

50 years in the Art and Practice of Internal Medicine

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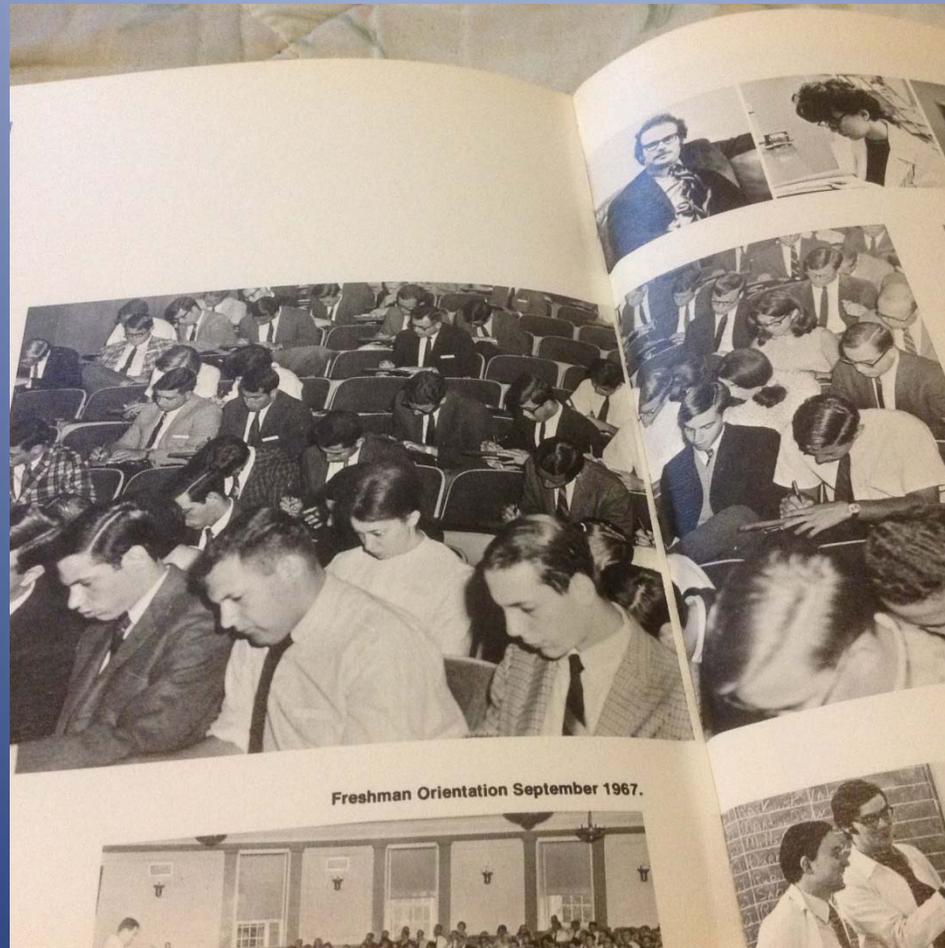
“It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness...”

A Tale of Two Cities or a Tale of the Last
50 years of Medicine

1968

- I was a 2nd year Medical Student and was using my required microscope in Histology and Pathology Labs.
- My class demographics: 107 Students
 - 98 Caucasian men; 9 Caucasian women
- All students attended all classes; men wore ties and jackets, women, dresses or skirts
- In Pharmacology we learned about Digitalis, Streptomycin and a new antibiotic that was going to eradicate Gram negs forever: Gentamicin
- Medicare was 3 years old

Students in Lecture



What Else Were We Taught

- There were NO computers, Cat Scans, MRIs, Echos, Ultrasounds, colonoscopies, flexible bronchoscopes, sigmoidoscopies or Pulse Ox
- We learned how to do a complete history and physical from outstanding clinicians
- We were taught how to logically solve puzzles
- Compassionate care and Dr-Pt relationships were emphasized

Physical Diagnosis-1968

- I went to see a 65 Y.O woman who had been bed ridden for 6 months. She “hurt all over” and could not get out of bed. Everyone was puzzled.
- I presented the case and the labs (slight anemia, increased platelets) to my mentor, a Renal Fellow.
- He jumped out of his seat and said “ I just read about this last night”! She has PMR, a newly described illness.
- We raced to the ward, told the housestaff and suggested starting her on Prednisone. The next day she was walking in the halls pain free

Teaching Point

- It is critical to read the literature. Medicine is about constant learning
- It is also important to read about diseases “outside” your subspecialty if you are going to be a complete physician. You don’t have to be an expert but should have some familiarity.

1971-Residency

- Our CCU had 8 beds and ICU (shared with surgery) had 14 beds
- No one was admitted to these units who had a “terminal” disease or was over 70 years old
- Dialysis was reserved for patients eligible for transplant. Diabetics, the elderly and cancer patients were excluded.
- We used a PDR, Washington Manual, Index Medicus and were often found in the library
- Private internists made ward rounds for 1 month

Medications Available

- Hypertension: Reserpine, Hydralazine, Thiazides, Aldomet
- Cardiac: Digitalis, Quinidine, Procainamide,
- Antibiotics: Penicillins, Ampicillin, Sulfa, Tetracycline, Streptomycin, Kanamycin, Colistin, Chloramphenicol, Cephalothin, Gentamicin (needed ID approval)

Rules

- ALL orders were written by the Primary Housestaff Team, not by attendings or consultants!
- I was TOTALLY responsible for my patients (under supervision by my attending)
- Today, I look upon a GOOD Internist as being the “Point Guard, Quarterback, or Orchestra Leader”
- This led to much greater communication
- Advocacy for our patients was stressed

Clinical Skills

- Dr Robert Eich, Chief of Cardiology, often said, “when all else fails examine the pt.” He would pass thru the CCU late in the afternoon and tell us “watch the pts in beds 2 and 7, all others are ok” and HE WAS ALWAYS RIGHT!
- He would predict severity of Mitral Stenosis based on the OS and Aortic Stenosis based on feeling the carotid upstroke, and he was right!
- Once a month he went to the northland and listened to hearts of about 50 children with murmurs suggestive of Rheumatic Heart Disease, selecting 3-5 who needed to come for cath
- He also taught us that it was OK to “change your mind at any time”

Clinical Skills

- A 35 Y.O. female was admitted with left sided pleuritic chest pain X 24 hrs
- She took OCP's, smoked, had a low grade fever and a nuclear medicine lung scan was highly suggestive for PE.
- Her PO-2 was 74%
- Dr Obeid examined her and insisted on getting a Pulmonary Arteriogram since her 2nd heart sound was soft.
- The study was negative and the diagnosis was changed to viral pleuritis and she was discharged and did well

Clinical Skills

- One night we admitted 15 patients.
- One was a man with an upper GI bleed which was stable but interestingly he also had situs inversus
- To try to get thru rounds we told Dr Streeten, an endocrinologist, only about the GI bleed.
- At the bed side he asked a few questions and then went to examine him. He looked up and said, “you didn’t tell me he had dextro cardia”

Working Together

- A 58 Y.O lady had unstable angina and severe hypothyroidism
- Sent for cardiac cath and possible CABG
- Cardiology said any surgery with her myxedema would kill her
- With the smallest dose of T-4 she had angina
- With 10 mg of Propranolol her HR was 35 and BP was 90

Working Together

What to Do

- Dr Eich and Dr Streeten talked in length to try to solve this enigma
- The endocrinologist came up with a novel approach!
- He suggested a temporary trans venous pacemaker with a rate set to 55 so that propranolol could be used and titrated up followed by T-4
- She tolerated the treatment, went for cath and CABG and did well.

Key Learning Pts From My Residency

- Always do a complete history and physical (the patient needs to be undressed)
- Your patient is YOUR responsibility and you should be Captain of the ship
- Pathophysiology NEVER changes
- Always step back and think
- Ask questions to both yourself and others
- Don't be afraid to say I DON'T KNOW
- Medicine changes: read a journal, get GOOD CME

Think Outside the Box

- If it is intuitively obvious
- 50 % of the time it is wrong
 - Estrogens are cardioprotective
 - Antiarrhythmics decrease sudden death
 - Beta Blockers are bad for CHF
- When BP is lowered to 120/80, the pt is still at much greater risk than those with the same BP who were never hypertensive
- When does Diabetes start?

Then and Now Breast Cancer

- 1970's- women with breast cancer had modified radical mastectomy (removal of entire breast and some chest wall muscles) and an axillary lymph node dissection. They were in hospital for 7-10 days on average.
- 2000- Ms C, a 78 yo pt of mine with a + mammogram had a lumpectomy and sentinel node biopsy with a frozen section all under local. The node was negative and she went home later in the day.

Then and Now Cardiology-ACS

- Patients were admitted to CCU. If MI ruled out they were sent home in a few days. If MI confirmed, they were hospitalized for 3 weeks.
- Treatment was Oxygen, Morphine for pain, Lidocaine for arthymias and Digitalis for CHF
- Nitrates and Beta Blockers were contraindicated and antihypertensives used only for BP greater than 180 systolic
- Heparin in selected few to prevent DVT's

Then and NOW Cardiology-ACS

- Ideally patients are taken to Cath Lab and undergo revascularization.
- Use of Nitrates, Beta Blockers, Thrombolytics, Anti Platelet Agents, Antihypertensives, Statins
- If revascularized and stable, patients often stay only a few days, have no loss of myocardium, get started on cardiac rehab and aggressive medical therapy to try to reduce the risk of another event
- Plaque Inflammation may be more important than LDL

Then and Now

Cardiology

- Dr W had significant stable angina. He was intolerant to beta blockers or nitrates. A cath showed a tight lesion in his diagonal which was successfully angioplastied (pre-stent era)
- 3 years later, while in Seattle, he had an ACS with successful angioplasty (Circumflex)
- 3 years after that he had an ACS in New York with successful angioplasty (RCA)
- 4 years after that he had an ACS in Tampa with successful angioplasty (LAD).
- When I retired he was 90 Y.O, angina free with a normal EF and no cardiac symptoms

Then and Now

Heme/Onc

- Acute Lymphoblastic Leukemia was almost always fatal; now it's almost always curable
- Hodgkin's disease was often fatal; now it is mostly curable
- Lymphoma was often fatal; now many cases are cured
- Metastatic testicular disease was fatal; now many are cured

Then and Now

Heme/ONC

- Promyelocytic Leukemia (M-3) was acutely fatal; now it's Rx with ATRA drugs (all trans retinoic acid) with normal survival
- CML was fatal; now it is treatable with TKI's
- AML was rapidly fatal; now some are cured
- Colon cancer was often diagnosed after symptoms or a Heme+ stool and was often far advanced; now colonoscopy and polypectomy may prevent its development.

Then and Now

HEME/ONC

- Some with metastatic melanoma, a quickly fatal disease are responding to immunotherapy (e.g. Jimmy Carter)
- Mammography is picking up smaller, early tumors and limited surgery and sentinel node evaluation is leading to better outcomes

Then and Now Infectious Diseases

- In the 70's and 80's, diagnosing infections often took a long time
- While there were limited antibiotics, one could often find one that would be effective
- 50 years ago there was no C Diff, Legionella, Zika.... BUT we did see Malaria and sequelae of rheumatic fever.
- HIV, in the 80's, was a fatal disease, Hep C had no treatment

Then and Now Infectious Disease

- There are resistant organisms (MRSA, VRE, etc)
- There are diseases that are iatrogenic (C Diff)
- PCR enables rapid diagnosis of pathogens
- Shorter and less intensive treatment times for some infections (pneumonia, UTI's and TB)
- HIV is a treatable and often a chronic disease
- Hepatitis C is cured in >90%
- Immunizations for Varicella, Zoster, HPV, Hepatitis A and B, H Flu, Pneumococcus

Then and Now, GI Peptic Ulcer Disease

- 1968
 - 90% of GI bleeders were admitted to the floor
 - Treatment was alternating Milk and MAALOX q1h
 - Recurrences were often treated surgically with vagotomy & pyloroplasty or partial gastrectomy
 - Cause was too much acid
- 2018
 - Most patients, with bleeding, go to the ICU
 - Treatment: PPI's or H-2 Blockers
 - Surgery is extraordinarily rare
 - H. Pylori is a major cause of PUD; Making it an infectious disease

Then and Now Stroke

- Prior to effective blood pressure control, stroke was a common problem
- Treatment was bed rest and later PT for selected patients
- Mortality was high: Roosevelt, Churchill and Stalin ALL died from stroke

Then and Now Stroke

- With better antihypertensives and emphasis on BP control, as well as statin use, the incidence of ischemic stroke has decreased
- Effective anticoagulation has reduced stroke from Atrial Fibrillation
- Early signs of stroke have been taught
- Early use of thrombolytics and thrombectomy have significantly decreased morbidity

Advances in Medicine

- The world has seen the Bronze Age, Stone Age, Renaissance, Industrial Revolution but we have now gone into the Tech Age.
- During my career I saw Computers, Chips to power everything, CT, MRI, Echo, Ultrasounds, Telemetry, PET scans, etc
- I have often said, however, “A good clinician should NOT be a slave to high tech, but high tech should work for him/her”

A Good History

- A 30 y.o. man complains of back pain. I am the 3rd physician he has seen(orthopod and neurologist) and has already had a CT and MRI both of which were “unremarkable”.
- He says he feels like his back is “inflamed”
- He denies and other symptoms but on questions regarding activity says that he was surprised that he was the only man in his wife's Lamaze class who could not touch his toes

A Good History

30 y.o man with back pain

- His family history was “negative” but he was surprised when I asked about his father’s back pain. He said, “how did you know that my father had back trouble”
- I sent him for an Xray of his SI Joints which revealed sacroilitis and a diagnosis of early Ankylosing Spondylitis was made.
- Take home pt: If you LISTEN to the patient they will often “help” you make the diagnosis

Pathophysiology

- 70. Y.O woman presents with abdominal pain. A CT of the abdomen and chest showed a Lt renal mass and 3 metastatic lesions in the liver.
- She is admitted to TGH for further work up.
- Her son in law is a Departmental Chair in the College of Medicine and her son, a physician.
- Her son suggests Hospice.

Pathophysiology (Cont)

- Dr Mike Flannery (former ACP council member) is on service and orders a liver biopsy which is “non diagnostic”
- July 1st starts and I am on service and ask IR to repeat the biopsy.
- This time it comes back “purulent material”
- She is treated with antibiotics with resolution of her “metastatic” lesions, undergoes a nephrectomy with negative nodes and lives to age 90.

Pathophysiology

- Was this great work by Dr Flannery and me?
- NO!
- A well trained internist should work this out
- Where does renal cell carcinoma metastasize to?
- Lung and Bone primarily, NOT Liver
- Don't be a slave to technology

Physical Exam

- 75 Y.O diabetic man admitted to TGH with RUQ pain x 24 hours with nausea and vomiting
- Residents order labs and a RUQ ultrasound.
- Labs: mildly elevated WBC, transaminases and Bilirubin
- Ultrasound: Negative for pathology
- PE: severe RUQ tenderness with rebound
- Pt taken to surgery where a gangrenous gall bladder was found, about ready to rupture.
- Don't be a slave to technology

Work With Technology

- 70 Y.O. hypertensive pt under good control presents for routine follow-up.
- He just returned from the Grand Tetons where he was a volunteer for the NPS
- His summer was good, only minor problem was sometimes in the morning he would get heart burn which was relieved by Tums. There were no other complaints.
- PE was unremarkable

Work With Technology

- I sent him for a stress echo which was highly abnormal, consistent with ischemia.
- Cardiac Cath showed severe triple vessel disease; he had a CABG and did well
- Take home message: GERD occurs typically in the evening, after a big meal or lying down. Angina occurs more commonly in the AM. The Tetons are at 7000' above sea level. To take Tums he sat down, stopped his work and rested
- A good history, pathophysiology and technology all working together

Transplantation



AMY SCHEE

Transplants: TGH-2016

- Heart: 42
- Lung: 40
- Adult Kidney: 237
- Pediatric Kidney: 15
- Liver: 65
- Kidney/Pancreas: 19

Since 1975 >5000 kidney and >1000 heart transplants

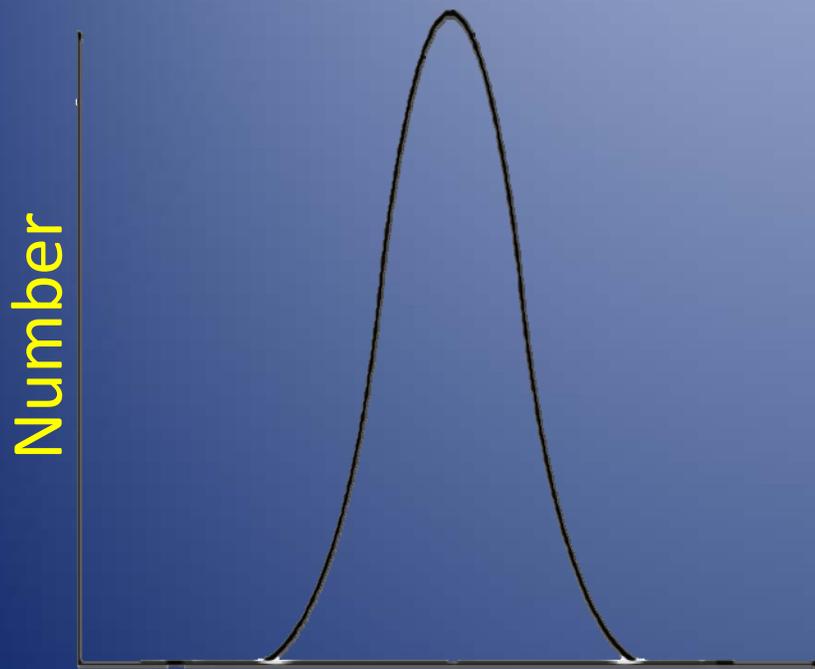
What Makes a Good Physician

- Is the goal to prevent death?
- NO we never prevent death, but hopefully delay death
- Then the goal is to prolong life?
- Not necessarily!
- Life is geometric; it has a length (quantity) and a width (quality)
- Goal is to provide a long, quality lifetime

Question of the Day

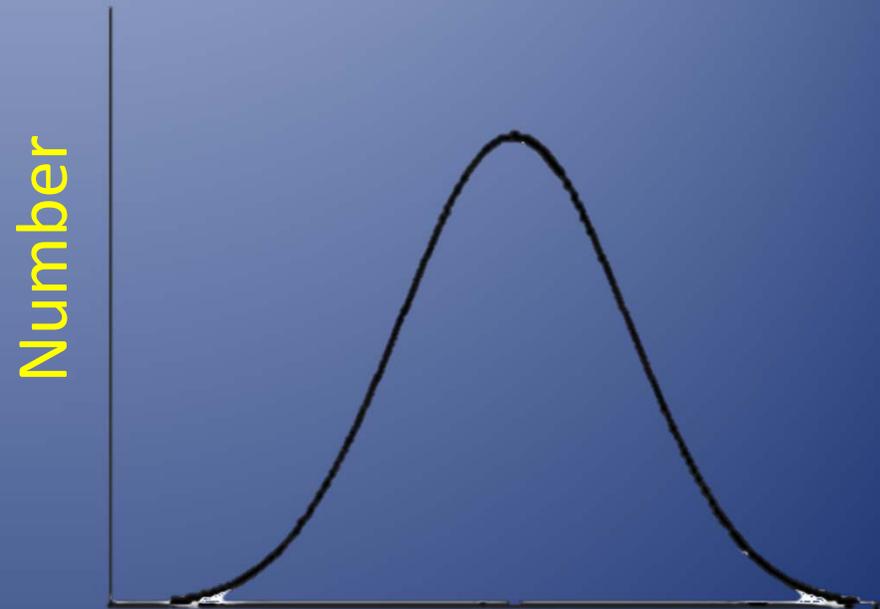
- What do a Physician, Shortstop and Plumber have in common?
- Some are outstanding, some are not good at all and most are in between as seen in a bell shaped curve
- We should all strive to “move to the right”

1968 Physicians



Quality

2018 Physicians



Quality

Don't Drop the Ball

- 70 y.o. pt with HTN comes for initial visit
- Had been treated in Michigan and BP was OK
- Hx: neg; PE: BP 130/84, pulsatile abd mass
- Stat US: Large AAA; Pt admitted to TGH with stent graft placed the next day
- On a “social” visit, he asked “Why didn’t they find this in Michigan”? I asked, Did they examine your abdomen”? His reply, “No they just asked me questions, took my BP and refilled my meds”
- Error on the shortstop!

Right Side of the Curve?

- 35 Y.O woman referred from her GYN Doc for treatment of her high Cholesterol (240 mg%)
- History neg except for father with CABG at age 58
- PE: 5'2", 125 lbs, BP 124/80; rest negative
- Labs: T.C. 240mg%; HDL 35mg%, Trig 350mg%, Glu 98mg%
- What do you do?
- More history: Father had DM; Physical: W:H=.95

Right Side of the Curve

- 1 Year Later after exercise (150 minutes /week of brisk walking) and “Sugar Busters” diet
 - Wt 119lbs
 - W:H= .75
 - TC= 200mg %
 - HDL= 47mg%
 - Tri= 180 mg%
 - Glucose = 87mg%

1970's

The Best of Times the Worst of Times

- The Best of Times
 - Professionalism: Physicians were regarded highly, probably second only to clergy
 - Time: Almost all devoted to patient care virtually no paperwork or “meaningless chores”
 - Relationships: As “captain of the ship” the primary care physician had a strong Dr-Pt relationship with mutual trust. I received many Xmas gifts
 - Strong comradery among Physicians
 - Voluntarism and a feeling of satisfaction

1970's

The Worst of Times

- The Worst of Times
 - There were limited things that one could do for the patient, yet we DIDN'T know that
 - Many physicians worked long hours with little time for family

2018 Medical Students

- Approximate Demographics at USF of entering class
 - 176 Students
 - Gender: 50-50
 - About 15% URM (self identified as African Americans, Hispanic/Latinos, Native Americans, Pacific Islanders and mainland Puerto Ricans)

2018

? The Best of Times

- Great progress has been made over 50 yrs, BUT
 - Many bacteria are resistant to antibiotics
 - Obesity and Diabetes are greatly increasing
 - Cancer rates are rising
 - >50,000 people died from opioids last year
 - While we spend many more \$'s than any other country, The US ranks 40th in years of health
 - US was one of 5 countries where life expectancy fell in 2016 (other 4: Somalia, Afghanistan, Georgia and St Vincent and the Grenadines)
 - Prices of medications have risen exponentially and a lot of money is spent on administration

Ancillary Medical Improvements

1968

- Cataract surgery: 7 day hospitalization
- Hernia Repair: 7-10 day hospitalization
- Total Hip: 2-3 week hospitalization
- Elective AAA repair: 2-3 week hospitalization

2018

- 2 hr Outpatient Procedure
- 5 hr Outpatient Procedure
- Out patient or 2-3 days
- 24 hr hospital stay

Future Questions

- Autoimmune and Other Diseases
 - What causes IBD, RA, SLE; ALS, MS, Alzheimers
- Cancer- What is the role of
 - Immunotherapy
 - Molecular and Genetic therapy
- Cardiovascular Disease
 - Prevention of Hypertension, MI and Stroke
 - How can we predict who has vulnerable plaques
 - Who should be revascularized

The Future

- Diabetes
 - What can be done to stop the obesity epidemic
 - Why do some with A1C's of 7.5 have complications and others do not
 - What causes Type 1
- Infectious Diseases
 - Development of vaccines vs viral, protozoan and bacterial agents
 - Specific molecular targets vs bacteria

Conclusions

- Technology has fueled major advances
- Good designed medical research (RCT's) has led to improvements in care
- A good history and physical exam, combined with a knowledge of pathophysiology, logical thinking and attention to detail are needed to reap the benefits
- With all the great science, Medicine is still an ART and depends on compassion and a good Dr-Pt relationship to maximize benefits