Health Systems

David Legge
IPHU Savar, Nov 2018

Objectives

- Brief tour of health systems 'science'
- Review history of global health systems policy
- Explore the 'principles' of health systems strengthening

What do we need to know?

- The language of health systems policy
- How health systems are structured and how they work
- How health systems evolve
- Evaluate health system functioning
- Policy options for improving performance
- Generic policy skills

Making policy for health systems development

- What is a health system?
- What do health systems look like?
- How do health systems work?
- How do health systems develop?
- How to evaluate health systems performance?
- Can we identify 'principles' for 'health systems strengthening'?

Outline

- Comparative and historical study of health systems (methods, language)
- From national health systems to health systems theory (building blocks)
- From building blocks to health systems (eg scenario testing)
- From description and explanation to prescription and strategy (control knobs)
- Need to study health systems in their wider context (history and culture matter)
- Global political economy also matters: international health systems policy since WWII
- Health system development: insights from political science
- Health systems strengthening

Comparative and historical study of health systems

Some famous histories

- Bismarck 1883
- NHS (UK) 1948, 1974, 1982, 1991
- Canadian Medicare, from 1949
- USA
 - Johnson 1967
 - Clinton 1993
 - Obama 2010
- Brazil 1988
- Thailand 2001
- China 1954, 1978, 2008

Country	Infant Mortality (per 1,000 LB)	
YR	'00	'12
Germany	4	3
France	4	3
UK	6	4
Australia	5	4
USA	7	6
Brunei	8	7
Russia	20	9
China	30	12
Argentina	18	13
Brazil	29	13
South Africa	51	33
India	67	44
Nigeria	112	78

Country	<5 Mortality (per 1000 LB),12	
YR	'00	'12
Germany	5	4
France	5	4
UK	7	5
Australia	6	5
USA	8	7
Brunei	10	8
Russia	23	10
Argentina	20	14
Brazil	33	14
China	37	14
South Africa	74	45
India	92	56
Nigeria	188	124

Country	MMR per 100,000 13	
YR	'00	'13
Australia	9	6
Germany	7	7
UK	11	8
France	9	9
Russia	57	24
USA	13	28
Brunei	24	27
China	63	32
Argentina	63	69
Brazil	85	69
South Africa	150	140
India	370	190
Nigeria	950	560

International comparisons - health status (WHR,2014)

Country	Hospital beds/10,000 ('06-'12)
Nigeria	5
India	7
Brazil	23
Brunei	28
South Africa	28
USA	29
ик	29
China	38
Australia	39
Argentina	47
France	64
Germany	82
Russia	97

Country	Physicians (per 10,000) ('06-'13)
Nigeria	4
India	7
South Africa	8
China	15
Brunei	15
Brazil	19
USA	25
UK	28
Argentina	32
France	32
Australia	33
Germany	38
Russia	43

Country	Nurses & midwives (per 10,000)
Argentina	5
UK	6
China	10
India	13
Nigeria	16
Brazil	29
South Africa	41
Brunei	77
Germany	80
France	81
Russia	85
USA	98
Australia	109

International comparisons -health service resources (WHS,2014) 9 9

Country	TotHlthExp/ GDP (%)	
	2000	2011
Brunei	3.0	2.2
India	4.3	3.9
China	4.6	5.1
Russia	5.4	6.1
Nigeria	4.6	5.7
UK	7.0	9.4
Brazil	7.2	8.9
Sth Africa	8.3	8.7
Australia	8.1	9.0
Argentina	9.2	7.9
Germany	10.4	11.3
France	10.1	11.6
USA	13.6	17.7

Country	PC THE (Int Dollars)	
	2000	2011
India	66	146
Nigeria	60	143
China	107	423
Russia	369	1354
South Africa	551	930
Brazil	502	1035
Argentina	841	1393
Brunei	1274	1179
UK	1830	3364
Australia	2246	3890
Germany	2679	4474
France	2553	4128
USA	4790	8467

Country	Gov share of THE (%)	
	2000	2011
Nigeria	33.5	34.0
India	26.0	30.5
South Africa	41.3	47.7
Brazil	40.3	45.7
China	38.3	55.9
USA	43.0	47.8
Argentina	53.9	66.5
Russia	59.9	59.8
Australia	66.8	67.6
Germany	79.5	76.5
France	79.4	76.8
UK	79.1	82.8
Brunei	86.5	92

Country	OOP share THE (%)	
	2000	2011
Nigeria	61.6	63.1
India	67.9	60.0
South Africa	13.0	7.2
Brazil	38.0	31.4
China	59.0	34.8
USA	14.3	11.5
Argentina	29.0	21.0
Russia	30.0	35.3
Australia	19.8	19.4
Germany	10.5	11.9
Brunei	13.2	7.8
France	7.1	7.4
UK	11.1	9.8

International comparisons – health expenditure (WHO, 2014)¹¹

Methods of study

- Travellers' tales / transfer of policies
 - Lloyd George borrows from Bismark
 - Canadians borrow from Beveridge
 - Australians borrow from Canada
 - Chinese borrow from Singapore
- Structured descriptive / comparative studies
- Policy-oriented and comparative histories
- Categorisation, generalisation, correlation and speculation
- League tables and benchmarking
- Health services research

How does the comparative and historical study of health systems contribute to health policy practice?

- CHS provides "languages" (terms, concepts, frameworks) for
 - Description (describing our own systems and problems and others)
 - Interpretation and explanation (insights and generalisations about how health systems work)
 - Prediction and prescription (if this then that)

Languages for description (terms, concepts, frameworks)

- Gatekeeping
- Fundholding
- Casemix adjustment
- Disease burden
- Managed care
- Internal markets
- Primary health care
- Purchasing/commissioning
- Universal health cover

Hidden histories underly widely used jargon

- Histories (of development and transfer) are invisibly embedded in the jargon
 - Social insurance
 - Casemix and DRGs
 - Managed care
 - Managed markets
 - Primary health care

Insights and generalisations: interpretation and explanation

- Dynamics of health system functioning, eg:
 - incentives associated with remuneration methods
 - sociology of health professions
 - political economy of big pharma
- Dynamics of health system change
 - responses to cost pressures
 - impact of complexity on management and planning
 - dispersed incrementalism
 - windows of opportunity
 - path dependency

Prediction and prescription

Policy models

- primary health care
- health funding models
- health planning strategies
- harnessing market dynamics

Strategies of change

- get the policy right
- build constituency
- look for the windows of opportunity

Learning from other countries

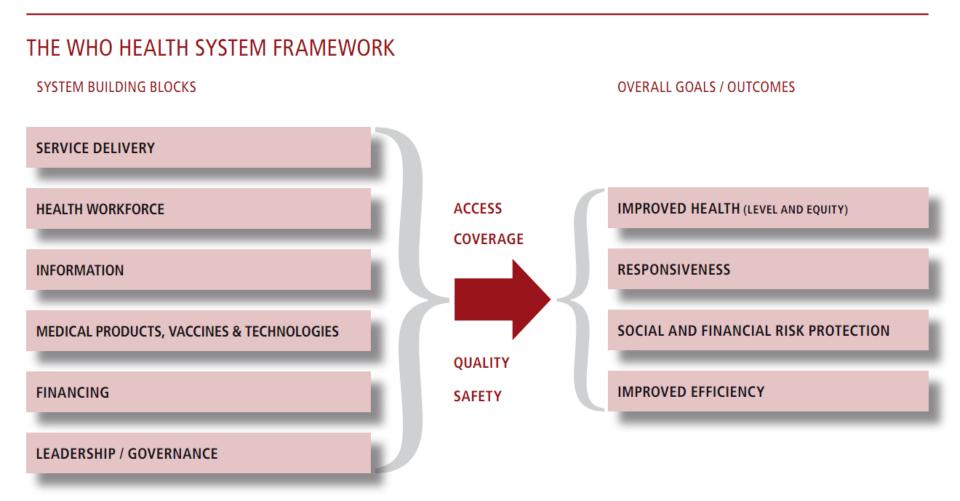
- Invaluable source of insights, models, patterns of development and strategies
- But beware
 - superficial similarities but deep differences
 - attractive models which were implemented in unique circumstances
 - the influence of fashion and power in health sector reform
- Cultivate
 - vision, debate, research, piloting and consultation

From national health systems to health system theory

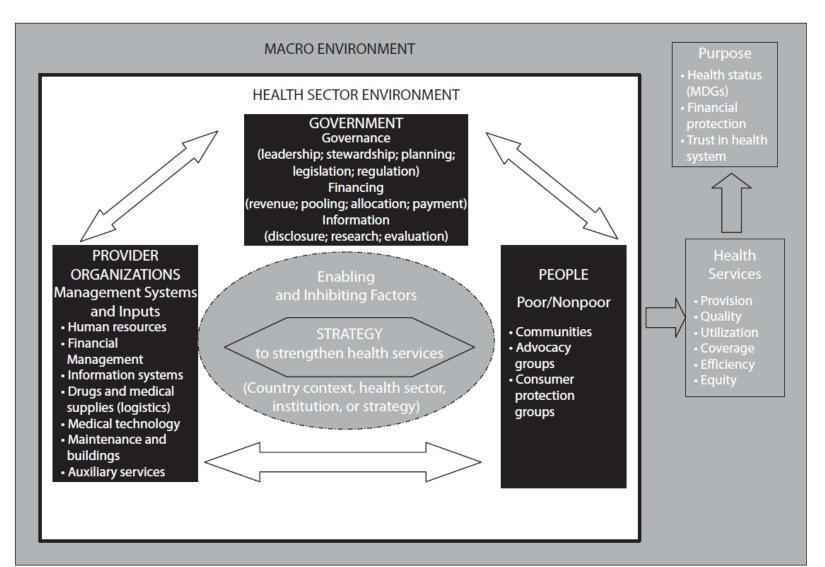
Defining health systems

- "A health system consists of all organizations, people and actions whose primary intent is to promote, restore or maintain health" (WHO, 2007)
- Be cautious about defining a social system on the basis of (assumed) 'primary intent'
- This definition excludes big pharma, local suppliers, voters and taxpayers!
- This 'system' overlaps unknowably with the employment system, the education system, the aged care system, etc
- 'Health systems' are not real; just a conceptual tool

Structural descriptions of 'the health system' WHO's 'building blocks'



Peters et al (2009) framework



- Provider ownership
- Organisational forms
- Drivers of coordination
- Patterns of access

- Provider ownership
 - public
 - voluntary, not for profit
 - private, for profit
 - mixed
- Organisational forms
- Drivers of coordination
- Patterns of access

- Provider ownership
- Organisational forms
 - managed hierarchies
 - market relations
 - mixed
- Drivers of coordination
- Patterns of access

- Provider ownership
- Organisational forms
- Drivers of coordination
 - disease focused vertical funding programs
 - devolution to local authority
 - patient focused coordination
 - primary health care
- Access to care

- Provider ownership
- Organisational forms
- Drivers of coordination
- Patterns of access
 - -unified universalism
 - stratified universalism
 - differential access

Workforce issues

- Not enough health practitioners
- Intolerable working conditions (lack of resources, inadequate salaries)
- Lack of adequate training
- Low professional commitment; low morale
- Lack of supervision and support
- Low level of productivity
- Inappropriate workforce mix
- Weak educational institutions
- Weak organisational infrastructure to support professional practice
- Inter-professional conflict
- Brain drain (sectoral, regional, international)

Workforce: a policy checklist

- Proper training and support for community health workers
- Balancing doctors and nurses, or GPs and specialists
- Strengthening basic training; improving advanced training; support for professional development
- Appropriate modes of employment; adequate levels of remuneration; modes of remuneration which optimise incentives

- Improving workforce productivity
- Equitable workforce distribution
- Adequate resources for professional practice
- Structured approach to clinical governance
- Community support & accountability
- Regulating health practitioners
- Innovation in service delivery
- Research and research brokerage

Information and technology

Problems

- lack of information for planning, performance management and accountability
- old technologies
- Policy issues
 - clinical guidelines
 - high level planning for data collections

Medical products, vaccines and technologies

Innovation

- role of patent protection in innovation for new medicines
- diagnostic and therapeutic methods
- health care delivery

Evaluation

- from RCTs to clinical guidelines
- health technology assessment
- health services research

Implementation

- evidence based medicine
- evidence based priority setting
- clinical leadership

Regulation

- marketing approval
- post-marketing surveillance
- cost effectiveness in subsidies for drugs
- Mobilising resources

Financing models

Collection

- taxation
- social insurance
- commercial insurance
- out of pocket

Pooling

- stratified and segmented
- universal (a single pool)

Payment

- public sector provision (employment)
- consumer purchase (out of pocket)
- surrogate purchaser
 - contract for streams of care
 - open market purchase of individual services or episodes

Leadership and governance

- Leadership
- Accountability
- Regulation (laws, codes, accreditation, reporting, accountability)
- Management (and management training)
- Support for frontline service delivery (inputs, supplies, maintenance)
- Governance and management systems
 - performance management
 - guidelines, standards, audit, clinical pathways, bench marking
 - innovation, re-engineering and modernisation

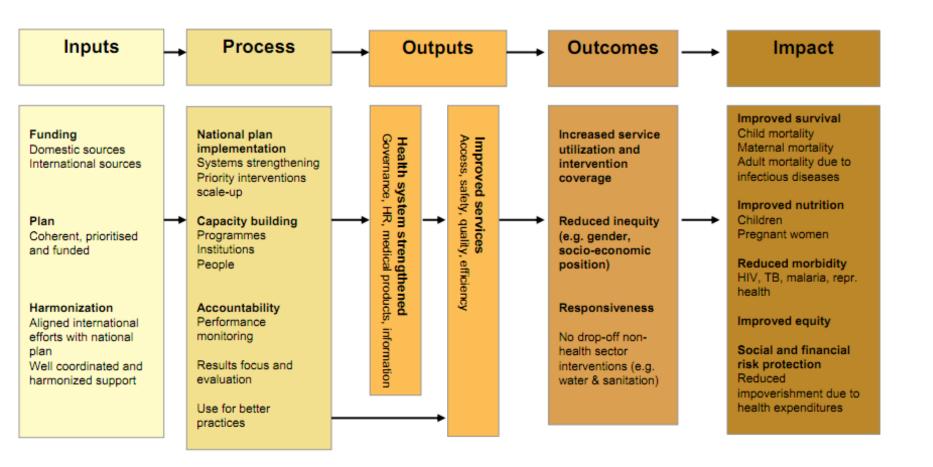
From building blocks to health systems

Systems approach: methods and tools

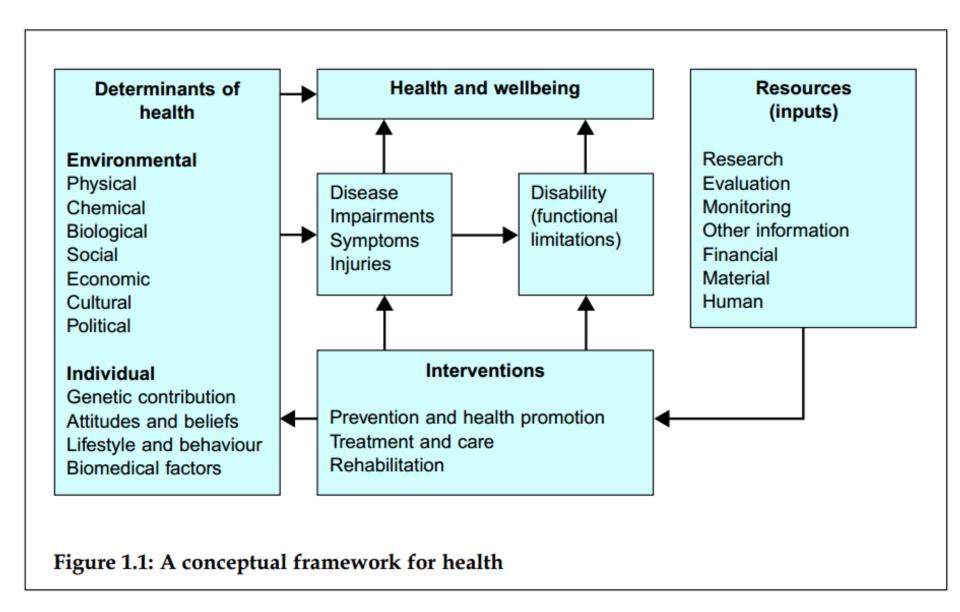
- Scenario testing
- Network analysis
- Causal loop diagrams
- Process mapping
- Stock and flow diagrams

Dynamic descriptions of how 'health systems' work

- Patient flows
- Financial flows
- Information flows
- Supply and demand
- Disease treatment and prevention
- Logical frameworks

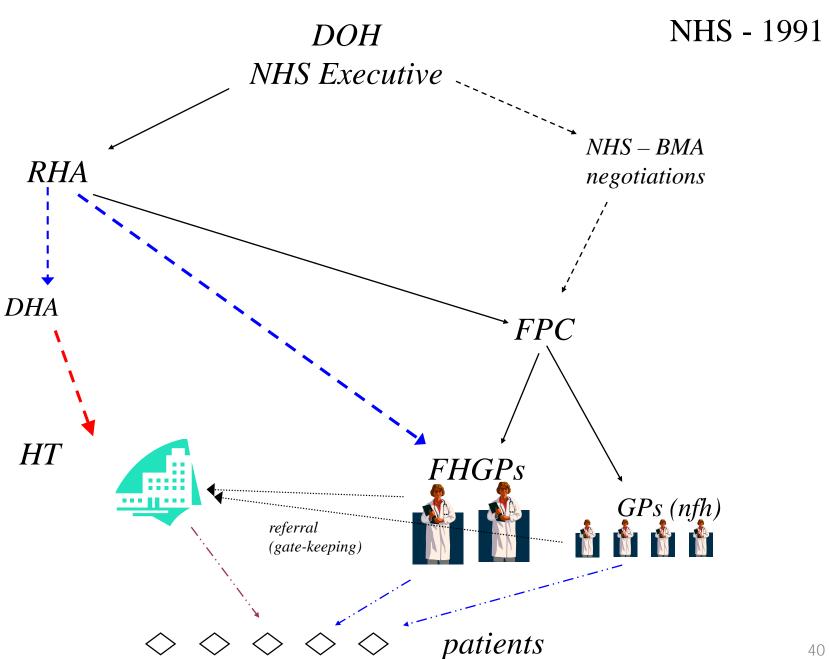


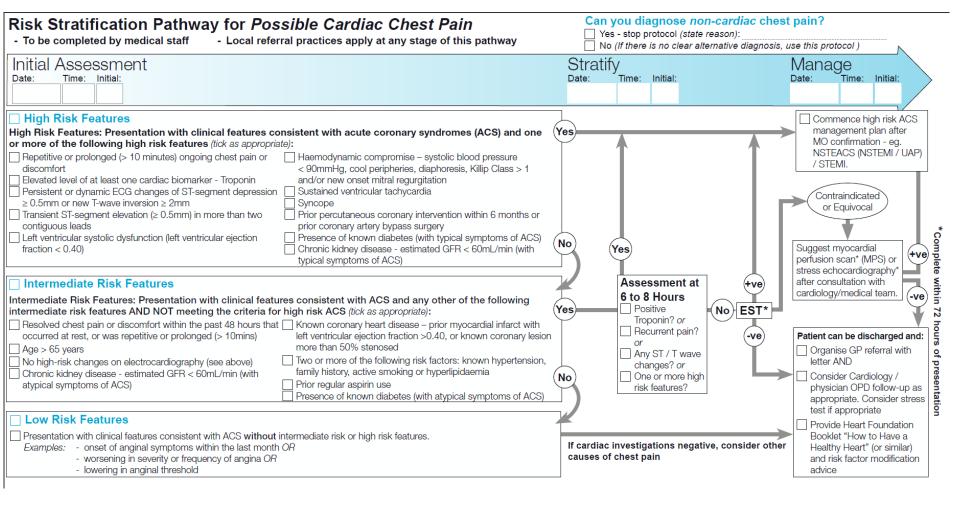
Health systems understood as inputs, processes and outcomes



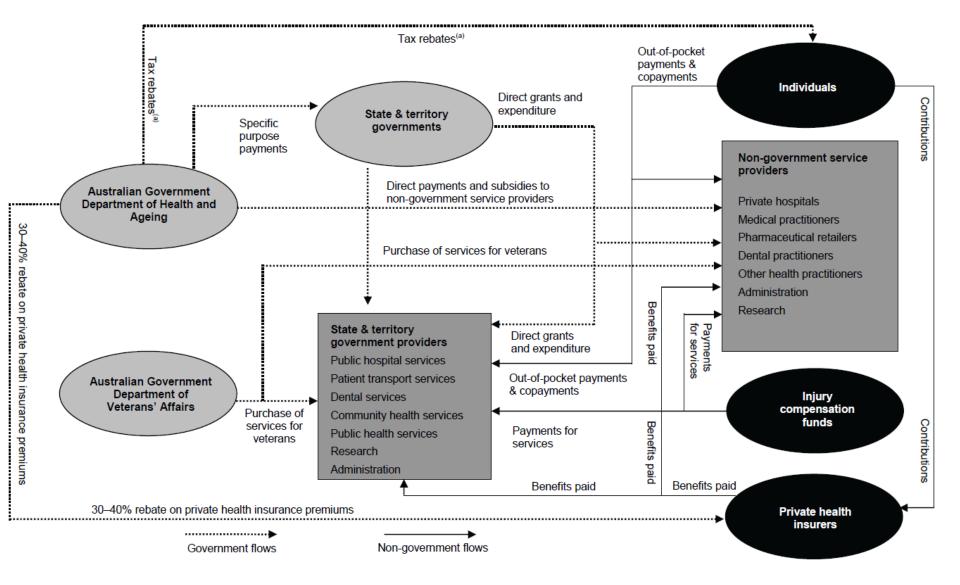
Patient flows and programs of care

- Referral relationships
- Clinical pathways
- Triage and appointment systems
- Program planning
- Chronic disease management programs
- Comprehensive primary health care



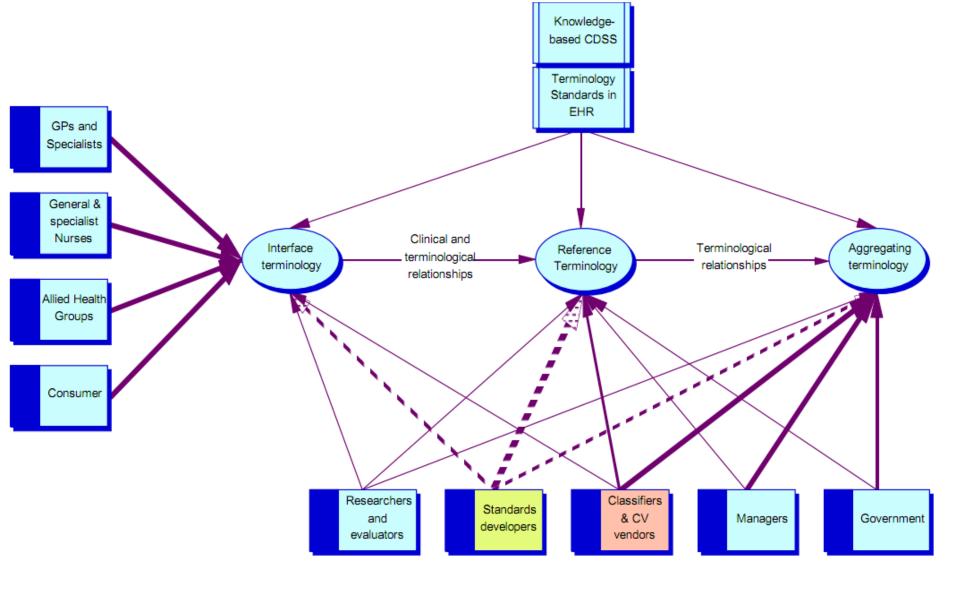


'Health system' understood as a series of clinical pathways



Health system understood as the flow of money

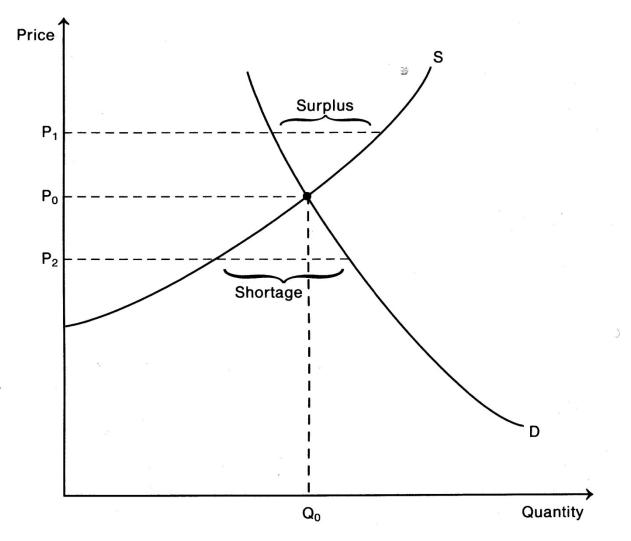
AlHW(2010) Health Expenditure Australia₄₂ 2008-09



'Health system' understood as the flow of information

Information flows

- Health agency information systems
- System wide information systems
- Surveys and administrative collections
- Population wide information flows regarding health, disease and health care
- Balancing access and privacy
- Commissioning hardware and software for institutional information systems
- Standards for information collections and communications



'Health system' understood as market place exchange

Lockett (1996)

Moving from description and explanation to prescription and strategy

The Harvard health reform 'control knobs'

- Financing reforms (mobilising, pooling, allocation)
- Altered payment mechanisms (eg from per diem to DRG; contracting)
- Organisation (public private, central local, command and report vs autonomy and risk)
- Regulation (eg clinical risk management)
- Behaviour (information, marketing, incentives, restriction, indoctrination, prohibition)

Improving service delivery

- Supply side
 - Resource mobilisation
 - Training practitioners
 - Improved logistics (eg drugs)
 - Quality systems
 - Leadership development and management reform
- Demand side
 - Payment reforms (user fees, vouchers, insurance, etc)
 - Changing consumer behaviour
 - Contracting out
- Other
 - Policy capacity development (including planning and implementation)
 - Health financing reforms
 - Re-organisation of service delivery (integrated service systems, decentralisation)
 - Regulation (from hard to soft)

Improving organisational performance

- Regulation
 - laws, codes, accreditation, reporting, accountability
- HR strategies
 - training, team building, organisational learning, career development, management development
- Input management
 - finance, supplies, assets, technologies, information systems
- Process focused strategies
 - organisational performance management
 - guidelines, standards, audit, clinical pathways, bench marking, re-engineering
- Household and community empowerment

Checklist for organisation reform

- Strengthening district health systems infrastructure
- Clear lines of responsibility
- Decentralisation
- Purchaser provider separation
- Organisational innovation
- Institutional structures to support evidence based medicine
- Complaints systems
- Regulatory reform

Improving workforce performance

- Training
- Professional activities
- Supervision and feedback
- Budget support
- Specific resources (supplies, equipment, print resources)
- Community activities (eg home visits)
- Group process / team formation / problem solving
- Performance incentives
- Contracting

Need to study health systems in their wider societal context

History

- Recognition of 'building blocks' is useful but inadequate
- Health systems are systems not just mechanical assemblages of building blocks
- But health systems are part of the wider social and economic systems of which they are part
- Need to study health systems in their wider societal context: historically, and comparatively

Contingency and the importance of history

		Comprehensive and universal	Multi-tiered with public safety net
Rich		Australia	USA
world	<5 mortality	5/100,000	8/100,000
	THE % GDP	9.5%	15.2%
	GDP pc	\$32,200	\$41,950
	Gov % THE	68%	45%
	Gini	35.2	40.8
Poor		Cuba	Brazil
world	<5 mortality	7/100,000	116/100,000
	THE % GDP	7.3%	7.6%
	GDP per cap	\$3,900	\$8,230
	Gov % THE	86%	45%
	Gini	40.7	57.0

54

Australia

- Early affluence in Australia linked to imperial preference; helped to pay for the wageearner's welfare state; collectivist ethic
- Gradually unravelled from 1970s with globalisation, decline of British empire; widening inequality; thinning welfare state
- Tax based single payer universal health insurance

USA

- Slavery and Southern wealth; the institutionalisation of inequality
- Resource rich diverse continent; capital from domestic economy and trade; human capital from migration
- Imperial relation to Latin America
- Revolutionary separation from Britain
- Frontier individualism
- Entrepreneurial health care; fragmented marketised funding; lack of support for universality

Brazil

- White settler elite, slavery and indigenous oppression;
- Wealth from natural resources and exploitation of oppressed
- Wide inequality; fiercely contested polarisation; 1988 constitution
- Unequal mixed health care provision, strong popular support for universal (primary) health care but huge job

Cuba

- White settler regime with slavery
- Wide inequality leads to revolution 1959
- Aggression and sanctions by USA leads to emergency war-footing economic regime (especially after 1989)
- Communist ascendancy leads to planned approach to health care and to improved health; tax funded, publicly provided, national health service

Contingency and the importance of history

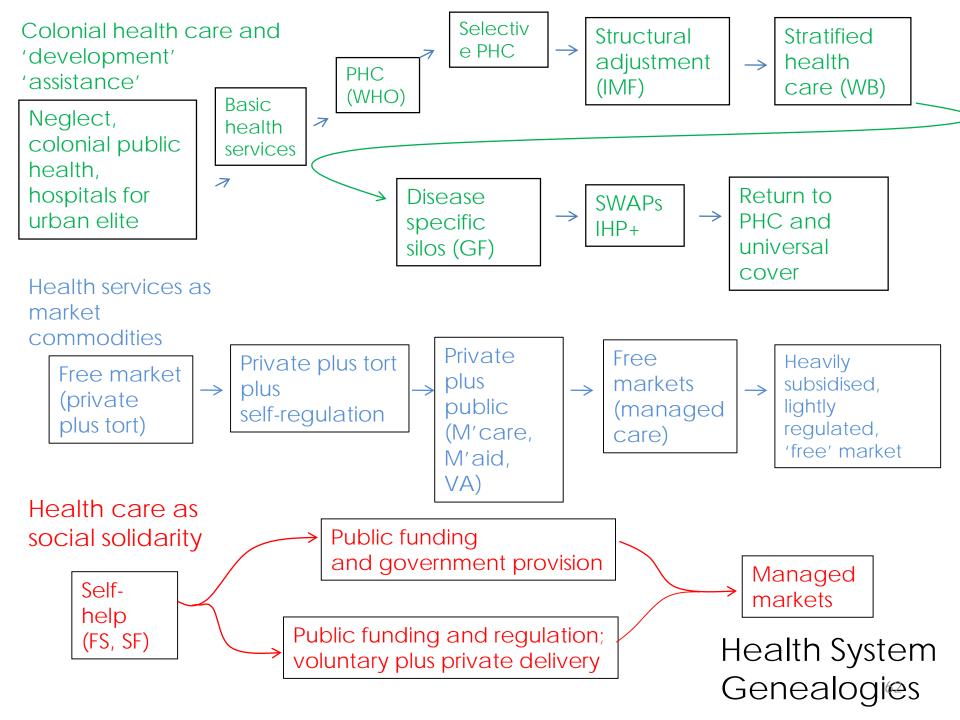
		Comprehensive and universal	Multi-tiered with public safety net
Rich		Australia	USA
world	<5 mortality	5/100,000	8/100,000
	THE % GDP	9.5%	15.2%
	GDP pc	\$32,200	\$41,950
	Gov % THE	68%	45%
	Gini	35.2	40.8
Poor		Cuba	Brazil
world	<5 mortality	7/100,000	116/100,000
	THE % GDP	7.3%	7.6%
	GDP per cap	\$3,900	\$8,230
	Gov % THE	86%	45%
	Gini	40.7	57.0

59

Conclusions from comparison of four health systems

- History matters
- Economic capacity matters ('modern' medicine is costly)
- Universality depends on social solidarity which is attenuated by inequality (and is shaped by culture and historical legacy)
- Policy leverage (including expenditure control) is limited where the private sector is strong

The global political economy also matters: international health systems policy, since WWII



Global health systems policy since WWII

- Colonial health care systems
 - health for the colonists and the urban elite
- Post-colonial health systems policy
 - health care for the urban elite
 - developing an indigenous medical profession (need for medical schools and teaching hospitals)
- 1970s Primary health care
 - 1973 G77 presence at WHA; demanding a health systems focus
 - 1978 Alma-Ata: Primary health care, appropriate technology, community participation, barefoot doctors
 - 1981 Selective primary health care (UNICEF: Child Survival & GOBI FFF)
- 1980s Structural adjustment
 - health systems disinvestment
- 1993 WB: 'Investing in Health'
 - stratified health systems; safety net based on cost effective packages of interventions
- Rise of the GHIs
 - 1996 HAART
 - 2001 Treatment Action Campaign, Doha
 - 2002 Global Fund for AIDS, TB and Malaria
- Health systems strengthening
 - 2007 IHP +
 - Universal Health Cover (UHC)

- Employment based health insurance
 - 1883 Bismarck
 - 1911 Lloyd George
 - 1942 US fringe benefits / 1954 US employer tax concessions
- Nationalised health care systems
 - 1917 USSR
 - 1948 NHS in UK
 - 1951 China
 - 1959 Cuba
- National health insurance
 - 1956 Saskatchewan
 - 1967 Medicare Medicaid in US
 - 1974 Medibank in Oz
- Health systems planning
 - 1917 USSR
 - 1974 Health systems agencies in USA
 - 1976 The NHS Grey Book
- Market based systems
 - 1939 Kaiser Permanente
 - 1973 HMOs and managed care
 - 1986 DRGs introduced and output funding
 - 1991 NHS Internal markets
 - 2011 Obamacare

Alma-Ata, 1978

- Pressure on WHO from developing countries for guidance on health systems
 - USSR calling for conference
 - Christian Medical Commission highlighting new models from the South
- WHO and UNICEF building a case for a new approach to health policy in developing countries
 - priority to basic services where people live
 - appropriate workforce and technologies
 - intersectoral approach to prevention
- Borrowing from
 - community health in South Africa & Israel (Kark), USA (Geiger), UK (Peckham)
 - polyclinics and feldshers in USSR
 - radical new models from the Global South (India, Indonesia, Guatemala, Costa Rica)
 - barefoot doctors in China
- Rich countries were not really watching
 - 'we already have GPs'
 - maybe they were surprised by the links to the NIEO?

PHC (A-A) – multiple meanings

- Sector of service delivery
 - first contact, continuing, generalist, comprehensive, essential services
- Policy model & principles of service delivery (not just primary level of care)
 - community involvement (accountability, planning, prevention)
 - mutually supportive referral systems,
 - district health systems
 - intersectoral collaboration,
 - appropriate multi-disciplinary workforce working as a team
 - appropriate technologies
 - essential care
- Social change
 - recognising the social determination of health
 - linked to vision of a NIEO
 - popular mobilisation towards health development with and through political sovereignty and self-directed economic development

PHC – contested from the start

- Selective or comprehensive?
 - 1978 Alma-Ata
 - 1981 'Selective PHC' (Walsh & Warren)
 - 1983 UNICEF: GOBI-FFF
- Place of vertical programs?
- Relationships with secondary and tertiary sectors
 - funding priorities
 - power relationships: top down or bottom up?
 - workforce policies remain contested
 - health workers as lackeys or liberators
- Global economic context
 - end of 'long boom' (1970s)
 - debt crisis and 'structural adjustment' (1980s)

Structural adjustment

- 1981 Debt crisis hits
- IMF as lender of last resort imposes 'conditionalities' (structural adjustment)
 - reduce tariffs to make imports cheaper
 - devalue the currency to make exports cheaper
 - cut public spending (including food subsidies, health funding, education)
 - encourage exports
 - encourage foreign investment (deregulate labour markets)
 - pay your debts
- 1988 UNICEF: Adjustment with a human face

Investing in Health 1993

- WB's 16th WDR
- Responding to the critics of structural adjustment
- Overview of world health
- Analysis of the conditions for better health
- Introduction of the DALY, measuring the BOD and cost-effectiveness of interventions
- Policy recommendations for health development

Guidelines for "healthy" structural adjustment

World Bank finds:

- It is possible to target funding to cost-effective interventions
- Cutting public expenditure is not necessarily bad for people's health
- Governments are notoriously and inevitably inefficient
- Public subsidy for water supply, sanitation and garbage removal generally not cost-effective
- Much hospital care is not cost-effective
- Structural adjustment lending can be consistent with health improvement if implemented in association with the recommended health policy packages
 - minimal essential cost-effective interventions for the poor
 - private sector provision and private health insurance for the rest

Stratified health care

Rich

 private provision, fee for service supported by private insurance plus out of pocket payment

Middle

 private and public providers, employment related social insurance plus out of pocket payment

Poor

 basic package of cost effective interventions to be delivered through NGO (eg FBO) providers under contract (plus user fees)

The rise of the GHIs

- 1984 AIDS/HIV
- 1996 HAART
- 1997-2001 Treatment Action Campaign
- 2001
 - -9/11
 - WHO Commission on Macroeconomics and Health
 - Doha Ministerial
- 2002 Global Fund for AIDS, TB & Malaria

'Health system strengthening'

- Rising criticism of vertical disease focused programs
 - fragmentation
 - country burden
 - internal brain drain
- Rising discourse of 'health systems strengthening'
 - 2007 International Health Partnership
 - Health systems platform
 - 2012 Universal health coverage

Globalisation and health policy

- Increasing power of transnational corporations
 - Big Pharma demanding easier patenting but stronger protection
 - investor state dispute settlement
- Pressures towards economic integration
 - harmonising IP protection
 - trade in services
- Tax competition + trade in services + ISDS = pressures towards privatisation
- Widening inequality -> weaker social solidarity

Health systems development: insights from political science

Contingency: circumstances limit what is possible

- Institutions, values, culture
- Politics, economics
- People

Path dependence

- The past constrains the future
 - institutional relations
 - cultural norms
 - historical episodes
- Examples
 - South Africa
 - Brazil

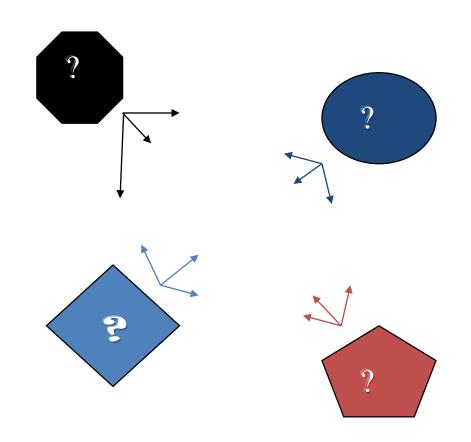
Convergence

- Different systems becoming more similar
- Common factors:
 - technology
 - aging
 - cost pressures
- Fashion
 - social insurance
 - health planning
- Globalisation
 - global economic integration

Forces of change and resistance

- Institutional interests
 - docs, nurses, other professions
 - big pharma, electronics, plastics
 - local suppliers
 - insurers
- Class interests
 - rich
 - middle
 - poor

Society as a complex adaptive system



Multiple autonomous agents

All watching and responding according to their own rules

Complexity, contingency, unpredictability

Complexity

- emergence
- sensitivity to initial conditions (contingency)
- unpredictable in the medium to longer term
- periods of stability and periods of instability

Serendipity

- Windows of opportunity
 - when systems 'unfreeze'
- Readiness: being ready to grasp the opportunity
 - implementable policy proposals
 - political constituencies ready to drive implementation

Health systems strengthening

Patterns of change

- Big bang reform
 - major societal convulsions
- Incremental policy reform
 - institutional 'unfreezing' (and 'windows of opportunity')
 - dispersed incremental reform emerging out of
 - consensus around shared vision, and
 - contested objectives of partisan advocates ('strife of interests')
- Unplanned development, between episodes of reform
 - organisational change
 - new bottlenecks and pressures
 - health technology change and institutional implications
 - epidemiologic change (eg chronic disease)
 - demographic change (eg aging)

Incrementalism, serendipity and vision

- Dispersed incremental change
 - health system strengthening takes place incrementally
 - incremental developments are often dispersed across time, level and sector
 - opportunities for incremental change can be created but often arise unpredictably
 - what is possible in each episode is determined by what has gone before (path dependence)
- Incremental change can be chaotic or coherent
- Health system strengthening depends on the coherence of incremental episodes of reform
- Leadership and vision are critical to achieving coherence across dispersed incremental reforms
- Resistance to change ebbs and flows
 - opportunities for change come and go; be ready to seize the moment
 - in the meantime, work towards a conducive policy environment

Create a conducive policy environment

Build a constituency for change

- work with the people who have most to gain
- work with the practitioners who care about their communities
- support a sustained, inclusive policy conversation
- build policy capacity; cultivate policy research
- develop leadership (government, industry, academia, community)
- build consensus around a vision for health care

Political culture

- basic freedoms
- integrity, accountability and transparency

Driving health system strengthening

- Study health system histories
- Follow the technical literatures
- Be prepared with creative policy options
- Build capacity for policy analysis and development
- Stoke the policy conversation
- Project an inspiring vision
- Build the constituencies for change