, Ph.D. (Gastrointestinal), and Dr. Russell Snyder, MD (Child Neurology) at the University of New Mexico, Albuquerque.

Following his Pediatric training, he entered private practice with Dr. Bovasso in Tulsa for 18 years. Recognizing that he was a “public health person,” he left private practice and obtained a Master of Public Health degree at the OU Health Sciences Center in Tulsa while working with Dr. D’Souza at Hissom Memorial Center, and then with the Tulsa City-County Health Department (TCCHD) as a consultant to the PNP program of TCCHD. During this time, he also worked as the TCCHD Clinics in Collinsville, Sand Springs, Broken Arrow, Bixby, and Jenks.

Fourteen months later, he was recruited by OU-Tulsa to join them full time in order to help Dr. Ed Tomsovic, MD, operate a specialty medical home for people with severe developmental disabilities, The Developmental Support Program. He joined the program with the proviso that he could continue with the TCCHD. The Developmental Support Program closed in 1993 when the Federal Judge in the Homeward Bound case ordered DHS to stop supporting a segregated service system. Everyone at the Program lost their job (including Dr. Tomsovic), except for Dr. Stewart. Dr. Plunket kept him on and again he hired out his services through OU-Tulsa to DHS-DDSD Area II as a medical administrator on a half-time basis. He continued to serve TCCHD until 1996. In 1997, DHS-DDSD decided they wanted a full-time medical administrator and Dr. Stewart was replaced by Dr. Liphard D’Souza.

Dr. Stewart completed his MPH (Master of Public Health) in 1993 and has been a mainstay of the OU Pediatric Clinic ever since. His community services have included terms with the following governing boards – Oklahoma Chapter of the National Association of Sickle Cell Disease, Project

Get-Together, Moton Comprehensive Health Services, Inc., and currently represents the OSMA as a board member on the Board of Medico Legal Investigations. He is also an alternate delegate from Tulsa County Medical Society to the OSMA House of Delegates.

Doug's wife, Lori, is also a graduate of Oklahoma College of Osteopathic Medicine and Surgery, finishing in 1988, after which she obtained an MPH with an emphasis on Health Policy. She teaches part time at OSU-College of Medicine, Clinical Problem Solving and Principles of Clinical Medicine.

When asked about changes in the practice of medicine and the future of medicine, he felt the biggest changes are in the areas that overlap with public health – poor nutrition, lack of vigorous physical activity (outdoor play), obesity, decrease in active transportation (human powered), and increase in single-parent households. Substance abuse was also listed as adversely affecting families. On the positive side, the number of effective vaccinations has more than doubled during his career and we no longer see invasive Hib disease. Doug also feels very strongly that the United States must change the way we deliver, organize and finance healthcare.

**Dr. Albert Walter Brownlee (1932- )**

Al served in the US Army from 1952-1954. His BS was obtained at Central State College in Edmond, OK, in 1957, and his MD from The University of Chicago School of Medicine in 1969. His Internship was at the Mabee Children's Hospital in Tulsa after which he returned to his hometown of Guthrie, OK, and entered general practice from 1963-1968. He then did his Pediatric Residency, with a special interest in Pediatric Allergy, at Children's Hospital in Oklahoma City with The University of Oklahoma from 1969-1971.

Al joined Dr's. Dick Russell, Bud (BJ) Maguire, and Bob Endres at Springer Clinic. In 1975, we separated from Springer Clinic to become Children's Clinic of Tulsa. By that time, Al had limited his practice to Pediatric Allergy.

He retired in 2002 from full time practice to doing part-time Allergy at Eastern Oklahoma ENT Clinic through 2004. He and his wife, Gerry, have three sons, one of whom, Steve Brownlee, MD, is an ENT specialist with the Eastern Oklahoma ENT Clinic. They enjoy their vacation home on the lake, and at one time Al was an avid sailing enthusiast. At this time, he concentrates on his golf game and his grandchildren. Al is a member of the American Academy of Pediatrics, American Academy of Allergy, American College of Allergy, and the Western Allergy Society. Although color blind, Al could see to the heart of most medical problems very clearly.

**Dr. Leroy Cecil Mims (1932-1991)**

A graduate of the Medical College of Georgia in Augusta, (1957), he completed his Internship at Greenville General Hospital in Greenville, SC, (1957-1958), and did his Pediatric Residency back at the Medical College of Georgia, Talmadge Memorial Hospital, from 1959-1960. He became a

Lieutenant in the Naval Medical Corp, and was the Chief of Pediatrics at the US Naval Station Hospital, Port Lyautey, Morocco, Africa, from 1960-1963. He practiced general Pediatrics in Camden, SC, until 1966, and again in Charleston, South Carolina until 1968. He did a year as a Research Fellow in Neonatology at The University of Oklahoma in Oklahoma City, from 1968-1969, followed by a stint as a Research Fellow in Neonatology and as a Special Trainee in Lipid Metabolism of the Newborn at the Laboratory of Nutrition and Metabolism at St. Jude Children's Research Hospital in Memphis, TN, from 1969-1971.

Roy came to Tulsa to become Director of the Regional Newborn Center and Developer and Director of Perinatal Research of the Laboratory Division of the William K. Warren Medical Research Center. He and Dr. RV Kotas did basic research on newborns with a dozen publications, and that many abstracts during his tenure here from 1971-1975. They also produced an educational series for Perinatal Nurses, produced by Health Media Corporation in Tulsa in 1973. They had already produced four educational audiovisual series.

At one point, while in Tulsa, he became the Director of the Newborn Center at St. John Hospital. He left Tulsa in 1976 for a teaching position at The University of Arkansas in Little Rock, where he was an Associate Professor in Pediatrics. He became an Associate Professor of Pediatrics and Director of the Neonatal-Perinatal Fellowship Training Program at The Medical College of Georgia, in Augusta, the next year, 1977, where he remained until April of 1990 when he moved to Meridian, MS, to set up a Level II Neonatal Intensive Care Unit at the Rush Foundation Hospital. Roy was certified by the American Board of Pediatrics and the American Board of Neonatal-Perinatal Medicine.

**Dr. J. Patrick Hughes (1940- )**

Pat received his BS from Notre Dame in 1962, then attended The University of Oklahoma Medical School, graduating in 1966. (AOA) He entered the Navy and did his Internship and Pediatric Residency at the US Naval Hospital in Chelsea, Boston, from 1967 to 1968. He finished his Pediatric training at the Boston Floating Hospital, Tufts, New England Medical Center from 1968 to 1969. He was at the United States Naval Hospital at Camp Pendleton from 1969-1972, and then came to Tulsa and joined the Pediatric Department at Springer Clinic in 1972. A year later, Pat returned to Vista, CA, where he practiced Pediatrics from 1973-1976 after which he once again returned to Tulsa and joined the Tulsa Pediatric Clinic.

**Dr. Jere D. Cravens (1942- )**

Jere received his BS from Washington University in St. Louis, MO, and Lee University, Cleveland, TN, then his MD back at Washington University in St. Louis, class of 1968. His Internship and Pediatric Residency were done at the University of Colorado Medical Center in Denver from 1968 to 1971. He then spent two years as a Major in the Army at the US Army Hospital at Fort Gordon, GA. Jere came to Tulsa in 1973 and has been certified (and

recertified) by the American Board of Pediatrics. He has been in solo practice since that time, sharing time off, and helping to cover for each other with Dr's. Moncada and Bharani.

### **Dr. Paul McQuillan**

Paul is another graduate of the Tulsa Medical Education Foundation, University of Oklahoma Pediatric Residency program who later joined Dr. Ray Harris in practice in Bartlesville.

### **Dr. Raymond Harris**

Ray graduated from the University of Arkansas in June of 1973 and came to Tulsa to do his Pediatric Internship at St. John Hospital, then continuing his Pediatric Residency with the Tulsa Medical Education Foundation, University of Oklahoma. Ray recalls making rounds with Dr. Bob Kotas in the newborn nursery and being introduced to a pleasant white-haired lady who he assumed was a grandmother visiting a grandchild. She turned out to be Dr. Mary Ellen Avery, the Chair of the Department of Pediatrics at Harvard Medical School who, literally, wrote the book on Neonatology. She was presenting a seminar on Neonatology here in town and Ray remembers she coveted the facilities and equipment at the Saint Francis nursery.

Ray has seen a lot of changes in his practice over the past 34 years. Primarily after-hours telephone triage by nurses has "saved my life," he often says. He also feels that Hospitalists and electronic records are big, but immunizations, especially H Flu and Pneumococcal, the insulin pump, and evidence-based medicine are some of the biggest changes during his career.

Ray hopes that our Pediatric Residency will continue to turn out quality physicians who continue to be passionate about the care of our children and the practice of medicine in general. When he and Paul McQuillan finished their Pediatric Residency here in Tulsa, they opened the first Pediatric office in Bartlesville.

### **Dr. James S. Lewis**

Jim obtained his BS from Ouachita Baptist University, Arkadelphia, AR, in 1965. He graduated from the University of Arkansas School of Medicine in 1969 and did a year of rotating Residency at St. John Hospital in Tulsa from 1969-1970. This was followed by two years with the Tulsa Pediatric Trust from 1972-1974. He was a Captain in the US Army from 1970-1972.

He joined the Children's Clinic of Tulsa where he practiced for several years before leaving for Searcy, AR. Jim was married to Peggy Jo and they had two children, Susan and James.

### **Dr. Subramania Jegathesan (1939 - )**

Dr. Jegathesan received his MD from the Stanley Medical College of Madras University in Madras, India, in 1963. He did his straight surgical Internship at Mt. Sinai Hospital in Chicago from 1964-1965, (where he

received the Abbie Norman Price Award as outstanding Surgical Resident of the year), then a Pediatric Surgical Internship at the Santa Rosa Medical Center, Milton, FL, from 1970-1972. This was followed by a year at Driscoll Childrens Hospital after which he did Pediatric Surgery in San Antonio, TX, from 1972-1974. He was Board Certified by the American Board of Surgery in 1970 and the American Board of Pediatric Surgery in 1975.

When “Dr. J” first came to Tulsa in 1974, he encountered a little resistance from some of the local surgeons who questioned his training and skill, and surgery time was a little hard to come by. However, he brought to Tulsa a skill that was soon well recognized and greatly needed.

As an aside, one of our Pediatric residents was examining a patient that “Dr. J” had operated on and was amazed that he was able to remove the appendix through the small 1cm incision. I explained that it was because he was from India. The resident wanted to know what that had to do with it. I went on to explain that after “Dr. J” made the incision, he removed his face mask, took out a flute, and played a tune. When the appendix raised its head through the incision, “Dr. J” simply ligated the appendix and removed the inflamed member. (Not everyone believes everything that I tell them.)

#### **Dr. Daniel C. Plunket (1929-2008)**

Dan received his Bachelors from Emory University in Atlanta, GA, at 19 years of age, and his MD from Emory at the age of 23, in 1952. His Internship was at the Medical College of Virginia Hospital in Richmond, VA, from 1952-1953, followed by his Pediatric Residency at the same place from 1953-1955. He joined the Army and during his military career was Chief of Pediatrics at Tripler Army Medical Center in Honolulu, Hawaii, from 1958-1959. He took a Fellowship in Pediatric Hematology and Oncology from 1962-1964, becoming one of the first to be board certified in both.

The last ten years of his military career, in addition to being Chief of Pediatrics, he was also Director of the Pediatric Residency Program at Fitzsimons Army Medical Center in Denver. He was a Pediatric consultant to the US Surgeon General from 1973-1975 before retiring as a full Colonel in 1975, at which time he came to Tulsa. Those of us on the Search Committee that interviewed Dr. Plunket for the position of our Chief of Pediatrics for the University of Oklahoma School of Medicine-Tulsa, were looking for a man with a background of general Pediatrics, a specialty, teaching experience, and an ability to work with the community of Pediatricians in a true collegial “Town Gown” relationship. He certainly fulfilled every one of those expectations and more.

During his time in Tulsa, Dan was Senior Associate Dean of the Office of Clinical Affairs for the University of Oklahoma College of Medicine for seven years and was a former director of the school’s Residency program. He also spent a year as interim dean and as acting dean for the college. His Pediatric Residency program was excellent and he brought into the Tulsa area many of today’s practicing Pediatricians.

Dan was Tulsa's first Pediatric Oncologist and treated area children with Leukemia and other forms of cancer as well as serving as an excellent consultant on all problems of a hematological nature. He was credited as one of the founders of the local Ronald McDonald House which provides housing and support for families of sick children and, in 2001, was inducted into the Ronald McDonald Charities Hall of Fame because of the tremendous amount of work that he did to bring a Ronald McDonald House to Tulsa.

In 1991, he received the University of Oklahoma's Edgar W. Young Lifetime Achievement Award for long-term dedication to medical education.

Dr. Plunket was a member of many community advisory boards, committees, and task forces, including those for the Tulsa Chapter of the American Red Cross, March of Dimes Foundation, Community Health Net, the Community Health Foundation, Planned Parenthood, HIV Resource Consortium, Oklahoma Sickle Cell Anemia Research Foundation, Tulsa County Medical Society, Mayor's Task Force on Domestic Violence, and the Tulsa Community AIDS Program. He was a constant champion of Tulsa's need for a Children's Hospital.

He retired in 2000 after concerns about the safety of patients in a local skin cancer study led Federal health officials to shut down all government-sponsored clinical research at the University of Oklahoma's College of Medicine-Tulsa while he was Chairman of the Institutional Review Board. However, he returned to mentor in the Pediatric Outpatient Department of the Medical School.

Dan and his wife, Bari, were hosts to many get-togethers with the medical students and Residents, as well as his Clinical Faculty, both full time and local Pediatricians. He was a great tennis player with a reach that went from sideline to sideline, and only once was he called for a foot fault!

#### **Dr. Robert W. Block (1943- )**

Bob came to Tulsa in 1975. He is a graduate of the University of Pennsylvania, class of 1969, with an Internship at the Children's Hospital of Philadelphia from 1969-1979, and a Pediatric Residency at the same place from 1970-1972. He joined the Army, achieving the rank of Major by the time of his discharge in 1975, during which time he received the Army Commendation Medal. He was Chief of Department of Pediatrics at the Munson Army Hospital at Ft. Leavenworth, KS.

He came to Tulsa at the instigation of Dr. Dan Plunket to join the Pediatric teaching staff of the newly formed Pediatric Department of the University of Oklahoma-Tulsa. He was awarded the University of Oklahoma Staunton Young "Master Teachers Award," is the recipient of the Aesculapian Outstanding Teacher of the Year on more than one occasion, the 1991 Award of Excellence by the Oklahoma Chapter of the National Association of Pediatric Nurses Association, the 1981 Maurice Walraven Award by the Oklahoma Association of Adults and Childrens Learning Disorders, and many other accommodations. I don't think that there has ever been a better advocate for children than Dr. Block.

He has worn many hats, including Past President of the Oklahoma Chapter of the American Academy of Pediatrics in 1990, the Medical Director of the Children's Justice Center, is on the Governor's Advisory Commission on Children and Youth and Families, and on October 29, 1996, was appointed to the Daniel C. Plunket Chair, Department of Pediatrics, at the University of Oklahoma College of Medicine-Tulsa. Dr. Block was also elected President of the American Academy of Pediatrics serving in this capacity from 2011-2012.

Dr. Block is on many local and national advisory committees, is the member of many professional and honorary societies, and has won numerous awards and honors. He is an excellent tennis player, as well, (he did not call the foot fault on Dr. Plunket!), and a Master Wood Carver. His wood carvings are works of art and have won many blue ribbons.

**Dr. William A. Geffin (1945- )**

Born at St. John Hospital in Tulsa, Bill's Pediatrician was Dr. KC Reese. While getting his early education here, he later received his BA in Biology at Rice University, Houston, in 1967, and his MD from the University of Texas, Southwestern Medical School, Dallas, in 1971. He did his Pediatric Residency and a Fellowship in Ambulatory Pediatrics at St. Louis Children's Hospital from 1971 to 1975, before returning to Tulsa and joining Dr. Stephen Adelson in 1975. They formed Tulsa Youth Clinic and later merged with other practices to become Utica Park Clinic.

Always interested in teaching, Bill was involved early on with the educational program in the medical school both here in Tulsa and in Oklahoma City. He became a Clinical Professor and eventually left Utica Park Clinic to become a member of the faculty at the University of Oklahoma-Tulsa at what is now called the Oklahoma School of Community Medicine (OSOCM). At the time of this writing, he is the Director of OSOCM Pediatric Clinic.

Bill has a wide range of interests in all things medical. He has a special interest in medical politics and history. He has been active in the Tulsa County Medical Society, the Ethics Committee, Board of Censors, Council on Medical Education, Board of Trustees, and the Grievance Committee. He was elected the President in 1998 and is currently the Chair of the Tulsa County Medical Society Foundation Board.

Community involvement is also extensive as reflected by his membership over the years on numerous boards of organizations that involve children and his active presence on the Tulsa Undergraduate Research Challenge (TURC) Fellows Advisory Board of the University of Tulsa since 1998. He has several publications and has been involved in clinical research for several years.

Bill sites the addition of NICUs and PICUs, Hib and other vaccines, Rocephen, and improved Medicaid reimbursements as a few of the changes of greatest importance to Pediatrics during his career. In addition, he applauds new insights offered by genetics and neuroscience, especially new understanding of epigenetics and the effects of early experiences and other environmental influences on later health and brain development.

### **Dr. Christopher Gifford**

Chris came to Tulsa to join Springer Clinic in 1976. He was a graduate of Creighton University School of Medicine in Omaha, NE, in 1967. Following an internship at the University of Kansas Medical Center, he then completed a Pediatric Residency from 1968-1972, and for the next two years, practiced Pediatrics. After this, he did a fellowship in Allergy & Immunology, 1974-1976, and then moved to Tulsa. Dr. Gifford has a membership in the American Academy of Pediatrics, American Academy of Allergy & Immunology, the American College of Allergy & Immunology, and the Oklahoma Allergy Society.

### **Dr. Edward Osborn (1943- )**

Ed graduated 1973 from the University of Oklahoma School of Medicine. He did one year of his Residency at OU, then completed his Pediatric Residency at the Children's Hospital of the King's Daughters in Norfolk, VA, 1974-1976. He and his wife were looking for a rural area with proximity to a good metropolitan city with good medical services, and a classmate, Randy Rauh, MD, having just completed a Residency in OB/Gyn, talked him into coming to Okmulgee. He felt the location had its pluses and minuses, but overall a positive experience for his family. He lives on 16 acres of woods across from the hospital and can walk to work in five minutes.

Of all the changes in Pediatrics, Ed feels that the vaccine for H Influenza Type B has produced one of the most dramatic changes in his Practice. He recalls that in the 70s and 80s, he averaged a child a month in the hospital with Hib Meningitis or Epiglottitis. Since the introduction of the vaccine, he has not seen a case since. He, too, has seen the swing from inpatient care to outpatient care, and has welcomed the freedom from a telephone line to wireless communication. The nurses for triage on the telephone after hours, the association with Naila Paul, MD, Noel Gattenby, DO, and Diane Cockburn, CPNP, all helped reduce his work day from over 60 hours per week to the point where 40 hours seems like a holiday.

Some of the boons to Pediatric practice have been the computer for online information gathering, the pulse oximeter, the wireless telephone, the availability of intravenous infusion pumps, the ready access of reliable and skilled patient transport to a higher level of care, and the better availability of sub-specialists. (Ed recalls the emergency transport of neonates as being difficult having to transport infants in a battery-powered isolette in the back of a low-headroom ambulance.

### **Dr. Suresh Bharani (1952- )**

A graduate of Hahara Sayajurao Medical College, Barado University, India, class of 1976, Suresh immigrated to the United States that same year because he felt he could practice a better quality of medicine here with better laboratory and radiology back-up than they had in India at that time. He did his internship at the Henry Ford Hospital in Detroit, then a Pediatric

Residency at the Children's Hospital of Michigan, also in Detroit from 1978-1980. He came to Tulsa in 1981, establishing a solo practice in Broken Arrow. When we discussed the changes in Pediatrics since he started, he noted that in the early days, "you were a 24-hour working machine." Little or no relief. He feels that the use of triage nurses who follow Barton Schmidt's protocols, the establishment of the Pediatric Minor Emergency Center at Saint Francis Hospital, and the use of Hospitalists (pioneered, he believes, by Dr. Jere Cravins), the life of the physician became much better. His only question was, "do we have better patient care now?"

Dr. Bharani's lovely wife, Nirmala, passed away in September of 2005. He has a daughter, Despa, and a son, Anup.

### **Dr. Donald P Wilson (1949 - )**

A native of Newton, MS, Don attended the University of Mississippi and received his BS in 1970. His MD was also obtained at the Medical School of Mississippi in Jackson in 1974, graduating in the upper 10% of his class and AOA. He did his internship at Baylor from 1974-1975, and a Residency in Pediatrics there from 1975-1977. He was Chief Pediatric Resident at the Texas Children's Hospital-Baylor from 1977-1978, after which he did a Fellowship in Pediatric Endocrinology from 1978-1980. He then came to Tulsa, joining Dr. James Coldwell at Children's Medical Center, specializing in Pediatric Endocrinology.

While in Tulsa, Don's fertile mind thought up many research projects, including "The Poor Man's Insulin Pump," and brought to Tulsa the knowledge of how to use an Insulin Pump in our children with Type I Diabetes. He was Tulsa's first Pediatric Endocrinologist and lived up to Dr. Ralph Feigin's(\*) assessment that he "*was one of the finest Pediatricians we have ever had in our training program and that he would be a credit to any community in which he chose to work.*"

One of Dr. Wilson's ideas was to develop a program aimed at the adolescent with Type I Diabetes...Winter Camp O'Leary. For the Type I Diabetic child, 14 years old through high school, it meant spending a long weekend at Red River, New Mexico, or Winter Park, Colorado, skiing. The program was very successful. The kids learned to ski, but they also learned how to reduce their insulin doses so that they would not have insulin reactions on the slopes. They also learned to look after their own Diabetes while away from their parents, learned about their diets and, by being with other kids with Type I Diabetes, learned that they weren't alone.

Don has been keynote speaker at many conferences on Diabetes and other endocrine disorders, an Associate Editor of Diabetes Forecast, and has a long CV of articles and speeches to his credit. He left Tulsa to become the Medical Director of Driscoll Children's Hospital in Corpus Christi, TX, in 1992. His approach to medicine and children encouraged Dr. David Jelley to take a Pediatric Endocrinology Fellowship in Denver, CO, after completing his Pediatric Residency. He then came to Tulsa and very capably filled the vacancy that was left when Don went to Texas.

*(\*) Dr. Feigin was Professor and Chair of Pediatrics at Children's Hospital-Houston, & author of "Pediatric Infectious Diseases."*

**Dr. Stanley E. Grogg**

Raised in Ohio, Stan attended the Kirksville College of Osteopathic Medicine obtaining his DO in 1971. He did his Internship at the Still Osteopathic Hospital in Jefferson City, MO, and his Pediatric Residency at the Oklahoma Osteopathic Hospital from 1972-1974. He is certified by the American Board of Osteopathic Pediatricians, and is a member of the American Academy of Pediatrics, serving on the Section of Child Abuse, the Section on International Health, and the Section on Osteopathic Pediatricians. He was president of the Oklahoma Osteopathic Association from 1988-1989. He was in Pediatric practice with Dr. John Rutherford before he became so involved with the School of Osteopathic Medicine. He became a member of the Saint Francis Hospital staff in 1985 and since then has served on the staff of the Oklahoma Regional Hospital, Hillcrest Hospital, Children's Medical Center, and St. John Hospital. He has been Interim Dean and President of the Oklahoma State University Center for Health Sciences, a Professor of Pediatrics with many honors and accomplishments, and his CV is long and interesting. He and his wife, Barbara, have three sons.

**Dr. Emil Stratton**

Emil was one of the first Pediatricians in eastern Oklahoma, settling down in Muskogee. He was well known and brought a needed skill in the care of the Newborn and Pediatrics in general. I was unable to get all the details of his contributions and background and would like to add them at a later date. (The same goes for his son, Dr. Michael Stratton, below.)

**Dr. Michael Stratton**

Michael followed his dad in practice in Muskogee, and is in practice there at this time.

**Dr. Terrence L. Carey (1950- )**

Born in Johannesburg, South Africa, and a graduate of the University of Witwaterstrand Medical School (Johannesburg) in 1973, Terrence completed a residency in Pediatrics at Mayo Graduate School of Medicine in 1981, and a Fellowship in Pediatric Allergy at Mayo Graduate School of Medicine in 1984. He then came to Tulsa to practice Pediatric Allergy. His professional organization memberships include the American Academy of Pediatrics, American College of Allergy, and the American Academy of Allergy and Immunology.

**Dr. Rick Irwin**

Rick originally planned a career in music as a concert pianist. Later, he changed to a career in teaching and received his BS from the University of Oklahoma in 1975. However, he found that medicine was more interesting

and continued his studies along that line, getting his MD from the University of Oklahoma in 1979. He then entered the Pediatric program at the University of Oklahoma Medical College-Tulsa, from 1980-1982.

Rick developed an interest in Developmental Pediatrics and, with Dr. Susan Ferrell as his Fellowship Director, continued in Developmental Pediatrics from 1982-1984, completing his studies then at Johns Hopkins in Baltimore, MD. He then returned to Tulsa and joined Dr. Ferrell in establishing a private practice of Developmental Pediatrics, Child/Adolescent and Educational Psychology, Occupational and Physical Therapy, Speech Language Therapy, and Social Work Services. Dr. Ferrell moved on to Kansas City in 1985, and Dr. Irwin joined forces with two co-workers/psychologists, Julie Powell Thomas, PhD, and Mark Sadler, PhD.

**Dr. Wendy Barnes McConnell (1951- )**

Wendy did her first two years of medical school at the Kansas University Medical Center in Kansas City, then finished with her MD at Eastern Virginia Medical School in Norfolk, VA, in 1976. She obtained her Pediatric training in Tulsa, finishing in 1979 and was Board Certified in 1987.

Wendy was on the faculty of the University of Oklahoma School of Medicine and did some Locum Tenens from 1980-1987. In 1988, she and her family moved to Amsterdam and established the Cross Roads International Church which continues to this day. She also founded the Abigail House Foundation that provides support for American Missionaries in Europe. They returned to Tulsa in 1995 and Wendy joined the Warren Clinics where she is currently serving as Chair, and also practices Pediatrics in west Tulsa.

Wendy enjoys the flute, travel, cooking, and time with her grandchildren. She, too, has observed some changes in our society in the number of mothers who work and who have their children in day care centers. She feels that the development of HIB, Prevnar (Pneumococcal vaccine), and the vaccine for the Rotaviruses has made a big difference in her practice. When asked about the future of Pediatrics, she feels that the PNP will be doing most of the "Well Child" check-ups and the Pediatrician will be seeing the sick kids. She also noted the change away from admitting and caring for sick kids in the hospitals, and the move to the use of Hospitalists.

**Dr. Gwendolyn L. Gibson (1960- )**

Gwen, a native of Roswell, NM, received her BS in Biology from the State University of New Mexico in Las Cruces in 1982. She then obtained her MD from the University of Oklahoma School of Medicine, class of 1986, completing her Pediatric Internship and Residency in Pediatrics at the University of Oklahoma-Tulsa, followed by a Fellowship in Child Abuse. She became Board Certified in 1989 and is a member of the American Medical Association, American Academy of Pediatrics, AMWA, and APSAC. After her Fellowship, she joined the faculty of the medical school here in Tulsa and worked with our Pediatric residents in training and at the Justice Center, creating a standard by which all such organizations are measured by.

### **Dr. Dawn Mayberry, DO**

Dawn received her BS from Oklahoma State University in 1983, obtaining her Doctor of Osteopathic Medicine from Oklahoma State University College of Osteopathic Medicine in 1987. She Interned with the Tulsa Regional Medical Center from 1987-1988, after which she did her Pediatric Residency at Baylor College of Medicine, Houston, TX, from 1988-1991. She came to Tulsa at that time to join the Utica Park Clinic and worked with them until she started her own group, South Tulsa Pediatrics, which now includes Dr. Jerry Freed, Dr. Christine Narrin, and Trish Farmer, PNP.

Dawn received her Board Certification as a Fellow of the American Academy of Pediatrics in 1991 and was re-certified in 2006. Her interest in the overall picture of medicine is exemplified by her additional professional activities including, Board of Censors, Tulsa County Medical Society in 2009; Board of Directors, Saint Francis Children's Hospital Foundation; Adjunct Faculty, Oklahoma State University College of Osteopathic Medicine from 2006 to present; Board of Directors, Hillcrest Medical Group from 2000-2003; President of the Tulsa Coalition for Children's Health, 2001-2007; Board of Directors, Hillcrest Medical Center PHO 1997-1999; Chief of Pediatric Section, Hillcrest Medical Center 1995-1997; Affiliate Medical Advisory Board, Planned Parenthood, 1993-2007; and Clinical Professional Staff, University of Oklahoma College of Medicine, 1991 to present. In addition, Dawn has worked tirelessly to push for a Children's Hospital here in Tulsa.

She has been married to Brit since 1993, and has a son and a daughter.

When asked to give her thoughts on Pediatrics in Tulsa today, her response was as follows:

*"I believe our biggest current challenges are recruitment of Pediatric Sub-Specialists. Our community is the size that is difficult to support more than one or two of our specialists, but then call becomes such a huge burden. It seems that Saint Francis has taken the lead to recruit the sub-specialists as opposed to our academic centers, OU and OSU. I believe that once the three entities can find a vehicle to work together towards recruitment, we will be more successful. It would also enhance the Pediatric training to have more specialists here. As the private Pediatricians have moved out of the hospital, we depend on our Hospitalists and Neonatologists more. This has created problems of continuity of care and effective communication between caretakers. This is an ongoing project. Over all, the changes in our community over the last 18 years I have been in practice are very positive and amazing. Tulsa has such a supportive community. We need to continue to improve the status quo and ask ourselves if we are doing the best job we can."*

## **Medical Care**

The Pediatric training programs during this time were concerned with making the Pediatrician a well-rounded specialist in everything. The

Pediatrician was expected to not only take care of the normal newborn, but the premature baby, the child with Erythroblastosis, Hemorrhagic Disease, and recognize Congenital Heart Disease. They were expected to take care of all infectious diseases, including Meningitis, Osteomyelitis, Pneumonia, and Encephalitis, as well as the routine Otitis Media, Tonsillitis, and routine URIs. In other words, they were trained as Hospitalists and Neonatologists. Diabetes was a routine problem, as well as taking care of the child with Diabetic Ketoacidosis. Cystic Fibrosis, Amyotonias, Cerebral Palsy, Mental Retardation, Child Abuse, Asthma, and Allergies.

There were no ER Specialists, and each hospital had a nurse triage team that saw each patient that came to the emergency room, then called his or her personal physician, or called the physician on-call for that particular problem. Everyone took his or her turn on being on-call at the hospital where they had privileges. The Pediatrician could do “cut-downs” (the forerunner of the Pic Lines) for IV fluids, LPs, and draw blood samples from a femoral vein. They could also give blood transfusions in a scalp vein in a newborn, and at this time, could do exchange transfusions using an umbilical veing. The Pediatrician, or someone in their group, was available all day, every day, year-around for phone calls or house calls or visits to the emergency room.

#### **PEDIATRIC TRAINING PROGRAMS**

The better the Residency, the less they paid Residents. At St. Louis Children’s Hospital, and other major training institutions, the Interns got \$10.00 a month, first year Residents got \$25.00 a month, and third year Residents got all of \$50.00 a month. A Fellow in Cardiology got the grand sum of \$300.00 a month. This stipend was considered “cigarette money.” The thinking back then was that *they are there as students and should have been paying tuition rather than receiving a salary*. Many a Resident (and his or her spouse) sold blood at \$25.00 a pint in order to make ends meet. Often, the Residents got their meals at the hospital and, once a week, received an extra meal ticket so the entire family could eat in the hospital cafeteria. You would load up two trays with plates of food and have a feast!

Interns were expected to be on the floor every other night during the first year, every third night during the second year, and every fourth night their final year. The Fellows were expected to be on-call or available at all times. In some institutions, the Interns did their own cultures, CBC, urine analyses, and simple blood chemistries, (blood sugar, CO<sub>2</sub>, etc.), after the technicians left for the day at 5:00 p.m. The better Pediatric Training Hospitals had close to a 100% autopsy record and all the Residents were expected to attend the autopsy of their patients.

Most major Children’s Hospitals had similar pay scales and routines. CPCs (Clinical Pathological Conferences) were held about once a month and everyone was expected to attend. A second or third year Resident was expected to present the case and discuss the Differential Diagnosis. The Pathologist would then give the final diagnosis and autopsy findings, followed by a discussion of the case.

### **CHANGES IN THE PRACTICE OF PEDIATRICS**

After-hour phone calls were either taken by the individual physician or his answering service who would take the call then track down the physician or wait for him or her to call in and pick up their messages. There were, of course, no cell phones. Children seen “after hours” were either seen on a house call or in the emergency room. The Pediatrician handled most minor lacerations and injuries, calling a surgeon only if the damage was more than he could handle. This made for some mighty long days.

The need for a specialist in the emergency room developed with the explosion of new hospitals encouraged by the Hill-Burton Act passed by Congress after the war to encourage small towns and cities to build more hospitals. The larger hospitals hired full time emergency room physicians and with this came the abuse of the emergency room by patients using the ER as a primary source of medical care, especially with the “medical indigent” and, subsequently, with some emergency room physicians refusing to treat patients without insurance or funds. As a result, in 1986, Congress passed the Federal Emergency Treatment and Active Labor Act requiring every emergency room to provide a minimal level of care to all patients, regardless of their ability to pay. The natural consequence of this Act made every emergency room the source of after-hours care for just about everybody. In May of 2003, an American Medical Association study revealed that emergency room physicians provided \$183,300.00 (on average) of uncompensated care due to this Act. Keep in mind, that Congress did not provide funds to compensate for this care. If the patient presenting at an emergency room needed special care that the hospital was unable to provide, their ER Physician was expected to stabilize the patient before transferring him or her to another hospital.

It was common for the practicing Pediatrician to donate his time to doing school physicals in the Fall of each year. (It was difficult to deny the request to help from Dr. Marcella Steele, Dr. Homer Ruprecht’s wife, and the Director of the School Health Program at the time.) In addition, at the end of the school year, the Pediatrician did pre-camp physicals for the Salvation Army, Boy and Girl Scouts, and the Camp Fire Girls.

The Pediatricians coming to Tulsa from the 1940s to the 1970s saw many changes in the way they practiced Pediatrics and the conditions and problems that they encountered. The approach to the premature and the newborn infant began to take on a much more scientific approach; certainly more aggressive. There was a massive influx of new antibiotics, new vaccines, and an active approach to Leukemia and Cystic Fibrosis, as well as Diabetes. Surgical and anesthesia advances offered more hope to the child with Congenital Heart Disease, child abuse became known as a very real problem, and children with Attention Deficit Disorders began to get some help.

## **TOBACCO**

Smoking and the use of tobacco have been under fire for a long time. However, the case against tobacco really came to a head in the 1950s and 1960s.

I had an opportunity to meet Dr. Evarts Graham, Professor and Chief of Surgery at Washington University, while eating lunch with my Chief of Pediatrics, Dr. Alexis Hartmann, in the cafeteria at The Barnes Hospital in St. Louis, in the Fall of 1953. Our conversation turned to the article in Time Magazine (November 1953) that told about the most recent studies that Graham and Wynder had published connecting the tars from tobacco smoke with cancer.

Dr. Hartmann asked him what he thought the tobacco companies would do now since they hadn't really responded to the initial studies published in JAMA in 1950. Dr. Graham who, along with Dr. Ernst Wynder, had both been heavy smokers prior to their initial studies, had both quit smoking when they saw the results.

He responded that the public would cut down on smoking, for a period of time, but then, human nature (or addiction) being what it is, would take over and they would go back to smoking as much as before. He added that doctors would begin to recognize the connection and would also quit, making headlines for a while, but the media would move on to other newsworthy events and the tobacco "interests" would raise a couple of hundred thousand dollars to fund a research project that would try to disprove the connection and try to filter the cigarettes in an attempt to make them safer. (Kent came out with a filter soon after, but it had asbestos in it!)

The tobacco companies started TIRC (Tobacco Industry Research Committee) in 1954 which became the Council for Tobacco Research in 1964. Dr. Evarts Graham died of lung cancer in March of 1957, at the age of 73, just about a year after I finished my Residency in St. Louis. Dr. Wynder died in July 1999. It seems that everything they predicted came true.

One of the big problems that has gradually been recognized is the effects of second-hand smoke. Studies done in the 1960s showed that 85% of the children in smoking families became smokers. It is easy to see that children exposed to cigarette smoke over a period of 10 to 12 years are already addicted to nicotine before they light up their first cigarette.

## **NEWBORN CARE**

The advances in the care of the newborn infant have been coming along rapidly with the development of the Neonatologist and Intensive Care Centers.

## **RLF**

As discussed earlier, the first two cases of Retrolental Fibroplasia were recognized or diagnosed in Boston in 1942. By 1955, some 10,000 cases of blindness developed because of RLF. Retrospective studies in Baltimore by a husband and wife team of Ophthalmologists, The Drs. Owen, showed no cases

between 1935 and 1944. Initially, it was a real enigma as to the etiology of this epidemic. Vitamin E deficiency was suspected and finally given up. Then ACTH was given a try with some initial success before it, too, was discontinued.

Finally, from July of 1953 to June of 1954, some 18 newborn centers did a collaborative study of premature babies weighing under 1.5 Kg who survived 48 hours, and reported their findings in September of 1954 at the American Academy of Ophthalmologist and Otolaryngologists in New York City. This study nailed high oxygen concentrations in the babies isolette as the culprit. It turned out that the improvement in isolettes for premies that permitted higher concentrations of oxygen was most likely the etiological agent causing the disorder.

“Retrolental Fibroplasia: A Modern Parable,” by William A. Silverman, was touted by the Journal Pediatrics in 1981 as a remarkable book well worth reading, interesting, informative, and provocative that tells the story of RLF. During the 1950s and 1960s, many of us attended seminars in Kansas City produced by Dr. Herb Miller, the Pediatric Chief at the Kansas University Medical School. During one of these conferences, I recall Dr. Miller making the remark that he didn’t use a lot of oxygen in his premature babies because “pure Kansas air is the best for infants.” In retrospect, he was probably right! The epidemic of RLF came to a halt after the above findings were published.

#### **THALIDOMIDE**

Another event that developed in the late 1950s and early 1960s was the use of the drug Thalidomide for morning sickness and as a sleeping pill in Canada and Europe. If taken during the first three months of the pregnancy, it could be quite teratogenic, especially resulting in malformations of the limbs, with the arms or legs looking like flippers and called Phocomelia (Gr. Phoco-seal+melia-limb). Fortunately, it was not given an approval by the FDA in this country and the only cases reported were of women who had heard how good the drug was while on a visit to Europe and brought it home with them. I don’t recall that there were many cases in Oklahoma, but it did impress on all of the teratogenic effects of drugs and other substances that could affect an unborn baby, especially in the first trimester.

#### **ERYTHROBLASTOSIS & EXCHANGE TRANSFUSIONS**

Erythroblastosis foetalis, or hemolytic disease of the newborn, was another Pediatric emergency that this group of physicians had to deal with. It was mostly caused by an Rh incompatibility but ABO incompatibilities could also cause trouble. The problem started when an Rh negative mother became pregnant with an Rh positive baby. This first child was usually not affected, (unless the mother had been sensitized earlier by a sensitizing blood transfusion), but, unfortunately, it produced antibodies in the mother that then crossed the placenta on the second and subsequent pregnancies and these antibodies caused a severe hemolysis in that pregnancy. Severe jaundice was the presenting finding associated with pallor, anemia, heart

failure, hydrops foetalis, and an enlarged liver and spleen. The lab work would show a rising bilirubin, (as I recall, above 18 mg/dl in the first 24-48 hours was associated with Kernicterus, and was the so-called danger level), and interferes with normal neuronal development resulting in mental retardation and other neurological problems.

Dr. Louis K. Diamond, (the Father of Pediatric Hematology), and Drs. Kenneth Blackfan and JM Baty identified the disorder of Erythroblastosis in 1932, but it was not until 1948 that Dr. Diamond and Dr. Fred Allen and Dr. William Thomas, at the Children's Hospital in New England developed the process that we call an Exchange Transfusion using the infants umbilical vein. Most of the Pediatricians of this period were trained in this treatment protocol, and those coming to Tulsa in the early 1950s could do it. It was a common procedure and several were done on an almost monthly basis. Before this procedure was established, some 20,000 infants were affected by Rh disease yearly. I am familiar with only one such case in Tulsa that developed Erythroblastosis during this period and it went to trial and the physicians involved lost the case. One of our colleagues said that a fee of \$50.00 was not enough to charge for the time and stress that it took to do an exchange transfusion.

Two advances changed the picture completely. Broughton, et al., published an account of treating some 300 cases of Hyperbilirubinemia with Phototherapy in 1965, and in 1968 the first Rho(D) Immune Globulin treatment, "RhoGam," was introduced. RhoGam is now given at the 28<sup>th</sup> week of pregnancy and again 72 hours after the birth of the infant. The Exchange Transfusion has almost completely disappeared and it is used only occasionally for ABO problems. It has been estimated that the use of RhoGam has reduced infant mortality due to Erythroblastosis, by some 10,000 cases a year in the United States.

#### **SCREENING TESTS FOR THE NEWBORN**

In those early days, there were no routine newborn screening tests. Most Pediatricians were on the lookout for infants with Hypothyroidism-Cushings Disease. The classical case was not difficult to diagnose. However, the not so classical case could really be tough. Phenylketonuria was another tough one. Early on, we did a Ferric Chloride Test (developed in 1957 by Willard Centerwall) on the urine wet diaper of an infant and if it turned a bright blue-green, it was positive for PKU. The problem was that it took several days after birth for the phenyl pyruvate level in the blood to get high enough to spill over into the urine and give a positive test. By the time it reached that level, CNS damage could have already begun. It took 15-20 cc of blood to get an accurate phenyl pyruvate level at that time. Dr. Robert Guthrie, a bacteriologist and physician at the Women and Children's Hospital in Buffalo, New York, (who had a retarded child of his own and was an advocate for the retarded), took the problem under advisement and developed a screening test using a drop of blood that produced a chemical alteration of the bacterial

medium on a filter paper. By 1962, it was being used in the hospitals in Massachusetts and, by 1966, in hospitals in most states.

Dr. James Coldwell had several cases that he followed at Children's Medical Center here in Tulsa. We had numerous conferences on PKU in the 1950s and 1960s at the Children's Medical Center and, at one of them, the dietitian prepared some cookies that were okay for a child with PKU to eat, namely cookies free of phenylalanine. They were terrible and none of us could eat a full cookie. However, if a child with PKU was to develop mentally, he really had to stick to the diet.

This was the beginning of newborn screening tests and, by 1980, we had tests for Galactosemia, Hypothyroidism, Hemoglobinopathy, Adrenal Hyperplasia, and Cystic Fibrosis.

Newborn screening really took off with the development of tandem mass spectrometry (MS/MS), and has been expanded to include 13 Amino Acid Disorders, 10 Fatty Acid Oxidation Disorders, 13 Organic Acid Disorders, and a Biotinidase Deficiency. This was nicely written up in the February 2009 issue of the OSMA Journal by Dr. Douglas Dannaway, MD.

#### **ANTIBIOTICS**

Early in this era, neonatal sepsis was a real problem and, in some areas, epidemic. We heard of nurseries being closed because of infections, especially *Staphylococcus Aureus*. Penicillin and the sulfonamides were effective initially, but we were learning about "smart germs", bacteria that had learned to develop resistance to our antibiotics. Fortunately, our scientists were looking everywhere for antibiotics and the next one on the scene was Chloramphenicol. It was discovered by Dr. Burkholder of Yale in cultures of a new actinomycete from soil in Venezuela in 1947 and developed by Parke Davis and Company. It seemed to be a real miracle drug and was effective against both Gram Neg and Gram Pos bacteria. By the late 1950s and early 1960s there were reports of the "Gray Baby Syndrome" associated with its use. This was characterized by cyanosis, shock, abdominal distention, and death. It was due to lack of functional liver enzymes, and impaired renal excretion of the drug. Shortly after its use in the newborn, and because of its effect on the bone marrow in older children, its use was gradually discontinued in Pediatrics and its production was discontinued in 1991.

Another antibiotic that started with great hope was Novobiocin. It was particularly effective against *S. Aureus* when this germ was becoming resistant to both Penicillin and the Sulfonamides in 1955. However, in 1959, it was used in Cincinnati General Hospital to abort an epidemic of *S. Aureus* in the nursery, and Dr. Sutherland, (who had previously called attention to the toxicity of chloramphenicol), noted that the babies became quite icteric. Fortunately, none of these babies developed kernicterus and the use of Novobiocin in the newborn nursery was discontinued.

### **PHISO HEX**

It was in the late 1960s that we learned that pHisoHex (Hexachlorophene) was also toxic to newborns, causing seizures, skin blisters, and GI symptoms and neurological disorders. Autopsies revealed vacuolation of the brain's reticular formation and spongiform myelopathy. The AAP recommended its use be discontinued in December of 1971.

### **RESPIRATORY DISTRESS SYNDROME**

Known as Pulmonary Hyaline Membrane Disease in this period, it developed in premature infants, especially in those born after 28 week gestation, and was also seen in infants of diabetic mothers. The most famous case was the son of the late President John and Jacqueline Kennedy, Patrick, who was born prematurely and died from RDS on not very scientific evidence. Progress came with improved ventilators and research in surfactant and CPAP which came along in the 1970s. Dr. Leroy Mims came to Tulsa in 1971 as a Neonatologist and began research with the Warren Research Foundation. He was particularly interested in Surfactant as treatment for RDS and published some articles with Dr. Robert Kotas.

### **GASTROSCOPIC FEEDINGS**

The feeding of the very small premature baby was, is, and probably always will be, a problem. It has always required skilled nursing care. For many years, nothing was attempted for at least 48 hours. If the infant survived that long, then every attempt was made to keep the baby going. Milk was dripped into its mouth from a nipple or small spoon. Aspiration was not uncommon. In the early 1950s, we inserted a small rubber tube into the stomach and they were fed that way. Although this was an improvement, the rubber was irritating and regurgitation afterwards was common. Plastic (polyethylene) nasogastric tubes came along and that helped. In 1960, Holder and Gross of the Surgical Service of the Children's Hospital in Boston, and the Department of Surgery at Harvard Medical School, reported on 187 cases of doing a temporary gastrostomy in prematures in the journal Pediatrics (vol 26, no. 1, July 1960), with improved outcomes and lower morbidity. Dr. Jegathesan tells me that doing a fundal placcation and gastrostomy continues to be used and is quite successful.

### **INFECTIOUS DISEASES & ILLNESSES**

This period of our Pediatric history saw many changes due to new vaccines and the development of many new antibiotics. Some of the diseases that had been common from the early 1900s through the 1940s began to respond to these new antibiotics and new vaccines.

- **Smallpox**

Variola (L-pimple) is caused by the variola virus and is characterized by fever and a maculopapular rash that becomes pimples, then pustules or blisters, then clears. It can cause blindness and the overall mortality rate was

30-35%, but it had been as high as 50%. In the 15<sup>th</sup> Century, it was given the name “Smallpox” to differentiate it from the “Great Pox” or Syphilis. It looks like a really severe case of Chicken Pox.

Smallpox has been eliminated due to the work of Jenner (Berkeley, Gloucestershire, England), in 1796. He developed a vaccine from a cow pox virus that gave protection from Smallpox. Many older people carried scars from this disease all their lives. We routinely gave a vaccination to all children on the upper outer arm, that festered up in 4-5 days, became red, and often was associated with a day or two of fever, produced a scab that fell off in 7-10 days, and left a little scar about 1 cm in diameter.

Prior to the 1950s, the disease had a mortality rate of 52% in the unvaccinated. In the vaccinated children of 3-5 years, a 95% protection rate was achieved; under 10 years the fatality rate was 1.3%; 11-20 years it was 7%; and over 20 years, it was 11%. The disease was practically eradicated in the United States in 1897, (the last case in 1949), and routine vaccinations were stopped for all children in 1972. Healthcare workers were vaccinated until 1976 and military recruits until 1990.

Smallpox was described as early as 10,000 BC, killing over 400,000 Europeans annually during the 18 Century, and was the cause of one third of all cases of blindness. At that time, 80% of the infected children died, and 20-60% of the adults. In the 20<sup>th</sup> Century, there were between 300-500 million deaths each year. Even as recently as the early 1950s, there were about 50 million cases worldwide.

#### ● **Diphtheria**

Diphtheria is another disease that had almost disappeared by the end of this period. In the 1920s, it produced 100,000-200,000 cases a year in the United States, with 13,000-15,000 deaths a year. The disease is characterized by a sore throat, low grade fever, and a thick membrane that coats the membranes of the throat and airways causing an obstruction to breathing. Dr. Dick Russell was training in Cleveland in the 1930s and told me that at one time, he had 35 children on his ward with tracheostomies that were needed because of Diphtheria. Dr. Joseph O’Dwyer developed the technique of doing tracheostomies in 1880. However, it wasn’t until 1890 that Dr. Emil von Behring developed an antitoxin, (for which he received the Nobel Prize for Medicine), and in 1913, he developed the vaccine. At one time, the Shick Test, developed in 1910, was done to test for susceptibility to the disease. Penicillin and Erythromycin are both effective against Diphtheria. In the United States, between 1980 and 2000, there were 52 cases, and only 5 cases from 2000 to 2007.

#### ● **Pertussis**

Also known as Whooping Cough, Pertussis has decreased in frequency, but not in severity, nor completely eliminated. The mortality rate is highest among infants and the vaccine gives protection only through childhood. Consequently, adolescents and adults form a large pool and many

advise continuing the vaccination through adolescence. Many of us remember the efforts we took as residents to get a good nasopharyngeal swab and plate it out on a Bordet-Gengou medium and, that if we didn't get it during the catarrhal stage, we were likely not to get a positive result at all. However, we now have immunofluorescence and serological methods to help make the diagnosis.

A vaccine, whole cell, was first developed in 1906 and wasn't combined with Diphtheria and Tetanus until 1942. In the 1970s and 1980s, a lot of controversy relative to a causal relationship between the Pertussis vaccine and permanent brain injury was brought to a head by a television documentary "DTP: Vaccine Roulette." There was a relative jump in the number of lawsuits, a drop in the ability of the vaccine manufacturers to get insurance, an ability for us to find any vaccine at all, an increase in the cost of the vaccine, and by the end of 1985, only one manufacturer remained. At about this time, Dr. Yuji Sato, in Japan, developed an acellular vaccine in 1981 that was much safer, but it wasn't approved by the FDA until 1992, and was then given as DtaP. The situation had gotten so bad that in 1986, Congress passed the National Childhood Vaccine Injury Act (NCVIA), which established a Federal no-fault system to compensate those who had been injured by the vaccine. Since then, new vaccines have been developed that are safe for adolescents and adults.

Before the vaccines, Pertussis was the cause of 157 cases/100,000 people with peaks every 2-5 years. After the vaccine was produced in the 1940s, the number dropped to 1/100,000 in 1970. However, it is trying to make a comeback with four deaths in 1996.

- **Tetanus**

The last of the Big Three, caused by the *Clostridium Tetani*, and also called "Lockjaw," is still with us. *C.tetani* produces a neurotoxin called tetanospasmin which causes striated muscles to go into spasm. It is usually caused by a deep penetrating wound or contact with contaminated material such as horse manure on an umbilical stump. (This is still done by midwives in Third World countries to "dry" the stump.) The Spatula Test is still the best diagnostic tool for Generalized Tetanus. Touching the spatula on the posterior pharynx causes the patient to bite down on the spatula. A negative result is the gag reflex.

Tetanus has a mortality rate of about 11%. Worldwide, there are about a million cases of Tetanus each year, with 300,000-500,000 deaths, mostly neonatal, and mostly in the undeveloped countries. In the United States, there are about 100 cases per year, with five deaths.

#### **CHILDHOOD DISEASES - MMRV**

The Pediatricians in Tulsa saw a lot of the so-called "childhood diseases" during this period. They were probably the primary reason for most house calls, hospitalizations, and phone calls. The development of the vaccines for these diseases saw a marked change in our practices. The following is a brief

description of each and some general statistics to give you an idea of what the vaccines meant to all of us.

- **Rubeola**

Also known as the Red Measles, Rubeola was one of the first exanthemas reported historically. Clinically, it started with the classical three C's, cough, coryza, and conjunctivitis, and an exanthema, (Koplic spots, or small red spots in the buccal mucosa with a bluish white speck in the center, often not seen), followed by a rising temperature to 104°F or more, and a characteristic maculopapular erythematous rash would then appear, starting on the face and neck, then down the trunk and finally out to the extremities. Often, there was marked photophobia and the room had to be darkened. This would usually last 7-10 days and then the rash would begin to clear, starting on the face and head, then down the trunk and out the arms and legs. Sequellae were pneumonia, encephalitis and corneal ulcerations. Dr. Dick Russell felt that aspirin shouldn't be used as the "Old Time" physicians thought it would prolong the illness. Reye's wasn't on the scene at that time. If there was any immunocompromization, the fatality rate could go as high as 30%. This could be racial, (European and American children had some natural immunity), or due to AIDS or kids on steroids.

A licensed vaccine became available in 1963 and four years later it was combined with Rubella and Mumps as MMR. We gave it at 18 months and 4-5 years of age. Since 1999, the Rubeola virus is no longer indigenous in the United States, and most all cases since then have been imported. In 2005, there were 66 cases in the United States, 50 of which were in unvaccinated individuals, and 17 contracted while traveling abroad. Indiana had 34 cases initiated by a young woman who had just come from Romania. Historically, Rubeola was the greatest killer of children. Before the vaccine, it affected 50 million people annually with one million deaths, mostly in undeveloped countries. During the 1850s, Measles killed one fifth of the Hawaiian population, brought to the Islands by missionaries.

- **Mumps - Epidemic Parotitis**

The Mumps virus caused the salivary glands to become swollen and tender. This was associated with fever, headache, malaise, and anorexia. Complications could produce orchitis, ophoritis, pancreatitis, and an inflammation of the meninges. In fact, Mumps was the leading cause of meningoencephalitis in the United States. Most of the time, the parotid glands were involved, but when the sublingual and submandibular glands were also involved, you really had a "moon facies."

The Mumps vaccine also became available in 1967 and is now given in the form of MMR. In 1968, there were 151,209 cases of Mumps in the United States and, since 2001, there has been an average of 265 cases per year. In 2006, there was an outbreak with over 6,000 cases.

- **Rubella**

Also known as German Measles, or Three-Day Measles, this relatively mild disease was first described by a German physician in the 18<sup>th</sup> Century. The name, "Rubella," comes from the Latin for "little red." It had an incubation period of three weeks and then was characterized by an erythematous rash on the face and head that progressed down the trunk and then the extremities. It persisted three days, then cleared in the same fashion. There was a low-grade fever, some joint pains, headache, and mild conjunctiva redness. An almost pathognomonic sign was the presence of small, pea-sized, sub occipital lymph nodes.

The disease itself was relatively innocuous. However, if a pregnant woman got it in the first trimester of her pregnancy, the results could be devastating. The Congenital Rubella Syndrome (CRS), was associated with prematurity, low birth weight, heart defects (especially PDA), deafness, neonatal thrombocytopenia, and mental retardation. Twenty percent of the women miscarried.

The vaccine for Rubella became available in 1969 and is also now a part of the MMR vaccination. Before the vaccine, there were outbreaks every six to nine years and affected the 5-9 year olds mostly. There was an epidemic in the United States in 1964-1965, with 12.5 million cases and an estimated 11,000 miscarriages or abortions. There was a pandemic in 1962-1965 that started in Europe. It was estimated that 2,100 died as neonates of the 20,000 cases of CRS confirmed. 12,000 became deaf, 3,580 became blind, and 1,800 were mentally retarded. The MMWR states that Rubella was eliminated in 2004.

- **Chickenpox**

Varicella is a viral illness caused by the varicella zoster virus and after an incubation period of ten days to three weeks appears with a vesicular rash that starts on the head and then goes down to the trunk and out the extremities. It starts as a small pimple that then fills with fluid, opens, then scabs over. It seems to come in crops and lasts 7-10 days. Some fever, usually not over 103°F. It is rarely fatal, but pregnant women in the first trimester, are at a similar risk to that associated with Rubella, and those on steroids or whose immune system is compromised can have severe complications such as encephalitis and a rare condition called necrotizing fasciitis.

Dr. Takahashi developed a vaccine in 1974 and it became available here in the United States in 1995. It is also now available in the MMRV vaccine. Before the vaccine became available, about four million children per year in the United States developed Chickenpox, about 11,000 had to be hospitalized, and there were 100 deaths per year.

- **Polio**

During this period, Polio was still a menace to the children of Tulsa and the Pediatrician was called upon to make this diagnosis on a all too regular basis. A visit to the Polio ward in the basement of Hillcrest Hospital

was depressing. You could hear the clank of the Iron Lungs, usually two or more going at the same time. Each patient had a stainless steel container at his or her bedside, about one foot in diameter and about 18" tall, with an electrical heating unit that kept the contents of wool wraps and water at a fairly hot temperature. The nurses would remove the hot, wet wraps and wring them out before wrapping them around the limb that was involved, hoping to prevent contractures as the muscles atrophied and shrunk. The odor of wet wool was always prevalent in the Polio wards. The children (and some adults) in the Iron Lungs lay motionless with only the head sticking out of the apparatus, a tight collar about the neck keeping the chamber air tight. The patient had a mirror in front of his face permitting them to see what was going on around the room. They could talk only when the machine was on exhalation. It took some time to have a conversation. An Iron Lung cost about \$1,500 in the 1930s. The March of Dimes, an outgrowth of the National Foundation for Polio, was established by President Franklin D. Roosevelt in 1938 helped many patients with the cost of having Polio.

After the acute phase of Polio, a long period of convalescent and rehabilitation would begin. The Children's Medical Center, started by the women of the Tulsa Junior League, was begun as such a facility at 5<sup>th</sup> and Cincinnati in 1926. After World War II they withdrew and turned the administration of the facility over to a community board in 1951. Later, they relocated to south Lewis on the west side of the street at about 48<sup>th</sup>. Children's Medical Center contained wards for the kids, a swimming pool, an excellent brace shop, and some of the best Physical Therapists in the southwest. They even had a school to help the kids keep up while convalescing. After the Polio drive in 1963, new cases of Polio ceased and the Children's Medical Center changed its focus to the Tulsa Child Guidance Center, Sunnyside School, Vocational Training Center, and Metabolic Disorders and Genetics.

Medical students were excited to hear that Enders, Weller, and Robbins received the Nobel Prize in 1948 for being able to keep alive monkey kidney cells in a special medium. None of us realized the full significance of this scientific breakthrough at the time. However, this ability to keep a cell alive "in vitro" permitted the Virologists to propagate viruses and, consequently, to develop vaccines for these viruses, especially Polio. (Viruses need a living cell in order to replicate.) In a Polio epidemic in Los Angeles, California, in 1934, 5% of the doctors and 11% of the nurses who took care of Polio patients came down with Polio themselves. One of my classmates, (University of Oklahoma, Class of 1948), went to Michigan to do general practice after his Internship, caught Polio, and died of the disease. The worse outbreak in U.S. history was in 1952 with some 58,000 cases of whom 3,145 died and 21,269 were left with mild to disabling paralysis.

During my Residency in Pediatrics at St. Louis Children's Hospital, St. Louis, Missouri, April 12, 1955, we were all given time off to attend a special closed-circuit television press conference given by Dr. Jonas Salk at a downtown theater telling about his development of a "killed Polio virus

vaccine.” It was pretty exciting. It wasn’t until 1962, however, that Dr. Albert Sabin developed his live Polio virus vaccine. The Salk Vaccine was given by injection and rapidly became a part of our regular immunization routine. The live virus vaccine was given orally on a sugar cube and had the advantage of providing both intestinal and bodily immunity whereas the Salk provided only bodily immunity.

The Tulsa Pediatric Society had discussed the idea of a mass Polio oral vaccination program. Salk had brought out the killed vaccine in 1955 that had to be given by a needle. The incidence of Polio was down, but there was still a lot going around. When Sabin introduced the live, attenuated vaccine in 1962, we thought it was time to go with a mass program. Consequently, Dr. John Kramer presented the idea to the Tulsa County Medical Society Board and they agreed that it was a great idea, and to include the entire medical society. I was vacationing in Minnesota at the time, so the Tulsa Pediatric Society nominated me to be the chairman. Consequently, the Mass Polio Campaign kicked off in the Fall of 1962.

There had been 12 cases of Polio in Tulsa County that Fall. (Tulsa’s last major Polio epidemic was in 1952 with some 159 cases.) Jack Spears did a tremendous job of coordinating the program which finally involved most of the physicians of the TCMS. There was a physician at each site that the vaccine was given. Pharmacists were on hand to see that the vaccine was properly prepared, and there were volunteers from the Tulsa City-County Health Department, the schools and their janitors, nurses, Boy Scouts, Girl Scouts, Camp Fire Girls, the Kiwanis and Rotary clubs, and Tulsa Police Department. All recipients were asked to donate .25¢ to offset the cost of the vaccine which cost the TCMS .25¢ a dose. Many people put in more than the asking price. There were checks for \$100 and many \$20 dollar bills. The TCMS ended up with something like \$150,000 after all expenses had been met. They decided that half should go to the organizations that helped them, such as the Tulsa chapter of the American Red Cross. The other half went into a scholarship fund that has been helping students in the healing arts to this day. The fund has continued to grow, but the seed that started it was the Polio drive. Tulsa has not seen a case of Polio since the Fall of 1962.

Polio really peaked in the United States in about 1952 with 21,000 paralytic cases and has decreased about 99% since 1988 with some 380,000 cases in 125 countries. There were 1,951 cases in 2005 and practically none since then. The last case of Polio in the United States was in 1979 in an Amish community in the midwest.

- **Rheumatic Fever**

Rheumatic Fever was one of the leading causes of death and structural damage to the heart in children until early in 1960. The advent of antibiotics, especially Penicillin, in the mid-1940s had a lot to do with that. However, it appears that there has been an increase in numbers during the past 20 years. Both Dr. Braverman and myself took a Cardiology Fellowship during which time the primary emphasis was on acquired heart disease (RF) and only

secondarily on congenital heart disease. The two of us, as well as Dr. Kishner were on the Rheumatic Fever Committee of the Tulsa American Heart Association and had a clinic for children with RHD at the Children's Medical Center (CMC) where 10-30 children were seen on a monthly basis. CMC was also used as a convalescent hospital for these children as they recovered from the acute phase of the disease. Rheumatic Fever practically disappeared from the Tulsa scene from 1965 until about ten years ago. Our Rheumatic Fever Clinic at Children's Medical Center ceased to function by 1965 for the lack of new patients, but our Rheumatologists tell us that it has not completely gone away.

Every Pediatric Resident learned T. Duckett Jones Criteria for Rheumatic Fever and its association with throat infections caused by Group A beta hemolytic streptococcus. Aspirin (100 mgm/kg/day) was the drug-of-choice, and steroids came on later. We learned to check a blood salicylates level every two to three days for a week or so because not all children absorbed it at the same rate. It could be embarrassing if you called your attending in to see your patient whom you felt was going into heart failure because his pulse and respiratory rate had risen precipitously, only to have him ask about the salicylates level, then check it and find that your little patient was the victim of Iatrogenic Salicylates Intoxication. It was heart breaking to see some of these kids with Sydenham's Chorea lying on an arm or crossing the legs in an attempt to keep the extremity from flying about. We always felt along the extensor surfaces of the arms and legs for nodules and it wasn't until we got to Tulsa that Dr. Dick Russell pointed out to us the frequency of abdominal pain with "strep throats." Initially, the ESR was our tool to monitor the level of inflammation, but the CRP came along in the late 1950s to help. (Sydenham, 1624-1668, described Chorea but did not associate it with Rheumatic Fever.)

Dr. Charles H. Rammelkamp, Jr., (1911-1981), was a Professor of Medicine at Case Western Reserve in Cleveland when he did research with the Warren Air Force Base in Cheyenne, Wyoming, on the relationship of beta strep group A and Rheumatic Fever. Dr. Rammelkamp was a great promoter of the idea that physicians in active practice could do basic research which could be applied to the clinical practice of medicine. He received the Albert Lasker Award in 1954 for this work.

At that time, we understood that 6% of untreated beta strep A infections would result in Rheumatic Fever. (The figure today is 3%.) Consequently, the Rheumatic Fever Committee of the Tulsa Heart Association felt that we should look into the incidence of Streptococcal infections in Tulsa children. We did our research with the help of the Tulsa City-County Health Department and its laboratories, Dr. Marcella Steele of the Tulsa School Health Department and her school nurses, and without the help of an IRB (Institutional Review Board). We obtained throat cultures on 860 children in one of the elementary schools in Tulsa in the Fall of 1959. We found 80 children with positive cultures for Group A beta hemolytic streptococcus. We notified families and did a follow-up. Most of these children were attending

school at the time and were not complaining of a sore throat. None of them developed RF. Some, if not all, received treatment.

Our feeling at the time was that if 10% of school children had positive cultures for strep, then we should be seeing lots of Rheumatic Fever, but we were not. We then decided to do a wider study and did throat cultures on all of the children in ten different elementary schools in Tulsa, West Tulsa, Bixby, Broken Arrow, and Owasso. Again, we came up with an average of 10% of the children with positive cultures. (One Bixby grade school had 50% of the children in the first and second grades with positive cultures.) We notified all families and found that most of the kids with asymptomatic, but I think that they were all treated.

We followed up and found no evidence of RF. On this study, we also obtained urine samples for protein and RBCs a month after we did the cultures and they were negative. We had thought of getting a CRP at that time, but the cost and the trauma of getting blood ruled out that procedure. Again, no outbreak of Rheumatic Fever. Research often raises more questions than answers: carriers may pass on the bug but don't get RF.

- **TBC**

A Tuberculin Skin Test was part of a complete physical examination during much of this period. If positive, we followed up with a Mantoux. Many of us started to medical school with negative skin tests, and we were positive by the time we graduated. Chest X-rays followed. I was in Japan from 1952-1953 and the country was struggling to get back on its feet after the war. Housing was poor and nutrition not much better. TBC was rampant. They told me that after the peace accords and the occupation forces came in, that so many Japanese died of Tuberculosis that every night a truck went through town collecting the dead off the streets. Emperor Hirohito decreed that everyone was to have the BCG vaccine, which they did, and the epidemic subsided. In 2004, in the United States, 4.9/100,000 of the population had TBC. It is now mostly a disease of the immunocompromised (HIV/AIDS) and the elderly. After a collaborative study in 2004, the AAP decided that a skin test was indicated only in those children where risk factors were present.

- **E-Coli**

In the 1940s, we learned about E-Coli as a "normal" bacteria found in the stools of humans, that was not only harmful, but its absence could lead to loose stools, abdominal cramps, nausea and vomiting. A German bacteriologist, Escherich, first described the bug in 1800. In the 1950s we were able to Serotype the E-Coli organism and learned that not all E-Coli were friendly little guys. Captain Dean Belnap, MC, and Captain John O'Donnell, MC, reported in the Journal of Pediatrics in 1955 on an epidemic of gastroenteritis due to E-Coli 0-111. Bacteriologists began to run Serotype on E-Coli and found over 700 different Serotypes. In August of 2008 we had an outbreak of gastroenteritis due to 0-111 and a Country Cottage Restaurant in Locust Grove, Oklahoma, was thought to be the source. In the 1950s,

Chloramphenicol and Novobiocin were the early drugs-of-choice but developed problems of their own. Penicillin and the Cephalosporins are useless but some of the newer antibiotics are helpful and the Russians are working on Phage Therapy. There is a big push to develop a vaccine.

## **METABOLIC DISORDERS**

### **• Diabetes**

The period from the end of World War II and into the 1970s was relatively slow. The big change in the management of Diabetes came with the discovery of Insulin by Banting and Best in 1923. Prior to that great find, all children developing Diabetes died within three to four years of either malnutrition (starvation) or Diabetic Ketoacidosis. During this period, we saw advances in the management of DKA (Diabetic Ketoacidosis Acidosis) with a better understanding of the pathophysiology of fluids and electrolytes. However, in the 1950s, a child coming to the emergency departments in severe DKA faced a death rate close to 20%.

At this time, we had quick and short-acting Regular Insulin, intermediate-acting Lente or NPH Insulin and the long-lasting Ultra Lente or Protamine Zinc Insulin. A combination of one or two of the above insulins, given once or at times more often was given to control the Diabetes. The decision on how much Insulin to give was based on the amount of sugar spilled into the urine. The Ames 2 Drop Clinitest could give a percentage of the glucose (up to 2%) in the urine, and this number multiplied by the volume of urine at that determination gave the grams of glucose lost at that time. This Glucose/Insulin ratio gave an approximation of the amount of insulin needed. Others used a so-called sliding scale method which determined the amount of insulin needed based on the preceding results. We obtained a blood glucose level in the office, but that told us only what the blood glucose was at that moment. The Glycosylated Hb A1c was not to come until 1980. Really *good control*, as we know it today, was not possible.

Next to Banting and Bests discover of insulin was the development of Recombinant DNA technology, the use of genetically altered E-Coli to produce insulin that was identical to human insulin. The Genentech Laboratories produced this breakthrough in 1978. In 1981, they did the same thing with the human growth hormone. No longer the long laborious procedure of getting cadaver derived HGH and worry about the possibility of transmitting the virus that causes Creutzfeldt-Jacob disease.

In 1974, Saint Francis started a Diabetes Center geared to educate the public and the Diabetic about the disorder. One of the first projects of the committee heading up this center was to start a camp for children with Diabetes. The first camp was in the Summer of 1976 and was held at the Jim King Basketball Camp in Mannford, Oklahoma. A Red Cross trailer became the infirmary. There were 40 children with Diabetes, volunteer nurses, dietitians, and counselors. Mr. Tom O'Leary, the Ames Company drug representative, was our volunteer Camp Director and did such a great job

that the kids voted to name the camp after him, Camp O'Leary. The camp has since grown to over 100 children and serves the entire state.

When Dr. Don Wilson came to Tulsa in 1980, a Winter camp was added to the camping program. With 40 or more Diabetic children in tow, the Winter camp took to the slopes of either New Mexico or Colorado for a long weekend of skiing. The purpose of both camps was to give these children an outdoor experience, learn a little about the effects of exercise on their Diabetes, and to perform a "Mometomy" (a jocular attempt to help the children separate from their families, and to give the families a little relief from the day-to-day stress of caring for a child with Diabetes. It was also a way to show the child that they were not the only one in the world with Diabetes.

When the western part of the state joined our camping program, it became known as Kno-Keto/Camp O'Leary Camp for Children with Diabetes. The Summer and Winter camps now have an enrollment of over 100 kids from all over the state of Oklahoma.

In the late 1970s and early 1980s, we gained experience with a Biostater, a device designed to maintain normal blood glucose levels with the use of a 3 lumen intravenous tube that determined the blood glucose levels every 5 minutes and delivered either insulin, glucose, or saline to the patient depending on the blood glucose levels. Mrs. Cathy Pielsticker-Colburn, RN, one of our early Nurse Educators, became certified in its use and we used it to manage the Diabetes in kids undergoing surgery. It was also helpful in managing the Type I pregnant mother with her labor and delivery. It was relatively cumbersome and finally fell into disuse.

None of our advances in management of the child in Diabetic Ketoacidosis will help the child being treated with adjustments, herbs, or religious practices that deny proper treatment, such as with the child in Wisconsin who died in 2010.

### ● **Malignancies**

The period from the end of World War II to the 1970s was the beginning of tremendous changes in the way we looked at malignancies and how they were approached. Madame Curie won the Nobel Prize in 1900 for her work in isolating the radioactive elements Polonium and Radium. Cobalt and Casium came along in the 1950s. We were just beginning to see the subspecialists of Pediatric Hematology and Pediatric Oncologist were not far behind. The Alkylating agents, Nitrogen Mustard and the Cyclophosphamides, like Cytosan, came along in the 1950s and the anti-metabolites, like 6 Mercaptopurine (6MP) and Methotrexate, were coming into use...our "Poisons." What did this come down to?

Prior to the 1940s, most children died of their malignancy, most kids with Leukemia didn't live longer than 18 months after onset. However, the five-year survival rates had increased to 14% from 1960 to 1963, and to 35% from 1975 to 1977, and to 54% from 1999 to 2005. The Oncologists of today have these patients living so long that they are developing other problems,

especially with the endocrine systems, and they are developing their skills as Endocrinologists or leaning heavily on their Oncology specialist friends.

- **Mental Retardation & Learning Disorders**

The care of the developmentally disabled has had its ups and downs since time began. By the end of World War II, Oklahoma had facilities in Enid, Pauls Valley, Bethany, and Taft to “warehouse” the retarded. Tulsa had a private facility that took infants and children up to about age five when they were transferred to one of the big state institutions. The idea of keeping these children at home was considered unfair to the other children of the family. In fact, many obviously retarded infants, such as a Down’s Syndrome, were often not even shown to the mother because they didn’t want *bonding* to take place.

Our legislature established a facility in Pauls Valley as a state training school for boys in 1907. It was converted to a hospital for people with Epilepsy in 1945, and then to a facility for people with Mental Retardation in 1953. In 1909, Enid became the home of the State School for Mental Retardation and later, a similar school was developed in Taft. These were managed under the Department of Mental Health and Retardation until 1963 when they came together under the control of the Department of Public Welfare.

Pauls Valley and Enid had some 2,300 residents and 709 employees. In 1959, they saw the need for additional beds and appropriated one million dollars to start such a facility on land that the Wiley Hissom family donated to the state on the banks of the Arkansas River near Sand Springs. This became known as the Hissom Memorial Center and opened, after the infusion of an additional five million dollars, in 1961.

Hissom opened with beds for 500 residents. The staff included physicians, psychologists, art and music therapists, physical therapists, teachers, and an excellent support staff. There was a swimming pool, playground, and a very inviting environment. Unfortunately, the director had a heart attack six months after he took over leadership of the center, nearly died, retired, and moved back to Pennsylvania.

After his departure, the facility never reached its full potential and over the years developed problems with funding and staffing. Several of us served as consultants for almost ten years without funding. There were five Diabetic children with varying degrees of Mental Retardation that received excellent care.

Dr. Luis Reinoso, a native of Peru, and Dr. Sergio Rodriguez, a graduate of Cuba Medical School 1947, were the primary medical caregivers during much of this time and, although not Pediatricians, should probably be on our list of physicians with a primary interest in children. They provided most of the primary medical care required and if a child needed more intensive care, they were referred to Pediatricians in Tulsa and admitted to either St. John or Saint Francis Hospitals.

A Homeward Bound class action lawsuit was brought against the state in 1985 and the center closed in 1993. To comply with the court order, community-based services had to be provided for some 950 members of the suit. At the time of this writing, there are over 3,000 people receiving services through the Home and Community-Based Waiver.

Since then, Medicaid reimbursement influenced the state's approach to services for children and adults with mental retardation and the change to group home programs, begun in 1981, with a big push by our First Lady, Donna Nigh, wife of then Oklahoma Governor, George Nigh, opening new options for these people. Enid State School and Pauls Valley State School got name changes in 1992, and are now the Northern and Southern Oklahoma Resource Centers. According to Arc Link, as of 1999, there were 418 residents at these centers and the Greer Center, with 1,400 total staff.

The children in these new programs live in communities, go to school, are active socially, and many hold down jobs, engage in Special Olympics, and are finally being given the chance to live up to their true potential.

As Polio declined due to the vaccines, the Children's Medical Center began to expand its services to other areas. It enlarged its patient base to children with emotional problems, seizure disorders, and mental retardation, and with Chapman funds, into genetics. Seminars were presented on a regular basis with physicians, nurses, social workers, and others attending. The lectures on the etiology of Mental Retardation could knowingly talk about the fact that only about 6% of the children with Mental Retardation had a known etiology. The coming years were to expand this number greatly. But there are still a lot of unknowns.

In the mid-1950s, Children's Medical Center was directed by Dr. Paul Benton. The center had been moving away from its original focus as a Polio and post-surgical rehabilitation unit and began seeing more developmentally disabled children. It had a Sunnyside School for these children and an excellent staff of psychologists and social workers.

Dr. Benton was a Pediatric Psychiatrist. He presented a conference on children with Chronic Brain Syndrome. It was new to most of us. He described "soft" neurological findings, minor EEG changes, learning difficulties, and hyperactivity. These children seemed to respond to stimulants by calming down. The explanation at the time was that their nervous system was in a state of lack of sleep, and that they were hyperactive as an attempt to keep awake. The stimulant simply permitted them to be fully awake, and thereby calmed them down.

Chronic Brain Syndrome became Minimal Brain Dysfunction (MBD) which became the Hyperactive Child, which became Hyperkinesia or Hyperkinesia-Learning Disorder (H-LD), which then became Attention Deficit Disorder (ADD), and finally, Attention Deficit Hyperactivity Disorder (ADHD).

Along with Dexedrine and, later, Ritalin, the Feingold Diet came into being. Dr. Feingold was a Pediatrician and Allergist at Kaiser Permanente Medical Center in San Francisco. In 1965, he observed that a patient referred to him for treatment of hives was found to be allergic to salicylate and some

food dyes. When he removed these items from the patient's diet, not only did her hives clear up, but there was a decided improvement in her behavior. In 1973, Dr. Feingold reported in a conference of the AMA, that children with behavioral problems improved on his diet plan.

Since the initial studies were done, after multiple papers, including controlled double-blind cross-over studies, EEGs, etc., have been done. We all recall the controversy in the early days and the numerous trials and studies that have been done since that time. The Feingold Association carries on the Feingold program at the present time.

### ● **Poisoning**

Accidental Poisoning has been with us from the time we started practicing. In the 1950s and 1960s, we saw frequent Salicylate Intoxication cases in the emergency room. At that time, many of the drug companies produced candy-flavored aspirin in order to make it more palatable. The unintended consequence was that it tasted so good that the inquisitive two-year-old would ingest an entire bottle. The hyperpnoea and tachypnea was impressive as was the change from respiratory alkalosis to metabolic acidosis.

Another emergency room emergence that we faced was hydrocarbon poisoning. Parents often kept kerosene, gasoline, furniture polish and other toxic products in soda pop bottles which children found enticing. This produced some pretty serious hydrocarbon pneumonia. As our society has become more sophisticated, we are seeing "designer" drugs. Kids are getting into their parents medication and trying various "cocktails" of mixtures. Alcohol has been with us since grape juice fermented, and nicotine has been a chronic poison since Columbus founded America.

### ● **Antibiotics**

The discovery and use of new antibiotics was one of the most exciting events of this period. It seemed that a new and better antibiotic was on the scene daily. To watch a pneumonia resolve in less than a week, to watch abscesses clear before your eyes, to see Syphilis and other sexually acquired diseases clear up within a few days, and to hit a case of Meningitis with several drugs while you anxiously awaited the results of the cultures and sensitivities, made the practice of Pediatrics, a pure joy.

Otitis Media didn't have to go into mastoiditis and sometimes into the brain. Osteomyelitis didn't end up as a crippling disease, and Scarlet Fever resolved in less than ten days with a dramatic decrease in Rheumatic Fever and all the complications that went along with that. The list goes on and on.

During the period, we also learned that some of these marvelous drugs could kill you. A classic example was Chloromycetin (Chloramphenicol) that came out in 1951, about the same time as the Tetracyclines, and was effective against both gram positive and gram negative organisms, as well as many anaerobes. It is especially effective against Typhoid and Cholera, and we were delighted with its ability to clear

acute cases of Meningitis. However, as observed previously, it could cause adverse events such as the Gray Baby Syndrome, and, in about 1 in 20,000 cases, could cause Aplastic Anemia, Bone Marrow Suppression, or Leukemia. By the mid-1950s, we had about discontinued its use. It was said that Dr. Louis K. Diamond, the Father of Pediatric Hematology, was so concerned about its indiscriminate use that he said he would be glad to be an expert witness in court for any child that was given Chloromycetin for a non-indicated need that developed Aplastic Anemia.

We learned that the Gram Staines that we did in bacteriology in medical school could be the start on differentiating what kind of infection that we were dealing with and which antibiotic would be best. However, things began to get complicated as bacteria began to develop resistance to our antibiotics. This was a result of several errors on our part. First, many physicians felt (and patients demanded) that an antibiotic could cure anything, so the drug was used indiscriminately for everything, even colds and other viral infections. Often, a patient would not finish all his medication because he felt better, then when he became ill again, would finish the leftover medication. In some infections, all the bacteria were not killed because of inadequate doses when the patient's weight was not taken into consideration. Finally, the use of prophylactic antibiotics given to patients undergoing surgery to protect them from bacteria that made the hospital their home.

Along with the above, during this period, there was an increasing use of antibiotics in agriculture to promote growth in chickens, pigs, and cattle. It has been estimated that 70% of antibiotics used today are used in agriculture. Regardless of the cause, resistance did and does develop and this leads to an entirely new specialty called Infectious Disease Specialists who are on hand to know what germs are around and, more importantly, which antibiotic to use.

- **Vaccines**

In a letter from the American Academy of Pediatrics to its members announcing their "Protect Tomorrow" project, stressing the importance of immunizing children, they proclaimed immunizations "one of the greatest advances in modern medicine."

It was just a little over 50 years ago that Tulsa County Medical Society started its oral Polio campaign. In the Fall of 1962 we gave OPV 1 and OPV 2 about a month apart. The third dose was given in the Spring of 1963. In the Fall of 1962 there were 12 cases of Polio in Tulsa County. There have been none since.

Prior to the Salk and Sabin vaccines, the United States could expect about 10,000 cases of paralytic Polio yearly. The last epidemic here was in 1979 which involved 13 unimmunized Amish children in the east. Between 1980 and 1999, there were 152 cases of Polio in the United States, six acquired Polio from outside the United States, two indeterminate (no Polio

virus isolated), and the remaining 144 being vaccine (OPV) acquired. In 2000, the oral Polio vaccine was discontinued and there have been no further cases.

A review of the figures from the Center for Disease Control (CDC) tells a fascinating story about the control of many diseases in our lifetime. Polio is a prime example, but the figures on the so-called "childhood diseases" is just as outstanding.

Rubeola got a live attenuated vaccine in 1963. Before that time, it caused some 500,000 cases per year, with 500 deaths per year. Most of the deaths in children were from pneumonia, and in adults, it was from encephalitis. There seemed to be an epidemic every two to three years. In 1982, the incidence had dropped to 25,871 and, by 1992, it was only 1,497. In 1993, it had dropped to 500, 200 in 1997, and only 37 cases in 2004. There was one resurgence in 1989-1991, about three years, with 55,622 cases and 123 deaths.

The history of Hawaii gives us an idea of the deadly effect of Rubeola on populations with no immunity. When Captain Cook arrived in 1778, the population numbered 300,000. Missionaries followed and brought epidemics of Rubeola. By 1820, the population of the Islands had dropped to 135,000, and by 1876, to 53,900. King Kamehameha and Queen Kamamalu visited King George IV in London in 1876, both contracted Rubeola and both died.

Rubella and its relationship to newborn problems was first identified in 1940 by an Austrian Ophthalmologist, Norman Gregg, who reported 78 infants with congenital cataracts. The virus was isolated in 1962 and a vaccine licensed in 1969. All of us were familiar with the damage that 85% of the fetuses sustained when their mothers developed Rubella in the first trimester. Defects were rare if the infection occurred after the 20<sup>th</sup> week. This came to a head during an epidemic in 1964-1965 at which time there were 12.5 million cases of Rubella with 20,000 newborns who developed Congenital Rubella Syndrome (CRS). Two thousand of these babies had encephalitis, 1,800 were mentally retarded, 11,600 were deaf, 3,580 became blind, and 2,100 died. CRS surveillance continues with 67 cases reported in 1970, and an average of 5-6 CRS cases annually since 1980.

Varicella, our old friend Chickenpox, was a part of childhood. However, it did have its problems. Bacterial infections of the skin lesions, pneumonia, some CNS manifestations, encephalitis, Reyes Syndrome, and 2-3/1,000 cases hospitalized each year, some post-herpetic neuralgia, and only 1/60,000 cases died. There was a very low congenital viral syndrome, less than 2% if the mother had it in the first 20 weeks of pregnancy. In pre-vaccination days, 11,000 a year required hospitalization. The vaccine was licensed in 1995 and since 1996, hospitalizations and deaths have decreased by 90%.

Diphtheria has already been pretty well covered. Before 1920, there were 100,000-200,000 cases/100,000, with 13,000-15,000 deaths per year. With the development of the toxoid, the incidence began to drop and by 1945, it was 19,000. Between 1970 and 1995, it was 196 cases per year, and from 1980 to 2004, there have been only 57 cases, an average of 2-3 per year. In

May of 2010 one 15-year-old boy in Port Au Prince, Haiti, died of Diphtheria while they were searching for the antitoxin. There have been no reported cases in the United States since 2003.

Mumps or Epidemic Parotitis was described by Hippocrates in the 5<sup>th</sup> Century. It is still with us. There were 212,000 cases in 1964. The vaccine was licensed in 1967 and became a part of our routine immunizations in 1977. It became a part of MMRV in 2005. Since 1989, we have seen a steady decline with 258 in 2004, and a moderate resurgence in 1987 when 12,848 cases were reported. Immune globulin is no longer being given to contacts.

We have had a vaccine for Pertussis (Whooping Cough) since 1926 with good results, but good control has been difficult with outbreaks every three to five years. The last peak was in 2005, with more than 25,000 cases. As of August 2010, there have been 10,400 cases. The acellular vaccine, aP, was licensed in 1991 for use in older children. As Pediatric Residents, we recall how we were the ones who had to get the culture from the posterior nasopharyngeal of our little patients and put it on a Bordet Gengou culture medium as quickly as possible.

Smallpox was declared eradicated worldwide in 1980. Routine Smallpox vaccinations were discontinued in the United States in 1971. My last Smallpox vaccination was given at Brooke Army Medical Center in June of 1951. I had a primary take with a sore arm and a temperature of 104°F.

When you ask some of the older Pediatricians what they think has been the greatest improvement in Pediatric care during their career, almost all will tell you it is the development of the vaccine for Haemophilus Influenzae, Type B. Prior to the introduction of the vaccine, there was a prevalence of 20,000 cases a year in the United States. It is a nasty bug and was the leading cause of bacterial Meningitis and other invasive diseases in children under five years of age. About 90% of Hib disease occurs in children under 5, and two-third of all cases among children under 18 months of age. The Meningitis was resistant to many early antibiotics and Mental Retardation and deafness resulted in 25-30% of those who made it.

Epiglottitis was severe, croup-like, and required tertiary care facilities. Pneumonia, Septic Arthritis, Osteomyelitis, and Otitis Media were also seen. The first vaccine was a polysaccharide vaccine that came out in 1985, and was not effective in children under 18 months. However, the Hib conjugate vaccine that came out in 1987, PRP-T and PRP-OMP, both produced a lasting immunity and the results became apparent very quickly. From 1996-2000 there was an average of 1,247 cases of H flu cases a year, involving all ages. Of these, 22% or 272, were in children under the age of 5.

Our last big epidemic of Hep A, previously called Infectious Hepatitis, was in 1971 when the CDC reported some 59,606 cases, with only 2,979 in 2004. The vaccine was licensed in 1995 and has been most effective. It is recommended whenever the incidence of Hep A gets above 20 cases per 100,000 population. Hep A is more common in children than it is in adults.

Serum Hepatitis, or Hep B, has come and gone. The use of disposable needles and syringes in the 1950s have helped eliminate the iatrogenic

causes but, unfortunately, it is not uncommon among drug addicts and homosexuals. Perinatal transmission to infants from infected mothers is the most common source of infection, accounting for 24% of chronic infections. If the mother has a positive test, it is imperative that the child get the vaccine within 12 hours after birth. Since the advent of the vaccine in 1995, the incidence of Hep B has declined 94% among children and adolescents from 1990 to 2004.

The Rotavirus is the most common cause of severe gastroenteritis in infants and young children, affecting almost all children by five years of age and causing 20-60 deaths per year in the United States, (500,000 deaths worldwide). It is almost common in children in day care centers, the immunocompromised and those with HIV. It was identified in 1973 and a vaccine was licensed in 1998. However, this vaccine was associated with intussusception and a year later it was withdrawn. The second generation vaccines were licensed in 2006 and 2008. In one study, the vaccine was 74% effective in preventing all degrees of diarrhea due to Rotavirus, and 98% effective in preventing severe cases.

Efforts to develop a vaccine for Pneumococcal Disease started as early as 1911. However, as we reviewed earlier, the advent of Penicillin in 1945 was so exciting and worked so well that the efforts to develop a vaccine practically stopped. In the 1960s, however, we began to see the development of resistance by the Pneumococci to Penicillin. Consequently, there was renewed interest in developing a vaccine and, in 1977, the first vaccine was licensed. The Pneumococcus was about as nasty a bug as H flu.

The Pneumococcus was the culprit in about 20% of our cases of Bacterial Meningitis with a mortality of 30%. According to the CDC, it accounted for 70% of invasive disease in children under two years of age and, as Hib disease has decline, S.Pneumoniae has become the leading cause of Bacterial Meningitis in children under five years of age. Prior to the vaccines, about 200 children died each year some 13,000 developed Bacteremia, 700 children had Meningitis, and some five million had Otitis Media.

The rates were worse with kids in the high risk groups, such as HIV, Sickle Cell Disease, African Americans, Native Americans, and Alaskan Natives. The first Pneumococcal Polysaccharide vaccine was licensed in 1977 with the development of the Pneumococcal conjugate vaccines in 2000.

Research continues and the future will probably be as exciting as more disorders are brought under control. A vaccine for HIV is hopeful in the near future and there is even talk of vaccines for some cancers. There will always be people who blame Autism, Mental Retardation, irritability, tiredness, etc., on the vaccines. At least, in September of 2006, the FDA came out with a statement that studies do not show any association between Autism and vaccines that contain Thimerosal. Hopefully, the "herd effect" will protect those who have not been immunized.

## **NEPHRITIC SYNDROME**

One of our medical students presented a paper on The Nephrotic Syndrome in 2008. He gave a fine presentation on its characteristics, etiology, physical and laboratory findings and treatments. An excellent review of the use of prednisone and some of the drugs like cyclophosphamide-cytoxin, etc. When he opened the floor to questions, I asked if they had exposed the child with Nephrosis to a child with Measles. This is probably a good reason not to invite old retired Pediatricians to conferences!

In 1953, we had a five-year-old boy at St. Louis Children's Hospital, with the Nephrotic Syndrome, "T-Bone" Smith. He had the typical albuminuria, hypoalbumenia, ascites, edema of face and extremities, and was weak, anorexic, and quite lethargic. His mother had been told to keep him on a high protein diet with lots of meat. He had been giving him a T-bone steak daily, hence his nickname. Periodically, he was hospitalized to remove some of the abdominal ascitic fluid. It wasn't unusual to drain several liters of fluid during an abdominal paracentesis. He was getting IV albumin and a mild diuretic along with the diet. Prednisolone and the cyclophosphamides hadn't come along at that time. He was exposed to a child with Rubeola and came down with the disease, and was pretty sick.

However, on clearing up from his Rubeola, his Nephrotic Syndrome also cleared. When I left St. Louis in 1956, they were just beginning to use Prednisone and the Cyclophosphamides were just coming on the scene. The abdominal paracentesis for the Nephrotic Syndrome was so common at that time that the hospital had a small table used just for that purpose, a wooden frame with a canvas top and a hole in the middle. After prepping the skin and using a local, a trocar was inserted, the child turned to the prone position, and the fluid allowed to drain into a basin by gravity. It wasn't unusual to obtain several liters of ascitic fluid in this manner and the child's relief was complete and immediate. Unfortunately, this was only a temporary expedient and had to be repeated periodically.

## **CHILD ABUSE**

Child abuse, as we know it today, was relatively unknown to the physician practicing before Drs. C. Henry Kempe, Silverman, Steele, Droegemullen, and Silver published their "Battered Child Syndrome" in JAMA, 1962, 181:17-24. Few of us thought that parents or guardians of infants and small children could injure children that were in their care. Even Dr. Caffey, the pioneer of Pediatric Radiology and author of the "Bible" on Pediatric Radiology, a Pediatrician and Radiologist at Columbia University and Babies Hospital in New York City, didn't fully appreciate the association of Subdural Hemorrhages and fractures of the long bones and ribs until 1946 when he published a review of six cases. He had suspected the association of trauma as early as 1939, but the theory at the time was that Scurvy was the etiological factor. Early Radiological textbooks referred to Brittle Bone Disease. Today, we know that as Osteogenesis Imperfecta. A French physician, Dr. Ambroise Tardieu, first published an article on Child Abuse in

Paris in 1860. However, there were no X-rays and time relegated it to obscurity.

Dr. Kempe had started talking about it in the late 1950s but most of us felt that it was unlikely in our practice; we had simply not seen it. In the first half of the 20<sup>th</sup> Century, 20-60 cases had been reported. After the JAMA article in 1962, there were 10,000 cases, in 1976 about 669,000, and in 1978, some 836,000 cases were reported. It has been estimated that there were three million cases worldwide in 1992 and, in 2000, some 4 million had been reported. An interesting side note: Dr. Henry K. Silver, co-author of the above noted JAMA article, also wrote in JAMA 1984, 251(6):739 on Medical Student Abuse-an Unnecessary and Preventable Cause of Stress. Dr. Silver also developed the first program for nurse-practitioners in 1964 and in 1969, he developed the Physicians Assistant Program, both specializing in Pediatrics.

# PEDIATRICS TODAY

## Tulsa Today

The era from the 1970s to the present we could call Modern Medicine because it is what we practice today. When we look back on the changes that have taken place during the past 90-100 years, we have seen changes that we just didn't anticipate and we know, from that experience, that some terrific changes are due in the future. Today's medicine will probably seem antiquated to our children and grandchildren.

This section of our Pediatric history will again look at the City of Tulsa, its hospitals and medical care facilities, the medical schools, the physicians, and the changes that have taken place in the practice of medicine.

Not surprising, the City of Tulsa continues to grow from 261,685 in 1960 to 396,466 in 2011.

In 1953, the city and county planning boards combined to form TMAPC (Tulsa Metropolitan Area Planning Commission) which talked about radials from downtown Tulsa to the suburbs and an Inner (and perhaps Outer) dispersal Loop which were to have been completed by 1972. Today, we have the Broken Arrow Expressway, the Skelly Bypass, the Sequoyah Loop, Mingo Valley Expressway, Gilcrease Expressway, Red Fork Expressway, Crosstown Expressway, Osage Expressway, LL Tisdale Parkway, Okmulgee Expressway, Keystone Expressway, and the Creek Turnpike.

In the 1970s, the periphery of the city gradually expanded. Memorial was now the eastern

## When we look

back on the history of Pediatrics during the past 100 years, we have seen changes that we just couldn't have anticipated and, from experience, we know there will be come equally terrific changes due in the future.

border, 51<sup>st</sup> Street to the South, the Arkansas River to the west, and a slow move toward Turley to the north. The building of Saint Francis Hospital at 61<sup>st</sup> & Yale, and Oral Roberts University at 81<sup>st</sup> & Lewis pushed the growth to the south.

Today, there is development all the way from the Arkansas River to Bixby south, and the west has seen Jenks play a big role with its river front development anchored by the beautiful Aquarium and housing developments to Highway 75 (with the completion of the massive shopping center at US 75 and 71<sup>st</sup> Street known as Tulsa Hills), and going south to 131<sup>st</sup> Street. Gilcrease Hills to the north, and all the way to Sand Springs on the west. Tulsa's growth on the eastside now run into Broken Arrow's city limits, with a casino on 169<sup>th</sup>, then solid around the airport to Owasso and across to Turley.



## Tulsa's Hospitals

### CHILDREN'S MEDICAL CENTER (CMC) 1926-1986



In the words of Dr. James Coldwell, "Children's Medical Center was the result of a community effort to serve children with special health care needs." It was started by the Junior League of Tulsa in 1926, opening its doors in October of that year as the Junior League Convalescent Home for Children. It had room for 14 children in a house that sat at 1101 E. 5<sup>th</sup> St., lent by philanthropist Charles Page of Sand Springs. The history of CMC (from 1926-1986) is beautifully told by Mildred Ladner Thompson in her "Saga of Sixty Years."

She describes the initial need for some type of convalescent facility for children recovering from Polio and other crippling diseases that was

recognized by the Junior League in 1926. They founded a Tea Room and Commission Shop to help raise money for the continuation of the project.

With Polio on the increase, and a rise in Rheumatic Fever and other crippling diseases, the need for more space resulted in a move to 4818 S Lewis and the new home opened in March of 1927 with room for 25 patients. The list of donors to the project included many of Tulsa's most famous pioneers.

The Depression of 1929 made it difficult to keep the doors open, but with imaginative fund raising ideas, such as charity balls, football games, wrestling matches, carnivals, and cruise raffles, they were able to continue to operations.

The Polio Epidemic in 1944 increased the needs and Sister Kenny came to Tulsa to teach her method of treatment and funds were raised to purchase an iron lung. Soon, the Center had a fully staffed physical therapy department with Dorothy Fugitt as the Chief Therapist, a good laboratory, a brace shop, Vic Childers, X-Ray Technician, and Dr. Walter Brown, Radiologist.

Children's Medical Center continued to expand. The Cerebral Palsy Association was granted access to the facility and Dr. Charles Brighton, an Orthopedist at the Springer Clinic, headed up its clinics. Clinics were also established to care for emotionally disturbed children at the same time. Dr. Paul Benton, a Child Psychiatrist, replaced Dr. Richard Apfel as the Medical Director of the institution and as the Salk Vaccine for Polio became available in 1955, the hospital patient character changed from Post-Polio, head injuries, burns and Rheumatic Fever, to a demand for psychiatric care and an interest in Mental Retardation.

Sunny Side School, for the Mentally Retarded, began in 1954 and Mrs. Ruth Smith became its Director. The Oklahoma Mental Retardation Center began in 1952 with help from Federal funding and was one of the first such centers in the United States. I can still remember Dr. Paul Benton describing a condition referred to as *chronic brain syndrome*. It was characterized by some brain wave changes on the EEG, hyperactivity, impulsivity, and emotional problems. Later, this became known as MBD or Minimal Brain Dysfunction, then ADD or Attention Deficit Disorder, and now, ADHA or Attention Deficit Hyperactivity Disorder. None of us were sure just what it was, and I suspect that, today, we still don't know what causes it or what it is.

The Joint Commission on Accreditation for Hospitals gave Children's Medical Center full accreditation in 1957 which allowed CMC to train nurses, doctors, psychologists, and other professionals in a five-state area. Mr. John Byrne became administrator in 1958 and Dr. James Proctor, a Psychiatrist, succeeded Dr. Benton as Chief Psychiatrist and Medical Director. Dr. Proctor started a psychiatric resident training program and organized an annual institute that brought in many well-known specialists from first-class institutions for presentations.

Dr. Coldwell had become acquainted with Dr. John Money when he was taking Fellowship training at Johns Hopkins Hospital and asked him to

present a paper during one of the seminars at CMC. Dr. Money talked on pornography in the home. It was our first exposure to some of his ideas and it stirred considerable discussion among our pediatric, social service, and psychiatric groups. Dr. Money was a New Zealander who emigrated to the United States in 1947 and became a Pediatric Psychoendocrinologist who worked with Dr. Lawson Willkins (the first Pediatric Endocrinologist), and developed Johns Hopkins' Gender Identity Clinic. He died of complications of Parkinsonism in July of 2006 at the age of 84.

From the early 1960s through the 1980s was a golden period that saw expansion in services and space. The Center still needed financial help from the CMC Auxiliary and they responded with horse shows and the annual Oklahoma Arts & Crafts Festival to continue raising money. In 1971, some 3,000 children were served by the Center and the decision to move to better quarters was made with the prodding of the Joint Commission. Consequently, CMC bought the Sinclair Research Laboratory building on 5300 E Skelly Drive and, after a massive remodeling project, converted it to a 60-bed hospital, opening in 1974.



When one considers the fact that Tulsa did not have a medical school at the time, and very little, if any help for our indigent from the state's legislature, it is amazing to review the services offered by the Center. The Orthopedic Clinic was staffed by practicing Orthopedic surgeons. The Cerebral Palsy Clinic was run by Dr. Brighton, an Orthopedist. The Cardiology Clinic was primarily a Rheumatic Fever Clinic and was run by Dr.'s Braverman and Endres (both having taken a year of Cardiology Fellowship). The active Dental Clinic was run by volunteer dentists. The clinic for Evaluation of Developmentally Delayed Children, a Neurology Clinic, was originally run by Dr. Averill Stovall, a Neurosurgeon, then later by Pediatric Neurologists Dr.'s Morgan and Miller. The Ophthalmology Clinic, a Spina Bifida Clinic, was run by Dr. Jim Wentzel, a Pediatric Nephrologist (who drove up from Oklahoma City to attend), and Dr. Mark Capehart, an Orthopedist, as well as by a Pediatrician and a Pediatric Neurologist. An Intake Clinic was developed to serve children with less clear neurological developmental and behavior problems.

Dr. James C. Coldwell graduated from the University of Oklahoma School of Medicine, completing his Internship at the University of Colorado,

then his Pediatric Residency at the St. Louis Children's Hospital. After his military duty, he came to Tulsa in 1960 and began his work at CMC. He took a year off (1965-1966) to take a Fellowship at the Johns Hopkins University School of Medicine in Baltimore. On his return to CMC, he began developing other services. The Cerebral Palsy Clinic was discontinued when its director retired, leading to the development of a Cerebral Palsy "services" with the children being folded into the general orthopedic clinics. The Cardiology Clinic also ceased because of the decline in the number of Rheumatic Fever patients and with the development of a Pediatric Cardiology Clinic at Hillcrest Hospital that could see referrals. However, with Dr. Coldwell's return, other programs were developed, consisting of a Genetics Clinic, a Neurophysiology Department, expansion of Neurology and the formation of a Muscular Dystrophy Clinic and a Speech and Hearing Clinic.

After the move to the new facility on Skelly Drive, there was further expansion and organization of specialty clinics. These included an Orthopedic Clinic, an Upper Extremity Clinic, Genetics was greatly expanded, Dermatology was added, and a Neonatal follow-up clinic for infants in trouble also came along. Dr. Don Wilson, a Pediatric Endocrinologist, came to Tulsa in 1980 and started several research projects, started a Winter Camp for older children with Diabetes, and a clinic for endocrine and growth disorders. The Spina Bifida Clinic was very active with several specialists involved, including Pediatricians, Orthopedists, Neurologists, and a Nephrologist. An ENT Clinic with an audiology service also started up. Orthoptics was started as well as the Ophthalmology Clinic. A Rheumatology Clinic was begun and the Dental Clinic was reinstated. Dr. Coldwell also started a clinic for Inherited Metabolic Diseases.

This expansion was possible because of the additional space, but also because of the willingness of the community physicians to provide their time on a volunteer basis to staff them. About the only physicians that CMC could reimburse were those who came from Oklahoma City to staff Pulmonology, Nephrology, and Rheumatology.

Beginning in 1990, Children's Medical Center found that it could no longer continue its efforts at such a high level, having lost support from the Federal government, the State of Oklahoma, the Board of Trustees, the Administration, and the practicing physicians. At that time, the Federal government began giving money to the State in the form of block grants, enabling Oklahoma to prioritize their needs. Unfortunately for some poorly financed states, such as Oklahoma, services for children did not receive a high enough priority. A downward spiral continued with the institution being sold to Hillcrest Healthcare Systems. They closed the facility on Skelly Drive in the year 2000 and dispersed activities to different areas within the Hillcrest Healthcare Systems.

Children's Medical Center was a jewel in the crown of Eastern Oklahoma's care for its children. During its prime, there was no parallel for its concern for children with multiple problems that the average Pediatrician or physician was unable to manage. Many people, lay and professional,

worked long and hard to make it a success. It will be up to the medical schools, the Children's Hospital, and the rest of us to make up the empty space that its loss has in our hearts and minds. Dr. James Coldwell will be long remembered for his humanitarian efforts to see that children with serious developmental, genetic, and metabolic disorders have a proper evaluation, diagnosis, plan of treatment, and follow-up care and management.

### **THE CITY OF FAITH 1981-1989**



In 1977, Evangelist Oral Roberts claimed to have a vision of a 20-story, 777 bed hospital, a research center in a 30-story building, and a medical office building in a 60-story building. It was opposed by about half the physicians in Tulsa because it was determined that Tulsa had more beds than needed by more than 400. However, Mr. Roberts appealed to his faithful and a mass campaign to get approval for the hospital was made and granted. The hospital

construction started in 1979 and in November of 1981 the first patient was admitted. The City of Faith had between 75-250 patients, but by 1986 they were losing \$10 million a year and closed in 1989. The research center never developed. Many of the physicians recruited for the hospital remained in Tulsa and continued to offer their skills at other hospitals.

Dr. Sidney Garrett became the Dean of the medical school and was the Professor of Family Medicine. Dr. David Schrum came up in early 1979 to become the Professor and Chairman of the Department of Pediatrics and Head of the Pediatric Section of The City of Faith Hospital. He taught a course on Growth and Development and wrote a manual for the students. Dr. Herschel Rubin provided clinical experience for the students in his office with the help of Dr. Gib Haslam, who was a Clinical Professor of Pediatrics and taught half time from 1980-1984. Gib died in 1985. Dr.'s James Hendricks and Ken Sutter, with Lynette Calvert and Marion Ledbetter, made up the rest of the Pediatric faculty.

The medical school at Oral Roberts University opened in 1978 with 24 Freshmen. In 1979, they had 48 Sophomores, and eventually a total of 533 students. Towards the end of the life the medical school, they had 155 full and part-time faculty in the Basic Sciences and the Clinical Faculty.

### **CANCER TREATMENT CENTER OF AMERICA**

Cancer Treatment Center of America (CTCA) moved into the empty part of The City of Faith Hospital called City Plex West, with a hospital specializing in treating advanced cancer. They functioned with 36 patient rooms, operating there until 2005 when they moved to their new facility at 81<sup>st</sup> & Highway 169.

They now function as Southwestern Regional Medical Center with a staff of MDs, DOs, PhDs, Naturopaths, Chiropractors, and Acupuncturists.



### **THE ORTHOPEDIC SPECIALTY HOSPITAL**

The Orthopedic Specialty Hospital opened in City Plex West of the old City of Faith Hospital when Cancer Treatment Center of Tulsa moved out, with ten surgical suites and 25 hospital rooms. In 2009, they became the Oklahoma Surgical Hospital and now include general surgery.

### **ST. JOHN HOSPITAL**

St. John expanded with a small Pediatric wing and good obstetrical units and nurseries. At the same time, they discontinued their School of Nursing. However, it continued to increase its “market share” by building a hospital in Broken Arrow which was finished in 2009, sponsoring the Jane Phillips Center in Bartlesville, building a four-story hospital in Owasso, and sponsoring the City Hospital and Bartlett Memorial Medical Center in Sapulpa, a North Park Medical Center in Claremore, a South Campus at 81<sup>st</sup> & Memorial in Tulsa, and an Urgent Care Center in Tulsa.

### **HILLCREST HEALTHCARE SYSTEM**

Hillcrest also discontinued its School of Nursing, but enlarged its present site with a new Heart Center, a Women’s Pavilion, and taking over the Children’s Medical Center with its excellent Pediatric Neurology Department, Behavioral Health Services, Developmental Pediatric and Pediatric Rehabilitation Units, and Neonatal follow-up programs. Its **Mabee Children’s Hospital**, that opened with a gift from the Mabee Foundation on 12<sup>th</sup> & Utica, functioned as a Children’s Hospital for several years. For lack of funding and the need of Hillcrest for additional obstetrical and medical beds, it closed its use as a children’s hospital.

### **DOCTORS HOSPITAL**

Doctors, on 23<sup>rd</sup> & Harvard, operated as a general hospital with 100 beds from 1966 to about 2000, but had no specific Pediatric department.

## SAINT FRANCIS HOSPITAL



Saint Francis opened its doors in September of 1960. It developed a Pediatric floor under Sister Clara in 1962 and a Pediatric Intensive Care facility several years later. There was interest in developing a Children's Hospital manifested by the construction of a Ronald McDonald House on the campus grounds with lots of support from Dr. Dan Plunket. However, the Children's Hospital at Saint Francis did not open its doors until the Fall of 2008.

## THE OKLAHOMA OSTEOPATHIC HOSPITAL

The Oklahoma Osteopathic Hospital was created in 1943 by a group of Osteopathic physicians. It became Tulsa Regional Medical Center in 1996 and then affiliated with Oklahoma State University Medical Center in 2006.

# Today's Medical Schools

## UNIVERSITY OF OKLAHOMA SCHOOL OF MEDICINE-TULSA

Preceding the coming of the University of Oklahoma School of Medicine-Tulsa, there was the Tulsa Medical Education Foundation (TMEF).

Dr. Ceylon Lewis, an Internist, was the President and Founder of the Tulsa Internal Medicine Foundation, Inc., from 1982-1984, one of the building blocks of the TMEF. TMEF was incorporated on July 1, 1971. Its first officers were Wendell Smith, MD, Chairman; William Bell, MD, Vice Chairman; Jed Goldberg, MD, Secretary; and Robert Imler, Jr., MD, Treasurer.

Dr. Edward J. Tomsovic (1922-1997) came to Tulsa to be the Dean of the University of Oklahoma, Tulsa, Medical School from 1976-1991, a 12-year stint. Dr. Tomsovic, a native of San Francisco, Pre-Med at the University of California at Berkeley in 1944, and his MD from The University of California at San Francisco in 1946. His Internship was at Bellevue Hospital in New York, followed by a Pediatric Residency at Bellevue from 1948-1950. He entered the Army and achieved the rank of Colonel, becoming the youngest Chief of Pediatrics at Walter Reed Hospital. During his Army career, he received the Commendation Award and the Legion of Merit Medal. After his retirement from the Army, he rose from Professor of Pediatrics in the Department of Pediatrics at the University of California, Irvine, to Assistant Director, then Director of the University of California, Irvine Medical Center.

He came to Tulsa where he served as our Dean. Ed directed the growth of the medical school from a collection of offices and clinics scattered over the City to the campus on 26<sup>th</sup> & Sheridan. He retired to become the Medical Director of The Doctor's Hospital Homecare Program.

When Plunket and Block arrived, there were only three part-time clinics (aside from those developed at the Children's Medical Center) in the area: Saint John, Hillcrest, and the Tulsa Health Department. Residency programs were situated in the three hospitals. The first nine residents were already in town working under the TMEF. The University of Oklahoma School of Medicine was then recruited to take over directorship and Dr. Plunket became the first Chair of the Pediatric Department and the first Program Director. Dr. Block was the Program Director from 1981-2005, and Dr. Deborah Lowen took over the position at that time.

Of those original nine residents, Dr. Zomer and Dr. Moncada remained in Tulsa, Dr. Ray Harris is in Bartlesville, and Dr. Carla Wilsey is in Stillwater. The original ambulatory pediatric clinic was located on 21<sup>st</sup> Street, just west of Utica. The only other pediatric clinics were those associated with Hillcrest and St. John who each had one pediatric clinic opened a couple of days a week. The campus on Sheridan opened in 1981 and was replaced by the final move to the 41<sup>st</sup> & Yale campus in June of 2000. The original faculty consisted of Dr. Plunket and Dr. Block. Dr. Kevin Donovan, a gastroenterologist, Dr. Bhushan Sharma, an infectious disease specialist, and Dr. Tom Reilley, a neurologist were soon added to the faculty, Dr. Gwen Gibson, Dr. Don Hamilton, Dr. Jodi Ladd, Dr. Lynn Calvert, and others followed. Dr. Plunket relinquished the directorship of the program to Dr. Block in 1983, but continued to chair the Department of Pediatrics.

The Pediatrics hospital training program began in all three hospitals with Hillcrest and St. John Hospital for three months, St. John and St. Francis for three months, and St. Francis and Hillcrest for three months. This didn't work well, and in the mid-1980s a consolidated hospital program was begun at Saint Francis. Dr. Doug Stewart was the first Osteopathic physician to join the program and since then there has been a steady mix of MDs and DOs. Dr. John Studebaker was our first Infomatic Specialist and he became a part of the program in 2002.

The Medical/Ped Program began in 1989 and has continued to grow and is now a department in its own right with Dr. Mark Fox as Department Chair. 1989 saw the consolidation of training in newborn care under Dr. Calvert at Hillcrest where the Obstetrical Department was delivering all its infants.

In response to an ever-growing need and interest in child abuse, the Justice Center was built in 1992. It was the first child abuse center of its kind in the country.

Dr. Martin Fitzpatrick became the Dean, Ralph Richter became the Associate Dean, and Jack Nettles was Ob/Gyn Chair, and we started looking for a head for the Pediatric Department. Our search committee interviewed several candidates, and our primary objective was to find someone who would include the practicing Pediatricians in the program and avoid a "town-gown" division. We felt extremely lucky to find the perfect candidate in Dr. Dan Plunket.

Dr. Plunket arrived in May of 1975 and Dr. Robert Block in August. Their offices were in the Ranch Acres office building from 1975-1981. Dr. Tom Charbonnel arrived in 1977 and Dr. Sean Ferrell in 1978. The academic program was supplemented heavily by the pediatricians in Tulsa and the faculty eventually included 50 volunteer pediatric faculty appointments who taught in the wards and in the clinic.

Dr. Block became the Department Chair in 1996 when Dr. Plunket was appointed to the Associated Dean position in the medical school. In 2001, the Department Chair became endowed in Dr. Plunket's name.

Dr. Block reviewed the history of the Pediatric Department of the Tulsa branch of the University of Oklahoma School of Medicine. His comments are worth reviewing for an accurate description of the development of this department from the 70s to today.

From a beginning of paid faculty consisting of he and Dr. Plunket in 1975-76 to the four in 1983, the number of faculty then burgeoned to 32 full or part-time in 2008, then falling to 20 in 2010 as the University and Department reorganized. By the end of 2011, new faculty additions will bring the total up to 26. Tulsa faculty members have all been skilled clinician-educators, a new "track" in academic medicine. They have been teachers and mentors to medical students, physician-assistant students, and residents over more than three decades of academic achievements. During this time, the faculty participated in a safety net practice of Pediatrics developing clinical services for as many as 12,000 children each year in the OU Pediatric Clinic alone, most of whom relied on Medicaid or were uninsured.

In order to develop a wide range of services for their patients, OU Pediatric faculty recognized the importance of collaborating with community programs such as early childhood education programs, the City-County Health Department, the Margaret Hudson Program, the Child Abuse Network, the Parent-Child Center, Tulsa and area public schools, the Hillcrest Medical Centers program for Adolescent Substance Abuse, the Red Cross Blood Services, the March of Dimes, the Ronald McDonald House, Neighbor-For-Neighbor, Tulsa hospitals through the Hillcrest nursery and the Saint Francis Children's Hospital.

#### **IMPORTANT MILESTONES:**

- 1975-1980    Creation of the County's first consolidated Pediatric clinic, the Tulsa Ambulatory Pediatric Clinic (TAPC).
- 1981-1985    The TAPC and the Department move to the Sheridan Campus.
- 1986-1991    Resident hospital training consolidated to Saint Francis Hospital.  
                  Combined Medicine/Pediatrics Program initiated (1989).  
                  Normal Newborn Nursery Service at Hillcrest Medical Center.  
                  Oklahoma Bioethics Center, Dr. Donovan, Chair.

First DO graduates entered into OU Residency Program (1988).

- 1997-2001 Department Chair endowed, The Daniel Plunket Chair in Pediatrics (2001).
- 2002-2005 Dr. Don Hamilton establishes the first OU school-based clinic at Kendall-Whittier Elementary.  
Dr. Deborah Lowen becomes the third Residency Program Director, following Dr. Plunket and Dr. Block.
- 2006-2011 Dr. Dan Plunket dies February 24, 2008.  
Child Abuse Pediatric Sub-Specialty established.  
Pediatric Hospital Program established in Tulsa.  
Dr. Keith Mather joins the faculty to head up the Pediatric Hospitalist Program and also to become the fourth Resident Program Director.  
Dr. Robert Block is elected the American Academy of Pediatrics President-Elect (2010-2011) and the President (2011-2012).

One outstanding and important result of the Pediatric Resident training program in Tulsa has been the addition of approximately 47 Pediatricians who completed their training at OU-Tulsa and have remained in Tulsa to practice.

OU-Tulsa Pediatrics has been responsible for recruiting and supporting many of the first sub-specialists in our community. Over the years, this includes the first Board Certified Pediatric sub-specialists in the following areas:

Hematology-Oncology  
Gastroenterology  
Infectious Disease  
Neurology  
Adolescent Medicine  
Rheumatology  
Child Abuse Pediatrics  
Infomatics  
Hospital Medicine-The Hospitalists

The Department of Pediatrics has been centered on Dr. Plunket's "Plunket's Principles" which include:

Patients  
People  
Perseverance  
Pride

These principles served to guide the department during the tenure of its only two Chairs. As Dr. Block retired in October 2011, a new era began...the first time in its 36 year history the department will be led by someone other than Dr.'s Plunket and Block. As there have been several successes in the past, the future holds great promise under the leadership of a new Chair, along with developing current and newly recruited faculty. Dr. Kevin Donovan, long-standing Vice-Chair, and current Interim Chair, will continue to be the senior faculty leader for the department.

Dr. Block reflects on his career by saying, *"The Tulsa Pediatric community and the University of Oklahoma have been a wonderful foundation for me, both professionally and personally. So it was for Dan Plunket, who stands forever at the forefront of our memories and continues to be a mentor for us as we recall his leadership and personal attributes. It is now up to the next iteration of our department and our community to face new challenges with the same compassion and professionalism that has defined Tulsa Pediatrics through out its remarkable history."*

The Pediatric Department has much to be proud of. In 2005, it celebrated its 30<sup>th</sup> anniversary. It is the most honored department in the medical school with faculty awards and has graduated over 150 Pediatric Residents and over 30 Medical/Ped Residents. It continues to be the largest provider of primary care for indigent children and Medicaid recipients. Its use of the clinical staff has been a real plus for the Resident and medical students, as well as a real honor and pleasure for the staff.

At present, the medical school has the distinction of being the first school of community medicine in the nation. It is bringing back altruism to medicine and is on the verge of becoming a full four-year school.

The focus at this time is going beyond individual health into community health, to improve the health status of the community and to decrease the disparity in healthcare among those living in North Tulsa and those living in South Tulsa. As an aspect of this approach, a new program has been started with students just starting their residency. Instead of immediately looking at area hospitals and clinics during their first week of the program, they will spend the time interviewing not-for-profits, talking to police officers, and visiting with other community leaders. In the past, students have been so focused on getting into medical school, learning the science, becoming doctors and opening a practice, that they forget what used to be an unspoken assumption; their social responsibility to the community they set up practice in.

#### **ORAL ROBERTS UNIVERSITY MEDICAL SCHOOL**

Evangelist Oral Roberts dreamed of a hospital that would extend his ministry's outreach, with a medical school that would provide young physicians with a "holistic" approach. Dr. James Winslow, an orthopedic surgeon here in Tulsa, left his practice to become the new Dean of the

Medical School in 1974, and in 1981 the first class began. He also started a school of Nursing in 1975 and a School of Dentistry in 1978.

The school brought in many physicians as instructors, developed ties with local Pediatric groups and Pediatric offices as well as St. John Hospital and the Children's Medical Center to provide a clinical experience for both the medical and nursing students.

By 1989, the school was losing \$10 million dollars a year and was \$25 million in debt. It closed on October 16, 1989, and the remaining 333 students finished their training at other schools. Exact figures are hard to come by, but it is estimated that most of the graduates went on into some specialty and about half went into the mission field either on a part- or full-time basis. Dr. Winslow moved to Chickasha and returned to the full-time practice of orthopedics. Many of the faculty remained in Tulsa, some returning to practice and others teaching at the University of Oklahoma School of Medicine.

#### **OKLAHOMA COLLEGE OF OSTEOPATHIC MEDICINE OKLAHOMA STATE UNIVERSITY SCHOOL OF MEDICINE**

The Oklahoma College of Osteopathic Medicine was founded in 1972 with the Oklahoma Osteopathic Hospital. Initially it was designed to provide Oklahoma with Primary Care physicians to small towns and rural areas. Dr. Larry D. Cherry, DO, was appointed Assistant Professor of Clinical Sciences in 1977, and Dr. John L Rutherford, DO, a long-time physician in Tulsa who had held a part-time appointment as Professor of Osteopathic Medicine at the college, was assigned the task of developing and managing the college's community-based primary care teaching clinics, applied clinical research interests, and OCOMS' future involvement in osteopathic continuing medical education activities.

The college has graduated some 2,250 physicians so far, about two-thirds going into primary care and the other one-third into specialties. However, it has grown since that time and in 1988, merged with Oklahoma State University. It is now the largest Osteopathic training center in the United States with an expanding faculty and a class size of over 100 students, of which about half are female. The combined residency programs consists of about 150 residents.

At the time I was first working on this history, Dr. Stanley Grogg, DO, was the Interim Dean/President and Professor of Pediatrics, and the Pediatric faculty consisted of Dr. Kayse Shrum as the Chair of the Pediatric Department, along with Dr. Colony S Fugate, Dr. Amanda Foster, Dr. Shawna Duncan, Dr. Rhonda Casey, and Dr. Heather Rector.

At the present time, Dr. Rhonda Casey, DO, is the Chair of the Pediatric Department and Dr. Kayse Shrum, DO, is the Chair Emeritus, and Provost for the OSU Center for Health Sciences, as well as Dean for the College of Osteopathic Medicine, and still a professor of Pediatrics. Dr. Grogg is now Associate Dean of Clinical Research and Medical Director of Service as well as

-serving as a Professor of Pediatrics. The rest of the faculty includes the following: Travis Campbell, DO, Residency Program Director Shawna Duncan, DO, M. Hany Elsayed, MD, MS, Colony S Fugate, DO, Amanda Foster, SO, FACOP, Jeremy Jones, DO, Heather Rector, DO, and William A See III, DO.

Dr. Stanley Grogg tells me that after obtaining his degree at the original osteopathic college in Kirksville, Missouri, 1971, he took a rotating internship at Still Osteopathic Hospital in Jefferson City, Missouri, and then came to Tulsa in June of 1972 and took his Pediatric Residency at the Oklahoma Osteopathic Hospital, finishing in 1974. His mentors were Dr. John Rutherford, DO, Dr. Don Hughes, DO, and Dr. George Bovasso, DO. (Dr. Bovasso did his pediatric residency at Doctors Hospital in Columbus, OH.) Dr. Don Hughes was the first osteopathic physician to train in Tulsa and Dr. Stanley Grogg was the second. Prior to the above, he trained under Dr. Larry Reed, DO, and Dr. Phil Jones, DO. On completion of his residency, he joined Dr. Rutherford in practice. Dr. Rutherford did his pediatric training at the College of Osteopathic Medicine and Surgery in Des Moines, IA. Dr. Reed was Director of Medical Education at OOH when Stan came to Tulsa. Since then, Dr. Hughes passed away in 2006, Dr. Rutherford retired and moved to Colorado, and Dr. Bovasso still practices part time in North Tulsa.

Dr. Grogg has an extensive CV and is a popular speaker at many pediatric seminars, as well as in the media. He is involved in many research projects as well as being involved with medical education. He was Interim President and Dean of the Oklahoma State University Center for Health Sciences when we first got together to discuss the history of Pediatrics in Tulsa. In 1985, with the help of Dr. Bud Maguire (who was on the Saint Francis Hospital executive team) and with the recommendation of the Tulsa Pediatric Society, Dr. Grogg became a member of the staff at Saint Francis Hospital. He was Chief of Staff at Tulsa Regional Medical Center from 1981-1983, and has served as Chair of the Pediatric Department several times. He has staff privileges at Hillcrest, the Oklahoma State University Medical Center in Tulsa, and has been on the courtesy staff at St. John Hospital. Besides being a Fellow of the American College of Osteopathic Pediatricians, he is also a Fellow of the American Academy of Pediatricians. He is a Professor of Pediatrics with tenure at The OSU Center for Health Sciences, College of Osteopathic Medicine, as well as being a Clinical Associate Professor of Pediatrics at the University of Oklahoma Medical School Tulsa.

Dr. Grogg loves to travel. He has visited 136 countries and has combined this hobby with mission work in Guatemala, Oaxaca, Mexico, and Kabul, Afghanistan. He is a member of DOCCARE, OSU-CHS International Medicine Club, and the Redeemer Covenant Medical Missions.

## **Tulsa's Physicians**

During Residency Training at St. Louis Children's Hospital, Dr. Alexis Hartmann, the Department Head and Chief of Pediatrics, used to say that

there were two kinds of Pediatricians: the Door Bell Ringers and the Lactate Ringers. Of course, he was referring to those in the office practice of Pediatrics and those involved in research and education. This differentiation still holds, and maybe with more meaning than it had 60 years ago.

As we look at the beautiful new Children's Hospital at Saint Francis and realize that perhaps a half dozen or fewer general Pediatricians today are admitting patients to the hospital and are relying more and more on the latest sub-specialist, the Hospitalist, to take care of the child needing hospital care it simply confirms the trend that has been taking place during this period that we write about.

In the early days, the child was simply a small version of the adult, cared for by the General Practitioner (now a Family Practice Specialist). The Pediatricians came along in the late 20s and the Pediatric sub-specialist began to multiply in the 1970s. However, the Pediatrician began to increase in numbers after WWII and many began to practice in the suburbs, smaller cities, and even in some rural areas. These physicians will still need the training to handle problem cases, especially the acutely ill child, the premature infant, and others requiring our special skills. Whether the concept of Community Medicine will address this need has yet to be seen.

Our medical schools should see to it that the new young doctor knows how to organize and run an office. The ability to read a contract so that nothing comes as a surprise as time passes is becoming ever so important since so many of the new physicians have such a big student loan that the offer to work for a clinic or managed care organization, or a partner looks too good to be true. The intrusion of government into medical care means that the medical dollar will have to compete with the money going to big business, the military, and politicians.

Up to this point, when we list the Pediatricians who have come to Tulsa and Eastern Oklahoma, we have talked about the Door Bell Ringers. The Pediatricians who took care of children, answered mothers' anxious calls after hours, made hospital rounds, and yes, even made house calls, the door bell ringers. The Lactate Ringers are those physicians who teach, do research, attend in the hospitals, make rounds, and in many ways, help young physicians develop character, compassion, knowledge, skills, and an understanding of what it takes to help each child develop to his or her fullest capabilities despite physical, emotional, developmental, or social disabilities.

Again, we will try to discuss each physician as to when they arrived in Tulsa. An effort will be made to include every Pediatrician who has been on the faculty but I would be remiss if I did not include the fact that just about every Pediatrician who has made rounds with a student or resident or fellow has been a teacher in some shape or fashion.

#### **Dr. Daniel C. Plunket (1929-2008)**

Our first Chairman of the Pediatric Department of OU-Tulsa, Dan came to Tulsa in 1975. In researching his background, I ran across a poem written by one of his patients which was posted online and drew many responses. It

paints a real picture of the man that our search committee was looking for. The following is the full message posted by "Ulysses."

**The Man Who Saved My Life Has Died  
by "Ulysses"**

*20 years ago this month, I was diagnosed with Hodgkin's Lymphoma. At the time, I'm told, there was only one Pediatric Oncologist working in northeastern Oklahoma, Daniel Plunket. Dr. Plunket was a big, ruddy-cheeked guy, perfectly tempered for dealing with scared parents and confused 11-year-olds. He treated the cancer aggressively where others might have been more cautious. He made my parents tell me what was up when they'd have rather not had to do so. He's why I'm still here. After my regular check-ups ended, I didn't see "Dr. Dan" for a while. Then, in the 90s, after I'd moved to Atlanta, he came to town for a conference and we had lunch together. It was the last time I saw him and I wrote this afterward:*

Meeting my Oncologist for Lunch  
You look once at me  
over the minestrone and  
I'm eleven again.

Let your voice drop  
the way it did  
in the quiet room  
when you explained about the shade  
in the x-rays and it is there again  
beneath the seventh rib.

Damned if I didn't grow up!  
It's been sixteen years  
since we spoke  
and it shows  
in your hearing aid,  
the magician who makes things  
disappear beneath dressing gowns,  
the alchemist who could conjure  
the metal of time from nothing  
is hard of hearing.  
You tell me about the son  
who's my age, we talk about  
Disease.

I want to ask you for a language  
to talk about this, I want  
to tell you that I believe.

In cancer, the bloody being  
of the tumor, and in radiation.  
That I believe in the diagnosis  
in Adriamycin, prednisone,  
vincristine, The Trinity,  
the survivor who suffered,  
the resurrection of the body and  
the life everlasting, amen.

But I don't, and neither do you.  
We argue over the check and you win  
again. Did I ever thank you? So.

Dr. Plunket died yesterday morning of a heart attack.  
Thank you Doc,  
I still owe you.

Dr. Dan Plunket elicited this sort of response from many of his patients, as well as from the many interns and residents who came under his influence. Calm and steady, he was a rock of support for all who came to him for help or support. He did a great job in getting the University of Oklahoma School of Medicine-Tulsa off the ground. The Medical School, his faculty, his staff, and so many of his little patients owe him a tremendous debt of gratitude.

**Dr. Robert W. Block (1943- )**

Bob joined Dr. Plunket in August of 1975, leaving the Army as a Major in the MC, Chief of the Department of Clinics at Munson Army Hospital in Leavenworth, Kansas, to follow his old chief and mentor to Tulsa. Since his arrival in Tulsa, he has served in many capacities, originally as Assistant Professor and Vice Chairman of the Department of Pediatrics, becoming a Full Professor in 1985 and taking over as the Daniel C. Plunket Chair, Department of Pediatrics, University of Oklahoma-Tulsa, College of Medicine.

Dr. Block has held and holds many administrative appointments including The State of Oklahoma Chief Child Abuse Examiner from 1990 to the present, Pediatric Consultant to the Tulsa County Health Department Child Health Clinic, and Director of the Pediatric Residency Program, Department of Pediatrics, University of Oklahoma-Tulsa, from 1981-2005. He has received numerous awards and honors over the years but the most outstanding is the number of times that he has been nominated and won the Aesculapian Award for Excellence in Teaching. In 1998 he was awarded the Stanton L. Young Master Teaching Award, and in 1999, the Samuel Roberts Noble Foundation Presidential Professorship.

He has nominated to the Presidency of the American Academy of Pediatrics in 2010, and elected to the office.

**Dr. George Pizarro Giacoia (1938- )**

George graduated from the Buenos Aires School of Medicine in Argentina in 1961. He did his Internship in the Baltimore City Hospital from 1962-1963, and a Pediatric Residency at the Montefiore Hospital in New York City from 1963-1965. George was a Major in the Army from 1969-1971. After that, he took a Neonatal-Pharmacology Fellowship at Buffalo Children's Hospital in New York from 1971-1972 and became the Director of the nurseries at the Children's Hospital from 1973-1974. He was on the faculty of the medical school until 1977. He came to Tulsa in 1978 to become our first Neonatologist at Saint Francis Hospital, and followed Dr. Block as one of our first faculty members of the medical school in the Department of Neonatology.

George wrote and co-authored numerous articles on Intravenous drug therapy in premature infants, genetics with Dr. Burhan Say of Children's Medical Center, and with Jimmie K. Cash, RN, MS, an article in the Journal of Obstetric Gynecological and Neonatal Nursing in November of 1981 on the Organization and Operation of Human Breast Milk Bank. This was interesting to me since Dr. Dick Russell had discussed his group of women who provided breast milk for his premature infants at St. John Hospital for many years.

Dr. Giacoia left Tulsa in 1996 and is now the Project Director of the Pediatric Pharmacology Research Units Network, National Institute of Child Health and Human Development, based in Bethesda, Maryland. According to his bio sketch, he is the author of some 160 articles, book chapters and abstracts with a special interest in Pediatric Pharmacology.

**Dr. G. Kevin Donovan (1948- )**

Kevin was the fourth full-time faculty member to come to the University of Oklahoma School of Medicine-Tulsa. He did his undergraduate studies at Notre Dame University getting his degree in 1970. This was followed by studies at the University of Oklahoma where he obtained his MD in 1974. His Pediatric Residency was done at the Baylor College of Medicine in Houston from 1974-1977, and it was back to Oklahoma where he completed a Fellowship in Pediatric Gastroenterology in 1979. This was followed by a Fellowship in Pediatric Gastroenterology at the National Institute of Health in Bethesda, Maryland, from 1979-1980.

Kevin's interest in Medical Bioethics lead him to take a Fellowship in Bioethics at the Kennedy Institute of Ethics in Washington, DC, from 1989-1990. At this time, he is a Full Professor and Vice Chairman of the Pediatric Department. Kevin and his wife are both avid tennis players and as far as I know, he has never called a foot fault on the Chairman of the Pediatric Department. He is a member of the American Academy of Pediatrics, AGA, and NASPGI. He is also the director of the Oklahoma Bioethics Center.

**Dr. Deborah Lowen**Error! Bookmark not defined.

Deborah received her BS from Duke University in 1989, then her MD from Wake Forest University School of Medicine in 1993. She completed her

Pediatric Residency at The Children's Hospital, University of Colorado School of Medicine in 1997. She then did a Fellowship in Child Abuse and Neglect at Brown University School of Medicine and Hasbro Children's Hospital in Providence, RI from 1997-1999. She then taught at the University of Medicine and Dentistry of New Jersey in Stratford, NJ, until September 2001.

Dr. Lowen has been on the faculty of the University of Oklahoma-Tulsa College of Medicine in the Pediatric Department since November 2001 and as the Program Director of the Pediatric Residency Program and Medical Director of the Children's Justice Center since 2005. She has also been the Director of the Fellowship Program in Child Abuse Pediatrics since 2002. She is Certified by the American Board of Pediatrics and the Child Abuse Sub-Board. Her Curriculum Vitae (CV) is long and lists many honors, publications, and speaker at many conferences and workshops.

#### **Dr. Nancy Rader Inhofe (1958 - )**

Dr. Inhofe received her BS, Magna Cum Laude, from Duke University in 1981 and her MD from the University of Missouri-Columbia in 1985. Her Pediatric Internship and Residency were done at the St. Louis Children's Hospital in St. Louis, MO, from 1985-1988. She was on the faculty of the University of Oklahoma Health Sciences Center from 1990-1993 in the Interdisciplinary Training Program in Child Abuse and Neglect, then spent a year in New Mexico before coming to Tulsa. Her Board Certification in Pediatrics came in 1989 and she became a Certified Instructor in Neonatal Advanced Life Support in 1990.

Dr. Inhofe became Medical Director of the Pediatric Asthma Clinic at the OU School of Medicine-Tulsa, in 1995 and has been involved in the curriculum development for house staff and medical student education on Pediatric Asthma. Her CV is also long, especially in Medical College teaching, but also in community service and work with abused children.

#### **Dr. Sarah J. Passmore**

Sarah did her undergraduate work at the University of California at Santa Cruz, getting her BA with honors in Ancient History in 1992. She then attended Oklahoma State University College of Osteopathic Medicine and received her Doctorate of Osteopathy in 2001. She did her internship and residency at the University of Oklahoma-Tulsa, Pediatrics Department, from 2001-2004, followed by a Fellowship in Child Abuse Pediatrics on the same campus. She is a member of the American Academy of Pediatrics, the American Osteopathic Association, and the Council on Medical School Education in Pediatrics. She is affiliated with the Ray Helfer Society and serves on committees at Saint Francis Hospital for Graduate Medical Education, Pediatric Peer Review, and Patient Care.

#### **Dr. Susan Nelson Studebaker**

Susan is a native of Ohio but attended Emory University in Atlanta, GA, for her BA in 1992. She then obtained her MD from the University of

Oklahoma, Health Sciences Center in Oklahoma City in 1996 where she did her Residency in Pediatrics at the Children's Hospital of Oklahoma from 1996-1999. Susan passed her Pediatric Boards and is a member of the American Academy of Pediatrics. She spent a year in Salt Lake City, UT, as a general Pediatrician then came to Tulsa where she serves as part-time faculty and manages the Adolescent Medicine rotation for the Residency.

**Dr. Ira John Studebaker**

Ira graduated from Notre Dame University with his BS in 1991, then his MD from the University of Oklahoma Health Sciences Center in 1996. His Pediatric Residency was at the Children's Hospital of Oklahoma from 1996-1999, where he was Chief Resident from 1999-2000. This was followed by a post-doctoral Research Fellowship in Medical Informatics at the University of UT, in Salt Lake City. He joined the Pediatric Faculty in 2002 as an Assistant Professor and is now the Administrative Medical Director of the Pediatric Clinic, University of Oklahoma-Tulsa, College of Medicine. John brings a lot of expertise in the new aspect of medical care under the science of Informatics.

**Dr. William A. Geffin**

Born at St. John Hospital in Tulsa, Bill's Pediatrician was Dr. KC Reese. While getting his early education here, he later received his BA in Biology at Rice University, Houston, Texas, in 1967, and his MD from the University of Texas, Southwestern Medical School, Dallas, in 1971. He did his Pediatric Residency and a Fellowship in Ambulatory Pediatrics at St. Louis Children's Hospital from 1971 to 1975, before returning to Tulsa and joining Dr. Stephen Adelson in 1975. They formed Tulsa Youth Clinic and later merged with other practices to become Utica Park Clinic.

Always interested in teaching, Bill was involved early on with the educational program in the medical school both here in Tulsa and in Oklahoma City. He became a Clinical Professor and eventually left Utica Park Clinic to become a member of the faculty at the University of Oklahoma-Tulsa at what is now called the Oklahoma School of Community Medicine (OSOCM). At the time of this writing, he is the Director of OSOCM Pediatric Clinic.

Bill has a wide range of interests in all things medical. He has a special interest in medical politics and history. He has been active in the Tulsa County Medical Society, the Ethics Committee, Board of Censors, Council on Medical Education, Board of Trustees, and the Grievance Committee. He was elected the President in 1998 and is currently the Chair of the Tulsa County Medical Society Foundation Board.

Community involvement is also extensive as reflected by his membership over the years on numerous boards of organizations that involve children and his active presence on the Tulsa Undergraduate Research Challenge (TURC) Fellows Advisory Board of the University of Tulsa since 1998. He has several publications and has been involved in clinical research for several years.

Bill and his wife, Barbara, have two sons. One son is a Ph.D. in Political Science working for the government, and the other is an attorney, like his mother.

Bill sites the addition of NICUs and PICUs, Hib and other vaccines, rocephan, and improved Medicaid reimbursements as a few of the changes of greatest importance to Pediatrics during his career. In addition, he applauds new insights offered by genetics and neuroscience, especially new understanding of epigenetics and the effects of early experiences and other environmental influences on later health and brain development.

### **Dr. David Jelly**

David earned a BA in Biology at Trinity University in San Antonio, TX, in 1982. His MD was obtained at the University of Oklahoma, Health Sciences Center, in 1986, his Pediatric Residency in Tulsa from 1986-1989, and served as Chief Resident his final year. He was attracted to a career in Endocrinology by his work with Dr. Don Wilson in Tulsa and he then went to The University of Colorado Health Science Center, The Barbara Davis Center for Childhood Diabetes, and the Children's Hospital in Denver, CO, as a Fellow in Pediatric Endocrinology from 1989-1992. He returned to Tulsa with his wife, Martina, and their three children.

He worked with Dr. Wilson at Children's Medical Center for a year, then took a position with the Warren Clinic Diabetes Center. He has published several papers on Diabetes, Growth Hormone, and other such projects. He has received numerous honors and awards, and is involved in several civic activities.

Dr. Jelly enjoys many outdoor activities including skiing. His downhill telemark skiing is a graceful and beautiful as Dr. Hugh Graham's figure ice skating. He has been active with the Camp O'Leary Winter ski program and has been the co-director of the program since 1992.

### **Dr. Bhushan Sharma**

Born in Meerut, India, Dr. Sharma obtained his MD in 1974 from the King George's Medical College, Lucknow, India, followed by an Internship at the same. He then served as House Officer at the Gandhi Memorial Hospitals in Lucknow from 1975-1976. From 1977-1978 he was a Resident in Radiology at the Veterans Administration Hospital in Dallas, TX. He then change course and took a residency in Pediatrics at Texas Tech University Health Sciences Center, Lubbock, TX, 1978-1981, followed by a Fellowship in Infectious Diseases at the same hospital from 1981-1983.

Dr. Sharma was a faculty member of the Pediatric Department of the University of Oklahoma Health Sciences College from 1983 until his death in April of 2009. He was 58 years old. He was tenured in 1991. During his career, he received many awards, among them the Aesculapian Award for Teaching in 1988, 1992, and a finalist in 1987 and 1989. He also won the Dr. C. T. Thompson Excellence in Trauma Care Award in 1992. He was a Diplomat,

American Board of Pediatrics, 1994, as well as the sub-board of Pediatric Infectious Diseases, 1994.

During his career he was very active not only in teaching, but also serving on many committees of the medical school, doing research, presenting seminars and conferences. He also coached kids baseball and soccer and was a judge at many science fairs. He enjoyed tennis and was an excellent player.

#### **Dr. Gwendolyn L. Gibson**

Gwen, class of 1986 University of Oklahoma School of Medicine, did her Pediatric Internship and Residency at the University of Oklahoma-Tulsa from 1986-1989, and immediately following, joined the faculty of the Pediatric Department, heading up the Child Abuse Program at the Justice Center with Dr. Block. At first they saw two to three cases per month, but the case load increased to the point that each of them were seeing over 200 cases a month. Child abuse must be one of the most stressful areas of Pediatrics and Gwen did a great job until her resignation from the department in 2009 when she joined the Utica Park Clinic.

#### **Dr. Jyoti D. Lad**

Dr. Lad was born in Kolhapur, India, and received her MD in Bombay in 1971. After completing her Rotating Internship in Nair Hospital in Bombay in 1972, she came to Oklahoma and did her Pediatric Residency at the University of Oklahoma College of Medicine-Tulsa, 1978-1980. She served as Volunteer Faculty from 1984-1990, then became a part of the paid faculty and soon promoted to Clinical Professor in 2001, holding that position ever since. She became Board Certified in 1985. She has been a mentor for Pediatric Residents since 1997. Her love of teaching is manifested by becoming the recipient of the Aesculapian Award, University of Oklahoma College of Medicine-Tulsa, 1989.

#### **Dr. Lynette Calvert**

Dr. Calvert is a Cum Laude graduate of Baylor University with a double major in Math and Biology in 1964. She was a Pre-doctoral Fellow with Dr. Barbara Bowman, Department of Human Biological Chemistry and Genetics, UTMB, Galveston, TX, 1972. Her MD was obtained at Baylor College of Medicine, Houston, TX, 1972, with a Pediatric Internship at Baylor and a Pediatric Residency in the Medical College of Georgia in Augusta, 1974-1976. She was a Pediatrician in the Department of Family Practice and Pediatrics, Medical College of Georgia, 1976-1982. She was Board Certified in Pediatrics in 1981. She left Georgia and came to Tulsa to join the new Medical School at Oral Roberts University in 1982 where she taught until 1988. She was Director of Newborn Services at Doctor's Hospital from 1989-1994 and has been on the faculty of The University of Oklahoma Medical School-Tulsa since 1993.

Dr. Calvert is the author of several books and manuals on care of the newborn, as well as giving many presentations and papers at medical seminars. Her involvement with OU College of Medicine-Tulsa has been Director of the Newborn Teaching Service at St John Medical Center from 1991-1993, and at the Hillcrest Medical Center from 1993 to the present.

### **Dr. Don Hamilton**

Don is an Associate Professor at University of Oklahoma and the Medical Director of School-Based Clinic at Kendall-Whittier Elementary School and Educare Clinic. He got his BS at Oklahoma State University in 1976, then his MD at University of Oklahoma College of Medicine in 1981. His Internship and Residency in Pediatrics was done at Children's Memorial Hospital in Oklahoma City from 1981-1984. He was Board Certified in Pediatrics in 1987. Don did general Pediatrics in Ardmore from 1984-1985 where he helped develop and then manage a Level 2 newborn nursery. He came to Tulsa and joined the Springer Clinic from 1985-1992 then the faculty of the Pediatric Department of the Medical School.

Don made two trips as a Medical Missionary to Tanzania in 2004 and 2006, serves on the Spina Bifida clinic at Saint Francis Hospital, and has received the Crimson Apple Award for Excellence in Teaching. His CV reveals his interest and knowledge in ADHD.

When asked about his thoughts on Pediatrics, he, too, has noted the marked decline in the invasive infectious diseases caused by H flue and the Pneumococcus due to the advent of the vaccines. Don feels that the next ten years will involve improving access to care and services for all children and a move to more cost-effective ways of treating children. He is also looking forward to improving manpower and resources for the care of children with the developmental and mental health problems.

### **Dr. Douglas W. Stewart**

Doug was born in Tulsa and raised in Skiatook. He is a graduate of the Oklahoma College of Osteopathic Medicine and Surgery, class of 1985, and has the distinction of becoming one of the first Osteopathic physicians to join the faculty of the University of Oklahoma Medical School-Tulsa. He took his Pediatric Residency at OOH, completing his training in 1988 under Dr. G. Bovasso, DO, Dr. W. Kennedy, DO, and Dr. Stanley Grogg, DO. His neonatology was under Dr. James Marshall, DO. This was followed by rotations with Dr. Don Wilson, MD (Endocrinology), Dr. Charlie Cooper, MD (Pediatric Cardiology), and completed rotations with Dr. John Udall, MD, Ph.D. (Gastrointestinal), and Dr. Russell Snyder, MD (Child Neurology) at the University of New Mexico, Albuquerque.

Following his Pediatric training, he entered private practice with Dr. Bovasso in Tulsa for 18 years. Recognizing that he was a "public health person," he left private practice and obtained a Master of Public Health degree at the OU Health Sciences Center in Tulsa while working with Dr. D'Souza at Hissom Memorial Center, and then with the Tulsa City-County

Health Department (TCCHD) as a consultant to the PNP program of TCCHD. During this time, he also worked as the TCCHD Clinics in Collinsville, Sand Springs, Broken Arrow, Bixby, and Jenks.

Fourteen months later, he was recruited by OU-Tulsa to join them full time in order to help Dr. Ed Tomsovic, MD, operate a specialty medical home for people with severe developmental disabilities, The Developmental Support Program. He joined the program with the proviso that he could continue with the TCCHD. The Developmental Support Program closed in 1993 when the Federal Judge in the Homeward Bound case ordered DHS to stop supporting a segregated service system. Everyone at the Program lost their job (including Dr. Tomsovic), except for Dr. Stewart. Dr. Plunket kept him on and again he hired out his services through OU-Tulsa to DHS-DDSD Area II as a medical administrator on a half-time basis. He continued to serve TCCHD until 1996. In 1997, DHS-DDSD decided they wanted a full-time medical administrator and Dr. Stewart was replaced by Dr. Liphard D'Souza, MBBS.

Dr. Stewart completed his MPH (Master of Public Health) in 1993 and has been a mainstay of the OU Pediatric Clinic ever since. His community services have included terms with the following governing boards – Oklahoma Chapter of the National Association of Sickle Cell Disease, Project Get-Together, Moton Comprehensive Health Services, Inc., Sparrow's Landing, and currently represents the OSMA as a board member on the Board of Medico Legal Investigations. He is also an alternate delegate from Tulsa County Medical Society to the OSMA House of Delegates.

Doug's wife, Lori, is also a graduate of Oklahoma College of Osteopathic Medicine and Surgery, finishing in 1988, after which she obtained an MPH with an emphasis on Health Policy. She teaches part time at OSU-College of Medicine, Clinical Problem Solving and Principles of Clinical Medicine.

When asked about changes in the practice of medicine and the future of medicine, he felt the biggest changes are in the areas that overlap with public health – poor nutrition, lack of vigorous physical activity (outdoor play), obesity, decrease in active transportation (human powered), and increase in single-parent households. Substance abuse was also listed as adversely affecting families. On the positive side, the number of effective vaccinations has more than doubled during his career and we no longer see invasive Hib disease. Doug also feels very strongly that the United States must substantially change the way we deliver, organize and finance healthcare.

## **Medical Care**

As one looks over the past and considers the changes that have taken place in the practice of medicine, you can't help but wonder what the future holds. I

have asked my colleagues that have helped with this history to give me some of their thoughts and have tried to include them in the following under some of the same headings that we have looked at previously.

#### **INFECTIOUS DISEASES AND THE ANTIBIOTICS**

Ron Powers, in his biography of Mark Twain, tells of a mesmerist named Phineas Parkhurst Quimby of Portland, Maine, who, in the 1840s, claimed that diseases could be cured by hidden powers of the mind. Disease was nothing more than an error of the mind and “medicine was irrelevant.” In 1862, Mary Baker, an ailing 41-year-old New Hampshire woman visited him and then decided that such healing was a manifestation of God and as Mary Baker Eddy, developed the Christian Science Church.

Mark Twain had always had an interest in “mental telepathy” and he and his family seemed to have bought into these ideas. Consequently, when his 24-year-old daughter became ill in August of 1896, she asked for her “healer.” The “healer” was unable to help, as were the physicians they called upon and she died of Meningitis. Unfortunately, this was some 35 years before the discovery of Penicillin and the sulfonamides.

In 1902, his wife, Olivia, developed heart problems and died in 1904. Mark Twain turned against Mary Baker Eddy because of these events and wrote that her promotion of “divine healing” was irresponsible and dangerous.

One can understand why people would turn to alternative medicine when we recall that it was in 1843 that Sir Oliver Wendell Holmes, Sr., MD, Dean of the Harvard Medical School, was just then promoting sanitation in hospitals to prevent puerperal sepsis. Dr. Holmes had met and talked to Louis Pasteur on his travels to Europe.

Dr. Ignaz Semmelweiss, a Hungarian, while teaching in Vienna, was one of the first to connect puerperal sepsis with the infections brought to the delivery of a newborn by the doctor who had just come from doing an autopsy. This was in 1847. In the 1860s, Dr. Joseph Lister was promoting the merits of sterilization of equipment and implements used in surgery. The idea caught on in Europe, but not in America.

At the request of Dr. Sam Gross of Philadelphia, Lister presented his case before the Medical Congress of the Centennial Exhibition, but many American doctors dismissed his discovery, including Dr. D. Willard Bliss who, just five years later, probed the bullet wound of President James A Garfield (more than once) with an unsterile probe and more than once with his unwashed finger. President Garfield’s assassin, Charles Guiteau, claimed to the jury that he had not killed the President, but just shot him; the President was killed by the malpractice that introduced the germs that caused the pyemia that was the cause of his death. This may have been the birth of the phrase that “ignorance is bliss.”

The advent of the antibiotics, bactericidal and bacteriostatic, has to be one of the outstanding events in medicine (although Type I Diabetes would give you a good argument that the discovery of insulin by Banting and Best

would top that). As medical students, we learned about Gram negative and Gram positive bacteria and then their susceptibility to the different antibiotics. As time went on, we learned that there is a medical parallel to Newton's 3<sup>rd</sup> Law, relating to motion...that to every action, there is an equal and opposite reaction. In this case, resistance. Some germs were smarter than others and developed resistance very quickly. Others were slower and some maintained some susceptibility. The search goes on and new antibiotics are coming out almost yearly.

In 1978 we learned about Toxic Shock Syndrome, and shortly after, in the early 1980s, along came AIDS (Acquired Immunodeficiency Disease). Here was a new disease with many manifestations and diabolically hard to treat. It was completely resistant to any of the old or new antibiotics. The AMA news magazine had regular articles about this infectious agent that attacked the immune system and the disease, and the publicity about it, reached a peak in the mid 1980s. It was given the name AIDS. Initially, it appeared in Africa, but then began to spread over the world so that by 2007, it affected some 30 million people and caused an estimated two million deaths with over 300,000 children becoming infected.

By 1981, the virus that caused the disease was identified as the Human Immune Deficiency Virus (HIV). This virus attacked the immune system and the CD4+T Helper Cells. It made the patient susceptible to lymphoma, Kaposi's carcinoma, Pneumocystis Carinii, Tuberculosis, and other bacteria as well as involving the brain and the GI tract. It gave a big boost to research into the immune system and increased the search for effective antiviral agents.

As a consequence of these new findings, a need for the specialization of infectious diseases. One of the first Pediatric Sub-Specialists in infectious diseases here in Tulsa was Dr. Bhushan Sharma who joined the Pediatric faculty in 1984.

#### **NEWBORN CARE**

The care of the newborn and the premature have increased by leaps and bounds. The Neonatologists became a Board Certified sub-board specialty of the American Board of Pediatrics in 1975. We've come a long way from 1952 when Dr. Virginia Apgar described the Apgar Score to evaluate the newborn's condition. May felt that its most important use was in getting someone to take a look at the newborn at one minute and at five minutes after birth.

The Neonatologist has brought an expertise to the delivery room that makes it possible for the premature to not only survive, but to survive with lungs and brain intact. Pulmonary surfactant, coming in the 1980s, has decreased chronic lung problems as has mechanical ventilation. Cultures of the amniotic fluid to detect intrauterine infection is common and there has been much study on the use of steroids to prevent Broncho pulmonary dysplasia and cerebral palsy.

Dr. Dick Russell did a study on babies born at St. John Hospital in the late 1950s and came up with some figures that showed that 10% of the

infants had some problem at birth and that of these children, 10% would be severely affected with mental retardation, cerebral palsy, Down's Syndrome, CHD, etc. At that time, he felt that in 6% of the cases, a definite etiological factor could be determined such as prematurity, maternal rubella in the first trimester, alcoholism, or the use of other drugs and so forth.

Since that time, the development of screening tests, improved laboratory and non-invasive examinations, knowledge about cytomegalovirus, toxoplasmosis, syphilis, and other infections, along with the advances in genetics, have made it possible to come up with a higher percentage of diagnoses. Dr. Michael Gomez gave an excellent Grand Rounds Seminar on the use of newborn screening tests to find cardiac anomalies and other heart problems in the Fall of 2010. At this time, all hospitals in Tulsa that deliver babies have a Neonatologist either available or accessible.

### **CARDIOLOGY**

The changes in Cardiology were a little slow in coming, but the past three decades have witnessed some great changes. Most of us with some Cardiology training were pretty limited in what we could do in the way of diagnosis and treatment. A Patent Ductus murmur was pretty diagnostic, and the lack of a femoral pulse in a newborn would tip you off to a Coarctation. We were pretty good in diagnosing the murmurs and ECG changes of Rheumatic Heart Disease and a few others. X-ray was of help, especially with fluoroscopy and a barium swallow. Sonography was really in its infancy at the time but has blossomed into a vital tool in diagnosing and following heart disease. The Blalock procedure for Tetralogy of Fallot was considered real cardiac surgery, now a complete repair is possible. Septal repairs, transposition of the great vessels, etc., are common place and getting more efficient all the time. The use of implantable pacemakers that can even act as a defibrillator are just a few of the marvels that we see on a daily basis. The need for Pediatric sub-specialists in this area was recognized by the APB in 1961 when it issued its first Sub-Board in Cardiology.

### **HEMATOLOGY AND ONCOLOGY**

In the 1940s and 50s, a diagnosis of Leukemia or Cancer in a child meant a referral to either an adult Hematologist/Oncologist here in Tulsa, or sending the child to Oklahoma City. Dr. Plunket's arrival changed all that and later we had the support of Dr. William Gene Klingberg who started his career at St. Louis Children's Hospital as a Hematologist/Oncologist, then went to Turkey for several years to help set up a children's hospital, leaving there in 1960 to become the founding Chair of the Department of Pediatrics at the West Virginia University Health Sciences Center. While teaching at the West Virginia Center, he was also the Camp Director of Camp Kno Koma, a camp for children with Diabetes from 1968 to 1983. He came to Tulsa in 1962. The presence of a Pediatric Hematologist/Oncologist means that our children with Leukemia can look forward to long remissions, if not complete cures.

Cancer vaccines have been studied for the past 20 years. These vaccines are designed to either prevent the development of some Cancers, or to treat a Cancer that has already become evident.

### **METABOLIC DISORDERS**

Metabolic disorders were more or less handled by all of us. For difficult problems we had to depend upon the adult Endocrinologists. The arrival of Dr. Don Wilson in 1980 was marked by an upsurge in research and in help in teaching our kids with Diabetes how to use the new Insulin Pump as well as making use of the newly developed Hemoglobin A1c which gave us an index of what the blood glucose had been doing the last 90 days instead of at that moment. Another big improvement in Diabetes management came with the appearance in 1978 of the new insulin, using a synthesized laboratory strain of E coli that was genetically altered with recombinant DNA called Humulin.

The synthetization of hormones by recombinant DNA technology has also improved the outlook for growth hormone deficiency in children. Before 1981 the hormone had to be extracted from the pituitary gland of cadavers making it expensive and perhaps not as pure as you would like.

Pediatric Endocrinology was the third Pediatric sub-board to be developed by the APB and this was in 1978. Considering the problems with ambiguous genitalia, and all the other hormone deficiencies we are fortunate to have some excellent endocrinologists in Tulsa.

By the way, at the time of this writing, there is a report of Google having just created a prototype of the “Smart Contact Lens” that is fitted with a tiny wireless chip, antenna, and a miniature glucose sensor that reads your tears’ glucose level every second.

### **NEPHROLOGY**

Our biggest need for a Nephrologist was in our Spina Bifida clinic at Children’s Medical Center. Dr. Jim Wenzl was the only one in Oklahoma for many years. He was with the Medical School and would make a trip up once a month for our clinic.

### **ADOLESCENT MEDICINE**

This sub-board was established in 1994, now one of about 16 or 17 sub-specialties that are now sub-boarded. I recall going to Pediatric Academy meetings in the 1970s and hearing talk about having a specialty in Adolescent Medicine. This talk came mostly from older Pediatricians whose little newborns were now Adolescent and giving him a new set of problems that he was called upon (and felt inadequate) to handle. The younger Pediatricians were getting the most newborns because the Obstetricians that came to town when they did referred their babies to their former classmates. There was even a proposal to call the new specialists “Ephebeatricians” (look it up!). It took another 20 years to develop this new sub-board.

## GENETICS

A history of Genetics in Tulsa (and in Oklahoma) must begin with Dr. Jim Coldwell and Billie June Loshbaugh, his laboratory technician, at the Children's Medical Center. In the late 1950s and early 1960s, Dr. Coldwell was beginning to see more and more children with PKU and other metabolic and genetic disorders, including mental retardation. At that time, these specialized tests and management were not available anywhere in the state. He and Billie June developed the first PKU screening tests in Oklahoma.

Mrs. Loshbaugh had been a pre-med student at OSU getting her BS in 1949. While a pre-med student, she worked for the US Geological Survey in the Surface Water Division. This Division was located in the chemical building on the campus. After graduation she transferred to the Department of the Interior in Washington, DC, where she continued her studies at the George Washington School of Medicine, where she received her MT in Laboratory Science, 1951. She then returned to Oklahoma and worked at the University of Oklahoma Medical School in Oklahoma City doing research in Leukemia. Following this, she came to Tulsa and was employed as the Laboratory Director of Children's Medical Center. Her tireless work and energy helped develop a first rate center for these studies.

Dr. Mehmet Burhan Say, a graduate of the University of Istanbul in Turkey, a Pediatrician with training in Genetics and Hematology, was then recruited by Dr. Coldwell to help with his increasing patient load. With financial help from the H. A. Chapman Foundation, they developed the H. A. Chapman Institute of Medical Genetics which furnished clinical and laboratory services for prenatal testing and screening, metabolic disorders, as well as genetic counseling, and cytogenetic and molecular genetics. This program filled a need that had not been met by the Medical School or the state of Oklahoma.

Frederick V Schaefer, PhD, FACMG, who obtained his PhD from North Carolina State University and post doc from Fox Chase Cancer Institute in Philadelphia joined the group, as did Nancy Carpenter, PhD, FACMG, who obtained her PhD from the University of Michigan and is head of the Cytogenetic Lab. Both are Diplomats of the American Board of Medical Genetics and the group produced an outstanding center for Genetic disorders.

With the loss of the Children's Medical Center, Tulsa is fortunate that we have been able to retain the knowledge and experience gained by the H. A. Chapman Institute of Medical Genetics at the Saint Francis Center for Genetic Testing. The potential is tremendous when coupled with the Children's Hospital and the medical schools of Tulsa.

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This history of Pediatrics is an attempt to take a look at the people and institutions that have been here for the children of Tulsa and Eastern Oklahoma. I have tried to include everyone that has been involved in one way or another, but I am sure that I have missed many that should be included.

What about the future? From what I've seen already, I would say Exciting! I would love to be here to see it develop. We have lots of problems like the delivery of healthcare to our poor, obesity, drugs, learning difficulties, and child abuse, to name a few.

We need more emphasis on diplomacy to solve our problems, not only locally but on a national level as well. We need more emphasis on education, paying our educators a salary commensurate with their responsibilities to train, enlighten and educate our future leaders.

We have two fine medical schools in Tulsa and the quality of our students is first class. The sub-specialties are attracting many of them and this will mean a higher quality of care in each field. When we talk with these students it is obvious that we need not fear that they will forget why they went into medicine in the first place.