UNIVERSITY of WASHINGTON SCHOOL of MEDICINE

The Montlake Cut

A Newsletter from the Department of Neurological Surgery
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The Montlake Cut

32 year-old Arthur A. Ward, Jr., MD

Old School

In 1948, when Arthur A. Ward, Jr. arrived in Seattle to become one of the first full time faculty members at the new UW Medical School, the division of neurosurgery didn't amount to much.

In fact, it was only him.

The medical school had received initial funding just two years earlier (on October 2, 1946) when the legislature approved a total budget of $3.75 million dollars for buildings. Another $450,000 were allocated to pay all the salaries.

And it was exactly 25 years after his arrival that the EMI Corporation marketed the first ever CT machines so that neurosurgeons could actually see what they were doing. Dr. Ward's therapeutic options following the Second World War were similar to those Harvey Cushing could have offered just after the First.

Art Ward's journey began in 1916, half a world away–though culturally and emotionally much farther–in Manipay, Ceylon (Sri Lanka). His missionary parents soon packed him off to Deerfield Academy, then to Yale. Thanks to Cushing and Fulton, New Haven was a center for neurophysiological research at that time, and Percival Bailey, Chief of Neurosurgery at the University of Chicago, happened to spend his sabbatical in the same lab as the undergraduate Art Ward.

Bailey convinced him to apply to the Yale Medical School, which gave exams then. After he graduated in 1942, Dr. Ward immediately started a residency in Montreal with Wilder Penfield. He came to Seattle with only three short years of clinical experience in addition to what he'd learned from Penfield about epilepsy, and from Bill Cone about the rest of neurosurgery.

He was 32 years old.

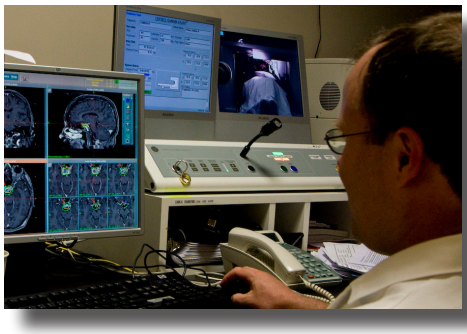
Before he retired from the Chair 33 years later, Arthur had trained 44 residents beginning with Larry Knopp, who started in 1953, Lowell White in '54, and Wally Nelson in '55. When I met him in 1970, he had an international reputation both as a neurosurgeon and epilepsy researcher, and was then an advisor to the NINDS Epilepsy Section where I was a Fellow.

One muggy summer day when he was visiting NIH, Art mentioned that he was later to testify before a Congressional Committee. My Lab Chief asked me to take him to Capital Hill.

With hair flowing to my shoulders and a cowboy hat jammed over my ears, I escorted Dr. Ward and his monogrammed, leather suitcases out to my jeep, then drove him down Wisconsin Avenue and up to The Hill. Years later, when I wondered aloud why on earth

. . . Arthur Ward made significant contributions to the field of neurosurgery. . .

Arthur A. Ward Jr., MD



. . . We are awash in technology, some of it still looking for reasonable applications . . .

he selected me to be his resident following such a preposterous introduction, both George Ojemann and John Loeser exclaimed, "Oh, Arthur liked excitement."

After Art's death in 1997, George expanded on that idea in a lovely obituary for Epilepsia when he wrote, "He had a series of sports cars, including a Jaguar XKE, that he drove with gusto, and often tuned himself. He was an avid skier, though some of us were not sure that he had ever learned to turn: straight down the hill was his preferred way." After the third fractured tibia, he either stopped going straight down double black diamond, or took the class on turning.

Arthur Ward made significant contributions to neurosurgery, pushed forward major progress in epilepsy research, trained 44 neurosurgeons, and established one of the great departments of neurological surgery in the world, starting from a division of one person at Harborview (previously King County Hospital).

These are not minor achievements. However, George Ojemann, (who knew him more deeply if not more intimately than most, for Arthur was a private man), also wrote something about him that many of us failed to recognize as self-absorbed residents: "As the faculty grew, he demonstrated his abilities to manage in a collegial environment. He was clearly the chief, but always sought advice and preferred (and was very good at) consensus decision making."

Today the UW Department of Neurological Surgery consists of 23 full-time clinical faculty members, 19 research faculty, 44 joint and adjunct faculty, and 11 teaching associates. There are 20 residents and five fellows, plus a staff of about 75 others stationed at five hospitals (now including our colleagues at Northwest Medical Center) in Seattle.

Arthur Ward would be happy with us. For our part, we owe him a great deal.

New School

Art Ward might have thought about something called "The UW Medicine Neurosciences Institute," but he'd have had a hard time getting anyone else interested during the era when he was Chair.

Times have changed. Earlier academic neurosurgeons – that is pre-CT – were often quite capable of doing their own bench science, but had very little clinical technology available to help on the wards or in the OR (see Wally Nelson's memoir in this issue).

In 2009, the tables are turned and we are awash in technology, some of it still looking for reasonable applications. Thanks to the digital revolution that has given us modern imaging, and the genetic revolution that has taken Gregor Mendel's peas to the ultimate hybridization, we now have many tools.

At the same time, it has become very clear that, while the United States spends billions of dollars annually on health care (in 2009, 16% of the GDP, or about $2 trillion), we aren't getting as much as we should for that money. By nearly all measures, the richest and most technologically sophisticated society in the word lags behind many less developed and less wealthy countries in the benefits their health care dollars provide them.

Surely we can do better. One reason we don't is explained in Eric Cassell's essay titled: "The Sorcerer's Broom" (Hastings Center Report, Volume 23, 1993). Using the metaphor of a device that evolved a life of its own, Cassell outlines the ways in which technology finds its own uses and defines medical paradigms. If this ability is linked to great profitability, it isn't surprising that health care costs continue to rise.

UW Medicine recognized an opportunity to expand on its already unique international reputation in multi-disciplinary neuroscience and transitional research by developing the new Neurosciences Institute. However, that recognition took four decades from the time it was initially proposed by Art Ward. When Richard Ellenbogen accepted the Chairmanship, he insisted (and the Dean agreed) on building the Institute for the following reasons:

- To insure faculty retention, UW identity, academic viability and fund raising.
- To promote a metamorphosis from department-based practices to intellectually integrated, disease oriented teams.
- To maintain an independent academically unbiased environment meant to establish the neurological standards of care in the region.
- To build financial stability of the departments and the hospital system.

This now very well- funded, collaborative program will focus on developing new methods to evaluate, treat, and manage patients with complex neurological diseases, including neuro-oncology, stroke, trauma, epilepsy, as well as degenerative, movement and psychiatric disorders. The Institute's goals include providing direct, practical application of research solutions to clinical problems, as well as the coordination of care. The graphic below illustrates the complete range of disciplines involved in this enterprise.

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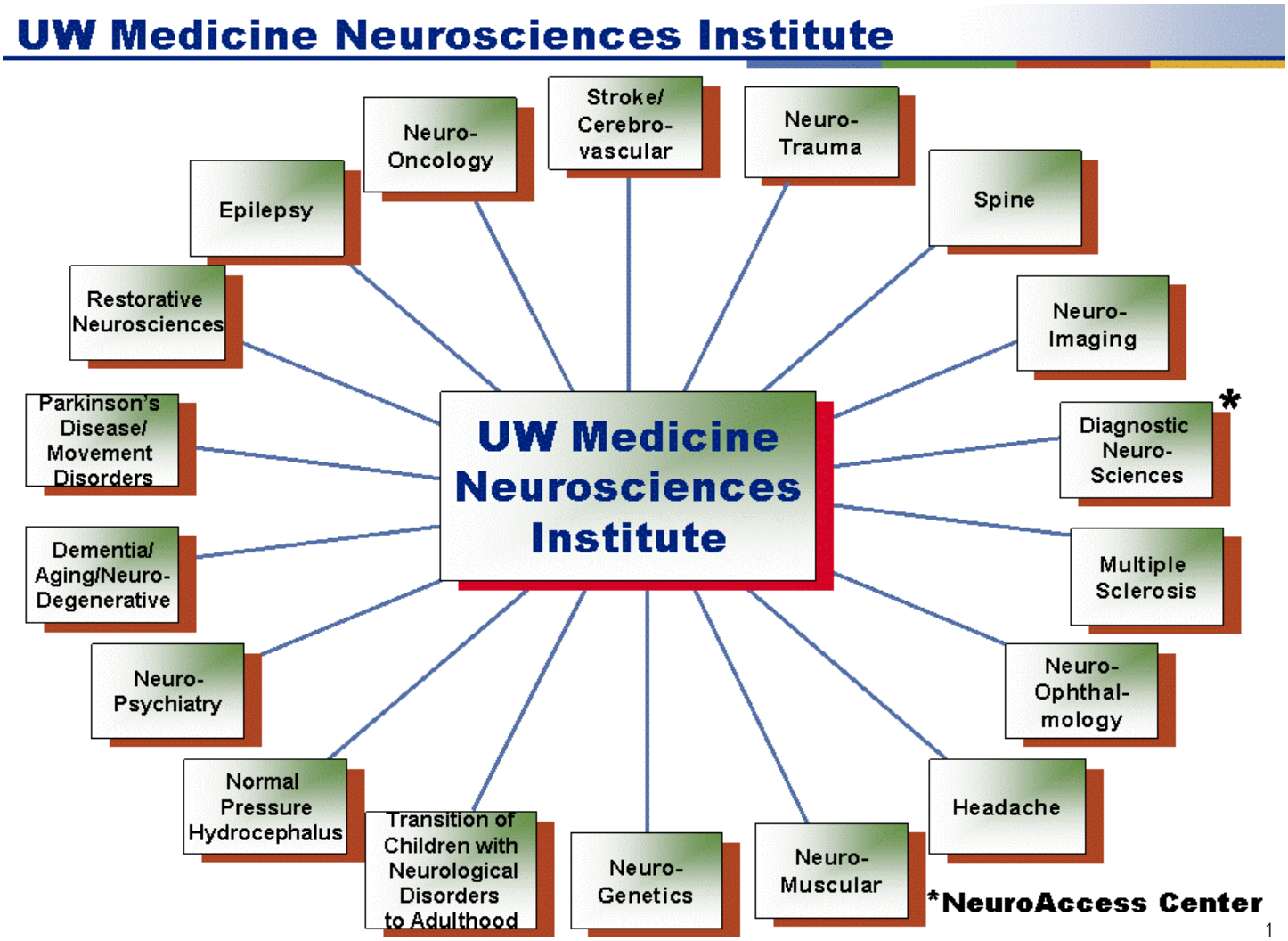
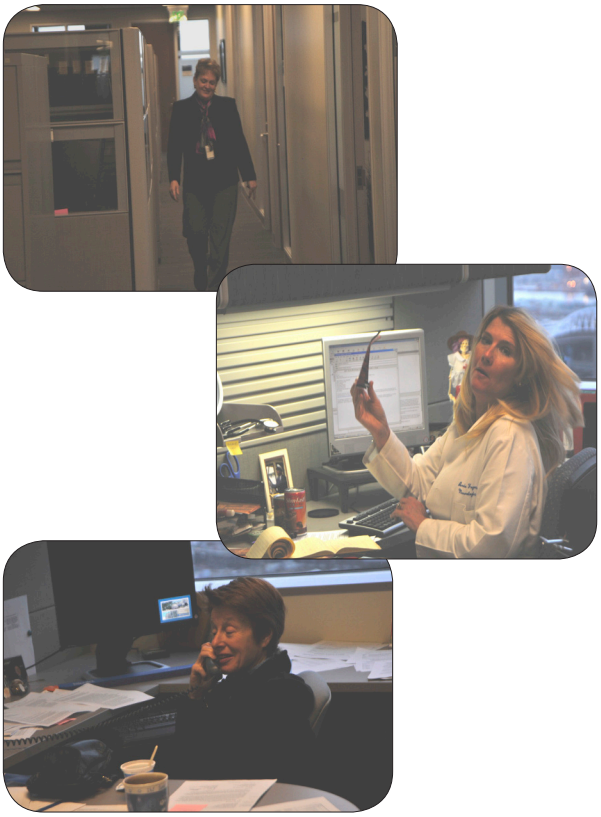


The Neuroscience Institute's Complete Range of Disciplines



(From top to Bottom): Mary Gilbert, Annie Feyereisen, and Nancy Temkin in the new NJB office space.

Views of Seattle and Puget Sound from inside the new office space on the 14th floor of the NJB.

New School Continued...

Tony Avellino

Under the leadership of Tony Avellino, MD, MBA, the Institute builds on an existing virtual monopoly of underfunded trauma patients at Harborview, plus the stroke and gamma knife center, and the Cancer Care Alliance that includes the Hutch. The Institute has additional office space in the new Ninth and Jefferson Building.

Clinically, the Institute's multi-disciplinary focus with a single point of access will attract patients not only from the WWAMI region, but across the nation.

Another MRI suite will soon be installed in the new building now housing our offices and clinic, and a new PET-CT scanner will upgrade the facilities already available at Harborview.

But perhaps the most extensive vision for this new venture comes in the form of translational research. The basic science labs already in place in the department will be augmented by clinical opportunities that bring problems directly to some of the best research minds in the country. The labs are funded by many RO-1 and other grants from the National Institutes of Health, as well as other funding sources, which provided more than $10 million extra-mural dollars in 2009.

Our Department of Neurological Surgery is structured, funded and intended to achieve these goals, making it unique in the WWAMI Region. But, we need your help in identifing patients whose problems are well suited to this cooperative approach. Better treatments and new cures are sure to emerge from such collaboration.

The New Offices

The NJB

As previously announced, in September the Department moved into brand new offices at Harborview. Now looking out unobstructed over downtown to Puget Sound from the 14th floor of the new Ninth and Jefferson Building (abbreviated the NJB, as everything is now camaflouged) we admire the entire city to the west.

The office on the south corner, appropriately occupied by the Chair, also stares at Mt. Rainier. In partial compensation, Randy Chesnut, the Harborview Trauma Chief, has installed a fancy stationary bike facing the Sound in his office on the north end.

This beautiful space has offices for the entire faculty and all the support staff, together roughly 50 people. In addition, we have several conference rooms equipped with state-of-the-art technology, and a new library for residents. We have ready access to the old Harborview Hospital, the new Maleng Building, and our clinic, also located in the NJB building.

Where Are They Now?

Wally Nelson was the third resident trained by Arthur Ward at UW. He wrote the following memoir about early neurosurgery in Washington State, an exclusive to the MONTLAKE CUT:

The first neurosurgeon in the state was Dr. Swift who, before he was conscripted into WWI, had been an ENT surgeon in Tacoma. More surgeons were needed to treat battle casualties, and so select people were given a three month course in neurosurgical techniques set up by Harvey Cushing. After the war, Dr. Swift came back to the Puget Sound area and practiced as a neurosurgeon. He was the only person in the area for quite a few years, until Sylvester (Bud) Berens joined him in 1931. Dr. Berens entire training in neurosurgery was a preceptorship under Swift, and when Swift died in the mid-1930s, Berens continued an active practice in Seattle.

Hale Havens came to the Virginia Mason Clinic around then. He had been formally trained in Chicago. When WW II started, neurosurgeons were again in short supply, and Dr. Havens had to go into the service, leaving Bud Berens to provide neurosurgical service for the entire community. In addition, he was appointed King County Coroner.

Soon J.Y. Phillips came to Swedish. He, like Swift, had only brief neurosurgical training in the service when he became a consultant. After the war, neurosurgeons became more numerous here.

Arthur Ward started the UW Department in 1948 and began teaching at Harborview. A year or two later, Eldon Foltz joined the faculty. Then, Donald Stafford, who had been trained at Mayo, joined Berens. Wolfgang Klemperer, trained at Yale, also began to practice at Swedish.

Dr. Ward needed help at Harborview, although he did have some resident coverage from general surgery. He started the neurosurgical training program in 1953. The first resident was Larry Knopp, the second Lowell White, and the third was me. All three of us were blessed with the GI Bill, which paid the tuition and expenses that allowed us to go to college and medical school.

Larry Knopp was from the South and when he got out of the service, he made a living as a nightclub singer in New York. I'm not sure how good he was, but eventually he went to med school and gave up singing. He started in general surgery at HMC and was recruited into neurosurgery by Dr. Ward. In medical school, I had written my thesis in the Department of Neurosurgery, so that after I graduated Dr. Ward knew who I was. He accepted me as the 3rd resident provided I obtained the other training required then. I was a general surgery resident at VM for a couple of years, and then entered the program. There was no University Hospital at the time, so everything we did was at Harborview or the VA.

Harborview had 550 beds, and the entire funding from King County was $2 million per year. Dr. Sherwood, the Medical Director, had to seriously control expenses. This meant that antibiotics were limited to penicillin and streptomycin, and anything else had to be begged from Sherwood. Salaries were $100/month for first year residents, and $150 for seniors, room and board included. Dr. Ward managed to get us another $100/month through some federal program.

The volume of trauma was large at Harborview, and on weekends the ER was a zoo. Head injury patients went directly to the 4N treatment room [now 4 EH–ed.] to be examined. Diagnostic studies were seldom

Continued on page 6 . . .

Save the Date!

GRAND ROUNDS

7:00 AM - 9:00 AM

EVERY WEDNESDAY

1st Floor Auditorium

R&T Building on 9th, HMC

Contact the editor, or the neurosurgery office for more information.

Late Breaking News:

The NCUU staff has just been awarded The Beacon Award for Critical Care Excellence®. This honor was created by the American Association of Critical Care Nurses in 2003 to encourage the best care possible for critically ill patients.

The award provides the critical care community a quantitative and qualitative way to view achievements in professional practice, patient outcomes and the health of the work environment. Congratulations to all the Harborview NCCU staff.

Brain Teasers:

Question: When Thomas Willis did the dissections that led to the publication of *Cerebri Anatome,* he had two collaborators. Who were they?

Check back in the next issue of *The Cut* for the answer!

Submit a neurosurgery joke, wordgame or riddle to us and you could win a Tully's Coffee giftcard if your *Brain Teaser* is printed in our next issue.

preformed since that was difficult and there weren't very many of them anyhow. Because there was no CT or MRI, etc, we did twist drills to rule out hematomas. Plain films were easier, and we always got stereo views. We became good at crossing our eyes to see in 3-D.

The 1st and 2nd year residents were on every other night, and the chief every night. The 1st year residents managed trauma (short of craniotomy), and did the diagnostic studies like angios and pneumos, while the second year residents did spine. Craniotomies were the responsibility of 4th year residents.

At the VA, we did early isotopes studies. Patients wore a rubber bathing cap with aluminum discs glued on. Techs then moved them under a heavy detection device. This actually worked, and it convinced me the technique was potentially useful. We also did discography, but I was never very enthusiastic about that.

Things were different at VM, where trauma was rare. But when I was a resident there we tried to improve the techniques for diagnosis. We did carotid sticks ourselves, but didn't have bi-plane angiograms. There were no automatic changing machines, so we had a wooden box built to hold cassettes so that we could get four views on the same injection. Each cassette had a tab on the back, and we quickly changed them by hand. Pneumoencephalograms were frequent and done with low volumes of oxygen, but still made all the patients deathly sick.

When Larry Knopp finished, he stayed on the faculty for a while. Dr. Havens recruited a partner, Jerry Nolis. After about a year, Jerry went into practice downtown in the Medical Dental Building. Lowell White was appointed to the faculty and remained for the rest of his career. I joined Larry Knopp, who'd also gone into practice downtown by then. We had a three-man group formed by 1959.

The only neurosurgeons in the state were in Seattle and Tacoma: the UW group in Seattle; Hale Havens was alone at VM; J.Y. Phillips and Klemperer were at Swedish; and Bud Berens and Don Stafford at Providence. Larry Knopp and I were later together at the old St. Francis Hospital.

We built the same changing box for angiograms we'd had at VM, and there was an isotope lab set up with a Picker machine. In the OR, when we started doing aneurysms under hypothermia, anesthesia set up the entire procedure to reduce body temperatures to 90 degrees. We never had complications from hypothermia that I remember.

Everything changed in 1965 with Medicare. There was a huge influx of patients who would previously have gone to Harborview. The service grew to 25-30 beds on our ward. We did have an ICU, and in 1964, we moved our office to the 4th floor of the Perry Hotel attached to the hospital so that we could stay overnight. After the World's Fair in 1962, communication improved when we got pagers. Still, we had to find a phone, which was inconvenient.

In 1965, Dr. Rand in Los Angeles offered a microscope course, presented mainly by his then chief resident, Peter Janetta. We had scope at Cabrini, but I always preferred loupes. The number of neurosurgeons increased in the 1960s: Ed Riefel joined John Titus at VM, and at Swedish Ralph Kamm joined Art Biddle. Gordon Mulder joined me at Providence. Dr. Arthur Schultz had established neurosurgery at Group Health, and Larry Knopp left private practice to join him in 1968.

Finances were a lot different years ago. In 1959 at Cabrini there was an old wing and a new one. In the old wing, the cost of a bed was $11/day, and $14 in the new one. Since there was no Medicare, a lot of bills got written off.

In spite of working 80-90 hours a week, it took me 5 years (when Medicare was passed) before I earned $25,000 a year. However, that would buy a house on Puget Sound in those days. A new MG cost me $2,000, and insurance for malpractice was $150/year. Things changed in the mid- 1960s. Expenses now are overloaded by overhead. In the beginning, credit cards didn't exist, so you couldn't spend more money than you earned.

With this issue, our readership has passed 500 recipients for the electronic form of this newsletter. A few of the very "old school" former faculty and residents still refuse to give in to the computer age, and so they receive The Montlake Cut via the US Postal Service. I am obliged to hand carry it to one other guy.

The expanded mailing list is the result of outreach in both directions: we are now happy to include our enormously talented and valuable nursing colleagues in the Neuro-Critical Care Unit, on the neurosurgery ward, and in the specialized neurosurgery unit (NSU) among the newsletter recipiants. The editor hopes that our readership will continue to expand, and that the newsletter will become a vehicle for reporting on the activities of our colleagues. For those who practice in the UW Medicine system, as well as others throughout the WWAMI Region, I remain anxious to publish stories, photos, and ideas about what all of us do in caring for sick people. Please contact me. Let me know the memories of your time here, what you are up to now, and ways in which you think we might find further common ground. Please contact us at the addresses below.

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