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# Health Systems
# - introduction & key concepts

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- a few definitions
- the importance of health systems
- what are health systems?
  - -- what are they made of?
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  - -- how do they do it?
  - -- how do we know?
  - -- how can they best be strengthened/improved?
- examples from field settings

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# Health

"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."

World Health Organization

Important Distinction:
Health vs. Health Care

-- *Health* refers to a state of the human body & mind

-- *Health Care* refers to information, chemicals, devices & services used by people to improve their health

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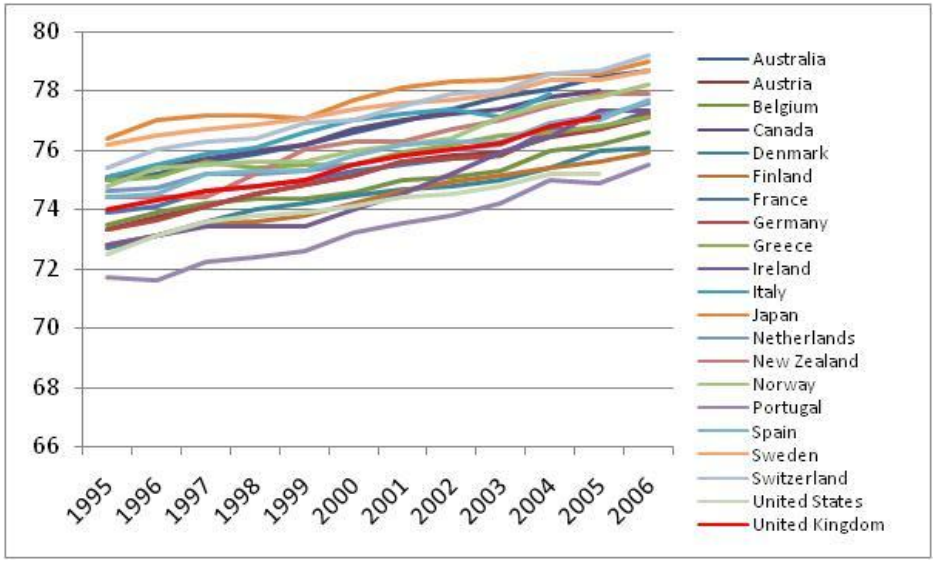
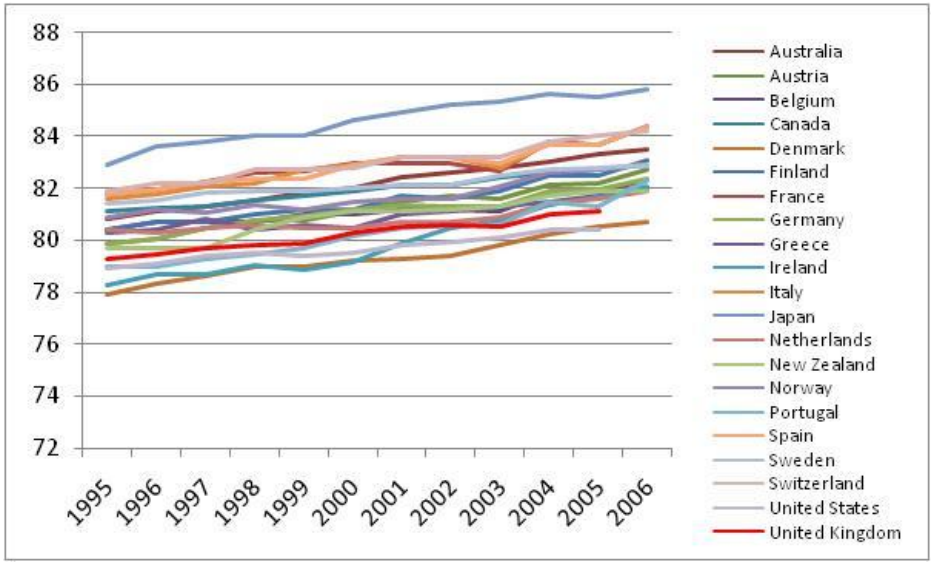
# Life expectancy at birth

**Males**




**Females**



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# Great improvements in health

- Life expectancy increased by 25+ years
- Deaths of children <5yrs: 12 million (1990); 6.9 million (2011)
- % underweight children <5yrs: 28% (1990) to 17% (2011)
- New HIV infections declined by 24% between 2001 and 2011
- Biomedical research and technological innovations have expanded enormously

However:

- 940 women die every day during pregnancy or delivery
  - >50% due to preventable/manageable haemorrhage & hypertension
- In sub-Saharan Africa, 880,000 babies stillborn every year
- > 1.2 million die during first 30 days of life

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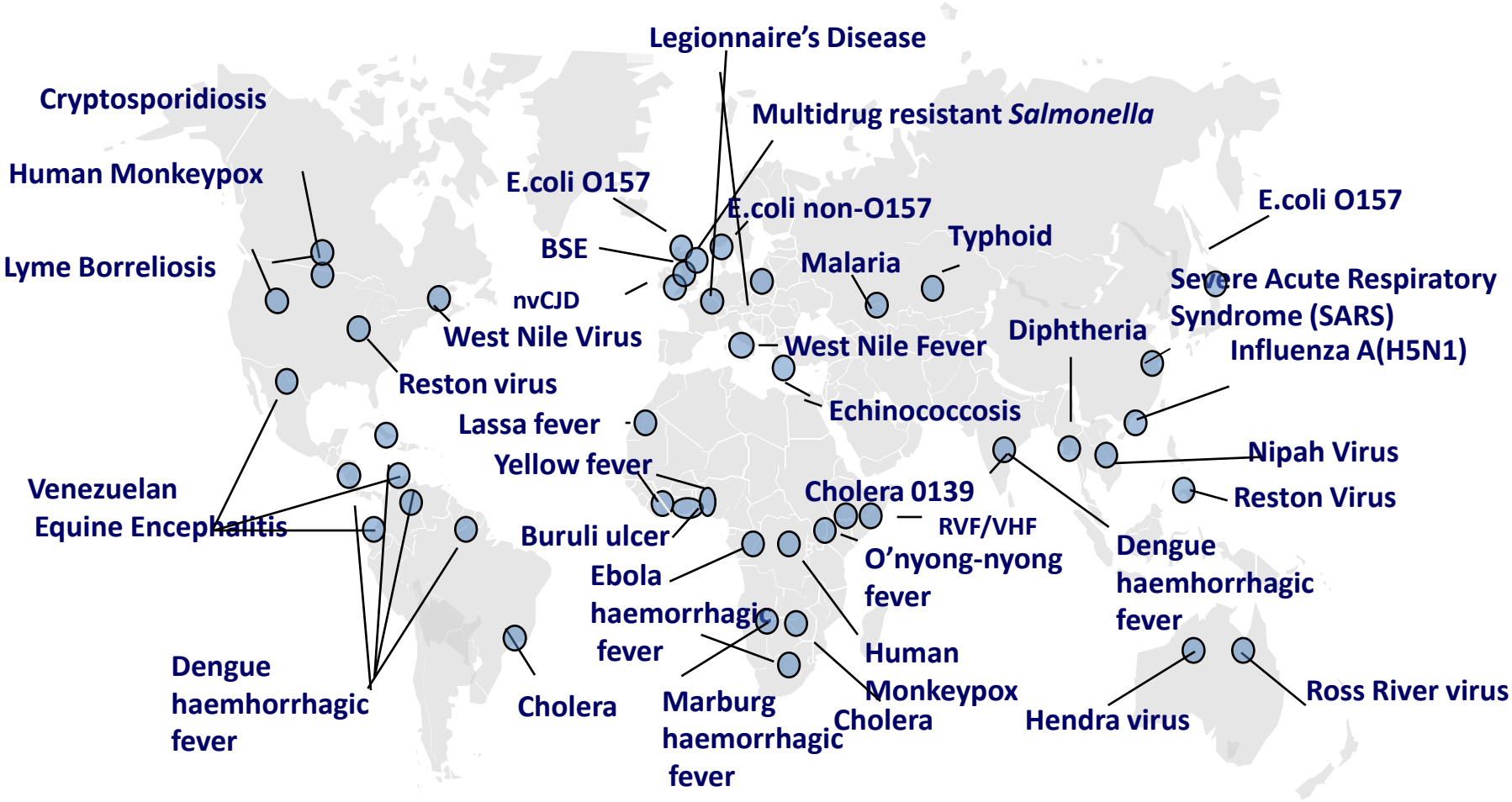
# Emerging & re-emerging infections



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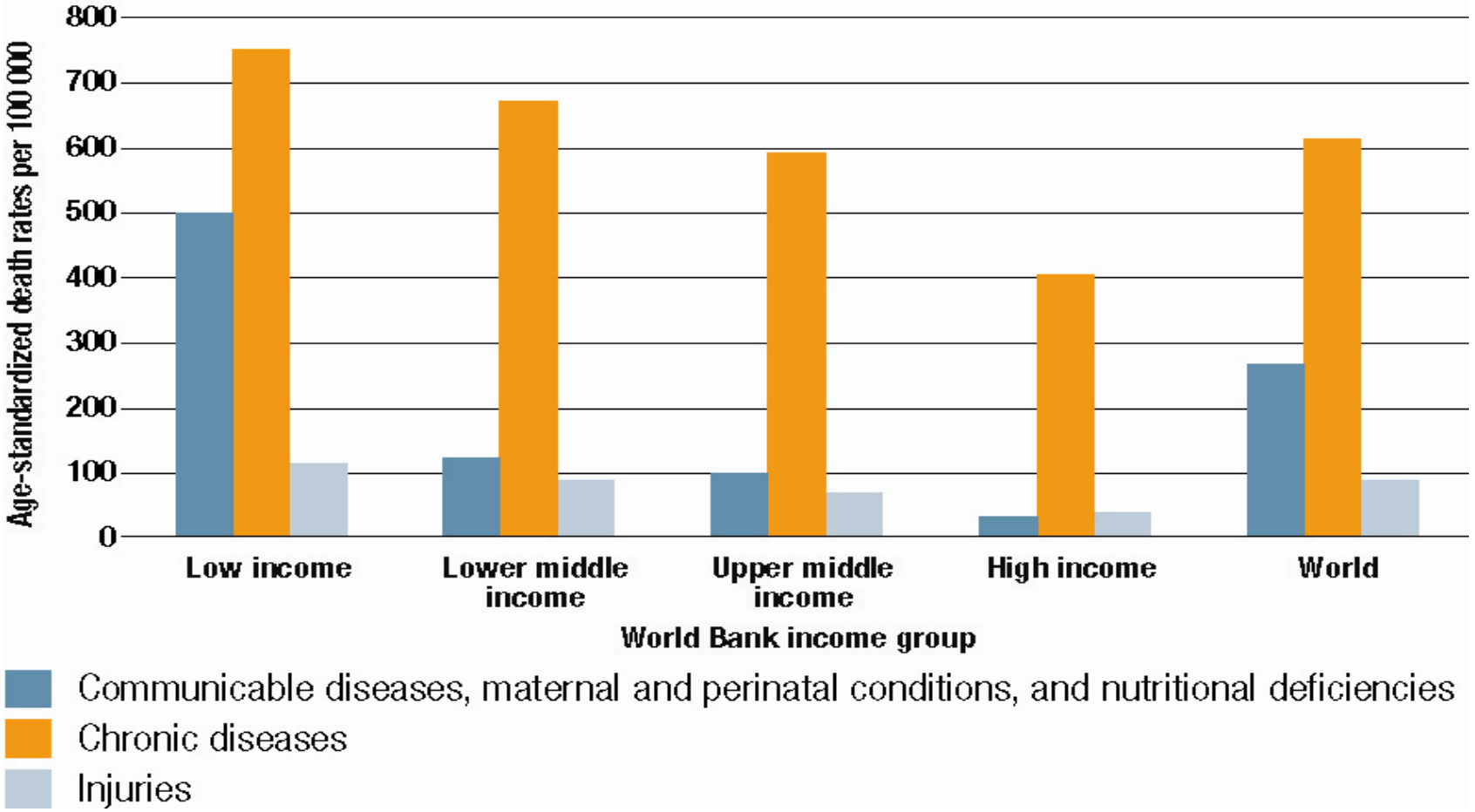
# Projected main causes of death by World Bank income group, all ages, 2005




Source: WHO Global Report: Preventing Chronic Diseases: a vital investment, 2005

# Varied nature of potential risks

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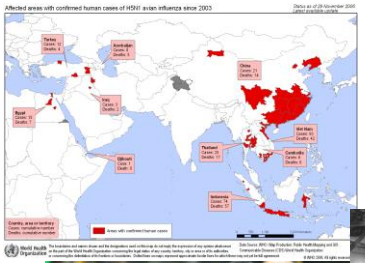
## Health




## Natural Hazards




## Political Violence / Terrorism





## Infrastructure Failure / Info Sec Breaches

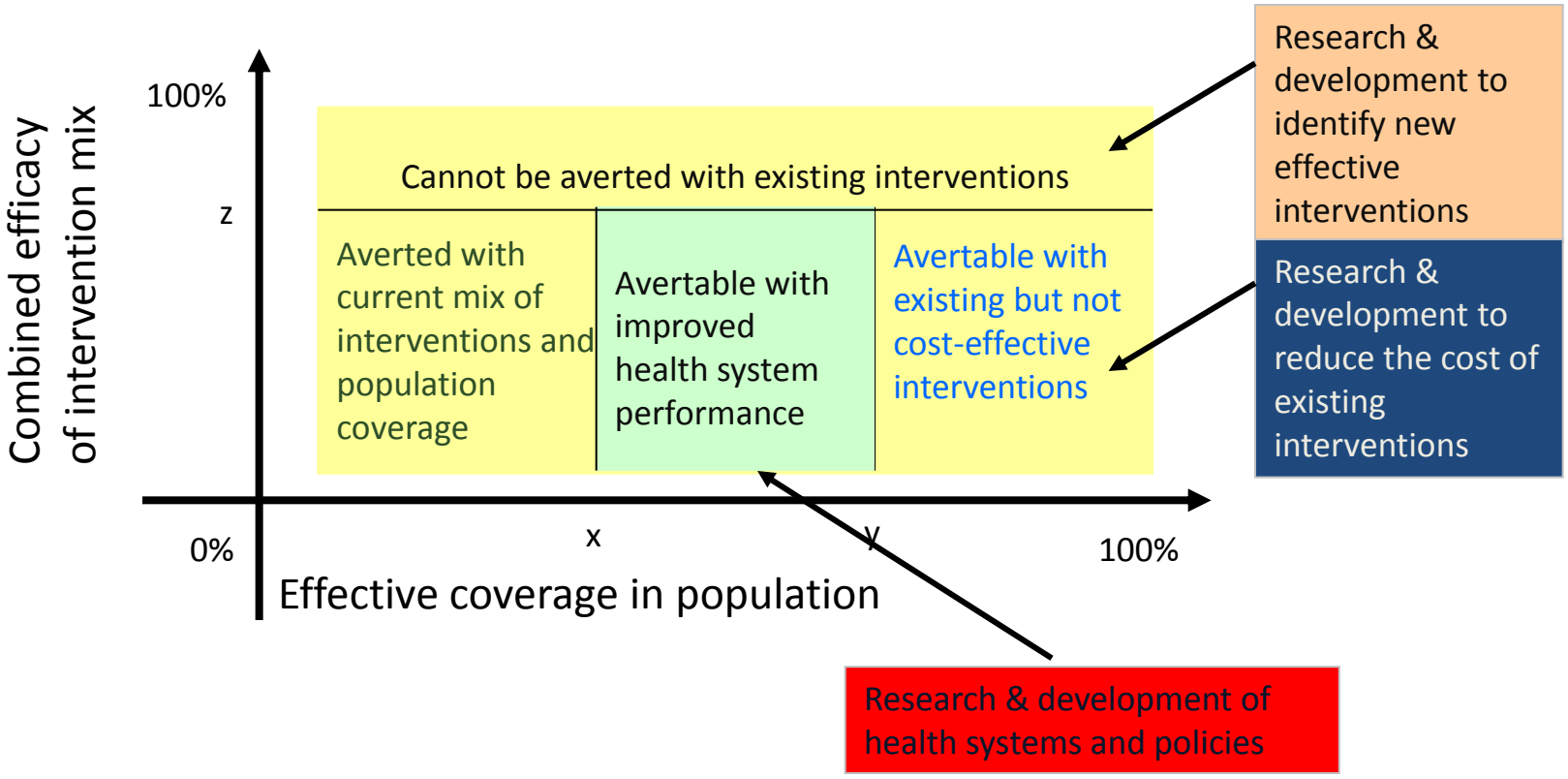


# The universal declaration of human rights

## → health is a right

- The General Assembly of the United Nations adopted and proclaimed these principles in 1948
- Article 25
  - Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.
- "… health… is a fundamental human right and … a most important world-wide social goal."
  - Alma Ata Declaration-1973

# Analysing the burden of a health problem to identify needs




x – population coverage with current mix of interventions
y – maximum achievable coverage with a mix of available cost-effective interventions
z – combined efficacy of a mix of all available interventions

Source: Adapted from Ad Hoc Committee on Health Research, *Investing in health research and development* (WHO, 1996)

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Several terms are used, often interchangeably:

Health systems

Health services

Health policy and systems

Implementation

Health systems and services

Operations/operations management

Health policy

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A multidisciplinary and interdisciplinary field of interest:

Health economics

Psychology

History

Anthropology

Political sciences

Management sciences

Geography

Statistics

Medicine

Epidemiology

Sociology

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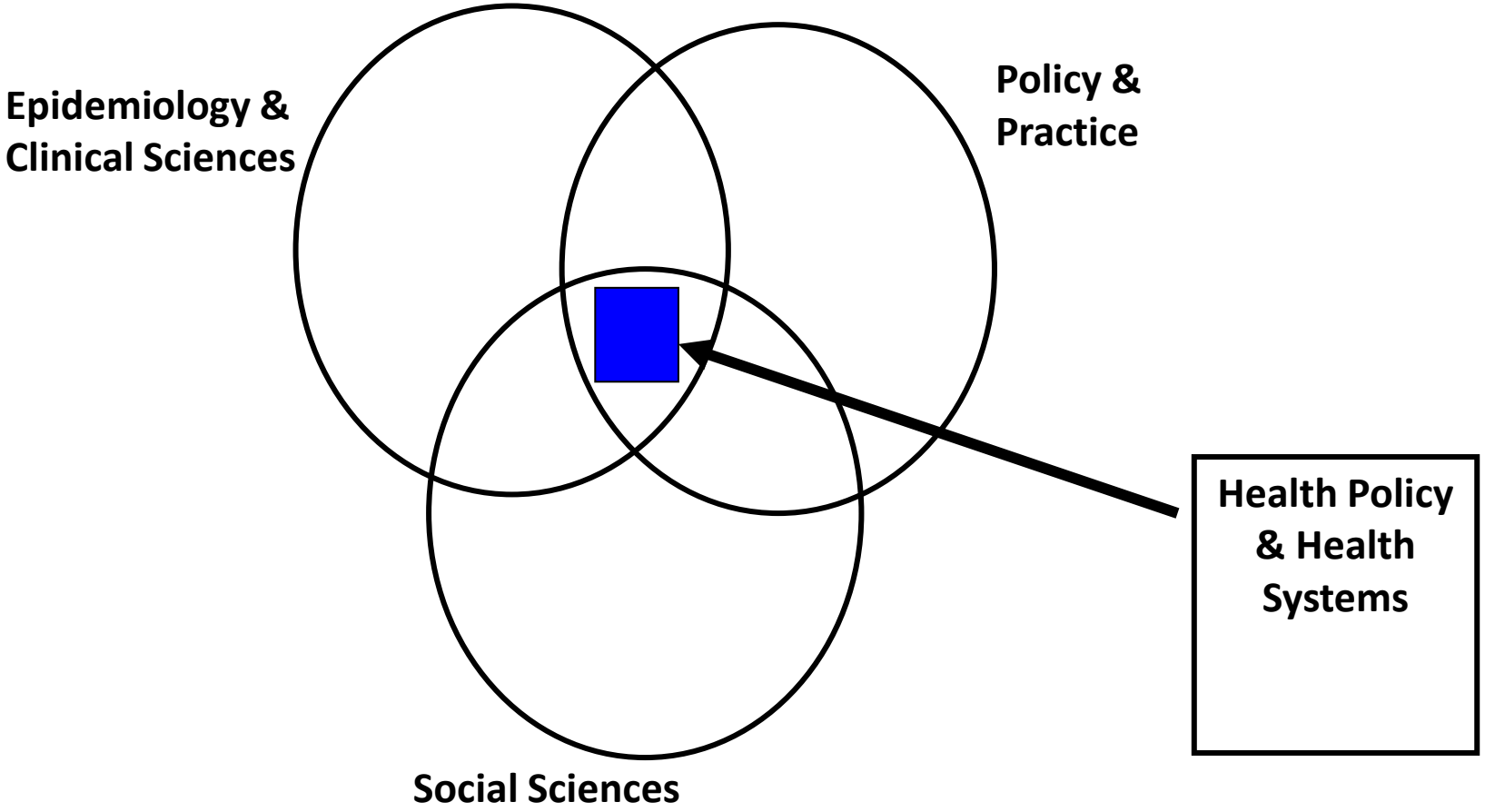
# Each with different perspectives



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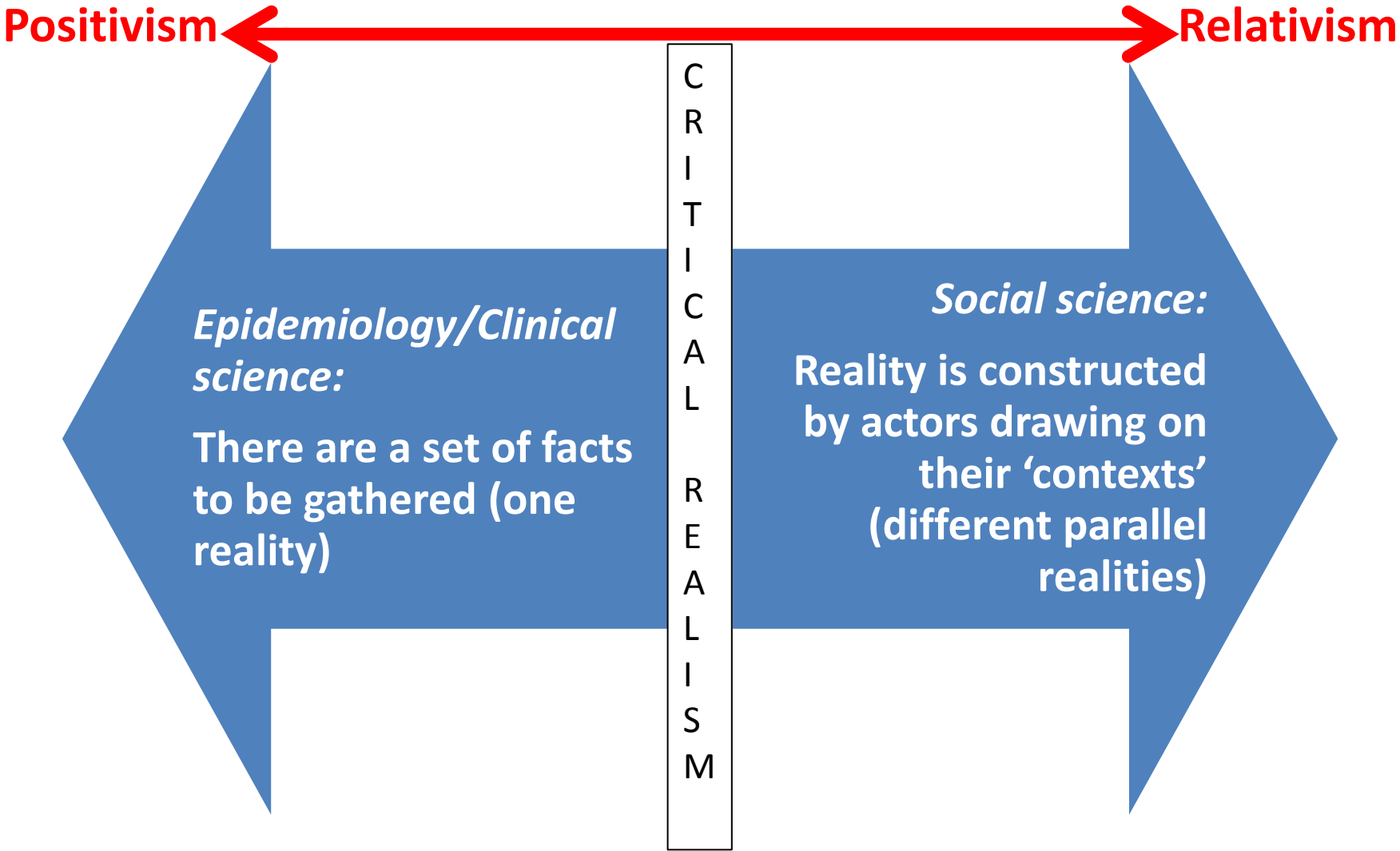
# and different knowledge paradigms



# What is the nature of the social reality being investigated?

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| Knowledge paradigm | Positivism | Critical Realism | Relativism (interpretivism/social constructionism |
|---|---|---|---|
| Related disciplines | Epidemiology; welfare economics; political science (rational choice theory) | Policy analysis; organizational studies | Anthropology; sociology; political science (sociological institutionalism) |
| Key research approaches & methods | Deductive: hypothesis driven<br>Surveys, statistical analyses, semi-structured interviews | Deductive & inductive: theory testing/building<br>Review of documents, interviews, focus group discussions, observation | Inductive: theory building<br>In-depth interviews, focus group discussions, participant observation, life histories |
| Types of question addressed | Is the policy or intervention cost-effective? | What works, for whom, under which conditions? | How do actors experience and understand different types of interventions or policies? |

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# A system:

"A group of interacting or interdependent functionally-related components working together to form a complex whole"

(Google)

a collection of units, agents, and institutions that interact coherently; adapting and adjusting to the social and physical environment

→(*coherence, adaptation, adjustment)*

# A systems perspective

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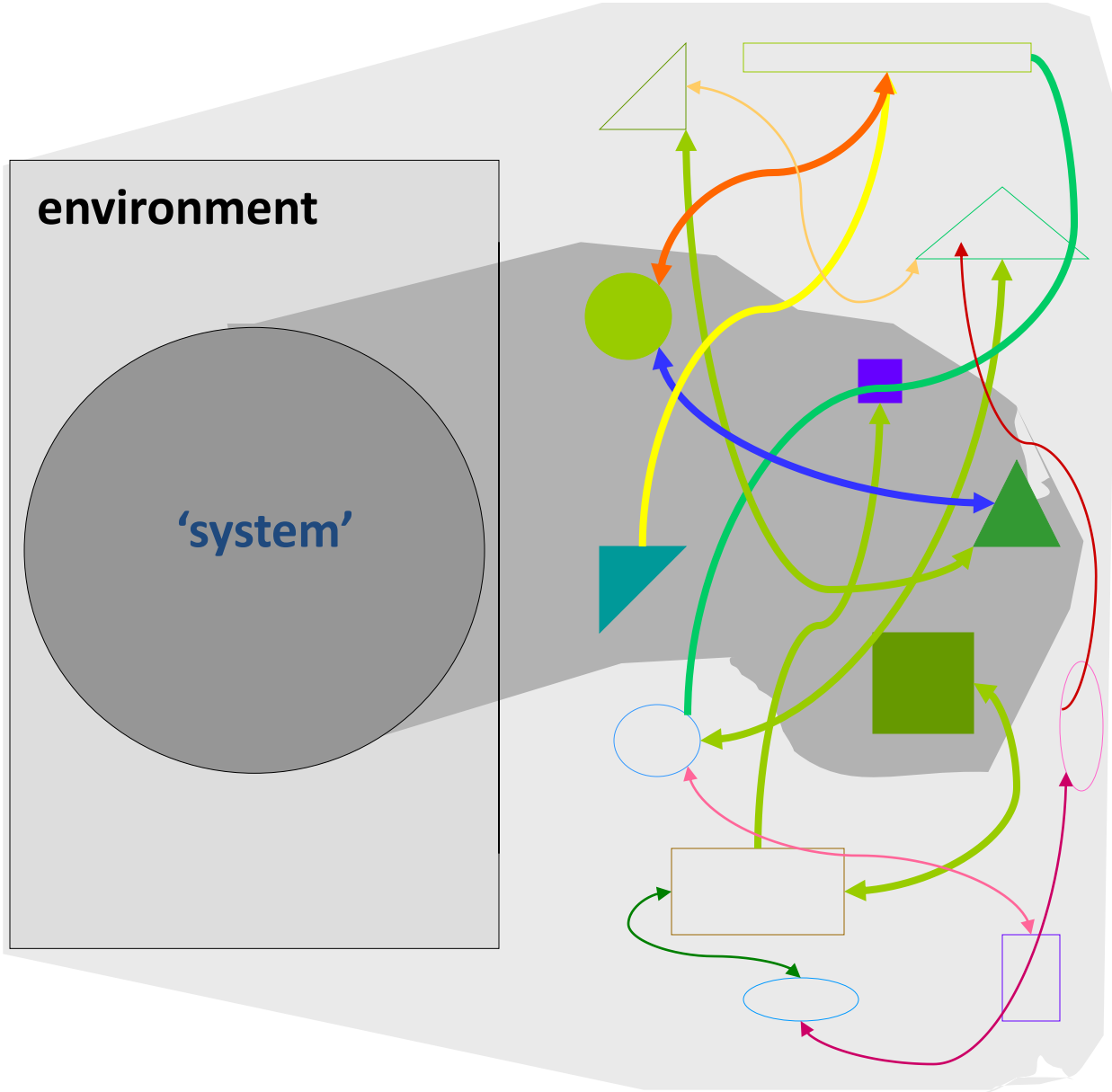
System:
Social, institutional, ecological and technological elements interacting in dynamic ways



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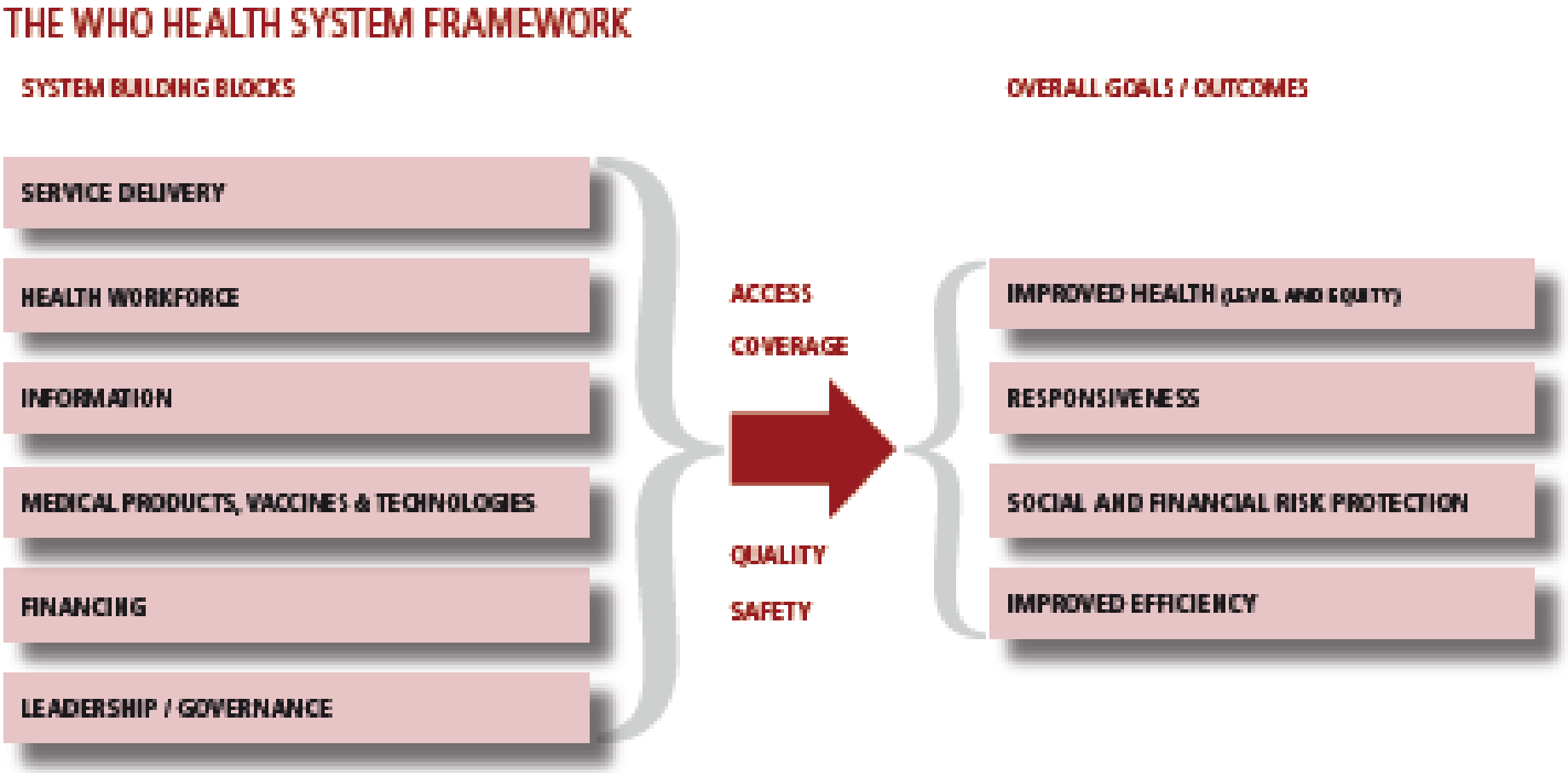
# The WHO definition of a **health** system

- The health system:

  "… all the activities whose primary purpose is to promote, restore or maintain health."

- *WHR 2000, page 5.*

# WHO building blocks




World Health Organization (2007). Everybody's Business: Strengthening Health Systems

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# WHO building blocks

- Good **health services** are those which deliver effective, safe, quality personal and non-personal health interventions to those that need them, when and where needed, with minimum waste of resources.
- A well-performing **health workforce** is one that works in ways that are responsive, fair and efficient to achieve the best health outcomes possible, given available resources and circumstances (i.e. there are sufficient staff, fairly distributed; they are competent, responsive and productive).
- A well-functioning **health information system** is one that ensures the production, analysis, dissemination and use of reliable and timely information on health determinants, health system performance and health status.

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# WHO building blocks

- A well-functioning health system ensures equitable access to essential **medical products, vaccines and technologies** of assured quality, safety, efficacy and cost-effectiveness, and their scientifically sound and cost-effective use.
- A good **health financing system** raises adequate funds for health, in ways that ensure people can use needed services, and are protected from financial catastrophe or impoverishment associated with having to pay for them. It provides incentives for providers and users to be efficient.
- **Leadership and governance** involves ensuring strategic policy frameworks exist and are combined with effective oversight, coalition building, regulation, attention to system-design and accountability.

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# What are health systems?

**Machine-like organizations which can be controlled from the top through rules and incentives**

**Complex social and political phenomena, constructed through human action**

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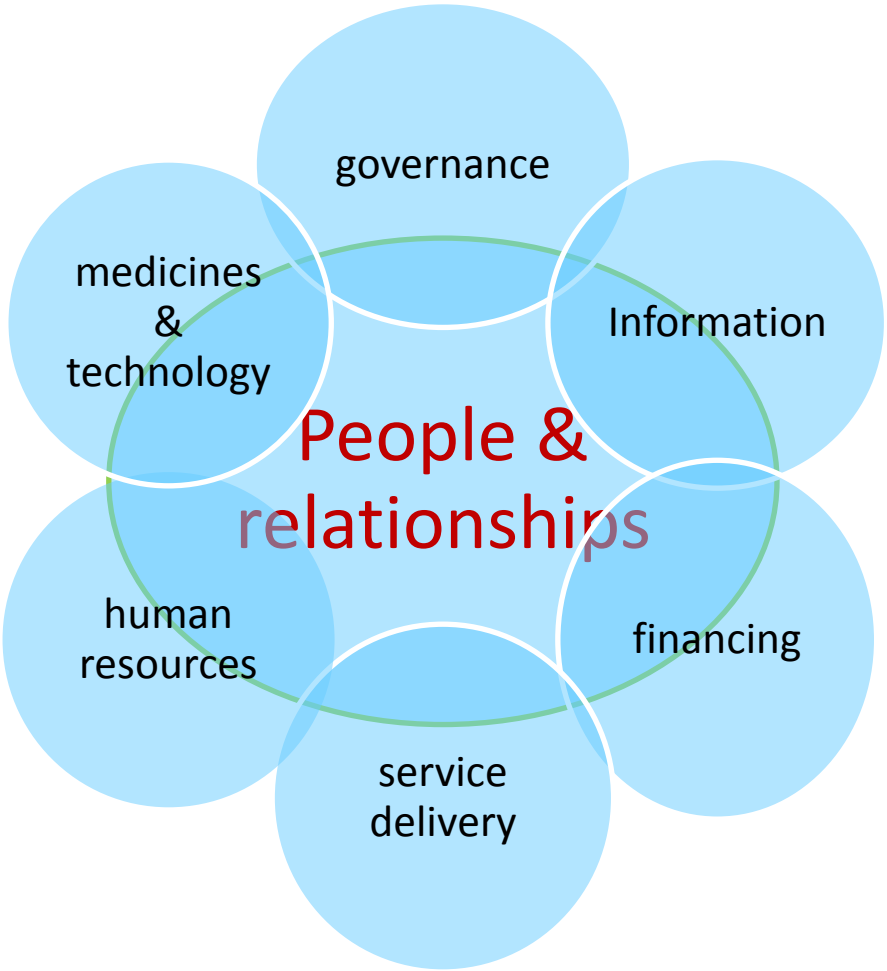
# Health systems are dynamic & interconnected systems at whose heart are people

*'It is the multiple relationships and interactions among the building blocks ... that convert these blocks into a system'*

De Savigny & Adams, 2009




Others have described these as "hardware" (in black) and "software" (in red).

# Schematic illustrating health system **structure/components**

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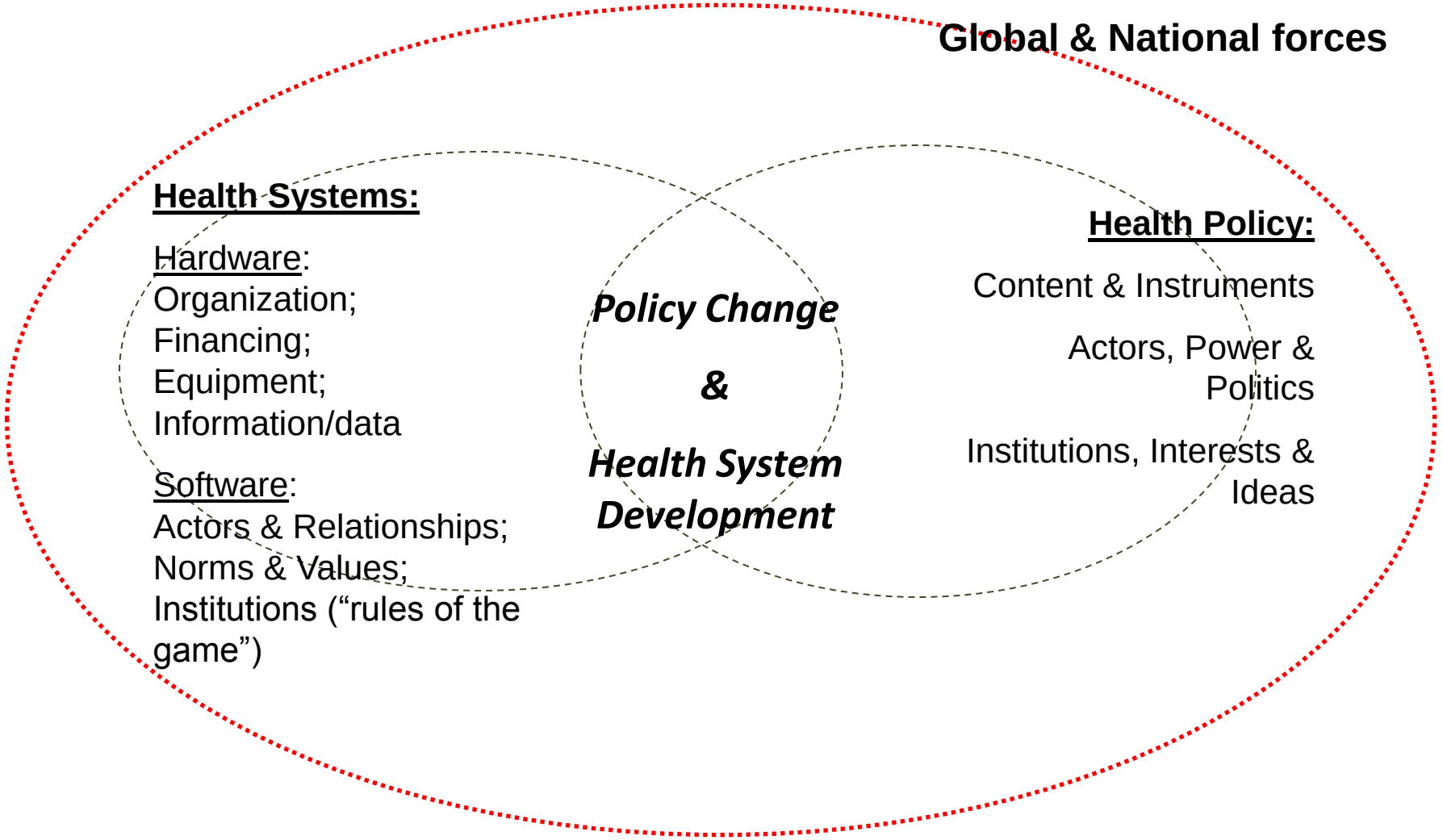
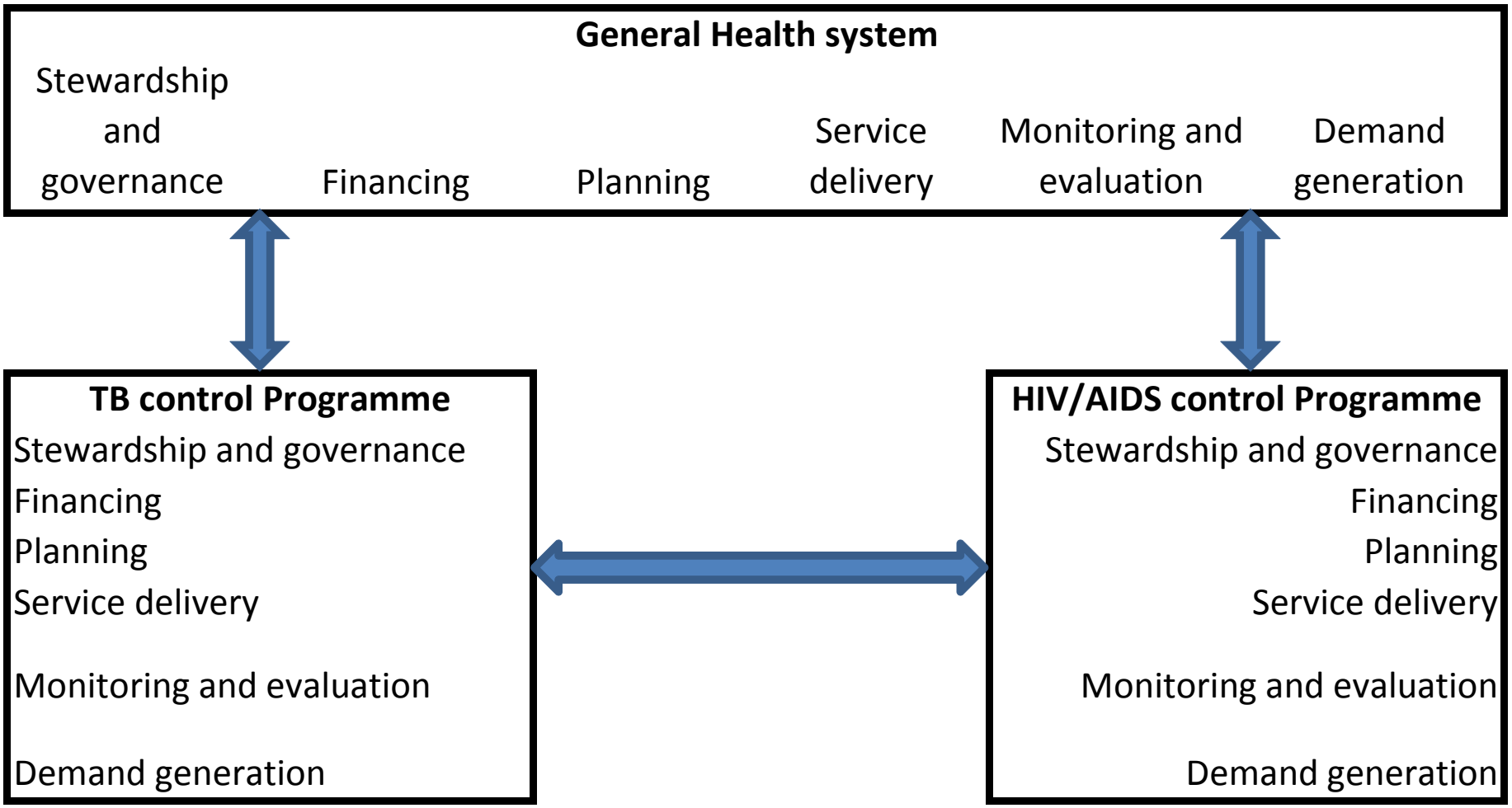


# Schematic illustrating health system **functions**




Mounier-Jack 2008 & Coker et al., 2010

# Stewardship & governance

# Defining governance

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- The exercise of political, economic & administrative authority at all levels

- Rules that distribute roles &responsibilities among actors & shape their interactions

  These can be:

  - formal, embodied in institutions (e.g., democratic elections, parliaments, courts, sectoral ministries);
  - informal, reflected in behavioral patterns (e.g., trust, reciprocity, civic-mindedness).

# Governance levels in health

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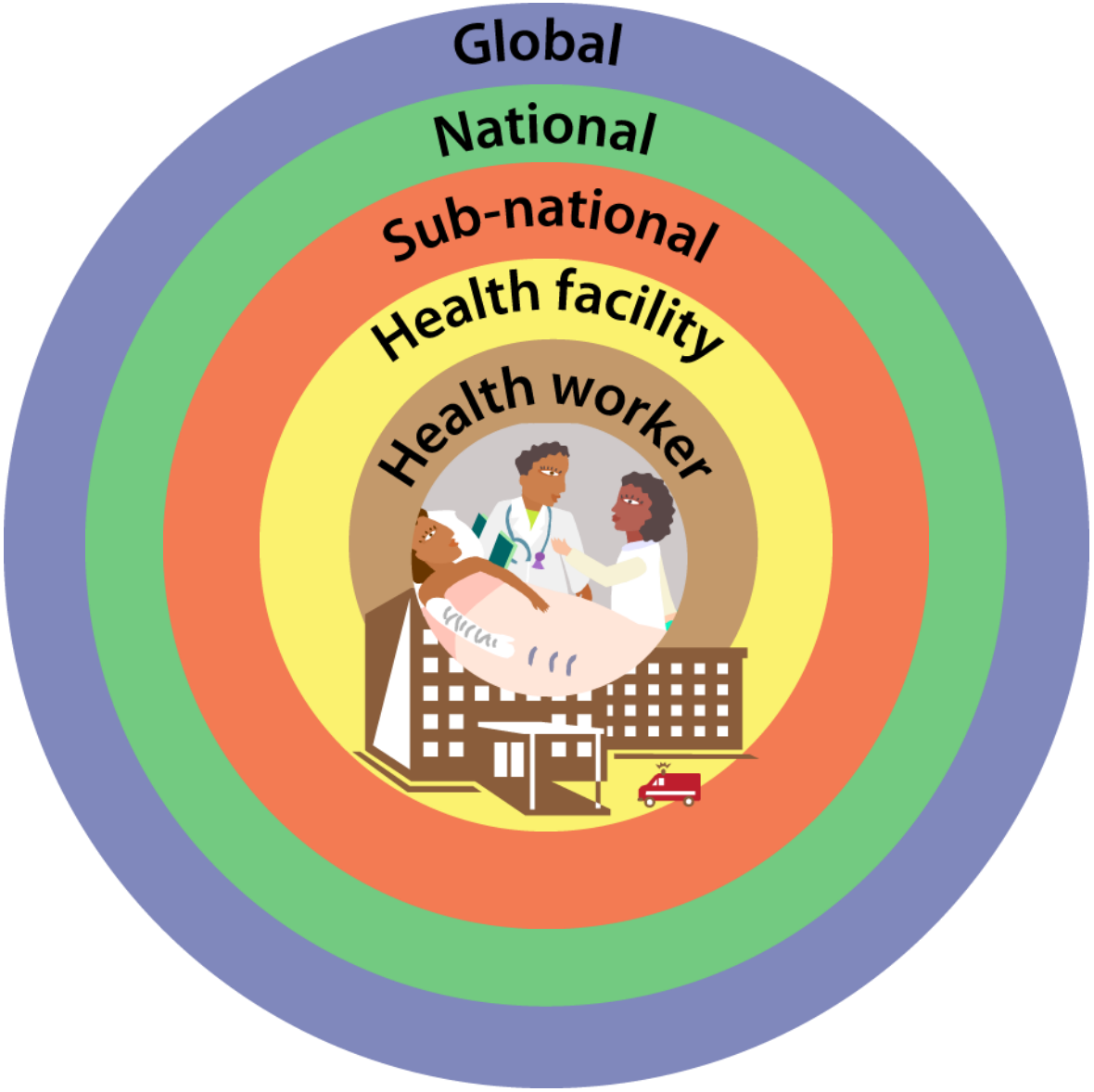

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# Good governance in health

- **Responsiveness** to public health needs and clients'/citizens' preferences
- **Leadership** to address public health priorities
- **Inclusion** of clients'/citizens' voice
- Clear and enforceable **accountability**
- **Transparency** in policymaking, resource allocation & performance
- Evidence-based policy & **decision-making**
- Efficient, effective, & equitable service provision, regulation & management

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# Frameworks for Analyzing Governance

1) WHO domains of stewardship;

2) PAHO Essential Public Health Functions;

3) World Bank six Basic Aspects of Governance;

4) UNDP Principles of Good Governance

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# WHO Domains of Stewardship

- Generation of intelligence
- Formulating strategic policy direction
- Ensuring tools for implementation: powers, incentives and sanctions
- Building coalition / building partnership
- Ensuring a fit between policy objectives and organizational structure and culture
- Ensuring accountability

(Travis et al 2001)

# PAHO Essential Public Health Functions

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- Monitoring evaluation and analysis of the health situation
- Public health surveillance, research and control of risks
- Health promotion
- Social participation in health
- Policies and institutional capacity for planning and management
- Strengthening institutional capacity for regulation and enforcement
- Evaluation and promotion of equitable access to health services
- Human resource development and training
- Quality assurance in personal and population-based health services
- Research in public health
- Reducing impact of emergencies and disasters on health



(PAHO 2002)

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# World Bank Governance Indicators

- Process by which those in authority are selected and replaced
  - Voice and Accountability
  - Political Instability and Violence
- Ability of the government to formulate and implement sound policies
  - Government Effectiveness
  - Regulatory Burden
- Respect of citizens and the state for institutions which govern their interaction
  - Rule of Law
  - Graft (control of corruption)

(Kaufmann 1999)

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# UNDP Five Principles of Good Governance

| Principles | Thematic areas |
|---|---|
| Legitimacy & voice | *Participation* |
| | *Consensus orientation* |
| Direction | *Strategic vision* |
| Performance | *Responsiveness* |
| | *Effectiveness & efficiency* |
| Accountability | *Accountability* |
| | *Transparency* |
| Fairness | *Equity & inclusiveness* |
| | *Rule of law* |

(UNDP 1997)

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# Contemporary Issues in Health System Governance

- Role of the state vs. the market in health
- Role of the ministries of health vs. other state ministries
- Actors in Governance – public sector, civil society and the private sector
- Static vs. dynamic health systems
- Health Reform vs. Human Rights-based approach to health

# Contemporary Issues in Health System Governance

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| **Governance principle - *Strategic Vision***<br>**Domain - Long term vision** | |
|---|---|
| **Broad Question** | **Specific Question** |
| *National* level<br>What are the broad outlines of economic policy of the government; | Where does health rank in the overall development framework by resource allocation, and as percentage of total government expenditure |
| *MOH policy level*<br>Whether there is a long term vision (policy) for health; | Is there a national health policy/strategic plan available stating objectives, strategies with a time frame and resources allocated |
| *MOH implementation level*<br>Whether the implementation mechanisms are in line with the stated objectives of health policy | What priority programs are being implemented and how do they correspond to the policy objectives |

# Some accountability relationships within the health system

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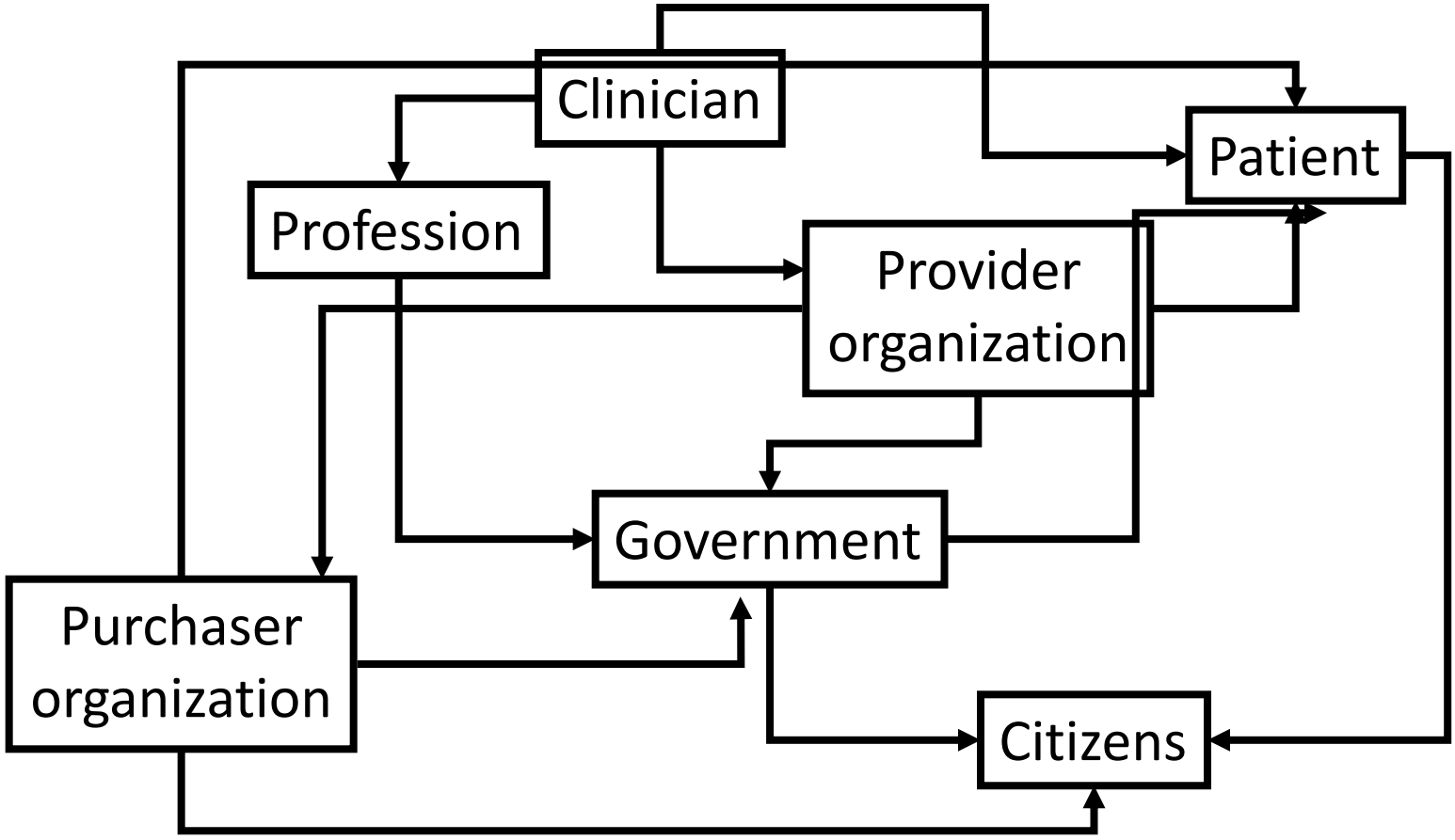

# Accountability of local organizations to citizens and patients

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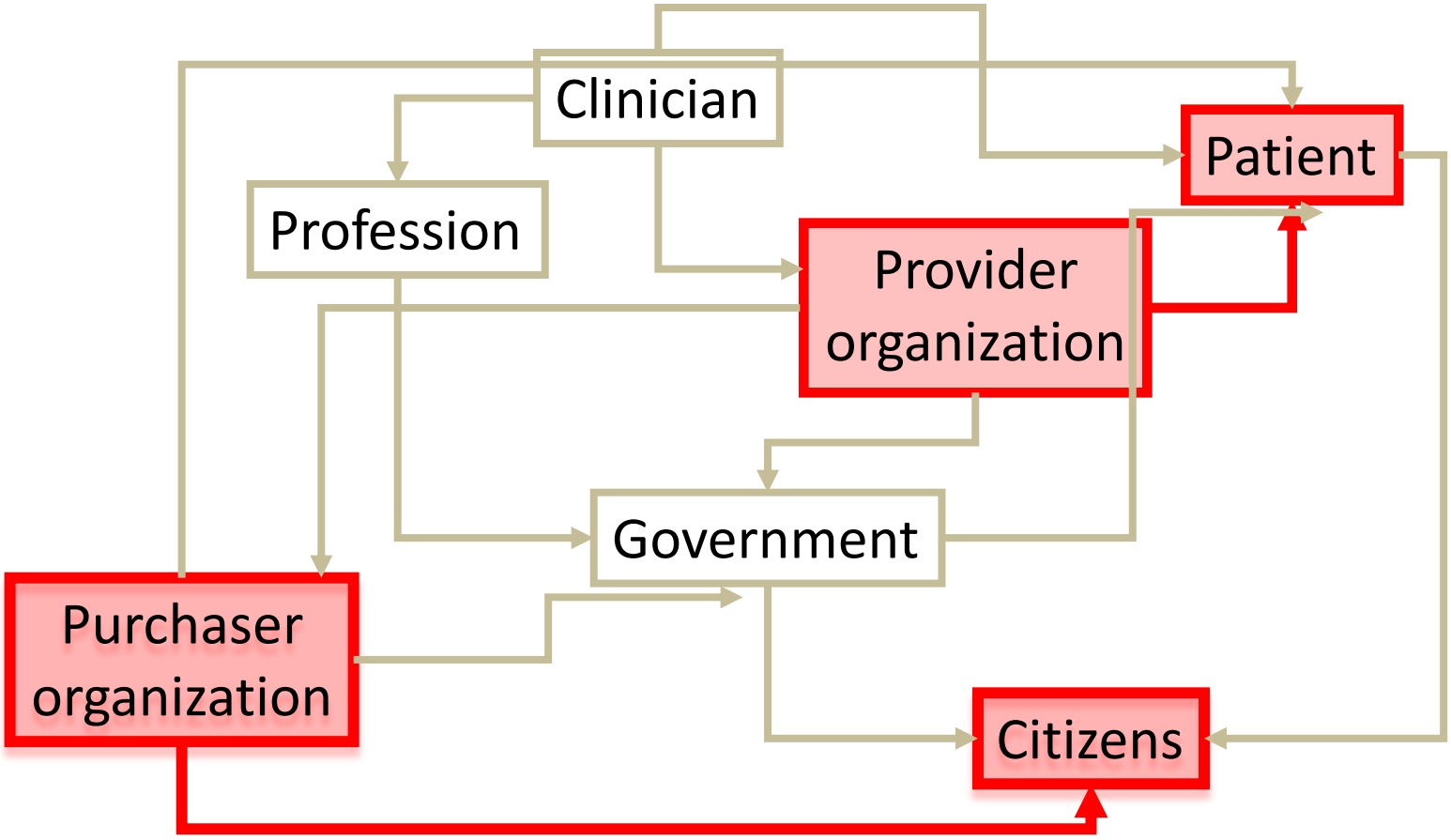

# Accountability of local organizations to government

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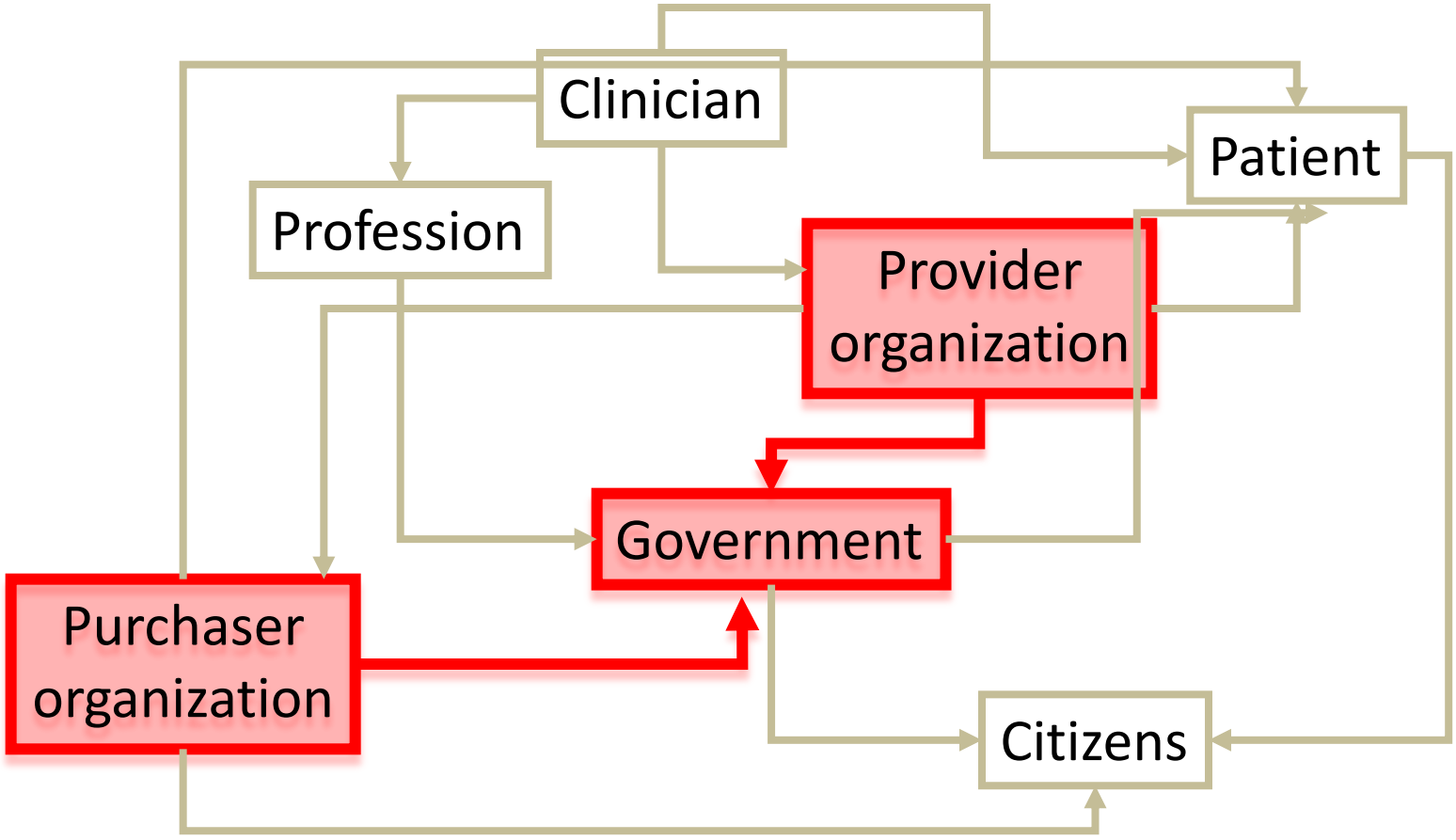

# Accountability of providers to payers

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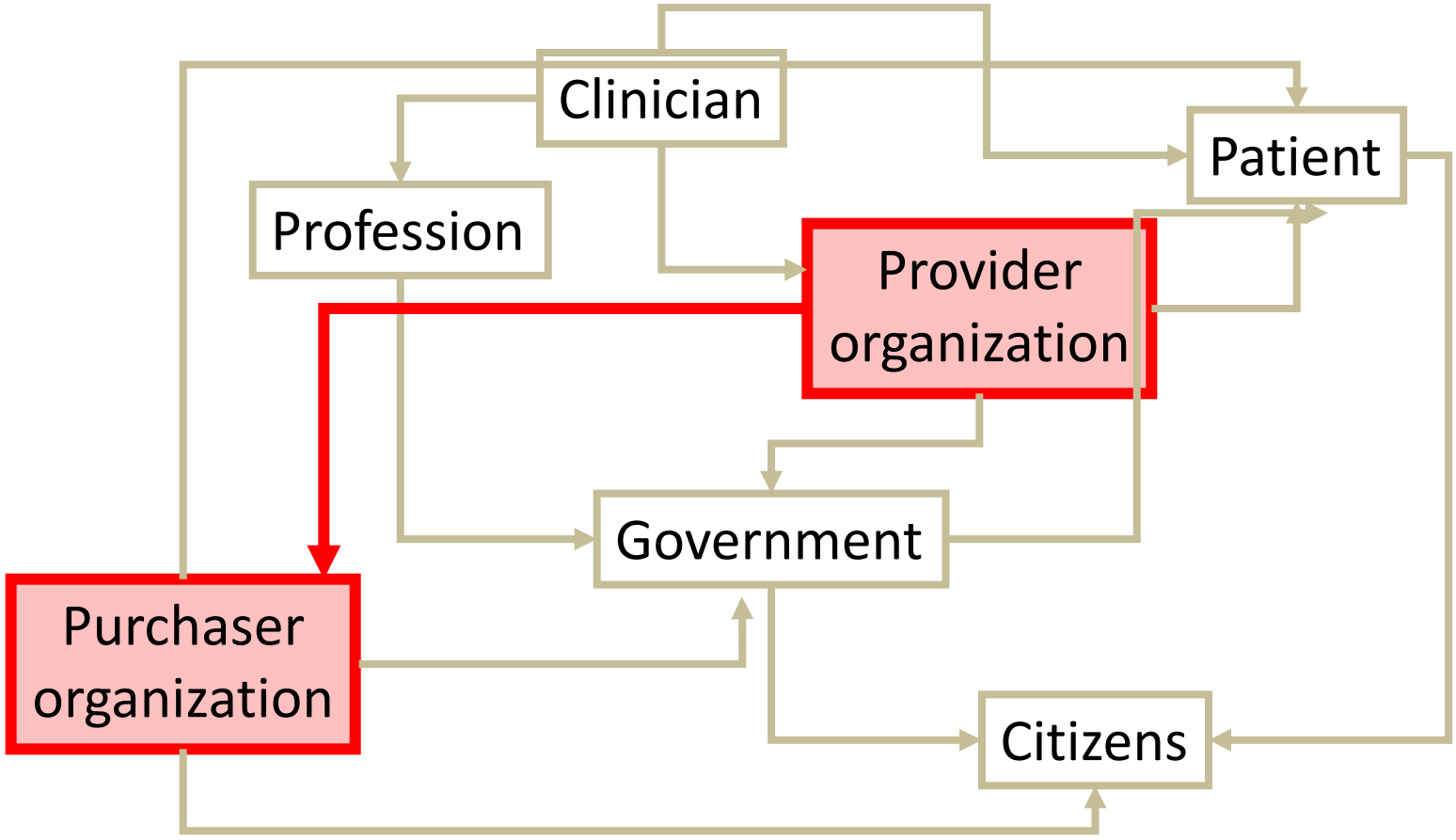

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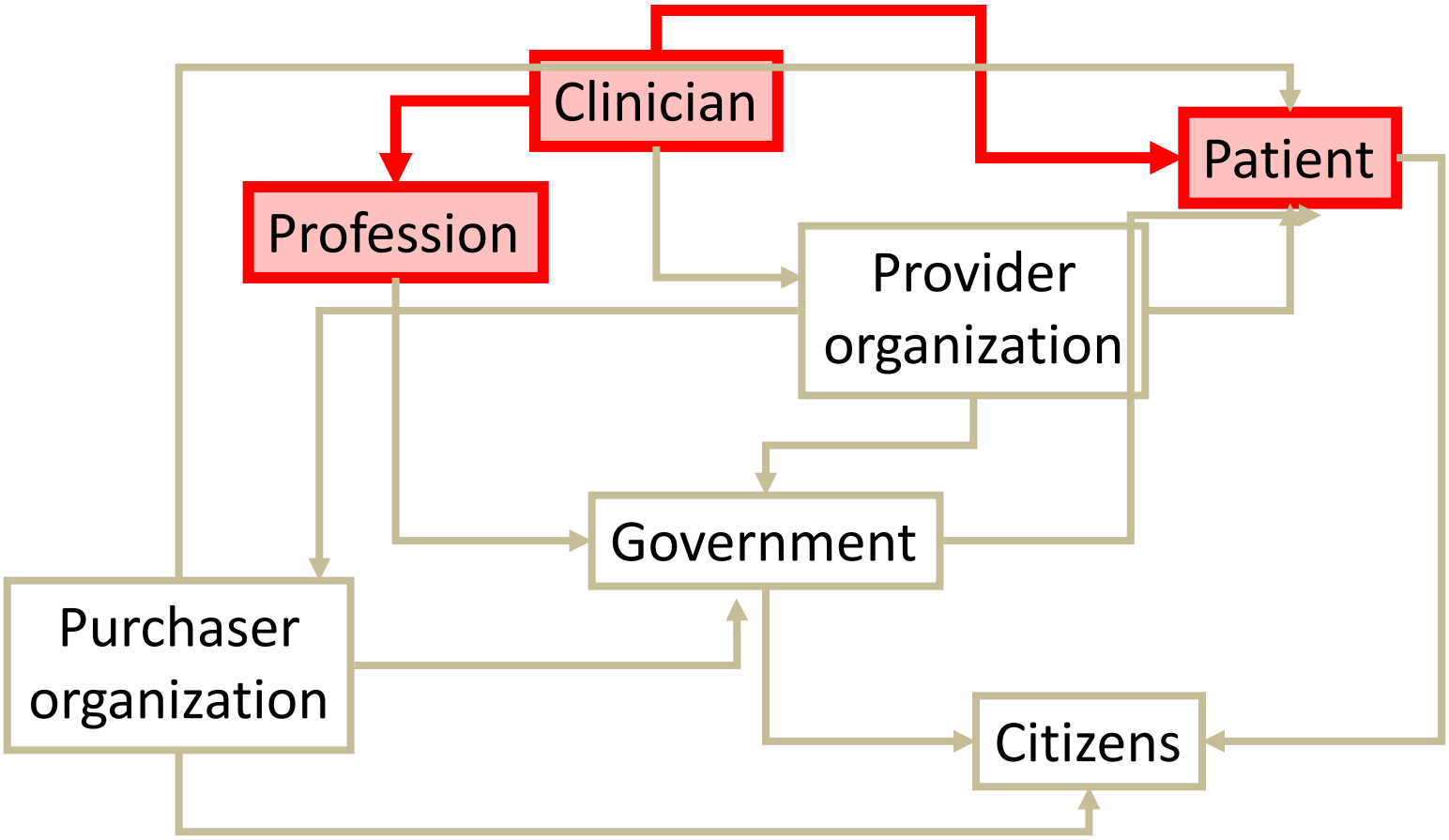
# Professional accountability



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# Accountability arrangements

- Might include
  - *markets* in which patients or payers can choose which providers they use
  - *democratic processes* in which the public passes periodic electoral judgment on relevant agencies
  - *direct incentives* through payment or accreditation systems
  - oversight of providers through professional *regulation.*
- The common feature is that they imply some incentive for the provider to take action.

# Financing


heavily donor-dependent?
how many donors + what is their % of overall health spending?
NGOs/philanthropists?
under the table?
user fees?
Overprescription?
absorptive capacity?
resource generation
funding gaps!
who benefits?
tracking + monitoring of GH finance channeled by + through private sources
what sort of incentives drive current/future programme/system performance?
financing
pooling of funds
funding from how many sources + distributed to the provinces how?
needs based breakdown of funds?
provider payment
performance based incentives for staff?
absorptive capacity?
financial arrangements
dispersement of funds from national level
who gets what, when, how?
salary reforms?
pooling?
delayed disbursal
payroll
critically examine who benefits from the rise in global health spending?

# Total expenditure on health as % GDP

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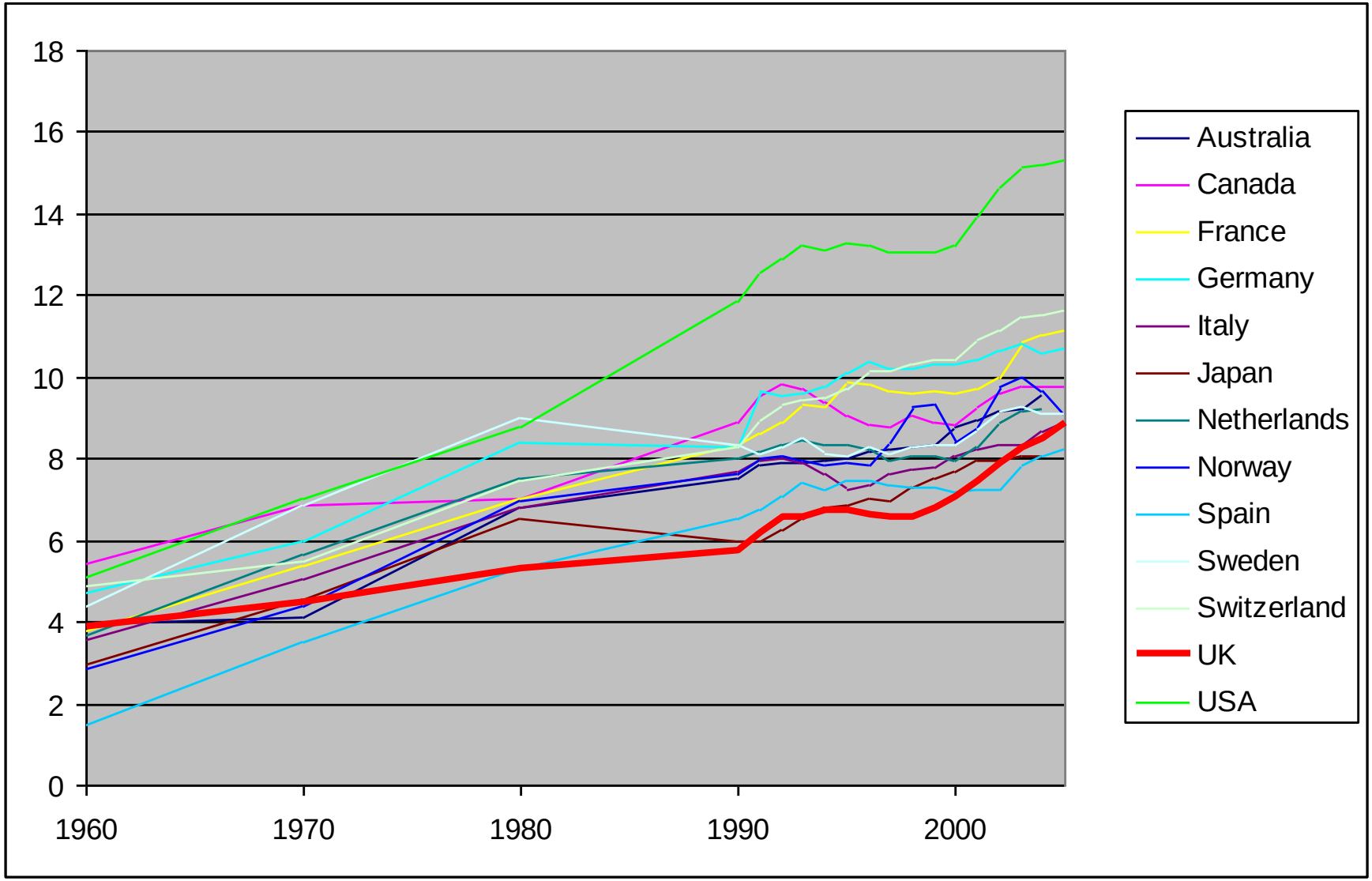


Source OECD HEALTH DATA 2008

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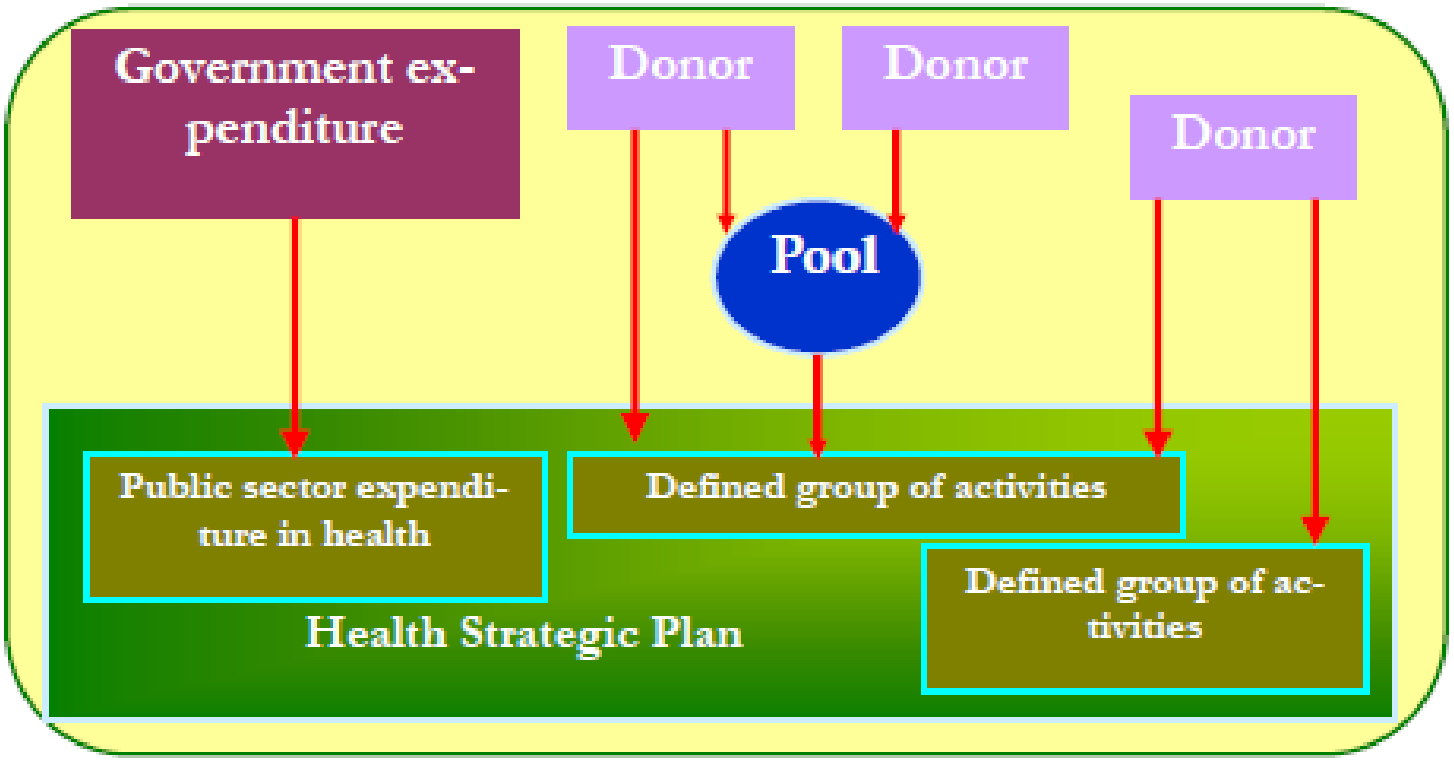
Fragmented financing, implementing and monitoring agencies:

# Example from Cambodia

Major changes in health care funding == complex financial mechanism

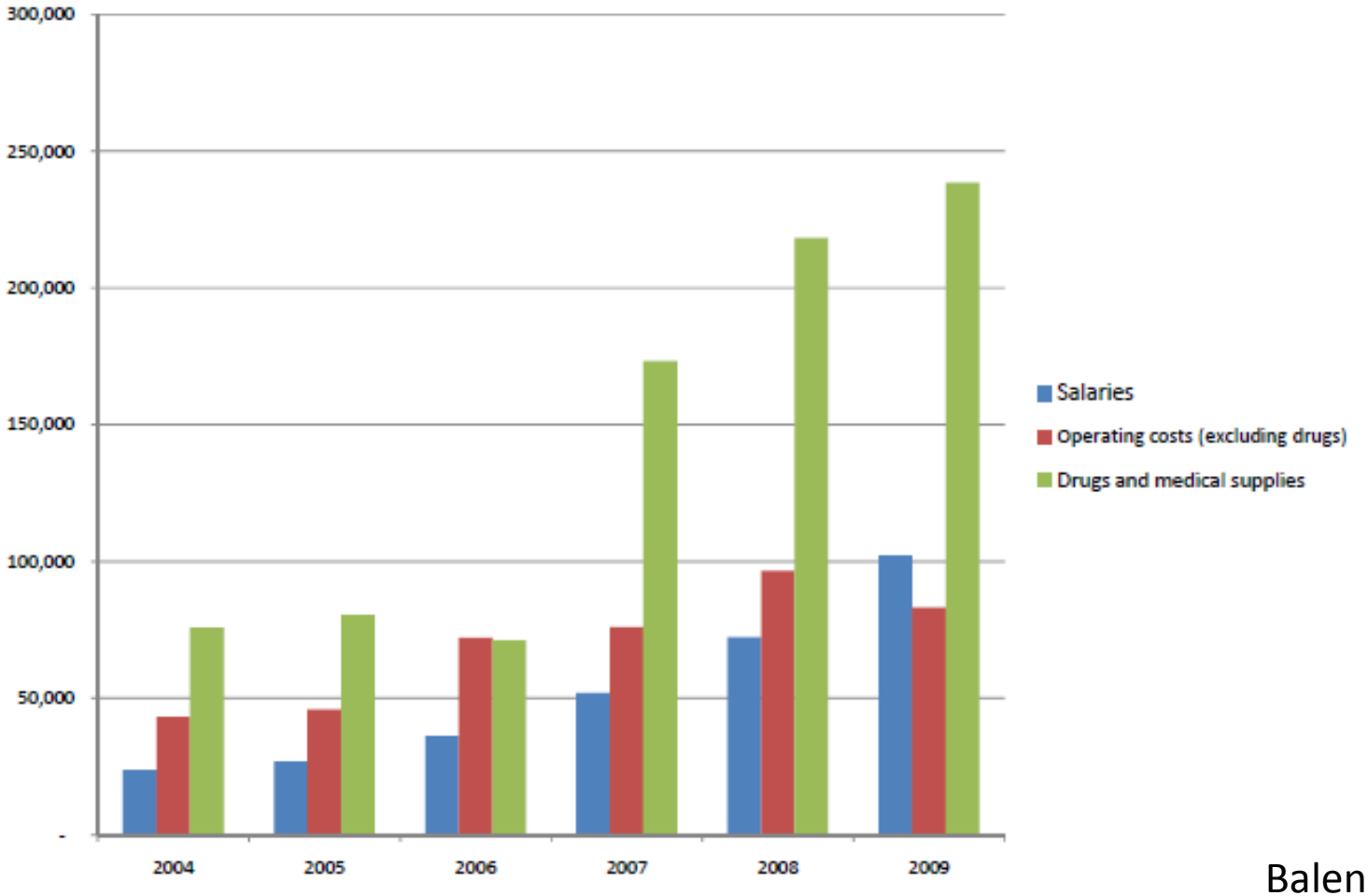



Approx. 20 multilateral & bilateral donors & >100 health-related international & national NGOs working in Cambodia

Balen et al., 2011

# Example from Cambodia

Composition of government's health spending 2004-2009, according to salaries, operational costs, & drugs & medical supplies (amount given in CR millions)




Balen et al., 2011

# Example from Cambodia

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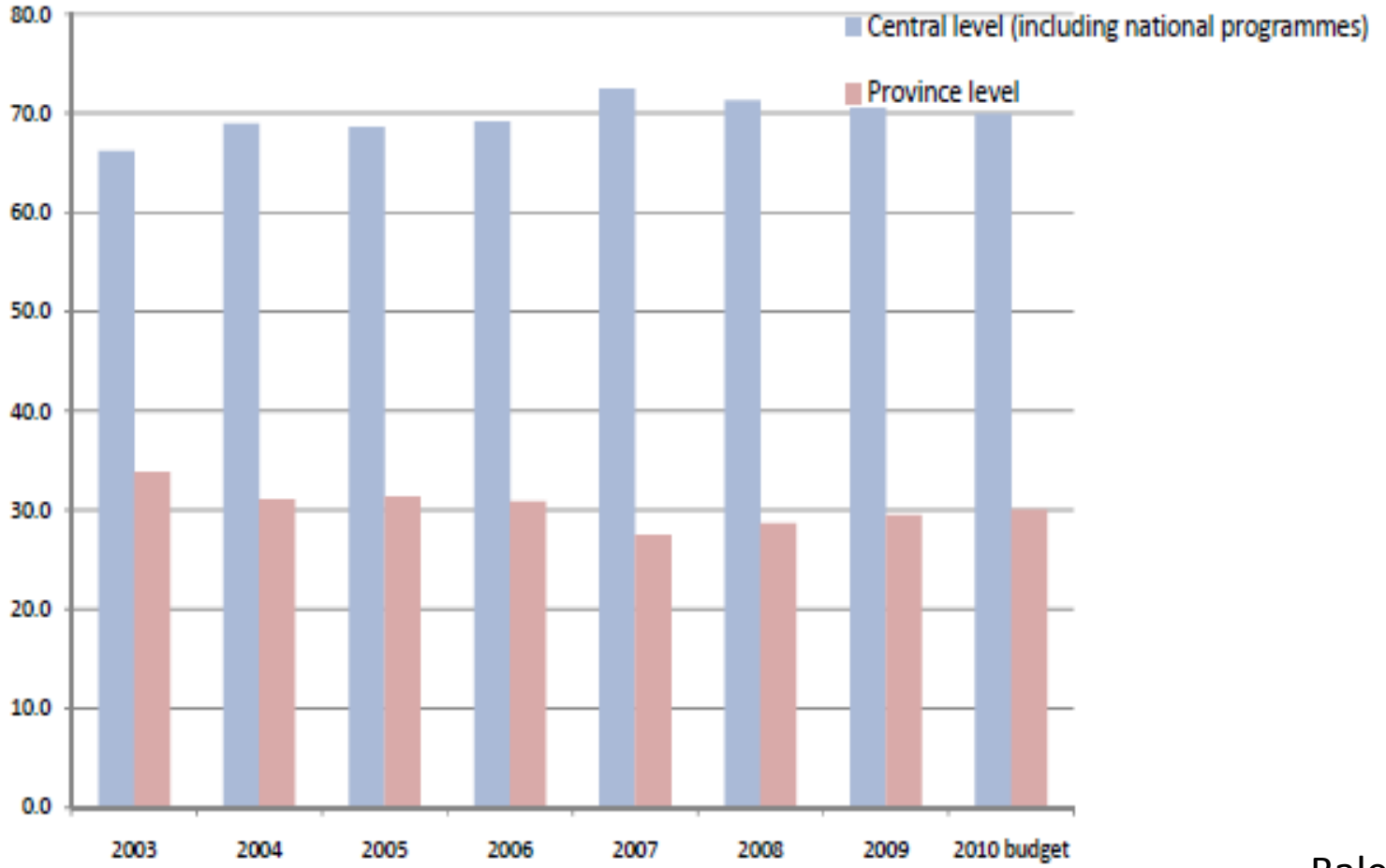
Proportion of total health budget in Cambodia spent at the central level & at sub-national level between 2003 & 2010




Balen et al., 2011

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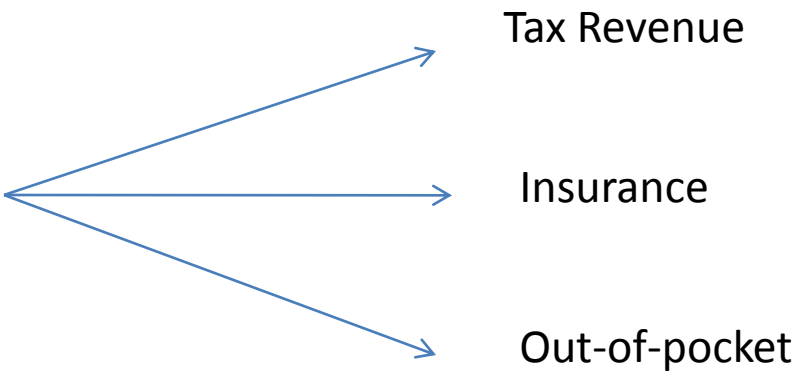
# Health care can be paid by:



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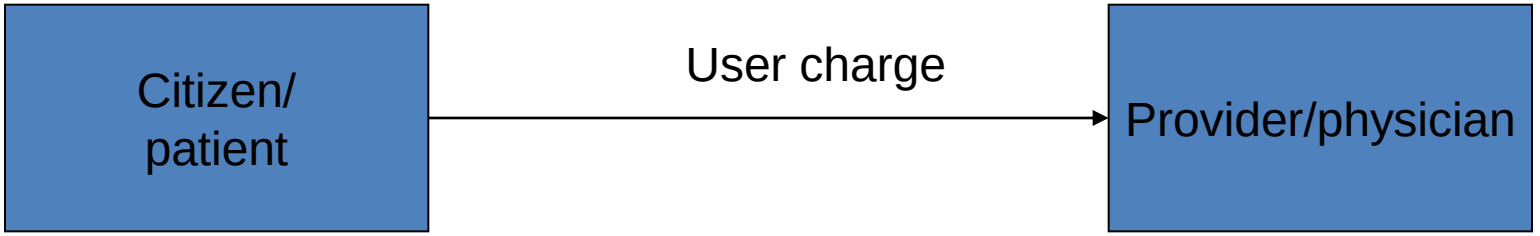
# Direct patient financing



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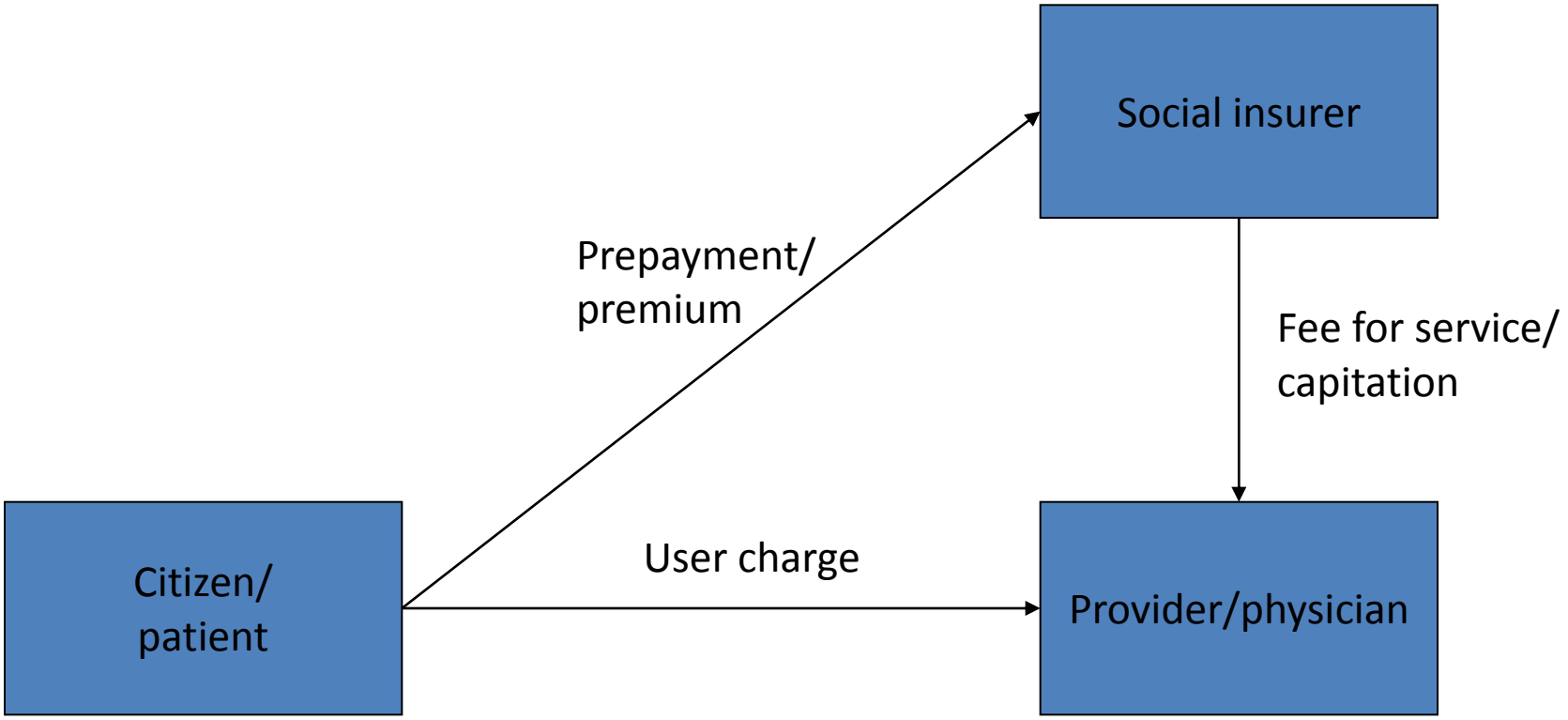
# Social insurance (stand-alone)



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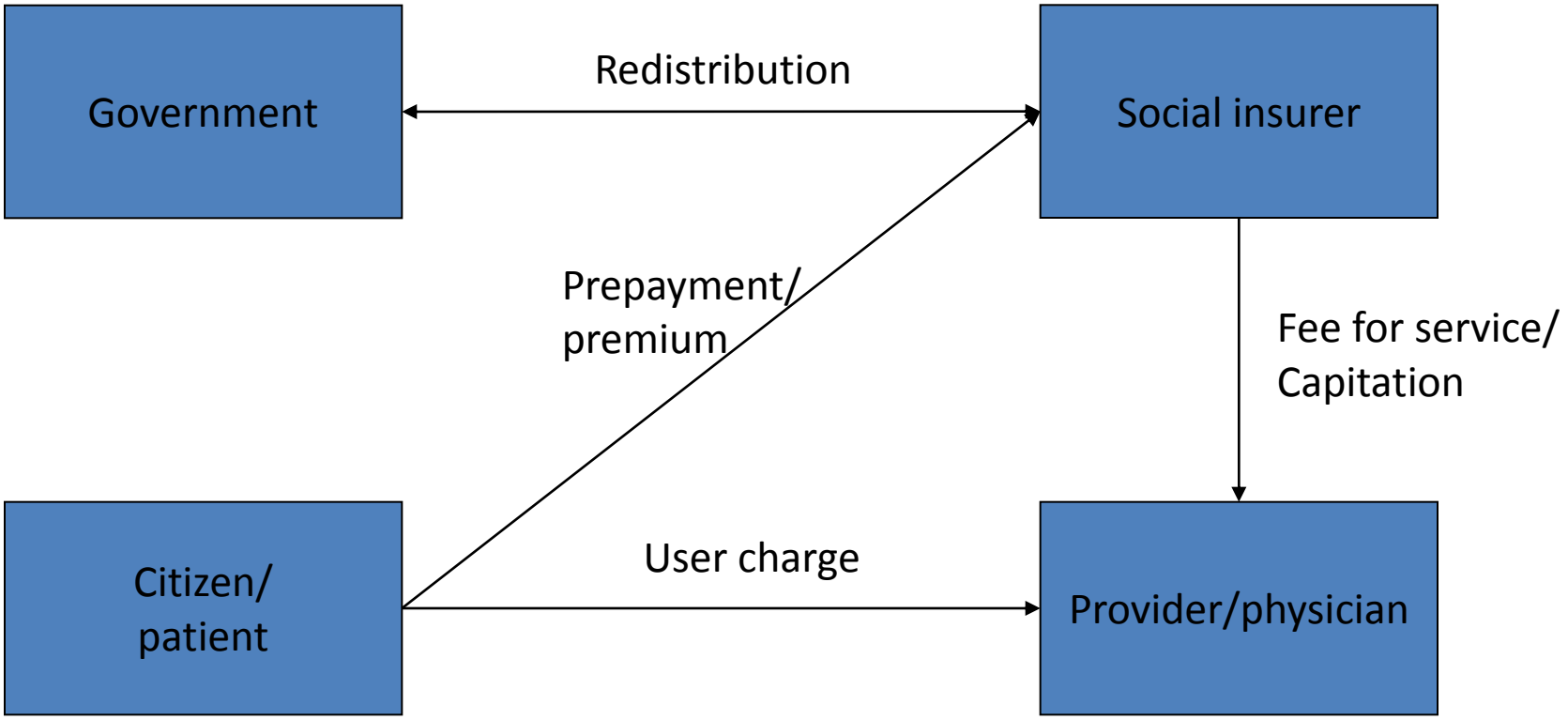
# Integrated social insurance



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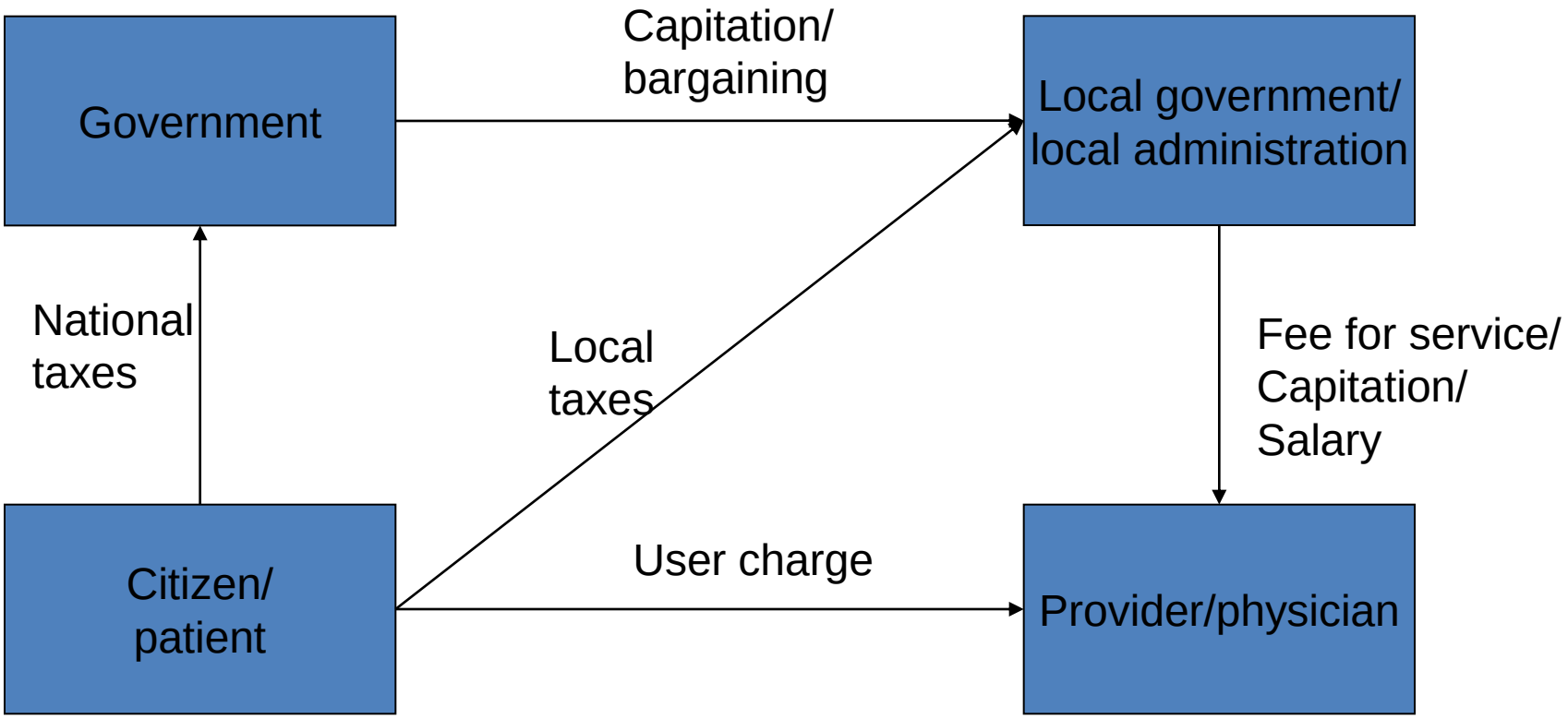
# Tax funded



# Categories of European health systems

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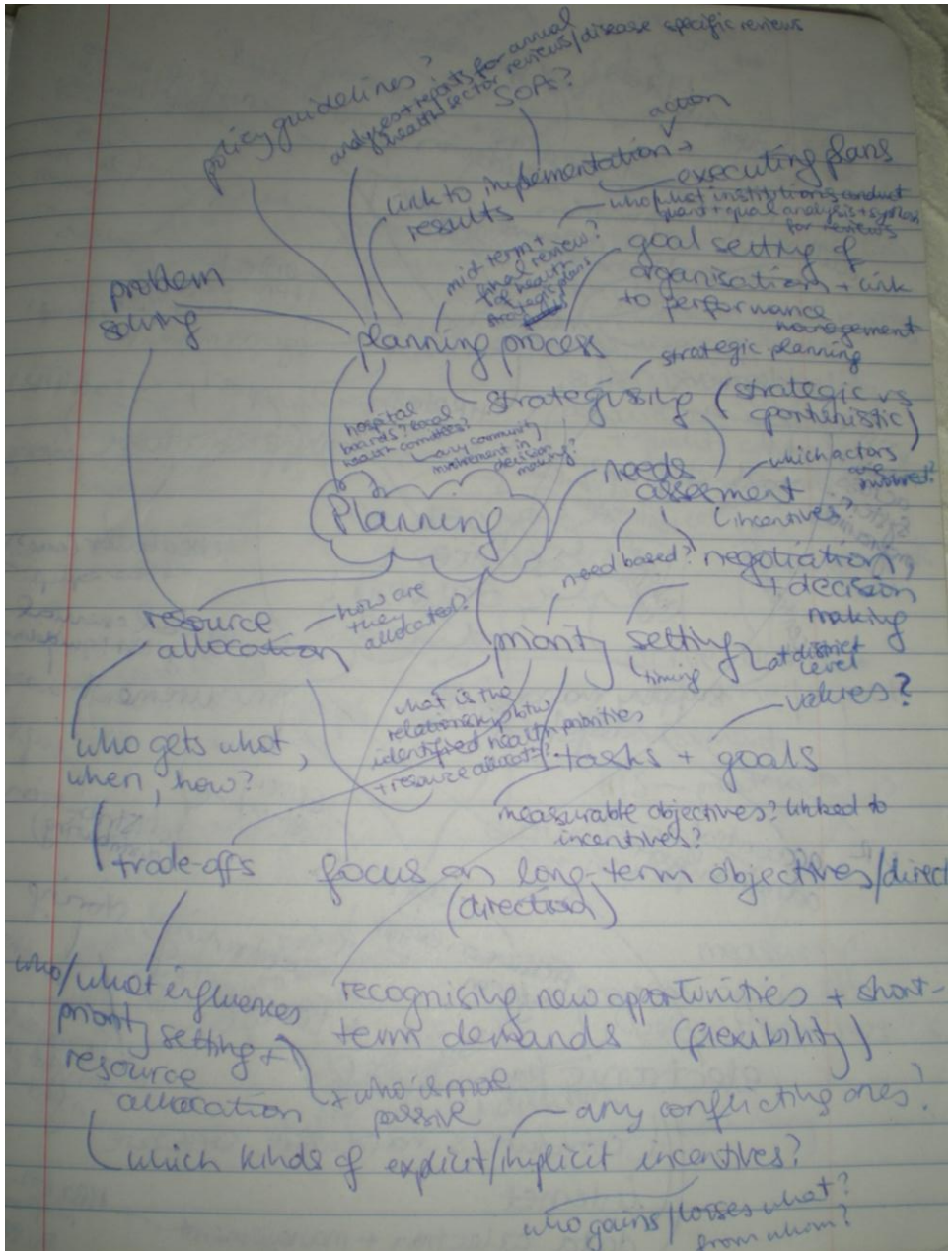
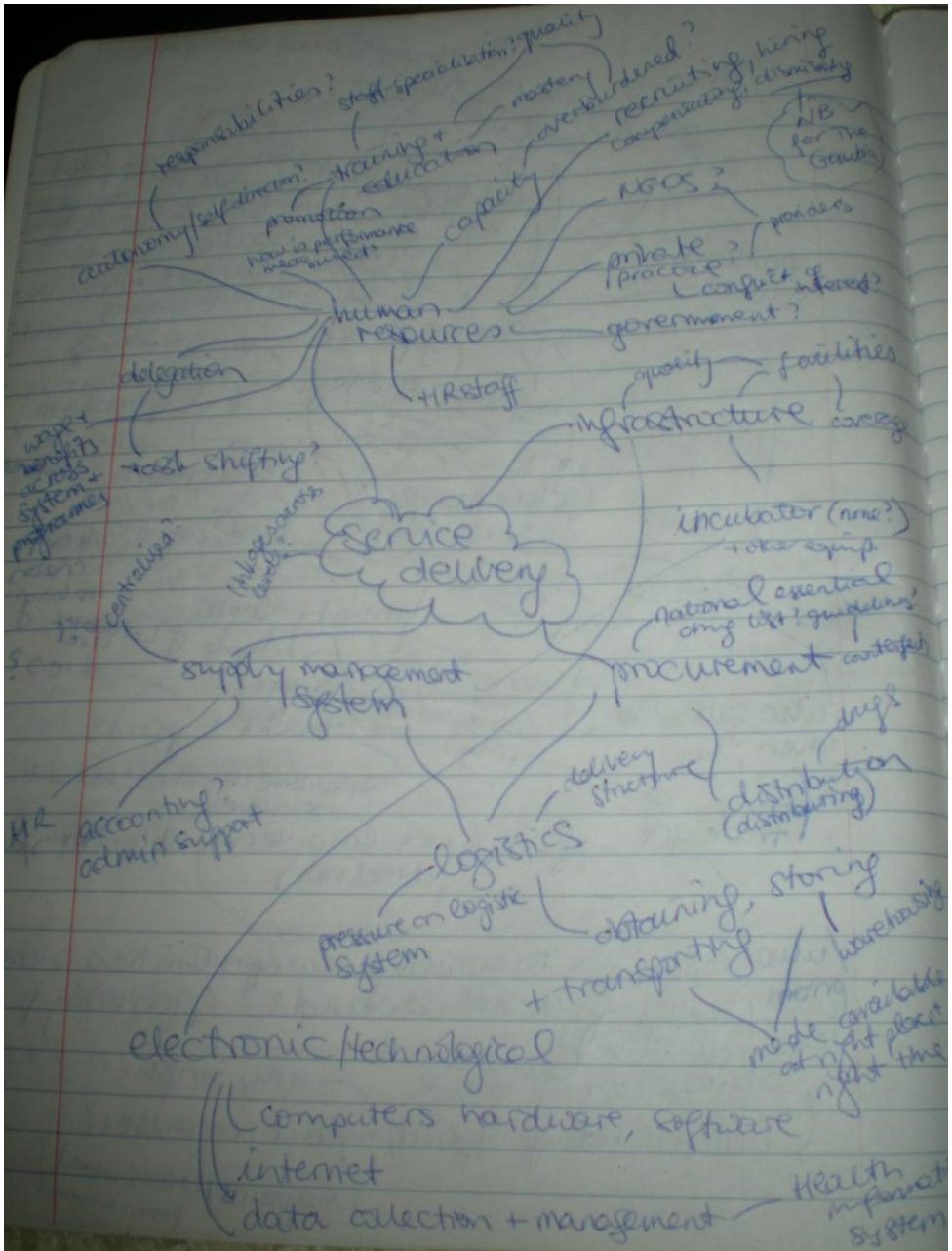
| ***Social insurance: competitive*** | ***Social insurance: non-competitive*** | ***Tax funded: decentralized*** | ***Tax funded: centralized*** |
|---|---|---|---|
| Belgium<br>The Netherlands<br>Germany<br>Switzerland | Austria<br>France | Denmark<br>Finland<br>Italy<br>Spain<br>Sweden | Norway<br>Portugal<br>UK |

# Planning

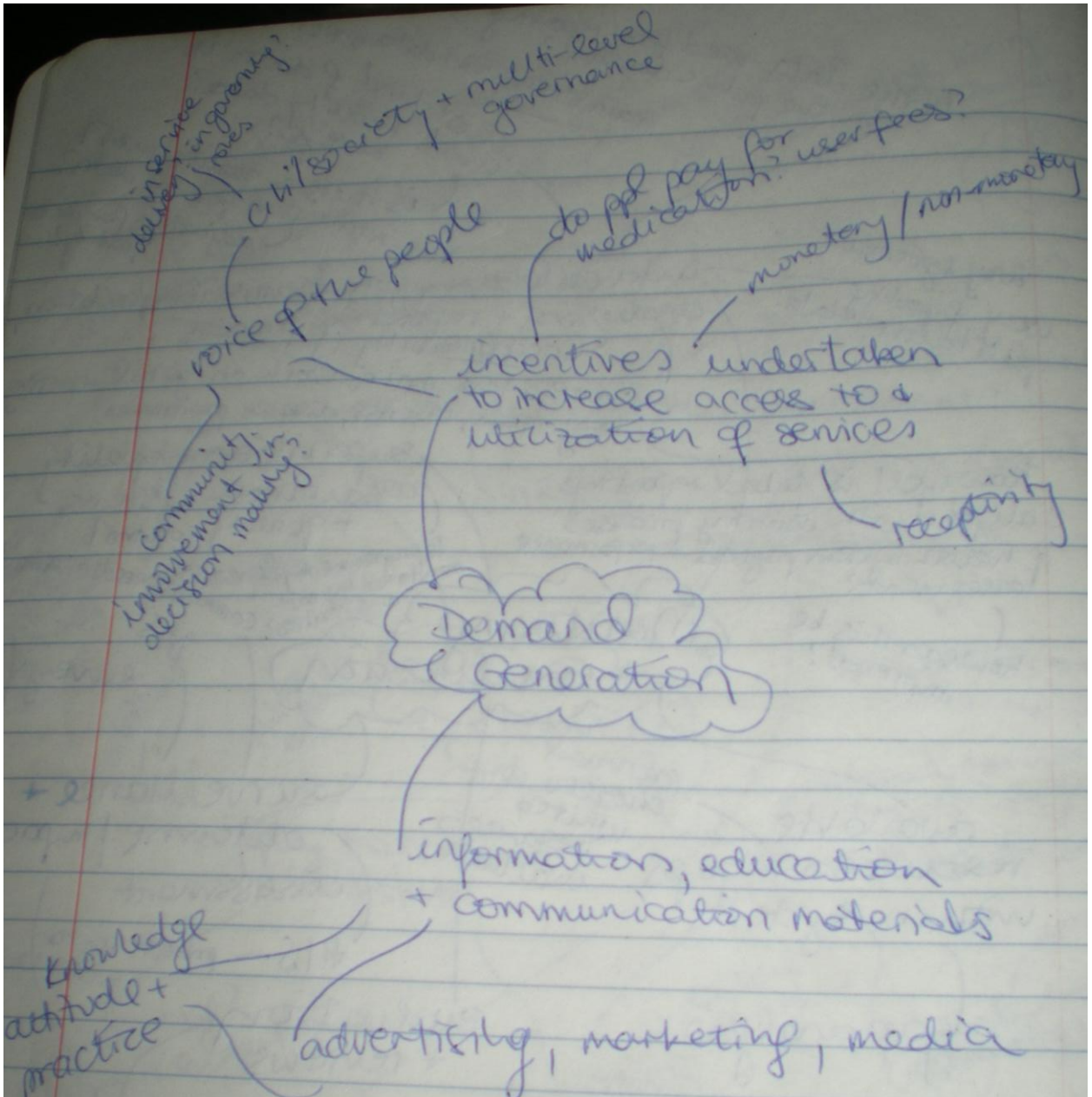

policy guidelines?
analyses + reports for annual / health sector reviews / disease specific reviews
SOPs?
action
executing plans
link to implementation
results
who / what institutions conduct joint + equal analysis + synthesis for reviews
mid term + final review?
goal setting of organisations + link to performance management
problem statement
planning process
strategic planning
strategicity (strategic vs. portfolistic)
hospital boards? local health committees?
any community involvement in decision making?
needs assessment
which actors are involved?
incentives?
Planning
need based?
negotiation + decision making
resource allocation
how are they allocated?
priority setting (timing)
district level
values?
what is the relationship between identified health priorities + resource allocation?
who gets what, when, how?
tasks + goals
measurable objectives? linked to incentives?
trade-offs
focus on long-term objectives/direct (directed)
who/what influences priority setting + resource allocation
recognising new opportunities + short-term demands (flexibility)
who's more passive
any conflicting ones?
which kinds of explicit/implicit incentives?
who gains/losses what? from whom?

# Service delivery



# Monitoring & Evaluation

# Demand generation



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# DIFFERENT HEALTHCARE MODELS

- Each nation's health care system is a reflection of its:
  - History
  - Politics
  - Economy
  - National values
- They all vary to some degree
- However, they all share common principles
- There are four basic health care models around the world

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# 1. THE BISMARCK MODEL

- Germany, Japan, France, Belgium, Switzerland, Japan, and Latin America
- Named for Prussian chancellor Otto von Bismarck, inventor of the welfare state
- Characteristics:
  - Providers and payers are private
  - Private insurance plans – financed jointly by employers and employees through payroll deduction
  - The plans cover everyone and do not make a profit
  - Tight regulation of medical services and fees (cost control)

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# 2. THE BEVERIDGE MODEL

- Named after William Beveridge – inspired Britain's NHS
- Great Britain, Italy, Spain, Cuba, and the *U.S. Department of Veteran Affairs*
- Characteristics:
  - Healthcare is provided and financed by the **government**, through tax payments
  - There are no medical bills
  - Medical treatment is a public service
  - Providers can be government employees
  - Lows costs b/c the government controls costs as the **sole payer**
- This is what Americans call "socialized medicine"

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# 3. THE NATIONAL HEALTH INSURANCE MODEL

- Canada, Taiwan, South Korea
- Characteristics:
  - Providers are private
  - Payer is a government-run insurance program that every citizen pays into; has considerable market power to negotiate lower prices
  - National insurance collects monthly premiums and pays medical bills
  - Plans tend to be cheaper and administratively simpler than American-style insurance
  - Can control costs by: (1) limiting the medical services they will pay for or (2) making patients wait to be treated

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# 4. THE OUT-OF-POCKET MODEL

- Rural regions of Africa, India, China, and South America
- “no-system” countries
- Characteristics:
  - Only those who can afford it get medical care;
  - Most medical care is paid for by the patient, out-of-pocket
  - No insurance or government plan

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# Some successful system design

- **Sweden** manages to engage its clinicians in the delivery of care, through its long-standing system of measuring and promoting quality;
- The **Netherlands** has a model of regulated competition in health care, with widespread popular approval;
- **Finland** has successfully addressed its public health problems in heart disease;
- **Estonia** is introducing an incredible health information systems;
- **Taiwan** manages to balance a thriving competitive provider market with strict cost control;
- New health technologies are diffused with unequalled speed in the **United States**;
- **Chile**, with a tiny health budget, has managed to implement a clearly defined package of treatments to which the entire population has an entitlement;
- The **United Kingdom** offers very good protection from the financial consequences of sickness with a minimum of bureaucracy.

# GREAT BRITAIN

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- Insured
  - 100% of population insured
- Spending
  - 7.5% of GDP
- Funding
  - Single payer system funded by general revenues (National Health System); operates on huge deficit
- Private Insurance
  - 10% of Britons have private health insurance
  - Similar to coverage by NHS, but gives patients access to higher quality of care and reduce waiting times
- Physician Compensations
  - Most providers are government employees

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# GREAT BRITAIN

- Physician Choice
  - Patients have very little provider choice
- Copayment/Deductibles
  - No deductibles
  - Almost no copayments (prescription drugs)
- Waiting Times
  - Huge problem
- Benefits Covered
  - Offers comprehensive coverage
  - Terminally ill patients may be denied treatment

# CANADA

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- Insured
  - Single payer system – 100% insured
  - Each province must make insurance:
    - Universal (available to all)
    - Comprehensive (covers all necessary hospital visits)
    - Portable (individuals remain covered when moving to another province)
    - Accessible (no financial barriers, such as deductible or copayments)
- Funding
  - Federal government uses revenue to provide a block grant to the provinces (finances 16% of healthcare)
  - The remainder is funded by provincial taxes (personal and corporate income taxes)
- Spending
  - 9% of GDP
- Private Insurance
  - At one time all private insurance was prohibited; changed in 2005
  - Many private clinics now offer services on the black market

# CANADA

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- Physician Compensation
  - Physicians work in private practice
  - Paid on a fee-for-service basis
  - These fees are set by a centralized agency; makes wages fairly low
- Physician Choice
  - Referrals are required for all specialist services except the ED
- Copayment/Deductibles
  - Generally no copayments or deductibles
  - Some provinces do charge insurance premiums
- Waiting Times
  - Long waiting lists
  - Many travel to the U.S. for healthcare

# FRANCE

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- Insured
  - About 99% of population covered
- Cost
  - 3rd most expensive health care system
  - 11% of GDP
- Funding
  - 13.55% payroll tax (employers pay 12.8%, individuals pay 0.75%)
  - 5.25% general social contribution tax on income
  - Taxes on tobacco, alcohol and pharmaceutical company revenues
- Private Insurance
  - "more than 92% of French residents have complementary private insurance"
  - These funds are loosely regulated (less than U.S.); the only requirement is renewability
  - These benefits are not equally distributed (creates a two-tiered system)

# FRANCE

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- Physician Compensation
  - Providers paid by national health insurance system based on a centrally planned fee schedule – fees are based on an upfront treatment lump sum (similar to DRGs in US)
  - However, doctors can charge whatever they want
  - The patient or the private insurance makes up the difference
  - Medical school is free
  - Legal system is fairly tort averse
- Physician Choice
  - Fair amount of choice in the doctors they choose
- Copayment/Deductible
  - 10% to 40% copayments
- Waiting Times
  - Very little waiting lists/times
- Technology
  - Government does not reimburse new technologies very generously
  - Little incentive to make capital investments in medical technology

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# GERMANY

- Insured
  - 99.6% of population – sickness funds
  - Those with higher incomes can buy private insurance
  - The federal gov. decides the global budget and which procedures to include in the benefit package
- Funding
  - Sickness funds are financed through a payroll tax (avg. 15% of income)
  - The tax is split between the employer and employee
- Private insurance
  - 9% of Germans have supplemental insurance; covers items not paid for by the sickness funds
  - Only middle- and upper-class can opt out of sickness funds
- Physician Compensation
  - Reimbursement set through negotiation with the sickness funds
  - Providers have little negotiating power
  - Very low compensation
  - Significant reimbursement caps and budget restrictions

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# GERMANY

- Copayment/Deductibles
  - Almost no copayments or deductibles
- Technology
  - Low technology compared to U.S.
- Waiting Times
  - WHO reported that "waiting lists and explicit rationing decisions are virtually unknown"
- Benefits Covered
  - There is an extensive benefit package which even includes sick pay (70% to 90% of pay) for up to 78 weeks

# JAPAN

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- Insured
  - Universal health insurance based around a mandatory, employment-based insurance
  - "The Employee Health Insurance Program" requires that all companies with 700 or more employees to provide workers with health insurance
  - Small business workers join a government-run small business national health insurance plan
  - The self-employed and the retired are covered by Citizens Insurance Program administered by municipal governments
- Costs
  - Not as high as U.S.; average household spends $2300 per year on out-of-pocket costs
  - Japans have a healthy lifestyle – lower incidence of disease
- Funding
  - 8.5% (large business) or an 8.2% (small business) payroll tax
  - Payroll taxes are split almost evenly between employer and employee
  - Those who are self-employed or retired must pay a self-employment tax
- Private Insurance
  - Very rare for Japanese to use this; less than 1%

# JAPAN

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- Physician Compensation
  - Hospital physicians are salaried
  - Non-hospital physicians are paid on a fee-for-service basis
  - Hospitals and clinics are privately owned but the government sets the fee schedule
- Physician Choice
  - No restrictions on physician or hospital choice
  - No referral requirements
- Copayment/Deductibles
  - Copayments are 10% to 30%
  - Capped at $677 per month for the average family
- Technology
  - High levels of technology; comparable to U.S.
- Waiting Times
  - Significant problem at the best hospitals b/c they cannot charge higher prices

## Healthcare comparisons

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US UK France Singapore

### Expenditure on health % GDP

US: 16%

France: 11%

UK: 8.4%

Singapore: 3.4%

### Expenditure on health, per capita US $

US: $7,290

France: $3,601

UK: $2,992

Singapore: $1,228

### Expenditure from private sector

Singapore: 67.4%

US: 52.8%

France: 20.8%

UK: 12.9%

### Infant mortality per 1,000 live births

US: 6.7

UK: 4.8

France: 3.8

Singapore: 2.1

### Life expectancy at birth

| France | Singapore | UK | US |
|---|---|---|---|
| 81 years | 79.7 years | 79.1 years | 78.1 years |

### US – without health insurance

**45.7** million (15.3% of population)

| 10.4% | 19.5% | 32.1% | 16.8% |
|---|---|---|---|
| Of Non-Hispanic whites | Of Blacks | Of Hispanics | Of Asians |

SOURCE: OECD, WHO

# Health systems operate at multiple levels

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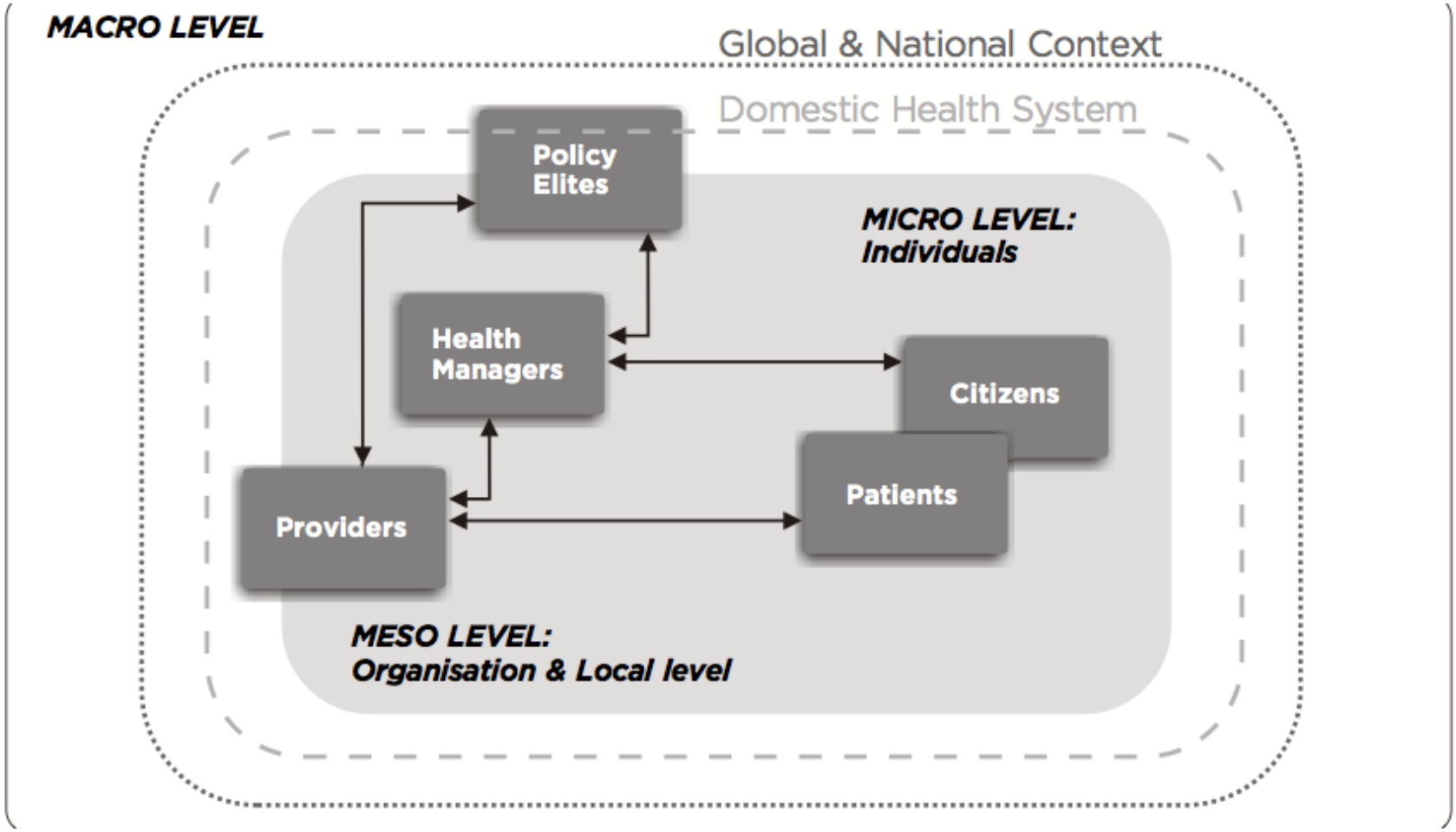

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# Exercise

- Reflect on **your** role in the global health system
  - Do you have power?
  - What form does it take?
  - How do you deploy it?
- If your goal were to be in a position to do the most to improve your health system
  - Who would you be?
  - Where would your power come from?