Designing a national health system

Reference: Bhattacharya, Hyde and Tu (2014)

Designing a national health system

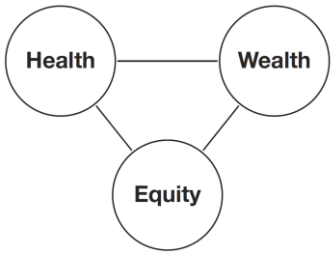
- Market failures and equity concerns → policy intervention
- Market failures (inefficient market outcome)
  - Markets for health care services
    - Oligopoly pricing and Medical arms races
  - Health insurance markets
    - Adverse selection and underinsurance
    - Moral hazard and technology overuse
- Equity
  - Access to healthcare and to health insurance
- Budget control must be taken into account
  - (Not only) MH, population ageing, rising relative prices ,costly developments in medical technology
- Health policy tries to deal with these problems

Welfare Economics is about collective choice. From individual preferences to social preferences

- Theorems of WE
  - **I:** *Under complete markets, any competitive equilibrium leads to a Pareto efficient allocation of resources.*
  - ***II:*** *any efficient allocation can be obtained as a competitive equilibrium*

    → The role of the market and the role of the State
- Arrow's impossibility theorem
  - *in a democracy there is no general rule to consistently aggregate individual's preferences into a policy choice.*
  - and its implications
- Welfarist approach
  - SWF $W(u_1, \dots u_n)$ $u_i(y, h, \dots)$

The health policy trilemma



- Health policy has two main goals: (max) **health** and **equity**
- and a **budget constraint.**
- Health policy requires making decisions under tradeoffs.
- For example, any hypothetical policy that combats adverse selection and increases equity would either increase costs or lower health for some.

Designing a national health system

- People and countries **disagree** about how important each of these three is.
  - If high value on social equity → willingness to pay more in taxes to achieve it.
  - If high value on efficiency (health) → willingness to correct moral hazard and monopoly pricing.
- People and countries **disagree** because they have different
  - Economic and Policy Preferences
  - Constraints
  - Political systems (aggregation of individual preferences)

The welfare system (or welfare state)

- WS is public policy to promote well-being
- WS is about social insurance and redistribution against risk
- WS expenses
  - **Healthcare**
  - Unemployment
  - Pension
  - Housing
  - Income

Designing a national health system

Objectives: max (health + equity) under (budget) constraint:

- Universal or compulsory health insurance solve the problem of *adverse selection*
- Price controls combat market power
  - Who pays? Who sets the price?
- Universal systems ensure *equity* (access), but …
- Budget control
  - **Economic evaluation**

Designing a health system

- How should healthcare and health insurance be organised?
- How should public healthcare be financed?
- How should the budget be controlled?
- How should health care markets be regulated?

Every policy choice involves a tradeoff between health, budget and equity.

Health insurance

- No insurance (the market model)
- Completely private (VHI)
  - Employer-sponsored
- Compulsory
  - Social Health insurance (mandatory contributions for workers)
  - Mandatory residence
- Means-tested (targeted programs)
- Universal public

The market model: no insurance

- Actors: providers and users (no third party)
- Providers set the price of their services; users pay OOP.
- The only role of the State is to regulate providers (e.g. license, quality standard) and promote competition (choice by users).
- Problems
  - risk averse individual demand insurance to protect against uncertainty
  - No risk pooling
  - Risk of catastrophic spending

Private insurance

- Economic theory (RS model) predicts that in private markets, only the "frail" customers are insured fully and much of the population is underinsured.
  - Under certain conditions, a completely private market can unravel completely, leading to uninsurance for everyone.
- This option minimizes government involvement, but it results in maximal *adverse selection*.
- **Taxes are low, but many citizens do not have access to full insurance.**

Employer-sponsored insurance

- Under such a system, employers are required or encouraged to offer a private insurance contract to all of their employees.
- Healthy employees with a low risk of illness pool with high risk, unhealthy employees. This mitigates adverse selection.
- Drawbacks: can create labor market inefficiencies, and not appropriate for unemployed populations (children, retirees, disabled).

Compulsory insurance

- A mandate (a legal requirement that everyone purchase private insurance) confronts adverse selection by effectively banning it.
  - Social Health insurance (mandatory contributions for **workers**)
  - Mandatory residence
- A mandate can be expensive, and many citizens cannot afford it.
  - Thus, mandates are usually either coupled with subsidies to the poor or paid for with payroll taxes.

Means-tested insurance

- Subsidized health care for the poor.
  - *Example*: Medicaid in the U.S.
- It attempts to improve **equity** by providing health care to those who otherwise could not afford it.
- Tax burdens
- Social stigma

Universal public insurance

- The government provides insurance to all citizens, and finances it with taxes.
- This policy option is appealing because it side-steps adverse selection and ends un-insurance.
- It also furthers the goal of **equity** because the poor pay little or nothing for coverage.
- However, with universal public insurance, steps must be taken to control the budget.
- HTA in this setting can be very useful.

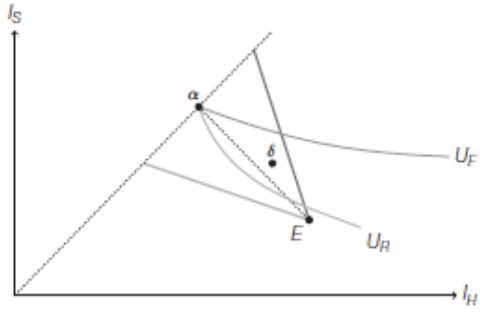


Figure 15.2. *Universal public insurance in the simplified Rothschild–Stiglitz model with only frail and robust citizens. Insurance contract α may be one such contract where everyone receives full insurance. Robust citizens may prefer contract δ, but the government forbids it from being offered, which protects the national insurance plan from unraveling.*

Universal public insurance

- Higher taxes are the main cost of public insurance.
  - Some argue that taxes might *distort* behavior by discouraging labor and commerce, so the entire economy may become less efficient as a result.
  - Others argue that universal public insurance is more efficient than private insurance markets because of low overhead costs.

- Note: this is "single-payer" health care because one entity (the government) pays for all care.

How should the budget be controlled?

- Health technology assessment (HTA)
- Cost sharing
- Gatekeeping and **queuing**
- **Prospective payments**

Cost-effectiveness analysis

- CEA entails gathering information about treatment options and determining which options produce the most additional health for the least cost.
  - CEA helps controlling the budget by reducing spending on inefficient, costly treatments.
  - But CEA also makes insurance contracts less "full" for patients, because some services are no longer covered.
  - This tradeoff can be worthwhile because it makes the entire system cheaper.

Cost sharing

- Cost sharing may be accomplished through the use of deductibles, coinsurance, and copayments.
- Cost sharing controls moral hazard and spending in a way that is sometimes more politically palatable than CEA, but it also makes health care less affordable for patients.
  - This can undermine equity.

Gatekeeping and queuing

- Rationing health care without prices
- Gatekeeping: patients must first visit a general practitioner (GP) before they can see a specialist
  - GPs act as ***gatekeepers***: Only patients they deem as needing care may then visit a specialist
- Limit the number of specialists available
  - If demand of specialists is high and supply is limited

  → ***queues***
- Unlike price rationing, queues treat rich and poor equally
  - But lacks political support

Queuing

- Usually queues are a sign of a market inefficiency, but **in the presence of oversuse, queues might be an indication of inflated demand**.
  - If so, limiting the number of specialist may save money without sacrificing health.
- The hassle of waiting in line constitutes a **non-financial cost that patients must "pay" for care**.
- Queue-based systems may be more equitable than a cost-sharing system if it means that rich and poor alike must wait for care.
  - But queuing systems risk provoking political backlash.

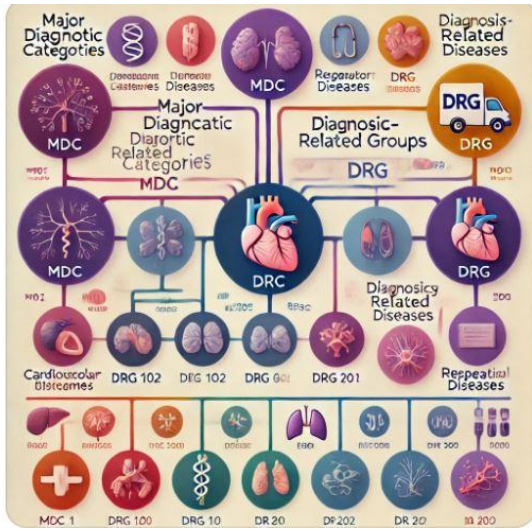
Retrospective payments

- The amount paid depends on how much health care is received.
- In a fee-for-service system, doctors have no reason to deny patients a service because the costs are too high.
  - This system fosters trust between patients and doctors, but creates incentives for physician-induced demand.

Prospective payments

- With prospective payments, payments are not based on procedures performed, but on the condition of the patient who is admitted (e.g. DRG).
- *Example*: A prospective-payments system will pay hospitals a fixed amount for treating any heart attack patient. **This gives hospitals incentives to economize in their treatment of heart attack patients, because they no longer receive extra payments for doing extra work.**

DRG: Diagnosis-Related Groups



Regulation of health care provision

- **Public provision**
  - hospitals are government-run and financed by taxes, and physicians are employed by the government.
- **Private hospital markets**
  - Allows for competition among hospitals and preserves the incentives for hospitals to operate efficiently.
  - But Pro and cons of competition
  - And access to care
- **Government-set prices**
  - to prevent private providers from exercising *market power* and keep health care affordable

Public provision

- Under this approach, **hospitals are government-run** and financed by taxes, and physicians are employed by the government.
- This approach could reduce costs of medical care and improve quality of care by banishing oligopoly power.
- Some also suggest that nationalized systems are less efficient than private markets.
  - Governments are vulnerable to agency problems, because government workers may have less incentive than private workers to ensure the success of their hospital.
  - Government systems also lack clear feedback mechanisms to correct them if they are not succeeding.

Private provision

- This approach allows for competition among hospitals and preserves the incentives for hospitals to operate efficiently.
- However, in private markets, too little competition leads to market power and the accompanying social loss due to high prices and underprovision.
- Conversely, too much competition can exacerbate inefficient quality competition, lead to a medical arms race, and increase health care costs.
- Another concern is that some populations – like the poor and uninsured – will lack access to care

Government-set prices

- By setting prices, governments aim to prevent private providers from exercising market power and keep health care affordable.
- In theory, such price controls could contain hospital costs, but government set prices could also induce some perverse incentives.
  - Unless prices are set properly, treatments priced below marginal costs may not be offered, while the most profitable services may be over-prescribed.

Comparing National Health Models

Three health models

Beveridge
Bismarck
American

Beveridge model

- Single-payer insurance
- Public provision of health care (physicians are government employees)
- Very little cost sharing at point of service
- Emphasis on equity
- Examples: UK, Scandinavia, Canada, Australia, NZ

The Beveridge model

- **Universal, single payer insurance:**
  - All citizens receive insurance from government, financed by taxes and not premiums
- **Public health care provision:**
  - Hospital and clinics run by the government
- **Free care**
  - Care provided for free at government hospitals
  - Free at the point of care
  - Some exceptions for prescriptions drugs, eye care, and dentistry

Aim of the Beveridge model

- Health care is a good provided by the government and paid for with tax revenue
- Allocation of health care based on **need** and not ability to pay
  - Eliminates *price rationing*
  - Promotes **equity**

UK 2002-08 Reforms

- From 2002 to 2008, three large reforms injecting <u>competition</u>:
  1. Move hospitals away from global budgets to a "**payment by results**" (PbR) system
  2. Allow patients freedom to choose between providers
  3. Give hospital administrators greater autonomy in managing hospitals.
- Unlike previous reforms, these reforms set uniform prices for all hospitals
  - Hospitals can compete only on quality, not price

Issues

- Queue reduction
  - Decrease demand
  - Increase supply
- HTA
- Competition

Health technology assessment (HTA)

- HTA more a central issue in Beveridge countries because:
  - Government pays for health care, so HTA plays a large role in cost containment
  - Government delivers health care, so HTA determines which services are available and which services are not
  - Patients may have to go abroad to access services denied coverage by HTA
- HTA decisions can be very controversial because they can determine who gets treatment and who does not

Competition

- Many of the problems faced by Beveridge systems (long queues, centralized HTA) not found in countries with private systems
- Hence, many Beveridge systems have tried to experiment with elements of competition while simultaneously preserving solidarity
- Uneasiness with private markets

Bismarck model

- Compulsory private insurance
- Private hospitals and doctors
- Strict price controls set by government (sometimes in negotiation with doctors and hospitals)
- Examples: Germany, Japan, Switzerland, Netherlands

Key traits of Bismarck health care systems

- *Universal insurance*
  - All or nearly all of the population has health insurance coverage, either through a plan sponsored by an employer or through the government
- *Community rating*
  - Insurance is financed through taxes (based on income), *not* premiums (based on health status) operates under managed competition
- *Regulated, private health care provision*
  - prices are set by the government in negotiation with private providers

Managed competition

1. *Minimum standards:* each insurance contract is required to meet a minimal standard of care; There are also limits on copayments and deductibles.
2. *Open enrollment:* insurers may not reject any eligible customers, even if they are unhealthy.
3. *Compulsory participation:* customers are mandated to have and pay for insurance coverage at all times.
4. *Community rating:* insurers can not set premiums using **risk rating;** instead they must be **community rated.**

Price controls

- *Price controls* are prices negotiated between providers and purchasers
- Essentially, a price control negotiation allows the purchasers of health care (sickness funds) to band together and exercise *monopsony power*
- This can counterbalance oligopoly power and lower prices, but prices set by a central agency can distort medical decision making
- The process for setting prices would ideally result in a price for each activity equal to its marginal costs of production.

Germany

- German patients have the option of choosing among all available health insurance plans, including plans run by other companies or faraway regions.
  - These plans are nominally private entities, they are extensively regulated (managed competition).
- Premiums to finance insurance are collected as **payroll taxes**, and vary only with income, not health.
- Patients and insurers are free to choose their health care providers, who can compete to attract them.
  - Providers must compete based on quality rather than price

Solidarity and liberty

- **Solidarity/equity:** the poorest and sickest members of society are supported by the system, which grants subsidized health insurance to those least able to afford it.
  - This subsidy is borne by the wealthiest and healthiest, who pay high taxes and actuarially-unfair premiums to keep the system afloat.
- **Liberty:** patients and doctors are at liberty to make fundamental economic choices, like which hospital to visit, which insurance contract to take, or where to open a new clinic or hospital.

Issues

- Adverse selection vs risk selection
  - Adverse selection refers to the behavior of insurance customers, while *risk selection* refers to the behavior of insurance providers.
- *Gatekeeping*
  - to limit health care expenditures, many Bismarck countries have initiated gatekeeping reforms.
- *HTA*
  - many Bismarck countries have also moved to incorporate HTA into their health care systems

How do Beveridge and Bismarck models compare?

- Beveridge systems emphasize equity and equal access to care, while Bismarck systems emphasize patient choice and provider competition.
- Countries that have adopted a Bismarckian health care system tend to have higher national health care expenditures compared to the Beveridge countries.
- Reforms in Beveridge countries have focused on increasing choice for patients and competition between providers.
- Reforms in Bismarck countries have introduced gatekeeping and managed care tactics that restrict patient choice in certain ways.
- The two models seem to be converging, and may one day be hard to distinguish.