American healthcare is commonly known to be in a deplorable state, costing 18% of GDP while underperforming in quality among developed nations. Changing the situation systemically also seems intractable - Obamacare endured a torturous path of compromises and ended as a sliver of its original ambition. Costs continue to rise without a clear winning strategy.

American Sickness unpacks how US healthcare got to this state. It examines the competing interests of the major blocs in healthcare - hospitals and doctors, pharmaceuticals and devices, and insurers. It’s the most helpful book on US healthcare I’ve read thus far, clarifying how deeply entrenched the interests are and why it’s so difficult to change anything.

American Sickness is written by Dr. Elisabeth Rosenthal, who trained at Harvard Medical School and served as a reporter at the New York Times for 21 years. It’s currently a top 5 Amazon bestseller in healthcare.

In this American Sickness book summary, you’ll learn:

- Why healthcare systems have undergone massive consolidation
- The incentives pushing hospitals and doctors to give you expensive, unnecessary care
- How doctors have regularly protected their own interests at the cost of patients
- How pharmaceutical companies manipulate patent and prescribing law to fight off cheaper
generics

• **What you can do today to lower personal health costs**

Full title: *An American Sickness: How Healthcare Became Big Business and How You Can Take It Back*

### 1-Page Summary

Below is my current understanding of the US healthcare structure, and problems arising from this structure. Not all of this came directly from *American Sickness*, though the book was strongly useful in building this conception.

- **The major blocs in healthcare are:**
  - Providers/vendors - they provide medical care and get reimbursed by insurers
    - Hospitals
    - Doctors
    - Pharmaceuticals
    - Medical devices
  - Insurers (e.g., Blue Cross) - they receive premiums and pay vendors for healthcare
  - Employers - in the US, they are the major payers to insurers
  - Patients - people who receive medical care

- These blocs have opposing interests (stated in a reductionist way):
  - Providers want to get paid more for doing less work.
  - Insurers want to get paid more premiums and pay less out.
  - Employers want to pay lower premiums and get happier employees.
  - Patients want to pay less and get more healthcare and flexibility.

- **However the incentives are set, participants in healthcare will generally exploit them to their maximum. And if the incentives don’t align with quality and cost-effectiveness, you don’t get quality and cost-effectiveness.**
  - Hospitals and doctors bill for everything they can possibly get reimbursed for and push for higher-cost care, despite lack of better outcomes.
  - Doctors get paid according to procedure time and complication (RVUs), without consideration of cost efficiency or outcome.
  - Pharma extends patent lifespans through several strategies (explained below) and fights off generics through manipulation of prescribing law.
  - Insurers push higher costs into premiums, co-pays, and deductibles for employers and patients.
  - Patients don’t directly pay for care, so they push for the higher priced, more technologically advanced option (would you rather get $50k “back” on your $6k in insurance premiums, or $10k?)
  - New treatments with unclear efficacy are pushed, since they have a higher chance of higher reimbursement, and are demanded by patients.
  - Even the FDA benefits from fees for each application for a drug, incentivizing more me-too drug applications.
  - Even non-profit disease foundations are funded by pharma and invest in startups.
• The maximization of incentives is true of any market, but **several factors make healthcare an especially dysfunctional market.**
  
  **Consolidation of healthcare providers has led to functional monopolies in certain geographies.**
  
  - Massive health systems consolidate and become the only game in town. (e.g., Partners Healthcare in Boston; Sutter Health in California).
  - Patients want insurance that covers this big player, and reject narrow-network insurance. Thus employers are pressured to get insurance with good coverage.
  - Thus health systems have massive leverage over insurers in setting prices and favorable policies.
  
  **Given the complexity of medicine, most patients cannot be fully informed about the tradeoffs of medical treatment. Thus they are swayed by pharma marketing and providers, who have their own competing incentives.**
  
  **The recipients of healthcare (patients) are not paying directly for the service - insurers are. This leads to moral hazard problems.**
  
  **Doctors are often ignorant of prices and thus can’t serve as effective proxies for the patient.**
  
  **Prices are opaque and often discovered only after treatment. Often this is because of confidentiality agreements between insurers and providers.**
  
  **High regulatory barrier to entry for getting drugs/devices approved (FDA trials) limits open competition for generics.**
  
  • One would expect the major blocs to have incentives pushing in the right direction (health outcomes at lower costs), but their are structural weaknesses to these incentives.
  
  **Insurers should bargain for lower prices, but they can actually just push the costs onto higher premiums, deductibles, and co-pays.** In some sense if the healthcare pie grows, they get a larger slice.
  
  **Insurers should** promote long-term health for patients, but employees switch between employers often, and employers even shop between health plans.
  
  **Employers should** want to lower cost, but they’re indifferent if costs are pushed onto employees (e.g., through higher co-pays), and insurance is a relatively small portion of total compensation, so there isn’t a strong counterforce.
  
  • Historically, loose policies let the cat out of the bag and make reversal difficult.
  
  **Any looseness in reimbursement causes a proliferation of investment, services, and employment that becomes difficult to reverse.**
  
  Say an insurer reimburses for a new unproven radiation treatment. Clinics will buy equipment and employ technicians. Doctors can get paid more and start pushing it to patients, who now start demanding it. Insurers that don’t cover the treatment get pressure from patients to cover it, and they relent.
  
  Now say that new data suggests the treatment is actually no better than the much cheaper gold standard of care, and ideally the treatment reimbursement is dialed back to incentivize the standard of care.
  
  **But by now the system is entrenched.** Clinics have loans to pay and employ workers. Pharma/device manufacturers don’t want to lose their sales. Patients are used to the treatment and don’t want it taken away. Doctors have mortgages to pay and don’t want to find new lines of business to compensate for lower reimbursements. All of this causes public resistance to any insurer withdrawing reimbursement for the treatment. So the
system continues.
  - As we acclimate to higher healthcare prices, boiling frog syndrome sets in - in the 1960s, factor VIII price of $3000/year was shocking.
- By now, all the major blocs are so deeply entrenched that any zero-sum change is strongly opposed (eg cheaper cost for patients but lower payments to doctors).
- **Additionally, fragmentation makes it difficult to change anything systemically.**
  - Much of healthcare is regulated on a state-by-state basis instead of nationally.
  - Employers are fundamentally competing between each other for talent, impeding collaboration between employers.
  - Even within each bloc, there is further fragmentation.
    - Providers are divided into specialties, and they battle for a fixed pie of Medicare RVU reimbursements.
    - Different blocs of patients want different things (eg AARP vs millennials)
  - Other countries have a single payer (the government) that can negotiate prices and reject treatments not proven to be cost-effective.
    - Much of the US is philosophically opposed to expansion of federal government and allergic to structures resembling “socialism.”
  - The largest payer/patient bloc is Medicare, which is effective at negotiating bundled payments for hospitalizations (DRGs) and provider care (RVUs). But it is legally prohibited from negotiating pharmaceuticals directly.

**Criticisms of American Sickness**

Rosenthal’s **American Sickness** is a fantastic book on US healthcare, but with some minor weaknesses.

Primarily, the book omits blaming patients for our share of the healthcare problem, instead redirecting ire to other participants in healthcare. I understand **American Sickness** is meant to be a populist, mass-appeal book, and admonishing the reader is unlikely to sell more copies.

But 70% of healthcare costs are a direct result of behavior, with a majority of cost in cardiovascular disease, diabetes, and obesity being preventable. Immense healthcare savings could be had in keeping to normal weight and adhering to drug regimens.

**American Sickness** also doesn’t blame patients for the “technological imperative” - demanding the latest technology regardless of cost effectiveness. In fact, Rosenthal advises patients to be cautious of insurance clauses that “require you to try what the plan considers to be a more ‘cost-effective’ drug.” The scare quotes are unhelpful in getting patients to substitute drugs, which is what she advises in the first place! I suspect patients aim to maximize their utilization of healthcare more than Rosenthal suggests.

Secondly, I wish **American Sickness** broke down the value of possible interventions - for instance, having a single national payer would save $X, allowing drug importation would save $Y. It’s not clear what the lowest hanging fruits are and where to detect political energy.

**Introduction**
• Say it again: Healthcare costs 18% of US GDP, or $3 trillion a year. Overall health outcomes are mediocre compared to other developed countries, which generally spend half per person.
• Healthcare seems incomprehensible in its billing practices.
  ◦ Multiple doctors send separate bills with huge amounts, and insurance pays a small fraction. What if you took a flight and got separate bills from the airline, the pilot, and the flight attendants?
  ◦ Further, the price for the same procedure costs different amounts depending on where it’s done, who’s doing it, and what insurer you have. What if you paid twice as much for a Prius in New Jersey as for one in California?
    ■ [Part of this is probably because healthcare is more a service than a fixed product. You can get two lawyers doing apparently similar work for $500/hour or $100/hour.]
  ◦ Why does getting a few stitches in an ER cost $5,000?

- **American Sickness's 10 rules for the dysfunctional healthcare market:**
  - More treatment is always better. Default to the most expensive option.
  - A lifetime of treatment is preferable to a cure.
  - Amenities and marketing matter more than good care.
  - As technologies age, prices can rise rather than fall.
  - There is no free choice. Patients are stuck. And they’re stuck buying American.
  - More competitors vying for business doesn’t mean better prices; it can drive prices up, not down.
  - Economies of scale don’t translate to lower prices. With their market power, big providers can simply demand more.
  - There is no such thing as a fixed price for a procedure or test. And the uninsured pay the highest price of all.
  - There are no standards for billing. There’s money to be made in billing for anything and everything.
  - Prices will rise to whatever the market will bear.

**Part I: History of the Present Illness and Review of Systems**

The first and major part of *American Sickness* covers the major segments and industries of healthcare. Each chapter contains a history of the industry and how well-meaning policies turned into current perverse incentives.

**1. The Age of Insurance**

**History of health insurance in the US**

- In the late 1800s, healthcare was unscientific and ineffective. Disease took long to recover from.
  ◦ The earliest health insurance policies compensated for income lost while sick.
  ◦ Some employers paid for doctors to be on retainer to care for employees, since long illness absences were a problem.
- In the 1920s, Baylor U Medical Center offered a local teachers’ union a catastrophic health plan for $6/year/head. This included a 21-day stay in the hospital after a deductible of a week.
A day in the hospital cost $5/day, or $105 in today’s dollars.

This became popular, signing 3 million by 1939, and led to the non-profit Blue Cross Plans.

- In the 1930s, technology improved - anesthesia, penicillin, ventilators, etc enabled new effective standards of care.
  - This increased the cost of care, and insurance had to adjust.
  - This could have been direct to consumer and private, as with auto and life insurance. But…

- During World War II, the National War Labor Board froze salaries. Companies attracted workers by offering health insurance instead. **This historical artifact was the origination of employer-sponsored healthcare.**
  - The federal government also made employer spend on health benefits tax deductible.
  - Population insurance rates grew from 10% in 1940 to 60% in 1955.

- Growth in the insurance industry and public demand for health insurance from employers prompted for-profit insurers like Aetna and Cigna to enter.
  - Per *American Sickness*, for-profit insurers were less bound by the mission statement of non-profit BCBS of “high quality, affordable health care for all.” They could offer lower rates for healthier patients and price segment.
  - The Blues began having to support sicker patients.

- In 1994, facing financial difficulty, the Blues’ board allowed member plans to become for-profit.
  - The immediate intention was to raise funds in the stock market.
  - The plans consolidated and grew, e.g. Wellpoint and Anthem BCBS.

**Medical loss ratio**

- In 1993, the Blues spent 95% of premium revenue on medical care (the “medical loss ratio”) and 5% on admin, marketing, and dividends.
- Today the standard is closer to 80%, required by the ACA.
  - [Note the effect of this is not straightforward - it can prompt more haphazard spending! Say an insurer before ACA spends 60% on healthcare, paying the rest for overhead and dividends. ACA passes and now it has to spend 80% of premiums on healthcare. Insurer now has a few (simplified) options:
    - Fix revenue and healthcare cost, and cut admin/dividends until healthcare reaches 80% (closer to the idealized effect)
    - Fix revenue, forcibly shift admin/dividends into paying for healthcare. This will lead to open spending (like departments having to exhaust their budgets at the end of the fiscal year) and less constraint on costs.
    - Increase premium costs and revenue, spend the surplus on extra medical care to get to 80% while fixing admin/dividends.
  - I am not sure where the equilibrium lies, but reducing dividends given public market pressures is not easy. Further there can be implicit collusion between insurers to keep premiums high so no Vanguard-like low-overhead insurer can appear and undercut.]
- Medicare is at 98%.

One would think that insurers have strong incentives to negotiate down prices.

- **However**, the counterforce is large providers (eg Partners Healthcare) who can refuse to contract
with insurers.

- Further, insurers have an outlet to pass increased costs to the patients - higher premiums, co-pays, and deductibles.
  - Since 2010, deductibles have risen 6x faster than family earnings
- The incentives are thus aligned with higher cost care:
  - Higher payments to vendors causes premiums to rise, which grows the 20% admin pie.  
    **Thus insurers benefit when total healthcare costs increase.**
    - "It's as if a mom told her son he could have 3 percent of a bowl of ice cream. A clever child would say, "Make it a bigger bowl."  
  - Patients are largely insulated from the cost and aren’t directly affected by healthcare cost (especially after the annual out-of-pocket maximum set by the ACA).
  - Minor: Higher list prices allow insurers to tell customers how much they saved.
- [What’s missing here is the counterforce of employers who want lower prices and can switch to lower cost insurers. Why isn’t there a Vanguard for health insurance? Theoretically an insurer can have virtuous cycles wherein the lower employer costs lead to more patients which leads to larger bargaining power with vendors. This large one can ultimately have very low overhead.
- Counterforces to this happening:
  - Lower costs imply lower payments to vendors, which means vendors will put up heavy resistance to accepting insurance, until it becomes too big to ignore (like Medicare). Thus a massive investment in marketing and sales is needed to get enough subscribers to get a critical mass for negotiating.
  - For employers, relative to a person’s salary, health insurance is a relatively small cost, so it may not move the needle sufficiently for employers to make the switch.
  - Given the fragmentation and many negotiations needed, it can simply require a lot of overhead to run a health insurance company, whereas Vanguard is automated trading.]

- Different hospitals can bill different rates for the same treatment, depending on their bargaining power.
- Health insurance became part of a reinforced ecosystem - hospitals adapted to its financial incentives, which changed how doctors practice medicine, which changed the types of drugs and devices manufacturers made.

## 2. The Age of Hospitals

- Hospital costs have grown faster than other aspects of healthcare, growing 149% from 1997 to 2012 compared to 55% for physician services.
- 10-15% of revenue goes to billing and contractors for claims.

### Brief history of hospitals

- Many hospitals began with religious roots (Baptist, Presbyterian) with general social good as mission.
- Health insurance broadened: In 1960s Medicare arrived and covered hospital payments. In 1980, 80% of Americans under 65 were covered.
  - Given that reimbursement was generally fee-for-service and retrospective (based on
previous costs), providers charged as much as they could, and insurers generally paid it out.
- Medicare payments to hospitals increased from $3 to $37 billion from 1967 to 1983.
- With more money rolling in, hospitals hired administrators, who helped steer the organization toward financial performance.
  - Physicians were influenced to focus on more profitable care, told what procedures to perform, given bonuses scaling with revenue they brought in, compared publicly to other doctors on revenue, and even told to attend charm school.
  - Nurses became “clinical nurse-managers” armed with statistics.
- To clamp down on charges:
  - Medicare revised payments to diagnosis related group - a fixed bundled amount based on the diagnosis.
  - HMOs had a heyday in the 1990s, where the PCP would be a gatekeeper for followup care and provider access was limited.
    - American Sickness says “overall patients hated them, in part because so many were hastily designed and poorly managed.”
    - [She leaves out the part about patients disliking restricted access to providers at will - in general she seems unwilling to blame patients for any malady.]

Hospital reimbursement

- The high list price by hospitals is a negotiating point with payers. Bigger payers pay a smaller fraction of the list price than smaller payers and the uninsured.
- Medicare assigns to every hospital an overall cost-to-charge ratio it deems reasonable. Thus, raising prices for one thing means lowering them for another.
  - The game is then to lower charges for items that are often not reimbursed (like gauze) and boost charges for what is reimbursed (OR time, oxygen therapy).
- A single procedure can be billed separately as a wide array of items.
- Reimbursement consultants arrived to help, first starting with a pay-for-results model.
- Billing is done aggressively, to the limit of what is acceptable for the service provided (“upcoding”).
  - A blood draw can be classified as a level 5 visit.
  - Optional services can be added - using ultrasound to inject steroids in a knee adds $300.
- Vendors lobby to get new conditions treated as diseases, eg obesity.
  - Critically, this gets billing codes assigned to it, pushing insurers to cover it.
  - [Interesting that our conception of health and disease, which should be fairly objective, are molded by the providers and their incentives. ‘Cellulite’ is one of the more egregious examples.]
- New treatments with unpredictable finances and small patient numbers can lead to loose reimbursement policy, which can let the cat out of the bag and be hard to constrain later.
  - Eg Proton beam therapy ultimately had little proven benefit. But financing to get the expensive ($100 million+) machine appeared, and more machines were installed per capita in the US than in Canada/UK.
- Manipulation of observation status
  - Admitting patients for observation is theoretically useful for monitoring before deciding on a treatment. This counts as outpatient care - for Medicare, if under “2 midnights.”
Payments are better for observations. Medicare pays bundled rates for inpatient admissions, but not for outpatient care (which observation fits under). For private insurers, outpatient care also means larger co-payments.

- [The author suggests the larger co-pay is better for the insurer, but she doesn’t say what the inpatient cost would have been for insurer.]

Further, Medicare penalizes hospitals for readmitting patients 30 days after discharge, but you can’t get readmitted if you were never admitted!

- [Doctors in hospitals are largely insulated from costs, performing whatever they need without knowing about billing. One can suspect hospitals of pushing doctors to over-workup to increase billing. And with medical training passed down as it is, this behavior can last through multiple generations of doctors.]

Setting incentives

- Physicians are compensated in proportion to relative value units (RVUs), based on complexity of exams and treatment plans. (Some even deduct from salary if RVUs are too low?)
- EMR software gives tips on checking the right boxes for upcoding (“you need to check two more boxes for level 4”).
- A facility fee is added on top and scales with the level of service.
  - This is somewhat grandfathered in as an analogue of overnight stays as more care went outpatient, and insurers accepted this.
  - This sets an incentive to stop performing procedures in doctors’ offices and instead in a surgicenter.
- Hospitals increasingly get rid of unprofitable departments (ER, labor and delivery, dialysis, drug treatment, Medicaid outpatient care) and focus on profitable offerings (orthopedics, cardiac care, stroke center, cancer care).
  - Hospitals sell patients to dialysis centers for $40-70k per head.
  - [What makes the most profitable offerings the most profitable? Possibly based on RVUs, complexity of treatment, and lack of bundling.]
- Resident trainees
  - Medical graduate stipends are paid by federal and state funds. Hospitals get $15 billion to support training, including “indirect payments” to compensate for losses of efficiency in training new doctors.
    - Author argues there is little evidence training hospitals are any less efficient than non-teaching hospitals.
  - In American Sickness, Rosenthal argues hospitals profit from cheap resident labor.
    - Median cost for resident in 2013 was $135k, with salary of $50-80k. Federal support is $100k. Value of work done by resident is $233k.
  - Despite the cap on residents, between 2003 and 2012, the number of residents rose by 20%.
    - AHA has lobbied to get foreign medical graduates, especially for less lucrative specialties.
    - Regulations have also curtailed # of hours worked by residents, creating a relative staffing shortage.
  - Hospitals could get rid of residents, but the counterforce is leaving the hospital without resident help, and take revenue with them.
Adding amenities and focusing on service

- Most hospitals are nonprofit and spend operating surplus on expansion, amenities, and executive compensation.
- Customer satisfaction:
  - Press Ganey is a survey tool rating patient experience at hospitals. They also publish rankings.
    - [Great business strategy to first provide the tools, then provide rankings, then provide services to help vendors improve their ranking. The tricky part is to get the reputation for the rankings first, a critical mass problem.]
  - "We focused on people and service excellence." - Schlichting, head of hospital.
  - Single hospital rooms have become the norm.
- The author bemoans that hospitals spend on new facilities without increasing provider salaries [but doesn’t stress that like any business, hospitals will pay only what they have to for salaries in the labor market, and spend on other things with higher ROI.]
- Focus on customer satisfaction may not lead to better care.
  - If patient asks for a test, giving it to them increases satisfaction while taking less trouble to explain why they don’t need it.
  - [This is part of a small vicious cycle wherein giving patients unnecessary care, without explanation, to make them happy increases the volume of patient load, which makes automatic workups and less patient teaching even more likely.]

Charity work

- Nonprofit hospitals are required to provide “charity care and community benefit” to keep their tax advantaged status.
- Hospitals caring for low-income people already get pharmaceuticals at discounts and disproportionate share payments from Medicare.
- The ACA requires IRS to collect each hospital’s quantitative enumeration of charitable activities and their value.
  - Recent research suggests hospitals spend only a fraction of the tax advantage surplus on charity care - a set of 200 hospitals receive $3.3 billion in tax exemptions and spend $1.4 billion on charity care.
- UPMC was engaged in legal battles with Pittsburgh govt around nonprofit status. Ultimately Pittsburgh decided to take the battle off legal status.
- In SF, hospitals planning new construction are required to demonstrate care commensurate with size. This opens door for politics.
  - For California Pacific Medical Center, Sutter Health agreed to create a $20 million Healthcare Innovation Fund, $60 million for affordable housing programs, and an agreement to not raise rates for insurers covering city employees by more than 5% annually.
  - [Naturally, for politicians, the major push is for the press release, and the money spend may be poorly monitored and ultimately drive back into the organization.]

3: The Age of Physicians
Compensation, financials

- PCPs make 40% more than Germans; orthopedic surgeons make 100% more
- Med school costs $120k-220k (state to private school) while it’s free or cheap in many other countries. Students graduate with mean debt of $170k, some from undergrad.
  - In *American Sickness*, Rosenthal suggests this pushes some students into more lucrative specialties rather than what they would organically prefer to practice.
- Lifestyle practices like derm, ENT, ophthalmology require less intense training and on-call nights.
  - “At every medical school, a small coterie of students suddenly find the skin or the eye or the ethmoid sinus so fascinating that they study these organs in a research lab.” [Funny]
  - “There is a bizarre martyr complex in medicine where people think they’re working harder and longer for less money than everyone else in America.” - medical student
  - Rosenthal argues they’re looking for dollars to compensate for loss of enjoyment from patient care.

Brief history of doctor pay

- Before the 1950s, American patients were uninsured, paid out of pocket, and on an informal sliding scale in proportion to income. Doctors were “comfortably middle class but not rich.”
- WWII and employer-sponsored insurance, and Medicare Part B (with its essentially unconstrained reimbursements) led to large physician payments and a golden era of compensation.
  - Retrospective “usual and customary” reimbursement led to explosive spiral of costs. “Usual” defined as mean charge of local doctors, “customary” defined as % of bill typically reimbursed (75-90%).
  - Thus local costs could differ - Queens gallbladder surgery cost $2k, Long Island costs $25k.
  - Since the profession was opposed to Medicare, this was part of a handshake deal to get Medicare passed - government vowed not to interfere with practice of medicine.
- 1992: Congress and AMA created the resource-based relative value scale (RBRVS) using relative value units (RVUs) based on:
  - Work/time spent by doctor
  - Overhead in rendering service
  - Cost of training to perform service
  - Malpractice expenses involved
  - All this multiplied by conversion factor adjusted annually and varied by location
- Further, Medicare set a legal cap to payments to physicians. [Have not yet found documentation of this]
  - If a highly valued procedure was approved, other costs had to decrease.
  - If total payments went up, the conversion factor had to decrease.
  - Private insurers often peg to RBRVS.
- This incentivized procedures with more time for intervention and more training required.
  - This punished less-quantifiable practices, like complex diagnosis by neurologists.
    - [Notably, RVUs are calibrated to effort, not to quality or outcomes]
- Median doctor income has risen over past decade as overall real income nationwide has dropped.
[Not well substantiated in American Sickness]

**Intra-specialty negotiations for Medicare**

- The Medicare RVU system requires constant updating. Medicare assigned this to the AMA
  - (which author considers akin to letting the American Petroleum Institute decide what BP and Shell can charge for gas.)
  - [CMS reportedly rubber-stamps RUC recommendations 90% of the time]
  - [Funnily, the AMA copyrights CPT codes and charges license fees to anyone wishing to associate RVU values with CPT codes - earning $70MM/year!]
- Three times a year, the AMA convenes the Relative Value Scale Update Committee (RUC), which operates like a senate serving 26 specialties. Otolaryngology gets 1 rep, general surgery gets 1 rep.
- Again, Medicare sets a legal cap to physician payments, so specialties have to negotiate for adjustments to care.
- RUC minutes are public as of 2013. Shown here
- Adjustment details
  - The “time” component of RVUs can be inflated, based on polling specialists ("which is like asking them whether they want to be paid more.")
  - RUC reps try to push up by using best-paid interventions as yardstick, like upper GI endoscopy.
  - [I see a lot of benchmarks to 25th percentile survey levels in example minutes. Also, the CPT codes are so detailed, I don’t know how any specialty member has enough knowledge about the other specialties to credibly comment on changes]
  - In American Sickness, Rosenthal argues that specialties with less political and aggressive reps, like pathology, get less favorable treatment at RUC.
- [Once set, these RVUs have systemic national implications, nudging doctors toward performing the higher compensated procedures.]
- [Undoubtedly perverse incentives are at play - manufacturers game the metrics to get higher RVUs for new procedures (more complicated procedures needing more training, longer procedure times). They influence doctors into supporting their device through sales meetings, discounts. Doctors push for higher RVUs at the RUC meeting. Higher RVUs get more doctors on board, which get more patients on board, and the procedure becomes entrenched, despite evidence of no outcome advantage]

**Strategies physicians use to increase pay**

- Own their own businesses, avoid contracts with insurance
  - Ambulatory surgery centers
    - Mostly owned by doctors and investors, not hospitals.
    - Allowed billing for facility fees. Further, centers themselves don’t participate in insurance networks, so their fees aren’t constrained by insurers’ negotiated rates
    - Procedures that could have been done in office were moved into their own centers
  - LLCs for services, then contract with hospitals
    - Pathology, anesthesiology, radiology, ER physicians (PARE) popular
    - Hospitals avoid overhead of malpractice and staffing
• Increases separate billing
  • Similarly, they also evade contracts with insurance, which often means out-of-network payments for patients.

• Contract with hospitals
  • EMTALA requires hospitals to treat all patients showing up at ER. But doesn’t apply to physicians who can pick and choose patients.
  • Thus hospitals contract with doctors to cover the ER, and in exchange doctors can bill however they like.
  • Contracted docs might be out of network

• Maximize time billed
  • Multiple overlapping appointments
    • Derm can do biopsies in multiple offices simultaneously; anesthesiologist can supervise 4-6 ORs at once.
    • Physician extenders - NPs, technicians, physician assistants - help doctors bill as though they were personally dispensing the care.
    • Allows physicians to open satellite offices staffed by assistants.
  • History: combat medics returning from Vietnam War prompted physician assistant programs. Idea was to improve care and give doctors a break to attend training.
  • Quick drive-by questions can bill for a full appointment.
  • Counters: Medicare requires surgeons to be present for key parts of operation, and PA can bill at 15% of surgeon’s rate.
    • No matter the incentive, doctors will take advantage. For oncology infusion
      • Medicare paid for first 1.5 hours, and a second part for any part of hour after. Led to a lot of 91 minute infusions.
      • To bill, doctors have to be present in the office for the first 15 minutes of infusion. Not only is this hard to police, but it likely leads to doctors hanging around and checking their watch without improving outcomes.

• Buy and bill
  • In US, oral drugs can be dispensed only by pharmacies (not sold by doctors) but IV and injectable drugs can be billed by doctors, thus leading to “buy and bill” practice.
    • Even better if administering the drug comes with a new procedure to bill for.
  • Doctors get incentives from pharma (free samples, rebates, administrative fees, grants) to push adoption. Doctors can then bill for drugs at full price, with a set percentage for markup.
    • More expensive drugs clearly let doctors earn more.

• Lupron story
  • Prostate cancer patients often had testicles removed surgically to remove testosterone and limit cancer growth.
  • Lupron blocked influence of hormones and could be administered at home with subcutaneous injections. Sales didn’t grow.
  • Takeda came out with Lupron Depot, longer-acting formulation injected into muscle and required in doctor’s office. Strategy was to give doctors a new procedure to bill and allow sales from drug.
  • To increase adoption in face of cheaper alternatives, Takeda provided free samples docs could then bill at full charge; offered grants and kickbacks to prescribe; inflated the wholesale price that Medicare reimburses at. More details
Dispensed Lupron checkbook, calculating how many prescriptions it took to make up for surgical castration.

Billing for free samples and giving secret rebates could be illegal.

- **Upgrades**
  - Push patients to choose higher-priced procedure.
  - Eg Cataracts have become very standard and reimbursements have fallen, giving rise to the femtosecond laser. Medicare wouldn’t reimburse extra for the laser, so ophthalmologists pushed patients to upgrade and pay out of pocket.
  - Patients have little pricing and quality info to compare across interventions. In effect they are paying for non-outcome things like trust in their doctor and emotion

- **Switch to procedures**
  - Nephrologists outsource commoditized dialysis, but now they perform procedures to create a fistula for vascular access.
  - [OK if tech is getting better to make procedures easier, but not OK if it’s a loophole in licensing requirements.]

- **Add ancillary services and bring procedures in house** [see Chapter 6 below]

- **Fee splitting - basically referral fees**
  - Supposed to be against code of ethics, but status is unclear

- **Itinerant surgery - moving between operating rooms, collecting fees for surgery but not following up**

4: The Age of Pharmaceuticals

**History of Pharma**

- **1906** Wiley Act gave US Bureau of Chemistry regulation power over drug safety. Since few medicines did anything, the focus was on preventing harm.
- **1937** Sulfanilamide (antibiotic for strep throat) was mixed with diethylene glycol and killed 100+ people. Prompting...
- **1938** Food Drug and Cosmetic Act required testing before drugs could be marketed, and prohibited false therapeutic claims.
- **1960** Thalidomide led to birth defects in 10k+ children in Europe.
- **1962** FDA now enforced methods for clinical testing and required medicines to be proven “safe and effective” beyond placebo.
  - Importantly, concerns about value were not addressed here - there was no need to be “safe and effective beyond the other drugs” or to be cost-effective.
- **1984** in response to approval process taking time out of 20-year patent protection period and rising drug prices, Hatch-Waxman Act allowed:
  - Generics to not run fresh clinical trials but rather show chemical equivalence, bioavailability, and to not violate patents (ANDA, abbreviated new drug application)
  - Gave manufacturers ways to extend patents, including
    - 3-year extension to support a change in dose form
    - 7-year exclusivity for orphan drugs
    - 6-month extension for pediatric trials
    - 5-year extension for claims of “time lost in regulatory review,” during which
generic markers couldn’t submit applications

- 1980s HIV concern led to rapid approval of AZT (1 human trial that lasted 19 weeks) and other antivirals, which at the time became the most expensive drugs in history.
  - Likely driving up the price: high public demand, high insurer willingness to pay, lack of substitutes, perceived low market size by manufacturer
  - This created a new paradigm for acceptable limits of drug pricing

Single payer systems like UK have more leverage to choose a subset of drugs to support and squeeze prices down. In the US, Medicare is legally prohibited from negotiating prices with pharmaceutical companies.

Clinical Trial Strategies

- Surrogate measures
  - The HIV rush for drugs prompted FDA to allow surrogate measures - proxies for health (like blood markers) instead of actually curing symptoms over months or years.
  - Manufacturers promise to carry out follow-up studies, but there is no punishment for not, nor is there mechanism to take drugs off the market if they later turn out to be inefficacious

- Orphan drugs
  - Treating conditions affecting fewer than 200k
  - Allows smaller trials, shorter trials
  - Bars FDA from approving any other application for same drug for same disease for 7 years, even if patent has expired
  - Melatonin analogue tasimelteon (Vanda) targeted Non-24, an orphan disease. It was approved despite not showing advantages over melatonin

- The FDA gets $2.5 million per drug application - thus aligning incentives with more applications for me-too drugs

Drug advertising

- Supreme Court has protected it under free speech
- Allowed “help seeking ads” first in 1990s where either drug or disease could be mentioned, but not both. In 1997, ads could contain both condition and medicine, but has to include all side effects and contraindications
- One of two countries allowing it, along with New Zealand. Other areas like the EU don’t allow commercial speech the same equivalence in free speech and considers drug advertising harmful to the public since it overpromises benefits of wonderdrugs

Generics

- Company can seek approval before the expiration of patent.
- The first company to submit an ANDA has exclusive right to marketing among ANDAs for 180 days
  - It does not block “authorized generics” which are produced by the patent holder, are the same drug on a private label, and compete with the ANDA
• However, filing an ANDA is considered “constructive infringement” of the patent. If the patent holder files infringement suit, FDA postpones generic drug for 30 months, unless before that time the patent expires or is judged invalid/not infringed.
  ○ [It seems this is most useful when a patent is actually invalid and more than 30 months before it will expire. Generic enters, patent holder sues and a 30 month max delay in approval happens. If not for the 30 months, the generic maker might get approval and market earlier.
  ○ If the patent is set to expire in 1 month and the holder files an infringement suit, the FDA postpones only for 1 month.]
• The generic maker can then countersue. Then parties settle, sometimes generic maker accepts payment to delay introduction of generic.
• Not necessarily plentiful supply of generics because the economics may not work out and competitors pull out, leaving a single manufacturer with virtual monopoly for a period of time
  ○ It’s said that 3 or fewer generic manufacturers are insufficient to provide price competition
  ○ [I imagine drug companies also partner under the table to reduce opposing generics for each others’ branded drugs]
• Important below - generics must be identical in dosage and form to brand-name drug for pharmacist to substitute
  ○ Before 1979, pharmacists weren’t allowed to substitute generics, but FTC/FDA recognized doctor had little price incentive to prescribe different drugs.
  ○ States have different laws - some mandate substitution, some require consent

Strategies to extend patent/fight generics

• Product hopping - creating new forms
  ○ Before the patent expires, the pharma changes form, dosing, and route of administration (which requires submitting data to FDA) (eg pill to chewable)
  ○ Then destroy all previous forms, or raise prices, to force prescriptions to switch to the new form, before generics arrive on market
  ○ This will entrench the habit so that when the generic arrives, it cannot be directly substituted by the pharmacist.
  ○ [The doctor could theoretically prescribe the generic, but low marketing and habit seem to prevent this from fully happening]
  ○ This is said to illustrate market failure, since the brand name having a minor time lead leads to large long term sales differences
  ○ Useful FTC amicus brief
• Sue generic makers or partner to delay introduction
  ○ See Generics section above
• Different formulations may be more difficult to prove bioequivalence
  ○ Sprays, lotions, creams are more difficult to replicate than pills
• Take it over the counter
  ○ By law, the same product cannot be on market as both prescription and OTC product. Further, any company that takes prescription drug to OTC gets 3 years of market exclusivity (since it requires submitting a new application with safety data).
    ■ Once gone to OTC, generics manufacturers have 6 months to use up supply.
Pharma can then also patent a new formulation or molecule similar to the now OTC drug, and enjoy both OTC and prescription sales.

- Both were done by Glaxo with Flonase.
- Large market size has to make up for cheaper prices due to lack of insurance coverage.

**Create a drug combination**

- Eg Duexis = ibuprofen and famotidine
- Strike long contracts with hospitals to lower market size for generic new entrants
- Purchase generic manufacturer and shut it down (unclear if this is actually done), thus delaying new entrants
- Promote danger information for substitute
  - Eg Zofran with droperidol

**Co-pay assistance**

- **A clever method to get around high co-pays.**
  - Say patients can’t afford a drug with high co-pays. *Pharma sets up a nonprofit that helps patients pay co-pays.* The drug price remains high, insurance reimburses, and pharma gets marginal sales.
  - Eg patient’s copay is $1250 of a $5000 drug. Pharma effectively discounts the price to $3750 by paying patient co-pay but makes the sale happen.
- **This neutralizes the advantage of cheaper drugs for consumer - without pricing pressure, consumer picks the drug they like most, or the most expensive one.**
  - Patient’s copay might be even higher with a competitor without this program - say a $1000 drug costs patient $200. Patient would obviously rather have the $0 copay drug.
- Medicare forbids co-pay offers directly from pharma firm foundations, but private insurers face competitive pressure to allow it - if one insurer didn’t allow it, patients would quickly leave for a competitor.
  - Unfortunately this sets up crisis when patient goes on Medicare and can no longer afford drugs.
  - Further, the money still arrives through a veiled corporation that is funded by pharma, eg Patient Access Network.
- Further, these are tax deductible for pharma.

**Pharmacy Benefit Managers (PBMs)**

- These are hired by insurers and employers to negotiate drug purchases with pharmacies
  - Insurers cannot compare prices they pay for medicine (per antitrust law) but PBMs can
- Largest ones: Express Scripts, CVS Caremark, OptumRx
- They pocket a percentage of discounts they negotiate. Thus they put drugs that net them the best deals, not necessarily the most in demand
- Further, they may drop a drug from coverage to pressure pharma for better deals, causing patients to find alternatives

**Misc notes**

- Natural products cannot be patented (eg melatonin)
• Drugs that are administered in clinics are billed as medical procedures and thus can have zero co-pays.
  - Unfortunately this leads to a separate incentive for doctors to get on board by billing as a procedure

5: The Age of Medical Devices

Per American Sickness, the medical device industry is dominated by a few major players: Medtronic, St. Jude Medical, Boston Scientific, Stryker, Zimmer Biomet - consolidating much like other segments of healthcare.

Brief history of medical devices

• Many device makers began in hardware or consumer electronics.
• Medtronic started in 1949 as a medical equipment repair shop
• 1969 Denton Cooley implanted first artificial heart in patient for 3 days without FDA approval

Three classes of devices

• Class 1: Little scrutiny, eg tongue depressors
• Class 3: Life-threatening or life sustaining or required extensive testing, eg pacemakers
• Class 2: In between, governed by 510(k)
  - Scrutiny is so much lower that most devices are submitted under this, including joint replacements, surgery clips

Class 2 Regulation

• Only have to claim device is substantially equivalent to a product already sold and used for the same purpose
• Requires far less testing than class 3
  - FDA spends 1200 hours for class 3 devices, 20 hours for 510(k) requests
  - Only 10% of FDA class 2 applications contain clinical data
  - Many not tested in animals before placing into humans, often no clinical trials at all
  - Don’t have to prove “safe and effective”
  - FDA cleared 85% of devices under “substantially equivalent”
• No recall mechanism for equivalent devices if one specific one is recalled
• ~3000 class 2 applications, only 30-50 class 3
• Doctors argue many Class 2 devices should really be in class 3, like surgical clips for blood vessels and joint replacements
• Some manufacturers don’t seek FDA approval because it considers not “substantially different” from older models
• Patients don’t always know the device is experimental and don’t consent to it
• Tracking of complications
  - Generally requires voluntary reporting unless FDA mandates it
Device marketing

- Ready clearance of “substantially equivalent” devices means they’re largely interchangeable, so marketing and sales need to intervene to push products
- Court doctors during residencies and fellowships. Get brands into major training programs
  - Target less experienced surgeons who are less resistant to new tech or less aware of risk without benefit
- Reward “influencer” doctors with patents, profits, grants
- Device reps serve as unpaid assistants in OR
  - Theoretically they’re on hand whenever a device is used. Don’t scrub in, but point to things that should be used in specific places.
  - They make money through commission only.
  - The bias will be toward devices from companies whose reps are more likeable and helpful; since they like the rep and know she’s paid on commission, will skew to higher priced items, “feel somewhat obligated to use the most expensive device because they obviously called you in for it.”
  - [Insidiously, doctors are likely overconfident about their ability to avoid bias]
  - Hospitals have demanded device reps be registered and get permission to enter premises, like lobbyists.
  - Good anecdotes on this trade
- “It’s nearly impossible to break into the market - it’s all about these relationships”

Device differentiation and pricing

- Devices are often largely interchangeable
- Manufacturers use proprietary screws, tools, and “operating systems” to generate complexity, were often changing, thus pushing need for reps on hand
  - [Note that the more complicated the device, the more complicated the procedure, thus increasing RVU billing for the doctor. Thus pushing to more complexity]
- If manufacturer releases new upgraded version, it can price the older version at same price so it stops being cost effective

Hospital bargaining

- Limit range of devices used to gain bargaining power
- Close down marketing, generate RFPs to get quotes from manufacturers

Why not generic devices?

- Regulatory policy and patents

6: Age of Testing and Ancillary Services

As payers tightened up their spending, providers looked for other ways to increase billing and restructured the business models of testing and ancillary services. The doctor, hospital, and staff all
benefit from increased testing.

**Testing**

- Tests done in hospitals are more expensive than those at third-party labs (eg Quest)
- MRI costs $160 in Japan; costs $3500 in a US hospital
- Doctors get rewarded through bonuses for billing testing. Hospitals are complicit
  - One doctor ordered EEGs for kids to detect undiagnosed seizures, until most patients turned out not to have seizures
- Increasing testing count
  - Physician extenders can order tests before seeing doctors, and are more likely to
  - Some offices refuse treatment or surgery before getting a particular test (eg echocardiogram)
  - EMRs offer automatic workups based on patient complaint
- Billing tactics
  - Preoperative tests are done on outpatient basis, so they can be billed separately from the all-inclusive rate for hospital stay
  - Unbundle a test into as many separate components as possible (CHEM-7 into seven separate tests)
- Other reasons for deep unnecessary testing
  - Patients want more data now
  - Doctors worry about missing something, defensive medicine

**Pathology**

- **Patients have little choice over where biopsies are sent, and doctors don’t know of charges**
- Particularly used by derm, gastro, urologists
- History of trend
  - Stark Law in 1990s limited referrals for testing where provider had a financial interest
  - In 2002, Congress allowed exceptions for certain types of care rendered in physicians’ offices, like X-rays and physical therapy
  - Many specialists hired pathologist to process samples in-house
  - Pathologists formed own LLCs and contracted with hospitals
  - Consolidation led to major international diagnostics companies like Miraca
- Marketing tactics
  - Commercial companies court hospitals through fellowships and pay salaries of doctors in training
  - Some practices outsource to national labs, but bill directly as though it were done in-house
  - Alarming diagnoses are re-read in-house, leading to double billing

**Ambulance Care**

- Run by cities, hospitals, or private companies (largest being Rural/Metro and American Medical Response)
  - Many refuse to contract with insurers, leaving bills with patients
- Crews get assignments through central gov’t dispatcher, and then get leeway on where to take
patients.
  - Hospitals run own ambulances to compete for patients
  - Hospitals also encourage crews with comfortable lounges and food
  - "We could keep raising rates because the private insurance companies always paid."
    - For those without insurance, council might waive bills and write it off, or lead to collections
  - Unbundling increases reimbursements (oxygen tank, ice pack, gauze)

Physical Therapy

- $26.6 billion industry in 2014
- Medicare therapy cap rose from $100/yr in 1979 to $1500 in 1999 and $1860 in 2010, all the way to lifting the cap in 2018
- Therapists can deploy extenders, and patients can see PTs without physician referral
- PT consult and followup has become standard in every hospital discharge, despite lack of efficacy proof

Elderly Care

- Medicare Advantage pays a fixed monthly fee to take care of members, but fee increases with burden of illness
- So health care plans contract with companies to conduct home visits at $300 per head, which can get $2k-4k more per person by uncovering new illnesses
- Another industry is to identify people who will accept in-home exams

7: The Age of Contractors: Billing, Coding, Collections, and New Medical Businesses

Billing codes have gotten so complex that both insurers and providers have outsourced claims to third-party contractors.

Brief history

- Billing was used for epidemiological purposes. WHO created ICD
- In 1979 US used ICD codes for Medicare/Medicaid claims with fork of ICD, ICD-CM
- Obesity got its code for 2013, which puts it in disease territory and obligates insurers to pay for it
- Three codes now prevalent: CPT, HCPCS, ICD

Different billing codes command different prices

- "Acute systolic heart failure" pays thousands more than "heart failure" because it is more severe and has defined conditions (less than 25% of blood pumped with each beat, undergoing echo, taking water pill)
- Finger fracture (99282) gets higher pay if narcotic painkiller prescribed (99283).
Plus, then you can bill for the painkiller!

- Perversely, this can cause overtreatment to fit the higher paying, more complicated code.
- Quirks
  - Modifier 59 allows for two payments in certain situations (eg two separate IVs)
  - Modifier XP allows for separate billing for a different practitioner

**The game:**

- Providers will bill for whatever they can
  - False billing for implied charges (eg circumcision for Jewish name)
  - Contractors get paid for percentage of billing
- Insurers will deny claims as overreaching
  - Medicare audits code abuses
  - Insurers outsource precertification to contractor, who gets paid for portion of money saved
- Any change in coding prompts more volatility and pushing reimbursement to limits, thus spurring professionalization of coding, which has become its own trade and industry

With increasing complexity of billing, doctors aggregate into eg. independent physicians’ associations, which negotiate rates with insurers

- It’s too much for single doc to check if she participates in plan, then if a procedure is covered, then if need authorization

**Price benchmarks**

- Some states use Medicare rates as limit for charging uninsured low-income patients (in NJ, 5x poverty level gets at most 115% of Medicare)
- Uninsured get standard 20% discount

Employers can now hire patient advocates, who estimate local prices and advice on where to get care

- If cost $50 per head, can save money on average patient
- These advocates can now resell data to providers and insurers who want to know what prices other parties get.
- They get their start by purchasing large claims databases or crowdsourcing prices
- Advocates don’t hand out price lists, since this would neutralize their info advantage

[Economics says that middlemen are compensated in proportion with their real value. Is the value here having specific points to negotiate around, that stifles wanton billing and protracted fuzzy negotiations?]

## 8: Age of Research and Non-Profits

According to *American Sickness* and Rosenthal, medicine’s history began with more moral ambitions and less profit motive.
Banting isolated insulin in the early 1920s and licensed the patent for only $1 “as a gift to humanity”
March of Dimes raised money for vaccines without trying to profit from each inoculation
Blue Cross Blue Shield began as a nonprofit

A massive change to non-profits happened when the Cystic Fibrosis Foundation sold its rights to drug royalties for $3.3 billion.

- CFF had invested in Aurora Biosciences in 2000, then was acquired by Vertex in 2001
- The new drug Kalydeco (ivacaftor) was FDA approved in 2012 and cost $300,000 per year
- CFF states it cashed in to fund other research sooner.

Disease-centered non-profits and charitable foundations are now often funded directly by pharma companies, leading to some confounding of interests.

- Example: JDRF gave Medtronic $17MM for glucose sensor, invested $4.3MM in BD, formed new fund with PureTech Ventures
- Pharma participates in foundation events to recruit patients and talk new treatments
- Non-profits with equity in companies may push those companies’ treatments more, and not resist higher prices, despite lack of cost effectiveness
- Potential treatments that cannot be patented maybe given less attention
- Possibly, non-profits shift a bit toward pharma incentives of seeking expensive lifelong treatments rather than real cures
- “If the March of Dimes was operating according to today’s foundation models, we’d have iron lungs in five different colors controlled by iPhone apps, but we wouldn’t have a cheap polio vaccine” - JDRF critic
- Fund-raising now seems like the primary metric for foundations, rather than patient wellbeing

Activities of the American Medical Association

- Licenses copyright for CPT code
  - [Perverse incentive to make billing more complex]
- Receives funding from Corporate Roundtable, mainly pharma
- Spends $20 million/year on lobbying
  - In the past, lobbied for restrictions on residency slots and medical school licensing
  - Limiting physician extenders from encroaching on physicians’ duties
  - Opposing sustainable growth rate, the 1997 government proposal to peg patient reimbursements to GDP rate. The “doc fix” was enacted 17 times in 12 years to prevent this from happening
- In 1998, tried to get its logo on Sunbeam devices for cash
- Publish the JAMA medical journal
- Only 25% of doctors join, partly because specialties now have individual medical groups, each with their own PACs

Provider lobbying
• Generally, professional groups will fight to retain powers and prevent encroachment of other groups on their practice
  ○ Anesthesiologists fight for administration rights of drugs like propofol. Gastroenterologists counter this, noting nurses can do this and wanting to bill for propofol themselves
  ○ Limit drugstores from giving shots other than influenza
  ○ Dentists prevent salons and spas from offering teeth whitening
  ○ Limiting physician extenders from encroaching on physicians’ duties
  ○ Limit psychologists from prescribing medicine
• Specialties push guidelines for when and how procedures should be performed within their specialty
  ○ Radiologists push for annual mammograms instead of biannual
  ○ Urologists push for PSA screening when they largely lead to false positives and prostate cancer doesn’t always require treatment
  ○ Orthopedists push for arthroscopy to clean up joint space
  ○ Dermatologists push Mohs surgeries
• Blocking legislation to inform patients when they were out-of-network before rendering treatments

Other notable casualties of profit seeking

• Physicians’ Desk Reference was a widely distributed, low-cost, ad-free, compilation of prescribing information, underwritten by pharma. After the Internet, it likely became less relevant, and was sold to private equity to support marketing.
• The American Board of Internal Medicine mandates more testing and recertification programs and attending conferences, required for bonus payments from Medicare and admitting privileges from hospitals. ABIM can then charge high prices for their own certifications. [In effect this is being paid for by insurance, which pays doctors’ salaries which goes to ABIM, thus many indirectly suck from the teat of payers.]

9: Age of Conglomerates

Healthcare systems in regions have consolidated to provide negotiating power against employers and insurers.

• If you’re the only medical game in town (eg literally the only maternity ward in the region), employers have to buy insurance that provides you in-network, and so insurers have to meet your demands (eg pricing) to sign you
  ○ Other demands include forcing certain procedures to be done in hospitals (like drug infusions)
  ○ Mergers in concentrated markets cause price increases over 20%
• Large health systems are composed of hospitals, ambulatory care clinics, nursing facilities, and large physician networks
  ○ Health systems can purchase PCP offices. This allows billing facility fees, and visits and tests as hospital charges. And some insurers require a higher deductible for hospital fees, pushing higher costs onto patients.
• Further, **size begets size, as large healthcare systems can pressure smaller players into being acquired to access their services, and pressure insurers into dropping smaller players.**
• Further, larger players set a high price, and smaller players are emboldened to raise the price as well.
• Sutter Health is an exemplar of aggressive consolidation, buying hospitals and restructuring around more profitable services and downsizing hospitals to meet Medicare’s 25-bed critical access designation (thus raising reimbursement)

Low-competition areas show symptoms of higher premiums, higher medical prices, and possibly suboptimal care and overtreatment.

**EMRs**

• Obama’s 2009 HITECH Act got $19 billion in incentives for providers to adopt EMRs. However, intercompatibility was not a priority
• EMR vendors (eg Epic) desire low intercompatibility to increase switching costs
• Large health systems desire low compatibility to charge smaller players fees to get into its system, and to impede importing of outside test data (thus raising friction for providers and forcing more tests into the hospital).
  ◦ The EMR then defaults to send labs and tests to the health systems

**10: Age of Healthcare as Pure Business**

Providers have turned over patient accounts to billing services and collection agencies [thus giving plausible deniability and moral piece of mind - the value of middlemen]

Doctors can charge retainers, upsell same-day answer service, or fees for writing prescriptions.

**Story of Factor VIII for hemophilia**

• Began priced at $3,000 in the 1960s, shocking at the time. Made from donated blood.
• In 1980s, HIV and hepatitis C infected blood supply, requiring process to kill viruses in blood, doubling/tripling prices. At 40 cents/unit
• In 1990s, gene was isolated, allowing recombinant products. These were priced even higher at $1/unit despite being cheaper to produce. Older blood-derived raised their prices to 60 cents/unit.
• Further, without rare supply, patients could take factor VIII 3x/week instead of in an emergency, now costing $300,000 to $600,000/year
• An industry of home-delivered factor VIII began. Patients started effectively getting kickbacks from manufacturers for switching to them. Normally illegal, this was neutralized by the manufacturer selling home care company units, then home care companies signing patients with free perks and rewards.
• Finally, the manufacturer has a co-pay assistance plan, so the patient doesn’t pay out of pocket. Expenses are pushed to insurer

**11: Age of the Affordable Care Act**
Good achievements of the Affordable Care Act

- Barred insurers from denying coverage to people with preexisting conditions
- Banned lifetime limits on insurance payouts
- Capped annual out-of-pocket spending per person ($6,850) as long as patient stayed in-network, to prevent bankruptcy
  - [Though this likely doesn’t constrain costs; if patients can only pay a certain maximum, fixing the cost, the extra just gets pushed onto higher premiums]
- Defined essential health benefits that insurers had to cover, like maternity care and screening procedures
- Adult children can stay on family health insurance until age 26
  - [Though this just raises employer premiums, and often the insurance doesn’t include out of state doctors]

Cons of Affordable Care Act

- Didn’t directly control rising costs.
- Insurers pushed expenses to patient in higher co-pays and deductibles
  - Higher prices meant patients avoided getting any medicine, pushing costs to later with more complications
  - Insurers also narrowed networks, often to less experienced doctors and second-tier hospitals
- Medicare Part D
  - Started in 2006
  - Structured as:
    - First $320 as deductible
    - Next $2,960 with 25% copay
    - Next $1,740 with 100% copay (the donut hole)
    - Afterword, 5% copay
  - Once having to pay out of pocket, seniors could now rely on Part D. Pharma thus pushed prices for essential medicines up
  - ACA changed donut hole to 45% instead of 100% and planned to close it completely by 2020.
  - [Further, drug pricing will likely push freely past the cliff, since getting past the donut hole is the hard part]
- Did not create a “public option” that allowed anyone to choose a national health insurance plan or get on Medicare. Insurance industry fought it
- The public option’s successor, non-profit health insurance co-operatives largely failed
  - Started as small startups without negotiating leverage size
  - Seed funding was cut and “risk corridor payments” were cut
- Some incentives were easily gamed
  - Despite promise of free screenings, providers could code procedures as a diagnostic instead of a screening procedure (eg if there was a benign polyp discovered 10 years ago, a colonoscopy could be a diagnostic)
  - Screenings could be free, but providers charge for room rental, anesthesiologist charges (for colonoscopy).
The lukewarm control of spending and rising premiums have given ammunition to those calling for repeal

**Part II: Diagnosis and Treatment**

Now that you understand why and how American healthcare is so dysfunctional, what can you do about it?

**Part II of American Sickness** discusses steps you can take to improve your personal healthcare and possibly make a dent in the American healthcare system. Each following chapter contains 1) practical tips on how to make medicine personally better for you, and 2) legal reforms that would lead to more systemic change.

[I should note though that many solutions seem unlikely to be passed due to powerful lobbying interests.]

**12: The High Price of Patient Complacency**

This chapter of American Sickness describes healthcare systems in other developed countries, ranging in degree of government intervention. Generally they show better quality for lower cost compared to the USA.

**National fee schedules and price negotiations**

- In Germany, Japan, Belgium
- Not only does this lower prices through negotiating leverage, it also reduces inefficiencies in billing haggling
  - US doctors spend 1/6th of time on administration
- Heart sonogram costs $1-8k in US, $150 in Japan, Belgium
- Doesn’t preclude private insurance
  - Japan and Germany have hundreds of insurers
  - Netherlands requires citizens to buy private insurance

**Single payer**

- In Canada, Australia, Taiwan
- Single authority (usually government) pays most of the money to providers
- Doctors and hospitals practice independently of government
- Private insurance still exists to cover people who opt out of national plan for more upmarket care, or for extras like dentistry
- In Denmark and Great Britain, state owns hospitals and infrastructure
  - Specialists and some general doctors are government employees

**Market-based transparency, with the Singapore system featured**

- Spends only 4.9% of GDP vs USA’s 17.1%.
  - [Note however it has population of just 5 million]
Singaporeans are required to contribute part of salary to HSA (health savings account)

- Care divided into 4 wards of privacy and amenities
  - Higher priced and more selective care require more participation in payment, up to 100%
  - Basic care is covered by government up to 80%

- Ministry publishes prices and bills at different tiers from different hospitals
- Most hospitals are state owned, with accommodations priced at 4 levels.
  - Private hospitals compete with to-level service at public hospitals

13: Doctors’ Bills

What you can start doing now

- Ask questions about what care will cost you, before you make your decision
- Choosing your doctor
  - Is the practice a surgery center or owned by a hospital? Will facility fees be charged?
  - Will you refer me only to other providers in my insurance network?
  - Can you send my testing to an in-network lab?
  - What extra fees are there - phone calls, annual fees?
  - Will you see me in the hospital if I’m hospitalized? Can I reach you on weekends?
- In doctor’s office
  - How much will this cost? Compare it to a ballpark range in your area you find online.
  - **How will this test/exam/surgery change my treatment?**
    - If there’s no reasonable justification, pass on treatment.
    - Where will this test/exam/surgery be performed, and how does that impact the price?
      - Are you an owner of the place you’re referring me to?
  - **Are there cheaper alternatives that are equally good?**
  - Who else will be involved in treatment? Will I get a separate bill from another provider?
  - If you find a surprisingly high price, tell your doctor. She may not have known.
- Wait before getting treatment.
  - Many symptoms resolve themselves.
  - Unnecessary scans and tests get insignificant findings that might prompt unnecessary care.
    - MRIs of middle-aged people may show bulging disks with no back pain at all

System changes to demand

- Demand more transparent pricing before care
  - Doctors need to see prices when placing orders. Hospitals should release chargemaster to staff
  - When given the choice between two differently priced treatments, most patients choose the cheaper one, even if surgery covers it
  - Providers and insurers contractually cover their rates under NDA. Some states have declared these illegal
- Malpractice reform
  - 80% of doctors will be named in suit by 60 years old
  - Place limits on noneconomic damages
- In CA, a $250k limit for indirect damages like emotional suffering
- Interestingly, some research suggests unneeded testing is correlated more with test center concentration than with malpractice awards
  - Encourage arbitration
    - This will decrease time for payment and legal fees
  - Offer warranties and guarantees
    - Some surgery centers guarantee care of complications with no additional charge
- Medical education
  - Finance medical school to deter doctors from feeling like economic victim and overbilling
  - Give loan forgiveness for doctors who enter low-paying specialties or work in underserved areas

### 14: Hospital Bills

#### What you can start doing now

- Vet the hospital
  - US News & World Report
  - Leapfrog Group on patient safety
  - Medicare’s Hospital Compare program
  - NYT Medicare payment data
  - Look at hospital’s IRS Form 990, financials for nonprofit

- In the hospital
  - When admitted, you’ll be asked to accept financial responsibility for charges not covered by insurer. Write in “as long as the providers are in my insurance network.”
  - If put in a private room, will insurance cover this, or will there be a supplement fee?
  - If staying in hospital, ask if you are being admitted or held under observation.
    - If under observation, will be an outpatient, with higher copays and deductibles.
  - Ask to know identify of every person appearing at bedside and what they’re doing.
    - Write it all down.
  - You can refuse care from any provider, such as physical therapist helping you out of bed and dermatologist examining useless rash.
  - Refuse equipment you don’t need.

- Dealing with bills
  - Negotiate large bills.
  - Request complete itemization of hospital bills.
    - Hospitals may insist that HIPAA or internal policy prevents this, but it’s your right.
    - If it takes a while and your bill goes into collection, tell company you’re waiting for itemization and are disputing charges.
  - Check the bill against your notes in hospital.
    - >50% of bills contain mistakes.
  - Protest bills in writing, not by phone.
    - Send e-mail or letter, and copy to local reporter, state insurance commissioner, consumer protection bureau.
If doctor’s charge is outrageous, send copy to his national specialty society.

- Compare to Medicare payment rate. Use Healthcare Bluebook, Pratter, ClearHealthCosts, FAIR Health, All Payer Claims Database to compare costs.
  - Argue against out-of-network bills if you didn’t provide informed consent.

**System changes to demand**

- Require price disclosure
  - California requires hospitals post chargemasters
- **Require hospitals to guarantee that all doctors treating you are in your insurance network**
  - Company should insist on this during policy negotiations.
  - NY law stipulates that out-of-network care during emergency or hospital are not responsibility of patient. Insurer and hospital has to work it out.
- Bundled pricing
  - Now common for patients paying out-of-pocket (eg $535 colonoscopy)
  - Should be made more common for people paying with health insurance
- Remove tax-exempt status from hospitals
  - Tax hospitals, and allow them to take credits or deductions when performing charity
  - [Though this might just push prices up to maintain the untaxed quality of life.]
- Break up hospital conglomerates through antitrust
  - 20 years ago, FTC lost antitrust cases in healthcare
    - [Why?] Book suggests in this era, cooperation between hospitals was seen as good thing
    - Also, it seems economically possible for competitors to move in and compete.
      - “It’s not illegal to have a monopoly and raise your price”
  - Trend seems to be shifting back toward more lawsuits and victories for antitrust
  - Mergers under $76MM don’t need to be reported to FTC, but many healthcare systems make small acquisitions
  - Promote publicity for state AGs who win a fight for patients
- Standards for billing collection
  - Insist on clear commitment on terms. When will bills be sent to collection? 6 months should be minimum, and should not be sent while patient is disputing bill

**15: Insurance Costs**

**What you can start doing now**

- Look at all the costs
  - Premiums
    - Figure out what % you have to cover. if it’s deducted automatically from your paycheck, you don’t feel the full extent
  - Deductibles
    - Calculated per person or for the whole family
    - Separate deductibles for in-network vs out-of-network care?
  - Co-pays
- Now often a % of the bill
- For doctors, different for generalist vs specialist?
- For medicine, different depending on whether it’s in the formulary or not?
- **Out-of-pocket maximum**
  - Does this count drug costs?
  - Will you be asked for co-pays even after meeting this number?
- **Find the insurance with the lowest total cost for your typical needs.**
  - The network
    - **Work backward to choose the best option.**
      - Which doctors do you currently see and want to keep?
      - Will your child go to college out of state - and will your insurance cover her?
      - Which conditions are you most afraid of - and does care cover it? Eg neonatal ICU, cancer treatment
    - Be wary of dozens of doctors at a single address - often it’s a clinic affiliated with a hospital, and you may not be able to keep the same doctor each visit.
    - Consider untraditional doctors - like male OB/GYNs
    - HMOs now offer good comprehensive care with incentives for quality
      - Look for systemwide integration, salaried physicians with no productivity bonuses, meaningful use of technology, and a clear process for referral outside HMO for rare conditions
      - Poor performance data from HMOs may be OK in context - HMOs are the rare medical systems that actually track standards and release data
  - Don’t trust insurance navigators fully - they have inconsistent training and may not be fully informed

**System changes to demand**

- **Require insurers to maintain adequate rosters across spectrum of care in local area, to avoid out-of-network charges**
- Require network provider contract to be in force through term of policy
- If procedure is covered under plan, then all tests and services associated with procedure should also be covered
- Keep provider directories up to date with no nonsensical information (like “in-network but not available”)
- Require insurers to justify premium increases over 10% (ACA passed this)
- **Reference pricing**
  - Set a total price for common procedures. If the patient chooses care that exceeds the price, she pays the remainder out of pocket
  - Avoids moral hazard once cost of care exceeds OOP maximum (eg 100k hospital bills)
  - Providers then compete to make sure they stay under this price
  - Can peg to Medicare’s DRG
  - [Requires public availability of pricing info]
- **Bundling**
  - Like reference pricing, but leaves patient out of decision making
  - Medicare pays for inpatient stays via DRG (diagnosis related group) bundled rates
  - Forces hospitals to consider whether discretionary care is essential in treatment (eg
physical therapy after hip replacement) and reduce perverse fee for service incentives
- Can also be applied to chronic conditions (eg $50/month for asthma patient)
- In Maryland, all insurers pay same rate for same procedure on every patient
- Important: need to define clearly what is included in procedure to avoid billing for outside services (eg epidural for childbirth)
- Taken to extreme, capitation is an annual fee per capita fee for care
- Taken to another extreme, site neutral payments - fixed fees for care regardless of where performed (hospital vs doctor office)
- **But: If sicker patients are given higher flat payment, a weird incentive to push patients into diagnosis groups and not improve their healthcare**
- Also, have to deal with complication of different groups paid differently - hospitals with DRG, doctors with RVUs, nursing homes with day rate. Would have to coordinate to package their services
  - Sliding coverage based on necessity
    - Insurer can completely cover necessary care (appendectomy) while covering little of elective sinus surgery.
    - Can also require waiting or lower-cost treatment before the more expensive surgery (eg 6 months of nasal steroids before sinus surgery)
  - Insurers are ambivalent about bundled pricing because they can just push costs to patient.

**16: Costs**

According to *American Sickness*, many Americans don’t fill prescriptions because of cost. It’s difficult to do price comparisons, prices can change from month to month, and depending on your insurance, it’s unclear what things will cost.

**What you can start doing now**

- **Find good substitutes for your medicines**
  - Avoid fancy formulations without clear benefit - combinations of two generic medicines (Duexis), extended release tablets, creams
  - Get different doses and change the # of pills you take (eg get double dose pill and cut pills in half)
- Shop at goodrx.com for cash prices of medicines
  - It may be cheaper than your copay!
  - You are not required to use your insurance, despite what they tell you
  - They also have a Medicare drug pricing tool, but no private insurance cost data (because commercial insurers consider pricing data to be proprietary info released only when prescription is filled)
- **Consider buying outside the US**
  - Technically against the law, but rarely prosecuted
  - Refill prescribed medicines when traveling abroad
  - Buy drugs that are over the counter abroad but not in the US
  - Buy from overseas mail-order pharmacies, especially for long-term medicines whose effects can be clearly measured (eg cholesterol or T2 diabetes drugs). Check
pharmacychecker.com to check for fakes. Source from English-speaking countries

- Be skeptical of drug advertising
  - Drug ad does not convey efficacy or cost. More cost-effective generics may be available
  - Check Goodrx.com for cheaper and potentially equivalent options

**System changes to demand**

- Allow drug importation from vetted international pharmacies
  - Maine tried to allow mail-order drugs from pharmacies in English-speaking countries, with the strategy of declaring such pharmacies licensed in Maine. This was later repealed

- **Give pharmacists more prescribing power**
  - Doctors have resisted giving pharmacists powers to encroach on doctors’ turf
  - Devise 3 classes of medicine - OTC, prescription, and pharmacist dispensed
  - Examples include birth control pills, asthma inhalers, thyroid pills

- Reform patent process
  - Orange Book includes all patents protecting approved drugs. All patents must be expired or litigated before competitor can start production of generic. Be more selective about which patents are included in the Orange Book.
  - USPTO should restrict patents for drugs that do not offer true novelty or benefits and shorten exclusivity.
  - For drugs that are true breakthroughs, give longer exclusivity
  - [Though giving USPTO scope over utility, not just novelty, would be difficult and gameable]

- **Reform drug and device approval**
  - FDA should require effectiveness over similar drugs for approval, not just beating placebo
    - [Though this would be marked as stifling competition and rewarding the first inventor]
  - Reduce cost of approval trials to allow lower profit drugs on market
    - Use results of studies from other countries (like European Medicines Agency)
  - Require approval to cease production of a drug, if it would lead to a monopoly
    - Government could activate “march-in rights” to assign licenses to new company to make drug

- Negotiate national prices
  - **Medicare is forbidden from negotiating prices, due to drugmaker lobbying.**
    - Great Britain tells pharmacists how much they’ll be reimbursted for certain medicines; pharmacists the nsource drug from anywhere in EU.
  - US could peg drug prices to Canada

- **Promote cost-effectiveness research**
  - Patient-Centered Outcomes Research Institute (PCORI) from ACA is prohibited from doing cost-effectiveness analysis
    - Idea is to not reject patients just because they’re costly
  - Insist that vendors estimate a price point from very start of FDA application process
  - Allow for cost-effectiveness research, then use said research to negotiate prices down

- **Discourage connections to pharma**
  - Including professional organizations and elected officials who take money from manufacturers
17: Bills for Tests and Ancillary Services

Hospitals can manipulate where your tests are done to increase billing.

What you can start doing now

- Do not test outside your network.
- As a general rule, send your labs outside the hospital lab.
- Ask commercial lab for printout of results or copy of scans.
- Avoid useless screening
  - Low T
  - Ultrasound of neck for narrowing of arteries
- US Preventive Services Task Force and Choosing Wisely
- Don’t get cheap on critical decision testing (eg pathology biopsy that leads to surgery decision)

18: Better Healthcare in a Digital Age

- Many health startups tend to add layers to cost, rather than making simpler
- Wearables may be ineffective - don’t accept it in lieu of a wellness or weight-loss program.
- Demand right to possess medical data in a transportable way
- Create a national health information program; providers can access your information
  - [Cue privacy concerns about government having access to all medical records]
- Make scheduling and pricing care seamless
  - Should work like reserving a restaurant table
  - Look up in-network providers in directory, show open appointment times and pricing, prepay payment, fill out forms, and have no wait time.

Open Questions

- What makes orthopedics, cardiac care more profitable than labor and delivery, ER?
  - Higher worth patients
  - More discretionary per patient, less commoditized and standardized than dialysis.
  - Compensation around RVUs - more quantifiable time and training required
- Larger deductibles today may lead to less utilization of good care, which can lead to hospitalizations and complications in the future. But this is countered by less utilization today.
- Better preventative care today leads to lower billing in the future, which is worse for vendors but better for insurers (and patients). Thus there will be some implicit bias against preventive care from whoever has an interest in acute care.
- What tactics are used to avoid Medicare audits? There are consultants for this
- Why are pharma adverts possible in the US when not in other countries?
  - Generally commercials protected as free speech
  - In smoking ads, the legal attack was unlawful practices of not warning of health hazards (eg Joe Camel). Pharma seems to get around this by mentioning side effects. There was also enough self-regulation by the cigarette industry to improve its practices.
- Is the golden age of billing over? Do payers now understand that giving any looseness on
reimbursement will lead to an expansion of supply and then of demand?

- **Will any trends be powerful enough to push popular support toward single payer system/"socialism"?** Maybe impossibly high premiums and copays, and hatred for provider institutions?
  - It is hard to vilify your doctor though, and people become loyal to hospital systems after care, e.g. childbirth.
  - It’s noted that patients typically stay with HMOs for longer than other insurers, so that employers and patients shop and change regularly. Why do patients stay longer with HMOs?
    - Monopoly power locally?
  - Maryland has allowed Health Services Cost Review Commission to set bundled rates for hospitalization
    - How did they get this to work politically?
    - Over what spectrum of care is this determined? Surely not over all CPT codes

- **Theoretically, insurers should compete to lower total healthcare costs for patient and employer, accrete more mass, and further lower prices. Why doesn’t this happen?**
  - First, the total cost of care is divided between employer and patient (employee). The employer has incentive to push more of the cost onto patient. So it’d rather have lower premiums and higher co-pays and deductibles.
  - For a healthy working population, only the rare patient will undergo catastrophes sufficient to bankrupt. Besides the cultural cost of hearing about a coworker get screwed by bad insurance, there isn’t much patient leverage over employer to choose better insurance
  - Ideally, patients would band together and switch employers with better insurance. But given today’s tough job market, people are unlikely to mobilize this way.
  - Insurance is a small portion of total compensation (eg 10% for well-paid positions), so 10% rises in premiums is just a minor change, not worth fighting employees on.
  - Given how often employees change jobs, employers also have less incentive to take care of patients long-term.
    - This has vicious cycle effects, further making employees feel uncared for and shopping for best deals, further making employers care less about long-term retention
  - There is a deep divide between people who believe government regulation is good and protects against bad greedy actors; vs those who believe government is oppressive and profit-seekers create win-win situations.
    - This conflict makes it difficult to agree on an effective solution, leading to lukewarm compromises.
  - Consumer mobilization currently requires much motivation. Is there a way to lower the friction of this barrier?
    - Sign effective power of attorney
    - Auto-deduct donations based on preferences
  - When does government intervention suggest there isn’t enough value for the market to take care of itself?
    - eg EHR adoption - why isn’t there enough competition to make this naturally useful, like restaurants adopting opentable?

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