# *The Death, Birth, and Life of Community Hospital, Geneva, Illinois*

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# Preface

Community Hospital, Geneva, Illinois, is a waning memory. This narrative is a subjective attempt to reconstruct a sketch of its death, life, and birth. Demise seems a rational place to start, for should anyone ever read this, the reader's motivation likely would be founded upon the ordinary "I wonder what ever happened to…?"[1]

The doctrine of medical practice is undergoing radical change. Community Hospital's time belonged to the old doctrine of fragmentation, inefficiency, idiosyncrasy, uneven quality and high cost. The old doctrine was also highly personal and almost entirely dependent on individual professionalism. The replacement doctrine is systematic and corporate, driven from the top down based on big data and big margins. The defects of the old doctrine were manifold and obvious. Its virtues were subtle and subjective. The defects in the new doctrine are yet unclear, but troublesome.


The writer has endeavored to emulate his heroes Walt and W.O.,[2] but with precious little success. Walt Whitman's *Leaves of Grass* was never finished. Walt incessantly tinkered with it, a work in progress. Walt was also a legendary nurse, a humble example of a noble profession whose work is never done. The only possible similarity between this analysis and their immortal works is the unfinished nature of it.

Sir William Osler, definer of the medical specialty of internal medicine, was born in 1849. After Community Hospital's obituary, this narrative will harken back to the era of Osler's birth because developments in the first half of the 19th century formed the need and the means that led to hospital creation.

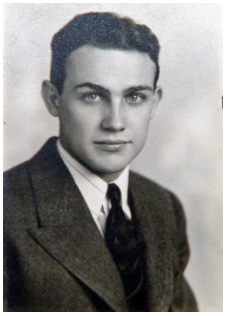

William Osler, M.D., was one of Walt Whitman's physicians[3] among many other things: author of what became the standard textbook of internal medicine;[4] one of the four founding professors of Johns Hopkins Medical School;[5] creator of a system of medical education that made the patient (not the iPad) its focal point; plus he was a legendary practical joker.

Rodney B. Nelson, Jr., M.D., was an internist and a member of the attending medical staff of Community Hospital for over 40 years. He gave the author his copy of Osler's *Aphorisms*[6] when he started medical school in 1967. Dad liked to point out that Osler's father,

1 Web addresses can usually be accessed with a "control click" on the link text. Some must be cut and pasted into the browser address window.
2 Nelson R: "Captains of an American credo: Walt and W.O." *New England Journal of Medicine* 305: 110-112, 1981.
3 When first asked to see Walt Whitman in consultation, Olser, a noted bibliophile and lover of poetry, asked: "Who is Walt and where does he live?" ibid.
4 Osler never "finished" his textbook, as it went through sixteen editions. The picture depicts Olser working on his textbook at Johns Hopkins.
5 Doctors Kelly, Halsted and Welch were the other three. http://www.hopkinsmedicine.org/about/history/history5.html
6 Osler WO, edited by Bean WB*: Sir William Osler Aphorisms: From His Bedside Teachings and Writings.* Henry Schuman, Inc., New York, 1950.

Featherstone Lake Osler (1805–1895), had been in the Royal Navy and served under his Uncle Horatio Nelson on HMS *Victory*.

Only the first part of this almost pure canard was true, which Dad well knew. "Uncle" Horatio (no relation) died at Trafalgar the same year "Old Feathers" was born.[7] *Victory* knocked about in various roles after having been holed numerous times at Trafalgar in 1805 and Lieutenant F. Osler may well have served on her.[8] The restoration of *Victory*, to this day, is the nautical equivalent of *Leaves of Grass*, and *Principles and Practice of Medicine*, being also a work in progress.



Dad concocted his tall tale as a retaliation. He turned 21 on December 8th, 1941, so the day after Pearl Harbor he became eligible for the draft. He was a senior at Carleton College then and his friends took special glee in toasting him on his birthday. His father, also Rodney Nelson, was born in 1891. The two largest battleships in the British fleet at the onset of WW II were the sister ships *Rodney* and *Nelson*.[9]

*Rodney* in May 1942

In medical school at Northwestern University in Chicago during the war Dad tired of being queried as to whether he had been named for the dreadnoughts, so he would first answer "yes" and launch into his Osler story. Then he would explain that the ships were really named for his father.

One of Dad's own aphorisms was "abhor the insult of surgery."[10] He also was a bit of a therapeutic nihilist, in the Oslerian tradition. He was of the generation of internists who literally went to surgery with his patients. He would often assist or observe surgery and he understood that the surgeon and pathologist provided him with personal, case by case, diagnostic quality control. He learned this from Osler.

In the diagnosis of abdominal tumors Bishop Butler's [Joseph Butler (1692-1752), English philosopher and priest] maxim that "probability is the rule of life" is particularly true, and the cocksureness of the clinical physician, who formerly had to dread only the mortifying disclosures of the postmortem room, is now wisely tempered when the surgeon can so promptly and safely decide upon the nature of an obscure case.

LECTURES ON THE DIAGNOSIS OF ABDOMINAL TUMORS. NEW YORK: D. APPLETON, 1899:1-2.

My father's physician role model was Edmund Francis Foley, M.D. (1896-1984). Dr. Foley, through his thirty plus years of significant influence on medical education in Chicago's West Side Medical Center, did much to shape the doctrine of medical practice at Community Hospital in Geneva. Many of Community Hospital's physicians were alumni of the wards of Cook County Hospital. Dad sent his most puzzling cases to "County" to see Dr. Foley, whose unkempt office and blunt manner were usually over


7 http://en.wikipedia.org/wiki/William_Osler#cite_note-3

8 Featherstone Osler was invited to serve on *HMS Beagle* as the science officer on Charles Darwin's historic voyage to the Galápagos Islands, but he turned it down because his father was dying. op cit

9 Sister ships with 16 inch guns, *Rodney* sank the *Bismarck* and shelled German armor on D-Day. Both survived the war only to be scrapped. http://en.wikipedia.org/wiki/HMS_Rodney_(29)

10 "Never let the sun set on a bowel obstruction," was another of Dad's aphorisms (though not original, and today not followed as often) demonstrating that his abhorrence of surgery was situational. A day or two of miserable and unproven nasogastric suction now seems the rule. Louis Stromeyer, a 19th century German surgeon first formulated the rule for obstructions due to strangulated hernias.

looked by the time his consultation was complete. Of Dr. Foley it could not be said "them that can't do, teach."

Ed Foley[11] was an Osler of Chicago in the 20th century. He did not possess Osler's eclecticism or literary gifts but he inspired the same kind of awe and loyalty from his legions of medical students. Foley was the quintessential "County Man" in the tradition of James B. Herrick, M.D.

Herrick was a graduate of the Mount Morris Academy and one of Ed's mentors at Rush Medical College, and at Cook County Hospital in Chicago. RBN, Jr., also knew Dr. Herrick, who was in the twilight of his career in the 1940's. Herrick made two seminal published contributions, and was a renowned clinician and consultant.[12]

Dr. Foley was born in Chicago in 1896 and began life on School Street in a rental that no longer exists[13] just a couple blocks due south of where Weeghman (now Wrigley) Field was later built. His father, after a brief stint as the politically appointed hospital chief administrator at Illinois Charitable Eye and Ear Infirmary,[14] was a furniture salesman. By 1910 Ed's family was living in a duplex at 2500 West Flournoy on Chicago's west side, uncannily near (less than a mile) to where Ed would perform his life's work.[15]

Ed Foley attended Saint Phillip's High School and then the Lewis Institute, one of the nation's first junior colleges.[16] He finished his undergraduate degree at the University of Chicago where he briefly remained as an assistant in pharmacology. He attended Rush Medical College, at that time the University of Chicago's medical school, where he received his M.D. degree in 1920. He became Professor of Medicine at the University of Illinois College of Medicine in Chicago[17], was Chief of Medicine at Cook County Hospital and Dean of the Cook County Graduate School of Medicine.

Among Ed's generation of medical pedagogues were many clinicians who did some research. However their main activity was the practice of medicine. Foley's generation gave way to a different group of

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11 I take the liberty of using "Ed" instead of "Doctor" or "Edmund" because I never heard any of my medical elders speak of him except as "Ed" or "Ed Foley" or just plain "Foley."

12 Herrick, James B.: "Peculiar elongated and sickle-shaped red corpuscles in a case of severe anemia." *Arch Int Med* 6: 5-12-521, 1910. Dr. Herrick examined dental student Walter Clement Noel, a student from the West Indies with bone pains, skin sores and anemia, at Cook County Hospital in 1910. Herrick described the sickle shaped red cell that he observed in Noel's blood. Herrick, James B.: "Clinical Features of Sudden Obstruction of the Coronary Arteries." *JAMA* 59: 2015, 1912. Dr. Herrick was born in Oak Park, Illinois, the same town where Dr. Foley lived at 539 Ridgeland Ave. during most of his career at Cook County Hospital. Herrick was also a long time trustee of the Lewis Institute. See: Herrick, James B.: *Memories of Eighty Years*. (Chicago, The University of Chicago Press, 1949.) RBN, Jr., was an early electro cardiographer at Cook County Hospital while he was a hematology fellow under Dr. Steve Schwartz. Radioactive iodine treatment of hyperthyroidism was also part of his role at County. In Dad's versatility he was following the example of one of his mentors, J.B. Herrick, M.D., who was the electro cardiographer who noted the pattern of myocardial infarction. Herrick, James B.: Concerning thrombosis of the coronary arteries. *Transactions of the Association of American Physicians* 33: 408–15, 1918. Dad liked to report that he had shaken the hand of Herrick who had shaken the hand of Osler. Herrick recalled being in the lobby of a Washington hotel when "Osler breezed in…gave Dr. Musser a poke in the ribs and said 'Here, Musser, why don't you introduce me to Herrick?' " Herrick, James B.: *Memories of Eighty Years*. (Chicago: University of Chicago Press, 1949). p 212-13.

13 The building that stands where Foley lived at age 3 in 1900 has the correct street number engraved in stone with a post September 1, 1909 address. That was the date the old numbers were retired.

14 John Foley was credited with recognizing and correcting a water quality problem at "Eye and Ear."

15 Ed Foley was a stalwart faculty member at the University Of Illinois College Of Medicine (the author's alma mater) located on the site of the second West Side Grounds where the Cubs won four National League pennants from 1906 to 1910 and two World Series championships in 1907 and 1908. The 1906 World Series, which the Cubs lost to the Chicago White Sox, was the only match up in series history between those two clubs. In the time since the Cubs abandoned West Side Grounds for the friendly confines of Wrigley Field, the team has never won a world series. See for further details: http://deadballbaseball.com/?p=2358 30

16 Lewis was later merged with the Armour Institute to form Illinois Institute of Technology. http://www.encyclopedia.chicagohistory.org/pages/628.html

17 Where there remains an endowed Edmund F. Foley, M.D., Chair in the Department of Medicine. http://uihistories.library.illinois.edu/cgi-bin/rview_browsepdf?REPOSID=8&ID=8124&pagenum=404

"whole time men" during the middle of the last century. Many of the Oslerian "multiform" traditions, both good and bad, of medical practice vanished in that era.

Sir William Osler foresaw this after reading Abraham Flexner's report of the (dismal) state of North American medical education early in the 20th century. Of the "whole-timers" Osler warned: "The danger would be the evolution throughout the country of a set of clinical prigs, the boundary of whose horizon would be the laboratory, and whose only human interest was research. Forgetful of the wider claims of a clinical professor as a trainer of the young, a leader in the multiform activities of the profession, and interpreter of science to his generation, and a counselor in public and in private of the people in whose interest after all the school exists. I would prefer a return to the French system -still in part effective- which ensures that each and every professor in the medical school - whether chemist, anatomist, pathologist, or physician - is kept in touch with the profession by giving him a hospital service…The truth is, there is much misunderstanding, and not a little nonsense on the tongues, of the people about the large fortunes made by members of the clinical staff. At any rate, let the University and hospital always remember with gratitude the work of one "prosperous" surgeon, whose department is so irritatingly misunderstood by Mr. Flexner. I do not believe the history of medicine presents a parallel to the munificence of our colleague Kelly to his clinic."[18]

The doctrine of medical practice has evolved importantly since 1896 when Ed Foley was born. What had been a craft taught by apprenticeship and largely based on traditions morphed, initially in fits and starts, into an "evidence based" science.[19] So we all hope.

Osler's textbook of medicine of February 1892, was written solo for the first seven editions.[20] His opus made him a preceptor by proxy to several generations of American physicians. Ed Foley and Rodney Nelson, Jr., professor and small-town doctor, had a shared doctrine codified by Osler. The practice guidelines of old were fewer and terser. Osler placed two epigraphs in his textbook on the verso of the third leaf:

"Experience is fallacious and judgement difficult."

Hippocrates: *Aphorisms*, *I*

"And I said of medicine, that this is an art which considers the constitution of the patient and has principles of actions and reasons in each case."

Plato: *Gorgias*[21]

Now medical practice has entered into the epoch of mega data and has joined hands with disciplines foreign to the old art. Mega data becomes part of the stuff of "evidence." The University of Chicago's Matthew Gentzkow won the 2014 John Bates Clark Medal as the top under age 40 U.S. economist. His

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18 Osler W: Sir William Osler: On Full-Time Clinical Teaching in Medical Schools. *Can Med Ass J* 8: 762-5, 1962.

19 Evidence can be categorized into levels, example: Level I: Evidence obtained from at least one properly designed randomized controlled trial.
Level II-1: Evidence obtained from well-designed controlled trials without randomization.
Level II-2: Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group.
Level II-3: Evidence obtained from multiple time series designs with or without the intervention. Dramatic results in uncontrolled trials might also be regarded as this type of evidence.
Level III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.
https://en.wikipedia.org/wiki/Evidence-based_medicine

20 Osler, Sir William. *The Principles and Practice of Medicine Designed For The Use Of Students And Practitioners Of Medicine*. (New York: D. Appleton, 1892). The author, a retired hematologist and internist, takes some pride in the fact that W.S. Thayer, Osler's successor at Johns Hopkins, was acknowledged by Osler to have provided "…assistance in the Section of Blood Diseases." Thayer was one of only four Osler colleagues so acknowledged in a "Note" on the third leaf.

21 The author's earliest copy of Osler's textbook is a first edition, 2nd issue with Plato's *Gorgias* spelled properly, and the June 1892 date in the end publisher adverts. The first printing misspelled Gorgias as "Georgias" on the verso of the third leaf.

work addresses "media bias and the perceived ideological echo chamber of online news."[22] The Clark Medal has been a springboard from the U of C to the Nobel Prize – Milton Friedman, Gary Becker, and James Heckman followed that trajectory.

Gentzkow began by studying media, but he has also studied health care spending (example: *Sources of Geographic Variation in Health Care: Evidence from Patient Migration*[23]). Whether his mega data analyses produce or reflect Baconian enlightenment or Malthusian tyranny remains for future judgement.

We must hope that work like Gentzkow's will help us navigate our present health care doctrinal transitions. His work on media led him to conclude that media outlets with niche appeal cannot afford journalists, i.e., they are "a lot of cost for a very small audience." This economic reality has led to the demise of many a small-town newspaper, an institution that preserved a small town's geographic niche that defined it as a community. The same great costs for a small audience may have slain Community Hospital and the type of physician who once practiced there.

Doctrine is a word most often associated with the art of war. But words like "paradigm," "strategy" and even "practice" may fail to capture some more comprehensive organizational principles. Many years ago, a retired brigadier was asked how the allies won WWII. The immediate pithy reply was: "Well Doc, our bureaucracy fell on theirs and crushed it." He explained that the U.S. military invented and perfected bureaucracy.

After a very brief pause he also said: "We had many individuals who could lock and load an M1 and were calm enough to shoot straight."[24] He was infantry.

The life story of Community Hospital is really a story of American 20th century health care doctrinal transitions and it ends during the recent doctrinal crescendo. Geneva Community Hospital had a biblical life span of roughly 75 years.[25] To get insights into the life of the institution an examination of the state of medical practice on the local and regional levels seems necessary to place the characters properly on the stage. What follows also includes a consideration of some of the reasons why Community Hospital disappeared, why it was created, and what happened in between.

22 Kelly J: "Mega Data" The University of Chicago Magazine, Mar-Apr, 2015.
23 http://faculty.chicagobooth.edu/matthew.gentzkow/research/movers.pdf
24 Called "the greatest battle implement ever devised" by General George S. Patton, the U. S. rifle, caliber .30, M1, was an elegant technological breakthrough. An aphorism attributed to the art of medicine, "Be not the first by whom the new is tried nor the last to last the old aside," was played out by the U.S. military brass in about 1940 over whether to keep the 1903 bolt action Springfield or adopt the semi-automatic Garand M1 as their standard infantry weapon. The phrase "lock and load" was made famous in reference to the M1 Garand by John Wayne in *Sands of Iwo Jima* in 1949. Dispute exists as to whether he should have said "load and lock."
25 *Psalms 90*: "The days of our years are threescore years and ten; and if by reason of strength they be fourscore years, yet is their strength labor and sorrow; for it is soon cut off, and we fly away."

# I: Background

"All history becomes subjective; in other words, there is properly no history; only biography."
Ralph Waldo Emerson in *Essays, First Series*, 1841

In this present attempt to describe a history the subject is an institution: a small town Illinois community hospital of the 20th Century. Individual hospitals of that time were as varied as the people who created and sustained them. Describing the American community hospital generally as an institution would require scholarship and synthesis beyond my ken. So, this narrative is a simple and biography-centric institutional anecdote. Subjectively describing a local scene, this tale could not possibly pass as historiography or even biography.

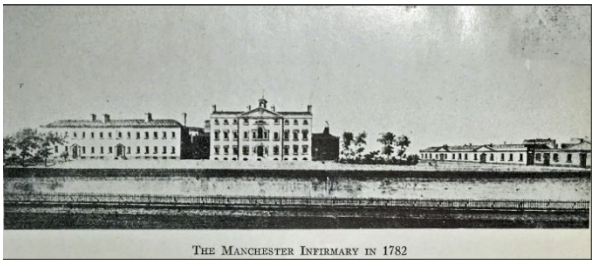
Medical Practice doctrinal change, both the intentionally planned and the largely yet unnoticed, must be a substantial part of the story. Local, regional, and national events with their attendant triumphs, treachery, and politics must be examined.

This anecdote is told from the biased perspective of just one physician.

Community Hospital began as the Colonial Hospital in Geneva, Illinois, in 1908. Raymond and Mabel Wager Scott created the original nine bed hospital with the encouragement and support of Doctors Francis and Julia Cole Blackman, whose remarkable lives will be chronicled later in this narrative.

Hospitals became necessities at the beginning of the 19th century for two reasons: first because medical practice, more particularly surgery, had by 1900 advanced to the point where more human resources and sophisticated equipment were required than a scalpel, a kitchen table, and a surgeon. Second, and equally significant for both physicians and patients, appropriately governed hospitals were vitally required as the institutional overseers of ethical medical practice.[26]

The expression "medical ethics" was introduced by Englishman Sir Thomas Percival at the behest of the Board of Governors of the Manchester Infirmary. A 1789 epidemic of typhoid or typhus[27] overwhelmed the Manchester Infirmary. So the Board decided to double the attending staff of physicians. This, of course, was not a popular decision among the physicians and surgeons already on the staff. Some members of the existing medical staff viewed the Governors' decision as a vote of no-confidence in their efforts, and many resigned.


THE MANCHESTER INFIRMARY IN 1782

The resulting chaos induced the Board of Governors to retain Thomas Percival, M.D., to draft a "scheme of professional conduct relative to hospitals and other medical charities." Percival's work product was printed and privately distributed in 1794 and his treatise formed the basis of hospital governance for about 200 years until it was replaced by today's untested corporate governance doctrine.

26 Leake, Chauncey: *Percival's Medical Ethics*. Baltimore, 1927. . Leake was a versatile University of Wisconsin pharmacologist and discoverer of vinyl ether, once used for induction of anesthesia. For a more modern view of the field see: Jonsen, Albert R.: *A Short History of Medical Ethics*. Oxford University Press, 2000.
27 All febrile illnesses were likely to be labelled either typhus or typhoid in the 18th century though many were probably neither.

From the beginning, Percival's decision to use the phrase "medical ethics" has resulted in great confusion, derision, and disrespect. In 1927 Chauncey D. Leake noted that Percival's term was a misnomer and that his code "…refers chiefly to the rules of etiquette developed in the profession to regulate the professional contacts of its members with each other." Leake's next sentence laconically states: "Towards this, society often evinces a respect not warranted by considerations of its own welfare."

Richard Harrison Shyrock seconded Leake's opinion in his 1959 *Anson G. Phelps Lectures* at New York University when that noted medical historian wrote: "The code dealt more with etiquette than with ethics, and so had more bearing on guild interests than on those of the public."[28]

Therefore, to the true ethicist the codes of ethics of physicians are more akin to the efforts of Emily Post then to those of Joseph Fletcher. This goes too far.

All of the codes of medical ethics that followed the code of Percival have addressed two physician centric issues: how physicians should relate to each other; and how they should be paid. But simply equating all "medical ethics" with etiquette among physicians widely misses the mark. Article I of the first American Medical Association's code of ethics of 1847, drawn largely from Percival's Code, addresses the duties of a physician to a patient. Article II speaks to the duties of physicians to each other and to the profession.

The very brief Article VII of that first AMA Code mandates the setting of fees by local medical societies. To be sure, this was self-serving to the profession, but restraint on the unscrupulous physician was part of its purpose.

Article V, "Duties of Physicians in the case of Interference" is where the etiquette clauses chiefly reside. At their core, the ten paragraphs of Article V create physician ownership of patients. A physician is unethical if he assumes the care of another physician's patient. The Article prescribes the narrow limits and specific circumstances where this rule may be temporarily laid aside in emergencies. During the existence of Community Hospital Article V was in force.

With this physician ownership came great responsibility. What Leake and many others have missed was that a patient can greatly benefit when a competent and dedicated physician accepts ownership of all a patient's problems. In the recent past, patient ownership was vested in the "attending physician" and "consultants" were to defer to the "attending". One of the most important roles of hospitals in the 20th century was to institutionally impose and supervise a necessary delicate balance while deploying this doctrine of the attending physician as ultimately in charge.

To be sure, the ethics of health care encompass far more than Percival's "medical ethics." However, many of the doctrines of Percival and of those who followed him should not be replaced by other doctrines without a careful review of what might be lost. A danger exists that physicians will become skilled technical employees in a corporate militia that lacks proper clinical leadership and incentives. A change from physician to corporate ownership of patients may not result in an ethical improvement.

A much older code than Percival's, The Code of Hammurabi (ca 1770 B.C.), as it relates to medical ethics (and only 9 of its 282 laws do), has been invoked recently by noted Princeton medical economist Uwe

28 Shyrock, Richard H. *Medicine and Society in America: 1660-1860* (Ithaca and London: Cornell University Press, 1975) 32.

Reinhardt in the context of ObamaCare because that ancient Code sets forth a schedule for surgeons' fees.[29] Reinhardt, after pointing out that if a slave dies after surgery the surgeon must replace the slave, proceeds to expound on the similarities of the Code's differentiated fee schedule (the same procedure to cure a tumor of a freeman versus a slave: 5 shekels versus 2 shekels) to many elements of the current U.S. system.

Much attention, by surgeons at least, has been paid to Hammurabi Code #218: "If a physician make a large incision with the operating knife, and kill him, or open a tumor with the operating knife, and cut out the eye, his hands shall be cut off." Sanctions, or the threat of them, alter behaviors. This is a two-sided *Sword of Damocles* for both the surgeon and the patient.[30] Two sided because a skillful and careful surgeon, remembering the admonition of Bishop Joseph Butler, knows he can do everything right and still have a disastrous outcome. A small series of unlucky events, however statistically "invalid" becomes career threatening.

For the surgical patient some awareness of the forces that can influence the judgement of the surgeon is essential for truly informed consent. It bears repeating that hospitals were largely created by surgeons who put themselves as well as their patients at risk when they operated. Community Hospital was a typical example.

If Raymond and Mabel Scott were the parents of Community Hospital, Francis and Julia Blackman were the godparents. Henry Crawford, M.D. and George Washington Richards, M.D.,[31] were the god grandfathers. Francis Blackman's touching tribute to his mentor and friend Dr. Henry Crawford poignantly illustrates an 1874 young Geneva surgeon's anxiety over his perilous position.

Francis Blackman wrote in 1900 upon the death of Dr. Crawford: "I remember calling him some 26 years ago to see a case of appendicitis. After viewing the case we both came to the conclusion that an operation alone would save the boy's life; but we were confronted with the newness of the procedure and the possibility of our patient dying and we being accused of killing him, for it was before the days when appendectomies were popular. After going over the matter carefully the doctor said to me: 'You go ahead and operate, and I will stand by you no matter what happens.' We operated, the boy was well in three weeks and is alive today."[32]

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29 Others have read more detail into the code, see footnote #7. http://economix.blogs.nytimes.com/2013/04/26/hammurabis-code-and-u-s-health-care/?_r=0 26

30 With a sword suspended by a single hair of a horses tail over his head Damocles finally begged the king that he be allowed to vacate his temporary seat on the throne because he no longer wanted to be so fortunate, realizing that with great fortune and power comes also great responsibility. I have known many surgeons. Some were arrogant, most were not. On the infrequent occasions when a patient complained of a surgeon's haughty manner I would apologize for my selection and promise to obtain the trembling hand of a timid self-doubter the next time.

31 Richards was a pioneer Midwest medical educator and the 1842 founder of The Franklin Institute in Saint Charles, Illinois, the first operating medical school in the state. He was a noted anatomist (and hence, by necessity, resurrectionist) but his career was cut short when he was shot standing on his front porch in St. Charles, Illinois, in 1849. Richard's wound in the apex of the right lung caused him to lose the use of his right arm. Nelson, R: *The Franklin Institute*. (Geneva, Illinois: Grant House Press, Geneva, Il, 1991) p 34. http://www.rodneynelsonmd.com/files/Publication13.pdf

32 Geneva *Republican* volume 4, issue 99, July 25, 1900, p 2.

One hundred years before the advent of the Scotts' Colonial Hospital, on Christmas day, 1809, another surgeon of Scottish descent, Ephraim McDowell, M.D., removed a 22.5-pound tumor from the abdomen of Jane Todd Crawford. He dexterously performed this 25-minute operation at his office in the frontier village of Danville, Kentucky, without the benefit of anesthesia. He had first visited Mrs. Crawford at her home 60 miles from Danville. The calendar and McDowell's clinical findings disproved the diagnostic hypothesis of the local physician that Mrs. Crawford was suffering from a beyond-term pregnancy.[33]

Dr. McDowell diagnosed an ovarian tumor. McDowell then described Mrs. Crawford's condition to her and explained that an operation for cure had never been performed. Mrs. Crawford begged him to save her from a certain slow and painful death. McDowell would perform the operation only if Mrs. Crawford consented and then only if she travelled to Danville, which she did on horseback.

McDowell insisted that his patient make the arduous trip for two reasons. Of course, he needed to be able to provide post-surgical care. However, he also needed to operate in a place where he was known and respected. He would need the emotional, and possibly the legal support, of his friends and family. Physicians who performed unsuccessful surgery could be, and occasionally were, charged with murder. McDowell had no hospital except his own home and office.[34] His institutional authority to perform the operation was vested in him by the community of Danville.[35] However, he operated at 10:30 am on a Sunday morning when nearly everyone was in church to avoid the curiosity of his neighbors over the inevitable screams of his patient.

When McDowell visited Mrs. Crawford on the fifth post-operative day, he found her, to his "astonishment," making up her bed. Mrs. Crawford was back home within the month. She died in Graysville, Indiana, 32 years later.[36] Abdominal surgery had begun, and with that birth came the nascent need for institutions like Community Hospital in Geneva, Illinois.

One of Francis and Julia Blackmans' professors at Chicago Medical College (later Northwestern Medical School) in 1870 had been John Hamilcar Hollister, an 1847 graduate of the Berkshire Medical College, Pittsfield, Massachusetts. Even at that later date abdominal surgery was "a fatal deed": "I was a candidate for graduation [November 7, 1847 was his graduation day] when Dr. Warren of Boston first used ether as an anesthetic. In my early days it was deemed a fatal deed to explore the abdominal cavity. Cleanliness was enjoined, but the whole list of antiseptics was unknown…"[37]

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33 Mrs. Todd's last born was mayor of Louisville in 1860. Schachner A: *Epraim McDowell, "Father of Ovariotomy" and Founder of Abdominal Surgery with an appendix on Jane Todd Crawford.* (Philadelphia, 1921), p 301.

34 "EMH" is now the acronym for an aptly and eponymously named health care system in central Kentucky. http://www.emhealth.org/

35 Hammurabi's Code of Law specified: "If a surgeon performs a major operation on an 'awelum' (nobleman), with a bronze lancet and caused the death of this man, they shall cut off his hands". However there is no proof that such a punishment was ever carried out. Hammurabi also specified fees for lifesaving operations: "Ten shekels of silver for 'awelum', five shekels for 'mushkenum' (poor man) and two shekels for a slave". No analysis was made of veterinary medicine or wet nursing.

36 McDowell, Ephraim: "Three cases of extirpation of diseased ovaria". *Eclectic Repertory Anal Rev* (7): 242–4, 1817. Jane is buried in the Johnson Cemetery, Graysville, Sullivan County Indiana. http://www.findagrave.com/cgi-bin/fg.cgi?page=gr&GRid=7369218

37 Hollister, John H.: Memories of Eighty Years, (Chicago: University of Chicago Press, 1912). p78. Hollister began his teaching career as anatomy demonstrator at Rush in 1857. He had to procure his own "subjects." "The exposures and real dangers I underwent in the fulfilment of duties connected with that position seem almost incredible. The procuring of subjects for anatomical teaching was sometimes at the peril of

The Doctors Blackman and Scott certainly knew and attended lectures by James B. Murphy, M.D., and Murphy had been associated with the almae matres of both men.[38] Dr. Scott and Dr. Murphy were both charter Fellows of the American College of Surgeons in 1913, an organization that played a major role in shaping the organizational governance and operation of American hospitals of the 20th century.[39] Dr. Scott's hospital evolved along the plan of the American College of Surgeons' hospital code and doctrine.

Doctor Murphy was an early advocate of immediate surgery for appendicitis. (Ironically Ephraim McDowell probably died of acute appendicitis.)[40] Both Murphy and McDowell had studied abroad, the former with Theodore Billroth[41] and the latter with John Bell.[42]

Dr. Frances Blackman, with the early mentoring of Dr. Henry Crawford,[43] was one of the early surgeons to perform appendectomies in Kane County. Dr. Raymond Gaylord Scott intended to take surgical and trauma care to the next level in the central Fox Valley. He would need help.

Mabel Scott studied anesthesia at Mayo Clinic.[44] Julia Cole Blackman, M.D., was in the inaugural 1871 graduating class of three from Women's Medical College of Chicago (later the Northwestern University Woman's Medical School).[45] In the class of 1892 of that school was Isabella Coler Herb, M.D. Dr. Herb was the Chicago pioneer of anesthesia, though she was also an accomplished pathologist. Both Dr. Scott and Dr. Julia Blackman had contacts though colleagues with Dr. Herb, who was Dr. Charles Mayo's personal anesthesiologist.

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life. At that period nothing in a community would so incite a mob as the invasion of a graveyard. It was at a time, too, when not even the failure of the regular lectures would so soon bring discredit to a medical college as the failure to provide subjects for dissection, and the demonstrator was responsible for the supply. It is needless to speak of the decoy letters, of shadowings by police, of the mutilation of subjects in the darkness of the night to prevent their recognition when the authorities were about to pounce down upon our college on a voyage of discovery. I might speak of visits to other cities and the sending home of barrels marked "Chemical Erasive Soap" so that the contents might not be betrayed by the odor. Only once was my life, I think, really in danger, and that was when I approached a half open grave and one of my helpers, deaf as an adder, grasped his hatchet to brain me, mistaking me for a policeman. I threw my hat in his face; he recognized it and sank down in complete collapse. We got our quota of subjects all right. To prove to myself that I could do it, I went one dark night and procured a subject all alone. I did it then, but I don't think I would do it again." Ibid. p 76-77.

38 James B. Murphy obtained his M.D. from Rush Medical College in 1879 and did an eighteen-month internship at Cook County Hospital. He was lecturer in surgery at Rush Medical College at the end of 1884. In 1890 he was elected Professor of Surgery. In 1892, he was named Professor of Clinical Surgery at the College of Physicians and Surgeons (later the University of Illinois College of Medicine). From 1901–1905 he held a position at the Northwestern University Medical School. From 1905–1908, he worked at Rush Medical College, and from 1908–1916 he returned to Northwestern University Medical School. Academic appointments and institutional affiliations in Chicago were and are volatile.

39 Many were called (about 4000) but few were chosen (about 1000). Bonner, T. N.: *Medicine in Chicago, 1850-1950*, second ed, (Urbana and Chicago), 1991. p 98

40 http://en.wikipedia.org/wiki/Ephraim_McDowell

41 http://en.wikipedia.org/wiki/Theodor_Billroth

42 http://en.wikipedia.org/wiki/John_Bell_(surgeon)

43 "Dr. Henry M. Crawford - One of the best educated and well known physicians in the entire Northwest, was born in Belfast, Ireland, and graduated from the Royall Belfast College, an affiliated college of the London University in 1848. He held a surgeon's diploma and prior date and furthered his studies in Dublin and Edinburgh. He came to America on an immigrant ship in the spring of 1848 and arrived in St. Charles in September. He continued on, but returned in October as winter was coming early, and found himself snowbound in St. Charles, where he decided to stay. He tended those with the Asiatic cholera from 1849 to 1854. Then in 1854 he was commissioned as surgeon of the St. Charles Grenadier Guards, a local military company. When the great war of the Rebellion came he accepted the surgeoncy of the 58th Illinois Volunteer Infantry and served as a regimental, brigade, division and army corps surgeon, chief of hospitals, etc. Afterwards he returned to St. Charles and resumed his practice. Before the Great Chicago Fire of 1871 he opened an office there and was a prominent lecturer. The fire destroyed his Chicago office and valuable library, hence he returned to St. Charles." Joslyn, R.W. and Joslyn, F.W.: *History of Kane County Illinois, Vol 1*, p. 516.

44 Isabella Coler Herb, M.D., was the first "physician-anesthetist" at the Mayo Clinic in Rochester, MN, and developed the Department of Anesthesiology at what became Rush-Presbyterian Hospital in Chicago, IL. http://journals.lww.com/anesthesia-analgesia/Fulltext/1995/03000/Isabella_Coler_Herb,_MD__An_Early_Leader_in.29.aspx

45 The others were Augusta Kent and Linda Miller. The latter attended, like Julia Cole, the Chicago Medical College in 1870. Both were academically successful there but neither was invited to finish. *Alumnae of the Woman's Medical College of Chicago, 1859-1896*. (Northwestern University, Evanston Ill. Chicago), 1896. p 93.

This story of Community Hospital begins with an examination of the mechanisms leading to its apparent demise. “Apparent” demise because the end did not come suddenly to the institution. No bankruptcy, scandal, failed inspection, fire, tornado or bomb felled it. No precise date of death can be assigned. Perhaps death could be ruled to have come naturally, perhaps not.

Community Hospital vanished into the innards of the corporate health care food chain. Occasional apparitions of the old institution glide by, but such sightings are becoming ever rarer. The last known publicly viewable physical evidence of the old Community Hospital at its progeny and beneficiary institution, Delnor Hospital, was discarded in a dumpster in 2012.


This was some time after the name “Community” had been expunged.

Much of this story could be viewed from a temporal paradigm as merely a description of the result of evolution of the doctrines of medical practice. Certainly 1915 was different than 2015.

A scale paradigm also seems an apt vantage point, though increasing hospital size might have been the result of doctrinal change, not the cause. Communities themselves were once smaller and less interdependent. The scale of both Federal governmental involvement in health care and of its share of total cost, when graphed, shows an inflection point in 1965 with the advent of Medicare. Larger institutions usurped the independence of the smaller. This continues unabated.

Soon a handful of huge provider networks, insurers, pharmaceutical and equipment makers, and governmental regulators will be the only players as mega mergers whittle away at competition and meaningful choice.[46]

The creation, evolution and dissolution of the local institution herein described were each influenced by outside forces and doctrines, both local and national. In magnitude present day outside influences and mandates dwarf those of yesteryear. Community hospitals were once idiosyncratic designs reflective of local conditions with players left quite free to identify their own problems and invent their own solutions. Now hospitals are cloned factories operated by check-list algorithms that in turn are based upon mostly scientifically untested and euphemistically termed “evidence based” “best practices”.

To estimate the net gains and losses resulting from the recent decades’ revolution in health care delivery an examination of the state of the old doctrines, again local and national, seems required. A “biography” of Community Hospital, Geneva, Illinois, could be one window for viewing the evolution of American medical practice doctrine.

The medical annals of the central Fox Valley of Kane County, Illinois, contain the names of many exceptional individuals. Yet struggles to deal with mysterious diseases and all too frequent accidents related to agriculture, industry, and transportation, of necessity, had to be communitywide. This

[46] Wall Street Journal Sept 22, 2015: http://www.wsj.com/articles/health-care-providers-insurers-supersize-1442850400

collective effort was institutionalized by the formation of hospitals. Indeed, the early Geneva hospital was named "Community Hospital", not out of modesty, but out of a mission critical imperative.[47]

A Fire Scare Today At Colonial Hospital

Boiling parafine caught fire this morning in the kitchen at the Colonial Hospital and in a moment the woodwork about the door way near the gas stove was in flames. Fortunately Doctors Scott and Marstiller were both in the hospital and by prompt use of fire extinguishers, with which the hospital is well equipped, the blaze was extinguished, with but very little damage. The fire alarm whistle was sounded but the department did not make the run to the hospital as word was received that the two physicians had proved themselves more than able to handle the matter, and the fire was out.

An eponymous alternative appellation had been obvious, since the hospital had been founded by an individual physician, Raymond Gaylord Scott, M.D, F.A.C.S. But Scott himself, recognizing that his hospital would need sustenance from at least some colleagues and some community leaders, had first named his endeavor "Colonial Hospital".[48] Two pieces on page 1 of a November 1915, Geneva newspaper demonstrate the Scotts' sagacity.

Governance and capital formation in health care in 2015 is dependent more and more upon ever larger and larger corporations, and less and less upon direct voluntary support from local community members. In 1915, trust busting was political gold. The Supreme Court dissolved Standard Oil in 1911. Today bigger is "better" again, especially in health care. With few exceptions, zeal for trust busting of health care behemoths has been lacking.

The modern hospital corporation's brand is sacrosanct, being central to its reputational marketing. One northern Illinois health care amalgamation of hospitals proclaimed itself "NorthShore University", thereby cloaking the exclusivity of its tony geography in the solemn and learned gown of academia. A term for this type of puffyness was invented in the Midwest at about the time of Chicago's first settlement: "flumadiddle".[49]

HAVE GOOD PICTURES FOR HOSPITAL BENEFIT

The committee in charge of the Colonial Hospital show at the Grand next Thursday evening, selected the films of Marguerite Clark in "Seven Sisters," only after they had devoted considerable time to the question what would be most appealing to the largest number of people. It is almost certain that this was a choice which will prove very pleasing to the large number who have already bought their tickets for the attraction.

A matinee will be given at four o'clock when children's tickets may be used. In the evening all of the tickets will be 35 cents each and the advance sale promises a very large audience.

Do not try to follow their football team or to contact their cosmologist. On the other hand, a cash and carry wrinkle erasing cosmetologist could be easily found within its hallowed halls. The "U's" tagline declared that "Excellence is all around you". Perhaps so. Certainly, their ads were. Do not form a lasting affection or consider that your appendectomy makes you an alum. NorthShore has announced its merger with the much larger Advocate system.

47 The original Delnor Hospital was in Geneva's neighboring town of Saint Charles. The 21st century Delnor Hospital in Geneva is the fusion product of two earlier small town hospitals. This marriage occurred after a stormy courtship that first saw Delnor leave Community at the altar in 1985. Only after local physician group," Doctors for Merger", engaged a legendary Saint Charles swimming coach as a relationship counsellor was the marriage consummated.
The Geneva institution was Community Hospital. The 1985 merger of Delnor and Community Hospitals led to an immediate name and identity conundrum. The descriptor "Community" carried embarrassing negative connotations. By 1985 every hospital fancied itself at least a "regional" Medical Center. First a hyphen was inserted between Delnor and Community so that "-Community" would be taken only as a respectful nod to history. Then, as the leaders and benefactors of the old Community Hospital faded from the scene, both the hyphen and the "Community" were dropped. This name dance and the angst that it produced was a harbinger of further political correctness and language cleansing to come.
48 Not to be confused with the somewhat later Colonial Hospital at the Mayo Clinic in Rochester, MN. Why the Scotts chose the Colonial name is not known. Possibly misidentification of the architectural style of its first edifice, which is classic Greek revival, was the reason. The original 9 bed hospital of 1908 was located in the private home built in 1854 by Charles B. Wells (from dimensions suggested by his physician Dr. Henry Crawford and from plans copied from the Encyclopedia Britannica.) The building is listed in the Historic American Buildings Survey.
49 The word is a portmanteau combining "flummery" (complete nonsense) with "diddle" (to fool with).
http://dictionary.reference.com/wordoftheday/2015/07/11/flumadiddle

"The harsh reality is that it is difficult to find well-documented examples of health care mergers that have generated measurably better outcomes or lower overall costs…The most consistently documented result of provider mergers is higher prices, particularly when the merging hospitals are in close proximity."[50] Ere long residents of the Chicago area will have more choices for cell phone service than for health care, with one large difference. All the cell phone providers will have to provide area wide local service while competing nationally.

# II: Causes of Death of Community Hospital

The external forces leading to the demise of Community Hospital are challenging to precisely characterize. Luddites might simply lump the forces under "technology" and be done with it. Other more progressive modernists would deny the very existence of at least some of these forces.

While technology is one driver of increased medical costs, it also has been a major driver of medical progress. Mapping the human genome likely could not have been accomplished without the digital computer and technologies such as x-ray crystallography that allowed Rosalind Franklin, PhD,[51] and others to discover the structure of DNA.[52]

Lewis Thomas addressed aspects of this in his "half way technology" essay almost 45 years ago.[53] A decade ago Thomas' "half way" proposition was applied to the methodology of economic evaluation of health care.[54]

To achieve Lewis' "high technology" in that economic evaluation data must be gathered. These data must be valid, reproducible, quantifiable and actionable, though not of necessity mega or even big. One thesis presented here is that little of this kind of robust data exists today. Ever grander magnitudes of uncalibrated "Big Data" gathered by today's half way technology may only make it harder to sort out confounders and effect modifiers from causes and effects.

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50 Dafny LS and Lee TH: *The Good Merger*. N Engl J Med 373:2077-2079, 2015.
51 http://en.wikipedia.org/wiki/Rosalind_Franklin
52 Oswald Avery, M.D., discovered DNA using comparatively simple methods. http://en.wikipedia.org/wiki/Oswald_Avery
53 Thomas identified three levels of technology in medicine: "nontechnology" that palliates symptoms of diseases that are not well understood but does not help solve the underlying mechanisms of the disease, "halfway technology" that makes up for disease or postpones death for diseases whose courses we cannot do much about, and "high technology" that from understanding the mechanism of the disease we are now able to cure. Lewis posited that when looking at the costs of the three different technologies they were all needed, but once a "high technology" is found for a disease the benefits outweigh the costs of studying the mechanism of the disease so thoroughly. Thomas suggests that in order to save money in health care, the highest priority in funding should be given to basic research. He did not address what to do with half-way technologies that postpone death by half of a half year at a cost of $100,000 per patient. Thomas, Lewis: "Notes of a Biology Watcher: Technology in Medicine." *NEJM* 285, 1366-8, 1971. This was published the year the author graduated from the University of Illinois College of Medicine.
54 Hutton, J.: "Economic Evaluation of healthcare: A half-way technology." *Health Economics*. Vol 3, p 1–4, 1994.

Worse and far more dangerous to the individual patient is the abrupt revolution in health care delivery doctrine.

Not a single first principle of health care delivery can be expressed in a provable formula and no measuring device gives outputs of unbiased readings with a standard deviation that approaches zero asymptotically. No wonder Lord Kelvin found thermodynamics so easy.

Walmart has been said to have killed the small Midwest town. No doubt the mom and pop hardware store, grocer, dry goods store and most other small merchants folded soon after Walmart moved into a nearby corn field. Some small downtowns survived, mainly those engulfed in the urban sprawl. But even those were never the same. Walmart could not have achieved its scale without its accounting and supply chain computer dependent technology.

The Walmart of health care is the multi-hospital health system. Measuring the net benefit and harm of increasing scale is difficult, whether the unit in question is a family, a small business, a corporation, or a government. Just as porridge can be too hot or too cold, institutions and enterprises can be too small or too large. Calculating the size sweet spot is not yet remotely scientific. Empiric research (i.e., trial and error) will be required. Measurement and hence valuation are perplexing. Yet without valid numbers, only opinion remains. The only certainty is that the experiments, like ObamaCare, will be unscientific, large and expensive.

The root cause of the death of Community Hospital was smallness. The bureaucratic administrative barriers to survival became too high, at least as perceived by its governance. Mergers could save neither its name nor its legacy.

Community Hospital succumbed to the “Tyranny of N”.

# III. Lies, Damned Lies, and Statistics[55]

***The Tyranny of Counting N Events***

> "At the same time, I confess there is a little something in it that rubs me the wrong way. According to what he has said, it is possible for us to diagnose only about 50 per cent of the cases of mitral stenosis . . . We are justified in asking him, whether he or someone equally as competent made the examinations, or were many of them made as they are in many hospitals by young, perhaps inexperienced interns or residents? Who interpreted the results?" James Byran Herrick, MD.[56]

Chicago's officially reported homicide rate is going down. In July 2013 the naked body of Tiara Groves was found bound, gagged, and badly decomposed in an abandoned warehouse on the west side of Chicago. On the night she was last seen witnesses said she had been crying uncontrollably and had told them she feared for her life. Toxicology reports showed no lethal levels. The medical examiner ruled it a homicide. Grove's mother was told by a Chicago Police detective that they would find her "murderer". Quietly, sometime later, Groves' case was reclassified as a noncriminal death investigation. In his report, a police official cited the medical examiner's "inability to determine a cause of death."[57]

That same year a mildly demented elderly patient with diabetes, heart disease, and moderate kidney failure underwent a risky but necessary surgical procedure in a large Chicago area hospital. Complications ensued. After a week in the ICU the patient was transferred to a regular room. Doctors, nurses, and family agreed that the end seemed near. The patient slipped past the point of being able to choose for himself and he was transferred to hospice status. He remained in the same bed with the same bedside care team and died 15 hours after the status change. His death was not classified as a surgical death or a hospital death. He was in hospice.

Forty-two years earlier, an intern at a Chicago hospital, during his first night in the emergency department, was faced at one a.m. with a patient in the midst of a seizure who was blue, gasping, and without a blood pressure. Moments later he stopped breathing altogether. The intern administered CPR (including mouth to mouth resuscitation) while shouting for help. In the ensuing hour the intern performed three procedures he had never before executed.

First, he successfully inserted in the wind pipe an endotracheal tube on his first try (beginners' luck, though he had seen it done before). Even after the arrival of (slightly) more experienced doctors and the administration of IV fluids, several medicines, and continued CPR, the patient died.

The senior (by a year) resident, as he took his leave, looked at the intern and said: "He is your patient. Talk to the family." The intern had witnessed such conversations but had never participated in one. After being informed of her husband's demise as gently as was possible by a rookie, the patient's wife

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55 Mark Twain popularized the saying in *Chapters from My Autobiography*, published in the North American Review in 1906. "Figures often beguile me," he wrote, "particularly when I have the arranging of them myself; in which case the remark attributed to Disraeli would often apply with justice and force: 'There are three kinds of lies: lies, damned lies, and statistics.'"

56 Herrick is quoted by: Ross, R.S.: "A parlous state of storm and stress. The life and times of James B. Herrick." *Circulation* 63: 955-959, 1983. Herrick, whose landmark paper on coronary thrombosis was widely ignored by his colleagues, criticized a report of a famous cardiologist. See: Cabot, R.C.: Mitral stenosis: observations on 200 cases, before and after death. Also on 116 cases not autopsied. *Trans Assoc Am Phys* 29: 45, 1914,

57 Bernstein, David and Isackson, Noah: "The Truth about Chicago's Crime Rates," *Chicago Magazine*, 7 April 2014.

related that the patient had been chronically ill but "OK" that afternoon when he got his "shot" across the street at "Sach's". (No tavern or department store was present across the street, but a TB clinic named after a pioneer Chicago TB specialist was located there.)

Even the intern knew that the "shot" almost certainly was streptomycin and that the drug can cause seizures. Was this death treatment related? Was it one of the 100,000 yearly deaths now attributed to medical mistakes by the Institute of Medicine?[58]

Finally came the most bewildering aspect of the entire unhappy sequence for the intern. The "AOD" shoved a form in front of him with a terse command (the intern just then had been making a mental note that he should get his PPD TB skin test rechecked in a few weeks): "Fill this out." It was a death certificate. "See one, do one, teach one" was the doctrine of clinical education in that era, but on this occasion the doctrine failed.[59] The intern had never before even seen a death certificate, but he took his best shot and did one. He did not mention the streptomycin.

The fundamental reason why the "Tyranny of N" reigns over the magical thinkers of modern health care is that the numbers they crunch are not reliable, and that situation is worsening. To make correct decisions based on evidence the evidence must be undistorted. James Byran Herrick, M.D., knew this 100 years ago. Alvan Feinstein, where are you?[60] Indeed, the pseudoscience of modern medical practice is at least as opinion based now as it ever has been.

Also, Bill Gates may have been right if he said "640Kb ought to be enough for anyone."[61] If Kb were to be rationed people would have to think more about the quality of their numbers before willy nilly gathering large chunk samples of convenient "big data" and then in engage in data mining by running multiple binary logistic regression analyses, etc.

Intricate linkage of "clinical documentation" with payment distorts decisions on what data to gather in addition to distorting data accuracy. For example, physicians at Northwestern Medicine in 2014 must "attest" (cosign) to a dietician's note concerning malnutrition. Failure to attest means an incomplete chart, which leads to physician "Crimson" demerits, pay cuts, and job loss. However, over-attestation can beget a stay in a gated community and orange wardrobe.

Malnutrition is a co-morbidity that indicates higher severity of illness that results in higher payments, so "game on." In Baltimore, hapless coders used ICD 9 "260". In 2011, the University of Maryland Medical

58 This figure can be best characterized as a "WAG" (wild ass guess). Doctors bury their mistakes. According to the CDC (which does not tally deaths due to errors) 100K medical mistakes would rank errors at least the 6th highest cause of death, ahead of diabetes and Alzheimer's Disease. The gold standard for "evidence based medicine" is the clinical trial. Curiously, medical mistakes are never tallied in these "scientific" reports. Complications and side effects are not the same as mistakes, but more complex treatments create more opportunities for lethal mistakes. See:
https://www.iom.edu/~/media/Files/Report%20Files/1999/To-Err-is-Human/To%20Err%20is%20Human%201999%20%20report%20brief.pdf

59 "See one, do one, teach one" was at its apex in the early 1970's. A prior doctrine, "Hear much, see little, do nothing" peaked about 120 years earlier after two 16 week lecture courses replaced the 3 year long true apprenticeship model of medical education. See: Ayers, L.B.: *Northwestern University Medical School, 1859-1959*. (Evanston & Chicago, 1959). p 17-26.

60 Feinstein, Alvan*: Clinical Judgment*. 1967. Feinstein, a University of Chicago mathematics major turned Yale M.D., made an early and valiant attempt to define and calibrate clinical observations before even attempting to statistically analyze them. His book could have subtitled "Truth in Clinical Accounting." Feinstein also described the many errors in statistical analysis that were and are extant in the medical "literature."

61 The quote is widely attributed to Gates but he denies ever saying it.

**ICD-9 Codes included in Range 260 - 269.9**

| ICD-9 CODE | ICD-9 CODE DESCRIPTION |
|---|---|
| 260 | KWASHIORKOR |
| 261 | NUTRITIONAL MARASMUS |
| 262 | OTHER SEVERE PROTEIN-CALORIE MALNUTRITION |
| 263.0 | MALNUTRITION OF MODERATE DEGREE |
| 263.1 | MALNUTRITION OF MILD DEGREE |
| 263.2 | ARRESTED DEVELOPMENT FOLLOWING PROTEIN-CALORIE MALNUTRITION |
| 263.8 | OTHER PROTEIN-CALORIE MALNUTRITION |
| 263.9 | UNSPECIFIED PROTEIN-CALORIE MALNUTRITION |
| 264.0 | VITAMIN A DEFICIENCY WITH CONJUNCTIVAL XEROSIS |
| 264.1 | VITAMIN A DEFICIENCY WITH CONJUNCTIVAL XEROSIS AND BITOT'S SPOT |
| 264.2 | VITAMIN A DEFICIENCY WITH CORNEAL XEROSIS |
| 264.3 | VITAMIN A DEFICIENCY WITH CORNEAL ULCERATION AND XEROSIS |
| 264.4 | VITAMIN A DEFICIENCY WITH KERATOMALACIA |
| 264.5 | VITAMIN A DEFICIENCY WITH NIGHT BLINDNESS |
| 264.6 | VITAMIN A DEFICIENCY WITH XEROPHTHALMIC SCARS OF CORNEA |
| 264.7 | OTHER OCULAR MANIFESTATIONS OF VITAMIN A DEFICIENCY |
| 264.8 | OTHER MANIFESTATIONS OF VITAMIN A DEFICIENCY |
| 264.9 | UNSPECIFIED VITAMIN A DEFICIENCY |
| 265.0 | BERIBERI |
| 265.1 | OTHER AND UNSPECIFIED MANIFESTATIONS OF THIAMINE DEFICIENCY |
| 265.2 | PELLAGRA |
| 266.0 | ARIBOFLAVINOSIS |
| 266.1 | VITAMIN B6 DEFICIENCY |
| 266.2 | OTHER B-COMPLEX DEFICIENCIES |
| 266.9 | UNSPECIFIED VITAMIN B DEFICIENCY |
| 267 | ASCORBIC ACID DEFICIENCY |
| 268.0 | RICKETS ACTIVE |
| 268.1 | RICKETS LATE EFFECT |
| 268.2 | OSTEOMALACIA UNSPECIFIED |
| 268.9 | UNSPECIFIED VITAMIN D DEFICIENCY |
| 269.0 | DEFICIENCY OF VITAMIN K |
| 269.1 | DEFICIENCY OF OTHER VITAMINS |
| 269.2 | UNSPECIFIED VITAMIN DEFICIENCY |
| 269.3 | MINERAL DEFICIENCY NOT ELSEWHERE CLASSIFIED |
| 269.8 | OTHER NUTRITIONAL DEFICIENCY |
| 269.9 | UNSPECIFIED NUTRITIONAL DEFICIENCY |

System faced up to $8 million in fraud charges for inappropriate use of that code, as did several California hospitals associated with Prime Healthcare.[62]

Code 260 is specific for Kwashiorkor, a severe form of protein calorie malnutrition endemic in Africa but extremely rare elsewhere. Playing that code in Baltimore or California is the craps equivalent of tossing snake eyes. On the other hand, CMS does not pay out if you roll the most common dice combo, 7, and use 269.8.

Malnutrition is a fellow traveler with many chronic diseases. Treatment with calories can be lifesaving when malnutrition is primary (i.e., little to no caloric access, as on the Bataan Peninsula in 1942) if done judiciously to avoid the potentially lethal re-feeding syndrome. Specific deficiencies are the stuff of classic medical legends (think James Lind and scurvy[63]). Scurvy and Rickets are clinical diagnoses. However, no one knows what the optimal vitamin D level is.[64] Evidence supporting short term nutritional interventions in complex chronic disease is rickety itself and largely grounded on ritualistic normalization of lab test results.[65,66]

Turning health care payment into *Grand Theft Medicine X* is a new and untested battle doctrine for improving quality or lowing costs. ICD 10 will make the game more challenging for both payers and payees. But the house (the payer) always wins.

The tyranny of counting N events is saturated with simplistic attempts to find surrogates for quality. These methods often resemble solutions described by H.L. Mencken: "For every complex problem there is a solution that is clear, inexpensive and wrong."[67] "Never events" illustrate this.

### *The Tyranny of N=0*

"Never events" (N=0) are the 28 (at last count) reportable bad things that should never happen (as identified by the U.S. National Quality Forum). Four are related to acts of violence. The United Kingdom defines only 8 "never events". None are related to violence.[68] This confirms that the US is the more violent and the UK the more frugal. A hospital is never to be paid for a never event.

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62 http://www.hcpro.com/HIM-303748-5707/News-OIG-fines-another-facility-for-inappropriate-Kwashiorkor-claims.html
63 http://www.jameslindlibrary.org/articles/who-was-james-lind-and-what-exactly-did-he-achieve/
64 Holick, M.F.: "Vitamin D Deficiency." *N Engl J Med* 2007; 357:266-281.
65 In the early days of multichannel serial chemistry analyzers "SMAC12" results were recorded by a pen moving across a printed page of 12 columns each depicting the result on a numerical scale with a gray box marking out the normal range. On rounds when someone asked about the albumin, the reply foreclosed serial questions by saying that the patient was "euboxic". A better visual reporting system has not been invented.
66 Aberegg, S.K. and O'Brien, J.M.: "The normalization heuristic: an untested hypothesis that may misguide medical decisions." *Medical Hypothesis* 72: 745-748, 2009.
67 H. L. Mencken. (n.d.). BrainyQuote.com. Retrieved March 28, 2015, from BrainyQuote.com Web
68 http://en.wikipedia.org/wiki/Never_events

“Never” # 7 is “Patient death or serious disability associated with a fall while being cared for in a healthcare facility.” Obviously, documenting all falls then becomes necessary, as reporting death or disability due to a fall requires knowing that the antecedent fall occurred. After a fall, clinical and radiographic examinations must be done and documented as a baseline to determine any contribution the fall might have to a future death or disability. Proving the absence of an injury in its immediate aftermath is difficult, if not impossible. However, patients are now increasingly “sliding to the floor,” not “falling,” especially when nurse documentation time is stretched thin.

All this may lead to an actual deficiency in the number of falls. Patients will not be allowed to sit in a chair to eat, stand to urinate (so Foley catheter remains longer in bladder) or walk at will as before the never rule was in force. Bed alarms buzz when a patient tries to violate the new immobility rule, contributing to care giver alarm fatigue and distracting them from other tasks, such as thinking.

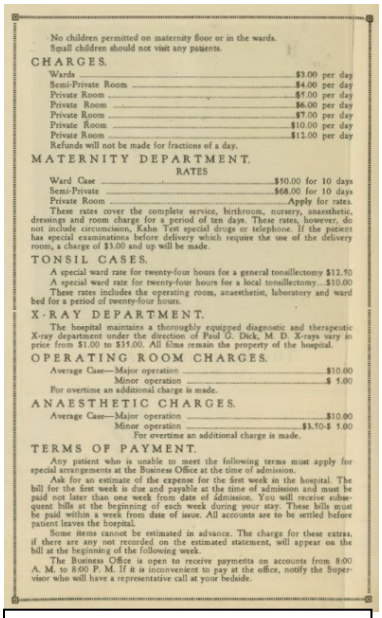
Ironically, this quality ritual may increase the incidence of never event #20: no bed sores. Bed sores are caused primarily by two factors: poor mobility and poor nutrition. Acute care hospitals need not fear #20 because current lengths of stay are too short to cause the rule-violating “stage 3 or 4” bed sores.

However, never #20 does imperil the nursing home’s bottom line (pun intended), if not the hospital’s. The solution is simple for the care givers at both classes of institutions, who will be individually profiled on these events and compensated or punished accordingly. When the patient leaves the hospital, skin break down will be stage 2: just some redness with a small blister. A few hours later when assessed at the nursing home the sore, now deemed “pre-existing,” will be at (a reportable) stage 3. Maybe the blister popped. Acuity creep is everywhere in health care, the direction is up or down according to incentives and penalties.

The policies and procedures to prevent falls are implemented to prevent falls, obviously. The assumption is that this will result in a net benefit after subtracting the costs and risks of surveillance, testing and documentation and those costs and risks of the unknown, unintended, and unmeasured consequences. The biggest risk to the patient may be what the surviving WWII fighter pilots called target fixation. But data analysis will show a reduction in falls as sure as night follows day. If you want less of something, impose a penalty on it. (OK, if you must, call it a tax.)

### *The Tyranny of "N" in Health Care Accounting*

Lord Kelvin, Nobel Physicist, in about 1905 made two pronouncements, 1) physicists had discovered all the important first principles of their science, and, 2) if a concept could not be expressed in numbers it could not be understood. The second became "Kelvin's Law" in the vernacular.[69] This law gave birth to the equally famous corollary, "Kelvin's Curse": "If you cannot measure it, measure it anyway."[70] To effectively manage the health care economy two variables must be accurately measured: cost and value.



No children permitted on maternity floor or in the wards.
Small children should not visit any patients.

CHARGES.

| | |
|---|---|
| Wards | $3.00 per day |
| Semi-Private Room | $4.00 per day |
| Private Room | $5.00 per day |
| Private Room | $6.00 per day |
| Private Room | $7.00 per day |
| Private Room | $10.00 per day |
| Private Room | $12.00 per day |

Refunds will not be made for fractions of a day.

MATERNITY DEPARTMENT.
RATES

| | |
|---|---|
| Ward Case | $50.00 for 10 days |
| Semi-Private | $68.00 for 10 days |
| Private Room | Apply for rates. |

These rates cover the complete service, birthroom, nursery, anaesthetic, dressings and room charge for a period of ten days. These rates, however, do not include circumcision, Kahn Test special drugs or telephone. If the patient has special examinations before delivery which require the use of the delivery room, a charge of $3.00 and up will be made.

TONSIL CASES.

A special ward rate for twenty-four hours for a general tonsillectomy $12.50
A special ward rate for twenty-four hours for a local tonsillectomy $10.00
These rates includes the operating room, anaesthetist, laboratory and ward bed for a period of twenty-four hours.

X-RAY DEPARTMENT.

The hospital maintains a thoroughly equipped diagnostic and therapeutic X-ray department under the direction of Paul O. Dick, M. D. X-rays vary in price from $1.00 to $35.00. All films remain the property of the hospital.

OPERATING ROOM CHARGES.

| | |
|---|---|
| Average Case—Major operation | $10.00 |
| Minor operation | $ 5.00 |

For overtime an additional charge is made.

ANAESTHETIC CHARGES.

| | |
|---|---|
| Average Case—Major operation | $10.00 |
| Minor operation | $3.50-$ 5.00 |

For overtime an additional charge is made.

TERMS OF PAYMENT.

Any patient who is unable to meet the following terms must apply for special arrangements at the Business Office at the time of admission.

Ask for an estimate of the expense for the first week in the hospital. The bill for the first week is due and payable at the time of admission and must be paid not later than one week from date of admission. You will receive subsequent bills at the beginning of each week during your stay. These bills must be paid within a week from date of issue. All accounts are to be settled before patient leaves the hospital.

Some items cannot be estimated in advance. The charge for these extras, if there are any not recorded on the estimated statement, will appear on the bill at the beginning of the following week.

The Business Office is open to receive payments on accounts from 8:00 A. M. to 8:00 P. M. If it is inconvenient to pay at the office, notify the Supervisor who will have a representative call at your bedside.

Community Chargemaster in 1931

The red headed step child of economics is accounting. Surely the cost of health care can be precisely measured. After all, double entry book keeping was invented by Pacioli about the time Columbus reached the West Indies. The Tyranny of N also rules the accountant's world. When the lowly "hospital administrators" of old figured out how to manipulate cash flow in a non-profit business, they were promoted to become "health care executives." Without accountants and their rules this could not have happened. The inflection point in the executive transformation occurred when hospital CEO median incomes surpassed $200,000 per annum. Then they invented the "chargemaster," joined the upper crust, and the exponential growth phase of their compensation became Brillian[71] history.

The charge-master concept is based upon what passes for a health care first principle: "hospital charges have no mathematical relationship to costs." The conceptual basis of this is that charges are opening derived. This sounds almost erudite and is confusing at first. But this "orifice dictum" is easily comprehended when understood to mean that hospital charges can be pulled out of any orifice, any time, and with any value assigned. Then an Enigma Code of obfuscation and opacity mediated through CPT numbers and ICD 10 modifiers is invoked. Even Alan Turing or Elizebeth Friedman would be flummoxed.

Before the reader cavils at this seemingly ridiculous metaphor, he should consider the Department of Orifical Surgery at Cook County Hospital. This weird example of an abject failure of hospital governance existed in 1892 where Dr. Edwin Hartley Pratt, a member of the Homeopathic medical fraternity, believed all chronic diseases could be cured by surgical procedures on the rectum, vagina, and urethra.[72]

"Accountants should learn to be valuers…Only a mastery of the appraiser's comparatively simple technique stands between accountants and a brilliant future of unparalleled service to business and to the public."[73]

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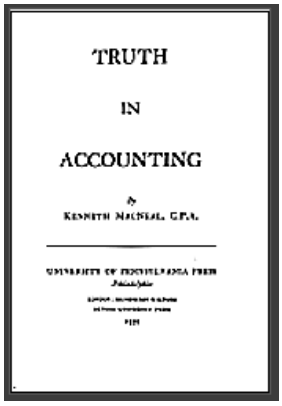
69 http://zapatopi.net/kelvin/quotes/
70 Feinstein A.R.: Clinical biostatics XII: On exorcising the ghost of Gauss and the curse of Kelvin. *Clinical Pharmacology and Therapeutics* 12: 1004, 1971.
71 See Steven Brill's *Bitter Pill* for a further discussion of the chargemaster. Brill, S,: *America's Bitter Pill: Money, Politics, Backroom Deals, and the Fight to Fix Our Broken Healthcare System.* (Random House Publishing Group.) Kindle Edition.
72 Dr. Pratt was a contemporary of Francis Homer Blackman and will be discussed further later.
73 MacNeal, Kenneth: *Truth in Accounting.* (University of Pennsylvania Press, Phila.), 1939. p 303.

So wrote Kenneth MacNeal, CPA,[74] whose connection to health care was tangential, in his obscure yet still classic accounting treatise. After flunking out of the University of Chicago in 1916 (he rarely was seen in class) he took the CPA examination in November 1919. His performance on that examination earned him the Gold Medal from the State of Illinois. He received Certificate #234 in April 1920.


TRUTH

IN

ACCOUNTING

MacNeal's book, *Truth in Accounting,* was published in 1939 and reprinted in 1970 as part of the *Accounting Classics Series* made possible by a grant from Arthur Andersen & Co. Andersen had been one of MacNeal's mentors.

In his preface MacNeal apologizes in advance for his "…ill temper and sweeping denunciation…" Lecturing and chastising professional brethren is usually not a successful career building strategy. But MacNeal's focus was fixed on his duty as a "public accountant" to inform the individual small investor about the value of his investment. He wrote during the depression in the shadow of the great market collapse of 1929.

Distilled to its essence (by a non-accountant) MacNeal denounces fellow accountants for failing to include the concept of value on their balance sheets and profit/loss statements. He offers no prescription for solving Lord Kelvin's curse that demands objective quantification where methodologies to do so have not yet been perfected or even invented.

In the uncalibrated world of healthcare, the "price" due to the vendor and "cost" due from the customer are N's arbitrarily fixed by executive chargemaster fiat. Value relates to the output of human health and happiness for which no agreed upon scale or assay exists. MacNeal argues that "valuers" have an easy job in the widget world, but even in that world accountants were failing to tell a true story. Enron shares anyone?[75]

MacNeal might applaud the recent invention of the "qaly" (quality adjusted life year[76]) as one metric in a formula to bridge the cost/quality value chasm. ObamaCare's "Independent Payment Advisory Board" (Sarah Palin's "death panel"[77]), could simply set a dollars per qaly threshold to ration health care. The British already do this through their "NICE" (National Institute for Health and Care Excellence, recently

74 Kenneth Forsythe MacNeal was born in Berwyn, Illinois, on 20 December 1895. His father, Arthur W. MacNeal, was the physician who founded MacNeal Hospital in Berwyn. Kenneth was educated at J. Sterling Morton High School in suburban Chicago and entered the University of Chicago in September 1912 majoring in commerce and administration. A detailed description of his career is given by Stephen Zell, p 334-363 in Edwards, J.E., ed: *Twentieth-Century Accounting Thinkers*, (NY and London, 1994).

75 Once a charter member of accounting's "Big Seven" firms, Arthur Anderson was destroyed in a legal battle over its role in the Enron debacle. The firm received exoneration posthumously from the US Supreme Court. Their international training center was located in Little Woods, Saint Charles, Kane County, Illinois.

76 The quality-adjusted life-year (QALY) is a measure of disease burden, including both the quality and the quantity of life lived. It is used in assessing the value for money of a medical intervention. The QALY model requires utility independent, risk neutral, and constant proportional tradeoff behavior. The QALY is based on the number of years of life that would be added by the intervention. Each year in perfect health is assigned the value of 1.0 down to a value of 0.0 for being dead. If the extra years would not be lived in full health, for example if the patient would lose a limb, or be blind or have to use a wheelchair, then the extra life-years are given a value between 0 and 1 to account for this. Under certain conditions, such the internship year in the old model of medical education, QALY can be negative number. A negative QALY is the accountant's quantitative version of the very seldom heard theological expression "Jesus hates you."

77 Often referred to now as the "death panel myth," Palin's brief Facebook quote kicked a hornet's nest: Palin, Aug. 7: "The America I know and love is not one in which my parents or my baby with Down Syndrome will have to stand in front of Obama's "death panel" so his bureaucrats can decide, based on a subjective judgment of their "level of productivity in society," whether they are worthy of health care." The ensuing comments focused on a provision in ObamaCare to pay for "end of life" discussions by physicians with patients with advanced disease. This provision, of course, did not contain language about "productivity in society." The word "rationing" is the third rail of the health care debate. The "panel" that comes closest to the high voltage is the "IPAB," not an individual physician explaining end of life issues and options.

renamed from National Institute for Clinical Excellence but still is abbreviated the same – Louis G. Carroll was British).[78]

To some this whole discussion conjures up the concept of the millihelen: that precise quantity of feminine facial beauty sufficient to launch exactly one ship. Quality is to health care as pornography is to art. Unfortunately, United States Supreme Court Justice Potter Stewart is no longer around to help clarify this. He likely would know quality when he saw it, just as he knew obscenity.[79]

MacNeal's accounting conundrum is not restricted to health care. Obama's Chairman of Economic Advisors, Jason Furman, asserted that middle class incomes have stagnated. A Cato Institute rebuttal charged accounting chicanery and invoked MacNeal's argument: "But to see it you have to assign values for quality and choice and convenience, things that dramatically impact Middle Class lifestyles of today."[80]

What is needed is another Kenneth MacNeal, C.P.A., to act as the private accountant for the small individual patient in a way similar to that of his father, Arthur MacNeal, M.D., who created a small-town hospital[81] while caring for his private patients.

***The Tyranny of N in the Three Dismal Sciences***

Mathematical models do exist in biology. Many biologic growth curves are "S" shaped.[82] Growth of a population ("N") in the first phase is slow to the point of appearing as nearly a plateau. Then comes a period of steep exponential growth that for a time appears to have a fixed upward slope. Then comes the saturation point where growth seemingly stops on another plateau. The sigmoid curve also empirically plots many other outputs of human activity besides procreation.

A darker mathematical model for "N" exists. The "Malthusian Catastrophe" prediction envisioned a population saturation point caused by famine and disease that would halt and then catastrophically reverse all human progress, including its population. Malthus envisioned boom and bust cycles whose biologic growth phase is the well-known "J" shaped curve, but with the population (and all human virtue) falling cataclysmically like a stone from the top of the J back to near zero when the "N" saturation point is reached.

At the macro level health care delivery system engineering starts with economists. Economics has been called "the dismal science." A Malthus contemporary, Thomas Carlyle, coined the phrase to deride those who thought "supply and demand" was "…the secret of this universe." He did, however, also apply the adjective "dismal" to the "Population Principle" of Malthus. Carlyle ended up on the wrong side of history in many ways, but he may have been right about economics. Yet economist brainiacs like MIT's

78 http://en.wikipedia.org/wiki/National_Institute_for_Health_and_Care_Excellence
79 http://en.wikipedia.org/wiki/I_know_it_when_I_see_it
80 Reynolds A: "The Mumbo-Jumbo of 'Middle-Class Economics': The statistics used to claim that average incomes have stagnated since 1980 also show stagnation since 1968." *WSJ* 3 March 2015. http://www.wsj.com/articles/alan-reynolds-the-mumbo-jumbo-of-middle-class-economics-1425340903
81 MacNeal Memorial Hospital was once a not for profit community hospital in Berwyn, Illinois. Now it is owned by a pac-man for-profit conglomerate, initially Vanguard and now Tenet. If MacNeal Hospital's death wasn't murder, it was at least man slaughter. MacNeal's name survived, however. http://www.chicagobusiness.com/article/20130801/NEWS03/130809989/tenet-paying-a-premium-for-vanguard-hospitals
82 The S-shaped growth curve: (dN/dt = rN(K − N)/K where N is the number of individuals in the population t is time, r is the biotic potential of the organism concerned, and K is the saturation value or carrying capacity for that organism in that environment. The resulting growth rate or logistic curve is a parabola, while the graph for organism numbers, "N", over time is sigmoidal. Allaby M. *"logistic equation." A Dictionary of Zoology*. 1999. Encyclopedia.com. There are many sigmoid functions. http://en.wikipedia.org/wiki/Sigmoid_function

Jonathan Gruber are now on the bridge, if not at the helm, of the health care enterprise.[83] Gruber invented Romneycare and was instrumental in shaping ObamaCare in the image of the former.

Medicine, Economics and Politics are all bedeviled by the "Tyranny of N." In the spirit of even handedness, all three disciplines will be here deemed "The three dismal sciences." The dismal sciences share the same fundamental shortcoming: no set of first principles. In physics, for example, a calculation is said to be *from first principles*, or *ab initio*, if it starts directly at the level of established laws of physics and does not make assumptions such as empirical modelling and fitting parameters. But the dismal sciences must begin by inventing their unprovable first principles. Then to act on them they must assume their conjectures are akin to Newton's Laws.

A parable illuminates this. An engineer, a physicist and an economist were stranded on a desert island where three palm trees were the only other living things. The engineer, using Archimedes principle calculated that by cutting down the trees with their watch bands and lashing them together with their clothes the resulting sufficient buoyancy would float them to salvation. The physicist, employing Kelvin's four laws of thermodynamics, calculated that by using their watch crystals as ignition devices there was sufficient energy in the trees to create a fire large enough to be seen by satellite and they would be rescued. They turned to the economist: "Aren't you going to suggest something??" Eventually, the economist pulled out a pencil and a piece of paper and started writing, "Assume we have a boat..."

The S (logistic), the J (exponential) the Gaussian (normal), and other "curves" are functions used by dismal scientists in models that create neither laws of nature nor first principles. In fact, a tacit conspiracy exists. When a statistician meets with a dismal scientist to write a paper for publication that each hopes will lead to another grant and then tenure, they wink at each other. The statistician assumes the dismal scientist has demonstrated the test model empirically fits, while the dismal scientist assumes the statistician can mathematically prove the test model.

In medicine, the evaluation of diagnostic and treatment methods should be "evidence based". The scientific method for evidence gathering has rested on controlled experiments since the time of Claude Bernard 150 years ago.[84] Use of the actual phrase "evidence-based medicine" has had its own J shaped growth. The initial flat part of the phrase's usage "J" curve dates back to at least the 1970's in the works of Alvan Feinstein, Archie Cochran, David Eddy and others. The inflection point in the usage frequency graph came in the 1990's when people like David Sackett, Donald Berwick and Zeke Emanuel,[85] became its champions.[86]

"Experiment" is a politically improper term when the subjects are humans. The Nazis performed human experiments. Today evidence in gathered, ideally, through prospective, randomized, double blind clinical trials whose designs have passed institutional ethical review. However, even if the trials are performed flawlessly by scrupulously honest and unbiased scientists, the Tyranny of N can ruin the conclusion.

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83 http://www.wsj.com/articles/mit-economist-jonathan-gruber-had-bigger-role-in-health-law-emails-show-1434910195?mod=trending_now_4

84 Bernard, Claude, *An Introduction to the Study of Experimental Medicine* (originally published in 1865; first English translation by Henry Copley Greene, published by Macmillan & Co., Ltd., 1927).

85 Emanuel recently took his own shot at the "three score years and ten" prescription that got Sir William Osler and Governor Lamb in so much trouble. Oddly (literally) and generously, Emanuel added a dose of 5 more years to the old prescription. http://www.theatlantic.com/features/archive/2014/09/why-i-hope-to-die-at-75/379329/

86 http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3263217/

Actually, as everyone knows, anything can be ruined by bad luck. So clinical trial conclusions are couched in a probability of correctness. Only a fool is positive. The basic trial design arbitrarily sets an acceptable risk of a false positive (alpha) and of a false negative (beta) conclusion. To calculate "N", the number of events needed to reach a "valid" conclusion, the trialists must make two educated guesses (assumptions): what chance does a member of the control group have of an event within the trial's duration; and how much better (or worse) must the risk for an event be for the group receiving the intervention of interest. In many clinical trials the calculated number of subjects needed is huge, especially when the individual's risk of an event is small and the difference ('delta") in risk between groups is small. This makes trials expensive and long and seduces investigators into taking dangerous shortcuts.

Indeed, a widely read (over 1 million "hits" so far) 10-year-old paper, invoking the methods of yet another ancient English clergyman, Thomas Bayes, holds that *most* of these "best of breed" experiments designed to lead to evidence-based medicine are, if fact, wrong. Wrong because of the tyranny of N, shortcuts, bias and even fraud.[87] The "evidence," Stanford's Dr. John Ioannidis suggests, may represent little more than the state of prevailing bias. "Comparative Effectiveness Research," a magical ObamaCare buzz phrase, is very often not well grounded in science.

Gerolamo Cardano

The father of probability was a physician. Gerolamo Cardano was additionally an accomplished gambler. His book on the subject, *Liber de ludo aleae* ("Book on Games of Chance"), was written around 1564. He relates that games of pure chance were preferable to him since any game incorporating both skill and chance left him at risk of running into a more skillful player.[88] To counter the latter, his book also has a section on how to cheat. He was the first but not the last statistician to invent such methods.

***The Tyranny of N=1***

Paradoxically, the tyranny of N in the three dismal sciences also appears when N=1. The human mind is extremely vulnerable to the anecdote. After all, each of us is one. And Pogo was right, "we have met the enemy and he is us." (Apologies to those born after 1975.) Steven Brill, in *Bitter Pill*, describes how politicians were swayed in their policy decisions in formulating ObamaCare by tragic anecdotes and how they employed those anecdotes in selling ObamaCare to the public.

The legal aphorism that "hard cases make bad law" can be stretched to absurdity with little effort. None the less, Oliver Wendell Holmes, Jr., made a utilitarian argument for the old adage in his opinion in Northern Securities Co. v. United States (1904): "Great cases like hard cases make bad law. For great cases are called great, not by reason of their importance... but because of some accident of immediate overwhelming interest which appeals to the feelings and distorts the judgment." He wrote this

87 Ioannidis, J.P.A. "Why Most Published Research Findings Are False." PLoS Med 2(8): e124, 2005. doi:10.1371/journal.pmed.0020124 http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.0020124

88 Mlodinow, Leonard: *The Drunkard's Walk: How Randomness Rules Our Lives*. (Toronto: Vintage Books, 2009). All practitioners of the dismal sciences of medicine, economics and politics should be required to read this treatise at least once a year.

dissenting opinion in a Sherman Antitrust Law case and the “overwhelming interest” likely was that of Teddy Roosevelt.

Health care anecdotes are often hard cases made into great political causes by such notoriety.

***The Tyranny of Titular N***

The Tyranny of N can strike when a number appears in the title of a regulation or law. Two such tyrannical examples are the 340B program for the provision of medications by the federal government, and the tax provision of 501(c)(3) which allows for the creation of tax-exempt businesses. These two examples originated from an intention to advance public welfare, particularly of the less privileged. Both have been largely hijacked for the benefit of rich and powerful modern robber barons.

*The Tyranny of 340B*

The 340B program was instituted in 1992 by the Federal Government for the purpose of providing subsidies through mandated drug company discounts primarily for cancer chemotherapy to be administered to the indigent. Initially 90 hospitals that cared for a "disproportionate share" of indigent patients would qualify. By 2011, 1,675 hospitals, or a third of all hospitals in the country, were 340B-qualified, including large profitable hospitals like those of Duke and Northwestern Universities. Duke, for example is reported to have made a profit of $77mil in 2011 just from 340B.[89]

ObamaCare expands 340B so that hospitals can buy drugs from drug companies at forced discounts of 25% to 50%. The hospitals can then bill government and private insurers for the full cost of the drugs, pocketing a huge profit. Often costlier drugs provide the highest profit margin.

ObamaCare is encouraging even greater profits by expanding 340B to cover hospital cancer centers, new categories of hospitals, and rural health centers. Since one of the ways that hospitals qualify for 340B is by treating Medicaid patients, ObamaCare Medicaid expansion will likely also increase the number of 340B-eligible entities.

Hospitals are buying private cancer practices so they can sell more of the expensive cancer drugs purchased at the discounted rates. By 2013 more than 400 oncology practices had been acquired by hospitals since ObamaCare passed. Acquiring a single oncologist and moving that doctor's drug prescriptions under a hospital's 340B program can generate an additional profit of more than $1 million for a hospital. In the process, treatment of the doctor's patients is moved from an office setting to a hospital cancer center.

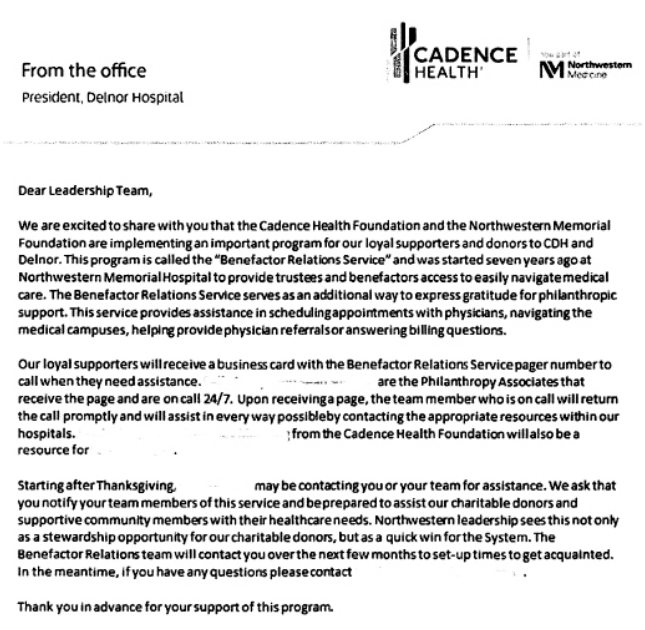
Overhead is higher for a hospital cancer center than for a doctor's office by Medicare calculations. Other payers recognize this increase and escalate payments accordingly. The Community Oncology Alliance reports a $6,500 increase in costs for a hospital cancer center patient than for that same patient treated in a private medical office. The hospital cancer center patient also faces an additional $650 in co-pays and other out-of-pocket expenses. Medicare data led to a price increase of 55% for just infusing the drugs in a hospital cancer center.

Under ObamaCare "sub regulatory guidance" inflates the 340B program still further. In March 2010 this "guidance" allows hospitals to contract with an unlimited number of neighborhood pharmacies to

89 http://www.wsj.com/articles/SB10001424127887324110404578630522319113676

dispense drugs. These "satellite" pharmacies are not required to have any geographic tie to the hospital. Over 25,000 satellite pharmacies and 340B-qualified treatment sites exist according to the Health Resources and Services Administration.

*The Tyranny of 501(c)(3)*



From the office
President, Delnor Hospital

CADENCE HEALTH
Now part of Northwestern Medicine

Dear Leadership Team,

We are excited to share with you that the Cadence Health Foundation and the Northwestern Memorial Foundation are implementing an important program for our loyal supporters and donors to CDH and Delnor. This program is called the "Benefactor Relations Service" and was started seven years ago at Northwestern Memorial Hospital to provide trustees and benefactors access to easily navigate medical care. The Benefactor Relations Service serves as an additional way to express gratitude for philanthropic support. This service provides assistance in scheduling appointments with physicians, navigating the medical campuses, helping provide physician referrals or answering billing questions.

Our loyal supporters will receive a business card with the Benefactor Relations Service pager number to call when they need assistance. are the Philanthropy Associates that receive the page and are on call 24/7. Upon receiving a page, the team member who is on call will return the call promptly and will assist in every way possible by contacting the appropriate resources within our hospitals. from the Cadence Health Foundation will also be a resource for .

Starting after Thanksgiving, may be contacting you or your team for assistance. We ask that you notify your team members of this service and be prepared to assist our charitable donors and supportive community members with their healthcare needs. Northwestern leadership sees this not only as a stewardship opportunity for our charitable donors, but as a quick win for the System. The Benefactor Relations team will contact you over the next few months to set-up times to get acquainted. In the meantime, if you have any questions please contact .

Thank you in advance for your support of this program.

The Internal Revenue Service rule 501(c)(3) allows hospitals to achieve tax-exempt status. Like everything related to the IRS, this is complicated. Just one example suffices to illustrate the tyranny: private inurement is not allowed in a 501(c)(3) corporation. The concept of inurement holds that no part of an organization's net earnings may inure to the benefit of a private shareholder or individual who, because of the person's relationship to the organization, has an opportunity to control or influence its activities.

Yet Northwestern Medicine recently created a gratis "benefactor benefit" club for people who donate money. This benefit is a private concierge service in return for a "donation." Quoting a memo from a Delnor Hospital President: "This program is called the 'Benefactor Relations Service' and was started seven years ago at Northwestern Memorial Hospital to provide trustees and benefactors access to easily navigate medical care. The Benefactor Relations Service serves as an additional way to express gratitude for philanthropic support. This service provides assistance in scheduling appointments with physicians, navigating the medical campuses, helping provide physician referrals or answering billing questions."

Big donors can influence institutions. This concierge service for the well-to-do also creates an official two-tiered level of care in violation of many insurance covenants, Joint Commission standards and Medicare regulations. Plus, it fails the smell test. One payer has this sweeping requirement (emphasis added): "Eligible members shall not be discriminated against with respect to the availability or provision of health services based on an enrollee's race, sex, age, religion, place of residence, HIV status, source of payment, membership, color, sexual orientation, marital status, or any factor related to an enrollee's health status. This includes, but is not limited to, an enrollee's medical condition (including mental as well as physical illness), claims experience, receipt of health care, medical history, genetic information, evidence of insurability (including conditions arising out of acts of domestic violence), disability, or on any other basis otherwise prohibited by state or federal law."

When two different Delnor Hospital executives were asked about the price for membership in this club two answers were received: $50K and $100K as a life time pledge. Accordingly, for a few hundred dollars a year in the form of a tax-deductible contribution a Northwestern Medicine "benefactor" can go to the head of the health service line with the aid of a personal concierge navigator. Donald Trump inadvertently reduced this loop hole with his tax reform. Even a blind squirrel finds a few nuts. Now the benefactor would have to make three years' worth of contributions every third year.

Many have wondered if modern day hospitals should remain tax exempt. In 1969 the Internal Revenue Service established the "community benefit" standard allowing qualifying nonprofit hospitals to obtain federal tax-exempt status pursuant to Section 501(c)(3) of the Internal Revenue Code. Many states have similar requirements. To gain and maintain tax-exempt status, nonprofit hospitals had to meet certain community benefit requirements, such as conducting medical research or providing emergency care to patients who are unable to pay.

The requirements had remained virtually unchanged for 40 years. Then ObamaCare added new requirements. Much like other measures implemented by the ACA, the goal of these additional mandates was to increase transparency within the healthcare system. Retaining Tax-exempt status is, or should be, if this particular requirement of ObamaCare happens to be one chosen non-arbitrarily for enforcement, now significantly more difficult.

Pursuant to 501(r) of the Internal Revenue Code (added by Section 9007 of the ACA), hospitals are now required to comply with several additional policy and reporting obligations, adding another regulatory barrier to the survival of smaller, truly non-profit, hospitals.[90]

90 http://www.lanereport.com/38898/2014/09/will-nonprofit-hospitals-lose-tax-exempt-status/

# IV: Doctrinal Disasters[91]

The very same cost/quality pathophysiology that led to ObamaCare also led to the demise of Community Hospital by making it too small to cope with sudden doctrinal change. ObamaCare contemplates "bundled care per capita payments" to health care systems (i.e., think HMO's). Such a system must have Walmartian scale to absorb all the administrative, reporting, and logistic costs and still pay executives in 7 figures. The death of Community Hospital may have been an unforeseen unintended consequence, or it may have been both intended and foreseen or somewhere in between. No one would claim it was a primary goal of ObamaCare.

Accepting Stephen Brill's *Bitter Pill* three-legged stool of Romeycare as the basis of ObamaCare (1-subsidized near universal coverage; 2-no preexisting condition exclusion for coverage; and, 3-mandatory purchase of coverage) simplifies the discussion. Brill's four horsemen[92] of legislative passage, (1-pharma; 2-hospitals; 3-insurers; and, 4-device makers) identifies the players whose scale, and therefore interests, had to be brokered to pass and partly pay for ObamaCare.

Some of Brill's narrative addresses the battle over which emphasis was ascendant: expanding coverage or improving cost/quality. Brill concludes that the expanded coverage champions carried the day. The hospitals agreed to a $155Bil "give back"[93] announced by VP Biden on July 8, 2009. Many seem to agree with Brill that the hospitals came out winners since the bill ultimately expanded their customer base to more than compensate for their giveback. To all appearances all four horsemen were winners, if to varying degrees.

Who among the left out other parties where the losers? One was the doctors. In fact, they had lost before the game started since they, like Ty Cobb in *Field of Dreams* (and perhaps for the same reason), were not invited to play even though they asked permission to do so. The profession has dramatically lost stature since the days of Raymond G. Scott.

In 1997 the "SGR" (sustainable growth *ratio* – still another Tyranny of N) was invented based on the incorrect (or at least undemonstrated) assumption that the doctors were driving the unsustainable growth in Medicare costs.

When those costs exceeded inflation the SGR automatically reduced physician fees. The result was years of deadlines for pay cuts that were neither implemented nor rescinded. The cuts were just kicked down the road (seventeen times by the final count with a cumulative 21% doctor pay cut if invoked). Each time the cut came up it was a cumulatively larger percent.[94] Sometimes CMS stopped paying the doctors for a

91 The Affordable Care Act actually refers to two separate pieces of legislation — the Patient Protection and Affordable Care Act (P.L. 111-148) and the Health Care and Education Reconciliation Act of 2010 (P.L. 111-152). It is called ObamaCare here by common usage.
92 "In dramatic lore they are known as famine, pestilence, destruction, and death. These are only aliases. Their real names are Stuhldreher, Miller, Crowley, and Layden. They formed the crest of the South Bend cyclone, before which another fighting Army team was swept over the precipice at the Polo Grounds this afternoon, as 55,000 spectators peered down on the bewildering panorama spread out upon the green plain below." This paragraph, penned by Grantland Rice, of the New York Herald-Tribune, on the occasion of the Notre Dame's victory over Army, 13-7, on Oct. 18, 1924, is considered to be the most famous passage in sports journalism. ND's four horsemen lost only two games in 1922-23, both to Nebraska. Rufus Dewitz, the author's high school coach, was the Nebraska full back.
93 Political "kick back" may be more accurate.
94 Up to about 30% at the time of repeal in April 2015.

week or more while Congress was lining up the can before kicking it. ObamaCare was to fix SGR by replacing it, by what was never said. That was the bone used to tease and torment the doctors.

Even that marrow-less bone was taken away in the fall of 2009 when the Congressional Budget Office "scored" the revocation of SGR as a $200 billion-dollar increased debit to ObamaCare. Since the SGR was never actually invoked this reached another new height of accounting absurdity. The deal with the American Medical Association was an example of one D.C. reality: if you weren't invited to the banquet, you almost certainly were on the menu.

In April of 2015 Congress did finally repeal the never invoked SGR but without addressing the fairy-tale $200 billion negative impact on health care costs.[95] Much cheering was heard from the doctor organizations, but they had better watch their wallets. The built-in "incentives" to join the Accountable Care Organizations likely will result in a net reduction in take home pay, autonomy, satisfaction, and patient grades.

The "doc fix" is classic "nothing down, no payments for a year" hucksterism. The estimate is that it will cost $141 billion in federal deficit spending over 2015 – 2025 with a total of $34 billion in "savings" gleaned by higher part B premiums for the ever-smaller percentage of "wealthy" seniors.[96]

Patients are put at risk by any "reform" that pushed their physicians further under the thumbs of their corporate keepers. The SGR is gone and will soon be forgotten as another "reform" that caused angst, uncertainly, and sound and fury but ultimately signified nothing.

Quoting from Brill: "From 2011 to 2013, the median physicians' and surgeons' income in the United States rose 1.4 percent, to $ 187,200. In just one year, from 2011 to 2012 (the last year for which complete figures are available), total cash compensation for the CEOs of nonprofit hospitals surveyed by the trade publication Modern Healthcare grew an average (a median was not provided) of 24.2 percent, to $ 2.2 million. And from 2011 to 2013, total compensation paid to the CEO of drug maker Amgen rose 92.3 percent, to $ 13.6 million."[97]

For the doctors all this meant an accelerating migration to the employment model of medical practice with the hospitals as their principal employer. The trickle to that model reached the inflection point and became a flood under the threat of ObamaCare's HMO styled bundled payments. When the process started 65% of American physicians were employed by their patients. Today over 70% are employed directly by corporations or governments. The "private practice" of medicine is a relic that will soon be as extinct as Community Hospital.

The cause of death of private medical practice can be discovered from a glance at the IRS Form 990 of the not for profit Cadence Physician Group of 2013. This captive group of Cadence Health employed physicians had about $102 million in income. Expenses (almost all physician salaries) were $140 million. The roughly 30% deficit was made up by the not for profit parent corporation.[98] Private practice,

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95 http://www.medpagetoday.com/Washington-Watch/Washington-Watch/50991

96 Individuals with modified adjusted gross income (MAGI) starting at $85,000--or $170,000 for joint filers--pay a higher share of the government's full cost of coverage in Medicare Part B and Part D for prescription-drug coverage. http://news.morningstar.com/articlenet/article.aspx?id=694322

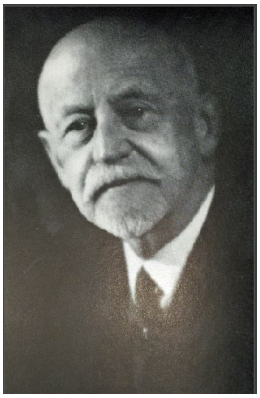
97 Brill, Steven (2015-01-05). *America's Bitter Pill: Money, Politics, Backroom Deals, and the Fight to Fix Our Broken Healthcare System* (Kindle Locations 6583-6587). (Random House Publishing Group, Kindle Edition).

98 http://www.guidestar.org/FinDocuments/2009/841/311/2009-841311146-066f67af-Z.pdf

possessed of no benevolent tax-exempt deep pocket, is fast being driven to extinction by the tyranny of 501(c) (3).

The term "private practice" was coined to distinguish it from public practice, i.e., the charitable portion of a physician's time spent at a public hospital, like the old Cook County Hospital in Chicago.[99] The origin of terms is often forgotten some years after their creation. For example, no one remembers that small pox was so named to distinguish it from the great pox (syphilis).

**Doctor Doctrinal Change**



*"On November 1, 1890, I began work as an independent practitioner of medicine. There was a thrill in feeling that I was free and my own master, nobody's "hired man". No longer with the day's program be made out by an employer…"*
James B. Herrick, M.D.[100]

Even the once haughty and fiercely independent physicians have succumbed to a corporate variant of the Stockholm syndrome.[101] At least some were uneasily aware that by turning away from individual patient centricity in both clinical focus and professional fee generation, they risked abandonment of a time-honored ethical doctrine of medical practice. Little concern was expressed by anyone over any ethical challenges that might result from shifting from third party physician payment to third party physician employment, where employer profiling can affect physician incomes and job security and, hence, "clinical judgment."

Once wary of the relative economic ferocity and treacherous capriciousness of even small hospitals, doctors now crowd under a health care system's corporate umbrella. They seek shelter from the cascade of Berwickian bureaucratic arrows falling on them from all points of the compass. Each doctor surrendered the title to a once personal ownership of a patient population or referral pattern in exchange for perceived job security, a better lifestyle, and enhanced income.

About a century ago the states began to codify the prohibition of the institutional or corporate practice of medicine. Some states have statutes, some rely on attorney general opinions, and some rely on case law. In many states, combinations of these instruments and opinions have shaped the legal environment. The prohibition of "corporate practice" stemmed primarily from the ethical concern that corporate profits might influence physician clinical decision making. In fact, the impetus may have been more aimed at restricting the types of business arrangements in which physicians could engage than at putting a check on excess corporate profits.

In Illinois, for example, the court cases of the past two decades have dealt with the issue of hospital employment of physicians (they can) (Berlin v. Sarah Bush Lincoln Heath Center), and with how physicians may share fees with corporate managed care (they may not, at least not on a sliding percentage basis) (Vine Street Clinic, et al. v. HealthLink, Inc.).

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99 The only paid member of the medical school faculty under Nathan Smith Davis at Northwestern was the full time chemistry instructor. All the clinicians were volunteers.

100 Herrick, James B,*: Memories of Eighty Years.* (University of Chicago Press; Chicago, 1949). p 90.

101 http://en.wikipedia.org/wiki/Stockholm_syndrome Also known as "Patty Hearst Syndrome" this is the phenomenon of hostages eventually adopting the causes and tactics of their captives.

The Illinois hospital exception to the prohibition of the corporate practice of medicine doctrine appears narrow. The court refused to extend it to a non-profit health care institute (not a hospital) that employed a physician. See *Carter-Shields, M.D. v. Alton Health Inst.*, 777 N.E.2d 948, 958 (Ill. 2002).[102] Health Systems are not licensed hospitals, just as the United States of America is not a State member of the Union.[103]

While many docs joined up willingly and even enthusiastically, many others became Russian volunteers in the corporate doctor militia. Once the local corporate system achieved a critical physician mass, greased by the lucrative early buyout offers that could not be refused, the rest were economically and politically coerced into the health care system's corporate legion. A doctor visit has become priced by a metric called the RVU,[104] a commodity like the GBP (pork belly future), and likely soon to be traded on the CBOE.

Physician's independence faces further erosion as the huge insurers merge. Patient options will also dwindle, first in the reduction in the number of insurers and then, as their physicians are captured into restrictive provider networks, in choice of physician.[105] United Health Care's enormity will likely cause the other huge players to pair up. The resulting big three will have massive leverage with providers and with government. Watch the sky to fill with golden parachutes as the number of top health care executives takes a 40% haircut.

This rather abrupt doctrinal change in physician payment methods and sources will lead to effects on patients that will not be obvious at first (and never transparent), nor can all the effects be predicted.

**The Tyranny of the Epic Doctrine of N Inputs**

The unkindest Tyranny of N is the one that poses the greatest immediate threat to the individual patient: the Epic Doctrine of N inputs.[106] With very little study of the potential impact on medical practice doctrine or outcomes, Federal grants for EMR's were set aside totaling $19 billion for electronic medical record adoption incentives as part of the American Recovery and Reinvestment Act of 2009.[107]

Granted, the old doctrine of medical practice was itself never codified in a robust way. Medical practice has been more of a tradition than a science. The "dismal science" of medicine has been dignified by calling it an art. However, belief must be suspended to argue that only benefit and no harm could result from discarding what was an ancient art.

The EPIC electronic medical record's greatest "benefit" is as a charge capturing up-coder. This is of enormous benefit to hospital profits and executive salaries, as it permits billing for every aspirin tablet and provides "documentation" of just how "severely ill" each patient "really" is. "High acuity" leads to

102 http://www.nhpco.org/sites/default/files/public/palliativecare/corporate-practice-of-medicine-50-state-summary.pdf
103 In King v Burwell The U.S. Supreme Court decided that subsidies for policies sold through insurance exchanges "established by the State under 1311" should be taken to mean that "the State" includes the Unites States as a State. Note the capital S at the beginning of "State" and the absence of an "s" at the end.
104 "RVU" means "relative value units," whose basis in relativity theory is yet to be discovered. Perhaps when the physicists prove the existence of "WIMPs" (weakly interacting massive particles) they can turn their attention to RVU's.
105 http://www.wsj.com/articles/health-mergers-could-cut-consumer-options-1434937235 22 June 2015
106 http://www.epic.com/; Similar to Dante's nine stages of *Inferno*, seven levels of Epic Doctrine now exist.
http://app.himssanalytics.org/about/NewsDetail.aspx?nid=82126
107 http://www.micromd.com/emr/stimulus-incentive.html

up-coding to higher charges and thus higher payments. All this requires auditable, if not confirmable, "documentation."

Scientific evidence of benefit is also lacking for the drastic doctrinal change that transforms the most highly skilled hospital employees, the doctors and nurses, into clerk typists. Even the cost-savings have not been documented. A 2005 RAND report helped Cerner and Epic executives sell their new systems, despite criticism at the time that the analysis was too rosy. RAND said that the report was not influenced by its financial backers and that, in fact, it disclosed the corporate sponsorship prominently in the report itself. The study was harshly criticized by the Congressional Budget Office for overstating expected savings.[108]

The EMR is central to the new doctrine of corporatization of medical care. Every action of every health care provider can be captured in real time and profiles can identify the heavy dollar hitters and those who are below the Mendoza line[109] and compensate or fire them accordingly. How this all came to pass troubles some observers: "If the crony odor and the potential for abuse that this "epic" arrangement poses don't chill your bones, you ain't paying attention."[110]

Doctrine destruction is an unpredictable and thus high-risk proposition for all participants. For example, the Japanese may have done fatal harm to their own cause in December 1941 by destroying the outdated American battleship based naval doctrine at Pearl Harbor and forcing the invention of a new one literally "on the fly". The Battle of Midway, less than 6 months later, illustrates.

Dick Best,[111] last and lowest in the formation, knew his assigned doctrine. His flight leader[112] was well above and ahead of him when two *Kidō Butai* aircraft carriers were spotted. One ship was a few miles ahead of and to the right of the other. Dive bomber doctrine directed that the first in line attack the more distant target.

108 http://www.nytimes.com/2013/01/11/business/electronic-records-systems-have-not-reduced-health-costs-report-says.html?_r=1

109 The Mendoza Line is an expression in baseball in the United States, deriving from the name of shortstop player Mario Mendoza, whose mediocre batting average is taken to define the threshold of incompetent hitting.

110 http://michellemalkin.com/2013/05/22/the-obama-crony-in-charge-of-your-medical-records/

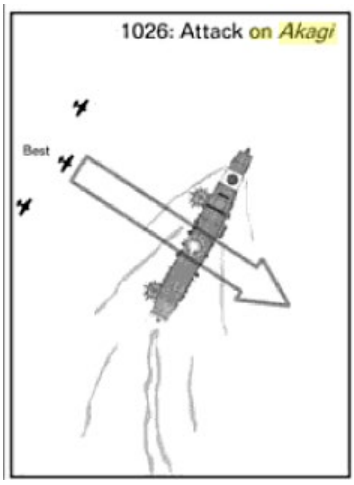
111 Lieutenant Richard Halsey Best never flew again after June 4th, 1942. Besides sinking *Kaga* in the a.m., he is widely credited with also dropping a 1000 pound bomb on *Hiryū* that afternoon, one of four that destroyed that last Japanese aircraft carrier in the attacking group. That night he developed hemoptysis and was diagnosed with active TB. Prange, G.W.: *Miracle at Midway*. (New York, NY: Penguin Books, 1982), p 273-274.

112 The flight leader, C. Wade McClusky, set up the whole battle with a non-doctrinal improvisation. He was conducting a standard doctrine "box search" and running low on fuel when he saw a lone destroyer with "a bone in its teeth" (i.e., a big bow wave indicative of high speed) and an easily spotted wide white wake. The Imperial Navy destroyer *Arashi*, had stayed behind *Kidō Butai* to keep the pesky USN submarine *Nautilus* below periscope depth. Now *Arashi* was dashing at 35 knots to catch up. McClusky correctly guessed the ship to be a Japanese straggler. He abandoned doctrine and used the V shaped wake as a directional arrow and it guided him quickly to his target. Symonds, C.L.: *The Battle of Midway*. (New York, NY: Oxford University Press, 2011) p 297.

Best radioed that he would "attack according to doctrine,"[113] meaning the closer target that was also to the left. Total confusion followed. The flight leader, recently transferred from a fighter wing, radioed Best to attack the target "on the right," which was more distant. "Best either never heard it, or, because he was so deeply steeped in standard doctrine, he processed it differently."[114] Doctrine was near/far based, not left/right. The FUBAR was discovered by Best moments later.

All planes were soon diving on the closer, left target, *Kaga*. *Kidō Butai*'s flagship, *Akagi*, faster, more proficient, and more deadly was to be spared. Best saw this, abandoned his doctrine and signalled his squadron by waggling his wings. Only his section's two wingman saw the signal. His other 10 planes stayed in the swarm that destroyed *Kaga*.

Best's threesome closed up their divebrakes, dialed up their superchargers, and headed for *Akagi*. The SBD-3 ("Slow But Deadly") Dauntless dive bomber in skilled hands like Best's was true to its nickname.[115] However the prior doctrinal SNAFU had cost Best altitude, subtracting two Dauntless survival traits: steep dive angle and speed. No time or fuel remained for doctrine. Best's threesome came in low and slow, in a shallow dive in a "V" and attacked abeam instead of the doctrine mandated high, steep and hot in echelon out of the sun from abaft.




*Akagi* took evasive action, turning hard to starboard. Best's wingmen's 1000 pounders were "paint scrapers," just missing short. The aft bomb's shock wave jammed *Akagi's* rudder hard over. Best's bomb hit amidships, penetrating the flight deck and exploding below amidst armed torpedo bombers, unstowed ordinance, and aviation fuel. *Akagi* steamed in a flaming circle, doomed. At almost the same instant a dozen miles away bombs from another Dauntless group fatally damaged *Sōryū*. In the span of six minutes three of the four *Kidō Butai* carriers became infernos.

Best had made the rest of the Midway contest lopsided. The planes of *Hornet, Enterprise* and *Yorktown* (plus Midway atoll) were left to deal with *Hiryū*. *Yorktown* was damaged and later succumbed to a submarine torpedo salvo just as her salvage crew was preparing to tow her back to Pearl Harbor. *Hiryū* was a

113 Symonds, p 300.
114 Symonds, p 300.
115 SBD is an acronym for "Scout Bomber Douglas." The "3" model had just arrived in the Pacific and it was a supercharged beast with self sealing fuel tanks and armored cockpit, and capable of a 1000 pound bomb load. The SBD-4 was the best dive bomber of the war. All the *Kidō Butai* carriers succumbed to the SBD's. Brazelton, D.: *The Douglas SBD Dauntless, Aircraft in Profile 196*. (Leatherhead, Surrey, UK: Profile Publications Ltd, 1967). A wonderfully restored SBD-3 hangs above Concourse "A", Midway Airport, Chicago.

flaming wreck before sundown after receiving a second-of-the-day Best hit. But *Akagi* could have been a game changer.

Doctrine is most often associated with military organizations but all organizations have doctrine, sometimes formal and written, but often by default. Organizations can unwittingly and uncritically adopt doctrine in the course of implementing technology. Doctrine is cognitive. Start with the three tenets of cognitive science: The mind is inherently embodied; thought is mostly unconscious; abstract concepts are largely metaphorical.[116]

Consider that doctrine is the glue that holds together tactics.[117] Medicine has departed the era of the cottage industry. A replacement doctrine exists but has not been formally studied. Epic doctrine has been widely accepted as the glue that bonds the clinical processes of identifying and meeting a patient's needs through human interaction and human reasoning.

Epic is "MUMPS"[118] based medical software for charge capturing, documenting of clinical activity and more. "More" is the category where Epic doctrine resides. Doctrine seeks to embody cohesion, reliability and mutual understanding among a clinical team. This becomes "the springboard and benchmark of all tactical improvement."[119]

Or does it? Epic doctrine demands both standardized and precise though artificial and disembodied categorization inputs from a human machine not programmed for that task. Does Epic doctrine mesh smoothly with the three tenets of cognitive science, or does it metaphorically force a square peg into a round hole with significant adverse consequences?

Clinical doctrine should facilitate human reasoning by accelerating, archiving, organizing, fact checking, etc. However, "Reason is not disembodied, as the tradition has largely held, but arises from the nature of our brains, bodies, and bodily experience. This is not just the innocuous and obvious claim that we need a body to reason; rather, it is the striking claim that the very structure of reason itself comes from the details of our embodiment."[120]

"Too much communication" is the clearest evidence of doctrinal deficiency.[121] Epic doctrine must encompass everything from charge capture to outcome measurement and still result in a legal document. Epic communication doctrine has more rigidity than flexibility and because it can be likened to the Swiss army knife (a versatile tool that is not particularly good at anything) of information handling, it is prone to cloning, inapproriate task partitioning, blockade of extra-Epic inputs, ritualistic normalization, error propagation, warning fatigue and target fixation, to name just a few potentially lethal unintended consequences of its adoption.

Epic doctrine fails to recognize that all of its processes start fully embodied at the bed side. Two embodied minds meet to cummunicate. Most of the thought basis of this communication is unconscious, and is highly individualized. Consider what happens in any conversation:

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116 Lakoff G, Johnson M. *Philosophy in the Flesh*. (New York, NY: Basic Books, 1999) p 3.
117 Hughes, W.P., Jr.: *Fleet Tactics and Coastal Combat*. *2nd Ed*. (Annapolis, MD: Naval Institute Press, 2000). p 27.
118 Walters, R.: *ABCs of MUMPS*. (Waltham, Massachusetts: Butterworth-Heinemann, 1989.) MUMPS is "Massachusetts General Hospital Utility Multi-Programming System".
119 Hughes, p 25.
120 Lakoff, p 5.
121 Hughes, p 31.

“Accessing memories relevant to what is being said

Comprehending a stream of sound as being language, dividing it into distinctive phonetic features and segments, identifying phonemes, and grouping them into morphemes

Assigning a structure to the sentence in accord with the vast number of grammatical constructions in your native language

Picking out words and giving them meanings appropriate to context

Making semantic and pragmatic sense of the sentences as a whole

Framing what is said in terms relevant to the discussion

Performing inferences relevant to what is being discussed

Constructing mental images where relevant and inspecting them

Filling in gaps in the discourse

Noticing and interpreting your interlocutor's body language

Anticipating where the conversation is going

Planning what to say in response”[122]

A physician was called to see a deaf person where he had always felt angst over the two way disruption in information flow caused by his communication limitations. The deaf have their own doctrine,[123] but the physician was insufficiently knowlegeable about it. He had the assistance of a skilled sign interpretor. At the EPIC “Hyperspace” screen to qwerty his consult, he realized he had failed to ask the patient about a pertinent family history issue. He checked the Epic data base. A cloned entry indicated “no pertinent family history.” The interpretor was still there. The physician requested her help in getting this information from the patient.

This request occurred with the unconscious steps described above, with one addition. The interpretor signed the request back to the physician and she signed her response as she spoke it. This triggered one of the 5% of the physician’s thoughts that are conscious. He pointed out that she did not need to sign to him. He remarked: “You don’t even know you are doing that, do you?” She acknowledged it was unconscious. The physician remarked: “You are very good , and I bet you are Italian.” “How did you know?” she asked. He just gave an exaggerated palms in the air shrug, and they both had a good laugh.

Epic doctrine includes tactics that dictate the structure of communication at the bed side and then among caregivers, patterned after the decades old “problem oriented SOAP”[124] doctrine. POSOAP is claimed to be superior to the old doctrine of “clinical judgment”[125]. ““Deep disorder pervades medical practice. Disguised in euphemisms like "clinical judgment" and "evidence-based medicine," disorder exists because medical practice lacks a true system of care,”” and “Because of a dependence on the

122 Lakoff, p 10-11.
123 Padden CA Humphries TL.: *Inside Deaf Culture. Cambridge*, (MA: Harvard University Press, 2005). p 1.
124 Actually in a current iteration of Epic doctrine, the documentation takes an “APSO” format. A “progress note” is generated for a specific problem by first updating the assessment and plan and then recording the data upon which this is based. This seems analogous to the Queen’s dismissal of an objection to her command to behead Alice: “First the sentence, then the trial.”
125 A mysterious term long cherished as an argument of last resort by physicians to justify their decisions, but never defined.

limited, idiosyncratic capacities of individuals, medical practice lags centuries behind the domains of science and commerce."[126] What if Medicine's "true system of care," i.e., its doctrine, out of physiologic necessity must highly depend on "the limited, idiosyncratic capacities of individuals"?

The "problem-oriented SOAP" doctrine is flawed. Problems are hierarchal and dynamic, and no standardized "problem" categories or ranking systems exist. ICD-10's intricate diagnosis categories will not solve this deficiency and may exacerbate it. "Categorization is… a consequence of how we are embodied."[127] And categorization, like cognition itself, also is largely unconscious. We consciously learn new categories almost daily but we cannot make massive changes in our category systems. Each individual's categories, conscious and unconscious, are determined by that individual's experience.

The "S" in SOAP stands for how the patient subjectively describes his predicament. Fair enough, but this is no more and no less subjective than the doctor's categorization of what he heard. The "O" is for objective. Is a radiologist's categorization of an image objective? Is the clinician's categorization of the report objective? Is the patient's categorization of the doctor's explanation of the result objective? Assessment ("A") of a loosely categorized problem, itself derived from a subjectively categorized data set, is what must ultimately be the basis for rational planning ("P").

"Reality comes divided up into categories that exist independent of the specific properties of human minds, brains, or bodies."[128] At least in Western culture this is a truth long held to self-evident. While it is only one of several important false assumptions about cognitive function, this one is particularly crippling to Epic doctrine. This is not metaphysical "a tree falls in the forest…" stuff. Categorization failure at the bedside can be both expensive and lethal. Epic is a multiple-choice test. Medicine is most often an essay contest.

Epic doctrine creates a battle group: the health care team. This leaderless team of equals can deliver better care by partitioning its task, via a list, into too often static categories called problems, keeping track of all the data (relevant and irrelevant, right and wrong and unweighted) for categorization, then mandating pathways based on guidelines for each partition, then measuring success by choosing non-random retrospectively ascertained arbitrary surrogate outcomes.

"Doctrine is the companion and instrument of good leadership. It is the basis of training and all that that implies: cohesion, reliability in battle, and mutual understanding and support."[129] Do caregiver teams need leaders? Epic doctrine devalues the concept of leadership and is silent on how leadership might be identified or practiced.

The old doctrine of medical practice made the attending physician the leader with ultimate responsibility for the individual patient. The primary care physician is no longer always the attending physician in the hospital.[130] But even if the primary care physician sees a patient while in the hospital that physician has no final authority. Too often the attending physician receives a "curtesy call" from a

126 Weed, Lawrence L., and Weed L.: *Medicine in Denial*. (CreateSpace Independent Publishing Platform, 2011.)
127 Lakoff, p 18.
128 Lakoff, p 21.
129 Hughes, p 25.
130 Third party payers often will not pay for hospital visits by a primary care physician. Some even prohibit such visits. The "admitting physician" might be identified, and a hospitalist assigned, but no one "owns" the patient and all his problems.

clerical worker with the message that the patient has been transferred to another hospital, taken to surgery, etc.

Epic doctrine holds that care givers are interchangeable commodities based on their categories. Today's nurse is as good as yesterday's so yesterday's can just as well be assigned to a different team. And each nurse may be on five or more different teams on the same shift. Today's cardiologist is a clone of yesterday's and a different one each day poses no threat because Epic is the constant.

Epic doctrine holds that patient problems are also commodities. Barely acknowledging that each patient has a unique permutation of a unique set of unique problems, Epic doctrine provides few tactics to deal with the infinite complexity that results. Clausewitz advised "…proceed from the simple to the complex. But …we must begin by looking at the nature of the whole; …the part and the whole must always be thought of together."[131]

Cognitive science holds that the vast majority (95% or more) of human cognition is unconscious. And, to reason, we must categorize. "A small percentage of our categories have been formed by conscious acts of categorization, but most are formed automatically and unconsciously as a result of functioning in the world."[132] Doctrine is categorical. Doctrine should establish unity amidst chaos.[133] Doctrine reflects and directs values.

Good doctrine is not dogma, but rather creates a healthy tension between conformity and initiative. For example, Japanese naval doctrine forced them into the Battle of Midway since they believed winning a war demands a decisive victory. This doctrine worked for them at Tsushima Strait against the Russians in 1905, but not at Pearl Harbor. American doctrine in June, 1942 was evolutionary. It had to be. Their old doctrine was battleship based, and they lost theirs at Pearl Harbor.

Forced to improvise, the Americans at Midway relied heavily on idiosyncratic inidivuals. Two such aviators may have created the tipping point. "Jimmy" Thach, literally "on the fly" over the Japanese fleet, implemented his Thach weave.[134] Through team work this allowed the mostly overmatched F4F Wildcat to shoot a Zero off the tail of a wingman. After decimating the American torpedo bombers early, the day took a bad turn for pilots of the fragile Zero as their superior nimbleness was trumped by the Wildcat's higher firepower and sturdiness plus newly improvised doctrine.

Midway was a fascinating contest between doctrines. The Japanese relied on offense and nearly ignored defense, including damage control. Technical expertise resided in their officer corps and officers comprised a high percentage of a ship's company. They relied heavily on specialists. They eschewed intelligence and were poor at reconisance. Their plane radios were primitive and unreliable and they had not embraced radar. By grouping into *Kidō Butai*, they could launch the most powerful massed carrier based aerial attack of any navy in the world. Their pilots were very experienced in 1942. But they skoffed at parachutes, did not have armored cockpits or self sealing gas tanks and never rotated home. Few survived the early war and their experience died with them.

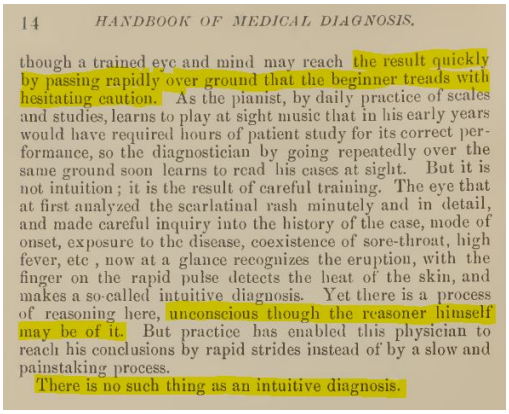
131 Paret, P.: *Clausewitz and the State: The Man, His Theories, and His Times*. (Princeton, NJ: Princeton University Press, 2001), p 382-3.
132 Lakoff, p 18.
133 Hughes p 25.
134 Ewing, S.: *Thach Weave: The Life of Jimmie Thach.* (Annapolis, Maryland: Naval Institute Press, 2004). Thach practiced the weave against another Midway hero, Butch O'Hare, the namesake of Chicago's largest airport. Midway, Chicago's, first airport, was named for the Battle.

The Americans in early 1942 were rookies at fleet air carrier operations. Each carrier operated more or less independently. American doctrine was more balanced in terms of offense and defense. Their leaders could sail away from a fight that was not to their tactical liking. Technical expertise resided in the senior enlisted corps so that officers were fewer. Crews were also generalists who knew something about many things. On all ships damage control was everyone's responsibility. American pilots flew often clumbsy but very robust machines and they wore parachutes. A downed pilot could count on a sprited rescue attempt. Pilots rotated home where they taught their replacements the nuances of aerial combat doctrine.[135]

Did superior doctrine carry that epic June day in 1942 at Midway? If so, American doctrine that allowed improvisation and Japanese doctrine that enforced inflexibility were the deciding factors. Indeed, bad doctrine can be worse than none. A debate has existed for two centuries over the extent to which the practice of warfare is an art or a science.[136] Using battle as a metaphor for medical practice can be questioned. Still, many practitioners of both warfare and medicine will agree that they are often enshrouded in a doctrinal fog.

Medical practice doctrine has never been well defined, hence the activity has long been deemed an "art." Synchronous with the slow death of Community Hospital came the largely unnoticed withering of aspects of the art of medical practice. With the enormous strides in knowledge of biologic processes and sophistocated ways to measure them came an information deluge. This data flood swamped the individual clinical practioner, thus creating the misplaced perception of the need for Epic doctrine.

Much of today's physician angst is the result of the profession's failure to codify its doctrines. Decades ago the author was "voluntold" to join a corps of rag tag untrained pedagogues charged with beginning the process of handing down the tenets of "clinical judgement" to fledgling sophomore medical students. We started by perpetrating a fraud on our apprentices. We taught our doctrine backwards in many ways.


14 HANDBOOK OF MEDICAL DIAGNOSIS.

though a trained eye and mind may reach the result quickly by passing rapidly over ground that the beginner treads with hesitating caution. As the pianist, by daily practice of scales and studies, learns to play at sight music that in his early years would have required hours of patient study for its correct performance, so the diagnostician by going repeatedly over the same ground soon learns to read his cases at sight. But it is not intuition; it is the result of careful training. The eye that at first analyzed the scarlatinal rash minutely and in detail, and made careful inquiry into the history of the case, mode of onset, exposure to the disease, coexistence of sore-throat, high fever, etc, now at a glance recognizes the eruption, with the finger on the rapid pulse detects the heat of the skin, and makes a so-called intuitive diagnosis. Yet there is a process of reasoning here, unconscious though the reasoner himself may be of it. But practice has enabled this physician to reach his conclusions by rapid strides instead of by a slow and painstaking process.

There is no such thing as an intuitive diagnosis.

While still a young physician Dr. Herrick described the doctrine of diagnosis in 1896 in his *Handbook of Medical Diagnosis*.[137] He sometimes knew "at a glance" and was stumped completely at times. Yet he also knew the glance was really a rapid and almost automatic act of categorization. He also knew diagnosis was iterative and longitudinal: "It is only the ignorant who expect a diagnosis at first sight in every instance."[138]

The time honored name for the first clinical course was "Physical Diagnosis" (universally but not uniquely translated to "P Dog").[139] Even the name of the course was a deception, for it suggested that the physical

135 The above is drawn from Parshall and Tully, perhaps the best researched and balanced study to contrast doctrines at Midway. Parshall J, Tully, A.: *Shattered Sword, the Untold Story of the Battle of Midway*. (Dulles, Va: Potomac Books Inc, 2007).
136 Hughes, p.27.
137 Herrick, James B.: *Handbook of Medical Diagnosis*. Philadelphia, Lea, 1895), p 14.
138 Ibid. p 21.
139 P dog When you mix crack and weed in a joint. Similar to Sherm but way more thug. "Let's roll up a P dog after class and f**k up the teachers car." Language is a capricious tool and idioms can turn on you in a heartbeat.
http://www.urbandictionary.com/define.php?term=P+dog

examination of the patient was the decisively important bedside activity. And the title made it seem that the course was about making a diagnosis. The author informed his own charges of the fraud but doubted many grasped the significance of his warning.

We pretended that the seasoned clinician spends three plus hours gathering and recording every bit (this was in the early days of the byte, which is 8 bits but not a dollar) of information available from the patient including queries on hat size and whether it was changing, pains in the hair, and pruritus of the teeth.

The author tried to emphasize that in "real life" the patient's history was "where the money is," often quoting Osler "Listen to your patient, he is telling you the diagnosis."[140] When we required students to do their three hour long clinical evaluations it was simply to introduce them to a set of tools. When we taught them how a tuning fork might be useful in the physical exam it was not to suggest that they would use it on all occasions, and depending on their ultimate type of practice, maybe never. The course was simply an introduction to clinical medicine.

We indicated that the diagnostic process is not a deductive one that only starts after all the information in the patient's universe is gathered. Rather the process, by necessity, is inductive and iterative. Hypotheses are tested shortly after the critically important open ended portion of the clinical interview (i.e., "taking the history only after receiving it"). Many pitfalls and traps exist, some of them with names like target fixation and premature closure.[141] A patient query is a diagnostic test and each one has limitations and sources of bias that influence sensitivity, specificity and predictive value. An aphorism was "the physician with the most patience is the best diagnostician, not the one with the most patients."

A diagnosis, we explained, is often a fragile and fleeting hypothesis. We introduced Occam's Razor and that there was more to the razor than the "Law of Parsimony" (never make two diagnoses when one suffices). William of Ockham also advised, when competing hypotheses existed, to choose the one that requires the fewest assumptions.[142] We called this the "kiss" approach (keep it simple, stupid).

We also introduced another Englishman of the cloth, William Bayes.[143] We translated his mathematical ideas into aphorisms like "when you hear hoof beats, don't look for Zebras." But we also had a (now ancient) HP hand held calculator with Bayes Theorem on a magnetic strip that could be read by the machine. All one needed was to enter the prior probability of a given diagnosis and have knowledge of the sensitivity and specificity of a given finding to calculate the likelihood of the correctness of that diagnosis.

$$P(H \mid E) = \frac{P(E \mid H) \cdot P(H)}{P(E)}$$

"A very good test for a rare disease is not good enough" was another Bayesian derived aphorism. A test that will identify 100% of patients with a rare disease with only 2% false positives is not good enough to diagnose a rare disease when the test is positive. If the prior probability of the diagnosis is 1 in a million and all million are tested, then 20,001 people will have a positive test, but still only one has the disease.

140 http://www.oslersymposia.org/about-Sir-William-Osler.html
141 http://archinte.jamanetwork.com/article.aspx?articleid=486642
142 http://en.wikipedia.org/wiki/Occam's_razor
143 http://en.wikipedia.org/wiki/Bayesian_inference

The moral to this is to spend much time and brain power on gathering clinical clues at the bedside so that "clinical judgement" can be utilized to raise the prior probability from one in a million to about 1 in 50. Then if your patient has a positive test, the probability he has the disease is about 1 in 2, not 1 in 20,001.

Such primitive demonstrations of what is formally termed "decision analysis"[144] were then only theoretical because of the Tyranny of N. The input data were unstandardized at every branch of the decision tree. The diagnostic side of decision analysis was hard enough because of the insufficient quality of data. Assigning a relative value to each possible outcome would challenge even Kenneth MacNeal, though he recognized the pivotal need to do so.

This value derived "utility coefficient" of formal decision analysis also had an aphorism: "Never miss the diagnosis of a disease known to be easily curable."

Today's "evidence based" "practice guidelines" are not based on any recently discovered methodology. But they have radically altered clinical doctrine. This new doctrine is not battle tested.

Perceptions (and misperceptions) become "reality." An example from the wards of Chicago's West Side VA Hospital demonstrates this. The ward team consisted of myself (a PG 2 in the parlance of the day), an intern, and three junior medical students on their first clinical rotation. (We had an "attending" but he rarely showed up for rounds and when he did, he never left the ward office.) The evening was busy, as it was our admitting day. Mostly to save time, I sat in on a student's "H&P" (taking the history and examining the patient).

The student did a very good job. She began with the prescribed open-ended question: "What brought you to the hospital today?" The patient, a portly man in his 60's who also enjoyed his port, tried to be precise. "The Ogden Avenue Bus," he said. I was a veteran physician by then (my M.D. degree was more than a year old), so I didn't laugh, but I'll admit I glanced at my watch and thought about the three more patients I had left to see before morning report.

The student was not flustered in the slightest. She smiled, nodded her head and continued: "Were you feeling sick?" "I's keeps a hurt," was the reply. Now my student was stuck, and she shot a puzzled glance at me. "He has pain," was all I said, and signaled for her to continue. It all took a while, but she got an enormous amount of information from someone who apparently had not had many such encounters in the past. But that was about to change.

The patient spoke Ebonics[145] but none of the three of us knew it. Another portmanteau like "Delnor," and "flummadiddle," "Ebonics" was coined in 1973 by combining the words ebony and phonics. 1973 was the year this incident took place. We finally concluded that our patient might have angina pectoris, but his un-coached initial description of symptoms was unclear to us. The EKG was not diagnostic. We requested a heart stress test and hedged our bet with a request for an oral cholecystogram for gall stones. (The Graham-Cole test was invented at the University of Illinois.)

Nothing moved quickly at West Side. Our patient was seen by sophomore, junior and senior students, residents of various seniorities, fellows and even attending physicians from the gastroenterology and cardiology services. Our patient told his history to no fewer than 15 interrogators over the course of a

144 http://en.wikipedia.org/wiki/Decision_analysis
145 http://en.wikipedia.org/wiki/Ebonics_(word)

week. I read all these notes, which became progressively more cloned. (Epic doctrine did not invent the cloned note, it only hustled and facilitated its propagation.). In 1973 all notes at West Side were hand written with the length inversely proportional to the writer's seniority.

The patient reported (at least as it was written by the later examiners) an exertional pressure pain in the mid chest relieved by rest and occasionally the pain went to the jaw and left elbow (some said to the ulnar side). A senior attending cardiologist, a tenured professor from the University of Illinois was "on service" for cardiology. With his entourage he entered our patient's ward and asked what troubled him. The now well-coached patient recited: "I gets a pain here (putting his clenched fist in the mid chest area) when I am walking, especially into the wind on a cold day, and it spreads to my left arm. Sometimes I feel short of breath."[146] The professor turned to his trainees and exclaimed: "See how easy this is?"

The student and I glanced at each other. That was the first time I noted she had a peculiar episodic almost rotary nystagmus…her eyes rolled. A few days later, after a negative heart stress test, our patient's coronary angiogram[147] showed no significant obstruction. But his Graham-Cole cholecystogram[148] showed gall stones. The surgical resident was elated. My student and I re-learned that "ain't nothin' easy" and that only a fool is positive. These two old saws comprise two of the fudamental tenets of the old highly individualized clinical doctrine.

The many, varied, and evolving ways the term "attending physician" had been used in the old medical practice doctrine illustrates how poorly the doctrine was codified. In an academic teaching hospital an "attending" was the titular physician in charge of a team or "service," but in the era from the mid 1960's to the early '70's the attending rarely, if ever, saw his patients. He supervised the house staff as a teacher but not often by direct example.[149] In earlier decades "teaching rounds" meant actually rounding on the ward. This latter custom hit a nadir in the 70's and then began to increase again as more direct supervision of trainees became mandated (to qualify for payment).

The old clinical doctrine was more attuned to modern understanding of cognitive processes because it recognized that categorization is by metaphor, is highly nuanced, and ultimately is highly individualized. Throw in the differing life experiences of both the reporter and the scribe and "data" look more like trajectories than static facts. The flight of these data can move both toward and away from the truth, or it can orbit Veritas[150] endlessly. To paraphrase Jack Nicholson, Epic doctrine can't handle the truth.

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146 A classic description of angina pectoris.

147 A pediatric cardiologist, Mason, Sones, M.D., while attempting a left vetriculogram at Cleveland Clinic in 1960, accidently injected the contrast dye into a coronary artery. The patient survived the cardiac arrest that followed and coronary angiography and ultimately angioplasty and stent placement were born. Connolly, J.E.: The development of coronary artery surgery: personal recollections. *Tex Heart Inst J* 2002;29:10-4.

148 The cholecystogram was introduced by Doctors Evarts Graham and Warren Cole. The former was the son of a Chicago surgeon and a 1907 graduate of Rush Medical College. Graham was Chairman of Surgery at Washington U. in St. Louis from 1919 to 1951. Cole, Graham's student at Washington University, was Chairman of Surgery at the U. Of Illinois College of Medicine in Chicago from 1936 to 1966. http://pubs.rsna.org/doi/abs/10.1148/76.3.354?journalCode=radiology

149 This also varied widely according to local factors. "Public" hospitals like Illinois R&E, Cook County and West Side VA were much different from "private" teaching hospitals such as Lutheran General in Park Ridge Illinois, where patients belonged to their "attending" physicians.

150 Veritas is the mother of Virtue.

TABLE 1 Sources of Medical School Support, Selected Years, 1960/61 to 1980/81 (millions of dollars)

| Year | Total Revenues | | Federal | | | | | | | | Other Contracts and Grants[a] | | State and Local | | Medical Service Funds[b] | | Tuition and Fees | | All other[c] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Total | | Research | | Teaching | | Other Federal | | | | | | | | | | | |
| | $ | % | $ | % | $ | % | $ | % | $ | % | $ | % | $ | % | $ | % | $ | % | $ | % |
| 1960/61 | 436 | 100.0 | — | — | 119 | 27.3 | 43 | 9.9 | d | d | 51 | 11.7 | 73 | 16.7 | 13 | 3.0 | 28 | 6.4 | 109 | 25.0 |
| 1964/65 | 779 | 100.0 | 424 | 54.3 | 281 | 36.0 | 96 | 12.3 | 47 | 6.0 | 54 | 6.9 | 118 | 15.1 | 22 | 2.8 | 39 | 5.0 | 122 | 15.6 |
| 1969/70 | 1,550 | 100.0 | 748 | 48.2 | 382 | 24.6 | 171 | 11.0 | 195 | 12.6 | 195 | 12.6 | 239 | 15.4 | 90 | 5.8 | 56 | 3.6 | 221 | 14.3 |
| 1974/75 | 3,046 | 100.0 | 1,200 | 39.4 | 614 | 20.2 | 303 | 9.9 | 283 | 9.3 | 469 | 15.4 | 628 | 20.6 | 303 | 9.9 | 130 | 4.3 | 316 | 10.4 |
| 1975/76 | 3,353 | 100.0 | 1,244 | 37.1 | 656 | 19.6 | 290 | 8.6 | 298 | 8.9 | 526 | 15.7 | 725 | 21.6 | 399 | 11.9 | 155 | 4.6 | 304 | 9.1 |
| 1976/77 | 3,901 | 100.0 | 1,262 | 32.3 | 746 | 19.1 | 206 | 5.3 | 310 | 7.9 | 460 | 11.8 | 859 | 22.1 | 541 | 13.9 | 192 | 4.9 | 585 | 15.0 |
| 1977/78 | 4,316 | 100.0 | 1,293 | 30.0 | 797 | 18.5 | 198 | 4.6 | 298 | 6.9 | 558 | 12.9 | 923 | 21.4 | 616 | 14.3 | 231 | 5.4 | 695 | 16.1 |
| 1978/79 | 4,906 | 100.0 | 1,433 | 29.2 | 883 | 18.0 | 218 | 4.4 | 332 | 6.8 | 603 | 12.3 | 1,050 | 21.4 | 727 | 14.8 | 265 | 5.4 | 828 | 16.8 |
| 1979/80 | 5,701 | 100.0 | 1,660 | 29.2 | 1,008 | 17.7 | 261 | 4.6 | 391 | 6.9 | 678 | 11.9 | 1,191 | 20.1 | 880 | 15.4 | 308 | 5.4 | 984 | 17.2 |
| 1980/81 | 6,425 | 100.0 | 1,880 | 29.3 | 1,098 | 17.1 | 275 | 4.3 | 507 | 7.9 | 774 | 12.0 | 1,341 | 20.9 | 1,001 | 15.6 | 346 | 5.4 | 1,083 | 16.8 |

a Includes non-government contracts and grants for research, nonfederal contracts and grants for teaching and training, and nonfederal contracts and grants for public service.

b Professional Fees Income from Practice Plans.

c Includes income from endowments, college services, medical school-university activities, teaching hospital and clinical payments, and other sources.

d Included in last column.

SOURCE: Data derived from "Medical Education in the United States," Journal of the American Medical Association, Annual Report, 1961–1982.

With the usual caveat about the tyranny of N in health care accounting, note that in the two decades 1960-80 the percent of medical education funded by the Federal Government fell roughly in half, while the percent funded by attending physician fees went up five-fold.[151] How this change affected the doctrine of medical practice and of medical education can be debated. However, the change likely had good and bad and often incongruent consequences for both patients and students.

151 http://www.ncbi.nlm.nih.gov/books/NBK217691/

# V: Search for DNA Evidence of Community Hospital

Before describing Community Hospital's creation and life, a description of recent events is needed to see if snippets of Community Hospital's DNA might possibly still be found posthumously in the institutions that first diluted it and then digested it.

> "We are all for sale, dear Remsen. You and I have been in the market for years, and I have loved to buy and sell our wares in brains and books. It has been our life. So with institutions. It is always pleasant to be bought, when the purchase price does not involve the sacrifice of an essential."
>
> Sir William Osler, M.D., to Ira Remsen, President Johns Hopkins University, dated Oxford, Sept 1, 1911.[152]

**Community Hospital Becomes Delnor-Community Hospital Becomes Delnor Hospital Becomes Part of Cadence Health Becomes Northwestern Medicine**

The most recent chapter of the Fox Valley medical care chronicle might well be entitled "The Manic Phase." For example, Delnor Hospital (itself the product a fusion of old Delnor with Community Hospital in the mid 1980's), was merged late in 2010 with Central DuPage Hospital in nearby Winfield ("CDH" was born in the mid 1960's from one of Dr. Theodore Sachs' TB sanatoria) to form the clumsily named[153] and high-handedly governed "Cadence Health."[154] Medical school flunk out Gertrude Stein[155] famously said of Oakland, California, what could also have been said of Cadence, "There is no there there."[156] "Always thinking. Always caring." was the Cadence tagline during its mercifully brief existence.[157]

"Central DuPage" as a hospital brand does have considerable appeal since it is geographically descriptive and the reference to centrality suggests dominance and significance.[158] The cynics, of course, long ago hijacked "CDH" to mean "Certain Death Hospital".[159] This serves to demonstrate an important principle: the worst hospital anywhere is the closest one. Relatives and friends die there, usually because of a botched operation or a missed diagnosis. You are certain of these blunders because your unemployed brother in law told you about what happened to his neighbor's mother. The hijacked name is thus evidence based.

The more distant hospitals not only care more about you, they are also are ranked in the top 5% in the country in something by some magazine and have "designations" of excellence bestowed by some fee-based rating agency. You know this because you saw it on a bill board on your way to work.[160]

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152 Osler W: Sir William Osler: On Full-Time Clinical Teaching in Medical Schools. Can Med Ass J 8: 762-5, 1962. This letter takes serious issue with much of the report of Abraham Flexner on the state of medical education in the U.S. and Canada (vide infra).
153 Cadence is derived from the Latin word "cadentia" that means "a falling".
154 The Cadence executive team was comprised mostly of MacNeal Hospital alumni.
155 Stein performed research in the lab of neurosurgeon Harvey Cushing at Johns Hopkins but Howard Kelly, Chief of Obstetrics, would not pass Stein. Kelly appears elsewhere in this narrative. He was a complex character, like Ms. Stein. Example: http://www.snopes.com/glurge/milk.asp
156 Sacred Emily https://www.questia.com/read/6082895/geography-and-plays
157 "Cadence" also conjures up the vision of the chain gang march scene from the 1980's Martin Sheen movie of the same name. But the Cadence name had no historical, geographic, personal, mission or value related connection with those it serves. In other words, it was a perfect brand name. https://www.youtube.com/watch?v=QVGgyGXPDJ8
158 http://dictionary.reference.com/browse/central?s=t
159 Dropping "Community" from Delnor's name did end the "DCH" era which had been similarly translated locally as "Don't Come Here."
160 Hospital ratings among the largest raters are rarely in agreement.http://content.healthaffairs.org/content/34/3/423.abstract#aff-1

"Delnor" is a more complicated appellation. The word is another example of a portmanteau, a linguistic term introduced by Louis G. Carroll.[161] "Delnor" serves as a remembrance of Dellora Norris whose philanthropy created the original Delnor Hospital in St. Charles, Illinois, in 1940. Mr. Carroll would have appreciated the delicious irony that resulted in the only personal name still associated linguistically with the four hospital horsemen of "Northwestern Medicine" is not a surname at all. "Delnor", like Carroll's "Haddock Eyes" is also a use-mention distinction.[162] "Delnor" is a portmanteau word for another name.

This merger of CDH and Delnor, announced in December 2010, was in part, the result of a Delnor failure.[163] The Illinois Health Facilities Planning Board in 2008 rejected Delnor's plan to start a heart surgery program. Perhaps that contest was rigged, as evidenced by what was simultaneously occurring at Edward Hospital in nearby Naperville. Delnor was, in the arborist's term, being girdled by competitors who possessed this crucial (and lucrative) service line.

**Enter (Briefly) Sherman Hospital**

No sooner was the ink dry on this first merger (not-for-profits cannot legally do "buy outs") when Cadence went on a Don Quixote quest for a grander scale. First Cadence Health tilted towards a merger with Sherman Hospital[164] in Elgin, itself a venerable institution named for a generous local businessman and possessed of a somewhat quirky history. Sherman was saddled with enormous construction debt resulting from an ill-timed move and expansion begun in 2007 just as the economy was collapsing.

To the outsider, appearances were that the Sherman-Cadence marriage would be one of convenience but not of similar cultures. Cadence was born into and because of an environment of rapid Chicago area hospital consolidation via mergers. Sherman was urgently in need of a better credit rating to reduce its financing costs. CDH was the most profitable of reporting hospitals in the Metropolitan Chicago area with an astounding profit margin of over 20%.[165] (In recent decades university teaching hospitals were held to be cash cows when margins were 3-5%.[166])

But Sherman jilted Cadence and instead immediately joined the larger Advocate Healthcare System. This decision may have been partly based on word reaching Sherman physicians from their professional brothers and sisters down the Fox River of Cadence's ham handed "merger" of CDH with Delnor. Except for the absence of the Stuka's, that merger was much like that of Germany with Poland in 1939. The Sherman Medical Staff may have been more comfortable with Advocate governance. Doctors have always felt an element of uneasiness with hospital authorities, not without reason. Sherman provides a vivid historical example.

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161 The word "portmanteau" was first used in this context by Lewis Carroll in the book *Through the Looking-Glass* (1871), in which Humpty Dumpty explains to Alice the coinage of the unusual words in Jabberwocky. Fromkin, V., Rodman, R. and Hyams, N.: *An Introduction to Language*, Eighth Edition. (Boston: Thomson Wadsworth, 2007). A Portmanteau can make an excellent brand name like "Verizon," a portmanteau of "veritas" (Latin for truth) and "horizon."

162 http://en.wikipedia.org/wiki/Use%E2%80%93mention_distinction

163 http://www.dailyherald.com/article/20101225/news/712269925/

164 A not-for-profit community hospital, Sherman Hospital was originally organized by the Elgin Women's Club in 1888. The first hospital building was a two-story house on Channing Street donated by local businessman Henry Sherman, with the condition that it be called Sherman Hospital and open to all creeds and races. http://en.wikipedia.org/wiki/Advocate_Sherman_Hospital

165 http://www.chicagobusiness.com/article/20131116/ISSUE02/131119853/crains-publishes-updated-list-of-chicago-hospitals 22 Jan 2015

166 http://www.wsj.com/articles/universities-get-second-opinion-on-their-hospitals-1429725107

## OUST DIVORCED DOCTOR

**Elgin Women Expel Dr. Charles E. Sission From Hospital.**

Elgin, Ill., Sept. 9.—The board of directors of the Elgin Woman's club by unanimous ballot yesterday afternoon expelled Dr. Charles E. Sisson, recently divorced, from the medical staff of Sherman hospital and barred him from further practice or consultation there.

"Cruelty" is mentioned in the resolution. That is the charge on which Mrs. Sisson obtained her decree.

Board members said their action was taken as "mothers and wives."

Thursday, September 9, 1915, *Daily Register Gazette* (Rockford, IL)

Hospital governance structures early in the last century varied widely. For example, for $1 a year any citizen could become a voting member of the Geneva Community Hospital Corporation.[167] Sherman Hospital in Elgin at about the same time was governed by the Elgin Women's Club.

As the Rockford *Gazette* explained, a physician's hospital practice was unprotected by any due process. Although Dr. Sisson had not contested his divorce, he underestimated the wrath of women scorned.

This diversity in governance tended to make hospitals unpredictable. As early as 1913 the American College of Surgeons, founded that year in Chicago, was urging outcomes based hospital standards and in 1919 they promulgated their first standards (on one side of one piece of paper).[168] By 1926 the ACS had an 18 page hospital manual.

Hospital governance was far more standardized after the American College of Surgeons convinced other national organizations to join it to form a Joint Committee in 1951. Their laudable goals were to balance the prerequisites of the providers with those of the owner/managers, but with a steady eye on improving patient care. A not-for-profit structure was favored. Hospital bylaws were to include checks and balances that left the mostly lay board of trustees in ultimate control, but with the provision that medical decisions were to be left to a formally organized medical staff with its own set of official and binding bylaws.

The resulting requirements of the "Joint" were to be periodically surveyed for compliance by Joint Commission outside auditors. Achieving their certification went from discretionary to existential for hospitals.[169]

**MRS. EMMA SISSON IS GRANTED DIVORCE**

Mrs. Emma Sisson was granted a divorce from Dr. Charles E. Sisson, prominent Elgin physician, by Judge Frank Shopen, in the Elgin city court last Saturday morning.

Cruelty and disregard of his marriage vows are alleged in the bill which was submitted by agreement Dr. Sisson did not appear.

Dr. and Mrs. Sisson have been prominent in Elgin for many years. He was president of the Elgin physicians club last year, vice president of the Commercial club, and an officer in Universalist church societies. He has taken considerable interest in politics and has been an officer in the Republican and Progressive organizations in Elgin.

August 25, 1915, *Republican* (Geneva, IL)

Other physicians of Dr. Scott's era and earlier beside Dr. Sisson had found hospital governance nettlesome. The "Old" Cook County Hospital[170] provides an early example of the long-lasting ill effects of governance failure. At the instigation of physicians, the Cook County Board built an attractive and sturdy hospital at 18th and Arnold Streets (Arnold ran a block east of Wentworth Ave) in Chicago. This had been the location of a frame structure since 1854 that had served mostly to isolate cholera patients. The

167 *Community Hospital's First 35 Years*, 1925-1985. (Geneva, Illinois 1985), p.33.

168 https://www.facs.org/about%20acs/archives/pasthighlights/minimumhighlight

169 Recently a second certifying agency has received government authority as a certifier, ending the monopoly of the Joint Commission. http://www.modernhealthcare.com/article/20081027/NEWS/810249995

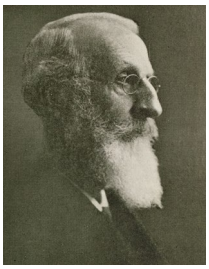
170 Not to be confused with the newest 1916 "Old" County Hospital replaced by the Stroger Hospital. Stroger is actually the fifth Cook County Hospital counting as first the frame building of 1854 that was replaced by the building here discussed. The "Old County" of this story was completed in October of 1857 at a cost of $75,000 but not occupied until 1859. The next "Old County" was that of 1876 built on the site of the last "Old County" built in 1916 and now (2015) standing vacant.

new building sat empty for a time as politics were played to wrest the indigent contract payment of $3 per week per patient from Mercy Hospital.[171]

The new building construction had been delayed for several years due to a feud between the clan of "regular" physicians and clan homeopath. The outnumbered regulars (40% of all the homeopaths in the world were said to reside in Cook County, Illinois[172]) finally prevailed.

The County Board leased the new hospital to a Medical Board comprised of representatives from each of the only two "regular" Chicago medical schools, Rush Medical College and Chicago Medical College (now Northwestern Medical school), plus physician representatives from the non-academic medical community. The strongest member of the Board was "the shrewd and forceful" non-college surgeon G.K Amerman, M.D.[173]

Dr. Amerman had dealt deftly with the ancient "town/gown" and intercollegiate academic feuds within the "regulars" by placing 6 college men and 7 men from the profession at large on the Board. The 6 college men were evenly split between the two schools. Then Dr. Amerman died and Rush pulled a fast one.


Edwin Powell, M.D.

Dr. Edwin Powell, a professor at Rush, applied for Dr. Amerman's "at large" position. To become eligible, he resigned his academic appointment. Powell was elected but a few days later he was re-elected to his chair at Rush. This act, "…a declaration of war between the colleges,"[174] ultimately resulted in protracted feuding that lead to the dismissal of the entire Medical Board and the creation of a new governance structure of persons appointed by the Cook County Board. Rush, relying on the ancient principle of intercollegiate sports ("If you ain't cheating you ain't trying") defeated Northwestern in that contest, one of many in their still continuing rivalry.

A later Rush Medical College building was designed by the same architect who designed Old Cook County. In the worldwide economic collapse of 1873(ironically blamed in significant part by many on the fires of 1871 and 1872 in Chicago and Boston), the architect had fallen on hard times. The architect in a later conversation with a faculty member of Rush Medical College said "well you are doing swimmingly and have made a great success in your new college, while I am actually starving. You remember that I did your work for half the usual price, because I was well off them, and you were in trouble. Would it be anything more than fair if you should now let me have the amount that I then threw off from your bill?"

171 Both the Chicago Medical College and Rush Medical College had a hand in the creation and early operation of Mercy Hospital, Chicago's first hospital. See: Murphy JB: History of Mercy Hospital in: Northwestern University, a History 1855-1905,Vol III. Indeed The Chicago Medical College was formed by a Rush splinter group and the rebels gained control of Mercy. Rush's counter insurgency captured Cook County Hospital for a long tumultuous time. Rush was located at 18th and Arnold at CCH for a time. William Quine, a Chicago Medical College 1869 graduate, wrote this bitter rebuke of Rush: "The medical board at this time was a self-governing and a self-perpetuating body and it was considered by professional people a high honor to be connected with it. The basis of organization was acceptable to everybody and fair to every interest, but the act of Dr. Powell led to its destruction. To that act may be traced responsibility for the transformation of a noble institution nobly administered into the toy of politicians and the scandal of the medical profession."

172 Quine, W.E.: Early History of Cook County Hospital to 1870. *Bull Med Hist Soc of Chicago*. Vol 1, p 15-25, 1911. p 15. Dr. Quine can be thought of as the father of the University of Illinois College of Medicine, originally known as the College of Physicians and Surgeons. It was initially located in the present day west side medical center in the building originally used as West Side High School.

173 Quine, op cit. p 18.

174 Quine, op cit.

William Quine, M.D.

Though Dr. Quine may not agree, apparently the faculty of Rush Medical College was possessed of a kind of honor among thieves. Upon receiving a check for $300 the architect exclaimed: "There, that is just what I had to pay the County Commissioners before I could get them to order the erection of the amphitheater [crucial to Rush] and the corridors." So, Rush Medical College belatedly paid the bribe and got control of its teaching hospital.[175]

**Enter (Briefly) Procure Proton Partnership**

The mid-20th century reform of hospital governance and the societal benefits of a not-for-profit structure have both largely crumbled to dust. CDH's construction of a controversial proton radiation therapy center is an example. Without discussion or a recommendation from its medical staff, CDH governance entered into a partnership with a for-profit entity (Procure) to build a $180 million dollar proton radiation cancer treatment facility. So much for relying upon the medical advice of an organized medical staff. Whether proton treatment is a medical advance or, ultimately, a very costly high tech gimmick is not yet known. Many prominent experts have come down on the gimmick side.[176]

Ironically, the first State of Illinois approved proton treatment facility was to be built in Big Woods very near the Fermi atomic physics lab. The idea of proton therapy was first proposed in the late 1940's by the Nobel physicist in charge of building Fermi Lab, Dr. Robert Wilson. In fact, Fermi physicists had already assembled a usable proton treatment machine, but it had been shipped years earlier to Loma Linda in California. This new Illinois treatment facility was to be under the institutional governance of Northern Illinois University. Incongruously, NIU did not have, nor has it ever had, a school of medicine, though it has a Division I football team.

As a demonstration of the modern maxim that anyone with internet access and a shovel can hold a ground-breaking ceremony, NIU boldly moved slightly forward with its plan. Funding quickly became a vexing obstacle. CDH's application for a proton center had been advancing in parallel to the NIU plan only to be denied. When NIU's proton facility predictably died from acute and chronic lack of funding, CDH/Procure inherited State of Illinois approval.

Thus far the proton facility has been a financial flop.[177] Procure defaulted on CDH's $40mil loan after missing a $3.6 million interest payment. Apparently Procure did not have much skin in the game, just debt. Cadence now owns 81%, up from 12% prior to the default. The center was hemorrhaging more than $10mil per year and that was before Medicare and other insurers began to whittle away at reimbursement or outright declining to pay for proton therapy. The first Procure proton center at Indiana University closed in December 2014 after chronic operating losses.[178]

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175 Rush's classes were held in the amphitheater. Lyman, H.M.:" A bit of the history of Cook County Hospital." *Bull Med Hist Soc of Chicago*. Vol 1, p 26-36, 1911. p 36. Rush promoted itself to a "University" in about 1971 when it resuscitated its dormant medical school. The Rush University Medical Center moniker was adopted in 2003. https://en.wikipedia.org/wiki/Rush_University

176 One such expert, Ezekiel J. Emanuel, M.D, was a framer of ObamaCare and the brother of a Chicago mayor. http://opinionator.blogs.nytimes.com/2012/01/02/it-costs-more-but-is-it-worth-more/?_r=0 11

177 http://www.chicagobusiness.com/article/20130711/NEWS03/130719958/cadence-to-buy-out-partner-in-cancer-center

178 https://www.insideindianabusiness.com/newsitem.asp?ID=66750

Proton therapy may ultimately find a place, especially as costs come down. Smaller, less expensive units are coming to market, though one maker, ProTom International, Inc., recently filed for bankruptcy. And, lower startup costs may only mean more centers offering overpriced, unproven treatment. "Now, we'll have an even bigger problem on our hands," said Amitabh Chandra, a professor of public policy at Harvard's Kennedy School of Government. Science and politics are not well met. Clinical trials are in progress but are difficult, expensive, subject to bias, and take years to complete.[179]

Central DuPage Hospital's CEO during the proton wars had been recruited to CDH after an uncomfortable period in its history in about 2004.[180] CDH cardiac surgery results came into question and other problems surfaced (infections, mother nursing wrong baby, etc.). The hospital had been in some existential danger via losing its JACO accreditation. Both the CEO and the hospital president had resigned.[181] A successful turnaround, if defined as the ability to absorb a self-inflicted $40 mil bad debt, was engineered.

**Enter (Briefly) the Cleveland Clinic**

In 2010 Cadence entered into an affiliation with the Cleveland Clinic, where coronary angiography had been first performed by mistake,[182] for its heart surgery programs, and into a similar agreement for cancer two years later. As recently as the spring of 2015 these affiliations apparently still existed, at least on paper. But tellingly, the expensive media blitz touting them ceased.

Ironically this affiliation was part of a Cadence "patient safety initiative." The Cleveland Clinic was the site of the worst American hospital disaster of the 20th century. On May 15th, 1929, a steam pipe fitter arrived to fix a leaking pipe in the basement where x-ray films were stored. The Eastman Kodak Company's nitrate film was highly volatile, unstable and extraordinarily flammable. Leaking steam catalyzed the release of deadly gas. The explosion and fire that quickly followed killed 123 patients, doctors and nurses, most instantly.[183] Cleveland Clinic's Crimson Safety profile, if accurately documented without historical censoring, probably has not yet climbed back into the second quartile, and if it has, the cause is likely the often empirically observed regression toward the mean.

**Enter (Briefly) Rockford Memorial Hospital**

After the collapse of the Sherman negotiations came word from Cadence executives that they had determined their vision for the future of health care was "as one" with that of Rockford Memorial. Remarkable balance is required to focus visual prophecy on multiple sequential targets while spinning quickly. Pre-nuptial negotiations were to proceed with alacrity (within 90 days). Rockford Memorial had

179 http://www.wsj.com/articles/big-bets-on-proton-therapy-face-uncertain-future-1432667393

180 Oddly enough, this new CDH ceo had presided over another transformation of a hospital, founded about the same time as Community Hospital in Geneva, by another doctor of Scottish descent: Arthur MacNeal, M.D. The then MacNeal ceo sold that hospital to Vanguard, a for-profit hospital chain and immediately took an executive position with the buyer that he held until he was recruited to save CDH. The monies from the sale of MacNeal were put into a foundation whose name mysteriously morphed from the MacNeal Foundation to the Arthur Foundation. The ceo remains the chairman of the Arthur Foundation which seems to make the majority of its grants to the ceo's alma mater, Notre Dame, where an endowed position bears his name. http://www.guidestar.org/organizations/36-4324067/arthur-foundation.aspx

181 http://articles.chicagotribune.com/2003-03-13/news/0303130334_1_seven-patients-sterilization-inspections

182 Sones, F.M., Shirey, E.K.: "Cine coronary arteriography." *Mod Concepts Cardiovasc Dis* 31:735-8, 1962. In 1960 F. Mason Sones, a pediatric cardiologist at the Cleveland Clinic, accidentally injected radiocontrast in a coronary artery instead of the left ventricle. The patient had a reversible cardiac arrest.

183 Brad Clifton , "The Cleveland Clinic X-Ray Fire of 1929," Cleveland Historical, accessed June 30, 2015, http://clevelandhistorical.org/items/show/573 5 April 2015

had a prior engagement with OSF Health annulled by anti-trust concerns of the Feds, one of a handful of such actions nationwide over the last decade.

The Federal Trade Commission had said that merger would have left the combined OSF-Rockford hospital with control of 64% of the local market for general hospital care and 37% of the market for primary-care physician services, essentially leaving only one competitor in both service lines: 320-bed Swedish American Hospital.

This Cadence-Rockford marriage proposal seemed ill-conceived even at first glance and proved to be only a head-fake. Although Rockford Memorial was a teaching hospital in the University of Illinois system, it never served as a referral center for the central Fox Valley or DuPage County. The distance between Cadence's footprint and Rockford's was substantial and the footprints did not overlap. Memorial served more indigents than Cadence. Even allowing for the effect of the newly promised universal health insurance, this seemed financially challenging at best. Only if by increasing scale anywhere, anytime, was the only successful strategy did the merger seem wise for Cadence and the communities it served.

Perhaps only in politics is everything local, but health care is close. Beginning with the marketing advantage that ambulances deliver, by rule, the acutely ill to the closest hospital, the local hospital, backed by its "health care system" syndicate, has become the big gorilla on the health care wall. Plus, with physicians rapidly becoming the employees of that gorilla, coupled with the restrictions imposed on provider panels by third party payers, competition as it relates to the individual patient is nearing extinction. The personal physician is also a thing of the past. Now with your parade of doctors and their surrogates you get a big gorilla's employed team of care givers.

**Enter Northwestern Medicine**

Apparently, the initial passion of Cadence for Rockford Memorial cooled due to the diminutive size of the latter's dowry, even in spite of their proclaimed perfectly shared visions. A new suitor for Cadence appeared during that 90-day engagement. This suitor tartly, if not tortuously, whispered sweet compensations in the Cadence executives' ears. Rockford was unceremoniously dumped, perhaps the victim of alienation of affection.

In an unseemly abrupt elopement, Cadence then became "part of" Northwestern Medicine (the latter brand and marketing moniker being a bald-faced adaptation from rivals "University of Chicago Medicine" and "Loyola Medicine").[184] "Oh Cadence, we hardly knew ye," in spite of your substantial (north of $10mil) branding efforts, electronic media blitz and all your billboards.

Once again impressive congruent visual acuity was cited: "Cadence is an ideal health system to combine with as their vision, mission and values are very similar to ours…"[185] These awkwardly sequenced words were those of the NWM poster child for an *Atlantic* magazine article that posed the question: "Why are

184 The similarities to U of Chicago are not surprising since the Northwestern Medicine CEO was recruited from the U of C. The NWM CEO was paid $9.7 mil in 2011 and his predecessor was paid a $17 mil retirement bonus.
http://www.chicagobusiness.com/article/20111119/ISSUE01/311199974/northwestern-memorial-highest-paid-chicago-hospital-ceo-in-2010
185 http://www.chicagobusiness.com/article/20140827/NEWS03/140829847/northwestern-cadence-come-to-terms-on-merger

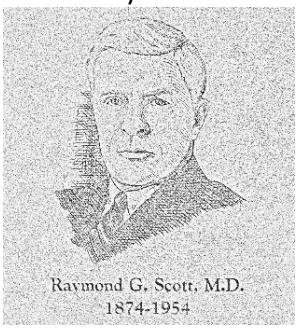
hospital ceo's paid so well?"[186] The thesis that hospitals have been homogenized seems well supported by their seemingly universal, if imprecisely defined, visions, values and missions.

Northwestern Medicine had itself broken at least one heart along the way. A merger had been planned with Elmhurst Hospital, a nearby competitor of CDH. Like Sherman Hospital, Elmhurst learned that in major hospital capital expenditure, as in comedy, timing is everything. Elmhurst had a brand-new campus and gorgeous new buildings, but it was up to its surgical mask in debt. Northwestern pulled the plug on its courtship of Elmhurst. Jilted Elmhurst, on the rebound, ended up in the arms of Edward Hospital in Naperville.


Edward Hospital, like CDH, was also first a TB sanatorium. Both had been under the direction of Dr. Theodore Sachs. In despair over the level of corruption in health care governance in general and that of Chicago Mayor Big Bill Thompson in particular, Dr. Theodore Sachs, took his own life at Edward.[187] Even in death, Dr. Sachs was unfortunate. He was buried under a tree on the grounds of his beloved Edward Sanatorium, "…the only place I have known peace in my life." The tree was a Dutch elm.

Dr. Sachs would be heartened to know that perhaps the greatest executive heroine in the history of Chicago health care is Edward's CEO (granted, there aren't many nominees though Dr. Mary Thompson[188] comes to mind). Ms. Davis wanted to build a new hospital building, but she refused to pay-to-play, wore a wire, and may have, at least momentarily, cleaned up the corrupt Illinois Health Facilities Planning Board.[189] She is also a quick study: building new was too hard, mergers were easy. So, she "bought" Elmhurst Hospital.

During this corporate mating dance, some disturbing changes took place in the dance halls. For example, Delnor's entrance atrium had been dominated by a massive plaque listing the names of community donors. That disappeared. An historical diorama at the main elevator bank telling of the people and backgrounds of the two hospitals that merged to form Delnor in 1985 also vanished. Less prominent plaques and portraits commemorating the names of physician leaders and award winners were removed "because they were a fire hazard."




Then Dr. Raymond Gaylord Scott's commemorative plaque was spotted in a construction dumpster. Pulled out by a dumpster-diving self-employed staff

186 Gunderman, R.: "Why Are Hospital CEOs Paid So Well?" *Atlantic*, Oct 16, 2013. Gunderman observes: "There is little correlation between CEO income and hospital quality—but there is between salary and excessive marketing." Regrettably quality cannot be measured and "excessive" is subjective. $5 mil per year does seem high using the smell test for non-profit CEO salaries. Defense of these salaries was classic and significantly meaningless hospital speak: "No margin, no mission." http://www.theatlantic.com/health/archive/2013/10/why-are-hospital-ceos-paid-so-well/280604/

187 On April 2, 1916, Dr. Sachs committed suicide by taking an overdose of morphine because "I am simply weary. I cannot bear this longer. It has been too much." "Obituary: Theodore Bernard Sachs, 1895." *The Alumni Quarterly and Fortnightly Notes of the University of Illinois*, Volume 1, #14, April 15, 1916. p 313. "…plans were made for a Dr. Sachs memorial hospital at Naperville on the site of the Edward sanitarium." The hospital was built but Sachs' name was never attached. Sic transit gloria mundi.

188 Dr. Mary Thompson was the first woman to receive an MD degree from The Medical College of Northwestern University in 1870, though she had already held that degree from the New England Female Medical College in Boston since 1863. The hospital she founded folded in 1988. Beatty, William K. "Mary Harris Thompson-Pioneer Surgeon and Hospital Founder." *Proceedings of the Institute of Medicine of Chicago* 34 (1981), p 83–86.

189 http://www.newyorker.com/magazine/2009/01/05/whistle-blower

physician (ironically, as will be explained later, a radiation oncologist who was soon working in another state) from that dumpster, it is not yet reposing in a landfill.[190]

The cancer center built in 1996 on the then "new" Delnor-Community Hospital campus had been named for Dr. Scott. Shortly after the creation of Cadence the Scott Center was basically torn down and replaced with a $25+ million larger, more ostentatious facility. (A donated $100 per brick patio made to honor departed cancer patients disappeared during the frenetic Cadence rebuild along with the name commemorated on each brick.) Neither Scott's name nor his plaque survived the reincarnation, which is now adorned by a large purple "Northwestern Medicine" banner.

Dr. Scott had founded Geneva's Hospital in 1908. Dr. Scott's diminutive plaque had been the last physical vestige of Community Hospital at the institution he hugely helped to create.

Naming institutions, or components of them, for wealthy benefactors is an ancient rite. Commemoration of the blood, sweat, toil, and tears of the less mercenary individuals without whom the institution would not have come into being is somewhat rare outside of the religious community. Sometimes names are chosen that have no apparent connection with the institution. An example is Rush Medical College, which was, of course, named for Dr. Benjamin Rush. The name was chosen by Daniel Brainard, M.D. "Rush" remains an historic and bitter rival of Northwestern Medicine.[191]

Dr. Rush, arrogant, paternalistic, and extremely opinionated, is best known in the medical world as the champion of bloodletting as a treatment for yellow fever during the Philadelphia epidemic of 1793.[192] Pierre Louis, one of the fathers of clinical epidemiology,[193] provided the first evidence that phlebotomy might be ineffective, or even lethal. The name of Louis comports much better than that of Rush with today's "evidence-based medicine" mantra.

No one has summarized Rush's modus operandi better than Abraham Flexner, a non-physician: "The debility of yellow fever, for example, Rush explained by 'the oppressed state of the system;' and on the basis of a gratuitous abstraction, resorted freely to purging and bleeding. His first four patients recovered; there is no telling how many lives were subsequently sacrificed to this conclusive demonstration."[194] Flexner found very little to like in Chicago during his 1909 visits to its 18 medical schools: "The city of Chicago is in respect to medical education the plague spot of the country."[195]

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190 The photo of a ghostly Dr. Scott is a digitally altered image of the weather pitted brassine engraving on the plaque. The plaque gives Scott's year of birth as 1874. He was born May 20th, 1875, according to his signed WWI draft registration, Geneva *Republican* obit of 12-16-1954 (p1) and several U.S. census entries. Scott was a graduate of Rush Medical College. Taken in that context and the Northwestern Medicine merger, the disposal of Scott's plaque was akin to the Ukrainian topplings of Lenin statues.

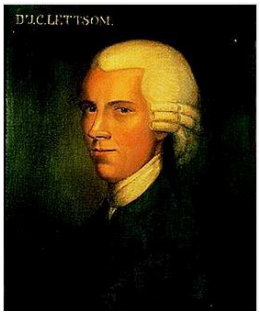
191 For a time Rush was the medical school of the University of Chicago. Medical politics in Chicago remain as quixotic as its governmental politics. Some have suggested that Brainard chose the name hoping for an endowment from the Rush family.

192 Kopperman, P.E.: "Venerate the Lancet": Benjamin Rush's yellow fever therapy in context. *Bull Hist Med*.78(3):539-74, 2004. Self-righteous, caustic, satirical, humorless, and polemical are adjectives used by another writer to describe Rush. North RL: Benjamin Rush, MD: assassin or beloved healer? *BUMC PROCEEDINGS* 2000;13:45–49.

193 Morabia, A. P.C.A. "Louis and the birth of clinical epidemiology." *Clin Epidemiol* 1996;49:1327-1333.

194 Flexner A: Medical Education in the United States and Canada. Carnegie Foundation Bulletin #4, 1910. p 52. This report led to sweeping changes in North American medical education, though Sir William Osler found it "…a pity that it was allowed to go out in its present form." See: Osler W: Sir William Osler: "On Full-Time Clinical Teaching in Medical Schools."*Canada Med Ass J* 8: 762-5, 1962.

195 Ibid. p 216. The author's alma mater, the University of Illinois College of Medicine was skewered thusly: "Advanced standing has been accorded to students from decidedly inferior schools, some of them among the worst institutions in the country. These students were examined, only those who passed being accepted; but the fact that, with the teaching they have had, they can pass is conclusive as to the nature of the examination." p 208-209.



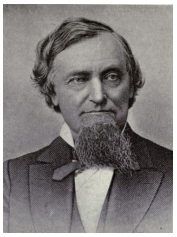

Dr. Brainard might have been even better served to name his school after Benjamin Franklin's close friend, Dr. John Lettsome, another devotee of the lancet. (Dr. George Washington Richards had already taken Franklin's name for his nearby medical college in St. Charles, Illinois.)

*I, John Lettsome,*
*Blisters, bleeds and sweats 'em.*
*If, after that, they please to die,*
*I, John, Lettsome.*

Dr. Lettsome himself wrote this classic medical parody. Clearly his personality (even his portrait has a more than a trace of impishness) was the polar opposite of Dr. Rush's. Dr. Lettsome shared Rush's abhorrence of slavery, so much so that when Lettsome's father died he freed his slaves.[196] He was also a founding member of the Royal Humane Society.

Rush Medical College was chartered by the State of Illinois 1837. E. Fletcher Ingals, M.D., in his early history of Rush, claimed its charter was the first issued to an educational institution in the State[197], but actually four colleges were chartered in one act of February 1835. One of these, Illinois College, started instruction in its medical school in early November 1843.[198] The first session of the Rush Medical College was not held until December 4, 1843. There were three graduates from that Rush class. Partisans of both Rush and Illinois College have claimed title to priority, but another, albeit unchartered in Illinois, Illinois medical school had matriculated it first students the year before: The Franklin Institute in Saint Charles, Illinois.[199]

Naming of institutions after patriots in that era was in fashion. Many believe that George Washington, patriot of patriots, was hastened to his grave by his physicians' aggressive use of the lancet. Ironically, Washington was a believer in phlebotomy in spite of the fact that he knew Dr. Rush had written an anonymous letter to Patrick Henry questioning Washington's competence.[200] Today phlebotomy as therapy is primarily used in Western medicine for a few conditions such as hemochromatosis, polycythemia vera, and porphyria cutanea tarda.[201]



Another Illinois physician of Scottish ancestry consigned to oblivion was Joseph Presley Ross, M.D. Dr. Ross provided the leadership (he even was elected to the Cook County Board) that led to the removal of Cook County Hospital from 18th and Wentworth to the West Side Medical Center in 1875. He provided a large share of the energy and the funds that established the first Rush hospital in 1884: The Joseph P. Ross Building. It later

196 http://en.wikipedia.org/wiki/John_C._Lettsome
197 Ingalls, E.F: "Rush Medical College." *The University Record*, 3: 10-15, 1917.
198 *Laws of Illinois*, 1835. p 177. The four were Alton, Jonesborough, Illinois and McKendree Colleges. Illinois College was the first to hold classes and to grant a degree.
199 The founder of the Franklin Institute, also known as the Franklin Medical College, was George Washington Richards, M.D. Institutions were not the only beneficiaries of patriotic monikers. Dr. Richards kept his school affiliated with his earlier academic institution, the LaPorte Medical College in Indiana. Some other Franklin faculty members were also on the LaPorte faculty. Itinerating medical faculty members were common at the time. Dr. Samuel Armor taught at both Rush and Franklin in the 1840's. A Franklin Literary and Medical College was chartered in Galena, Illinois, in February of 1845 by Dr. Horatio Newhall and others, but it never operated. *Laws of Illinois*, 1845. p 219.
200 North, R.L., op cit. Patrick Henry forwarded the missive to Washington who immediately recognized Rush's hand. Washington magnanimously allowed Rush to resign his medical position in the Continental Army when he could have court-martialed him.
201 The author made part of his living by bleeding patients with these three ailments. He often gave a brief history of phlebotomy as part of the process of informed consent. He even introduced the parody of Dr. Lettsome, though selectively.

became the Ross-Hamill Pavilion until it was torn down to make way for the Jane Murdock Women's and Children's Hospital in 1910.[202]


*Galter's Gizmo*

Cadence was led by anonyms who believed they need not stand on the shoulders of their progenitors, but who saw fit to dispose of benefactor remembrances while pocketing their legacies of donated exertion and capital. Northwestern Medicine, still an arch rival of Rush, currently does prominently commemorate a few names. An example is the name of the big band drummer who invented the Falcon camera.

Will Northwestern Medicine bring a change in the corporate culture introduced by Cadence? Or is the corporatization of health care in the age of "big data" certain to relegate the individual, whether patient, donor, volunteer, or caregiver, to oblivion?

Next: The Community Hospital Founders

To be continued……

202 Ingalls, op cit; *History of Medicine and Surgery*, op cit. p 73.