L7: Health Policy

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Outline

- What are the goals of a health care system?
- What are the problems we face?
- What are the options?
- How do other countries organize health care?
- Nationalized health care versus social insurance
- No country is immune to high health care costs
- The US model before and and after 2014
- The Affordable Care Act: a market for insurance

How should the health care market function?

- This seems like a simple question, but there are no simple answers
- It helps to first think about the **goals** we want to achieve. Here is a partial list:
  - Achieving good population health
  - Access to health care when needed
  - Affordable care
  - Achieving good health care quality
  - Equitable care
- The Institute for Health Care Improvement developed a catchy "triple aim" theme
- It's essentially costs, quality, and outcomes

Triple aim


The IHI Triple Aim
Population Health
Experience of Care
Per Capita Cost

Everything we covered so far in one slide

- Modern medicine started after WWII, about 1 second ago in human history, an infinitesimal fraction in universe time
- Technological advances in part explain increasing costs, but medicine is also a large sector of the economy. This is not necessarily bad. We care about our health
- Health is in part a choice; health is a stock; it accumulates and depreciates. Health investments are affected by education, income, the environment. It's the accumulation of daily behavior and opportunities over a lifetime. We use *market and non-market* goods and services to improve our health. We face trade-offs
- The health care market does not function like a perfectly competitive market. Far from it. Supply of health care is concentrated. Providers have market power (monopolies, oligopolies)
- A key aspect is *uncertainty*. We want protection from uncertainty, which is what insurance provides: it protects us from income loss. But this protection also changes *our* behavior, since we do not face all the consequences and the *behavior of providers*. A lot of incentives to do too much
- The insurance market is complicated too because of asymmetric information. Asymmetric information distorts the market. The US created a patchwork of solutions to deal with these problems

Digression: Arrow's impossibility theorem

- Yes, that same Arrow who wrote about the unique features of the health care market also came up with the **impossibility theorem**. Not necessarily relevant in practice because we can rely on second best, but very interesting and somewhat disconcerting
- Some background first:
- **Transitivity**: Key axiom in utility theory. If you prefer A to B and B to C, transitivity tells us that you prefer A to C
- But what if not? Then you prefer C to A, which **means that you cannot make an optimal choice**
- Would you choose A? Nope, C is better. But wait, B is better than C, so it must be B. But A is better than B... You go around in circles

Digression: Arrow's impossibility theorem

- **Independence of irrelevant alternatives** (IIA): You prefer A to B, regardless of whether C is a choice
- A violation of IIA is this: You prefer A to B, but when C is part of the choice set, you prefer B to A
- Example: you prefer a salad to a burger, but when your friend puts a burger, a salad, and fries in front of you, you prefer the burger to the salad – you can tell stories about this, but note that you are not eating the fries – you choose the burger or the salad, hence the fries are irrelevant (the fries are not the top choices)
- Or the favorite example adapted for current times: A woman asks her date if he would prefer to listen to pop rock or classical music; he says pop rock. When she mentions that she also has reggaeton, he says that in that case he would rather listen to classical
- Is he crazy? Maybe not. I can come up with several stories...
- Unanimity is easy. If everybody prefers A, then we should do A

Digression: Arrow's impossibility theorem

- Adapted from Geanakoplos (1996):
- **Arrow's theorem**: Any system (constitution, voting system) that respects transitivity, independence or irrelevant alternatives, and unanimity is a dictatorship
- A voting system or organization respects **unanimity** if society decides to do A over B when every person prefers A over B. The system respects **independence of irrelevant alternatives** if society's relative ranking (high, low, indifferent) of A and B depends only on the relative ranking of every individual. The system is a **dictatorship** lead by person *n* if society strictly prefers A to B when *n* prefers A to B.
- One practical interpretation is that Arrow's theorem says that there is no perfect voting system. But we accept imperfection and move on... From Arrow: "Most systems are not going to work badly all of the time. All I proved is that all can work badly at times."
- See here for more `https://plato.stanford.edu/entries/arrows-theorem/`

Triple aim, trilemma, quadruple aim?

- Your textbook talks about a trilemma: health, wealth, equity. Not sure if it's the best way to put it but it really is another version of triple aim
- We want to achieve good health, at a cost that is affordable (wealth), and in a way that is equitable. Quality is probably in the good health category?
- Maybe we should talk about a **quadruple aim**:
  1. Good health outcomes (health)
  2. High quality care (quality)
  3. Affordable (costs)
  4. Equitable
- Try to come up with definitions of each and you see how complicated this gets
- Note something else: these factors are also **determined by socioeconomic conditions**
- Note the consequence: are we asking too much of the health care system? Hard to achieve these aims without considering the economy overall and people's behavior

Pathologies?

- I like this one from the textbook: **pathologies**:
- 1) Adverse selection, 2) moral hazard, 3) monopolistic suppliers [market power], 4) health disparities [which is a mirror of income/wealth inequality]
- These are problems that are present in the health system
- So any system we come up with must acknowledge these issues and find a way to address them

More big picture

- Let's try to simplify a bit more:
- We have **goals**:
  1. Health
  2. Quality
  3. Affordability (cost)
  4. Equity
- We have **problems**:
  1. Adverse selection
  2. Moral hazard
  3. Market power (monopolies, oligopolies – concentration)
  4. Income inequality (we could include here things outside the health care system)
- **How we deal** with all these boils down to:
  1. Who provides insurance? (Government, private sector, mix)
  2. Who provides services? (Government, private sector, mix)
  3. Amount of cost sharing (Free for all, small amounts, varies)
  4. How is cost control done? (Cost effectiveness, price controls, other)

What can we do?

- We only have one country with one history
- How have other countries dealt with these problems?
  1. Nationalized health care (Beveridge): both insurance and the provision of health care is controlled by the government
  2. Universal health insurance with private provision of care (Bismkark; Germany, etc)
  3. A mix: employer-sponsored insurance, private market, some government, private provision of health care (USA)
- All have some form of cost control and quantity control
- Keep in mind that some countries care more about income inequality than others, so there is that piece lurking behind

Nationalized health care

- "Nationalization" has a precise meaning. It means that the government takes control of an industry or company
- It might be a weird concept to you, but it happens around the world
- Why? In countries with political instability it happens because the people who are in power want money, so just grab the industries that are more profitable – compensate the owners or not; that's optional
- In some countries, it's a bit more strategic and organized. In Chile, a country proud of its free markets (insert asterisk), the government owns the largest copper mine in the world
- It was taken in 1971 from foreign companies by a socialist government; the dictatorship that took power formalized the takeover
- The argument against this tends to be "efficiency." But is there a problem if the government manages the mine efficiently and uses the profits for schools and roads?

The UK

- Adam Smith's country has a nationalized health care system. How it came to be is an interesting contrast to the US
- After WWII, a plan was devised that was based on the idea of "shared sacrifice and a notion of solidarity between countrymen"
- Remember that the period after WWII is a period of innovation, population growth, optimism – and the birth of modern medicine, although they didn't know that part at the time
- Other countries followed the same model: Canada, Sweden, Australia, Norway, Denmark... with some differences
- I think there was a sense that a united country and that the government can do things for the good of all, but it was also controversial

UK

- The new UK system was approved in 1946. Insurance companies and hospitals were nationalized (there are some private providers)
- Think of the UK model as making health care a **public good (service)**. Like education, postal services, parks, national defense
- There is a whole area in economics on public goods. Usually two criteria: non-rivalrous (supply is not reduce when the good is consumed); non-excludability (the good is available to everybody). Think a public park
- It's a deep change to think of the provision of health care as public good
- But a public park or defense is not like the provision of health care: If I have a doctor appointment tomorrow at 8am, another person cannot have an appointment at 8am

UK - features

- **Insurance**: the government provides health insurance to every citizen automatically. No premiums
- **Provision of care**: the government provides health care, which means that the government owns hospitals, offices, etc. Medical providers are hired by the government (but they could provide services to others)
- **Cost-sharing**: It's low or zero. There are copays for some services
- In other words, nobody pays because *everybody pays*
- What **predictions** can we make based on all we have learned? Probably more utilization than optimal. Medical costs are mostly driven by innovation so it must be hard to control costs and must need to increase taxes
- There is probably a way to deal with overutilization...

How do countries pay for these services

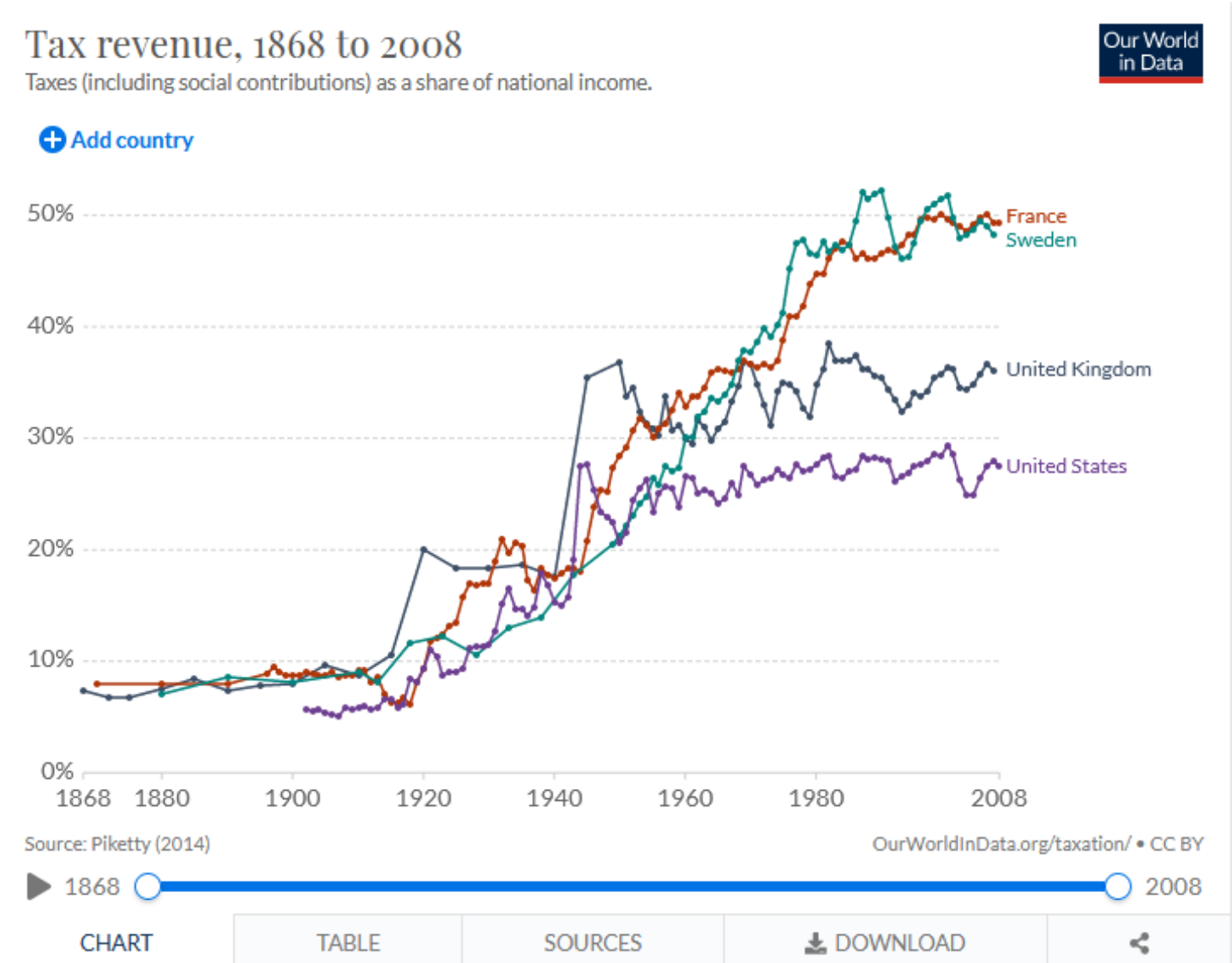


Figure: `https://ourworldindata.org/taxation`

Take a look at corporate taxes

Figure: `https://www.taxpolicycenter.org/fiscal-fact/corporate-income-tax-revenues-ff-03022020`

Detour: Cost-effectiveness or health technology assessment

- **Cost control**? The National Institute for Health and Clinical Excellence (NICE) determines what is covered (cost-effectiveness)
- Most of you need to take a cost-effectiveness class so I won't get too much into this
- Basic idea: when a new technology is available, should we, as a society, use it? Technology means a lot of things: drugs, new procedures, new imaging
- **Does it have value**?
- The idea is to compare the **incremental cost** of the new technology to its **incremental effectiveness**
- The incremental part is important. It's essentially a comparison of marginal cost to marginal benefit

Detour: Cost-effectiveness or health technology assessment

- We are currently doing A. Should we do B?
- Calculate the incremental cost effectiveness ratio (ICER)
  $ICER = \frac{Cost_B - Cost_A}{Effectiveness_B - Effectiveness_A} = \frac{\$}{effectiveness}$
- Usually effectiveness is measured as Quality Adjusted Life Years (QALY)
- So ICER is money per unit of QALY
- Say, a new medication is $300,000 per QALY. Is this good value?
- Need to compare to something else or a **threshold** to determine value

Detour: Cost-effectiveness or health technology assessment

- In the UK, new technology must be approved **in part** based on ICER
- Most importantly, prices are also based **in part** on ICER
- If you are a drug manufacturer who wants to sell a drug in the UK, you want to price it so it gets approval
- By law, in the USA, the government (i.e. Medicare and Medicaid) is **not allowed to use cost-effectiveness analysis** to make coverage decisions
- It's part of the Affordable Care Act
- But note that cost-effectivness does **NOT need to lead to rationing**. It could be used to set cost sharing. For example, encourage the use of cost-effectiveness procedures; discourage the use of procedures that are not cost-effective but setting copays proportion to ICER

Rationing; waiting

- Note that in the UK there is **rationing**; not all procedures or medications are paid even if available (NICE needs to approve them)
- In our system, rationing is **implicit** with access, affordability issues, etc
- There is also the problem of **waitlists** that are common to these systems
- The UK has experienced many problems and there is a long history of reform trying to make the system work better
- Some of the reform target competition, patient choice, etc
- But one important point: a common complaint in the UK is that NHS is chronically underfunded. **So is it a problem of the system or how the system is managed**?
- Sweden, with a similar system, although with some differences, does better: `https://www.commonwealthfund.org/international-health-policy-center/countries/sweden`

What about the goals and pathologies?

- Adverse selection? Not an issue. Everybody has health insurance; everybody pays taxes. The healthy pays for the sick
- Market power? Well, the government is the insurance company and the government provides the care. It can negotiate with itself. Innovation could be discouraged, though
- Moral hazard? Well, in the strict definition, moot point, but there is the problem of **overutilization** because it's free at the point of service. Waitlist are probably a deterrent
- Income inequality? The system for sure puts people in a more level field. On the other hand, countries with more centralized medicine tend also to have stronger safety nets
- **Goals**? Equity for sure, cost control is a problem, quality problems always present
- Affordability when needing care is not a major concern, but it is so as a country: **modern medicine is expensive, there not way around this**

What are the lessons for us?

- Keep in mind that a system like the one in the UK in the US would be an **extreme shift** (as in extreme!). It would require *nationalization*
- Most proponents of universal insurance are **not** in fact proposing a system like in the UK, just the insurance part, although sometimes is not clear
- Administrative savings? Maybe in some aspects, but don't forget the bureaucracy that would need to be created. To put it in perspective, Medicare currently administers the insurance of about 61 million people; that's **just 18.5% of the population** (331 million)
- Lower costs? No cost sharing means more utilization. Would need to find a way to control costs: cost effectiveness? Rationing? Waitlists? Price controls?
- For sure taxes need to go up to fund such a system
- **But there could be much to gain**. It's difficult to have a good, rational discussion about this, like many other topics nowadays

Big picture

- Remember the key features

1. Who provides insurance? (**Government**, private sector, mix)
2. Who provides services? (**Government**, private sector, mix)
3. Amount of cost sharing (**Free for all**, small amounts, varies)
4. How is cost control done? (**Cost effectiveness**, **price controls**, **waitlist**, other)

Social health insurance

- We are now going to cover a kind of hybrid model
- Textbook calls it the Bismark model, as in Otto von Bismark, the (first) Chancellor of modern Germany around 1870
- We think of Germany as one country now, but Germany is made of historically many different regions (Prussia, Bavaria, etc), religions, tribes, languages, administrations, etc
- It's reflected in the many names Germany has in different languages: Deutschland, Alemania, Allemagne, Niemcy, Saksa
- The modern version of health insurance in these systems follow some key characteristics, but the details are complicated
- **Caveat when reading Chapter 17**: a bunch of countries mixed together, but the there are many differences among countries. The German plan details are a bit sketchy in that chapter (see Canvas PDF for a better description)

Social health insurance

- **Universal health insurance**: everybody has health insurance, either provided by private companies or the government. Plans are regulated by the government
- Premiums are (mostly) not based on risk. This is called **community rating**. You pay the same regardless of your health
- Community rating is the opposite of **risk rating** (think pre-existing conditions)
- **Providers are NOT owned by the government**. This is a key difference with nationalized health care systems
- But it's not a free-for-all scheme. There is **heavy** regulation in every single aspect of health care – that's another feature

Social health insurance

- Going back to our classification:
  1. Who provides insurance? (Government, **private sector**, **mix**)
  2. Who provides services? (Government, **private sector**, mix)
  3. Amount of cost sharing (Free for all, small amounts, **varies**)
  4. How is cost control done? (**Cost effectiveness**, **price controls**, waits, **other**)
- Again, many countries have adopted different versions, so it's hard to make a blank statement about how this system works because the details matter

Germany

- This is a good summary:

  "Approximately 86 percent of the population is enrolled in statutory health insurance, which provides inpatient, outpatient, mental health, and prescription drug coverage. Administration is handled by nongovernmental insurers known as sickness funds [Krankenkassen]. **Government has virtually no role in the direct delivery of health care**. Sickness funds are financed through general wage contributions (14.6%) and a dedicated, supplementary contribution (1% of wages, on average), both shared by employers and workers. Copayments apply to inpatient services and drugs, and sickness funds offer a range of deductibles. Germans earning more than $68,000 can opt out of SHI and choose private health insurance instead. There are no government subsidies for private insurance."
- So a person making $70,000 contributes about $10,220 (employer pays half, but nominally) – and there are copays
- From `https://www.commonwealthfund.org/international-health-policy-center/countries/germany`

Insurance market

- People can choose their insurance provider, kind of like buying car insurance here
- Some key features:
  1. **Minimum standards**: insurance companies cannot sell any policy they want. There is tight control on the procedures and treatments that will be covered. Limits on copayments and deductibles are set
  2. **Enrollment**: Insurance companies must enroll anybody who wants to buy the policy
  3. No premium based on risk (community rating), but risk could be used in private insurance
  4. Mandate to have health insurance.
- Note something in there. Is there anything that prevents insurance companies to try to enroll the healthy (cream skimming)?
- **Not exactly**. This has been the subject of research in Germany and other countries. Lots of tactics to avoid insuring the sicker; separating equilibrium

Let's go back to our problems

- Our pathologies:
  1. Adverse selection: There is adverse selection, but up to a degree since there is a mandate. Everybody needs to have health insurance
  2. Moral hazard: It's present, but utilization is controlled by managing care in multiple ways, including **cost sharing** (copayments and deductibles)
  3. Market power (monopolies, oligopolies – concentration): Markets are tightly regulated; and sickness funds have a lot of power
  4. Income inequality/equity: Well, countries with these systems also have strong welfare systems
- Key thing to understand: how does the insurance market work?

Cost control?

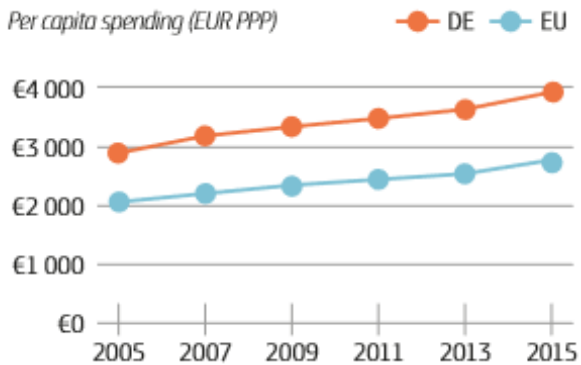
- Costs are a problem like in any other country because health care is expensive
- First tool are **price controls**. There are differences in these systems, but in general it is not a provider that negotiates with each insurance company, but rather with the aggregate of insurance companies (sickness funds)
- The sickness funds can negotiate directly to set prices. Think about market power. Clearly, sickness funds have a lot of power –they collectively insure 86% of patients
- Cost-effectiveness analysis: There is usually some version of cost effectiveness, but details matter. In Germany, the sickness funds could use cost-effectiveness analysis to decide on coverage, but it's different than in the UK. Always controversial
- For example, Germany now has copayments for medications; higher copays for less cost-effective meds

Big picture

- A nationalized system takes over the health care industry
- A social insurance model mostly takes over the provision of insurance, not providers, but also heavily regulates the markets
- Note something that is very important: in social health insurance, the **government is usually not directly competing** with private companies – or at least both are subject to similar rules
- **None of these countries let free markets deal with health care**. Some a bit more than others, with a lot of regulations
- **All of these countries** are suffering from the same problem: health care costs keeps increasing. All these countries have **hefty taxes** to pay for it
- Some countries have borrowed ideas from the US: DRG payments (prospective payments). Some countries have pioneered models that we think are American: HMOs (Switzerland)

Not cheap, costs increasing

- No immunity to cost increase



Health expenditure is high. In 2015, Germany spent EUR 3 996 per capita on health, the second highest amount in the EU, and 43% more than the average (EUR 2 797). In fact, Germany spends a greater proportion of its GDP on health (11.2%) than any other country in the EU (EU average: 9.9%). While 84.5% of health spending is publicly funded – again the highest share in the EU – out-of-pocket spending amounts to 12.5% and is below most other EU countries.

Figure: `https://www.euro.who.int/__data/assets/pdf_file/0004/355981/Health-Profile-Germany-Eng.pdf`

But they get services in return

- % of **unmet needs**. Most countries with less than 10%

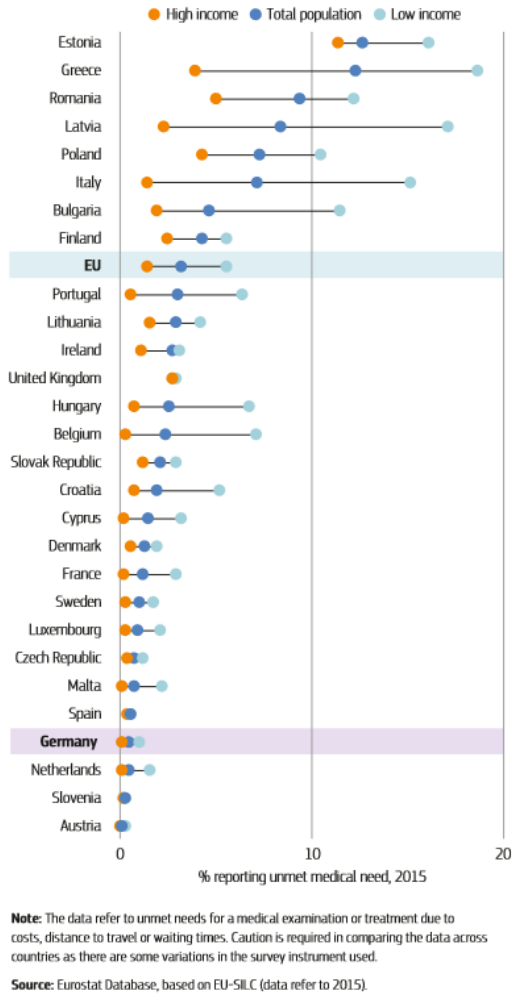


Figure: `https://www.euro.who.int/__data/assets/pdf_file/0004/355981/Health-Profile-Germany-Eng.pdf`

Big picture

- Some current proposals for a **public option** are popular, but there are a lot of concerns because the devil is in the details: **How** is the government –with all its power– going to compete with private companies?
- Few proposals detail what happens with employer-sponsored insurance. How would it coexist with a government run insurance? Some say that it will stay, but how is that supposed to happen?
- **Medicare for all** proposals sound a bit closer to social health insurance, although they are often not clearly formulated. Would it replace insurance companies? Compete with them? How?
- With lower premiums and copays, you can see employer-sponsored insurance collapsing, especially if on top of it public insurance has more power to negotiate prices with providers. You could also see a mess if public insurance is NOT allowed to negotiate prices with providers
- I wish we could discuss the amazing GOP health care plan that is coming any day now and will be great, but to date there is no plan to discuss (screaming "free markets!!" is not a plan)
- On the other hand, there is also not a *concrete* single payer plan or public option plan. Plans with TBD asterisks are not plans

The US model

- You're obviously more familiar with the US model
  1. Who provides insurance? (Government, private sector, **mix**)
  2. Who provides services? (Government, **private sector**, mix)
  3. Amount of cost sharing (Free for all, small amounts, **varies**)
  4. How is cost control done? (Cost effectiveness, price controls, waits, **other**)
- One key aspect of our system: no universal insurance (mandate repealed)
- No price controls
- No heavy regulation, if we define heavy regulation following a country like Germany

The US model before and after 2014

- Because the Affordable Care Act passed in 2010 (but took effect in 2014), it's helpful to separate our discussion into two periods, before and after 2014
- It's great that your textbook was published in 2014; we have the before. There is a chapter on the after that I'll post on Canvas
- How is insurance provided?
- A mix of public and private insurance, with an emphasis on "choice"

Historical accidents

- Before and after WWII, insurance was offered as a work perk, a way of increasing people's total salary without actually increasing salary per se (convenient during the war effort when salaries were controlled)
- Among advanced nations, it's fairly unique to the US, but common in other countries too, although a lot of countries also have a parallel insurance system
- Like the UK and other countries post ward, President Harry Truman tried to pass health care reform in the 40s, after WWII:

  "Healthy citizens constitute our greatest natural resource, and prudence as well as justice demands that we husband that resource... as a nation we should not reserve good health and long productive life for the well-to-do, only, but should strive to make good health equally available to all citizens."
- `https://www.history.com/news/harry-truman-universal-health-care`

Historical accidents

- There is a lot of interesting historical facts about the attempt to reform the health care system
- As a country we have been talking about this for the last 80 years – essentially since the birth of modern medicine
- We regularly have the same debate, with the usual suspects are always involved: the American Medical Association –and later– insurance companies, hospital associations, advocacy groups
- The monster, boogeyman of **social medicine** seems to be an effective enemy, from the very beginning (see Truman's letter)
- Ronald Reagan famously recorded a message (LP) against Medicare: subsidized medicine would curtail Americans' freedom; "pretty soon your son won't decide when he's in school, where he will go or what he will do for a living. He will wait for the government to tell him"
- In these discussions, "social medicine" is not well defined, but it seems to mean that the government should not be in the business of interfering in health care markets, sometimes in any shape or form

Medicare and Medicaid

- Logically, there is a problem with a system in which insurance is obtained through employment: the elderly don't work (but as we will see later, not *all* employers were or are required to provide insurance either)
- A major change happened in 1965: with **risk rating**, insurance policies were too expensive for most seniors. Adverse selection was a problem: only the sicker had incentives to buy insurance, which made insurance even more expensive
- Under Lyndon Johnson, Medicare and Medicaid were created: insurance for the elderly or unemployed/poorer people who temporarily might need coverage
- Medicaid was never intended to be long-term care insurance

The US before 2014

- And that's the system we had for about 50 years (until 2014):
- Federal insurance for the elderly (65+), disable, ESRD: Medicare
- Federal + state insurance for the unemployed/poor [temporary]: Medicaid (highly variable, because benefits depend on states). Recall that Medicaid covers long-term nursing home care as well
- Employer-sponsored insurance for those employed (group insurance)
- Private insurance (non-group) with risk rating
- Other: Veteran's Affairs (VA), Indian Health Service
- No insurance for those who are unemployed, have a job that does not provide health insurance, had a prexisting condition that makes (non-group) insurance expensive – and not poor enough to quality for Medicaid
- Wanted to start your own company? Well... Consolidated Omnibus Budget Reconciliation Act (COBRA) was a possibility [20 or more employees], but also very expensive

Trends in the US

- 15% of about 330 million is close to 50 mill uninsured; or about 8.7 Colorados

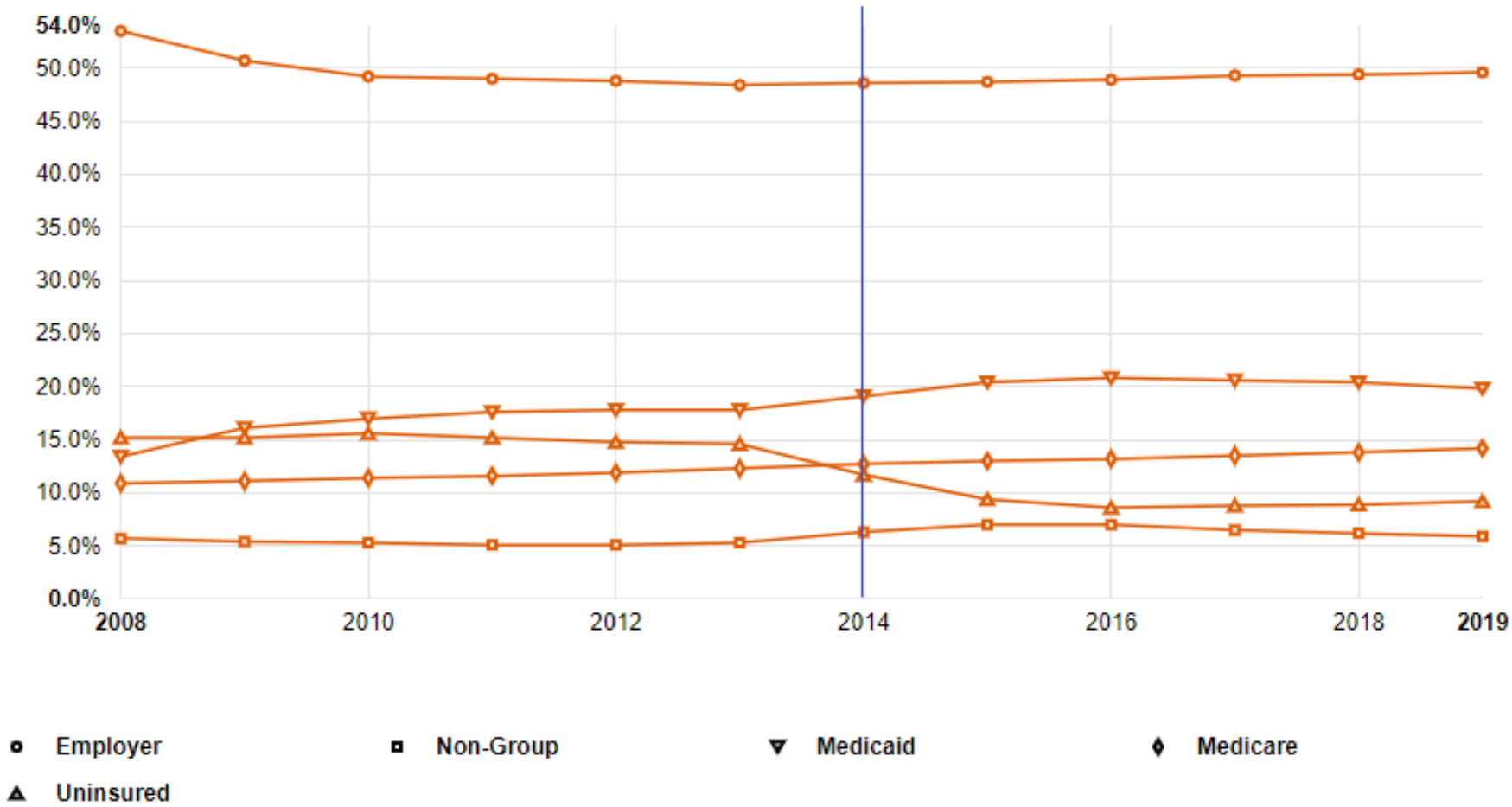


Figure: `https://www.kff.org/other/state-indicator/total-population/`

Trends in the US

- 1% is about 3.3 million people

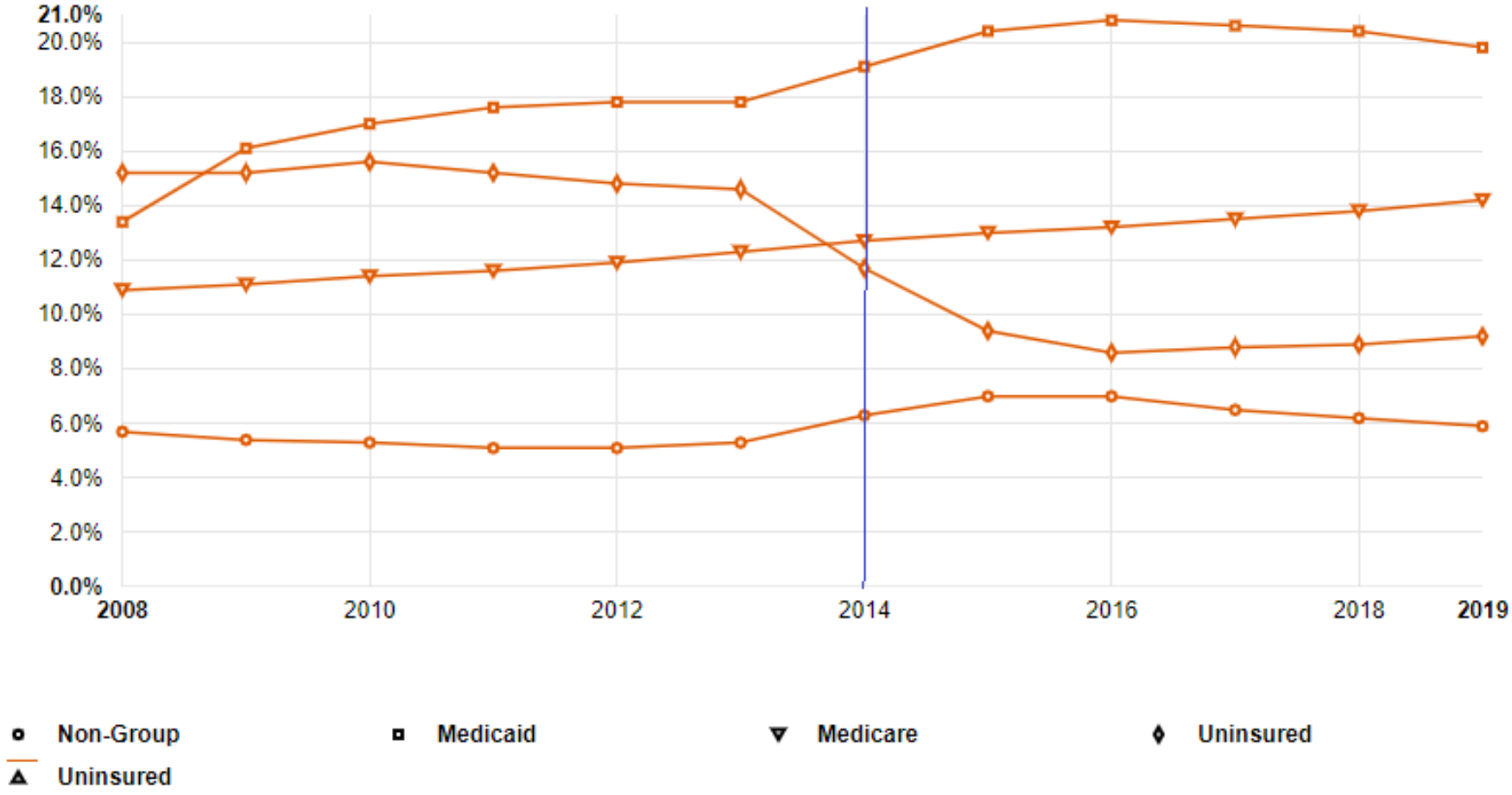


Figure: `https://www.kff.org/other/state-indicator/total-population/`

Trends in the US - definitions

- Data from the American Community Survey. Definitions from KFF:
- Medicaid: Includes those covered by Medicaid, Medical Assistance, Children's Health Insurance Plan (CHIP) or any kind of government-assistance plan for those with low incomes or a disability, as well as those who have both Medicaid and another type of coverage, such as dual eligibles who are also covered by Medicare.
- Medicare: Includes those covered by Medicare, Medicare Advantage, and those who have Medicare and another type of non-Medicaid coverage where Medicare appears to be the primary payer. Excludes seniors who also report employer-sponsored coverage and full-time work, and those covered by Medicare and Medicaid (dual eligibles).
- Employer: Includes those covered through a current or former employer or union, either as policyholder or as dependent
- Non-Group: Includes those covered by a policy purchased directly from an insurance company, etiher as policyholder or as dependent
- Uninsured: Includes those without health insurance and those who have coverage under the Indian Health Service only.

Employer-sponsored insurance

- The first thing to understand about employer-sponsored health insurance is that **YOU** are paying for it (**wage pass-through**)
- Nominally, it's a work benefit. Your employer pays a portion of the premium (about 73% on average), and you pay the rest. Some companies are more "generous" than others

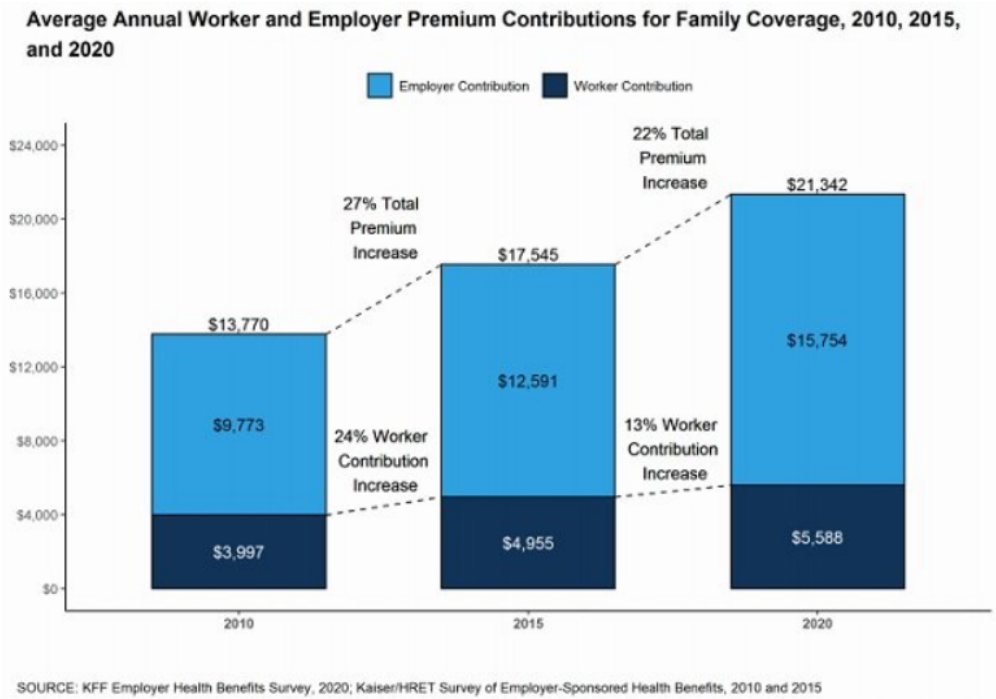


Figure: `https://www.kff.org/report-section/ehbs-2020-section-1-cost-of-health-insurance/`

Insurance cost

- Insurance is expensive, even if you don't "see" it

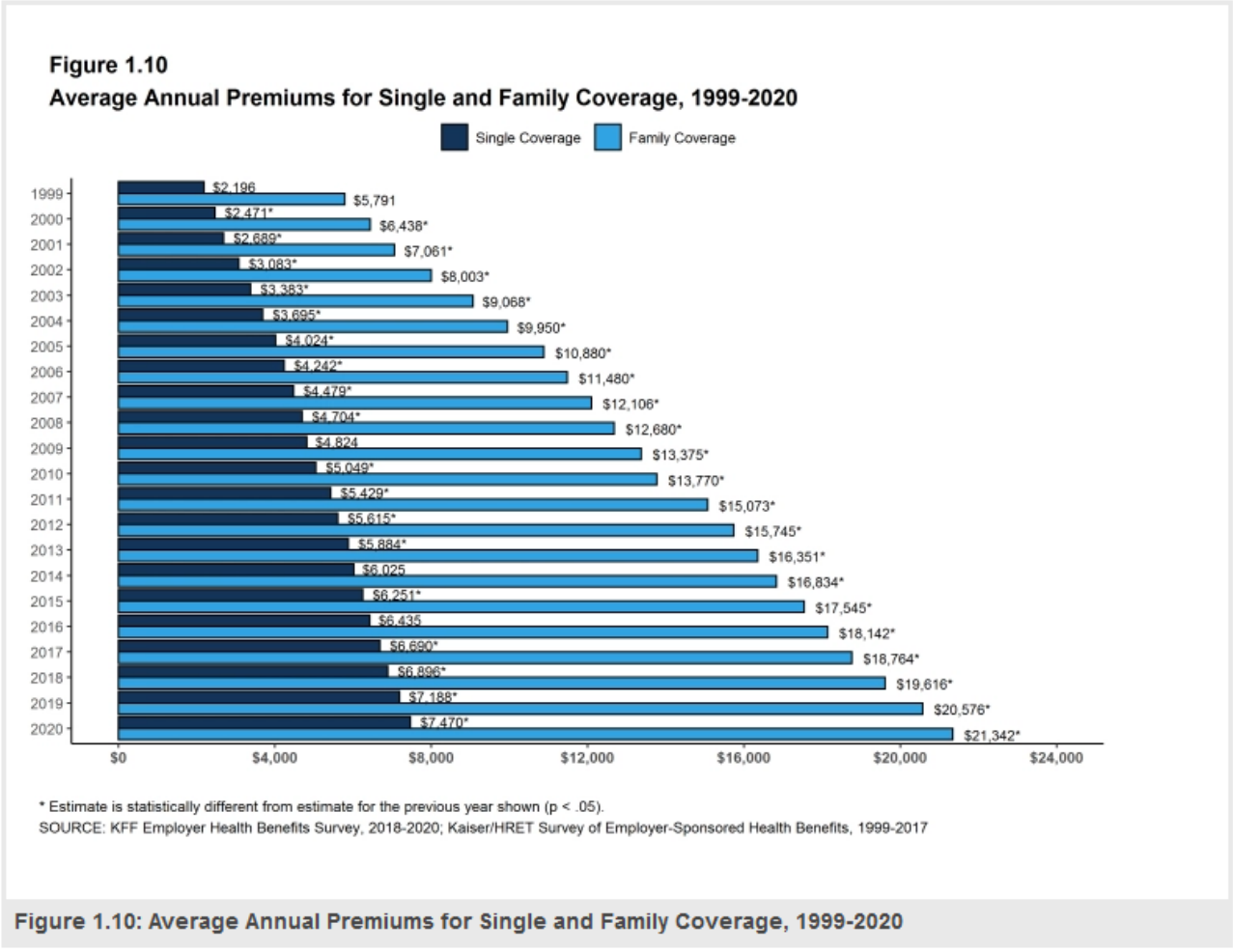


Figure 1.10: Average Annual Premiums for Single and Family Coverage, 1999-2020

Figure: `https://www.kff.org/report-section/ehbs-2020-section-1-cost-of-health-insurance/`

Wage pass-through

- This is an important concept to understand, and a concept that has a lot to do with attempts to do health policy reform
- **Wage pass-through** in general means redirecting funds *to* or *from* wages. In this context it means that the cost of health insurance is coming from wages, even if nominally a company pays a large portion
- (Another use of the term: there is also wage pass-through legislation. Say, Medicaid agrees to reimburse more for nursing home care, with the condition a portion should be used to increase wages in nursing homes)
- It's not hard to understand how this works in practice. When we want to hire a new person, we do not use the wage the person will receive as the cost of hiring the new person. We look at the overall costs: salary + fringe benefits
- If salary is $100,000, in our accounting that person cost is $124,000, with insurance taken into account (plus workers' compensation, retirement plans, and family and medical leave)

How does employer-sponsored insurance works?

- Employers have a **pool** of workers. They form a group (hence, **group insurance**). By definition, this pool is on the healthier side –they are working after all, most likely aged 18 to 64
- The employer negotiates with an insurance company to get its employees covered. The insurance company doesn't have perfect information, but they have a rough idea about the cost of care for the pool (obviously, if they have insured the employees before, they can see how much they paid the previous year)
- Premiums are going to be based on the health of the pool and the **negotiation power** of the company. Larger companies have more power (think CU)
- **All employees pay the same premium**, and some can choose insurer (again, usually larger companies)
- You can see the incentives. A company has an incentive to have a healthier pool, but they cannot (openly) discriminate
- There is evidence that this happens, of course

But why does it work?

- The reason employer-sponsored has "worked" is because healthy employees subsidises unhealthy ones (remember that you can be one or the other in any given year) and companies require you get insurance
- Think about it this way: there is a *mandate* to purchase insurance, which is they way your company deals with adverse selection
- You can opt-out in some circumstances, but that makes a company happy: they are still paying you a lower salary (not sure how common is this, my old/small company in Boston would increase salary if one opted out from insurance, but you had to show proof that you were insured somewhere else)
- Couples/families can do this: use the more generous insurance, which often means the larger employer
- **Why wouldn't a healthy/low-cost worker leave for a higher paying job without insurance**? Because it's difficult given the types of jobs that offer health insurance...

But why does it work?

- Think about student insurance. Why is it "cheap"? Because you are spring chickens
- And because it's often not the best insurance and nowadays have high deductibles. Some universities offer their own health insurance – cheaper
- But same idea: the insurance company prices according the **pool** of people
- Employer-sponsored insurance has many drawbacks, including job-lock and is very **regressive**: those with higher incomes pay less
- **Regressive** and **progressive** have very precise meanings in economics; it's not about politics, although the term has been adopted. A progressive tax is a tax in which the tax rate increases (i.e. "progresses") as the taxable amount increases; the opposite is regressive
- **Compare to Germany for example: premiums depend on income**

  (Scientific words are a problem. Think dark matter, dark energy, confidence interval, moral hazard, utility... We would be better off using random names so they don't get confused. If I invent something, I'll call it Ella's law or the Freddy principle – then people have to define it every time they talk about it)

Not all jobs offered insurance

- Before 2014, there was **NO requirement** for employers to offer health insurance
- It was a perk that large, more profitable companies could afford because it essentially means that a company was offering higher wages than a company that did not offer insurance
- So a lot of people who were working could not get health insurance, and these were also the jobs that paid less
- That changed in 2014: The ACA's employer shared responsibility provision penalizes employers with 50 or more full-time equivalent employees (FTE) who who work at least 30 hours a week (employer mandate)
- Losing a job was and is a problem. There is COBRA (Consolidated Omnibus Budget Reconciliation Act of 1985) that allowed people to keep their insurance company, but then they had to pay the full premiums plus 2%

Medicare

- Medicare is insurance for the elderly: beneficiaries and spouses over 65 or the disable or those with End Stage Renal Disease (ESRD). Paid by taxes (and premiums, but not high compared to costs)
- Medicare currently insures 61 million people, and growing due to the aging of the population
  - Part A: covers inpatient care
  - Part B: covers outpatient and physician services
  - Part C (aka Medicare Advantage): Beneficiaries receive care through a private company, often HMO
  - Part D: Implemented in 2006, it covers (some) prescription drugs. No prescription benefits before 2006
  - People can buy supplemental insurance to cover some things Medicare doesn't cover
- Part A has a premium, but most people do not pay it (those who worked over 10 years, paid Medicare taxes)
- Part B has a premium (as of 2021: $148.50 per month); depends on tax returns (`https://www.medicare.gov/your-medicare-costs/part-b-costs`)

Why part C, Medicare Advantage?

- Traditional Medicare or fee-for-services pays providers in the same way you pay your car mechanic: for everything they do
- So the idea of Medicare HMO was to change that. Medicare pays an insurance company to act as a **gatekeeper** to control costs
- Medicare pays the HMO on a **capitated** basis: a fixed amount per enrollee (by it depends on risk; risk adjustment payments). The idea is that the HMO has an incentive to do *less*, not more
- But... uh... Medicare actually spends more money than otherwise – payments to insurers are generous, insurance companies want those patients, healthier patients have incentives to get HMO plans (lower premiums)
- And next year if they get sick they can enroll in traditional Medicare to so they don't have HMO restrictions

Part C enrollment

- High variability

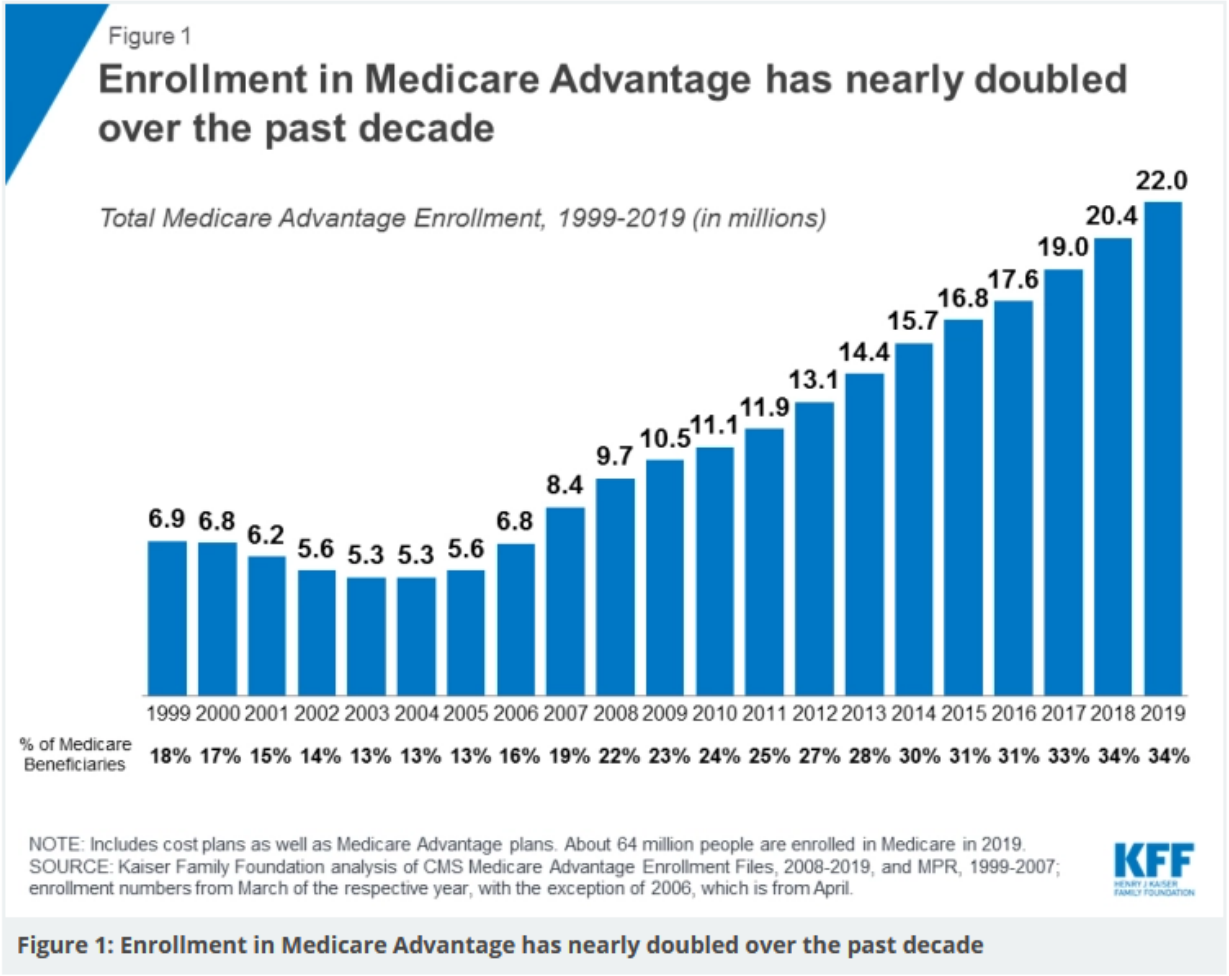


Figure 1: Enrollment in Medicare Advantage has nearly doubled over the past decade

Figure: `https://www.kff.org/medicare/fact-sheet/medicare-advantage/`

High variability

- Insurance companies are free to enter or exit a market

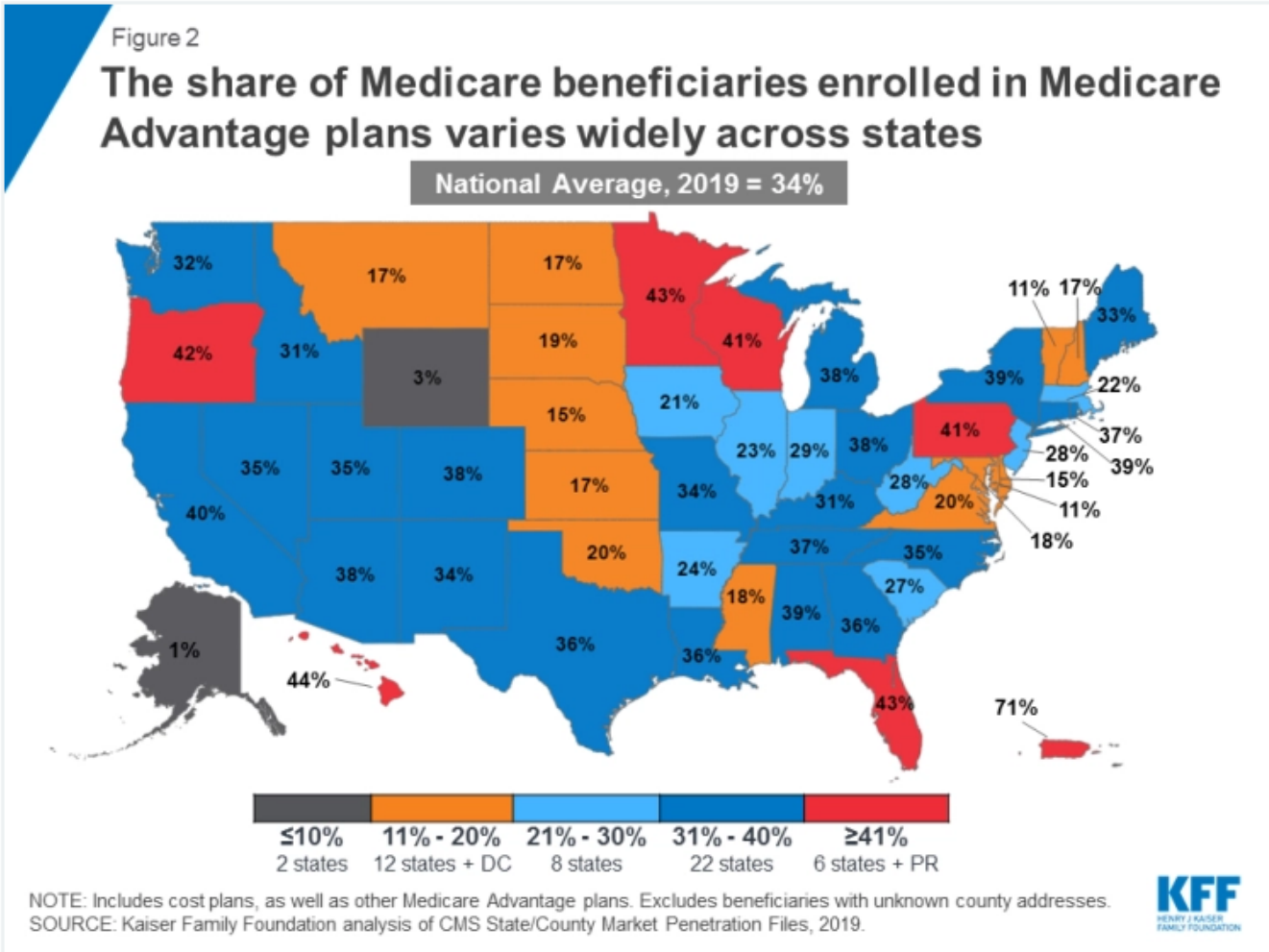


Figure: `https://www.kff.org/medicare/fact-sheet/medicare-advantage/`

Part D

- Before 2006, the only way to have coverage for drugs were supplemental insurance plans, but of course they were expensive (these are people over 65)
- The Bush administration passed Medicare Part D passed in 2006
- Not managed by Medicare but by private insurance companies
- Medicare (or the private insurance companies) are not allowed to negotiate prices with pharmaceutical companies
- You may not remember this, but the roll out of the program was messy to put it mildly
- Brought us the infamous **doughnut hole** (later fixed)

Medicaid/State Children's Health Insurance Plan (SCHIP)

- Not centrally administered. It's a partnership between the Federal government and states
- States set benefits and also budgets, which means that generosity of plans and some eligibility criteria varies by state
- But the Federal government matches spending, so roughly spending is 50% Federal government and 50% states
- Eligibility depends on income (aka **means-tested program**)
- Medicaid pays for long-term nursing home stays
- Copayments are low and so are **reimbursement rates to providers**; some doctors do not accept Medicaid enrollees. See Asplin et al. (2005)
- Medicaid also has HMO plans, restrictions on some Medications (**rationing**)

Work incentives and Medicaid

- A concern that preoccupies some is that Medicaid provides disincentives to work
- Eligibility depends on income. The more a person works the more income a person makes, but there is level of income that creates a "notch:" working more means *less* income because the person could lose Medicaid
- Incentives matter, but the reality of living at 100% (or 133%) of the Federal Poverty Level makes the problem of disincentives rather trivial
- But in some circles it drives discussions about working requirements to qualify for Medicaid
- Another concern is fraud. Of course that it exists, but fraud also exists in any type of insurance, private, Medicare, life, car...

Medicaid

- Characteristics

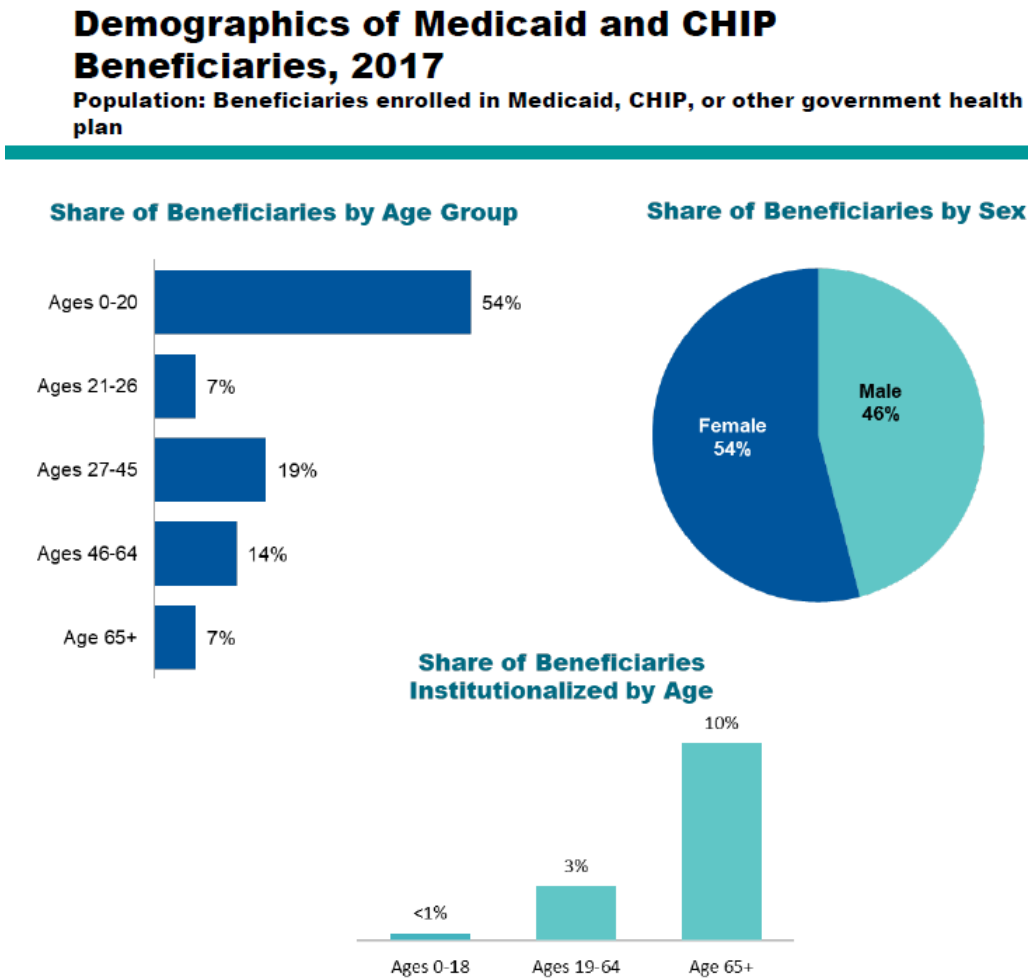


Figure: `https://www.medicaid.gov/medicaid/quality-of-care/downloads/beneficiary-profile.pdf`

Medicaid

- Race/ethnicity

Location	White	Black	Hispanic	Other	Total
United States	40%	21%	25%	14%	100%

Figure: `https://www.kff.org/medicaid/state-indicator/medicaid-enrollment-by-raceethnicity/`

Medicaid - utilization vs enrollment reason

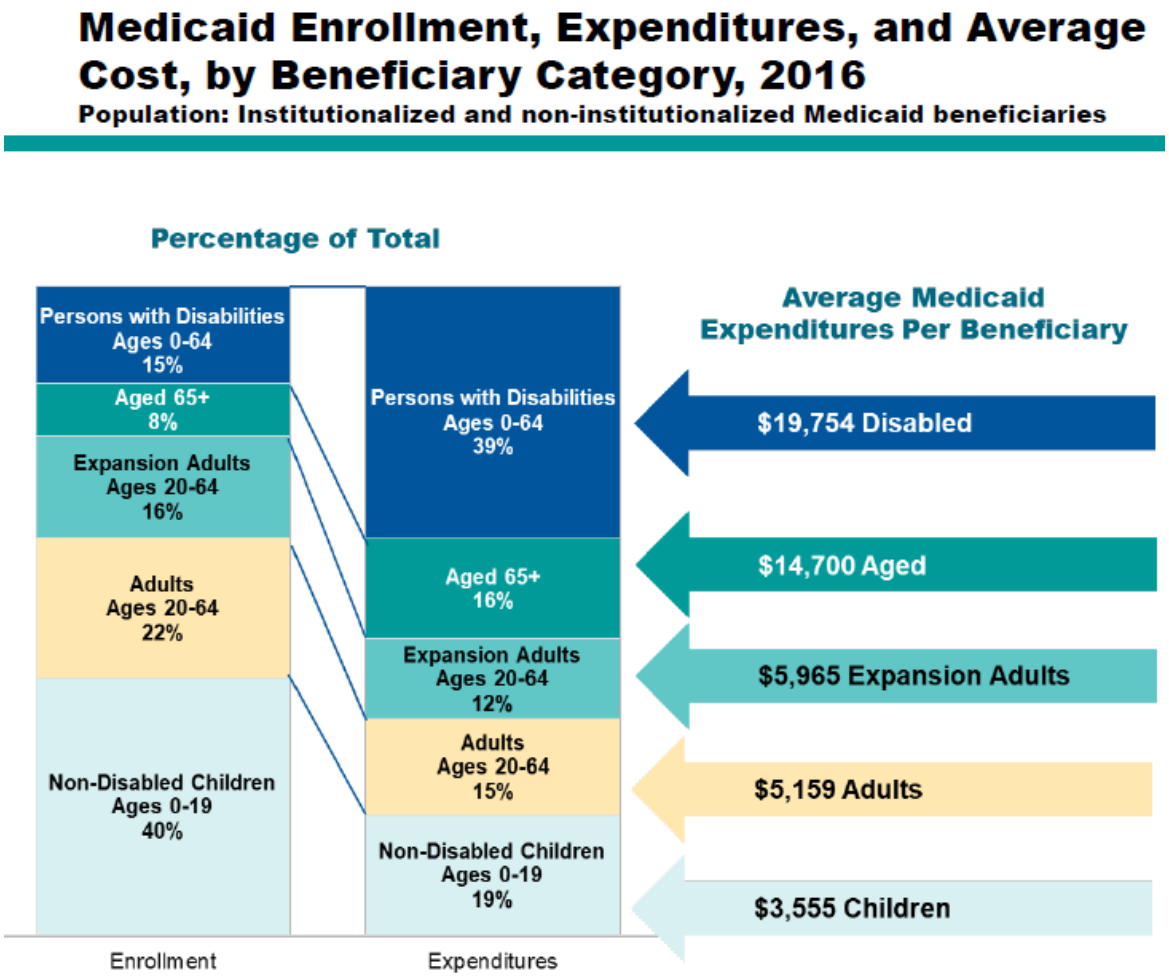


Figure: `https://www.medicaid.gov/medicaid/quality-of-care/downloads/beneficiary-profile.pdf`

Non-group insurance

- What if you were unemployed and wanted to buy insurance? You kind of had to be healthy or had savings or be married to a person with a job
- Risk rating was in place (pre-existing conditions), so price depended on a health assessment or you could be denied coverage – or denied payment if the insurance company could argue that you had that condition at the time of purchased the policy
- What if you get sick and can't keep working? Precarious position. Could use COBRA, but needed savings. Many must use Medicaid
- What if you were employed but your employer didn't offer health insurance? Same as with the unemployed

Changing things

- What if we wanted people to be able to buy health insurance if unemployed or employed but without employer-sponsored insurance? Or left out because of pre-existing conditions?
- One way is to **pool them together** – essentially get "group" insurance by combining all of them into one group. It's a fragmented market, but we can create a larger one
- But insurance companies could still refuse some of them based on risk ratings (pre-existing conditions). After all, they were not being insured before, and nobody was "forcing" this situation. In part, it was also affordability
- What could we do?

Changing things

- We could require insurance companies to insure anybody who wants to buy a policy. But then insurance companies have incentives to create cheap policies that covers very little when needed
- We can then require minimum standards of coverage and same prices not based on risk (**community ratings**)
- But then we would trigger a **death spiral**. People could just buy insurance whenever they need it; the healthier/younger/low-cost may not buy it
- We could now require everybody to buy insurance (**individual mandate**), which prevents a death spiral (and higher prices)
- But what if people still can't afford coverage? We could also give people **subsidies** based on income including using existing mechanisms like Medicaid (i.e., expand Medicaid)
- To make transactions easier, we can come up with an online market so these transactions can be done more easily (**insurance exchange**)

That's the Affordable Care Act

- A) **Eliminate risk rating** (pre-existing conditions), create minimum standards for plans, same prices. Anybody can buy insurance
- B) To avoid death spiral, require an **individual mandate**: the uninsured must buy health insurance or pay a penalty
- C) Provide **subsidies** based on income so people can afford the plans
- D) To prevent more people following into cracks, **penalize companies that do not offer insurance**
- That's the big picture view. A, B, and C are sometimes called the three-legged stool. You need the three elements for the stool to work
- Notice a key aspect: no change in Medicare, no change in employer-sponsored insurance. No "rationing" using cost-effectiveness
- Lots of details to cover (the ACA changed many other things)
- **Very little cost control**; negotiation power of insurance companies diminished, difficulty controlling prices