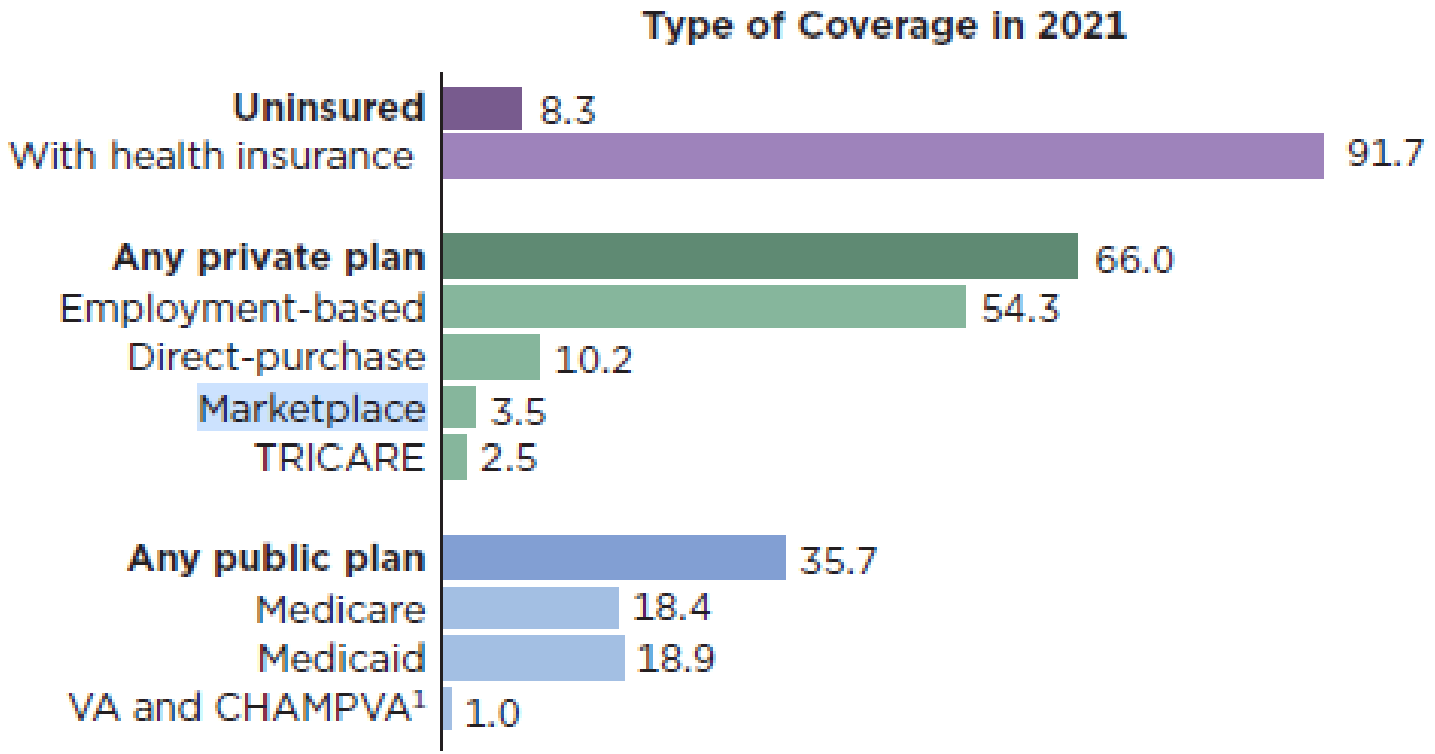
HEALTH INSURANCE AND PRICES

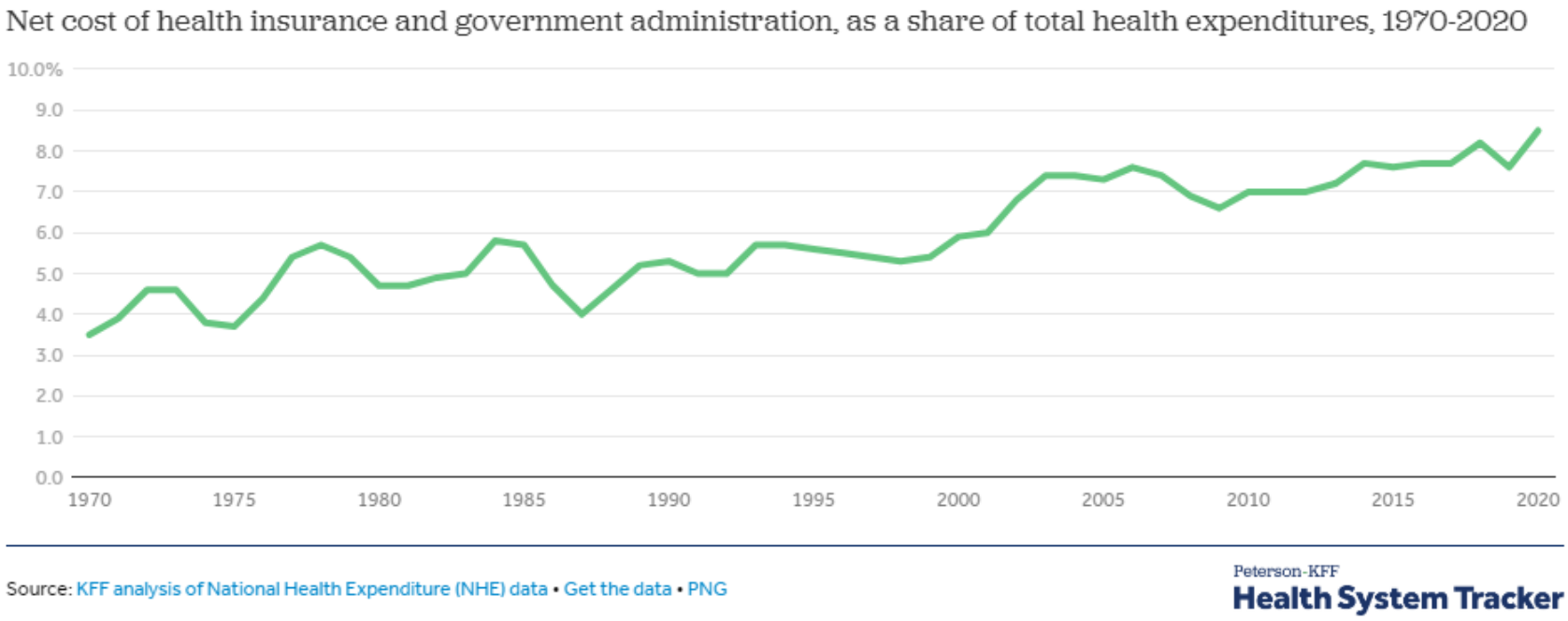
- HEALTH INSURANCE IN THE U.S.
- HOW DOES (HEALTH) INSURANCE WORK?
- SELF SELECTION INTO INSURANCE
- OVER-CONSUMPTION WITH INSURANCE
- HOW CAN WE BRING DOWN PRICES?
- IF WE CAN'T BRING DOWN PRICES,
  THEN WHAT DO WE DO?
- WHAT DO OTHER COUNTRIES DO?
- OBAMACARE

1. HEALTH INSURANCE IN THE U.S.



- Figures add to > 100 as people can have more than one policy.
- Nonelderly get insurance primarily through employment.
- Elderly get insurance primarily through Medicare.
- Many uninsured is an unusual feature of U.S.

- All the different insurance schemes **add overhead**.

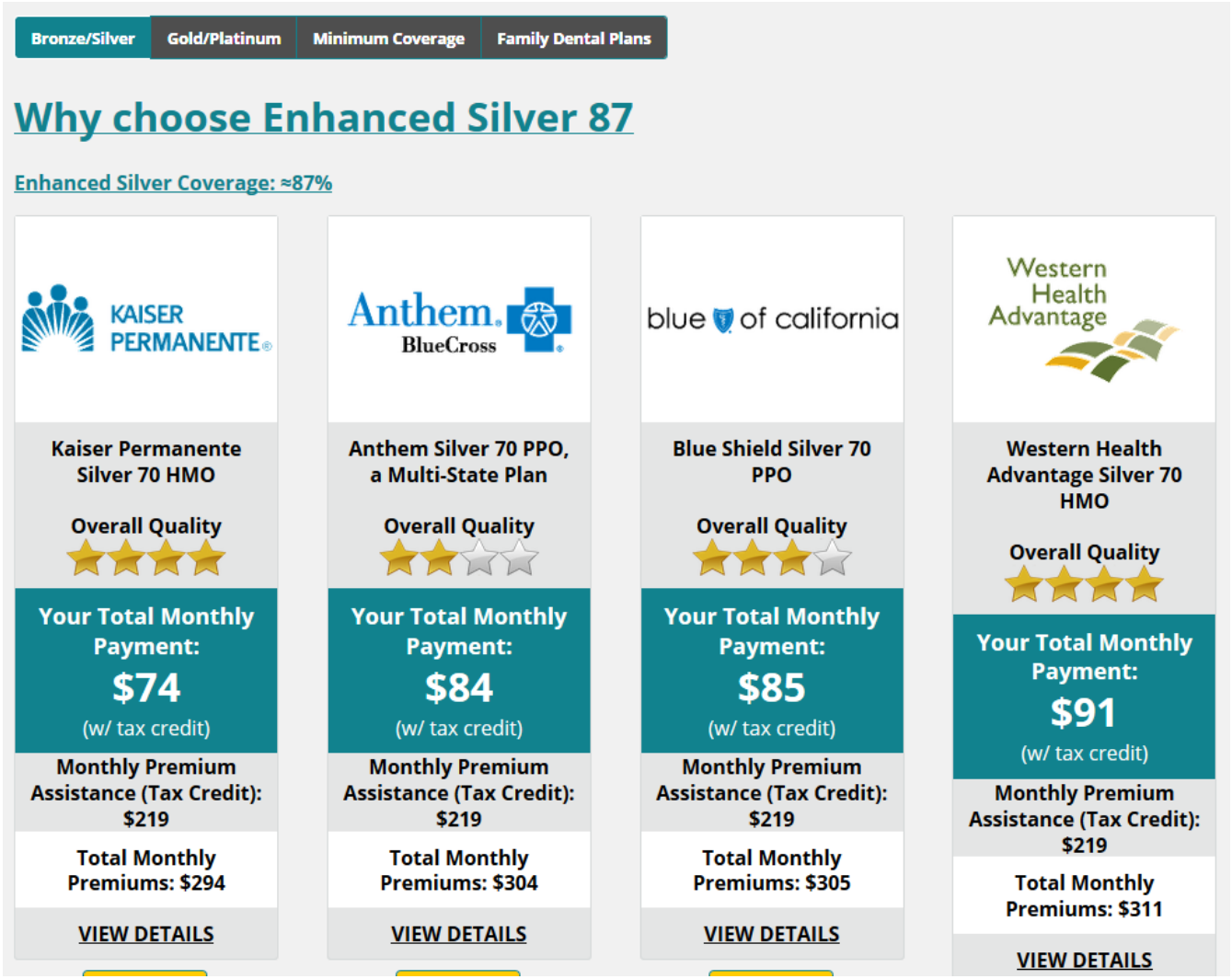


In 2020, administrative expenses – which include the cost of administering private insurance plans and public coverage programs but not the administrative costs of health providers – represented 8.5% of total national health expenditures, up from about 3.5% in 1970, and 7.6% in 2019.

Source: https://www.healthsystemtracker.org/chart-collection/u-s-spending-healthcare-changed-time/

Insurance Choice can be complicated

Covered California (Obamacare) 2016 for 25 year-old in zip code 95616



What is HMO, PPO, copay, deductible ?

Enhanced Silver 87 Plan Details

Available Plan Benefits in blue are subject to medical or drug deductible.

Copays in Black are Not Subject to any Deductible and Count Toward the Annual Out-of-Pocket Maximum

Before selecting a plan to enroll in, always check the plan's Summary of Benefits and Coverage (SBC) and Evidence of Coverage (EOC) documents for specific costs. There may be variations between products that are not reflected here.

ENHANCED BENEFITS FOR INDIVIDUALS

Key benefits	Enhanced Silver 87
Individual Deductible	$550 medical deductible $50 pharmacy deductible
Family Deductible	$1,100 medical deductible $100 pharmacy deductible
Preventative Care Copay[1]	no cost
Primary Care Visit Copay	$15
Specialty Care Visit Copay	$25
Urgent Care Visit Copay	$30
Tier 1 (most generics) Drug Copay	$5
Lab Testing Copay	$15
X-Ray Copay	$25
Emergency Room Facility Copay	$75
High cost and infrequent services (e.g. Hospital Stay)	15% of your plan's negotiated rate
Hospital Stay Physician Fee	15% of your plan's negotiated rate
Tier 2 (preferred brand) Drug Copay after Pharmacy Deductible (if any)	$20
Tier 3 (non-preferred brand) Drug Copay after Pharmacy Deductible (if any)	$35
Tier 4 (specialty drugs) cost-share after Pharmacy Deductible (if any)	15% up to $150 per script after deductible
Maximum Out-of-Pocket For One	$2,250
Maximum Out-of-Pocket For Family	$4,500

[1] in-network only

Types of Health Insurance in the U.S.

- FFS – **fee for service** (indemnity)
  - insured has great choice of treatment and provider
  - now disappeared but was dominant until late 1980's.
- HMO – **health maintenance organization**
  - restricted choice of both treatment and provider
  - introduced in 1980's, peaked in 1996, much less now.
- PPO – **preferred provider organization** (restricted FFS)
  - FFS if use network doctors + can pay more for out-of-network
  - introduced in 1990's, most common form now.
- POS – **point-of-service** (less restricted form of HMO)
  - HMO if use network doctors +can pay more for out-of-network
- HDHP – **high deductible health plan**
  - much higher deductibles, copays than traditional HMO, PPO
  - highly tax favored with health savings account (HCA) option
  - introduced in mid 2000's and increasingly popular.

Health Insurance Terminology

- **Copayment** – a lump sum paid by insured per service e.g. $20
- **Coinsurance** – a percentage paid by insured per service e.g. 10% (and % cover is percentage covered by insurer=100–coinsurance)
- **Deductible** – an annual amount paid before any insurance cover e.g. $2,000
- **Premia** – the price of a health insurance policy.
- **Pre-existing conditions** – health conditions that may not be covered.

Medicare Insurance

- For aged over 65 &/or disabled &/or end-point kidney disease.
- Established in 1965 (parts A & B).
- Federal program financed by 1.45% employer + 1.45% employee payroll tax (part of social security taxes of 7.65%+7.65%).

Part A (Hospital)	free (if contribute to soc sec > 10 years)
+ Part B (Physician & Outpatient)	optional - premia is heavily subsidized
+ Medigap	optional supplemental insurance to A &B
+ Part C (Medicare Advantage)	optional HMO/PPO plan replaces A and B
+ Part D (Prescription Drugs)	is heavily subsidized (began in 2006).

- Part A reimburses hospitals for diagnosis related group (DRG)
  - a fixed sum paid for the problem e.g. tonsillectomy
  - incentive for hospital to monitor costs
- Part B Traditional Medicare reimburses by prices Medicare sets by relative value scales (otherwise Medicare Advantage).
- Parts C, D and Medigap are run by private insurance companies.

Medicare Advantage

- Traditional Medicare (Parts A and B)is fee-for-service
  - Part B coinsurance is 20% with no maximum out-of-pocket (unless one has a Medigap Policy such as Plan G) (or qualify for a low-income Medicare Beneficiary program)
  - https://www.healthline.com/health/medicare/medicare-out-of-pocket-maximum#medicare-out-of-pocket-costs
  - since 2020 there has been some preauthorization
  - www.cms.gov/research-statistics-data-systems/medicare-fee-service-compliance-programs/prior-authorization-and-pre-claim-review-initiatives
- Medicare Advantage (Part C) is managed care
  - run by private insurance companies
  - substitutes for Part A and B plus may cover Part D and extras such as dental
  - 43% in Medicare Advantage in 2022
  - has $8,300 maximum out-of-pocket in 2023 for in-network
  - for most people it is cheaper than traditional Medicare.

Medicare Advantage (continued)

- Medicare Advantage is mostly HMO and PPO.
- Insurance companies are paid per person covered directly by government
  - initial benchmark is a percentage of traditional Medicare spending in a county
  - there is then some risk adjustment and quality adjustment.
- In 2019 Medicare Advantage cost government 4% more than traditional Medicare (after controlling for risk adjustment)
  - so is not chealer than FFS even though FFS has overservicing.
- Good reference:
  https://www.commonwealthfund.org/publications/explainer/2022/may/medicare-advantage-policy-primer

Medicaid

- For those indigent (poor)
- Established in 1965 (Social Security Act Title XIX)
- Federal / state program financed out of their general revenues.
- Great variation from state to state (Medical in California) in state contribution (50%-80%), eligibility and benefits.
- Includes nursing home for low income elderly (not covered by Medicare).
- Most costs are for disabled and old even though most people in Medicaid are young.

CHILDREN'S HEALTH INSURANCE PROGRAM (CHIP)

- Created in 1997 to cover all children whose parents have modest incomes too high to qualify for Medicaid.
- Joint federal / state. $21 billion in FY 2021.

2. HOW DOES (HEALTH) INSURANCE WORK?

- **Risk aversion**
  - people are willing to pay for insurance to reduce risk exposure.

- **Risk pooling**
  - risks are reduced by grouping individuals into insurance pools
  - variability of the group average is less than individual variation.

- It's as simple as that ! And is the basis for
  - Homeowners insurance
  - Automobile insurance
  - Life insurance

- But we will see that complications arise with health insurance.

Insurance Example

1. Each person has health costs of
   $0 with probability 0.99
   $50,000 with probability of 0.01
so on average expect a loss of $500.

2. Now put 1,000 similar people into a pool.

Then the average loss in the pool is again $500.

And we can show that with 95% probability
the average loss will be in the range $450 to $550 !

This is much less than for the individual
who faces losses in the range of $0 to $50,000.

3. SELF SELECTION INTO INSURANCE

Different people face different likely health expenses.

Question: What if only the sickest choose health insurance?

Answer: Insurance markets may fail
(worst case is insurance death spiral).

Solutions:

1. Experience rating
2. Community rating
3. Subsidize purchase of health insurance
4. No existing preconditions
5. Separate insurance pools for different risk levels
6. Mandate insurance

1. **Experience rating**

- e.g. pay more if have bad driving record
- e.g. pay more if have bad health.

2. **Community rating**

- experience rating is unfair + may not know person's health status
- so instead base insurance premium on age

3. **Subsidize purchase** of health insurance

- e.g. Obamacare health insurance exchanges
- e.g. Medicaid provided free for low income people

4. **Exclude preexisting conditions**

- common if try to buy individual insurance policy outside Obamacare

5. **Separate insurance pools** for different risk levels

- Employer-provided insurance is a low risk pool
  as the insured are healthy enough to work and are not too old.
  But can lead to job lock.
- Over 65s and disabled have Medicare.

6. **Mandate insurance**

- done for auto insurance and for home if have a mortgage
- health insurance was to be mandated in U.S. under Obamacare but this was relaxed.

4. OVER CONSUMPTION WITH HEALTH INSURANCE

- Once insured we may consume more
  - called moral hazard.

- One reason for consuming more is that people **may take more risks as covered by insurance**
  - e.g. smoke in bed and/or leave lit candles unattended if home insured against fire
  - e.g. drive recklessly
  - e.g. too-big-to-fail bank takes big risks
  - e.g. let body go as have insurance and doctor will take care of it

- A second more consequential reason for consuming more once insured is that **the price to the consumer is much lower**
  - e.g. if I paid 10% of cost of a replacement car and insurance paid the other 90% then I might buy a Rolls Royce
  - e.g. rather than get an X-ray get an MRI.

- This latter reason is the big challenge for health insurance
  - demand curves slope downwards !
  - even for health care (RAND health insurance experiment).

- Furthermore there is less incentive for the consumer to negotiate with supplier on price
  - so healthcare providers may charge more.

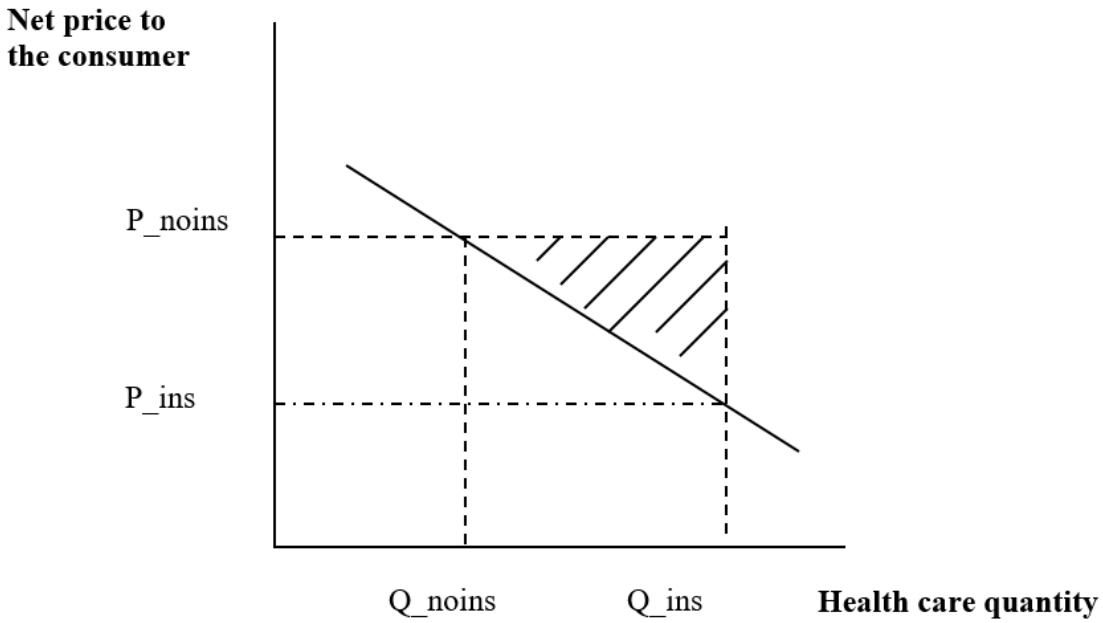


Diagram shows going from **no insurance** to **partial insurance**.

Moral hazard: Decrease in price to consumer leads to increased consumption.

Shaded area gives welfare loss due to moral hazard

- There is a clear loss as some people overconsume
  - e.g. a doctor visit costs $100 to produce and I value at $40.
  - If I only pay $10 I'll get it with welfare loss 100–40 = $60.
- At the same time insurance has the benefit of risk reduction.

Solutions to overconsumption.

- **Have insured pay more** through coinsurance and deductibles
  - but this reduces the amount of insurance
  - and may lead to not getting cost-effective preventive care
  - and expensive treatment will exceed annual deductible so the marginal cost to the consumer becomes zero.

- **High deductible health insurance plans** (HDHPs)
  - favored by government policy
  - but these are disproportionately chosen by high income people.

- **Have insured pay more** for out-of-network care
  - and insurer negotiates prices with in-network providers.

- **Rationing through managed care**
  - gatekeeper doctor decides what care to get
  - utilization review such as second opinion for surgery
  - HMO's in particular offer this
  - there was a backlash against HMOs.

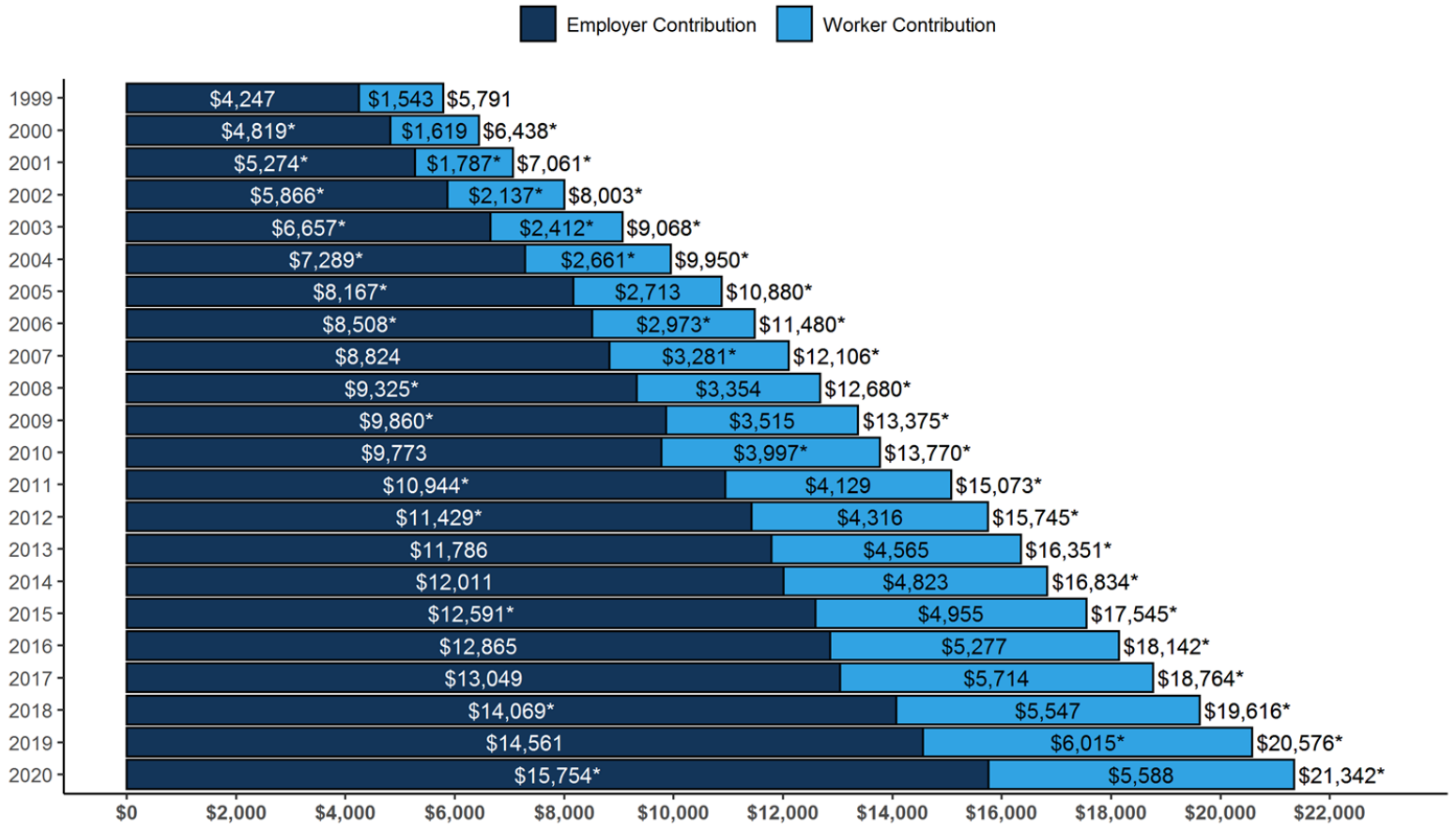
- **Rationing by insurance company**
  - insurance company tells insured to get no treatment or cheaper treatment
  - this is not popular
  - this soaks up a lot of doctor, insured and insurance company time.

5. HOW CAN WE BRING DOWN PRICES ?

- Problem: We want consumers to respond to price
  - but prices of healthcare services aren't sending a good signal to insured consumers as they face heavily subsidized prices.
- One solution: Instead **have consumers respond to the price of the health insurance policy.**
- **Managed competition**
  - different insurance companies offer **the same standardized product** (e.g. HMO with certain deductible and coinsurance rate)
  – so insurance companies compete on price.
- This has not worked as well as hoped
  - because different insurers have different networks of doctors
  - consumers may want to stay with particular doctors
  - and suppliers have bargaining power if insurance company wants to include them in the network.

- RESULT. Health insurance is not cheap!

Figure 6.5
Average Annual Worker and Employer Contributions to Premiums and Total Premiums for Family Coverage, 1999-2020



* Estimate is statistically different from estimate for the previous year shown ($p < .05$).
SOURCE: KFF Employer Health Benefits Survey, 2018-2020; Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 1999-2017

6. IF WE CAN'T BRING DOWN PRICES, THEN WHAT?

- **Price controls**
  - Medicaid does this
  - Medicare fee-for-service does this.

- **Not cover expensive procedures if not cost effective**
  - Medicare is not allowed to consider cost effectiveness.

- How is cost-effectiveness determined?
  - We can't use revealed preference of consumers because their consumer choice is distorted by highly subsidized prices.
  - We can't use standard cost-benefit analysis as what is the value of a life saved?
  - Instead use measures such as QALYs.

- **QALY** is **quality-adjusted life-year saved**
  - e.g. if one procedure costs $50,000 per QALY
  and another costs $100,000 per QALY
  then go with the cheaper treatment.

7. WHAT DO OTHER COUNTRIES DO?

- Various **types of health insurance** market
  - completely private insurance can fail due to adverse selection and is not equitable.
  - universal public insurance run by government is equitable but with low coinsurance can have high costs due to moral hazard
  - compulsory insurance requires subsidies or payroll tax to be equitable and regulation to minimize adverse selection.

- Various methods are used to **control moral hazard**
  - cover only procedures that are cost-effective
  - use coinsurance, copays, deductibles
  - ration by gatekeeping and queuing
  - use prospective payment systems (covered later).

- Various **methods to provide health care**
  - **public provision** (government salaried doctors) is usually cheaper but can be lower quality
  - **private provision** but regulate to prevent monopoly power or have government set prices.

Three Leading Different Models

- 1. Beveridge Model e.g. Britain, Canada, Sweden, Australia
  - government single-payer insurance
    (for some countries with private supplemental insurance)
  - government provision (or at least control) of health care.

- 2. Bismarck Model e.g. Germany, Japan, France
  - universal insurance often through (regulated) private insurance
  - private provision of health care but regulated with price controls.

- 3. American Model e.g. U.S. and nowhere else
  - private and public insurance but no universal insurance
  - private provision with little price control.

8. 2010 HEALTH REFORM ("OBAMACARE")

- Patient Protection and Affordable Care Act signed by President Obama on March, 2010 and implemented in January 2014. [Source: http://www.kff.org/healthreform/upload/8061.pdf.]
- **Insurance has three components:**
- 1. Employer-provided insurance
  - Employer mandate – must offer insurance if more than 50 employees or face penalty (of $2,000 per full-time employee).
- 2. Public insurance to be expanded
  - Medicaid available to adults with income<135% of federal poverty level (though not all states chose to participate)
- 3. Privately purchased insurance
  - Purchase through geographic area health exchanges
  - Subsidies for lower income people (but not so low as to qualify for Medicaid) to purchase insurance.

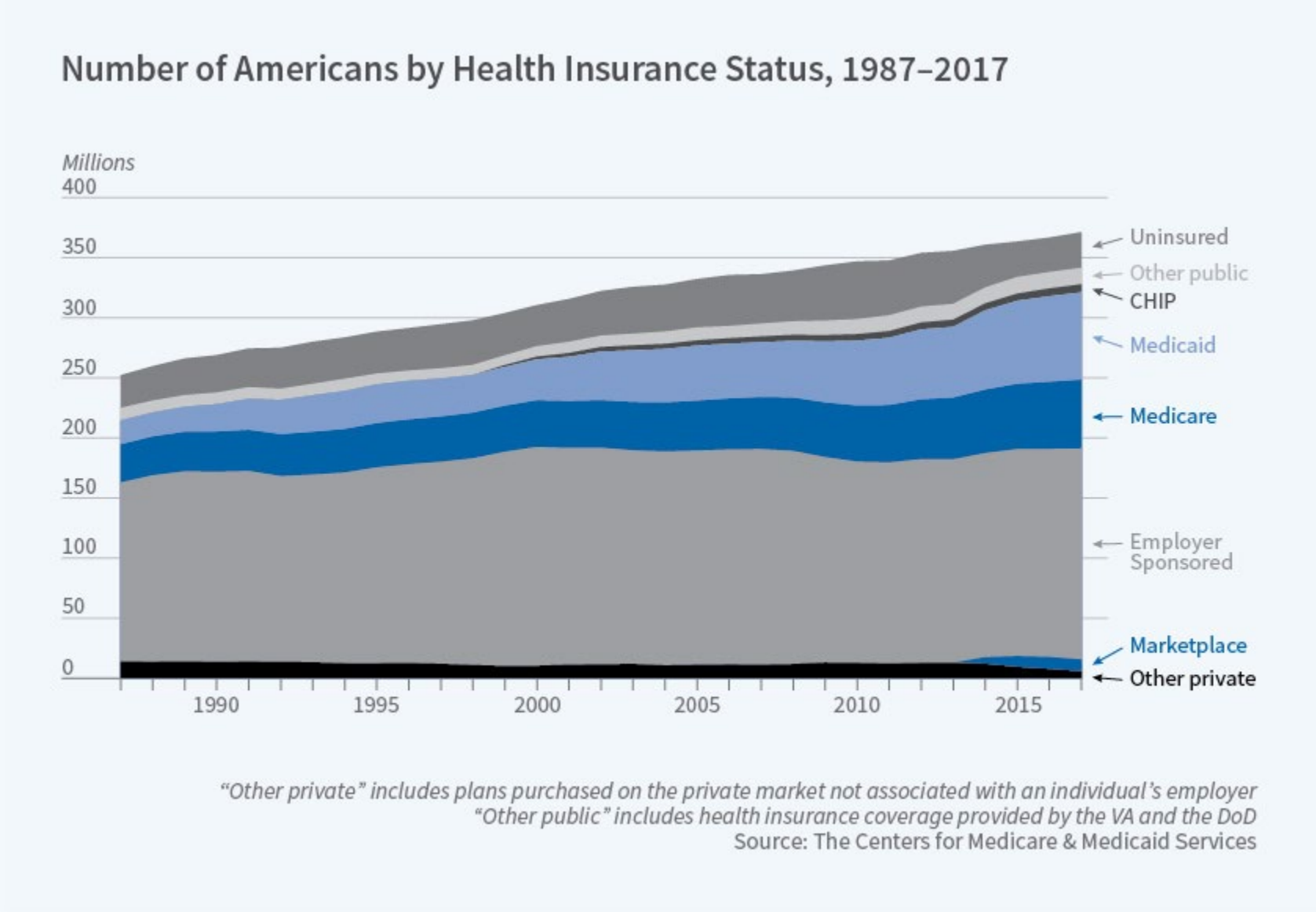
- **To reduce adverse selection:**
  - all individuals must have insurance (mandate dropped in 2018)
  - in return insurers cannot exclude due to pre-existing conditions
  - standardized policies are sold at community-rated prices.

- **Cost containment:**
  - Medicare and Medicaid lower reimbursement
  - Greater emphasis on prevention and wellness programs

- **Quality:**
  - Patient-Centered Outcomes Research Institute to compare clinical effectiveness of various treatments
  - Increased payments to primary care physicians.

- **Overall:** Goal was 32 million more insured.
  (16 million Medicaid, 24 mill exchanges, -8 mill other private)

TRENDS


Number of Americans by Health Insurance Status, 1987–2017
Millions
400
350
300
250
200
150
100
50
0
1990
1995
2000
2005
2010
2015
Uninsured
Other public
CHIP
Medicaid
Medicare
Employer Sponsored
Marketplace
Other private
"Other private" includes plans purchased on the private market not associated with an individual's employer
"Other public" includes health insurance coverage provided by the VA and the DoD
Source: The Centers for Medicare & Medicaid Services