Health Systems, Policy and Economics

1. The organization of Health Systems
Dr Janet Harris

- systems thinking approach
  - the 6+people building blocks in health care
    - important framework for strengthening health systems
    - 1. service delivery
    - 2. human resources/health workforce
    - 3. medicines and technologies
    - 4. governance and leadership
    - 5. information
    - 6. financing
  - the 5 layers of divisionalised adhocracy
    - strategic apex for the definition of national health policy
      - policy makers use "control knobs" as levers to influence outcome such as: financing, macro-organization, payment, regulation, education/persuasion
      - think of the generic drugs issue in Greece
    - technostructure of standardization and training
    - the integration of all components
    - the administrative and logistics support
    - the operating core responsible for the service delivery
- conceptualizing health systems
  - functionalist
    - focus on health care delivery/mostly on operational issues
    - limited to the components of service provision
    - improve access, coverage, quality and safety
  - relational
    - conceptualizes the system as an environment of multiple actors interrelating/ actors+relationships
  - complex adaptive
    - diverse and multiple interconnected elements and adaptive in that they have the capacity to change and learn from experience
    - the challenge is to identify: who the stakeholders are, their motives and drivers, their barriers
    - key features of a complex adaptive system
      - feedback
      - equilibrium
      - time delays
      - non linear relationships between cause and effect
      - open systems
- the structure, relationships and boundaries of health systems
  - conflicts between stand-alone health programs funded by global organizations and government-funded programs
  - the relationship between the functions and the roles played by various parts of the health system
  - restructuring, refinancing, health system reforms
    - oversight: policymaking, regulation
    - health service provision: clinical services, health promotion
    - financing
    - managing resources: pharmaceuticals, medical equipment, information
  - managing complex change - systems thinking
    - the concept of interconnectedness
- the relationships between health systems, health economics and health policy
- the dominant model globally promoted by WHO
- other models that can be used

2. Mapping Health Systems: Problems, politics and policy
Dr Janet Harris

- use the mapping in the assignment structure
- The Policy Analysis Triangle
  - Context (Where)
    - situational
    - structural
    - cultural
    - international
  - Process (How)
    - issue identification
    - formulation
    - implementation
    - evaluation
  - Actors (Who)
    - ministry of health
    - pharma industry
    - doctors
  - Content (What)
- health policy and health systems
  - how policy is created
    - normative standards
      - social standards are governed by the ruling political party and public common sense
    - strategic representation
      - problem framing: the problem is represented in a way that will either:
        - benefit a group of stakeholders
        - disadvantage a stakeholder group
        - make a particular group responsible (naming, blaming, shaming)
  - political contexts
  - agenda setting / creating a window of opportunity
    - what determines whether health problems get on the agenda?
      - is government involvement legitimate?
      - is the problem aligned with the prevailing political ideology?
      - does the majority of the population accept that this is a problem that needs to be addressed?
  - how to implement policy
    - local organizations contribution
    - negotiating commitment
    - costs, benefits
    - outline budgets
  - policy formulation
    - policy implementation
      - SMART objectives
      - task allocation
      - accountability
      - governance
      - competencies
    - policy evaluation
      - process of implementation
      - desirable and undesirable effects
      - side effects
      - is the policy legitimate?
      - evaluation results?
    - health policy
      - what were the windows of opportunity?
      - what was the response to this policy?
      - was it implemented successfully?
      - the policy analysis triangle
      - the regulatory policy cycle

3. Economics of Health and priority setting
Dr Anju Keetharuth

- there is a finite limit to resources (scarcity), the demand for goods and services is infinite
- economics for health is about benefits, evaluating services, providing information to assist in the allocation of scarce resources
- Health economics need to measure and value changes in health, evaluate services and treatments, evaluate the whole systems
- The 6 key concepts of Health Care Economics
  - Opportunity cost
    - it is the sacrifice of the benefits forgone from not allocating resources to the next best activity (the best alternative=the opportunity cost)
  - Economic efficiency
    - producing the maximum amount of health gain from given resources would involve achieving technical and allocative efficiency
    - technical efficiency
      - the best way to produce a certain output
    - allocative efficiency
      - should we do all, what and how much to produce
  - Equity
    - sizes of impact in health (e.g. 300 patients using treatment A, 150 in treatment B)
  - Economic evaluation
    - the 4-types of economic evaluation
      - evaluation of interventions
      - this is the comparative analysis on costs/benefits and the effectiveness of health care interventions
      - cost-minimization analysis
        - generic drugs in Greece
        - interventions in terms of costs when the effects are assumed to be the same
      - cost-effectiveness analysis
        - interventions in terms of cost per unit of effect e.g. cost per positive case detected, cost per life year saved
      - cost-utility analysis
        - interventions in terms of cost per quality adjusted life years (QALY) (e.g. quality of life and life expectancy)
      - cost-benefit analysis
        - compares benefits with costs of an intervention, where all benefits are valued in monetary terms
  - The margin
    - the concept of margin: marginal cost/marginal benefit/marginal patient, decisions on whether to expand or contract services
  - Incremental cost
    - the effects of expanding/contracting a whole programme=incremental cost
    - the added benefit and added cost of choosing an option over another

4. Markets in the Health sector
Dr Anju Keetharuth

- microeconomic concepts
  - demand and supply
  - market equilibrium
  - costs and revenues
  - profit maximization
  - market structures
    - the idea of perfect markets: the marginal social cost=the marginal social benefit
- market structures
  - perfect health markets
    - many buyers and sellers with no market power
      - monopoly
      - oligopoly
      - monopsony
        - few buyers
    - perfect knowledge
      - buyers have knowledge through experience with the market
    - certainty
      - buyers know if and when they will need something so they can plan
    - no externalities
    - rational consumers
      - consumers buys according to their interests
    - homogenous product
      - the identical producs and the product differentiation
    - market is contestable and ensures competition
  - market failures in health care
    - risk and uncertainty and failures of voluntary insurance
    - externalities
    - Doctors as agents
    - UK example from 2005-06: elective care/acute trusts - fixed prices (national tariff plus market forces factor)
    - USA example: in free market if quality is difficult to observe, the focus will be on cost-competition with a danger of lowering quality
    - the free-price competition
      - lowers quality
      - hospitals are more competitive and have higher deaths during the competitive period
      - focus is given usually in competing on waiting lists and price
    - regulated prices
      - benefits might increase over time
      - hospitals are safe from competition
      - fixed price competition improves the clinical performance and the hospitals' efficiency
  - management issues
    - better management=better outcomes, cost-effectiveness and competition
    - the set of national tariffs creates a beneficial competition
    - merging and alliances between hospitals
      - may be beneficial in terms of reduction in excess capacity but likely it have negative impact on outcomes
    - Doctors as fund-holders
    - significant to define: who is the provider and who is the purchaser in the health care system

5. Funding, Finance and healthcare systems
Dr Anju Keetharuth

- implications of financing functions
  - available funds now and in the future
  - fairness
  - economic efficiency
  - types/number of services purchased and consumed
  - technical efficiency
  - access
- the funding service cycle
  - revenue collection
    - who will pay
    - how will collect the money (e.g taxation)
    - who will collect the money
  - pooling
    - management of funds
    - independence from government
    - who holds the pools?
    - pooling risk
  - purchasing
    - allocating funds to providers to get services
    - selective contracting
    - payment policies
    - link needs to the performance of providers
  - provision of services
    - public providers+private providers
    - who receives services
    - what services they receive?
    - how much the patient has to contribute?
- 3 models of healthcare systems
  - private: private insurance funded by voluntary pre-paid contributions
  - national: publicly owned health service funded by general taxation
  - social health insurance funded by payroll taxation

6. The government as payor and regulator
Dr Janet Harris

- linking policy to laws and regulations related to health
  - in the policy cycle there is a point where governments decide whether a policy needs to be formulated to address an issue
- the role of government in terms of regulations
- regulation
  - healthcare providers can be regulated to ensure that they meet agreed standards for provision of care in terms of: quality, safety, outcomes
  - standards vary by health care system
  - the attitudes towards standards and regulations
  - the economic regulation: it aims to:
    - protect against market failures that arise as a result of monopoly providers that are abusing their dominant position
    - promote competition where appropriate
    - ensure competition is working effective by tackling anti-competitive behavior
    - maintain continuity of essential services in times of crisis
  - the independent economic regulation: benefits and risks
    - benefits
      - innovation
      - lower costs of enforcing regulations
      - opportunities for growth
    - risks
      - providers have influence over the regulator
      - goal displacement/the original purposes are being overlaid through time
      - the scope and scale of regulation becomes disproportionate
      - regulation inhibits change and innovation/ossification
      - regulators become self serving (unaccountability)
      - regulation becomes legalistic
  - the ministry of monitoring
    - governments may promulgate regulations
    - the inspection for compliance is best assigned to an independent body
      - away from political whims
  - the concept of trade offs in regulation
    - cost versus quality
    - cost versus access
    - 1. standard setting, 2. price setting, 3. quality
      - who manages all three functions in the health system? the same institution or different?
- Policy and Practice
  - regulation needs to consider both policy that reflect social values and practice that responses to needs and demands
  - effective accountability of a regulatory framework depends on transparency, a requirement to explain decision making, exposure to scrutiny and the right to challenge decisions

7. Market Failures and Insurance Markets in Health Care
Dr Anju Keetharuth

- role of insurance
  - in health care
    - the demand for insurance is related to issues of uncertainty and attitudes to risk
    - insurance is a form of risk management used to reduce risk of a significant loss
    - insurance enables the transfer of the risk from the individual to the insurer in exchange for a premium
    - the issue of adverse selection: community rating and pooling equilibrium
      - individuals don't necessarily know their own risks
        - even if they know they do not use the health care system as expected
      - insurers do nor know the risks of each person but do know the risks of each type of person
      - low risk and high risk people
  - moral hazard
    - is the temptation to take more risk when you know that insurers will cover the risk
    - moral hazard results in the excess use of services
    - what an insurer can do to reduce moral hazard?
      - use primary care as gateway for further services
      - keep waiting lists for certain treatments
      - maintain a time cost for the patients to discourage unnecessary use of services
    - this is an institutional problem arising where a third party pays for the health care provided by the doctor
      - doctor has certain incentives to increase consumption creating SID
      - this can be affected by the remuneration package used for doctors
    - provider moral hazard
      - moral hazard in combination with the market behavior of pharmaceutical companies and doctors manipulation as satellites directed to the creation of deficits in the Greek health care system
    - dealing with provider moral hazard
      - reward for good practice
      - salaried service
      - financial limitations-fixed budgets
      - government regulation (e.g. limited lists of drugs that can be prescribed)
  - a competitive market may not be the efficient method of providing health care or health care insurance
  - the provision of health care insurance is in the interests of social welfare
  - the complex nature of the relationship between the payer, the provider and the consumer of health care makes it difficult to ensure the efficiency of the system
  - the control cost strategies demonstrate equity implications and are unacceptable to the public
  - the issue of externalities and the high fixed costs that make health care not very contestable
- principal-agent theory
  - main actors in the health market: people, hospitals, pharmaceutical industries, government, insurance companies, doctors
  - an agency relationship is formed when a principal delegates decision making authority to another party, the agent
    - asymmetric information
      - agent problem: conflict of interests
      - one party possesses more information than the other
      - doctors can take advantage of the asymmetry of information
    - information asymmetries result in market failures
      - a restrained market mechanism may be the suitable way to allocate resources
    - if Doctors decide what is needed for the patient they are both demanders and suppliers of health care
      - there are micro and macro methods for testing SID
        - changes in reimbursements
        - quality assurance programs (monitoring and auditing)
        - dissemination of clinical guidelines information
        - research on outcomes and economic evaluation
        - application of non-price methods
      - a system with government intervention would bring greater benefits
- supplier-induced demand
  - the Supplier Induced Demand (SID): where doctors encourage patients to consume services of little or no benefit
    - the SID is the extend to which a doctor provides the provision of medical services that differ from real situation where the patient would choose if he was an expert
    - SID may prevent patient from being able to maximize utility
    - Inducing demand may direct to the increase of doctors income in combination with the asymmetry information
    - the target income hypothesis: doctors adapt their behavior to maintain a target income
      - doctors are not necessary utility maximisers as the system assumes

8. Economic Evaluation
Dr Anju Keetharuth

- assessment of economic perspective
- Economic Evaluation is a method of ensuring that the benefits of programs implemented exceed their opportunity costs
  - this is a rational way of decision making
  - economic evaluation can provide information to decision makers on the comparative costs and benefits of alternatives
    - the objective is to maximize health for the available resources
  - the basic task is to identify, measure, value and compare the costs and consequences of the alternatives under consideration
- two reasons for the need of economic evaluation:
  - resources are scarce
    - this means choices have to be made
  - opportunity costs
- there is a need for incremental analysis incorporating measurements of costs and benefits
  - we compare the difference in costs with the difference in consequences
- what constitutes an economic evaluation?
  - comparative analysis
  - measuring both the costs and benefits
  - concerned with efficiency not just effectiveness
- types of economic evaluation
  - should we apply one type of economic evaluation? or a combination depending on the nature of intervention
  - generic drugs in Greece
  - cost minimisation analysis
    - equivalent outcomes
  - cost effectiveness analysis
    - natural units
  - cost utility analysis
    - quality adjusted life years
  - cost benefit analysis
    - net benefits
  - partial economic evaluation
    - cost consequences analysis
- techniques
  - allocative efficiency question
    - whether to allocate resources to a programme
  - technical efficiency question
    - how best to deliver a programme to achieve a given objective
- strategy:
  - assemble a regional database on the cost
  - measure the impact on population health
  - study the cost effectiveness of key health interventions
  - the idea of PPP: purchasing power parity
  - DALY: Disability Adjusted Life Years
    - a quantifiable measurement/metric for health benefit is used to calculate the years of life lost from disease and years lived with disability
    - this is measure of health gap
      - describing and measuring health
      - valuation and combination of these two
    - DALYs offer an approach to estimate the impact of interventions for different diseases in different regions
  - QALY: Quality Adjusted Life Years
- economic evaluation dependents
  - results of economic evaluation depend on a wide range of highly localised factors
  - there are differences in the practice of health care
  - difference in resource implications
  - difference in demography and epidemiology

9. Equity and Ethics
Dr Janet Harris

- equity and equality
  - key concepts in understanding EQUITY
    - health disparities
      - e.g breast cancer for women but men don't
    - equality in health
    - social determinants of health
    - vulnerable social groups
    - health inequalities
      - ways of approach to visualise health inequalities: (a) through life course perspectives, (b) geographical perspectives
      - the life pathway, accumulation and critical periods are crucial (exposure to disadvantages)
      - the geographical health inequalities
        - worldmapper.org
      - the issue of social composition and social context in the idea of region and regional health inequalities
    - health inequity: systematic association between vulnerable social groups and health disparities
  - health patterns reflect the social, psychological and biological patterns of people
    - such patterns are related to people social and economic structures, hierarchy and social status
- equity audit
  - equity=distributive justice and social justice-basic ethical principles
    - distribution of equity
  - health inequity=inequality in health that is unjust, unfair and avoidable
  - equity audit has the potential to ensure that health services are fair
- relationship between equity and health care financing
- the health equity audit cycle
- systems thinking can help to create "a life course political economy of health"
  - health economics can help to make decisions on which resources should be targeted to whom, in terms of caring for those who are most in need

10. Contemporary Issues in Health Care Management
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- see the specific mind map