Health Systems Development: a Policy Guide

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1. Health systems[1]

Our purpose in this chapter is to review some ideas about health systems and explore some resources and principles for health systems strengthening.

What do health system reformers need to know?

Health system reformers need:

- to know how health systems evolve and how policy initiatives can direct such evolution;
- to be able to evaluate health system functioning to identify areas where health system performance can be improved;
- to be able to diagnose weaknesses in health system performance; identify policy options for improving performance and evaluate such options against a range of criteria, from likely effectiveness to implementability;
- a range of generic policy skills, including policy analysis, development, advocacy and implementation (see Chapter 3 below);
- to know how health systems are structured and how they work; this includes the functioning and development of various specific health systems as well as the accumulated theory about health systems more generally;
- to understand the language of health systems policy (including description, analysis, explanation, prediction and prescription); a body of knowledge (and terminology) which has developed through the study of different national health system, structures, functioning and histories.

The comparative and historical study of health systems

Comparative and historical study of different health systems is one of the most useful ways of learning about health systems.

Methods

There are many methods for doing comparative studies of health systems.

The simplest way is to go visiting and in practice this is one of the most important ways in which policy models are compared and evaluated and move. There is an interesting strand of comparative and historical study which follows the ways in policy ideas travel from one system to another, observing how policies are borrowed and adapted to local conditions.

Lloyd George borrowed ideas for health insurance for the poor in England from Bismark in Germany. Bismark set up his scheme in Germany in 1883. Lloyd George visited Germany several times between then and the time he set up the British reforms in 1911. In due course the British system was transformed from a social insurance (Bismark) scheme to a taxation based (Beveridge) scheme when the NHS was established in England, but maintains some of the features of its Bismarkian legacy, such as capitation based payments to GPs.

When Canada (initially one of its Provinces, Saskatchewan) determined to implement single payer health insurance in the 1960s, it based it on the Beveridge system operating

1. This chapter includes material developed by David Legge, Jenny Lewis, Pei Likun and Deborah Gleeson.

since the 1940s in England and New Zealand. When Australia introduced Medibank in the 1970s, the system owed much to the experience of the Canadian system.

A structured approach to describing different national health systems facilitates useful comparisons. This method of structured and comparative description is one of the key foci of the work of the European Observatory on health systems (European Observatory on Health Systems and Policies, 2015).

There is also a substantial amount of research that uses numerical indicators (such as amount spent on financing health care and doctor to population ratios) to compare health systems across nations. These can then be used as the basis of "league" tables to establish where different nations sit in relation to each other (WHO, 2015).

Comparative histories of policy making in different nations tell us both about policy transfer and also about how certain health policy paths become established and continue to affect future policy. The different trajectories of national systems tells us a great deal about the factors which affect the implementation and the successful operations of different policies.

Languages

Comparative and historical study provides a series of "languages" (terms, concepts, frameworks) which we can use for description, explanation and prescription. Terms like 'managed care' or 'social insurance' gain their meaning from their original and subsequent usages. The term 'social insurance' is commonly used as a generic descriptor but much of the meaning which hangs off the term derives from its origins and subsequent usages. Getting a handle on how such terms are being used is greatly helped by tracing those origins and usages.

In terms of the language of health systems policy it is useful to think in terms of description (describing our own systems and problems and those of others); explanation and interpretation (insights and generalisations about how health systems work); and prediction and prescription (if this then that).

Examples of common terms used in describing health systems: gatekeeping, fundholding, casemix adjustment, disease burden, managed care, internal markets, primary health care, purchasing/commissioning, and universal health cover. Each of these terms refers to particular models or mechanisms in health system architecture. However, hidden in each of these terms is a history: a history of the particular contexts within which each model or mechanism has developed; a history of transfer from one country to the next; and also a history of research and debate. Such histories inhere invisibly in the jargon of the field.

Consider, for example, terms like: social insurance, casemix and DRGs, managed care, managed markets, primary health care. Hidden behind each of these terms are rich histories of development, transfer, research and debate.

Comparative and historical study also provides us with languages for explaining how health systems work.

The concept of different incentive environments as a way of thinking how structures affect function is enriched by knowing about a wide range of different systems and periods when particular incentive pressures created particular patterns of practice.

The sociology of the professions is a core resource in understanding how systems develop (in particular the forms of professional power and the ways in which turf warfare works its way through the system). The body of knowledge which we recognise as the 'sociology of the health professions' is very much informed by many different episodes in different jurisdiction involving different professional groups.

At a slightly higher order of abstraction we can reflect upon the impact of complexity on health system development by tracing a range of different changes in different systems that seem to be associated with increasing complexity.

Prediction and prescription are at the heart of the health policy task. We need to be able to articulate a range of policy options and trace into the future a range of different scenarios. If we did this then what would eventuate? Prescription assume a capacity to predict scenarios and to compare and evaluate those scenarios.

As an example we may consider the harnessing of market dynamics in health system policy. There are many different ways in which market dynamics can be harnessed and regulated as tools of health policy. The principles of health economics provide some guidance but these principles are themselves informed by the experience of different jurisdictions which have at different times sought to harness particular pressures.

Organisational models

Much of the discussion of health systems policy is focused around organisational models which are discussed as 'generic' models but which imply also the experience of particular health systems which serve as paradigm cases for such models. Such whole-of-system *organisational models* (and their paradigmatic cases) include:

- tax funded, input funded, public sector delivery (eg the UK NHS);
- capitated primary health care and single payer capped episode payment for hospital care (eg Germany);
- voluntary health insurance market providing fee for service (or episode) reimbursement (eg Chile); and
- managed care (eg USA).

Mechanisms

While there are only a limited number of 'whole of system' models there are many more *specific mechanisms* which are sub-units or components of health systems. These mechanisms include: gate-keeping, fund-holding, different financing mechanisms (collecting, pooling, disbursing), general practice versus primary care specialists, community health workers, chronic disease management, three tiered health care, district health systems, referral and support relationships, defined benefit packages, decentralisation, incentive engineering versus regulation through professional norms, e-health, m-health, and various brokerage models (GP gatekeeper, managed care, surrogate purchasing, patient advocate etc).

Borrowing

As an organised field of knowledge, the field of health systems reflects the gradual accumulation of different approaches to research: from travellers' tales, to structured comparative descriptions, comparative statistics, histories, evaluative research and scholarly commentary. This body of knowledge can be organised at various different levels, from *whole-of-system models*, to more partial, more circumscribed health system *mechanisms*.

These models and mechanisms all have their own histories and genealogies reflecting their applications in various different settings. In 'borrowing' mechanisms from other countries it is critical to be aware of the specific histories and contingencies which have shaped their development. Rather than 'transplanting' fully specified models it is necessary to identify the underlying principles and consider how these might be grafted into one's own health system. Participating in this kind of health systems design work calls for a close understanding of different health systems and their histories, as well as an understanding of one's own health system and its history.

Stories from other countries provide an invaluable source of insights, models and strategies. However we need to beware of superficial similarities which hide significant differences. Think of the idea of GP gatekeeping for example, as implemented in the UK as compared to Australia and the US. The backgrounds and institutional settings are very different. These differences suggest that we need to handle the idea of GP gatekeeping at a relatively high level of abstraction and not assume any particular mechanism for making it work.

We need to be aware of attractive models which were implemented in unique circumstances. The period after the 2nd World War saw dramatic health sector reforms implemented in many developed countries in the flush of post war reconstruction. This was a period of strong government and popular hope. It may be more difficult to implement similar reforms in contemporary environments.

We need to be aware of the influence of fashion and power in health sector reform. When particular models for reform are being clearly pushed by powerful interests it is important to be sceptical, look for reasons, look for alternatives. The fact that certain models for reform are being pushed by powerful interests does not invalidate them but it should warn us to look carefully. A case in point might be the use of hospital privatization, allegedly to encourage efficiency through competition.

One hundred years ago the German health insurance system was very influential internationally. In the present period US thinking is similarly influential. The international dominance of US health system design principles reflects in part the constant innovation and turmoil of US health care and the investment in health services research and publication. However, it also reflects the political power of US institutions and US influence in international organisations.

It is also important to be wary of attractive models which were implemented in unique circumstances. There are many attractive features of the UK NHS but the study of its history will make it clear that its development was shaped by a number of quite specific episodes and circumstances. Chief among these was perhaps the commitment to national

reconstruction after the second world war. The same is of course true of all national health systems.

From national health systems to health systems theory

The WHO (2007) has defined a health system in the following terms: 'A health system consists of all organizations, people and actions whose primary intent is to promote, restore or maintain health.'

However, we need to be cautious about defining a social system on the basis of (assumed) 'primary intent'. This 'system' overlaps unknowably with the employment system, the education system, the aged care system, and excludes big pharma, local suppliers, voters and taxpayers! 'Health systems' are not real; they are a conceptual tool devised to help us to focus on the problems associated with health care.

A wide range of descriptive frameworks have been developed to facilitate some kind of standardisation of health system descriptions for purposes of structured comparisons and research.

One of the best known of these frameworks is WHO's 'building blocks' model (WHO, 2007). This envisages the health system as comprised of 'building blocks': a financing system, an organised health service delivery system, a workforce, information, and various systems for reproducing and developing the technology, the workforce, the information system etc.

Service delivery

There are no 'neat' classification schemes to frame our thinking about service delivery options; just a mess of different partial schemes which have been developed to serve different purposes at different times. We shall use four 'dimensions' to frame our consideration of variations in service delivery. These are provider ownership, organisational forms, coordination drivers and patterns of access.

Provider ownership

The main forms of provider ownership are

- public,
- voluntary, not for profit,
- private, for profit, and
- mixed.

Of course the most common is 'mixed' but the patterns of mixture and the directions of change are also quite interesting. The NHS in the UK is largely publicly owned (assets publicly owned, staff publicly employed) but successive governments have been progressively making more space for the private sector.

Health care in the USA largely delivered through privately owned, for profit, corporations. However, it is worth remembering that the Veterans Administration health care system in the USA is one of the largest publicly owned health care systems in the world.

Voluntary, not for profit, organisations play an important role in health care delivery in many countries. Some are owned by faith organisations; others secular but non-profit.

Organisational forms

'Organisational forms' refers to the degree of marketisation of the system (or alternatively, the degree to which the system is managed within an administered hierarchy).

The standard examples of the managerial hierarchy is the NHS in the UK which is the public service option. (However, it is worth noting also that the Kaiser Permanente system and many other large corporate health care providers in the US deliver private sector health care through a managerial bureaucracy.)

Service delivery in many countries is largely or in part structured around market relations.

The simplest of the market based systems is where the consumer meets the provider in the open market without any third party payer involved.

In the standard insurance based system the consumer has a separate relationship with an insurer (or public reimburser) which helps to cover the cost of services either completely or partially.

Managed care describes a 'three contact' situation where, in addition to the consumer's contracts with provider and insurer, the insurer also has a direct contractual relationship with the provider. Contracts between purchasers and provider organisations are used in many systems to frame the funding and delivery of services. Such contracts may take the form of an agreement on conditions of service, prices and perhaps volumes. In this case the government or insurance organisation is playing the role of surrogate purchaser, on behalf of the ultimate customer, the consumer. Bulk contracts for health care may be calculated on the basis of fee for service (price by volume) or inpatient episode (price by volume) or capitation (annual per capita payment by numbers covered).

Coordination drivers

The third dimension which we may use to describe service delivery concerns the 'drivers of coordination'. In other words how do the different elements of the system work together and why; what drives coordination.

Vertical funding programs for chronic diseases such as AIDS or TB have some advantages for monitoring individual cases and coordinating their care. Vertical funding is epitomised by the various AIDS programs in developing countries.

Another approach is the idea of devolution to local government which has featured in many World Bank strategies. Devolution to local government is presumed to promote local accountability and stronger local level relationships.

Two models which might illustrate the 'patient focused' approach are the referral role of the GP in the Australian and UK systems and the case manager role in a number of programs involving complex care. In many health care systems dedicated funding to support 'chronic disease programs' is being introduced. This is used to encourage and support the closer monitoring of patients with diabetes, hypertension and other chronic diseases.

The primary health care model has a strong focus on local community involvement and accountability as a strategy for better coordination.

Patterns of access

Our final dimension of service delivery strategies is patterns of access to care.

We can identify three broad options under this dimension.

United universalism means that everyone has access and they have access to basically the same system. The UK NHS or the Australian or Canadian Medicare schemes illustrate this. Brazil is moving towards this model with its 'Unified Health System'.

Stratified universalism means that everyone has some protection or some level of assured access but differently according to their ability to pay. This is essentially the model promoted by the World Bank: commercial insurance and private care for the rich; social insurance and private care for the middle and safety nets for the poor. Safety nets for the poor have been conceived in different ways in different times and places:

- public sector provision – the most common approach to providing a basic safety net for the poor has been public sector services which however, have often been of limited quality and often restricted access;
- in its 1993 Report the World Bank introduced a new approach to the safety net, based on identified cost-effective interventions; this led to the idea of 'benefit packages' of 'cost-effective interventions' for the poor.

Differential access simply means that some people do not get social protection with respect to health care. This is the US system where there is stratified access among those who have some protection but there is a significant group (around 30 million) who do not have any cover and can only access care on an out of pocket basis. This option of differential access, including a significant group with no health protection, carries a big risk of health induced poverty.

Workforce

Workforce is the heart of health systems. Many of the barriers to quality, efficiency and access arise from problems with workforce. Some common problems include:

- 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, and
- brain drain (sectoral, regional, international).

A policy checklist for the health care workforce might include:

- 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, and
- research and research brokerage.

Information and information and communications technology

Many problems regarding access, cost, quality and equity can be traced, perhaps indirectly, to the management of information and technology. Planning may be limited for lack of information systems and thereby contribute to access barriers. Lack of information and various technologies may lead to reduced efficiency and productivity.

Medical products, vaccines and technologies

Some of the critical policy challenges in relation to medical products and technologies include innovation, evaluation, implementation, regulation and mobilising resources to support both innovation and access.

Innovation is a big issue in pharmaceuticals. The originator pharmaceutical industry claims that it needs low standard patenting with high levels of protection in order to fund pharmaceutical innovations. However, this claim is criticised on several grounds. Corporate investment in innovation is tied closely to the prospects for profitable sales so that often the development of me-too drugs to compete with blockbusters is given priority over higher clinical need areas (like new antibiotics). In some degree the rents from patents flow into aggressive marketing (rather than innovation) which can lead to over-utilisation.

The need for innovation extends beyond medicines to include clinical methods generally and the innovation with respect to the organisation of health care delivery.

With innovation comes evaluation and implementation; evaluation of new technologies and new approaches for expediting the implementation in practice of proven technologies and methods (and the retirement from practice of dangerous and ineffective technologies and methods).

Regulation of medical products and clinical technologies is essential but challenging, in part because it is quite controversial. This includes marketing approval, monitoring quality of product and appropriateness of use, and post-marketing surveillance.

Financing models

Financing is the fifth ‘building block’.

This includes:

- how is the money collected;

- how are monies pooled; and
- how are the health care providers paid.

In Chapter 2 below we explore these issues in more detail.

Leadership and governance

The last of WHO's building blocks is 'leadership and governance'. Most problems in service delivery can be traced back, at least in part, to issues of governance and management. In developing policy solutions to problems in service delivery consideration needs to be given to:

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

Other descriptive frameworks

The WHO framework was developed in part to guide WHO itself in fulfilling its leadership role in relation to health system development. There are many alternative frameworks for describing, comparing and researching health services which are generally shaped by somewhat different purposes. See Shakarishvili (2009) and Piña and colleagues (2014). Piña and colleagues propose a framework which is based on:

- capacity,
- organisational structure,
- finances,
- patients,
- care processes and infrastructures, and
- culture.

From building blocks to health *systems*

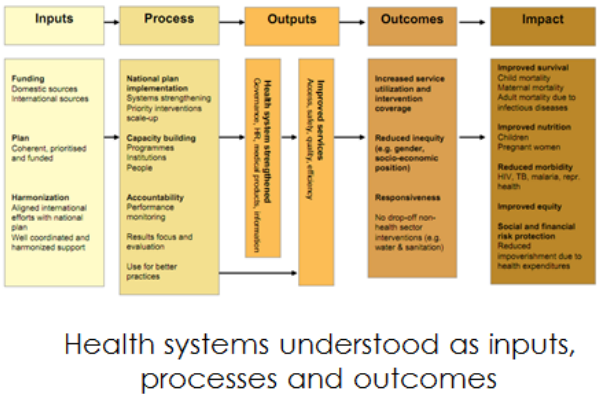
The building blocks metaphor represents the health system as an assemblage of component parts. However, these component parts overlap and interact in complex ways.

Systems-based accounts of 'the health system' aim to show how the building blocks work together. Information is carried by people, health service delivery is carried out by people; information is central to service delivery and to financing. System accounts of 'the health system' focus variously on the flow of money through the different parts of the system, or the flow of patients, or the flow of information, etc.

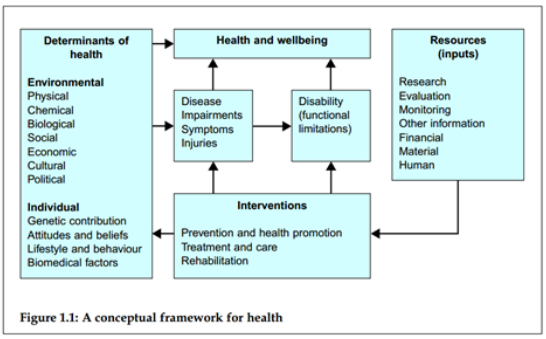
The health system includes population health programs as well as individual health care. Population health programs, including health protection and health promotion, involve a range of services and programs, from personal preventive services (immunisation, screening, etc), to public health infrastructure and regulation, to social marketing and policy advocacy. (See Chapter 5 below.)

The systems approach brings new methods and tools to health systems analysis. these include: scenario testing, network analysis, causal loop diagrams, process mapping and flow diagrams (Peters, 2014).

The systems metaphor provides scope for much more dynamic descriptions of health systems and how they work. See Figure 1, below. The IHP+ Common Evaluation Framework (Monitoring and Evaluation Working Group of the IHP+, nd) represents the health system as a series of Inputs which are Processed into Outputs and which lead to Outcomes. The Australian Institute for Health and Welfare (AIHW, 2000) structures its framework from Health Determinants to Interventions (based on Inputs) which then lead to Health and Wellbeing.



IHP+ Common Evaluation Framework



AIHW (2000) Conceptual Framework for Health

Figure 1. Input output models of the health system

Another approach to understanding the health system as a system is to focus on the flow of patients through institutional systems and across time, as in 'the patient journey'. Key applications of this approach are to be found in discussions of:

- referral relationships,
- clinical pathways,
- appointment systems,
- emergency retrieval, triage and assessment, and
- disease management programs.

The 'patient journey' offers a different view of the processes of patient care from the intake, process, discharge model.

The health system can also be represented as the flow of money from collection, pooling to payment (see Chapter 2) and as information flows (generation, documentation, aggregation, analysis, reduction, reporting, etc).

The market place provides a different approach to representing the health system. An efficient market involves a large number of consumers meeting a large number of providers. The consumers know their needs and have access to knowing about the services offered by the various providers. Most of these assumptions do not hold in relation to health care which is why 'market failure' is common.

In contrast to the market place model is the idea of 'co-production of care' which posits the individual and family working collaboratively with teams of carers.

Need to study health systems in their wider societal context

The term 'health system' sometimes suggests that 'the health system' can be in some way isolated from, or considered apart from the rest of the society, economy and polity of which it is a part. In fact, 'the health system' is an artefact of analysis; entities have been named and foregrounded because of their contribution to health care and prevention. The funding of health services is irrevocably embedded in tensions over taxation, public expenditure, and the distribution of aggregate income. The agencies of health care delivery (and their suppliers) are deeply embedded in local, national and global economies. Likewise action on the environmental and social determinants of health will often cut across the interests of commercial stakeholders.

Health systems are part of the wider social and economic systems of which they are part. We need to study health systems in their wider societal context: historically, and comparatively.

In this section we shall review and compare the histories of four health systems: Australia, the USA, Brazil, and Cuba and seek to relate their health systems to their histories and geographic, linguistic and geopolitical contexts.

		Comprehensive and universal	Multi-tiered with public safety net
Rich world		Australia	USA
	<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 world		Cuba	Brazil
	<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

Figure 2. Four countries with different health systems and different places in the global picture compared with regard to under-fives mortality, %GDP spent on health, GDP per capita, Government expenditure on health as % of total health expenditure and the Gini coefficient

Australia

Australia has a tax based single payer universal health insurance system with provision for optional private hospital insurance.

Australia is a rich country although it spends much less money on health care than does the US. Despite the continuing disadvantage carried by many Aboriginal people Australia has relatively good under-fives mortality and a lower Gini than the other countries cited. A high proportion of total health expenditure (THE) is government funded.

While modern Australia (post European colonisation) started out as a penal colony it soon established its place in the economy of the British Empire through its exports of wool, wheat and meat. By the end of the 19th Century Australia was growing in affluence largely due to preferential access to the British market. Protected access to the British market helped to pay for the 'wage-earner's welfare state' with a minimum wage and relatively high levels of social protection. As a country which started out as a government project and never rebelled Australia is accustomed to a relatively high level of government involvement

These were the conditions for the development of universal health insurance in Australia although the more collectivist and egalitarian ethic gradually unravelled from 1970s with globalisation, decline of British empire, widening inequality and the thinning of the welfare state.

USA

Health care in the USA is dominated by private providers: private practitioners, private hospitals and private health insurance. It has a seriously fragmented and marketised funding system and there has not been political support for universal health cover. Around 30 million people do not have any health insurance cover.

The US has around the same under-fives mortality as Cuba and a similar Gini coefficient. It spends far more on health than most other countries.

European settlement in the US was voluntary and motivated by a rejection of the politics and culture of England. The hostility to the English and government generally was exacerbated by the revolution. Meanwhile the displacement of the Native Americans was associated with a certain frontier individualism. The role of slavery in generating (Southern) wealth contributed to the institutionalisation and political acceptance of inequality.

In contemporary times the suspicion of government, the values of individualism and the acceptance of inequality have played a significant role in the defence of entrepreneurial health care and the failure to implement universal health cover.

Brazil

Brazil has a universal primary health care system funded and administered through local government but hospital resources are largely in the private sector and health insurance is fragmented.

Historically Brazil has been a very unequal country with a white settler elite, slavery and indigenous oppression. Political governance is fiercely contested while commercial governance remains controlled by a small elite. The 1988 constitution declared that health is a human right and committed Brazil to moving to a singular unified health system with a

strong PHC sector. Creating a unified health system involves ensuring access to hospital care as well as PHC and reallocating some of the resources which are disproportionately directed to the rich.

Cuba

Cuba has a tax funded, publicly provided, national health service. It has a planned approach to health care and has achieved good population health outcomes at relatively low cost.

Cuba was colonised as a white settler regime with slavery. Inequality and political repression led to the revolution of 1959.

Aggression, covert action and economic sanctions imposed on Cuba by the USA has kept the country in a defensive posture. This has been associated with planned approach to health care and population health with a strong primary health care approach. The collapse of the USSR in 1989 imposed new economic stresses on the regime because of the loss of the East European sugar market.

Conclusions

Three conclusions can be drawn directly from this comparison of four different health systems:

- History shapes the health system we inherit and constrains how its further development might unfold;
- Universality depends on social solidarity which is attenuated by inequality (and is shaped by culture and historical legacy); and
- Policy leverage (eg implementing an organised approach to health care organisation and establishing effective expenditure control) is limited where the private sector is strong.

Control knobs to strengthen the building blocks

In this and the next section we move from description and explanation to prescription and strategy.

In this section we shall review a range of health system policy recommendations which are largely tied to specific building blocks. In the next section we shall look more broadly at the policy paradigms which have dominated global discussion of health systems development since WWII.

One influential 'guide to improving performance and equity' was published in 2008 by Roberts and colleagues who used the metaphor of 'control knobs' in describing the policy task of improving performance and equity. Their control knobs included:

- financing reforms (mobilising, pooling, allocation),
- altered payment mechanisms (eg from per diem to DRG; contracting),
- organisational reform (public private, central local, command and report vs autonomy and risk),
- regulation (eg clinical risk management),
- behaviour change strategies (information, marketing, incentives, restriction, indoctrination, prohibition).

In a parallel World Bank sponsored project, Peters and colleagues (Peters et al., 2009) produced a comprehensive review of commonly recommended strategies for improving health care and assessed the supporting evidence.

To provide a taste of their approach we shall review recommendations around service delivery, organisational performance, and workforce, drawing largely on the work of Peters et al. The listing of various strategies below does not imply endorsement. Indeed, the relevance and likely usefulness of any of the following strategies can only be evaluated in the specific context within which their implementation is being considered.

Service delivery

Strategies for improving service delivery are sometimes described in terms of supply side and demand side strategies. This can be a bit confusing because it is a reference to the market interface where consumers face providers and does not problematize the consumer – insurer interface, including the role of the 'surrogate purchaser'.

'Supply side' strategies include:

- mobilisation additional resources,
- providing further training for practitioners,
- improving logistics (eg maintenance and supply),
- contracting out certain functions to specialised providers (eg cleaning, medical imaging, etc),
- strengthening systems for promoting quality and safety, and
- leadership development and management reform.

'Demand side' strategies include:

- payment reforms (user fees, vouchers, insurance, etc), and
- initiatives directed to changing consumer behaviour.

Other strategies for improving service delivery, which don't really fit the supply demand dichotomy include:

- policy capacity development (including planning and implementation),
- health financing reforms,
- re-organisation of service delivery (integrated service systems, decentralisation), and
- regulation (from soft to hard).

Organisational performance

Strategies directed to improving the performance of individual organisations can be categorised under:

- 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 (guidelines, standards, audit, clinical pathways, bench marking, re-engineering), and

- Household and community empowerment (directed to strengthening the accountability of provider organisations).

Institutional systems reform

Strategies directed to improving the performance of institutional systems or networks of organisations and private practitioners include:

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

Workforce performance

Strategies directed primarily at practitioners include:

- 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.

These lists of strategies which have been recommended and in some cases evaluated serve to illustrate the breadth of options which health system reformers may consider. However, lists such as these tend to divorce the 'technical' side of the policy challenge from the political context and from the contingencies of implementation. We will return to these real world issues at the end of this chapter.

The twists and turns of health systems policy globally, since WWII

In making judgements about different health system configurations, and in evaluating different policy strategies, we draw upon particular assumptions about the purpose of health systems. One set of widely accepted (not universal) public policy goals for health care includes:

- better health outcomes (through prevention and better care);
- safe and high quality care; and
- efficient use of resources (including technical, allocative and dynamic efficiency).

In fact it is not self-evident that the purpose of health systems is to deliver better health outcomes and better health care. In the various literatures about health systems there are a range of different narratives of purpose all of which have different implications for purpose, design and evaluation. These include health care as:

- input to productivity,
- expression of charity,
- expression of solidarity,
- guarantee of security,
- realisation of human rights,
- fulfilment of market rights, and
- economic opportunity.

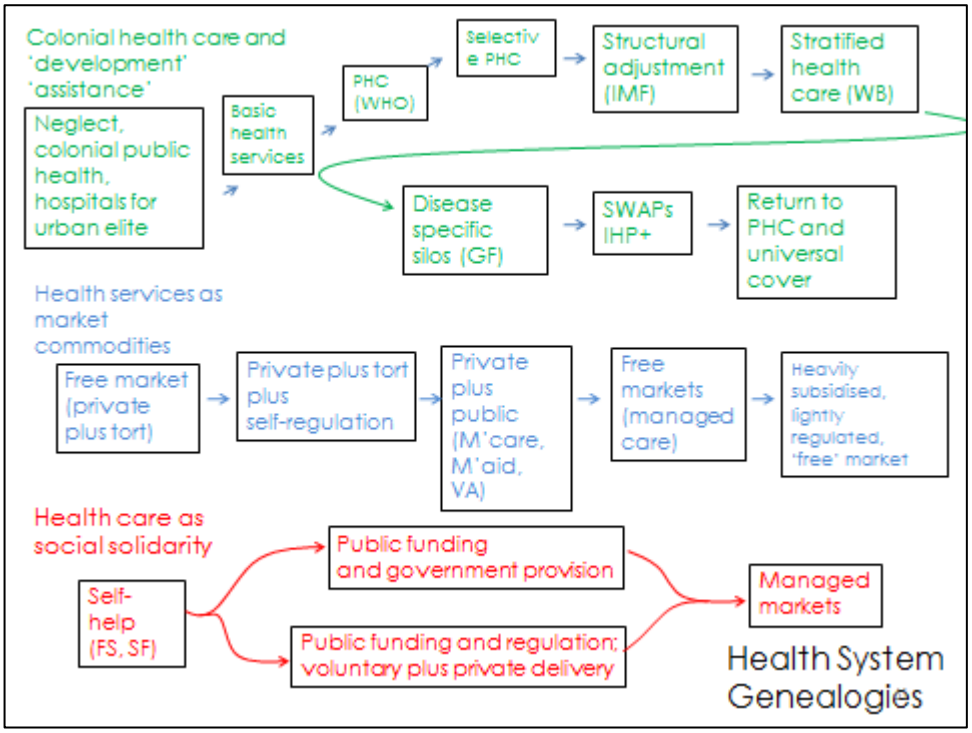


Figure 3 Health system genealogies

The genealogy of health system policy can be traced through a number of different narrative streams including health system policy in industrialised countries (including the market stream and the solidarity stream) and health system policy promoted by the rich countries and other donors through development assistance policies (technical and financial). There are separate genealogical streams regarding the conditions which shape population health (infectious diseases, under-nutrition, non-communicable diseases, etc) and policy methods (such as intersectoral policy collaboration / HiAP and policy coherence / global health diplomacy).

The two main *health system genres* are the market models and the solidarity models. In *market models* the health service is conceived of as a commodity to be exchanged for cash in a market where a mix of sellers meets a mix of buyers. In this group of models buyer choice from what the sellers offer is largely a matter of individual responsibility. *Solidarity models* treat health care as a collective responsibility and as a consequence such models call for some level of collective agreement on system design with broadly standardised agencies, relationships and pathways. Most health systems exhibit characteristics of both of these families.

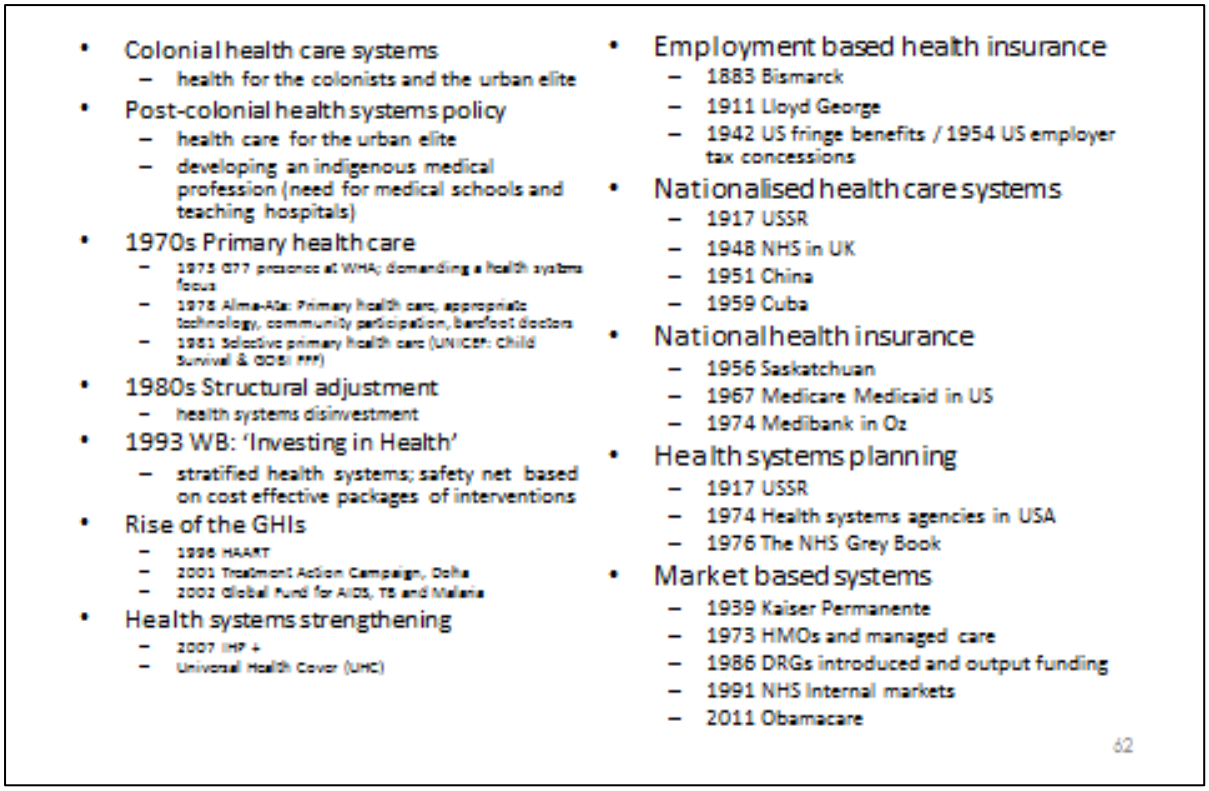


Figure 4. Global health systems policies since WWII

Figure 4, above, is a complex figure. In the left column the changing focus of development assistance for health is sketched, the evolving principles which have guided donors and national policy makers in developing countries with respect to the health systems development.

In the right column is listed some of the landmarks in health system development in the rich countries. These landmarks are grouped under five broad headings:

- employment based health insurance
- nationalised health care systems
- national (public) health insurance
- health systems planning, and
- market based systems

Global health policy as it applied to the 'developed' or OECD countries can be read from the interweaving and evolution of these different strands. These changing fashions in rich world health policy also influenced the policy nostrums being advanced through various 'development assistance' programs.

In terms of the developing countries the first key landmark is decolonisation which took place at different times and under different circumstances. However, there was a common pattern. Colonial health care systems were focused on health care for the colonists and the urban elite and generally failed to provide services to the poor, especially the rural poor.

Post colonial health systems combined the legacy of privileged health care for the urban elite with new initiatives directed to developing the indigenous medical profession with

local medical education, commonly structured around the imperial model with indigenous medical schools and teaching hospitals.

Primary health care

During the 1950s and 1960s the WHO was actively prevented from saying anything about health care systems in developing countries except for general advice about priority for 'basic health services'. However, by the early 1970s there was a stronger presence of newly independent countries at the World Health Assembly and a rising call for WHO to provide more substantive advice regarding health system development in developing countries.

The pressure on WHO from developing countries for guidance on health systems development coincided with calls from the USSR for a conference on health systems. While the USSR diplomats were keen to promote the Soviet model (feldshers, polyclinics, etc), WHO was also lobbied by the Christian Medical Commission highlighting new models of primary health care from the global South. The very influential Health by the People (Newell, 1975) showcased several case studies of PHC in action, including from Indonesia, India, Costa Rica, Guatemala and China. Another stream of experience which fed into Alma-Ata arose in the community health movement in South Africa & Israel (Kark and Kark, 1999), USA (Geiger, 2002), the Peckham Centre in London (Pearse and Crocker, 1985[1943]) and in Indigenous Australia (Foley, 1991).

This mix of experiences was influential in the development of the Declaration of Alma-Ata on primary health care which placed priority on delivering basic services where people live, on developing an appropriate workforce and appropriate technologies, and on an intersectoral approach to prevention.

The term 'primary health care' carries multiple meanings. It refers to a sector of service delivery, a policy model including principles of service delivery, and a strategy for social and political change.

PHC, as a sector of service delivery, refers to first contact, continuing, generalist, comprehensive and essential services.

As a policy model, including principles of service delivery, PHC encompasses:

- a comprehensive range of services from prevention to care to rehabilitation;
- community involvement (strengthening accountability, involvement in planning, and engaged in prevention),
- mutually supportive referral systems,
- organisational support at the district level ('district health systems'),
- intersectoral collaboration,
- appropriate multi-disciplinary workforce including community health workers, and
- appropriate technologies.

The PHC model adopted at Alma-Ata was also a strategy for social change. At the local and national levels it recognised the social determination of health. At the global level PHC was linked to the vision of a New International Economic Order or NIEO (Toye, 2014). The

model envisaged popular mobilisation towards health development with the PHC practitioners playing a facilitatory role.

PHC was contested from the start. The first challenge was structured around the idea of 'selective PHC' (Walsh and Warren, 1979) which was taken up by UNICEF in the early 1980s with the acronym of GOBI encompassing growth monitoring, oral rehydration, breast feeding and immunisation (Werner and Sanders, 1997). 'Selective primary health care' sacrificed the comprehensive vision of Alma-Ata for a focus on a few interventions which were seen as cost-effective.

Other contested issues associated with the implementation of PHC have been:

- relationships with secondary and tertiary sectors,
- funding priorities,
- power relationships: top down or bottom up,
- workforce policies, in particular, the role of community health workers (Werner, 1981), and
- the balance, in preventive work, between risk factor focused behavioural change versus community action around the social determinants of health.

The lead up to the Alma-Ata conference came at the end of the 'long boom'; the period of rapid economic growth following WWII associated with decolonisation and a high level of optimism across the Non-Aligned Movement (NAM). However, by the late 1970s growth was slowing and stagflation was emerging as the economic priority.

The high interest rates of the early 1980s precipitated the Debt Crisis and as developing country debt escalated more and more countries were forced to turn to the IMF for bail outs and to accept the associated structural adjustment policies. Comprehensive PHC was an ambitious goal, even in the context of the Long Boom. However, in the context of the disinvestments in health care associated with structural adjustment it was, for many countries, an impossible dream.

Structural adjustment

During the early 1970s interest rates were low and the banks were flush with cash. (Following the oil price rises of 1973 and 1975 the revenue to oil exporting countries increased and much of this money was deposited in the international banks.) Bank salespersons lent large sums to Third World borrowers with loose regard to risk; the borrowers were enticed by negative real interest rates (interest rates lower than inflation).

With the interest rate hikes from 1981 the debt trap closed and many countries were forced to turn to the IMF as lender of last resort. The IMF 'conditionalities' (structural adjustment) included:

- encouraging production for exports to earn foreign exchange;
- reducing tariffs to make imports cheaper (including imported food);
- devaluing the currency to make exports cheaper;
- cutting public spending (including food subsidies, health funding, education); and
- encouraging foreign investment (including deregulating labour markets).

The purpose of IMF conditionalities was to generate foreign exchange to reduce the debt and there was little regard for the human cost.

Investing in health (1993)

By the early 1990s there was rising condemnation of structural adjustment with a report published under the aegis of UNICEF in 1988 entitled 'Adjustment with a human face' (Cornia et al., 1987) and the Jubilee movement for debt cancellation.

This was the context in which the World Bank developed its 16th World Development Report 'Investing in Health' published in 1993. 'Investing in health' was in large part a response to the critics of structural adjustment.

The report included:

- an overview of world health,
- an analysis of the conditions for better health,
- an introduction of the metric of disability adjusted life years (DALYs) for measuring the 'burden of disease' and the cost-effectiveness of interventions
- policy recommendations for health systems development, including health care and public health.

The Bank concluded that:

- much hospital care is not cost-effective;
- health care funding should be targeted to cost-effective interventions;
- governments are notoriously and inevitably inefficient;
- cutting public expenditure is not necessarily bad for people's health;
- public subsidy for water supply, sanitation and garbage removal are generally not cost-effective (if done for health reasons alone).

The bottom line was that structural adjustment lending could be consistent with health improvement if implemented in association with the recommended health policy packages.

The Bank argued for restricting public funding to a minimal safety net for the poor based on a carefully selected 'benefit package' of cost-effective interventions. This benefit package would be available through public agencies, private providers or non-profit voluntary providers. Services outside the benefit package would be funded through user fees.

In essence this was a model for stratified health care with private provision for the rich (fee for service supported by private insurance plus out of pocket payment); private provision for the middle, supported by employment related social insurance plus out of pocket payment); and the basic package of cost effective interventions to be delivered through various providers under contract (plus user fees for excluded services).

The rise of the GHIs

The World Bank's prescriptions were the 'conventional wisdom' with respect to 'development assistance for health' during the mid to late 1990s.

However, in the first decade of the new century there was a dramatic increase in development assistance for health much of which was channelled through a proliferation of new 'global health initiatives' or GHIs, also referred to as global public private partnerships.

Key to the increased DAC and the new GHIs was the AIDS/HIV epidemic (from 1984) and the emergence of highly active retroviral treatment (ART) from 1996. The emergence of ART problematized the WTO's TRIPS Agreement (Trade Related Intellectual Property Rights) because of the potential impact of TRIPS on access to treatment.

The focus of this contradiction was the 1997-2001 Treatment Action Campaign in South Africa. In 1997 39 international pharmaceutical companies sued the South African Government (in the domestic courts) charging that the provision for parallel importation of HIV drugs was at odds with South Africa's commitments under the TRIPS agreement. The South African government had legislated for parallel importation because ART drugs were being sold in South Africa at much higher prices than the generic equivalents. ART drugs were was being sold in South Africa at around $10,000 per treatment year compared to $350 which was the price the Indian generics manufacturer Cipla was selling ART drugs to Medicins Sans Frontieres (MSF).

The contradiction between profit and access sparked controversy worldwide and a vigorous social movement in South Africa. The USA initially threw its weight behind the pharmaceutical companies but in the lead up to the 2001 presidential elections (Al Gore versus George W Bush) domestic pressure (based in part on the AIDS community in the US) on the Clinton Administration led the US to withdraw support. By early 2001 the global pharmaceutical industry was suffering significant reputational damage and in April withdrew the suit and agreed to pay the South African Government's costs.

In December 2001 at the Doha meeting of the WTO Ministerial Council the Declaration on Trade and Health was adopted which affirmed that trade rules should not be a barrier to health care.

The early years of the new millennium saw a dramatic escalation of DAH channelled through a growing range of new GHIs of which the Global Fund for AIDS, TB & Malaria from 2002 was the largest. The expanded funding for DAH and the creation of new GHIs was in part a response to the reputational damage suffered by the pharmaceutical industry and loss of legitimacy of the TRIPS agreement. Under this new regime access to treatment would be guaranteed through the expansion of donor funding administered through the new GHIs.

Other influences also contributed to the expansion of DAH including the report of the WHO Commission on Macroeconomics and Health which argued that globalisation itself was under threat and urged a massive mobilisation of donor funds as part of its response to this threat.

Health system strengthening

By the mid naughties there was rising criticism of the proliferation of vertical disease focused programs. The main criticisms concerned:

- fragmentation of recipient country health systems with new special purpose grant funded organisations competing with established health services;
- the liaison burden on recipient governments having to deal with scores of donors, all insisting on their own strategies and their own reporting protocols; and

- internal brain drain as the new GHI funded projects competed with generic health services for staff.

The rising discourse of 'health systems strengthening' was a response to this criticism with a range of initiatives designed to put health systems back on the agenda. These initiatives included

- the establishment in 2007 of the International Health Partnership plus;
- WHO's Maximising Positive Synergies project in 2009 (WHO Maximising Positive Synergies Collaborative Group, 2009);
- The World Bank's health systems platform (World Bank, 2010); and
- the heightened advocacy around 'universal health coverage' from 2012 (led by the Rockefeller Foundation, the World Bank and WHO's DG, Dr Margaret Chan).

In retrospect the twists and turns of global health policy (regarding development assistance for health systems) have been bewildering: from neglect in the 50s and 60s, to a brief call for PHC in the late 1970s, to disinvestment under SAPs in the 1980s, to the WB's stratified health systems model in the 1990s, to the GHIs in the 2000s, to 'health systems strengthening' (a slogan from WHO in the 1980s) and UHC.

These gyrations reflect the storms and stresses of the global economy and associated geopolitics rather than any evidence based collection of best practice principles in health system design. To the contrary they demonstrate how the prevailing orthodoxy of the technical experts is shaped by the political environment in which they are working.

Globalisation and health systems policy

Health systems policy remains powerfully influenced by the prevailing economic and political stresses and forces. Because of this domestic health system policy makers need to be aware of the global context which shapes global orthodoxy. At the present time some of the key influences include:

- the increasing power of transnational corporations (eg Big Pharma demanding easier patenting but stronger protection and the increasing use of investor state dispute settlement to manage the threat of government regulation of foreign corporations);
- pressures towards closer economic integration (including the harmonising of intellectual property rules, new provisions to facilitate trade in services including health insurance);
- pressures towards privatisation reflecting the combination of tax competition, new trade in services rules and ISDS;
- widening inequality and the threat of weaker social solidarity.

Insights from political science

In view of the highly political nature of health systems policy it should not be a surprise that the political scientists have quite a lot to offer in making sense of the processes involved.

In this section we introduce some particularly useful ideas. We will demonstrate their usefulness in the last section of this chapter, in which we discuss the practice of health systems policy reform.

Interests and conflict

Sectional interests are always in operation, both in the routine operation of the system and in debate and discussion around system reform. Health care has also been described as 'a strife of interests' (Sax, 1984) with multiple agents striving to achieve sectional benefit. It is well to keep this 'strife of interests' in mind as we work through some of the technical nostrums which circulate in health policy discussions.

Institutional interests who have much at stake in health system policy discussions include the practitioners, health care organisations, international suppliers (pharma, electronics, plastic), local suppliers and insurers. Class interests are also at play, particularly in relation to health care funding and sometimes in relation to health promotion strategies (in particular the risk factor focus or the social determinants focus).

The existence of such interests and the conflict which they can give rise to are familiar to regular observers of health policy debate. However, they are worth emphasising as a corrective to the tendency in some settings to focus solely on the technical elements of health policy without acknowledging the political context in which such discussions take place.

Contingency

Contingency refers to the constellation of unique circumstances which limit what is possible and drive what happens. Contingency sums up all of the reasons why comfortable generalisations may not apply to this unique situation.

Contingent differences may reside in various different aspects of the policy environment:

- institutions (eg federations compared with unitary systems),
- values (eg individualism versus solidarity),
- culture (eg traditions of popular engagement in policy debate or caution about such involvements),
- politics (eg when health policy is held hostage to bigger conflicts),
- economics (eg degrees of inequality, levels of economic growth), and
- people (the influence of individuals can be profound).

Path dependence

Path dependence is similar to contingency in that the past constrains the future except that the concept of path dependence highlights the ways in which specific historical episodes open certain options and close off others.

Both Brazil and Thailand have committed strongly to universal health care delivered in accordance with the primary health care model. Both Brazil and Thailand have been through military dictatorships and in both cases the affirmation of the right to health and a vision of primary health care played a significant role in the struggle to return to democracy. The commitment to PHC was in a sense *dependent* on the experience of that struggle.

On the other hand Brazil emerged from colonisation with wide social and economic inequalities and with national politics dominated by a small powerful elite. This was associated with highly stratified health care with private and social insurance for the rich but no risk protection (and often no health care) for the poor. Despite the return to democracy in the 1980s and the commitments of the 1988 Constitution, progress towards a more equal access has been slow.

Path dependence can also be seen in many post-colonial health care systems where the hospital-centric model, directed to looking after the colonial elite, has become adapted to the needs of the urban elite in the post-colonial context. A similar pattern is evident in post democratic reform South Africa where unequal access to health care under apartheid is reproduced under democracy and has been very hard to change.

The concept of path dependence highlights the need for a high level of creativity in adapting strategies and models developed elsewhere to the local situation.

Convergence

While contingency and path dependence explain why health systems take their own unique development path, the idea of convergence highlights the common challenges which policy makers are facing and the possibility that policy strategies to address those challenges might contribute to a degree of convergence towards more similar health system.

Some of these common challenges include: rapidly developing technology, population aging, widening inequalities and fraying solidarity. There is also a widely shared concern about how to address the social determinants of health, eg obesity.

In relation to these challenges there may be a certain convergence among different health systems. However, the social contexts within which health systems adapt to these common challenges can be very different, different economic resources, cultural and institutional differences, different political systems.

Apart from common factors such as technology, aging and fiscal restrictions there are two other pressures towards convergence. One of these is simply fashion. There is a global flow of policy influence from leading instances to local adaptors. Some of the instances of such policy flows include the influence of:

- mandatory social insurance in Germany on other European countries;
- health planning technologies adopted in the USSR on health planning in other countries (an influence which peaked in the 1970s);
- the UK NHS on both governments (often positive) and medical organisations (mainly taken as a warning of what to resist);
- quality assurance mechanisms developed in the USA on quality assurance in other countries;
- market inspired policy mechanisms developed in the US and later in the UK (eg from 1991).

It may be somewhat naïve to attribute all of these influences to ‘fashion’. There are also systemic interests and forces globally driving policy reform in both rich and poor countries,

in particular, the ideology of neoliberalism with its pressures to commodify and marketise health care.

Complexity

In an earlier section we discussed the value of thinking about health systems as *systems* rather than simply an aggregation of building blocks. Some of the applications of systems thinking we considered included:

- scenario testing – brainstorming how an intervention in one part of the system can reverberate and create stresses or opportunities in distant parts of the system;
- flow charts – tracing the movement of patients, information or money through the system.

In this section we will consider a different form of systems theory, namely complexity theory which invites us to see society as a complex adaptive system.

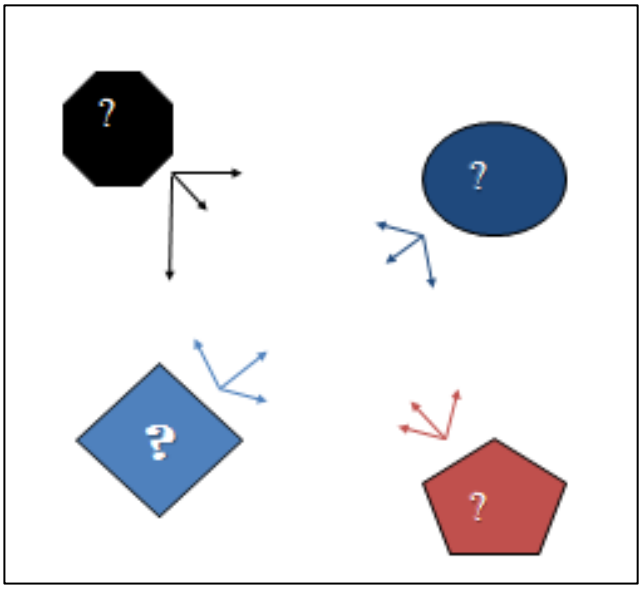


Figure 5. Society as a complex adaptive system: multiple autonomous agents, all watching each other and responding according to their own rules; fundamentally unpredictable

A complex adaptive system is characterised by multiple autonomous agents all watching each other and responding in accordance with their own rules. A system with many agents, different sensibilities and variable responses is highly complex and fundamentally unpredictable. Small differences in the starting parameters of complex systems can produce huge differences in outcomes.

Three important properties of this system are unpredictability, emergence and tipping points.

Unpredictability (in the medium and longer term) arises from the high level of complexity involved in determining the behaviour of the system and the huge data requirements and computing power which would be needed to model and predict the behaviour of the system. Unpredictability refers to the medium and long term; in the short term there may

be transformations forthcoming which can be clearly foreseen. The insight arising from complexity theory is that the horizon of predictability is surprisingly close.

Emergence refers to properties (patterns of system wide behaviour) which emerge at macro level from the micro choices of the agents who/which constitute the system. The collapse of the former Soviet Union in 1989 was not predicted by most commentators (unpredictability) but was precipitated by a system-wide loss of legitimacy which arose from the behaviours and perceptions of the multitudes of agents who constituted that system. This loss of legitimacy was an 'emergent property' of the Soviet system.

The idea of 'tipping points' arises from the iterative computer models which are used to simulate complex adaptive systems. Adaptation is a defining characteristic of complex adaptive systems. A movement by one agent leads to responses from other agents and the system has moved to a new situation. In this new situation a movement by one agent will lead to responses and the system will move to a new situation. Computer models construct this as recurring cycles governed by the same rules but where the input to the next cycle is the output of the last cycle. Modelled according to these rules complex adaptive systems will generally remain stable within certain boundaries unless a change in one of the variables takes it from stability to instability, meaning that the system can suddenly move to a completely new configuration which may or may not be stable. The idea of tipping points refers to transformations where the system as a whole moves from stability to radical change. This is most familiar in relation to climate change. A possible application of the idea of tipping points in relation to human society might be the impact of widening inequality and weakening social capital on social stability.

The idea of complexity, and in particular the high level of unpredictability which flows from this, has great relevance for policy. The idea of contingency reminds us that there are no far reaching formulae which can be applied without regard to context; it reminds us of the need for creativity in developing policy proposals. Uncertainty regarding the future trajectory of the system should carry some degree of hope, that positive change remains possible and with that some sense of obligation to work towards creating the conditions out of which progressive change might emerge. However, there is no inevitability regarding such progressive change.

Unpredictability

Complexity theory highlights the unpredictability of social process. This has important implications for policy work: windows of opportunity and readiness.

Institutional systems can be frozen in place for long periods of time. However, such stability can be destabilised, sometimes for reasons which are not immediately clear, and windows of opportunity can open.

The policy operative must be ready for such windows, must have policy ideas in her bottom drawer which can be dragged out, polished up, and put out there for wider consideration.

How do health systems develop?

Health policy is based on narratives about how the health system works now and how it might produce better outcomes if it was structured or operated somehow differently. Such

narratives refer to different health system models and mechanisms and general principles about how health systems work.

However, the strategies we adopt for making change happen are based on assumptions about how health systems develop.

Patterns of change

We can identify three broad patterns of change: unplanned change (between episodes of policy driven reform), big bang reform, and incremental policy reform.

Unplanned development refers to the aggregate of small changes in practice or organisation or resource allocation as practitioners and managers adapt to changing technologies and changing patterns of morbidity.

Big bang reform where the whole health system is subject to radical structural reform is much less common than incremental reform. Radical structural reform is generally associated with major societal upheavals. An example is the collapse of the Chinese primary health care system and the three tiered referral network in the early 1980s associated with the economic reforms associated with 'opening up'; suddenly the funding base for PHC in both the cities and the country collapsed. The dramatic changes in health care in China at this time were largely unplanned consequences of economic change; they were not driven by health policy considerations.

Incremental policy reform refers to the dispersed episodes of reform in different parts of the system and across time. As particular institutional domains unfreeze and new 'windows of opportunity' open, localised reforms can be effected. Consideration of incremental health system reform calls for consideration of the individual episode of reform and consideration of the aggregate impact of a sequence of such reforms.

Episodic reform

Health system reform involves technical, political and managerial challenges.

The technical challenges involve description, evaluation, explanation, prediction and prescription. We need to be able to describe how our health system is working (building blocks, systems analysis, societal context) and identify areas where improvement is possible and worthwhile. We need to understand how particular patterns of service delivery are stabilised and reproduced. We need to be able to predict how the system will evolve; if we do not introduce new policies, or in the case of various different interventions. We need to be able to project the different scenarios associated with various interventions including the functioning of the services and the responses of the various stakeholders. Finally we establish a set of criteria to evaluate the interventions and select a preferred path. The technical challenge draws on the various knowledge domains and theories discussed earlier and draws upon evidence and debate regarding particular models and principles for health system design with full recognition of local histories and contingencies.

Health system reform is highly political. Health systems are also markets, jobs, and tax sinks. The structures and dynamics of the health system we inherit reflect perceptions and power relations as they have evolved to this time. Often the stakeholders who might lose some benefit from reform are highly conscious and tightly organised, as opposed to the stakeholders who might gain net benefits from reform but who may be only vaguely aware

and not well organised. We need to understand the political forces which reproduce the current structures and dynamics if we are to take specific actions which might lead to change. While the technical argument upon which the policy is based may be based on recognised health system models and principles the strategies involved in driving change are based on assumptions regarding development pathways and the politics of the system.

The third set of challenges lie in the managerial domain; managing for policy development and managing for implementation.

Managing for policy development touches on a range of organisational issues (information systems, evaluation practices and investment in staff who can manage data or who can generate evidence or who can build relationships). However, the fundamental need is for policy leadership. Leadership is about carrying followers across uncertainties; it is a capacity to inspire and to deliver. Health system reform is always uncertain territory with questions such as: Is now the time to drive ahead or to wait? Will this model take root in this soil? Will the different stakeholders respond as predicted? This kind of judgement is needed at all levels in the organisation so that the organisation can respond flexibly and appropriately without requiring all input to be processed in the chief executive's office and all decisions to be OK'd by the minister.

Managing the implementation of change also depends on leadership. In part this is about basic systems and procedures: ensuring proper planning, full documentation, monitoring and evaluation, appropriate devolution. It is also about ensuring rigorous policy development, effective communications (up, down and across) and a shared vision and common commitment. Implementation failure can take place for many reasons. Sometimes it reflects weaknesses in policy development, such as lack of research, failure to listen during consultations, lack of rigour in the development and testing of different scenarios. Implementation failure can also arise through lack of policy clarity and uncertain drive. These can be due to poor communication vertically and horizontally within the department; poor communication between minister and officials and tension between different portfolios or levels of government.

Allowing such leadership to flourish requires a supportive organisational culture; sometimes described in terms of the learning organisation. Developing organisational learning in government departments depends on executive leadership: investing in research and evaluation, ensuring good communication within and beyond the organisation, building a sense of shared purpose and cultivating policy leadership in the upper and middle ranks.

We shall return to the challenges of policy development and implementation in Chapter 3 below.

Incrementalism, serendipity and vision

Propensity for change varies from periods when institutional relations are frozen to periods of greater flexibility. Opportunities for incremental change can be created but often arise unpredictably. From this comes the principle of readiness: if the policy ideas are available and constituencies primed, when 'windows of opportunity' open then change can be achieved more easily and with lower costs.

Health system reform as the aggregate impact of a sequence of dispersed incremental reforms raises a further question about coherence: how can we ensure that a sequence of decisions taken across time will be coherent in the sense of the second decision complementing the first and putting in place the conditions for the third. The aphorism about 'feeling the stones to cross the river' suggests that the sequence of decisions (where to put your feet) is guided by the goal of crossing the river. If the decisions taken by one decision-maker is to be coherent in this sense with those preceding and following it will be because he/she has been guided by a shared vision of the longer term objectives in framing those episodic reforms.

Health system strengthening depends on the effectiveness of each episode of reform and the coherence of the aggregate sequence of incremental reforms. Effectiveness depends on the setting of each episode, the quality of policy analysis which has gone into it, the readiness of the proponents and the effectiveness of implementation. Leadership, readiness and vision are critical to managing the opportunities for change which ebb and flow. Coherence across a tapestry of reforms (across time, level and sector) requires that each reform episode is directed in some degree towards the same vision for health system development.

The vision we might develop regarding 'the health system we want' cannot be viewed in isolation from 'the society we want' because as we have argued earlier the health system is society at large, viewed through the health system lens. It will be very difficult to achieve comprehensive primary health care, except in a society which values solidarity and the commitment to work together for a better, more sustainable society. However, working to achieve comprehensive PHC will be a significant contribution towards achieving a better more sustainable and inclusive society.

A critical part of driving health sector reform is communicating such a vision and inspiring confidence in it. This depends on high level leadership.

Creating a conducive environment

It can be difficult to predict when or where windows of opportunity for health system reform will open. For this reason there is a strong case for working on a whole of system basis to create a policy environment which is conducive to strategic health reform so that no matter where or when the opportunity arises the policy ideas will be there, the various stakeholders and constituencies will be ready to support change and there will be a broadly shared vision circulating which will help to align the various dispersed reform initiatives.

Strategies for building a conducive policy environment include:

- promoting research and development;
- supporting a sustained, inclusive policy conversation; promoting policy debate and dialogue;
- building policy capacity; encouraging broadly based policy research;
- nurturing leadership (in government, industry, academia, community);
- building a constituency for change;
- projecting a vision for health care and building consensus around that vision.

Principles for policy practice in relation to health system reform

Finally we come to our principles for policy practice in relation to health systems.

First, and perhaps most important, study the histories of different health systems, including your own. Try to contextualise what was happening in health care in relation to the wider historical movements of the time.

Follow the technical literatures, in particular those around the components and functional systems we have described. The building blocks approach is reductionist but this kind of focused attention does yield useful insights.

Be prepared with creative policy solutions. We can get ideas about possible directions for reform but to implement such ideas in our own specific economic, cultural, political, institutional environment will require creative structures and strategies.

Build capacity for policy analysis and development, within government and in civil society. The quality of policy debate is a major determinant of reform outcomes. Involving the different stakeholders (particularly those who are presently excluded from or disadvantaged by the way the system presently works) is important.

Stoke the policy conversation: briefing papers, debates, consultations.

Project an inspiring vision; invest such a vision with the authority of senior leaders.

Build a constituency for change!

2. Health care financing[2]

There is a technical language regarding health care financing and a set of principles and theories about the relationships between particular funding arrangements and outcomes including quality, efficiency, equity, etc. Much of this technical knowledge is fairly self-evident to people with practical experience but acquiring the language facilitates participation in research, discussion and communication.

Beyond the perimeter of technical debates about different health care funding arrangements there are large scale economic and political forces with powerful interests in the outcomes of those debates. The health system typically involves 5-10% of GDP and even marginal adjustments to health care funding arrangements can have important outcomes for various interest groups beyond considerations of access to quality care. Various streams of argument which derive in some degree from such interests wind their ways through debates about health care financing although generally cast in terms of health care rhetoric. A critical view of the politics of health financing policy discourse is necessary for evaluating such arguments in policy development.

Some necessary principles

Efficiency

The concept of efficiency is central to policy making around health care financing.

There are three types of efficiency.

Technical efficiency deals with the cost of producing a good or a service. The production process is more efficient if the same good or service can be produced more cheaply or if more units can be produced for the same cost. In thinking about efficiency it is necessary to have regard to the relation between outputs and outcomes. Be cautious about measures of efficiency which focus only on outputs and do not take account of outcomes. The measurement of outcomes in routine health care is very hard; even the measurement of the quality of outputs (the process of care) is difficult and expensive.

Allocative efficiency refers to the total benefit achievable through best allocation of resources across a range of different inputs. If the marginal benefit of increasing expenditure on TB treatment is greater than the marginal benefit of spending the same on heart attack care then allocative efficiency will be improved by such spending.

Dynamic efficiency refers to the cost of achieving change. The change process is dynamically efficient if change can be achieved at relatively low cost. If the evidence suggests that screening for prostate cancer has a net harmful effect how can practice change be best achieved?

Incentives and accountability

Consideration of incentives is never very far from discussions of health care financing. Incentives can be positive or negative; can be material or non-material; exogenous or intrinsic; can be constructive or perverse. Material incentives include financial benefit (or

2. This chapter includes material developed by David Legge, Judith Dwyer, Ji Xudong, Arthur Hsueh and Adamm Ferrier.

penalty) or career advancement (or otherwise). Imposed (exogenous) sanctions such as public rewards (or demotion or public shame) may be material or non-material. Intrinsic (non-material) incentives include enjoyment, sense of fulfilment, public recognition, appreciation and learning or skill development.

The significance of incentives in policy terms is that they help to explain why the system behaves as it does and the possibility of changing incentives structures may inform the development of policy options. In policy terms incentives are *constructive* if they contribute to producing desired outcomes and *perverse* if they obstruct the achievement of such outcomes. There are both constructive and perverse incentives associated with all organisational and funding relationships.

In policy terms the design goal is to align the prevailing incentives as closely as possible to the desired outcomes of the service: safe, high quality efficient care, responsive to consumer preferences, etc.

Policy makers can focus on exogenous material incentives in this purpose or on the intrinsic rewards of the practice environment. The use of exogenous material incentives is complicated by two things: first, the risk of goal displacement, and second, the challenge of measuring outcomes so that the incidence of material incentives does in fact correspond to good outcomes. 'Goal displacement' refers to the fact that the more powerful the incentives, the more the practitioner or manager will focus on the measurables to which the incentive is tied rather than the ultimate outcomes. Their efforts are 'displaced' in this sense. Health care, at both the clinical and management level, is extremely complex and the technologies of measurement relatively crude as well as being costly. In many respects clinical or managerial judgement will provide a cheaper and more valid and reliable estimate of outcomes than formal measurement systems.

However, the more powerful the exogenous incentives under which clinicians or managers are working, the less motivation they have for acting in accordance with their own judgement of excellence. Of course the intrinsic incentives of practice (enjoyment, fulfilment, appreciation, recognition, etc) can also have perverse effects. Where practitioners or managers are not accountable for quality, safety and efficiency the intrinsic rewards may displace these system goals.

Accountability relationships are critical in mediating the rewards and sanctions of clinical and management practice. Accountability needs to respond to both the formal measurement of outcomes as well as the implicit judgements of practitioners / managers and their peers. Other incentives, beyond the operation of such accountability structures, need to be tempered if they are not to displace a concern for quality, safety and efficiency.

Markets and market failure

Market relationships can be very effective in:

- mediating between consumers with needs and producers whose goods or services might address those needs;
- allocating resources to production and consumption through the links between price and demand; and

- promoting efficiency and innovation in production through the mechanisms of profit and competition.

The effectiveness of market mechanisms is also subject to strong ideological positions which make rational consideration of their application more complex. In neoliberal orthodoxy the effectiveness of markets in a very wide range of settings is commonly an article of faith rather than evidence based.

Market theorists have identified the conditions for a perfect (efficient) market. These are set out as assumptions and implications in Table 1, below.

The more that a particular market departs from these conditions the greater the risk of 'market failure', meaning that the effectiveness of the market (in mediating, allocating and promoting) is reduced.

Assumption	Implication	Health care
1. Full information	Buyers know how much and when they wish to consume, as well as the quality of the goods.	Information asymmetry and patient vulnerability with sickness or injury
2. Impersonal transactions	Buyers and sellers act independently and operate at 'arm's length'.	Centrality of caring in health care
3. Private goods	Only the person consuming the good is affected by it; he or she pays all the social costs and gains all the social benefits.	Public goods character of both clinical and public health outcomes
4. Selfish motivation	Buyers are 'only in it for getting satisfaction', and sellers are 'only in it for the profit'.	Altruistic element of health care professionalism
5. Many buyers and sellers	No single buyer or seller can influence the market price, neither alone nor through coordinated action.	Unique nature of individual health care programs
6. Free entry (and exit)	Anyone who would like to sell the products may start to do so, and anyone may leave the market whenever they want.	Professional monopolies and state regulation of entry control
7. Homogeneous Products	Buyers cannot distinguish between the products of the different producers.	Unique nature of individual health care programs

Table 1. Perfect markets and health services

Most of these conditions for perfectly efficient markets do not prevail in the health care setting and the risks of market failure are significant:

1. The buyer does not always know what their specific needs are; advice regarding their needs is part of the service they are contracting for.
2. Both the content and mode of advice regarding diagnosis and treatment is generally shaped by some degree of empathy or identification with the situation of the patient.
3. We return to public goods below.
4. Doing what is best for the patient, even if it runs counter to one's own material interests, is a core value of professionalism.
5. While some health services are fairly standard, in many cases the most appropriate program of care is quite specific to this patient, having regard to both biomedical and emotional considerations. This is relevant to both Conditions 5 and 7.
6. Control over market entry is exercised by the professional regulator, the educational institutions and the professional organisations.

Externalities

The term 'externality' refers to benefits or detriments which are incurred by stakeholders outside the market relationship of buyer and seller.

Immunisation is the classic case of positive externalities. The consumer pays to get immunised and as a consequence avoids contracting a disease; this is the personal benefit from the trade. However, this act of immunisation also benefits the wider community which is now safer through stronger herd immunity.

The treatment of AIDS/HIV benefits the individual. It also benefits the economy if sick people are brought back to health and can contribute to the community by working and looking after their children.

Antibiotic use is an example of negative externalities. Whenever antibiotics are used it increase the risk of spreading antibiotic resistance. The use of antibiotics may benefit the patient but penalises the wider community (who were not part of the trade).

Public goods

The defining characteristics of private goods are that they are excludable and rivalrous. Excludable means that only people who buy can benefit; non-buyers are excluded from sharing in the benefit. Rivalrous means that if one person consumes a commodity, then others ('rivals') cannot consume the same product.

Public goods on the other hand are non-excludable and non-rivalrous. The benefit extends beyond the immediate buyer and the benefit remains for others to enjoy even tho it has already been enjoyed by the immediate buyer. Examples of public goods include: environmental sanitation, the effective treatment of communicable disease and the provision of advice about the risks of tobacco use.

Market failure in relation to public goods arises from the 'free-rider' problem. If goods or services can be enjoyed without contracting for them either because they are non-excludable and non-rivalrous, the market demand will be reduced and they will be under-produced.

Costs, prices and values

It is useful to be precise in using these terms. Costs are different from prices and both are different from values. The price is assigned by the seller. This is a cost to the consumer. The seller's price is the buyer's cost. The seller takes into consideration his/her costs in setting his/her prices. The value of the product can be impossible to quantify. This may be because of externalities which are not included in the price or because of its public goods character. Where the benefits or risks are projected far into the future the rendering of value in monetary terms can be meaningless.

We need to distinguish between fixed costs and variable costs. Fixed costs are 'overheads' which do not change with volume. Variable costs are related to the volume of production. These are the costs directly associated with each unit produced. Average costs are the total of all costs, including overheads and the total of variable costs for the volume produced. The average cost per episode of hospital care is the sum of total costs divided by the number of episodes of care.

The marginal cost is the change in costs if the volume is increased (or decreased). If the marginal costs is less than the average cost then increased volume means increased profit. If the marginal costs is greater than the average cost then increased volume will lead to a loss.

If we want to know about the technical efficiency of a particular hospital we may use [total costs/total numbers] to calculate the cost per casemix adjusted inpatient episode.

However, if we want to allocate resources across a range of uses with a view to maximising allocative efficiency we may focus on marginal costs. If the marginal cost of treating another case of TB is less than the marginal cost of gaining the same benefit from treating heart attacks allocative efficiency will be served by allocating those resources to TB treatment. The benefits from treating TB or heart attack may be calculated in terms of disability adjusted life years or DALYs which are introduced below.

This last example draws on the concept of opportunity costs which is an economic rather than accounting concept. The opportunity cost of a particular purchase or outlay is the cost of nearest alternate mutually exclusive option. If you buy one of these you will have less money to buy one of those. Opportunity cost assumes limited resources and the comparison of different ways of using those resources helps to ensure that limited resources are used efficiently. Opportunity costs can also apply to the use of time, also a limited resource. If you choose to spend time on X you will have less time to spend on Y. This is the opportunity cost of spending time on X.

Raising, pooling and paying

Health care financing is about raising funds, pooling funds and paying for services.

Raising

Revenues can be raised through government taxation, health insurance or user charges.

Policy evaluation of the place of taxation in health care financing involves consideration of potential tax revenues, the tax mix and the efficiency of collection and the equity of tax contributions. These are partly questions of institutional capacity but also of political tensions and choices.

Health insurance is a category of systems rather than any particular system. Contribution arrangements vary widely. In some systems health insurance contributions are employment related, passed directly by the employer to the insurer. In many cases this is cast as a joint contribution, partly from the employee and partly from the employer. Employment related health insurance contributions also vary in terms of their taxation status. In the US both the employee and the employer gain tax benefits as a consequence of their health insurance contributions. In some systems insurance contributions are independent of employment with individuals or families making a direct contract with the insurance company. In the Australian Medicare system, which is styled as a medical 'insurance' system, contributions are actually paid by the government from taxation.

Health insurance also varies in other respects too. In some systems it is voluntary, which usually means that the poor miss out. In other systems it is compulsory and therefore universal. Health insurance schemes also vary widely in terms of who owns the insurance organisations, in some cases government, in some cases non-profit community organisations and in some cases they are commercial insurance companies.

The third avenue for raising funds for health care is user charges. It is something of a paradox that poor countries tend to depend on out of pocket payments for health financing much more than do the richer countries.

Pooling

The second question to be asked about health care financing is about how funds are pooled between the processes of collection and the processes of paying for services.

Pooling is significant for two reasons: risk management and cross-subsidisation.

The larger the pool, from which payments for health care are taken, the lower the risk of insolvency and the lower the level of reserves which will be required to manage that risk.

The other significance of pooling concerns the cross subsidies (or transfers) which are effected by having people with different levels of resources and different levels of risk contributing to (and drawing from) the pool.

The basic concept of insurance involves buying coverage against the risk of falling ill or being injured and needing care. Against this concept there is a transfer from people who stay well to people who fall ill or are injured. However, there are a number of other transfers which may be effected by different pooling arrangements in different health insurance systems. These include transfers:

- from well to sick,
- low risk to high risk,
- young to old,
- rich to poor.

The magnitude and direction of these cross-subsidies depend on the nature of the pooling and this will depend on how the contributions are collected and how they are pooled before payments to the providers are made.

Commercial insurers generally expect to set contribution rates at levels which are commensurate with risk. Where this is allowed the insurer might want to charge higher premiums for older people, particularly older smokers, and much higher premiums for people known to have HIV. In many systems the insurers are not allowed to discriminate in setting their premiums because high risk people, such as those with HIV, might not be able to afford insurance. Under the community rating system (where everybody pays at the same average contribution rate), the low risk people are effectively subsidising the high risk people.

Employment based insurance, where contribution rates are income related, there is a further subsidy, in this care from richer to poorer because high income people will pay more than poor people but may well use less.

Almost all health insurance systems involve some pooling and cross-subsidisation. The exception is the individual savings account system where the cross subsidy, if any, is transgenerational.

Paying

We now turn our attention to the third element of health care financing: paying for services. There are three sets of issues to be considered here: first, the institutional pathways through which funds are mobilised, pooled and disbursed; second, the units around which payment is calculated (paying for what); and third, the various arrangements for cost sharing.

Institutional pathways

In terms of institutional pathways we can identify four broad categories of payment systems (Table 2, below).

Institutional pathways:
• Government provision (owns buildings and pays salaries) • Contract between purchasers (government purchasers or insurance plans) and health service providers • Patient payment and insurance reimbursement • Out of pocket payment (not reimbursed)

Table 2. Payment pathways

The first model involves government provision, where the government owns the buildings and employs the staff directly. In federal systems the pathways may be complicated by transfers between different levels of government or transfers between regions with different revenue raising power.

Where the government is both the funder and the provider of services it is not so meaningful to talk about the relationship between the funder and the provider. However, in the other models there is an organisational separation between the funder and the

provider of services. (The nature of this 'purchasing' relationship (in particular the unit of service which is 'purchased') is discussed further below.)

The second model we can call a purchaser provider contract, where there is a direct contract between the purchaser (government or health insurance organisation) and the provider. The provider will have a separate relationship with the patient concerning the provision of services but as far as payment is concerned the relationship is directly between the funder and the provider.

In the third model, the patient provider contract, the principal financial relationship is between the patient and the provider. The patient pays the provider and then seeks re-imbursement from their insurer in accordance with their independent contract.

Finally, in the fourth model, the patient pays the provider out-of-pocket and because the cost is not covered by any contract between patient and insurer it is not re-imbursable.

The 'unit' of purchase

In systems where the role of funder is organisationally separate from the role of provider we can speak about a purchasing relationship. Ways of purchasing health care can be categorised according to the unit of service which is being purchased.

In fee for service systems the unit of purchase is the item of service, for example, a standard consultation, immunisation, an ECG or a blood test.

Under case mix hospital funding the unit of purchase is the inpatient episode or care for a pregnancy including delivery. The development of casemix classification systems such as DRGs has made the purchase of in-patient episodes much more common.

Under capitation models the unit of purchase is an assurance of health care for a fixed period, for individuals, or families or the staff of an enterprise. The various capitation models, such as the GMS contract for GP in the UK, fit this category. In the UK system GPs agree in advance to provide primary medical care to the people on his or her list and in return the NHS agrees to pay the GP a fixed figure per head per year.

The metaphor of 'purchase' can also be applied to grant funding of a program of services and activities, such as a health promotion program or a chronic disease program, where the agreed price covers a package of activities (and supporting infrastructure), generally with associated specifications about content, impact and outcomes.

Finally, and still of theoretical interest only, we may one day be able to purchase health care outcomes. At this stage we do not the tools for defining, evaluating, quantifying and pricing health care outcomes at the clinical level. In many cases the outcomes of care are only revealed well into the future and even then there is uncertainty about whether the outcomes which are evident can be attributed to the health care intervention or whether they would have happened anyway. The lack of metrics and the uncertainties of attribution are significant drawbacks in terms of purchasing outcomes.

The metaphor of 'purchasing' (rather than the looser and more general idea of simply paying for health services) has been introduced into health policy jargon through the efforts of the market enthusiasts, who needed to represent health care as a commodity with a clear

definition, a unit price and a capacity to be counted as a condition for applying market principles and market disciplines.

At this stage there remain significant limitations to the application of free market principles to health care, one of which is the difficulty of measuring outcomes.

Nevertheless, the metaphor of purchasing has provided a useful analytical framework for thinking through the different incentives which are associated with different forms of payment. The application of this kind of analysis can be seen, for example, in the idea of blended payment systems for general practice.

Health insurance

While it is common to talk about health care as a market it is important to recognise that there are potentially three separate markets:

- where patient meets provider in the clinic;
- where consumer contracts with health insurer; and
- where insurers and providers negotiate inclusion or otherwise in particular insurance plans.

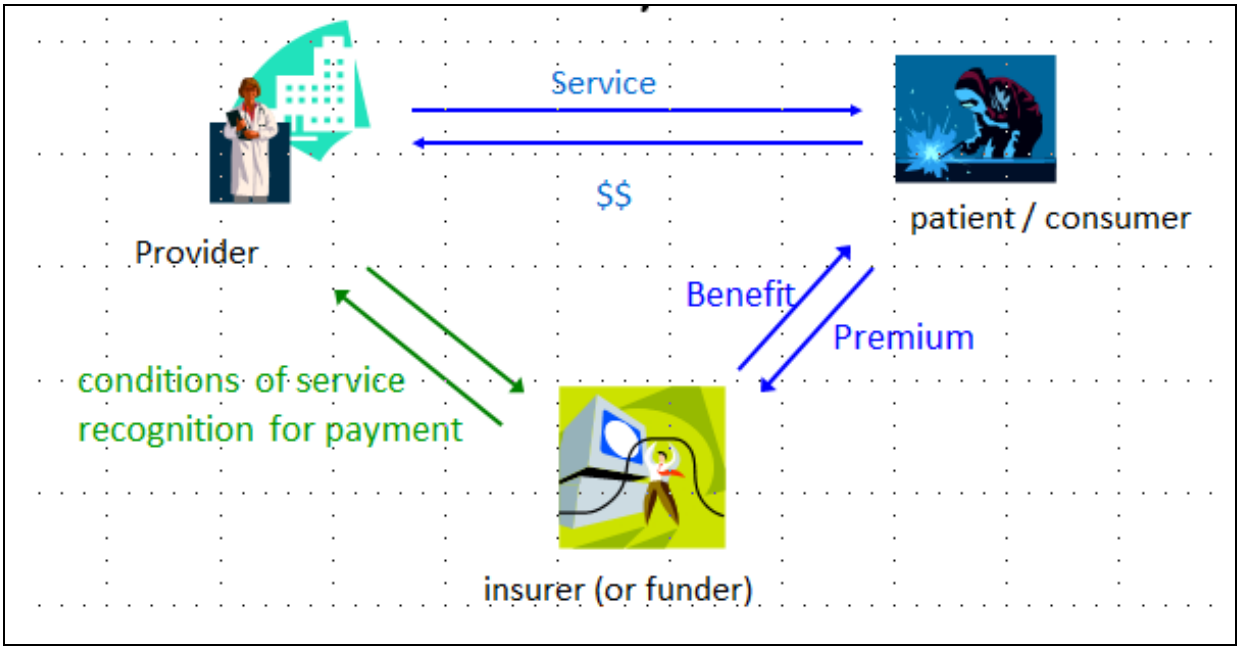


Figure 6. Three markets in health care

The simplest market configuration is the 'one contract system' between the patient and the provider. The patient pays (out of pocket) for the service.

Under the 'two contract system' the patient pays for the service and then seeks a reimbursement from their insurance fund. There are two contracts here: one between the patient and the provider and one between the patient and the insurer/funder.

Increasingly health insurance systems are moving towards the three contract system where the provider has an independent relationship with the insurer or funder, independent of their relationship with the patient. Commonly this will involve the funder undertaking to recognise this provider for purposes of payment of benefits in return for the provider undertaking to abide by agreed conditions governing the services they will provide.

These agreed conditions might be about providing information to the funder; they might be about fee levels or how they will charge; it might be about seeking the approval of the funder before committing to provide particular services. Managed care in the USA is an examples of the three contract system.

Episode funding of inpatient care

The development of various systems for categorising inpatient episodes has enabled a significant shift in the funding of inpatient care.

In the private sector (health insurers paying private hospitals) there is a move in many jurisdictions away from fee for service and per diem payments to episode payments based on DRGs (diagnosis related groups) or similar categorisations. Fee for service reimbursement encourages over servicing; per diem payment encourages longer lengths of stay. Episode based payment encourages technical efficiency in the management of the episode (although there are perverse incentives associated with episode payment).

Likewise in many public hospital systems governments are moving from input (or budget) funding to episode payment.

Budget funding, based on line item budgeting, calls for line item expenditure control. If hospitals were allowed to move funds freely between lines in the budget it would make a mockery of the process through which the budget had been built. If the government officials were not able to hold hospitals to the budget provisions for individual line items they would have no grounds for negotiating the total budget. However, line item expenditure control greatly restricts the flexibility of managers to move funds between lines as they see fit during the course of the year.

This approach to budget development and expenditure control was appropriate to an earlier era when hospitals were simple to run, there were relatively few line items to estimate and monitor and it was not so hard for the government officials to understand what was going on in the hospitals.

However, by the end of the 20th Century, hospitals were very complex organisations. It was becoming more and more difficult for government officials to understand enough about what was happening in the hospital to negotiate line item budgets. The line item expenditure commitments were also becoming more and more irksome to hospital managers who were accountable for performance but restricted in the exercise of judgement with respect to resource allocation during the year.

The introduction of DRGs as a tool for measuring hospital throughput enabled governments to move from input budgeting to the purchase of outputs. The production of inpatient care could be characterised in terms of case mix and measured in terms of inpatients treated and could be purchased. Managers would be accountable for the outputs produced rather than for sticking to arbitrary line item budgets. Government officials could focus attention on the need for services and efficiency with which services were being produced and leave decisions about resource allocation within the hospitals to the managers. Episode payment encourage technical efficiency in the management of the episode. In single payer systems episode payment can also enable governments to cap

volumes and to redistribute service loads across hospitals, thus promoting allocative as well as technical efficiency.

At the heart of this reform are DRGs and other similar systems. The following description is couched in terms of DRGs but applies broadly to other inpatient categorization systems.

DRGs are a tool for categorising episodes of inpatient care; for taking tens of thousands of inpatient episodes provided each year and sorting them into groups of episodes which are similar clinically and similar in terms of cost. DRGs are based on ICD coding and procedure coding.

ICD coding was designed to provide precise coding of diagnoses and procedures so that the diagnosis and treatment of every individual could be precisely specified. This has enabled precise retrieval of groups of patients who have had the same diagnoses or treatments, a capacity which has been fundamental to clinical research. However, if you seek to research the hospital instead of the patient, ICD coding is less useful because it does not provide for a practical description of the work of one hospital across one period and thus does not provide for comparison between different periods of different hospitals.

To describe the volume and mix of inpatient episodes across hospitals or across time requires a categorisation scheme which is mutually exclusive (in that patients get counted in one group or another but not both) and jointly comprehensive (in that the scheme as a whole covers the whole universe of inpatient episodes). This is what the DRG system does.

At the heart of the DRG system is a computer program called a “grouper”. It is quite a simple program. The input to the grouper is the discharge abstract data from each inpatient admission, specifically principal diagnosis, age, procedures and co-morbidity. On the basis of these data and a relatively small number of rules the grouper allocates every inpatient episode to one of (say) 500 groups. The process of allocation has several steps. First, the patient is allocated to an MDC (major diagnostic category), and then into either surgical or medical. Surgical cases are sorted into types of surgical procedure. Medical cases are sorted according to principal diagnosis. For some DRGs, age and sex are additional variables. For example, there are special weights in many medical categories for babies under 2 years old, and for older people (over 70 years). So, a baby will be coded into a different (but closely related) DRG than an adult or an old person for many types of separations. Co-morbidities and complications are then added, and will sometimes shift the patient into a DRG with a higher weight. Whether the person was discharged alive or dead is also coded. The case can then be allocated into a DRG.

There are two basic principles underlying the rules for allocating inpatient episodes to groups. Firstly the groups should be clinically meaningful in the sense that they correspond to similar care processes, similar kinds of expertise. Secondly the groups should be homogeneous in terms for resource use, costing roughly the same in terms of money.

DRGs have two basic uses: description and funding. The particular value of DRGs as a descriptive tool is that it can be used to count episodes of inpatient care across a manageable number of separate groups, groups which are mutually exclusive and jointly comprehensive.

DRGs also enable comparisons to be made across hospitals where the casemix is different through the statistical procedures of standardisation or casemix adjustment. If Hospital A is a cancer hospital and Hospital B is a general hospital they will have very different casemix profiles. However, if we have full casemix data for both we can adjust any performance measures for Hospital A to reflect *what it would have been if* Hospital A had the same casemix profile as Hospital B. This is the essence of casemix standardisation or casemix adjustment.

The second main function of the DRG system is in hospital funding. If each DRG has a narrow cost profile and if we know the volumes we can use DRGs as the basis for hospital funding, paying for outputs (completed episodes) instead of items of service (procedures) or days of inpatient stay. Instead of budget funding based on line item budgets we can purchase episodes of care on the basis of volume commitments and agreed prices per DRG.

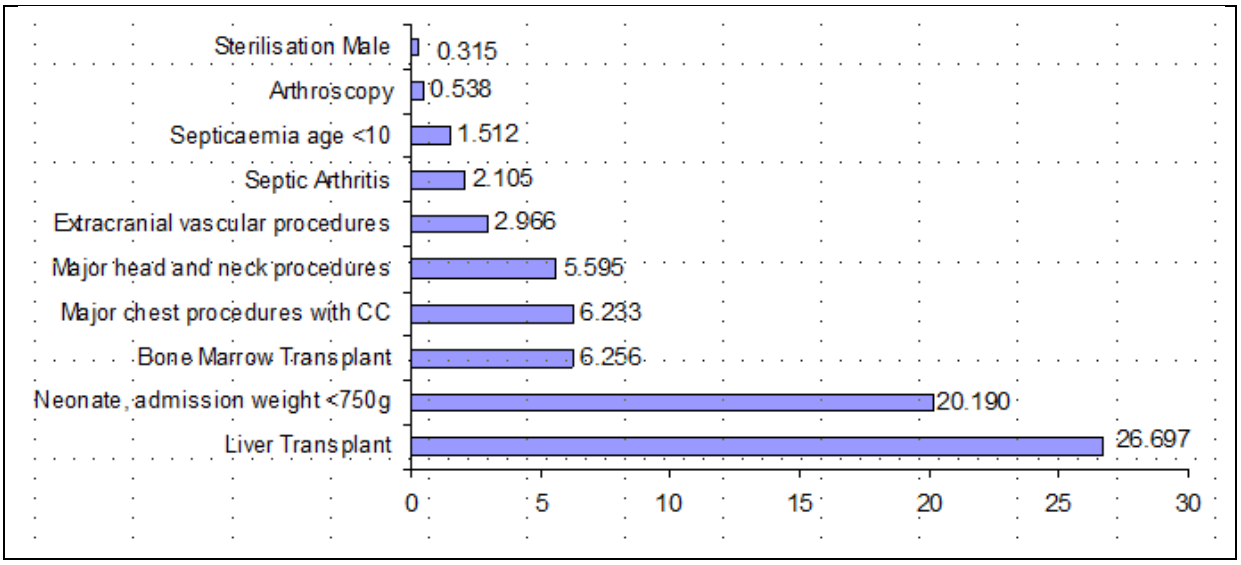


Figure 7. Cost weights for selected DRGs (Victoria, 2009)

The prices of DRGs are calculated in two stages, first, determining the relative costs of different DRGs (see Figure 1, above) and then putting a money price on for the standard DRG (with a cost weight of 1). The determination of relative cost weights is based on empirical costing, although cost weights can be changed if in policy terms a judgement is made that a particular procedure is being done too frequently or not frequently enough. The money price of the standard DRG will be determined on the basis of empirical costing, close monitoring of hospital performance and an urgent debate between hospital managers and government executives. In single payer systems DRG payments can be capped at a certain volume with reduced prices beyond a particular target.

There are significant perverse incentives associated with DRG funding: skimping, skimming and creep.

There is an incentive to increase profit on a particular DRG by skimping with respect to service inputs. The risk here is to safety and quality. The management of this risk must involve rigorous clinical governance arrangements.

Skimming (as in cream skimming) involves the implementation of covert policies to encourage the admission of cases where are high profit margin and discourage those for

whom a low profit margin is likely. Managing this risk depends on close monitoring by the funder.

Diagnostic creep refers to overstating the severity of the case in order to shift it into a DRG with a higher cost weight. Managing this risk requires rigorous monitoring of coding practices.

Resource allocation

Efficient use of resources in health care is critical, including both technical and allocative efficiency. The preconditions include:

- adequate data;
- appropriate measures to gauge efficiency in resource distribution and resource use; and
- managerial leverage to curb the inefficient use of resources and leverage to direct funding to priority areas.

Our purpose in this section is to review three methodological areas which are critical to support efficient resource allocation. These are

- economic evaluation,
- expenditure control, and
- priority setting.

Economic evaluation

Economic evaluation includes:

- cost benefit analysis,
- cost utility analysis, and
- cost effectiveness analysis.

Cost benefit evaluation involves estimating the cost of a particular service or program and comparing the cost of delivering the intervention with the benefits gained where the benefits gained are expressed in monetary terms. This would be a good approach for a hospital seeking to evaluate a new marketing campaign. The cost was $1m; the increased profit was $5m; the cost benefit ratio was 0.1 (or conversely a tenfold benefit). Cost benefit is not appropriate in evaluating patient care interventions because patient care outcomes cannot be meaningfully converted into money values.

Cost effectiveness analysis involves measuring the cost of the program (or intervention) in money terms but measuring effectiveness in terms of units of production (eg episodes of inpatient care). The cost effectiveness ratio might be expressed as $ cost / inpatients treated.

Cost utility analysis aims to relate the cost of the program to meaningful indicators of health outcome, such as quality adjusted life years. QALYs are widely used in clinical trials comparing treatments.

QALY = LE (person life years) x QOL weight (0-1)

	Survival	QOL Weight	QALYs

Treatment 1	8	.9	7
Treatment 2	12	.5	6

Table 3. QALYs used for comparing treatments

Quality of life (QOL) weightings are based on the documentation of patient experience using questionnaires and valuing different health states by asking healthy people what they would give up to avoid being in this state.

QALYs can also be used in evaluating screening tests. This might involve modelling different scenarios including:

- a group of people who are tested with the new test;
- a group of people who are tested with whatever test is current best practice, in this case probably the use of faecal occult blood screening; and
- a group of people who are not screened and who present symptomatically.

The model in would need to include provision for:

- the incidence of bowel cancer in the population,
- sensitivity and specificity of both tests,
- a number of different screening intervals,
- the morbidity avoided through early diagnosis,
- the morbidity from false positives, and
- the morbidity from false negatives.

Diagnostic tests are evaluated in terms of sensitivity and specificity.

Sensitivity, the rate of true positives =	number of true positives / (sum of true positives and false negatives)
Specificity, rate of true negatives =	number of true negatives / (sum of true negatives and false positives)

Measuring outcomes

Common indicators for measuring health outcomes in clinical trials include:

- mortality rates,
- survival rates,
- life expectancy,
- complication rates, and
- QALYs.

However, further indicators are needed to measure the outcomes of health care programs at the population level as an input to health policy and planning. This will involve comparing the outcomes of different kinds of health care programs and identifying where additional resources will make most difference.

Mortality and morbidity have been standard measures of population health status, expressed either in terms of incidence or prevalence. More recently metrics based on years of life lost include PYLLs (potential years of life lost) and DALYs (disability adjusted life years lost).

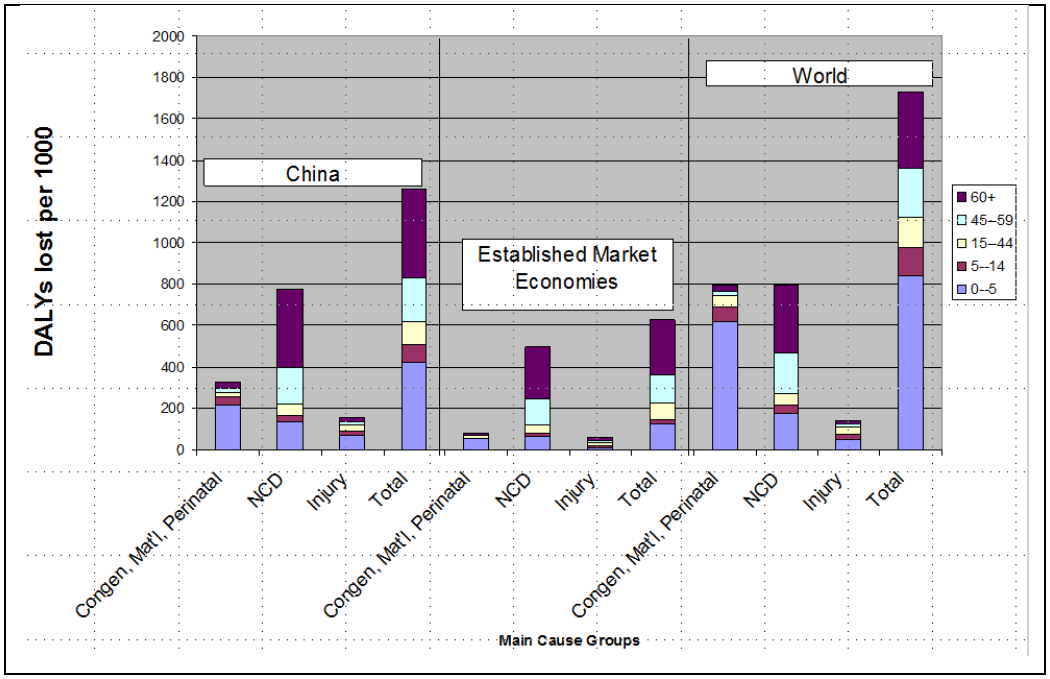


Figure 8. Burden of disease, from World Bank 1993

Burden of disease (BOD), estimated in DALYs, can be very useful in conveying the 'big picture'. Figure 8 represents the BOD from different causes in different groups of countries. Figure 9 represents the BOD attributable to different health risks in different groups of countries.

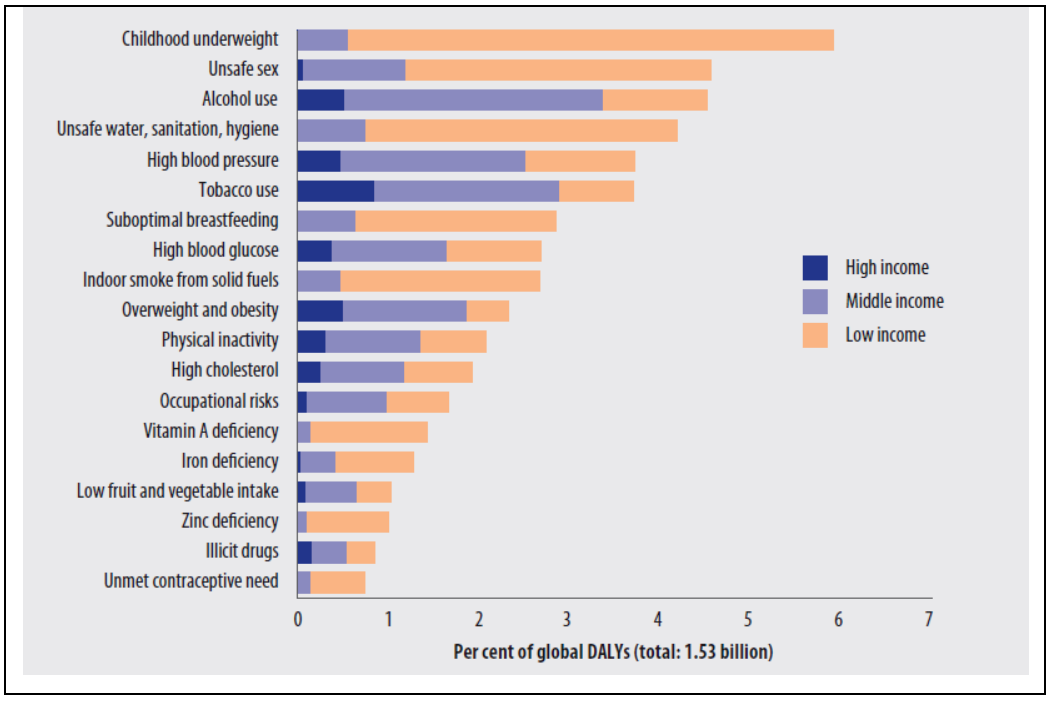


Figure 9. Percentage of disability-adjusted life years (DALYs). WHO (2009) Health Risks

The DALY is a measure of disease burden, expressed in terms of years of life lost, or lived with disability, due to disease or injury. It can be used as a measure of the outcome of health care in terms of years of life gained, or years of disability avoided, due to prevention or treatment.

The DALY is based on the PYLL (potential years of life lost) with disability weightings (from 0-1) for years lived with disability; a reduced weight given to years lived far in the future, and (in some cases) with greater weight given to years lived in the so-called 'productive' age group 15-40. It is important to appreciate that the DALY is based on incidence – the number of new cases in each year. Thus it is a measure of the BOD consequent upon incident cases in the reference year. Alternatively it is a measure of the BOD avoided as a consequence of treatments and preventive interventions in the reference year.

- DALY (disability adjusted life years) = YLL (years of life lost) + YLD (years lived with disability)
- Years of life lost = average life expectancy (for a person of that age) less the average age at death
- YLD (years lived with disability) = LE (life expectancy of person with disability)x DW (weighting factor (0-1) representing the burden of disability)
- Estimation of disability weights involves:
    - establishing reference weights (standards to judge other conditions);
    - document the disease pathways and health states associated with each condition;
    - determine the disability weights for each health state.

DALYs are quite controversial, partly because of the assumptions embedded in procedures such as the age weightings (giving greater value to lives of people in the 'productive' age group) and the disability weightings (in effect a person who is assigned a DW of 0.5 is being treated as if he or she is only half alive). DALYs are also criticised because of the arbitrary, subjective and uncertain methodologies involved in the estimation of DWs. Nevertheless the DALY is an interesting idea and we will return to DALYs shortly under priority setting.

Expenditure control

We will introduce the principles of expenditure control through a review of the US experience in both public and private sectors since Medicare and Medicaid were introduced in 1965.

Medicare and Medicaid were introduced in 1965 under the slogan of the 'Great Society' during the Kennedy Johnson period.

Medicare is a national health care subsidy program ('health insurance') for the elderly, funded and administered through the Federal Government. Medicaid is a health care subsidy program ('health insurance') for low income people which attracts funding from both the Federal Government and the state governments and is administered through the state governments. The conditions for subsidy under Medicaid vary widely across the US states.

Both programs experienced rapid cost escalation after introduction. This reflected in part previously unmet need. It also reflected the lack of effective expenditure control provisions in either program and the phenomenon of 'provider induced demand'.

The story that we are following here concerns a sequence of strategies that were introduced to control the rate of cost increases in the Medicare program.

We will talk about four separate strategies:

- utilisation review / control
- regional health planning
- rate setting (in some states)
- episode based payment for inpatient care

Utilisation review and control

The first three of these are essentially regulatory, controlling utilisation, controlling new capital development, and controlling the prices which the hospitals were allowed to charge. The last involved was not strictly regulatory in the same sense. It involved changing the formula under which hospitals were funded.

The practice of utilisation review commenced in the 1940s. It started with evidence of wide variation in servicing rates for certain discretionary procedures such as hysterectomy, tonsillectomy, appendicectomy and herniorhaphy in surgery and Caesarian section in obstetrics. In some regions the rate of hysterectomy was double that in others with no evidence that the low rate regions were suffering worse outcomes.

Identifying wide variation in servicing rates did not help to identify the individual surgeons who were undertaking unnecessary operations. This was where the tool of medical audit came in. Medical audit involved the retrospective review of the medical records of patients who had had various procedures. This was initially undertaken by clinicians reading the full medical records of a sample of cases. However, once explicit criteria had been developed for screening medical records the work could be delegated to clerical staff with the clinicians just reviewing the cases which did not match the criteria.

Utilisation review took a further step forward in the 1960s in the context of competition between different health insurance plans. Surgeons who were working for HMOs ('Health Maintenance Organisations') were being paid on the basis of salary plus profit sharing and of course had no incentive to waste resources in doing unnecessary procedures. They were competing with more conventional health insurance plans where surgeons were remunerated on a fee for service basis and reimbursed through the fund. Because the HMOs were discouraging overservicing they were able to offer lower premiums which was starting to threaten the fee-for-service doctors and the conventional health insurance upon which they depended. It was at this point that the fee-for-service clinicians started to use the techniques of utilisation review and utilisation control to curb overservicing so that they could compete with the HMOs.

This was the background to the introduction by the Federal Government of a number of new organisations from 1972, first of all the EMCROs (Experimental Medical Care Review Organisations) and then the PSROs (Professional Standards Review Organisations). These

new organisations were required to explore and develop the methodologies of utilisation review and utilisation control in order to control the escalating costs of Medicare.

Increasingly stringent application of these tools helped to slow the rate of increase in the costs of Medicare but it was still seen to be excessive.

The methods of UR/UC have made much progress since these early beginnings, boosted by their widespread uptake in the private sector with the introduction of managed care. During the 1980s large corporations started to put increasing pressure on the health insurance industry to contain the rate of increase in health fund contributions through the wider use of the tools of UR & UC.

Regional planning

The second strategy that was employed to control the escalating costs of Medicare was regional planning and certificate of need regulation to curb capacity growth.

From 1974 the Federal government set up regional planning authorities, called 'health systems agencies' right around the country. Health systems agencies had two main jobs. Firstly they were required to write a broad plan for the development of hospitals and health services for the people of their region. Secondly they were authorised to give (or withhold) what were called 'certificates of need' for proposed capital developments. The basic sanction was that facilities that had been built without certificates of need would only be eligible for reduced Medicare rebates.

Part of the background to this regional planning legislation was an earlier piece of Federal legislation called the Hill Burton Act of 1946. This legislation, passed in the nation-building aftermath of the Second World War, was designed to encourage the development of hospital facilities in rural and deprived areas. Federal funding would be available to community organisations seeking to build new hospital facilities if they were in accordance with state sponsored plans.

Hill Burton funding did achieve some evening out of the distribution of hospital beds. It also contributed to a net expansion of hospital beds in the period from 1946 to 1967 when Medicare was established. The Hill Burton Act was passed at a time when the recurrent costs of health care were entirely supported through health insurance and out-of-pocket payment and accordingly the Federal authorities had not been too concerned about the impact of an oversupply of beds on servicing rates and total expenditure patterns. However, with Medicare the Federal Government had taken on a major burden of recurrent funding and suddenly the possibility of a limiting capital development as a strategy for limiting the growth of recurrent expenditure took on new urgency.

There is no firm evidence that the introduction of certificate of need controls restricted capital development although they probably contained it to some extent. The decisions of the HSAs (Health Systems Agencies) were subject to frequent legal challenge and they were often overturned in the courts. The legislation was rescinded in the mid 1980s.

Rate setting

The third strategy for controlling the growth of Medicare costs was focused on regulating the insurance benefits payable to hospitals. This was never enacted at the Federal level,

although it was considered, but it was enacted by a number of states, partly because the growth of Medicaid expenditure after 1967 was also unexpected and in this case involved a heavy drain on state budgets.

When Medicare was introduced the provisions determining hospital reimbursement were very generous. Medicare undertook to reimburse hospitals for all customary and reasonable charges.

Rate setting methods had been developed by the private insurers since the early 1950s and so when Medicare Medicaid were introduced a few states sought to apply those methods to fixing the rates at which the hospitals would be re-imbursed. The most common method involved negotiating a total notional budget (on the basis of expected input costs) and then projecting estimated servicing rates and then calculating per diem reimbursement rates that would yield the agreed budget. Some of the states established norms for hospitals of different sizes and classes and applied these in determining reimbursement rates.

It seems likely that rate setting programs did actually curb the growth of expenditure to some extent.

Episode payment for inpatient care

We have discussed three regulatory strategies that were employed to curb the expenditure growth associated with Medicare from 1967: utilisation control, capital controls and rate-setting.

The strategy which has had most dramatic effect was not strictly a regulatory strategy, rather it was a change in the basis for paying hospitals for inpatient care: the shift from per diem reimbursement to episode based payment.

In 1986 the Federal Government determined that it would shift from its previous commitment to reimbursing customary and reasonable per diem fees to paying a prospectively fixed price for particular episodes of care, defined in terms of diagnosis related groups (DRGs). DRGs provided a way of grouping individual episodes on inpatient care into five hundred groups (DRGs) each of which would be characterised by having similar clinical requirements and similar cost patterns. The new prospective payment system involved setting a price for each of the 500 groupings of care episodes defined by the DRG system.

The introduction of DRG based payment dramatically changed the incentives shaping the strategy of hospital managers. Under the old system there was an incentive to allow unit costs to inflate, so long as they were picked up by Medicare's "customary and reasonable" provision. Under the old system there was an incentive to encourage volume even if this involved overservicing. However, under the new episode based payment arrangements there was a strong incentive to keep the unit costs down for each episode, certainly to keep them below the reimbursement rate. The impact of the new arrangements on volume was more complex. The new incentive was to maximise volume for those procedures were the unit cost was comfortably below the reimbursement rate (and hence where the surplus was to be gained).

There seems to be no doubt that the introduction of episode based payment has curbed the growth of unit costs and total costs to some extent. It would seem that there is still a role for utilisation review to contain volume.

Managed care

Managed care is a generic term which is used to describe a wide range of health insurance plans. The thing that they have in common is that the insurers are actively regulating the provision of services or have structured the incentive environment to contain costs.

User charges, based on fee for service, was a core principle of private health care in the US and as health insurance plans developed in the first half of the 20th Century the reimbursement of fee for service user charges was standard.

This commitment to fee for service user charges and reimbursement was challenged from 1949 by the development of a small number of 'health maintenance organisations' (HMOs) which paid the provider organisations on a capitation basis and employed salaried medical staff. The incentives were reversed. From the encouragement of overservicing under FFS to a focus on curbing unnecessary expenditure under capitation.

The first HMO (or Health Maintenance Organisation), the Kaiser Permanente HMO, was established in 1949 by the Kaiser Steel company for its workers but very soon was offering coverage to the residents of nearby towns. It was one of the first pre-paid health plans in the US. Basically this involved changing the contract between the insured person and the insurance organisation. Instead of the insurance company saying 'we undertake to reimburse your health care costs on an item by item basis' the insurer was saying, 'In return for your annual contribution, we undertake to provide whatever health care you need.' This is 'prepaid health cover'.

In the Kaiser Permanente system the physicians were employed on salary plus profit sharing bonuses. Under these circumstances the incentives for both managers and clinicians are to contain expenditure and therefore to avoid providing unnecessary services at inflated costs.

During the 1980s the business sector was paying increasing attention to escalating health costs in the private sector because employer contributions to health insurance were being driven up by increased health care costs. By the 1990s there was a wide range of different health care plans available for corporate health insurance strategists to select from.

To understand managed care it helps to identify and consider separately the different roles which conceptually constitute the structure of health insurance in the US, the players.

We can start with the patient, the person who has concerns about his or her health (or that of his/her children or other family members). Your role is to access health care and procure services. This may be as easy as going to the local clinic but if your health plan has only a restricted number of authorised providers accessing a practitioner who would be eligible for payment under the conditions of your plan may not be easy.

The next role is that of providers, the private physicians and the hospitals.

The physician used to simply provide care to those who sought it (and could afford to pay). Building a good reputation in your community or among colleagues who would refer patients to you was the key strategy for maintaining your business. Now however, you will need to ensure that you are registered as an authorised provider within the major plans in your region and accept the tighter regulatory oversight imposed by those plans.

Likewise the hospitals will need to ensure that they are authorised providers with the main plans serving their region and this may involve quite stiff negotiations over reimbursement rates and utilisation control.

The next role is that of the plan managers. These are the executives who are responsible for the successful operation of particular health care plans. Your role is to maximise the enrolment and to compete successfully within the market niche for which this plan has been designed. If this plan involves active management of service provision you, as plan manager, will have a complex task in recruiting and managing the providers who are authorised providers. If you plan is more upmarket with high premiums and less cost control you may play a more passive role, simply reimbursing patients for costs incurred no matter where the services were provided. The plan managers are essentially purchasers of health care on behalf of the enrollees; purchasing from the providers in accordance with the provisions of the plan.

The next role is that of the insurance companies themselves. Their role is to create a suite of products; a package of health plans that can be sold in bulk to large employers or on a retail basis to individual customers. You will stratify the market and develop plans for each stratum of the market.

The role of the brokers is to assist employers to find the plans that suit their needs; to assist employers put together a selected group of plans which can be offered to the employees of their companies. These brokers are the intermediaries in the market between the employers and the insurers.

The employers negotiate plan options with the unions, contract with particular insurance companies for particular plans, offer their range of plans to their employees and contribute to premiums.

The unions bargain with employers over plan cholce.

The employees make their choices, within the range of plans offered by their employers, contribute to their premiums and hope to stay healthy.

The key to understanding managed care is to appreciate that different plans are designed for different sections of the market.

At the top end of the market are rich individuals or company executives for whom the company is happy to pay a high premium and who would not wish to face any restrictions in accessing any programs of care they believe they need. The most appropriate plan for them may be the traditional fee-for-service reimbursement plan without restrictions on service providers and with tight quality assurance but loose utilisation control.

At the bottom end of the market the companies will need a plan for low paid workers whose employers are only willing to pay a very low contribution rate. The most appropriate

plan for them might be a pre-paid plan with GP gatekeeping and fundholding, restricted numbers of authorised providers and loose quality assurance but close utilisation control.

The feature which defines managed care is the active purchasing (by the plan) of health care for enrolled plan members from a selected group of contract providers (sometimes in-house providers). This active purchasing includes a deliberate structuring of the incentive environment in order to contain costs and the active involvement of the plan managers in regulating the provision of services to enrollees.

Prepaid HMOs which employ physicians (often on salary plus bonus) and which own hospitals are generally categorised nowadays as managed care organisations. However, to make this model work you have to have a high level of coverage in the districts and regions in which you operate so that your physicians and hospitals are fully occupied in looking after your members and not disabled by diseconomies associated with small scale operations.

If you want to build a plan which offers pre-paid cover but you don't employ physicians or own hospitals you will need to contract with physicians and hospitals to provide health care to your enrollees as part of the wider range of patients they are treating. Thus you, as the plan manager, may approach a number of physicians and offer them fee for service payments (in accordance with your schedule of fees) if and when plan members seek care. This relationship does not impose the same direct incentives on the physician. The fee for service payment keeps the volume inducement which is part of all fee for service systems. For this reason you will have to impose fairly tight utilisation control and you may need to impose further restrictions on service provision. One of these may be to insert a GP gatekeeper or even a GP gatekeeper fundholder to control the flow of patients to the specialists.

In contracting with hospitals you will have some of the same issues to work through although you will probably contract to pay the hospitals for inpatient care on a casemix basis rather than fee per item of service.

Expenditure control –summary

- Total expenditure control
  - budget funding
  - single payer purchasing with volume caps
- Total expenditure = volume x unit cost
- Volume can be addressed through
  - direct regulation (utilisation control)
  - capacity control (certificate of need, entry control)
  - incentives (capitation, fund holding, copayments, deductibles etc)
- Unit cost can addressed through
  - regulation (rate control) or

– incentives (casemix funding)

Table 4. Strategies for expenditure control

Total expenditure is a function of volume and unit cost.

Strategies for controlling volume include capacity control, incentive and regulation. The first strategy which was used in the Medicare story to control costs was utilisation control, making approval of the service (as 'needed') a condition of payment of benefit.

The second strategy was capacity control, in particular, the attempt through regional health planning in the 1970s to control the bed capacity of the hospital system. Many national health systems also deliberately control the labour force with a view to containing costs.

The third strategy for controlling volume has been altering the financial incentive as with the move from fee for item of service to capitation payment or prepaid health care. Fund-holding is another approach to changing the incentives.

The second factor in the equation is unit cost. Two strategies were used in the Medicare story, the first was statutory rate controls – controlling the levels of benefit payable under Medicaid in certain states. The second was the move to episode payment for inpatient care, replacing per diem payment systems. The latter was very effective in encouraging greater efficiency through the control of unit costs of inpatient care.

Priority setting

- Political pressure from stakeholders
- Needs based resource allocation (contingent valuation, citizens' juries)
- Equalising the distribution of assets (facilities and workforce)
- Equalising servicing and utilisation rates across different populations
- Equalising the distribution of recurrent expenditure for different populations
- Evidence based health care
  - RCTs, systematic reviews, clinical guidelines
- Cost effectiveness and health technology assessment (HTA)
  - cost effectiveness studies for pharmaceutical subsidy scheme listing (eg PBS)
  - HTA for cost-effective benefit packages
- Programme budgeting and marginal analysis (PBMA)

Table 5. Priority setting in health care

A wide range of methodologies are used in setting priorities for resource allocation.

One of the most common is simply responding to political pressure from more powerful stakeholders.

A commonly held idea is that resource allocation should be 'needs based'. However, if 'needs' does not necessarily imply health care which changes outcomes. Many people have needs for which there are no obvious answers.

Two methods which in some degree reflect a concern for needs are contingent valuation and citizens' juries. Contingent valuation is a survey technique for asking 'people in the street' how much they value various programs of care. Citizen's juries likewise seek to elicit the preferences of 'people in the street' regarding priority setting. This involves presenting the juries with a brief of evidence which includes needs but also includes capacity to make a difference. See Mooney (2005) for a review of community involvement in priority setting.

A number of approaches have been used which are based on equity of resource distribution rather than capacity to make a difference. Of these the oldest is simply to focus on the distribution of assets, such as hospital beds or health care practitioners. Variants on this theme involve redistributing resources with a view to equalising servicing and utilisation rates or equalising recurrent expenditure across different populations.

Equity of resource allocation does not address the question of impact on health outcomes which has been brought to the fore by the rise of 'evidence-based' health care: RCTs, systematic reviews, clinical guidelines, etc.

Two methods which are explicitly focused on health outcomes are cost-effective benefit packages and program budgeting and marginal analysis (PBMA).

Cost effective benefit packages

Adopting 'the market' as a framework for understanding health care requires defining 'the intervention' as the commodity being bought and sold. In the context of priority setting, this directs our focus to the 'cost-effectiveness' of commodified interventions.

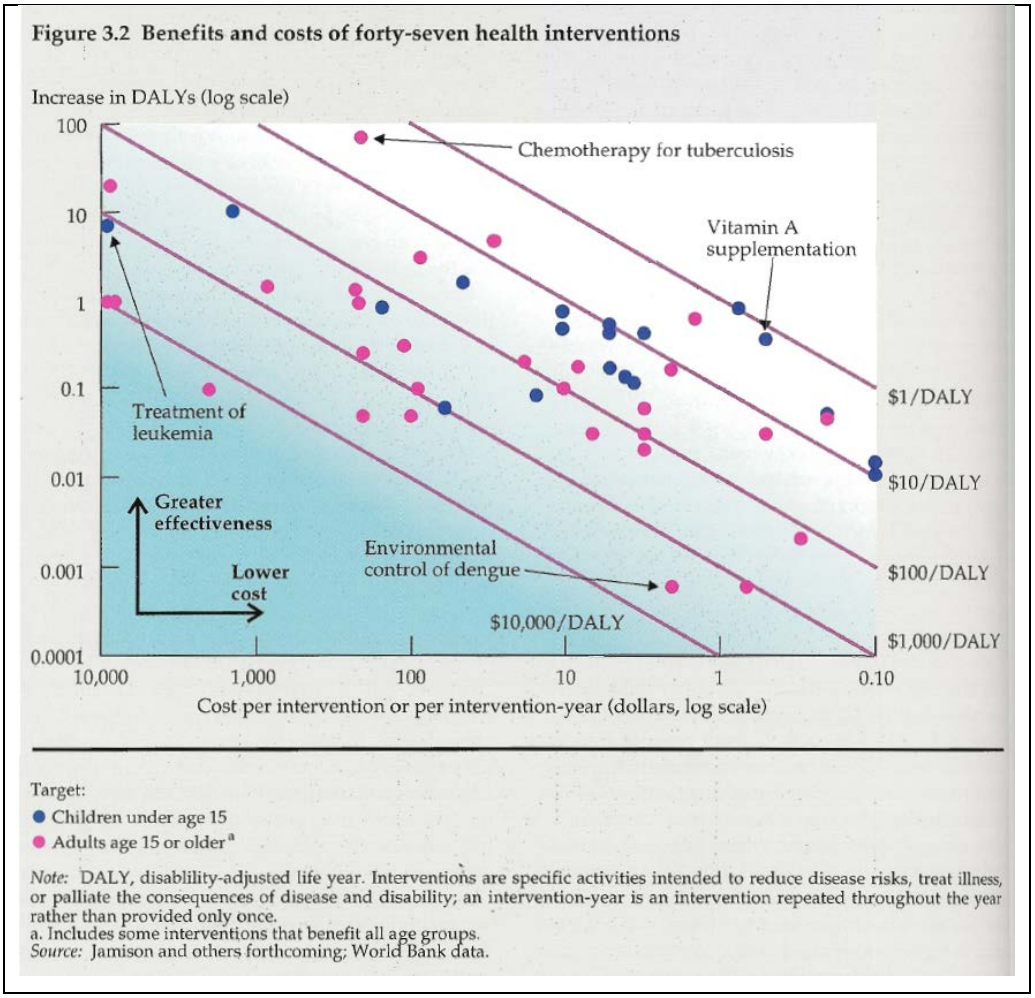


Figure 10. Cost effective interventions, from World Bank (1993)

The 1993 World Bank report developed the idea of cost effectiveness of interventions using the DALY as the outcome measure and cost effectiveness measured in $/DALY. Figure 1, taken from the 1993 report, relates the cost effectiveness (in $/DALY) to the unit cost of the intervention or intervention year. This shows that while control of dengue is cheap it is not so effective in gaining DALYs so the cost per DALY is high. Vitamin A supplementation is also cheap but more effective so its cost effectiveness is registered as high.

The 1993 WB report was in some degree a defence of structural adjustment; a demonstration that reduced health expenditure need not impact on health outcomes. The health financing model which the Bank advocated envisaged high income and moderate income families being protected through private or social insurance and restricting public funding to fund a safety net for the poor. This safety net would be defined in terms of a defined benefits package, comprising a limited number of cost effective interventions for which government benefits would be paid. The Bank envisaged these safety net services being delivered by public, voluntary or private providers. Services not included in the defined benefits package would be paid for through user charges.

The Bank has continued to promote the defined benefits package as the preferred approach to priority setting; now in the context of the drive for 'universal health cover'. UHC is quite ambiguous; WHO generally defines it as a unified singular program with a single

payer, while the Bank continues to promote the concept of a health insurance market place with a range of different plans.

Health care organisation is much more than the sum of a number of interventions. Health care providers need support in the form of facilities, supplies, professional development and functioning referral networks. They also need accountability and clinical governance structures. These functions are sometimes linked together under the idea of 'district health systems'. The defined benefits package does not make provision for the funding and management of district health systems.

A further challenge arises from the difference between efficacy in research and effectiveness in practice in diverse settings. Benefit packages are more than a list of interventions; they either include or imply clinical guidelines which would qualify the use of such interventions. Clinical guidelines are informed by research results but they must also take into consideration prevailing epidemiology and provider capacity.

Effectiveness of the intervention in practice depends on provider capacity (including diagnostic capacity and capacity to deliver the intervention) and patient condition. Research-based clinical guidelines for diagnostic interventions are always contingent on the availability a particular mix of technologies, on prevailing epidemiological patterns (incidence levels determine the likelihood of false positives or false negatives) and on particular patterns of clinical presentation. Research based clinical guidelines for therapeutic interventions depend on particular standards of diagnosis (and diagnostic resources) and on particular standards for delivery of those interventions.

While it is easy to define 'benefit packages' in terms of a list of 'interventions' and associated guidelines, it is a huge administrative task to ensure that benefit payments are restricted to interventions that are used in accordance with research based clinical guidelines (assuming that clinically authoritative guidelines for that environment exist). It is likewise a huge administrative task to assess for approval the exceptional cases for benefit payment in relation to interventions which are not included in the standard benefit package.

This is particularly so in the context of private practice and private insurance. The difficulty of monitoring adherence to clinical guidelines in private practice in the industrialised countries is well known. The cost of prospective utilisation review in the USA is a significant contributor to the exceptional cost of health care in the US. Likewise the cost of approvals for exceptional cases is high. These high administrative costs in the rich countries translate into huge opportunity costs in L&MICs.

PBMA

In budget funded health care, priorities are set in the hierarchical distribution of input funding. Managers at various levels exercise judgement in making choices between competing claims. One of the established tools for priority setting in such settings is the use of program budgeting with marginal analysis (PBMA).

The steps involved in PBMA are listed in Table 6, below. Documenting the programme budget for the programs being considered is critical. This will include current expenditure as well as output estimates and whatever data can be assembled regarding outcomes. The core of the marginal analysis phase is to ask what kinds of outcomes might be achieved (or

lost) by a marginal increase (or decrease) in programme funding. The third key element of this methodology is the use of key stakeholders to provide advice based on implicit judgement to supplement the available data and evidence (always insufficient).

1. Determine the aim and scope of the priority-setting exercise - within programme or between programmes
2. Compile a 'program budget' - the resources and costs of programs
3. Form a 'marginal analysis' advisory panel of key stakeholders (managers, clinicians, consumers)
4. Determine locally relevant decision-making criteria - e.g. maximising benefits, improving access and equity, reducing waiting times etc
5. Identify options for investment and disinvestment: (a) service growth (b) resource release from efficiency gains (c) resource release from scaling back services
6. Evaluate investments and disinvestments in terms of costs and benefits
7. Validate results and reallocate resources

Table 6. Program budgeting and marginal analysis.
Further details from Madden et al (1995) and Peacock et al (2007).

A critical aspect of public sector delivery systems is the role of senior clinicians as budget holders, bringing together budget responsibility and clinical authority. In such situations formalised clinical guidelines can be modified in practice in accordance with local circumstances. Clinical judgement in such settings may be a more reliable approach to priority setting than centralised exclusion inclusion decisions. Certainly it is likely to be much cheaper.

Clearly it is essential that such decision making is accountable, including in terms of established clinical guidelines. The advantage of public sector health care delivery is that utilisation review is embedded in comprehensive clinical governance arrangements so that inappropriate use of resources is considered in the same setting as clinical review of quality and safety.

Public funding and public sector delivery are not without challenges. In highly unequal societies there is always pressure from the rich to buy their way out and to reduce a universal public system to a residualised safety net. Resource mobilisation is always a challenge, particularly in situations of tax evasion and tax competition. Accountability and probity require continuing attention, including through strong community involvement.

Macroeconomics and health

The relationships between the national economy and health, including both health care and population health, often figure in policy discussion and it is necessary to have a clear view of these relationships.

Essentially it is a two way relationship as depicted in Table 7, below.

	Health systems and macroeconomics	Population health and macroeconomics
Macroeconomic policy shapes health	Macroeconomics shape health care	Macroeconomics shapes population health
Health a consideration in macroeconomic policy	Health care a consideration in macroeconomic policy	Population health a consideration in macroeconomic policy

Table 7. Macroeconomics and health

Macroeconomics shapes health care. First, because it affects the availability of resources, economy-wide, to pay for health care; public or private services, public or private funding. Public sector revenue shapes public expenditure and this is affected by tax capacity including the international tax policy environment (eg 'tax competition').

Macroeconomic policy also frames health policy in various ways. Neoliberal economic policies which privilege private sector activity will push health care policy towards supporting private insurance and private providers. In many jurisdictions the support of private insurance includes the provision of a public subsidy. In employment based health insurance systems the case may be made to reduce the burden on employers through government subsidy.

Macroeconomics also shapes the social and environmental determinants of population health and the willingness and capacity to address the determinants of population health.

The influence of macroeconomics on the social and environmental determinants of health is evident through pathways as diverse as occupational health, safe and healthy environments, investment in housing and infrastructure, social protection and income inequality and social participation. Macroeconomics also contributes to policy around addressing the social and environmental determinants of health. This includes infrastructure such as sanitation and safe roads as well as regulation, well framed laws which are appropriately implemented. The issue of regulatory space is currently quite controversial because of trade agreements which harmonise regulatory provisions at a relatively low standards and investor protection provisions which limit government capacity to regulate (sometimes referred to as policy space).

Conversely health care is a consideration in macroeconomic policy. Health costs can be a significant burden on families and in jurisdictions where there are high levels of out of pocket payments families may have a preference for savings rather than spending. In China for example the government has greatly expanded health insurance in recent years with a view to loosening household savings and promoting economic growth through increased consumption spending. Alternatively, in Singapore the implementation of individual savings accounts as the backbone of health insurance was seen as a way of encouraging savings and hence funding investment.

From a macroeconomic point of view private health care (and related industries) may be valued as a market opportunity for private health insurance, pharmaceuticals and the purchase of goods and services from other sectors and as employment. Health care (and related industries) can also have significance as export prospects. The pressure which the US and Japan placed on the other parties to the TPP for low standards and high protection for intellectual property reflects the importance of IP in terms of export earnings for those countries, including in the pharmaceuticals sector as well as in electronics and entertainment.

Finally population health is shaped by macroeconomic policy in relation to labour. In some settings labour is treated as a resource to be consumed, for example in relation to poorly regulated mining (eg in India and China) or other dangerous industries (eg ship breaking in Bangladesh). In other settings labour power is a resource to be nurtured where disease is a cause of low labour productivity or where disease is a cause of labour shortages. AIDS/HIV is the outstanding contemporary example of a disease which is detracts from labour productivity and where an investment in treatment can release healthy labour with flow on benefits to households, communities and the national economy.

3. Health policy process and capacity[3]

The purpose of this chapter is to review the field of health policy practice with a focus on capacity building; individual and organisational capacity for health policy work.

Policy is central to the vision of humanity exercising control over our collective destiny. Policy is a kind of narrative (or story); it is narrative with authority which frames our reflections on our challenges and provides guidance with regard to preferred futures and the actions needed to realise such visions.

Policy works with governance. Governance is broader than government; it is practised across a network of institutions, constituencies, classes, ethnicities, religious groups, social movements, individuals, and governments. The links between different agents (nodes) in the network are critical to the outcomes of policy deliberations. Network configurations include issue-specific 'policy communities'; small but fiercely interested agents versus larger but only vaguely aware constituencies; and office holders who are accountable to complex networks of interest groups and constituencies. The network is dynamic, changing with time and issue.

Policy work in government is part of this wider picture. Government officials develop policy for programs which they administer; for policy engagement across portfolios ('health in all policies' or HiAP), and for policy coherence, referring to collaboration between domestic sectors with a view to presenting a coherent view in international negotiations, such as trade agreements (global health diplomacy).

There are practical skills involved in policy work which we shall discuss briefly: policy analysis, policy development, policy communication, policy implementation and policy capacity with a note on policy theory.

Policy analysis

Policy analysis is used here to refer to the analysis (appraisal, evaluation) of an existing policy or a number of proposed policy options. It involves three phases: appraising the argument, analysing the political field, and reflection on one's own preconceptions.

The *argument* includes the technical narrative which sets out the problems and needs we are addressing. It explains causes (how the problem has been reproduced) and the dynamics of change (what we know about how the system works and why our recommended initiatives can be expected to achieve their objectives). It reviews and evaluates the options for change and identifies a set of preferred directions and it summarises the list of actions to be taken.

Does the policy make sense? Or do the various options being considered make sense? What are the likely outcomes of the proposed actions? What are the alternative policies and what kinds of outcomes might they yield? What criteria should we use for comparing different policy options. The rational approach to policy analysis is seen particularly clearly in policies about health financing. Different financing strategies can be evaluated in terms

3. This chapter includes material developed by David Legge, Deborah Gleeson, Zhang Tuohong, Pei Likun and Yang Hui.

of their impact on government expenditure, patient payments and access, hospital revenues and so forth.

The rational approach to policy analysis is necessary but it is not sufficient.

Analysing the policy in terms of its *politics* involves asking where did this policy come from and why; who is pushing in what directions and why. We ignore for the moment the rational version of the policy, the facts and logic, and we focus on this policy as an 'event' in a political field. Why is this policy here now? Who has been pushing for it and why? Who else might have influenced the way it has emerged and why? And who might have fought against it, and why?

It is essential to understand the politics of the policy because it helps to sketch the political dynamics which will shape the implementation of this policy or of any competing policy in this particular field. Understanding the political dynamics prevailing across this policy field is essential if we are to be able sketch and evaluate the different scenarios which might follow its implementation. We can then ask about the politics of the policy. We seek to map the political field within which this policy has developed. We ignore, for the moment, the facts and logic of the argument and ask about the politics.

- Who are the main agents bringing influence to bear in this policy field?
- What are their relationships; relationships of collaboration, competition and accountability?
- Who are the main stakeholders (some of whom may not be very active in the policy making)?
- Who is pushing for this policy and why?
- What are the alternatives and who might be pushing for those?
- Who are the winners and who are the losers?

It is not always easy to identify the key stakeholders and to map the forces at play across this political field. However, there are often clues about the forces shaping the outcomes of this policy which can be discovered by examining the way in which a policy was commissioned and developed and looking at clues in the text, the way the policy is written.

In many cases it can be quite hard to read the politics of the policy; where the controversy is not so obvious and the discussions were all held behind closed doors. In such cases 'inside information' is invaluable and may provide critical data for the policy analysis.

We have discussed the first two phases of policy analysis: analysing the argument and analysing the politics. The next step is to bring these two analyses together, to reconcile our assessment of the argument of the policy with our assessment of the politics of the policy.

In a sense we have to strike a balance between naivety and cynicism. A policy analysis which only looks at the argument and ignores the politics is naive; an analysis which only looks at the politics but doesn't consider the rational argument is cynical.

In reconciling our assessment of the argument and of the politics we need to ask: does our criticism of the argument *make sense* when you come to look at the politics? Are the strengths of the argument consistent with our analysis of the politics?

Questions like these help to bridge the gap between our analysis of the argument and of the politics.

Finally we need to reflect on our *own preconceptions* in this policy area: is it possible that my prejudices are getting in the way of my appraisal of the argument or the politics of the policy. In evaluating the argument we have chosen to use particular methods, particular reference points; we have drawn on particular evidence and deployed particular logics. In evaluating the politics we have made assumptions about how people's positions might be driven by their material interests or alternatively about how ideological positions might be at odds with material interests.

We need to reflect on the degree to which our analysis at this stage might reflect our own interests and world view rather than providing a useful representation of the policy conversation and the policy field we are trying to understand.

This framework for reflecting on the practice of policy analysis is a kind of intellectual scaffolding to get started in policy analysis; it is not a protocol to be followed religiously in all detail. As people gain experience their policy analysis becomes more implicit; the steps are less deliberate and their focus is more on the content of the analysis rather than the analytical procedure.

Policy development

We are using the term 'policy development' to refer to the analysis of needs and circumstances, the canvassing and evaluation of directions and options and the shaping of suggestions with respect to the actions to implement the proposed policy.

Each policy is based on a story which proceeds from problem and objectives (and criteria for preferred policy) to causes and contexts to directions and options to the evaluation of options (against the criteria) to identification of preferred directions and suggested actions and agents. Policy development is, in part, about the shaping of this story.

Policy is more than telling stories. It is also about governance and about economic, social and institutional development. It is about change and also about continuity.

Policy is a narrative with authority. It may derive its authority from the regulatory or financial power of government. It may also gain its authority from its sensibleness; from the fact that stakeholders in different institutional settings see it as 'making sense' and are predisposed to support its implementation for this reason. Policy implementation gains further support when a critical mass of stakeholders see it as promising benefits for them or at least not harmful to their interests.

It generally requires the coordination of relatively autonomous players in different institutional settings and across time. In absolutist systems where government has strong command and control capacity policies take the form of commands backed up by the sanctions available to government. However, in the market economy, government does not have this kind of absolutist control. The autonomy of market players is a necessary element of the market economy. This is a 'loosely coupled' system, made up of agents which are all influenced by the behaviours of other agents but all of which have some degree of autonomy. In such systems policies need more than sanctions; they need the authority of meaningfulness as well.

The test of effective policy is that the goals of the policy are achieved because of the guidance and direction provided by the policy to various players with respect to their actions. Four requirements for effective policy are:

- authority - the policy must motivate the key players because of its own authority as well as attracting a minimum degree of support from stakeholders with an interest in its outcomes and some influence over its adoption and implementation;
- foresight - the preferred scenario implied by the policy projects forward a sequence of political, economic or institutional changes which will provide the best pathway towards achieving the objectives of the policy;
- flexibility in the face of unpredictability - the policy should allow for unforeseen contingencies and provide for flexibility in implementation and space to work with new opportunities or to work around new barriers; and
- capacity building – the policy should provide for building capacity (information, evidence, expertise, etc) for better decisions tomorrow.

Policy development involves three builds and three tasks. The *three builds* are: build the argument, build the constituency which will support implementation, build capacity for better policy making next time. The *three tasks* are simple - research, draft, consult – but we iterate through these tasks many times.

Three builds

The three objectives of policy making, or the three builds, are: build the argument, build constituency and build capacity.

Building the argument corresponds to the rational view of policy and involves collecting data, investigating causes, looking for evidence about what works, identifying the key criteria for evaluating options and scenario testing with regard to implementation. Building the argument is of course quite essential.

The second build is building constituency. Policy implementation starts with the policy development process. The way in which policy is developed helps to shape the environment for implementation. The way you go about developing your policy, the way you collect data, the way you identify and test options; these will be done in such a way as to maximise support for the policy which finally emerges. Part of this is about consultation, ensuring that all of the stakeholders (certainly all of those who are likely to suppport the policy) are fully consulted in the policy development process.

It is often good practice to consult closely with the stakeholders who might be opposed to the policy. If often leads to better policy. It may be that some of their concerns can be accommodated in the policy without jeopardising the policy objectives you are working towards. Opponents are always likely to scrutinise your early policy drafts more closely than your allies and their criticisms can be invaluable in strengthening the policy. In some cases there may be a case for a more covert approach to policy development.

The third build is building capacity. Build capacity for better decisions next time. This may involve initiating research or establishing a staff development program or supporting self-help groups or creating new institutions.

This third build is based on a recognition of uncertainty. Decisions made now for the medium to longer term are often swamped by unforeseen oncoming events. It is very hard to predict the unfolding of policy affairs except in the short term. Accordingly we need to leave scope for tomorrow's decision makers to deal with what are the uncertainties of today. Supporting tomorrow's decision makers by investing in capacity (research, information, training, institution building) will make better decisions easier decisions tomorrow.

Policy development iterates between long range vision and short range implementation plan; between loose exploration of broad options and more detailed work on clearly specified reforms. Across the policy field where reform is underway there will be some institutions which are ready for change and others which are locked into particular ways of operating.

Three tasks

In terms of material practice policy making is about three processes: research, draft, consult. It is a highly iterative process. We research the field, prepare a draft and then take it out to our stakeholders for consultation. They criticise, make suggestions, provide new information and we return to our desk for further research, another draft and further consultation. Research, draft, consult; research, draft, consult; research, draft, consult and so on.

The research phase is directed to developing the argument and mapping the politics. We collect data about the problem, causes, options and data to help to evaluate the options. Mapping the politics involves different kinds of data: who are the main stakeholders, what do they care about, what scope do they have to support or oppose your policy, to whom are they accountable, etc. Mapping the politics may be done more informally than developing the argument and it may not be fully reported in the draft material you prepare for consultation. Nonetheless it is an important goal of your research. Research can also help to build consensus around the emerging policy story by sharing the tasks of problem definition and research.

Policy making involves writing many many drafts of what may become the policy statement. Drafting, consulting and redrafting are necessary parts of clarifying the storyline, building the argument, mapping the political context and projecting possible scenarios.

The third task of policy development is consultation. In consulting with experts and stakeholders we are testing the argument (both its factual base and the logic which we are relying on to identify causes and options). We are test the possible scenarios that we associate with our different options (including business as usual). The process of sketching and testing scenarios is a critical part of evaluating options and listening to the responses of different stakeholders and experts from different disciplines is invaluable in this process.

Is the policy direction we are proposing strategic? Is there one initiative that we can devise that will re-orient the whole system in a way that will yield our policy goals. A policy that involves 120 separate actions is often harder to implement than one which is focused on one or two strategic changes.

One purpose of the consultation is to identify the risks and uncertainties associated with our preferred policy directions. The process of consultation always throws up new perspectives on risks and uncertainties.

Is the policy developmental? Will it stand up to unforeseen contingencies? Will it help to build our own capability for better decisions tomorrow?

The consultation phase also provides opportunities to reflect on my own prejudices and aspirations and the ways in which these are shaping my analysis of the argument and my representations of the politics.

Consultation is a critical part of such policy development and it is important to be clear about the purposes of such consultation. These may be directed at producing a better policy (through testing analysis and proposals in debate with stakeholders or reframing the policy through taking account of stakeholders' perspectives). Sometimes a major purpose of the consultation is to map more clearly the politics of the field; to identify where the opposition and support will come from. Sometimes the purpose of the consultation is largely marketing; selling the policy; mobilising those who will support it and managing the opposition.

How we go about consultation will be shaped in large part by our purpose. Generally we try to conduct our consultations in ways which will help to build a stronger constituency for the implementation of the policy. (On the other hand if you don't want the policy to proceed there are ways of consulting which are likely to generate opposition and ensure its defeat.)

Policy development planning

Within government a critical phase of policy development is the negotiation of the policy brief including the mandate or authorisation. This negotiation of the brief takes place in various ways. In some cases the brief for the policy is handed down from the minister's office to the bureaucracy in a reasonably clear and detailed form. In most cases however the ministers' office would seek input from the bureaucracy regarding ramifications and implementation.

Often the negotiation of the brief takes place in a complex sequence of communications involving bureaucracy, minister's office, Cabinet, advisers and lobbyists. As this 'conversation' proceeds the mandate and the brief are defined more clearly and the more details development of the policy within the bureaucracy is able to proceed.

Planning for policy development involves: writing the terms of reference; specifying the process and the constraints; estimating the budget and time-lines and identifying possible personnel. When politicians or senior officials decide to initiate a new policy development process (health insurance reform, illicit drugs use, bird flu preparedness, etc) they have to address the kinds of planning questions listed in Table 8, below.

- Purpose and scope?
- Who will lead the process; who will do the work and how will it be managed?
- Budget?
- Timelines?
- Terms of reference (and exclusions)?
- Policy development strategy?
- Management or advisory structures?
- Stakeholder involvement?
- What form will the policy take (and what product)?

Table 8. Planning for policy development: the brief

While all policy development involves the three builds and the three tasks a range of different strategies can also be identified. These vary in terms of the degree to which they reflect the rational as opposed to the political dimension of policy work. They also vary in terms of how they approach uncertainty.

Health insurance planning illustrates rational evaluative planning as an approach to policy development. Whilst the politics of health insurance is complex and important the technical modelling is quite fundamental.

What level of premium will generate enough resources to cover the likely outgoings? What would be a reasonable proportion of total health expenditure for government to mobilise (both now and in five years time)? What kind of increase in utilisation patterns would follow a reduction in the out of pocket payments? What will be the impact on costs of technological developments in the short to medium term? What will be the impact of an aging population on utilisation patterns, unit costs and revenue capacity?

These are all questions which call for hard evidence. Plan design needs to be consistent with mooted revenues and costs. It would be possible but risky to introduce a new health insurance policy if answers to these kinds of questions were not available.

This kind of technical planning points to the need for good information, including technical capacity to model many different scenarios and research capacity to supplement the available information. One option would be to have a technical unit which is able to generate this kind of information working with the policy makers. A drawback of that model would be that much of the information would not be available to outside participants in the policy conversation. An alternative would be a funding program to commission these kinds of studies from independent academics so that the outcomes of their studies would be available to all.

In some cases our strategy for policy development will be driven by the need to build a wider, firmer consensus around what is to be done. This is particularly so in addressing contentious policy issues where people have strongly held views or strong vested interests. Two policy development strategies which can help in building consensus are research driven policy development and highly consultative policy development.

In Australia the adoption of harm reduction strategies in relation to illegal intravenous drug users (rather than simple criminalisation) has been quite controversial; people hold very different views about illegal drug use. In this case a research driven approach has benefits: putting on side our prejudices about what is right and what is wrong and working together to find out what actually works in practice.

In relation to quality of care and patient safety there is wide agreement at a high level of generality: quality safe care is good. However, the different stakeholders often have very different views about how to achieve this and their views are often affected by their own interests. In such circumstances again a research driven approach can yield a workable policy and bring along the different stakeholders.

Policy development and policy implementation are often highly incremental, meaning that they take place in small steps. This has been called 'muddling through' but also corresponds to the Chinese aphorism about 'feeling the stones to cross the river'.

In theory incrementalism is well suited to dealing with complex and uncertain situations: take small steps, see what happens, take more small steps. In this sense the small steps represent increments across time. Examples include road safety and tobacco control.

The form of the policy

There is no single correct form for a policy document. It depends on the purposes and settings of policy making. In some cases a policy can be determined but never documented.

In many cases the policy narrative will take the form of problems, causes, options, directions and actions. But not always.

What is the purpose of the policy? Is it to guide action or to build consensus or to provide leverage for advocacy for more distant objectives?

The right form for a policy document to take cannot be specified. It is part of the craft of policy making to find the best form.

Policy advocacy

The purposes of policy communication include consultation, implementation and advocacy. These are not the same; it is important to be clear about purpose. We have reflected on consultation above and return to policy implementation below. In this section our focus is on policy advocacy

Policy advocacy has always been an important responsibility of public health leaders and medical care leaders. Rudolf Virchow (1821-1902) epitomises the tradition of policy advocacy within public health (Ackerknecht, 1957, Virchow, 2006[1848]). Virchow was a German pathologist, public health activist and politician. As well as making many important contributions to pathology and anthropology Virchow was a powerful advocate for social reform, including occupational health, urban infrastructure and social security.

'Health policy advocacy' refers to the deliberate engagement by practitioners, researchers, managers and consumers in the health policy process with the aim of influencing health policy outcomes in a particular direction. Policy advocacy can be distinguished from policy consultation. Policy consultation is usually organised by the policy makers, consulting with stakeholders (including the advocates) as part of developing (or

selling) their policy. Policy advocacy is organised by particular stakeholder groups, directed towards the policy makers directly or indirectly though those who have significant influences on policy making. On the other hand policy makers are generally keen to hear what policy advocates are saying and will often direct their consultation strategies to achieve this.

Vigorous health policy advocacy depends upon civil society having an active role in policy making. 'Civil society' refers to one of three broad domains of social practice: the state, the market and civil society. Civil society includes organisations, meeting places and communication channels which are not government and are not markets. In planned economies, policy is generally seen as belonging to government; something that governments create and governments implement. In a market economy political power is necessarily more dispersed than in a planned economy. In jurisdictions where resource allocation is shaped by market forces the levers of power policy available to governments are rather less than in planned economies. Policy implementation comes to depend more on stakeholder cooperation rather than command and control. Regulation, likewise, must recognise the limitations of government power and new forms of regulation must emerge. An active civil society is part of this.

The main stakeholders in the field of policy advocacy include:

- the advocates,
- the decision makers,
- the interest groups, and
- a range of different variously passive constituencies.

The decision makers are the key focus. Their decisions will give effect to the policies that we as advocates want to see implemented. However, the decision makers are subject to a wide variety of varying pressures from other stakeholders and interest groups. In many situations the influence that lobbyists and stakeholders exert over the decision makers is indirect; mediated by the sentiment of wider often quite passive constituencies to whom the decision makers are accountable.

A wide range of stakeholders, interest groups and constituencies have an interest in the outcomes of health policy debates and may engage in policy advocacy; although not all are advocating for health objectives. Some of the most effective public health advocates have been government bureaucrats who work behind the scenes and help to create the conditions for more high profile advocacy.

The first stage in policy advocacy is mapping the field. Who are the stakeholders? What are their interests in this issue? How do they see the issue? What are their strengths and weaknesses?

In dealing with the decision makers, the advocate will generally aim to maintain direct communication with them, to understand their problems, and to ensure that the options being advanced are practicable, technically feasible.

In dealing with other interest groups, the advocate will aim to build coalitions with potential allies and to manage relations with the opposition. Building coalitions involves a

lot of listening and trust building. Managing relations with the opposition may also involve listening; perhaps more listening than speaking.

The policy advocate needs to think beyond the decision makers and interest groups to the constituencies to which they in turn are accountable. What are the stories about this issue which presently circulate in these different constituencies? What are people thinking about second hand tobacco smoke, about occupational health, about the referral links between primary and tertiary care.

It is often useful to think about public health advocacy as engaging with the flowing discourses (stories, ways of speaking) around these kinds of issues. How are people speaking about second hand smoke or about occupational health? The task of the advocate is to steer the 'community conversation' from incoherence and debate to consensus.

Communication is central to policy advocacy: communicating with public officials; communicating through the mass media; communicating with community groups. Different conversations call for different communication styles: technical and analytical with the experts; pragmatic with the officials; expressed in terms of everyday experience with community groups; and short sharp sound bites for the mass media. It is often necessary to express complex arguments into short memorable slogans (multiple levels, multiple media, few simple messages).

Risk analysis is an important part of strategy development and there are some risks associated with the advocacy approach and boundaries beyond which these risks are increasingly likely. The most obvious risks are those of alienating rather than convincing; inevitably the advocate will alienate some stakeholders but it would be well to keep this to a minimum. Another risk is simply 'getting it wrong'. It can be hard to maintain a clear sighted view of the situation while advocating (passionately and sometimes in a simplified way) a particular perspective. A related risk is of 'not hearing the other'; where the passion of the advocate gets in the way of hearing how others see the issues and perhaps precludes moving towards win-win outcomes. We need to find a balance between advocacy (urging a particular view) and listening to other ways of seeing things.

Capacity-building is also a key part of advocacy strategy: developing resources (expertise, relationships, and material resources) and developing skills in the key strategies.

Finally ongoing evaluation is also critical: evaluating impact; understanding mechanisms; reviewing strategy and starting over again.

Developing a strategy for policy advocacy may be spread out over many years and is never as logical as this sequence. Sometimes the advocacy is just launched because the opportunity arose and the plan for on-going advocacy is clarified afterwards. The contexts in which public health advocacy initiatives arise may be very different and different contexts may call for very different strategies. These may include:

- research, innovation, evaluation and publication,
- building professional associations,
- media advocacy,
- using the internet and social media,
- lobbying,

- movement building, and
- litigation.

One of the most commonly used approaches to health policy advocacy is research-based advocacy including descriptive research and reports of interventions or innovations.

Research means documenting the problems, quantifying costs, measuring the impact on health and health care, describing what is happening in terms of process, which serves as an important foundation for approaching policy makers and public as well. Research in relation to side-stream tobacco smoke might be directed to estimating the morbidity and mortality associated with such exposure. Research in relation to occupational injury / disease reporting might involve independent surveys of the incidence of such.

Innovation means experimenting with different ways of doing things. This is particularly relevant in terms of policy advocacy regarding health system policy. Two useful models for innovation are benchmarking and re-engineering. Benchmarking involves scanning beyond your own organisation to find people who are managing systems and processes like yours but who are doing better in certain aspects; studying their practice, understanding the principles, borrowing what might be relevant to experiment with new ways of doing things in your own organisation. Re-engineering involves thinking about your production processes as if you were designing them afresh and experimenting with new ways of doing things on the basis of this theoretical design. In what ways would you do it differently? Innovation, directed to the wider system problems, might involve building new referral relationships between primary care and specialised facilities and evaluating the health outcomes as well as costs and savings.

Evaluation can contribute to policy making in other ways. Evaluation studies of existing mechanisms for reporting occupational injury and disease might point out how and why they are under-reporting; evaluation studies of the cost and quality of primary care in community health centres and in tertiary hospitals might contribute to learning more about the wider system problems.

Research and evaluation are not useful as resources for advocacy if they are not published and disseminated. Publication is more than peer reviewed journal articles. It is also about conference papers and media releases (or press conferences). It is sometimes sensible to ensure that the responsible public officials are aware of the research findings before they are published so that they have time to prepare a response. Unpublished research findings may provide the basis for a delegation if it can be arranged.

New research findings play a key role in policy advocacy, not just by the researchers but also the funders who commission the research and the mediators who carry the findings to the decision-makers. Sometimes the research is commissioned by one ministry as part of generating evidence to convince other ministers.

Professional organisations play an important role in health policy advocacy: sharing the problem, sponsoring research, conferences, publications, and talking with government.

Policy advocacy commonly includes working through the media. The objective is to use the mass media to communicate one or a few simple messages to identified decision-makers, stakeholders and / or the wider constituencies.

In the case of smoke free enclosed public spaces the messages might be about the well-being of non-smokers but they should not alienate the smokers. Thus a simple message might be "Second hand smoke is harmful; responsible folk don't force it on friends and family". As important as the cognitive content of the message are the overtones; what are the symbols and ideas with which the message is packaged.

There are several different ways of getting the message communicated: advertising, news coverage, specialist program coverage, invited articles, letters to the editor etc. Advertising is expensive but could be effective for this message. Aiming for news coverage requires that there is an identified news 'spin' to the message. This might be the announcement of new research findings or coverage of an event ranging from an expert visits the minister to a stunt. The press looks for human interest so testimonials or protests from non-smokers (or injured workers) might fit. In working with the media it is essential to know their needs; to present them with the sort of material they are looking for rather than expect them to take on board the advocate's enthusiasm.

Policy advocacy is often embedded covertly in media campaigns notionally directed at individual behaviour change. Thus social marketing campaigns delivering anti-smoking messages are also delivering policy relevant messages to the decision-makers.

The internet is a powerful tool for health policy advocacy. The combination of well designed and well resourced websites plus well subscribed email lists, and social media networks has added new dimensions to policy advocacy. A well designed website with downloadable resources and links to various specialised sources of information can help to hold together a campaign across a broad movement. Well networked social media can get information distributed very fast.

Public officials working within government institutions can be quite limited in terms of their engagement in policy advocacy. However, creating accessible, searchable, and information rich websites can provide a powerful resource for outside advocates to use. Putting improved information about occupational health on a health department website might help to build policy advocacy for more effective regulation (including improved reporting) of occupational health and safety.

Lobbying is an important strategy for policy advocacy. Originally it meant catching legislators in the 'lobby' outside the parliamentary chamber and urging a particular point of view regarding the issues being debated inside the chamber. It still has this usage in the sense of accessing legislators (or senior politicians) but the kinds of networks which the lobbyist works through may be more far reaching than this. Lobbying in the USA is also tied to election campaign funding. Professional lobbyists arrange access to influential legislators on the understanding that the advocate has donated or may donate to the legislator's election campaign funds. In other parliamentary systems lobbyists might donate to the political party's campaign funds rather than to the individual politician. This practice of 'selling influence' is widely regarded as undesirable or even corrupt and counter to the principles of democracy. The use of the term 'lobbying' does not necessarily imply this kind

of 'buying of influence'. Certainly, the kinds of organisations who engage in health policy advocacy do not generally have the financial resources to participate in these practices.

'Lobbying' is an important advocacy strategy. Lobbying may involve letters, phone calls, delegations and dinners. In general letters are not so effective as face to face contact. The advocate needs to have a clear sense of what they are trying to achieve and a simple message. Decision makers are busy people with many issues competing for their attention. It is sometimes useful to prepare a simple one page briefing note to leave with the decision maker.

It is important to approach the interview with a sense of how the decision-maker might be approaching this issue. They need to know the technical issues but in summary form with further reference material provided. Politicians are often oriented around how this issue affects the 'man in the street'; what do ordinary people think about this issue? It may be worth undertaking some kind of survey. They also need to know how the issue may play out in the future and how other powerful players might be approaching this issue.

Lobbying around improved monitoring of occupational health will need to have answers to some quite political questions. Many decision makers will be aware of occupational injury and disease risks but they will want to think through the strategic questions of how to gradually improve monitoring and awareness. They will also want to think through the consequences of the continuing situation.

Litigation has been used in a range of different health issues including vehicle safety, occupational health and tobacco control. In Australia and the US the passage of laws prohibiting smoking in enclosed public spaces was preceded by high profile litigation by cancer sufferers against long time employers for allowing employees to work in smoke filled spaces. The cost of maintaining effective air conditioning in smoky circumstances was a factor in some settings.

Policy implementation

Health policy stands between the *problems* on one hand and the *institutional or social change* required to solve those problems. Policy-makers, in moving from problems to institutional change, have a large menu of strategies, instruments and levers to draw upon; the building blocks of policy development. Some policy instruments which are commonly used in health policy are shown in Table 9, below.

- funding (more or less; here or there)
- personnel reforms
- regulation (many different strategies)
- community mobilisation
- competition
- social marketing
- planning plus sanctions
- information and evidence

Table 9. Strategies, instruments and levers

Policy implementation involves clear specification of roles and responsibilities, timelines and budgets; appropriate monitoring and drive as necessary and evaluation (of process and outcomes) and adjustment as necessary. The implementation plan is based on clearly specified scenarios of implementation so that preconditions are met, resources are available, and drive can be generated.

Implementation planning is a critical part of policy development. One of the first preconditions for successful implementation is a clear and valid program logic. As the policy narrative takes shape careful testing of different implementation scenarios is undertaken and the identification of significant risks and contingencies. From here the implementation plan is built drawing on project management principles and out of the implementation plan comes clear task assignment and briefings for the various implementing players.

It is useful to think of the various agents of implementation in terms of a network of participating organisations, managers and practitioners and (usually) an implementation manager with the assigned responsibility of driving implementation across the network.

Implementation drive may be conceived in terms of top down instructions backed up by incentives and sanctions. This approach may work where the policy is being implemented within a single hierarchy but even here there is usually scope for resistance or sabotage from the 'street level bureaucrats'. Most implementation networks are loosely coupled systems in which different agents have some autonomy. In these circumstances shared commitment to the objectives of the policy is a more reliable driver enabling a negotiated implementation plan and collaborative coordination.

Monitoring and steering is critical part of implementation. It calls for rich data, clear reporting protocols and implementation flexibility.

The causes of implementation failure correspond to the principles discussed above. They include:

- weak articulation between policy development and implementation management;
- assumptions of top down control (and omniscience) and neglect of the power and values of the 'street level bureaucrats';
- planning failure (timelines, budget, personnel);
- unforeseen contingencies; failure to anticipate; delay in recognising; inability to control.

Policy capacity[4]

Policy capacity can be thought about at the level of the individual policy practitioner, the organisation within which policy is developed, the institutional systems across which policy is developed and implemented, the individual policy communities and policy networks who focus on various different policy issues, and the wider policy environment.

4. For more on policy capacity see: Gleeson, Deborah, David Legge, Deirdre O'Neill, and Monica Pfeffer. "Negotiating Tensions in Developing Organizational Policy Capacity: Comparative Lessons to Be Drawn." Journal of Comparative Policy Analysis 13, no. 3 (2011): 237-63. doi: http://dx.doi.org/10.1080/13876988.2011.565912 and Gleeson, Deborah H, David G Legge, and Deirdre O'Neill. "Evaluating Health Policy Capacity: Learning from International and Australian Experience.". Australia and New Zealand Health Policy 6, no. 3 (26 Feb 2009). doi. http://dx.doi.org/10.1186/1743-8462-6-3.

The individual competencies needed for good policy work include:

- knowledge of context,
- knowledge of relevant disciplines (law, economics, social science, epidemiology, project management, info tech),
- knowledge of the historical lineage of the local health system and of systems and developments in other countries,
- analytic skills, skills of policy analysis and development,
- communication and relationship skills,
- ability to frame problems,
- creativity, imagination, intuition and judgement.

The full range of policy competencies are rarely embodied in the same individual which is why team work is necessary.

Alongside these individual competencies there is a suite of organisational structures and processes which are necessary for supporting good policy work. These include the generation and management of evidence and information; management of relationships within the organisation, across organisations and with those responsible for implementation; organisational capacities in strategic management, evaluation and monitoring; personnel management and workforce development practices.

Individual and organisational capacities can overlap, as when professional development policies (an organisational attribute) focus on the competencies of individuals; and in the case of leadership which is an individual competency but one which needs a supportive organisational environment to be fully expressed.

Building health policy capacity is not straightforward. Public sector organisations are characterised by tensions between competing and changing priorities. The requirements for policy capacity can at times conflict with pressures for investing in service delivery, or with priorities driven by more political imperatives. Building relationships for successful policy reform requires time and resources that might otherwise be invested in service delivery; relationships with stakeholders can also create political risks for governments.

On top of these tensions and potential conflicts, policy development is extremely dynamic. The institutional and political environment within which policy development takes place is changing all the time with implications for the speed, content and mandate of the emerging policy.

Managing these volatile tensions in a rapidly changing environment is an intrinsic part of policy work, and leadership at every level is central to managing them successfully. This kind of policy leadership is a combination of individual leadership and the organisational culture which allows such leadership to be expressed.

Policy leadership is expressed:

- in judgement and flexibility regarding competing priorities;
- in negotiating the brief and developing the mandate;
- in practical mentoring of more junior policy officers;
- in conceiving and conveying a vision, generating commitment, earning trust;

- in being ready for the windows of opportunity;
- in nurturing organisational learning.

Policy leadership is needed at middle as well as senior levels.

Developing individual competencies may involve formal academic study, particularly in relation to particular sub-disciplines such as economic evaluation or statistical analysis. However it is hard to acquire the core practical skills of policy work in formal course work. Many policy practitioners report that the learning experiences which they value are from on the job experience backed up by mentorship, professional development opportunities and communities of practice, formal and informal.

While organisational learning is an attribute of organisations rather than individuals, the learning organisation describes an environment within which on the job learning is greatly facilitated.

Policy theory[5]

Theory helps us to talk about practice, to understand difficulties in practice, to think ahead about how we might practise differently.

The value of policy theory is that it helps us to describe and to evaluate the policy process; it enables us to explain what policy is, what it does and how it works. Policy theory helps us to understand why we sometimes have problems in policy-making; to make sense of policy failure. Theory enables us to model different ways of doing policy with a view to exploring different and perhaps better ways. It help us to identify the resources and relationships which good policy work depends on so that we can build capacity for better policy making.

What is policy? Policy is a tool of governance. It is a tool for coordinating practice across a loosely coupled social system.

As a tool for governance policy may take different forms, ranging from documents to slogans to deliberate inaction. Policies may be called different things including protocols, guidelines, programs, laws, plans, etc. Policies deal with different levels of scale from routine operations to strategic change across institutional systems.

Policy is a tool for coordinating practice across a loosely coupled social system. The policy narrative defines the problem, explains causes, projects better futures and provides guidelines for action by the various agents who are part of the implementation network. Policy coordinates the system because different agents re-shape their practice in accordance with the policy.

Policy is a narrative with authority; various degrees of authority are critical in encouraging 'loosely coupled agents' to undertake the necessary changes in their practice to implement the policy. Authority comes from the power of the sponsor (and the sanctions tied to compliance) and/or the meaningfulness of the policy narrative.

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5. Wayne Parsons, (*Public Policy: An Introduction to the Theory and Practice of Policy Analysis*. Aldershott UK: Edward Elgar, 1995) provides a very useful introduction to policy theory.

The idea of 'policy' is very slippery. Different usages vary widely. Academic commentators on the policy process have addressed this 'slipperiness' by mobilising a range of different metaphors for describing policy making; metaphors which represent the policy making process in different ways and can be used for describing different aspects of policy making. In addition to the narrative metaphor, other ways of conceiving policy include:

- rational choice (the policy cycle)
- incrementalism (muddling through)
- input, process, outcomes
- agenda setting and windows of opportunity
- and public choice.

Many policy commentators have found it useful to envisage a 'policy cycle' which follows a rational sequence, from: problem definition, to identification and evaluation of options, to formulation of policy and implementation, to evaluation and then the reformulation of the problems to be addressed. This is a useful metaphor because it emphasises that policy is never finished; that each new policy contributes to framing the next problem. It is useful also because it articulates some of the key elements of policy work including problem definition, evaluation of options and evaluation. However, these processes are not always separated in time as is suggested by the diagram but they are facets of a more complex process.

One of the main critics of the rational model of policy making was Charles Lindblom who, writing from the 1950s, described policy making as 'muddling through' (or more academically, as 'incrementalism'). He described the rational model of policy making as 'futile attempts at superhuman comprehensiveness' and argued that 'muddling through' was a more accurate description of the policy making process. Lindblom (see, for example, Lindblom and Woodhouse, 1993) introduced the politics of decision making into the process with his emphasis on the interplay between the powerful stakeholders who shape the decision making. Many policy researchers have found that incrementalism corresponds more closely to the reality of policy work than rational models.

The idea of a policy *agenda* is widely used to refer the 'list' of issues on which government is focused at any given time. Of course this is no real list but the metaphor points to a prioritising process in the sense that issues at the top of the agenda are likely to be attended to. It also points to the importance of actually getting onto the agenda in the first place. There are many items struggling to get onto the agenda and in some cases there are powerful stakeholders trying to keep them off the agenda. The decision not to have a policy may be a carefully thought out policy. The agenda metaphor also points to the political processes which determine which policies get up and which policies get to the top.

Getting an issue onto 'the agenda' does not guarantee that it will be solved. It may be that the time is not ripe for an effective solution.

Cohen, March and Olsen (1972) introduced the *garbage can* metaphor to describe how organisations make decisions when there is conflict about how problems are defined and little consensus about goals. From this point of view, problems wandering around looking for solutions and possibilities looking for problems swirl around together within the

organisations and in public discourse. Opportunities to make choices are conceived as garbage cans in which problems and solutions coexist. The decision or choice is a product of the mix of problems, solutions, participants and choice opportunities and the interaction between these different streams within the garbage can. From this perspective, there is no linear or sequential relationship between the opportunity for decision making, the identification of problems and the generation of solutions.

Kingdon (1984) further developed this model, describing problems, solutions and politics as three separate streams which sometimes come together at critical times. Thus the 'key to understanding agenda and policy change', Kingdon argues, is the process of 'coupling' the three streams (p. 93). Change takes place when a problem is identified, a solution is available and the political situation enables change to occur.

From time to time an individual or group picks up on a set of possibilities and links them to a problem. Windows of opportunity arise where advocates for particular proposals, or 'policy entrepreneurs', can bring the three streams together and get the issues high enough onto the policy agenda to be acted upon. Not all issues which are advanced by policy entrepreneurs will get onto the agenda. They need to be seen to have technically feasible solutions; the solutions need to be compatible with prevailing values and the solutions need some continuity with established institutional structures and processes (Kingdon, 1984)

There may be a window of opportunity during which a particular issue will 'get up', when problems are compelling or when events in the political stream make circumstances favourable (Kingdon, 1984). Policy entrepreneurs keep their proposals ready (in the 'top drawer') waiting for a policy window to open. Policy windows close quickly, and if an opportunity to get an issue onto the agenda is missed, the entrepreneur must wait for the next chance. There are some issues whose time has come; there are others which make their run too late.

The application of neo-classical economics to the study of public policy has made a huge impact on public administration including public policy over the last two decades.

This movement has generated a powerful critique of bureaucracy as self-interested and uncontrollable and of hierarchical decision making as carrying high transaction costs (higher in many cases than would be the case if similar decisions were effected through market mechanisms) (Parsons, 1995). These criticisms need to be taken seriously.

Public choice argues that many problems which we try to solve through bureaucratic strategies are actually due to bureaucratic failings and that instead we should seek to restructure institutional relationships so that the 'problem' can be solved by market forces; 'public choice' in the sense that the public can express its choice better through exhibiting individual preference than by voting.

Public choice theory suggests that public policy should concentrate on liberating market forces rather than solving social problems. Transaction costs economics suggests that complex issues involving allocation choices are often more efficiently addressed through market mechanisms rather than through public policy. Relying on the invisible hand of the market to mediate public choices is a way of addressing complexity and the limits to human capacity to grasp large and complex sets of information.

One of the limitations on public choice approaches to health policy making is the salience of market failure in health care. See Table 1, above.

A completely different framework is provided by complexity theory which invites us to see society as a complex adaptive system. A complex adaptive system is characterised by multiple autonomous agents all watching each other and responding in accordance with their own rules (see Figure 5, above). A system with many agents, different sensibilities and variable responses is highly complex and fundamentally unpredictable. Small differences in the starting parameters of complex systems can produce huge differences in outcomes.

Complexity has some very important implications for policy work. Firstly, it emphasises that the outcomes of policy initiatives are unpredictable. This casts a new light on Lindblom's criticism of the "futile attempts at superhuman comprehensiveness" of the rational policy theorists. It emphasises the importance of flexibility in policy implementation and capacity-building in policy design; building a capacity to deal in the future with issues which are currently clouded in uncertainty.

Another implication of complexity theory is that we, the policy makers (and we the policy commentators), are inside the models we use to identify problems and trace out solutions; hence the importance of reflexivity, of being able to see ourselves inside the models we use to make sense of society. This requires us to acknowledge and manage recursion in our practice; this is the paradox of the map maker making a map of the map maker making a map of the ... The recursive paradox provides another limit to the idea of rational choice in policy making.

Finally, complexity theory provides tantalising suggestions that policy might constitute one of the hidden attractors of complex social cycles. It is a feature of complex systems that order can emerge from chaos and in computational physics this is described in terms of 'hidden attractors'. The metaphor of the hidden attractor suggests that policy development can generate shared perspectives, common values and shared visions which can help to give some coherence to the independent decisions of the multiple autonomous agents.

The policy analysis triangle described by Walt and Gilson provides a framework for describing and analysing the influences of context, content, actors and processes on the policy process from agenda setting and policy formulation through to implementation and evaluation (Walt and Gilson, 1994). (See Figure 11 below.)

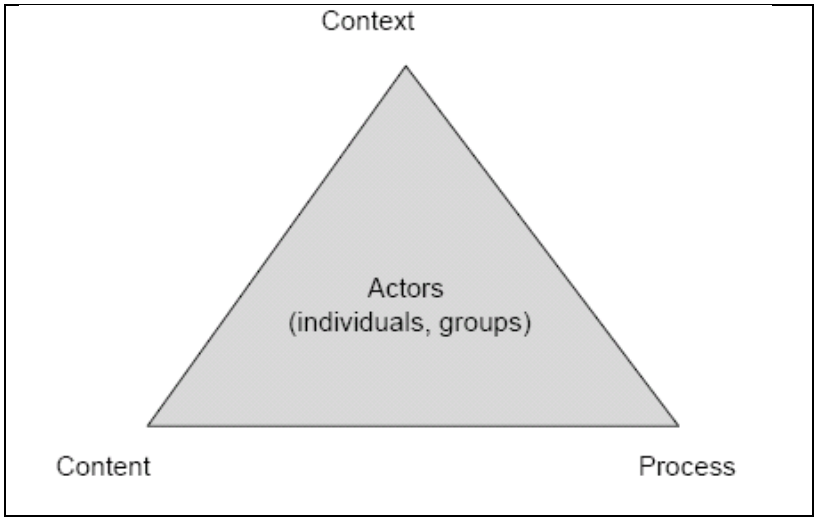

Figure 11. The Policy Triangle (Walt and Gilson, 1994)

There is no single, coherent and objective account of policy work. The best we can do is to try out the different perspectives; to describe and explain from different positions within the system. However, there is no objective vantage point from which these different perspectives can be synthesised into a singular truth. It is more useful to be aware of these different perspectives (theories, languages, stories) and to hold them in balance until the time for action. It is at the point of action (specific to person, place and time) that we choose between (or integrate) different perspectives. If we judge our action to have been effective, this is as close as we will get to the truth.

4. Safety and quality[6]

The purpose of this chapter is to survey the principles, models and mechanisms which have been developed to promote safety and quality in health care.

Settings and causes

Particular patterns of concern regarding both quality and safety emerge in particular organisational settings. Priorities for quality assurance and risk management likewise vary according to context (see Table 10, below).

- Lack of resources
  - poor quality because lack of resources
  - under-use because of access barriers
- Public (input) funding, salaried staff and bureaucratic inertia
  - concern over inefficiency and low productivity
- Fee for service funding (with incentive payments tied to revenue generation)
  - over-servicing
- Private provision but loose regulation
  - over-servicing to maximise income
  - under-servicing (adverse selection)
  - poor quality (lack of competence and conscientiousness)
- Third party funding and tight expenditure control
  - efficiency pressures lead to increased risk of underuse and skimping

Table 10. Different settings, different patterns of risk

Across most of the world today lack of resources is the biggest threat to quality and safety. Managers face particular problems where lack of resources dominates. Where there is a shortage of fully qualified staff health care agencies may implement 'task shifting' which means shifting some functions to lesser trained staff. This will carry particular risks and require particular strategies to minimise risks. Where salaries are so low as to impact on motivation and attendance managers have particular challenges to monitor such risks and maintain motivation.

Financial barriers to access is a very common threat to quality of care and patient safety. While this is largely a policy and finance issue it carries specific patterns of risk and threats to quality and calls for particular strategies to ensure quality and safety.

6. This chapter incorporates material developed by David Legge, Judith Dwyer, Liz Mullins, Bill Shearer, Mary Draper, Russel Renhard, Sophie Hill, Brian Collopy, Pei Likun and Arthur Hsueh

In some settings, public funding plus salaried payment plus rigid and bureaucratic administration have been associated with lack of morale, low productivity and low efficiency levels. This pattern of risk calls for particular approaches to monitoring and improving quality and safety.

On the other hand fee for service payment encourages over-servicing, both in private systems where higher volumes lead to higher personal incomes and also when it is associated with bonuses tied to departmental revenue generation as in modern China. The problem of fee for service driven over servicing has contributed to the development of highly sophisticated mechanisms for utilisation review and utilisation control.

Another pattern is labelled 'private provision but loose regulation'. This can impact on quality in a range of different ways, as shown.

Finally, the most recent pattern to emerge: third party funding linked to tight expenditure control can lead to concerns regarding safety. This pattern is evident in the UK NHS and in the US managed care system.

The immediate causes of risk and shortfalls in quality can be classified into

- Human factors (miscommunication, lack of training, fatigue and scheduling),
- Environment and equipment (lack of equipment, unsafe equipment, environmental hazards, etc),
- Rules and procedures (eg rules which tolerate unsafe procedures),
- Culture (eg environments where safety and quality are not valued by all).

Principles

The challenges of ensuring quality and managing risk overlap. They depend on many of the same principles and data collection procedures.

However, there are significant differences. Quality assurance is focused on improving the outcomes and experience of care. If health care resources are redirected towards more effective patterns of care there will be efficiency gains as well as improved outcomes. Quality assurance depend on the values of continuous quality improvement (CQI) and total quality management (TQM) (both discussed in more detail below).

The focus of risk management is on risks to patient safety; the possibility of harms befalling patients. Certainly departures from best practice care may be regarded as a potential 'harm' but the risks to patients which motivate risk management are often much more dire, including wrong side, wrong procedure, wound infection, etc. Certainly the principles of CQI and TQM contribute to safer care but the core principle of risk management is the idea of institutional resilience.

Quality assurance

Clinicians have always cared about quality but formal systems to ensure quality of care were not widely implemented until around the 1960s. Quality assurance (QA) at this time generally comprised three elements: first, a capacity to review services provided; second, to study cases where problems were identified; and third, to identify initiatives that might make such failures less likely in future. However, there were two elements missing in these early QA programs, namely, action and accountability. Early QA programs were largely run

by enthusiasts who were personally and professionally committed to quality but who were not part of the organisation's top hierarchy. Thus review, analysis and recommendation were not necessarily followed by action and accountability. In this respect the relative impotence of early QA programs in health care reproduced the relative powerlessness of the Quality Control Department in manufacturing. During the mid 20th C there was an increasing acceptance that executive management has direct responsibility for quality as well as share price. This was in part due to the success of Toyota in exporting motor cars to the USA (see below).

- screening - systematic review of all streams of care and all functions which contribute to patient care outcomes
- study – in depth study of potential problem areas and critical outcomes
- analysis, evaluation, recommendation – identifying and explaining shortfalls and recommending initiatives directed to improving outcomes
- decision (at appropriate managerial level) – including project brief to implement and monitor change
- accountability

Table 11. Quality assurance: core elements

One of the simplest but most influential 'theories' of quality is the "structure, process and outcome" model developed and publicised by Avedis Donabedian (1980). This provides a (partial) theory of quality and a strategic framework (although there are many important aspects of the quality and performance challenge which do not easily into this framework).

For centuries the only controls over quality in health care were the educational standards required for professionals entering practice. This focus on 'structure' was continued during the late 19th century as licensing regulations were put in place governing places called hospitals and was continued in the 20th C with the development of various forms of hospital accreditation.

A further development in the regulation of structure (personnel) was the introduction of periodic recertification (revalidation in the UK) in various medical specialties. This takes various forms ranging from encouragement to pick up Continuing Medical Education/Continuing Professional Development (CME/CPD) 'points' to periodic review based on a portfolio of evidence from one's practice.

However, in the early 20th C there was an increasing focus on 'process', what is done to patients as well as the personnel and facilities involved. Much quality assurance and utilisation review activity was focused on process, as in medical audit. Medical record review, as a formal part of hospital practice, developed first in the US, primarily in response to concern about over-servicing. Early reviews were based on 'implicit criteria'; the reviewer made judgements based on his or her own reading of the record. The introduction of medical record review using explicit criteria, determined in advance of the review, greatly increased the number of records that could be reviewed. Clerical staff would sort a large number of records against the criteria and pass on a small number of records which failed to

meet the review criteria to the clinician reviewer. As more of the medical record becomes digitised the sophistication of search algorithms has increased.

Many commentators are critical of quality assurance schemes which focus on process standards rather than outcomes, particularly where the evidence base for such 'process standards' may be weak. In recent years there have been redoubled efforts to measure the outcomes of care as well as defining and collecting indicators which reflect process standards. However, outcome indicators are expensive and except in research settings the attribution of outcomes to process is always problematic. The general focus now is on ensuring that process standards are evidence based. We shall return to evidence based medicine below.

Learning from business

The term 'quality control' was coined relatively early in manufacturing. It described a process which was based on the 'bad apple theory'; inspect the product at the end of the manufacturing process and remove the bad apples, those products which are faulty or which do not meet production standards.

This bad apple approach had two implications: first, it was inefficient in that the bad apples which had to be removed represented a waste of the resources which went into their production; and second that the Quality Control Department was a relatively insignificant unit at the end of the production chain. The rise of 'quality assurance' in manufacturing (as opposed to quality control) recognised that it would be a more efficient use of resources to get it right first time and this would involve closer attention to all the steps in production further up the line. However, the rise of quality assurance was limited because in many enterprises it was still being driven by a relatively powerless unit which, by whatever name, was the successor to the Quality Control Department.

In the early years after the Second World War Japanese industry focused on light manufacturing for export but its export products acquired a reputation for poor quality. Concern about reputation led to a deliberate focus within Japanese industry on quality management in manufacturing and it is in this context that the concepts of CQI and TQM emerged. Both concepts were developed in Japan but broke into global discourse in the 1970s as Japanese exports started to make inroads into the US market, in particular, in the auto market. These cars were cheap and of high quality.

CQI is about culture; creating a culture which is never satisfied with achieving any particular standard; a culture which is striving for continuous improvement. This illustrates the way in which prevailing attitudes may be part of the problem and culture change may be part of the solution. The idea of benchmarking also emphasizes the importance of culture. CQI is also about measurement, statistics and the systematic tracing of causes. It builds on the practices of operations research in the investigation and analysis of causes and identification of alternative systems and procedures. CQI brings to the fore 'the project' as the action pathway through which identified shortfalls might be addressed as a way of committing to change in a way which can be accountable within the organisation.

TQM is about mainstreaming quality. The quality of the product depends on striving for quality in all aspects of the production process. This requires making it the responsibility of

executive management instead of just the quality manager. It requires involving teams of workers in worrying about quality.

The concept of the organisational learning arose in the context of an ongoing debate about organisational design: when is it better to include the various units of the supply chain within the corporation and when might it be better to outsource (or contract in) non essential elements of production. This boils down to the big all-encompassing corporation versus the small lean contracting in model. The idea of organisational learning deconstructs this dichotomy by exploring the conditions under which large hierarchical organisations can cope with complexity and uncertainty.

Organisational learning is about culture. Practitioners and managers at all levels and in all departmental sectors are encouraged to think about how they do their work and how it might be improved; to think as well about changes in the external environment; and about how their work fits into the broader directions of the organisation. The learning organisation seeks to maximise the benefits of local autonomy without losing the wider coherence. Critical to maintaining the wider coherence is the idea of shared vision.

- Business models of quality management
  - quality control, quality assurance
  - CQI, TQM,
  - benchmarking
  - organisational learning
  - standardisation (6 sigma)
  - corporate governance
- Risk management
  - occupational health risk
  - financial risk
  - public liability risk
  - reputational risk

Table 12. Learning from business

During the latter part of the 20th C quality assurance in health care was increasingly influenced by thinking and practice in manufacturing and other service industries and the emergence of continuous quality improvement (CQI) , total quality management (TQM) and organisational learning.

Safety

Health care is inherently risky, including financial risk, clinical risk, occupational health risk, and liability risk.

- 3.70% of hospital admissions lead to "adverse events"
- 1.85% of hospital admissions lead to avoidable "adverse events"
- 0.50% of hospital admissions lead to "adverse events" resulting in death
- corresponds to 120,000 avoidable deaths per annum in USA

Table 13. The Harvard medical practice study (Brennan et al 1991)

The Harvard Medical Practice Study (Brennan et al., 1991) was a landmark study. Its findings have been reproduced in a number of other studies in the USA and in other countries. Note that 50% of adverse events were preventable. This points to the scope for improvement.

Adverse events also cost a lot of money. A study of adverse events in Victorian hospitals-2003–04 (Ehsani et al., 2006) reviewed 979,834 admitted episodes, of which 67,435 (6.9%) had at least one adverse event. Patients with adverse events stayed about 10 days longer and had over seven times the risk of in-hospital death than those without complications. The presence of an adverse event added $6,826 to the cost of each admitted episode. The total cost of adverse events in this dataset in 2003–04 was $460 million which was 18.6% of the total inpatient hospital budget.

For many years medical licensure was seen as necessary and sufficient for guaranteeing safety as well as quality in health care. This was partly due to the political influence of the medical profession during a period of ascendant medical hegemony. During this period the redressing of wrongs was largely assigned to the consumer and the lawyers through the civil litigation. Indemnity insurers took a determined approach to defence but a relatively passive approach to safety.

In the 1990s the prevention of wrongs became a matter of public policy beyond professional indemnity insurance, partly because of publicity attracted to particular scandals and partly owing to the increasing role of public funding in health care. A number of influential studies demonstrating the morbidity and costs associated with health care wrongs led to an increasing focus on safety as well as quality.

Another important change which was initiated through this increasing focus on safety as well as quality was the increasing recognition of quality and safety as responsibilities of executive management rather than being the professional concern of the clinicians (or lawyers). In some jurisdictions the term 'clinical governance' has become associated with this movement for managers to integrate a concern for quality and safety into the central strategic directions of their organisations.

The influence of business on the management of safety in health care has come through somewhat different pathways from those concerning quality and somewhat different issues have been emphasised.

In the mining industry problems related to safety arose primarily in relation to occupational safety and health (OHS). The number of miners dying in mine accidents bears a predictable relationship to the investment by mine owners in safety. Depending on the strength of unions, the pressures of the marketplace and the stringency of OHS legislation mine operators may choose to expose their workers to greater or lesser risks. Perhaps the most important lesson that health care can learn from mining concerns the calculus of risk analysis and risk management. Adverse events can be predicted and, given appropriate investment in safety, can be prevented.

The pressures are different in the airlines industry where the consequences of a crash in terms of loss of life and reputation are so much more catastrophic in terms of corporate interests. The airline industry takes an engineering and human factors approach to safety. This includes tracing through various scenarios associated with particular mishaps in order to put in place preventive measures in advance. It also includes the principle of multiple back-up systems.

Resilience

The concept of resilience is critical to managing for safety. A resilient organisation continues to deliver safe and excellent care *despite* occasional human errors. The difference between high and low performing organisations is not so much the frequency of human errors; rather it is the resilience of the high performing organisation in preventing the error from causing harm.

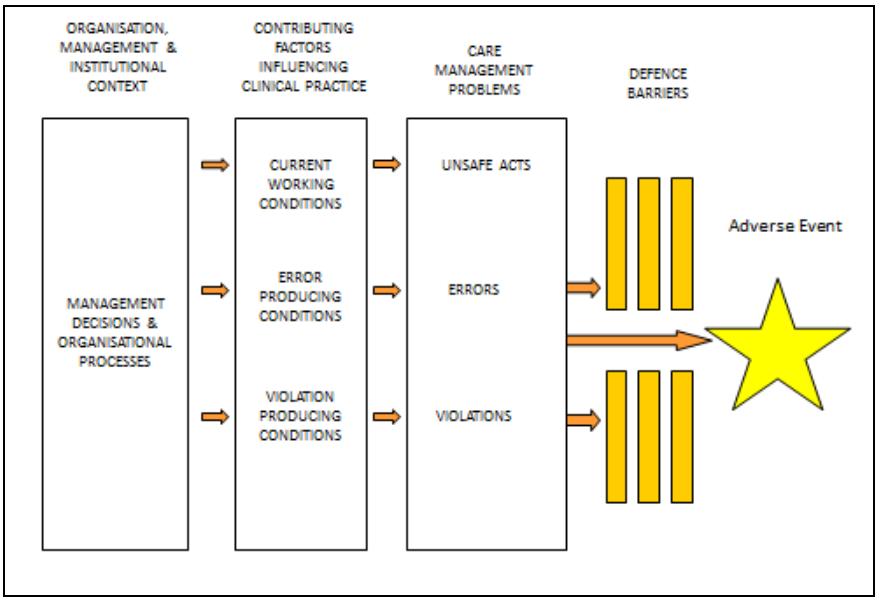

Figure 12. Adapted from Reason

Figure 13, above, demonstrates how errors and violations may be prevented from causing harm. Healthcare needs resilient organisations which are capable of dealing with uncertainty and unforeseen risk. Some of the characteristics of a resilient organisation are listed in Table 16, below.

- Focus on the objective of safety rather than just implementation of the rules
- Organisational learning (a culture of learning from experience)
- Decision-making authority of middle and lower levels validated
- Willingness to "drop your tools" (and break the rules if authorized protocols conflict with the needs of safety)
- Recognition of uncertainty (and the legitimacy of local judgement)

Table 14. Characteristics of a resilient organisation (after Mullins)

Evidence based medicine / health care

Clinical trials were not unknown before the early randomised controlled trials (RCTs) of the 1950s. Indeed the principles of controlled experimentation had been an established part of scientific enquiry and statistical science for centuries.

The advent of the RCT (and the 'natural experiment) demonstrated the feasibility of applying scientific method to medical practice. However, the authority of tradition and the legitimacy of clinical judgement remain a powerful forces in health care. The distinction between efficacy (in selected samples and controlled research settings) and effectiveness (in clinical practice dealing with different populations and variations in co-morbidities) points to the limitations of evidence based medicine and the continuing place for clinical judgement.

Towards the end of the 20th C there was increasing skepticism about using standards for evaluating 'process' which were essentially based on expert opinion rather than derived from research evidence. During this same time there was a rapid growth in the discipline of clinical epidemiology and a growing dissatisfaction with expert determined or consensus determined guidelines (particularly where tradition and seniority counted for more than clinical evidence). For a while there was an aspiration to bypass process measures altogether with the rise of a new 'outcomes movement'. However, the scope for any direct measurement of outcomes remains limited (including the challenges of attribution) so quality improvement in routine practice must continue to rely on the measurement of process linked to evidence based guidelines.

With the growth of the 'outcomes movement' and the move to evidence-based guidelines for processes of care there was increasingly scepticism also about claims for excellence based on achieving particular standards with respect to 'structure' as in the earlier versions of hospital accreditation, particularly where such standards were expressed primarily in terms of resources and assets. However, by the beginning of C21 the emphasis in evaluating 'structure' was very much about systems, processes and culture, with the rising influence of ideas such as organisational learning and clinical governance. However, there is much less

research around the structure → process relationship and the structure → outcomes relationship than there is around the process → outcomes relationship.

Nowadays we recognise the importance of structure and process as determinants of outcomes and hence as domains for intervention. We also recognise the importance of evidence linking process to outcome and structure to process and outcome.

Elements of EBM	Further reading
clinical trials	Bradford Hill (1952) The clinical trial, NEJM 247:113-9 Evans et al (2007) Testing treatments here
efficacy and effectiveness	Cochrane (1972)
James Lind library	James Lind Library
systematic review and meta-analysis	Duke University Centre for Excellence in Surgical Outcomes > systematic review / meta-analysis here; NHS Centre for Reviews and Disseminationhere
Cochrane Collaboration	Cochrane Collaboration here
clinical guidelines	National Guideline Clearinghouse (US) here US Agency for Healthcare Research and Quality: Clinical Practice Guidelines Online here; American College of Physicians: Guidelines for Internal Medicine here NICE (UK) Clinical Guidelines here NHS (UK) Library of Guidelines here Medical Journal of Australia Clinical Guidelines here Canadian Medical Association Infobase: Clinical Practice Guidelines here
clinical pathways	Every et al for the American Heart Association (2000). Critical pathways: a review, Circulation. 2000;101:461 here Queensland Clinical Practice Improvement Centre: Clinical Pathways here European Pathway Association here
clinical indicators	Mainz (2003). Defining and classifying clinical indicators for quality improvement, International Journal for Quality in Health Care 15:523-530 (2003), here Hickey (2004) Using clinical indicators in a quality improvement programme targeting cardiac care, International Journal for Quality in Health Care 16Suppl:i11-25 here ACHS Clinical Indicator sets, here
clinical audit criteria	NICE audit support (criteria), NICE） here Wikipedia > Clinical audit here
cost effectiveness / cost utility analysis	See Chapter 2 above

Elements of EBM	Further reading
evidence to support consumer choice	Sophie Hill (1998). Using evidence: empowering consumers here Patient Decision Aids (Ontario Health Research Institute) here NHS Choices, here Noah (New York Online Access to Health) here

Table 15. Evidence based medicine (EBM): key elements and further reading

More tools and methods

A wide range of different frameworks, models and mechanisms which have been developed for addressing quality and safety.

Many of these are mechanisms for particular aspects of the quality and safety challenge; variously, identifying, measuring, analysing, constraining and encouraging health care practice.

Among the 'partial mechanisms' we may include:

- regulation: registration and recertification (entry control), includes practitioner registration and recertification and facility registration and accreditation
- complaints and litigation (including liability risk management);
- the clinical tradition including the clinical logic model (structure, process and outcomes), accreditation, clinical audit, outcome measurement;
- clinical research and evidence based medicine; RCTs, systematic reviews, clinical guidelines (see Table 15, above);
- utilisation review / utilisation control;
- medicines policy: good manufacturing practice, marketing approval, access (subsidies, availability of generics), quality use of medicines, ethical promotion;
- learning from business, including CQI, TQM, risk management, organisational learning, benchmarking, clinical governance;
- demand side controls (market forces, competition); patient (family, community) empowerment; surrogate purchasing;
- engineering of financial incentives associated with payment mechanisms;
- exhortation and inspiration;
- nurturing of professional norms.

In contrast to these 'partial mechanisms' there are a few system wide institutional frameworks for quality and safety; we discuss these in the next section under four headings:

- Clinical risk management
- Clinical governance
- Organisational performance management
- Quality and safety at the jurisdictional level

Clinical review

The oldest form of 'clinical review' is the post mortem examination. During early C20 surgical death and complications meetings were set up, initially in academic centres but increasingly widespread. During the mid C20 medical audit was developed driven initially by

concerns regarding overservicing but in many settings, ranging much more broadly over various aspects of quality and safety.

The core idea of clinical review is the scanning of large numbers of cases and then focused study of problematic groups of cases or priority outcomes. The structure of clinical review programs depends very much on the tools and processes of the specialties involved.

In many institutions clinical review programs operate at some distance from executive management and are treated as the responsibility of clinical leaders. However, clinical review programs which are not accountable within the larger structures of the institution can be weak in terms of structural analysis of shortfalls and implementation of strategic reforms to promote quality improvement.

Benchmarking and best practice

Another important development in management thinking during the 1980s was the ideas of benchmarking and best practice. Benchmarking means comparing our practice with other organisations which do the same things or which do similar things. Applied to the health care system this might involve a focus on patient reception and routing in the outpatient department. We might start by looking closely at how we presently manage patient reception and routing in the OPD. We might select a number of indicators which reflect measures of the effectiveness of these systems. We then identify a number of organisations, preferably those which reflect 'best practice' in the industry and go explore how our results compare with theirs and investigate why. The idea of 'best practice' does not imply a standard which cannot be surpassed; rather it speak about the organisation which exhibits best practice within our circle of comparators.

Complaints and litigation

The role of complaints and litigation under the framework of common law has been a major feature in the quality and safety environment for centuries. During much of this time the structures of litigation and professional indemnity insurance evolved with little oversight from public policy and with the insurers paying a relatively passive role (while the doctors and hospitals and public were relatively unprotesting about premium levels).

However, during the mid to late 20th C, as professional indemnity premiums rose (and were passed on to third party payers in the form of higher medical and hospital costs) there was increasing pressure from insurers and government for more investment in prevention rather than simply dealing with wrongs after they occur.

One major innovation associated with this movement was the development of adverse (or sentinel) event monitoring and expectations of a more proactive approach to clinical risk management in hospitals. Risk management, encompassing the risk of legal liability, was commonplace in business but had traditionally been a relatively passive aspect of hospital management until the latter part of the C20. However, before looking further at risk management and complaints we need to delve a bit more deeply into common law and tort.

A tort is a legal wrong which has been done by one person to another and for which redress must be sought in the civil court. It has its origins in British common law (as contrasted to statute law). It is different from a crime which is generally based on statute law and is prosecuted by the police through the criminal courts.

There are two main torts which can arise in health care: negligence and assault. Negligence involves a duty of care, a breach in the duty of care and damage flowing from that breach. Proving all three elements can be very difficult which means that people who have suffered very real injuries from medical misadventure may be denied compensation. The possibility of the tort of assault arises when a procedure is undertaken without informed consent.

There are many problems with the litigation pathway. The adversarial nature of the proceedings contributes to bad feelings (as when a practitioner who has made a mistake feels unable to apologies for fear of admitting legal liability). The process depends on there being an identifiable breach of a duty of care (meaning that many patients who suffer damage from medical misadventure are not able to access any compensation). Demonstrating a breach of a duty of care depends on patients accessing information and technical advice which can often be hard to access.

Most importantly the blame and punishment orientation of the process is a barrier to early identification of system flaws and preventive action. In an editorial in the BMJ Berwick and Leape (1999)comment:

> *Fear, reprisal and punishment produce not safety but rather defensiveness, secrecy and enormous human … anguish … safety depends not on exhortation, but rather on the proper design of equipment, jobs, support systems and organisations.*

The complications of the litigation pathway have contributed to more systematic systems and procedures for complaints handling and systems and procedures for identifying and addressing risks before they lead to damage, including sentinel event monitoring and risk management generally.

In many jurisdictions specialist commissions have been established as part of this more systematic approach to patients complaints. These typically will include provision for conciliation, investigation and referral on to registration boards or the police if necessary. The emphasis on conciliation is intended to reduce the hurt and distress which denials can generate and to look at and learn from the system causes of mishaps. The conciliation process is terminated if complainants decide that they want to proceed down the litigation path.

Partly because of the increasing cost of indemnity insurance premiums systematic approaches to risk management in health care are being introduced more widely. Risk management means understanding your risk and taking steps to reduce or even remove particular risks. In its narrowest sense risk management focuses on the risk of litigation and is measured in terms of financial risk. Most indemnity insurers set their premiums at a lower rate if they are persuaded that reasonable risk management arrangements are in place. Further, most indemnity insurance policies offer an up-front deductible option, meaning that the hospital is effectively self-insuring for exposures up to a particular level.

With the rise of risk management comes a focus on documenting adverse events and near misses and analysing these to identify risks. It is now widely recognised that the fault and

blame focus of the litigation pathway tends to make the problem worse (because of clinicians' denials) and acts as a barrier to documenting and analysing problems.

A number of new policies are being introduced to reduce the fault and blame atmosphere around complaints and adverse events. One such policy is the 'OK to say sorry' policy being adopted by many indemnity insurers. In other words they are telling the hospitals and doctors who are insured with them that it is OK to say 'sorry' if a patient suffers some damage or heightened risk and that it does not mean that they are admitting liability. A related policy being widely adopted is 'open disclosure' which commits the hospital and staff to telling patients if something has gone wrong, even if the patient would not have otherwise learned about it. The NHS in the UK has a policy to encourage the reporting of adverse events; so long as no crime has been committed, if the staff member reports the incident within 24 hours there will be no punishment.

Some other initiatives which have been taken to ameliorate some of the negatives associated with the litigation pathway include legislating for legal privilege (protection) for documents generated in the course of quality assurance reviews and introducing no-fault compensation schemes. No fault compensation for vaccine related damage has been legislated in many jurisdictions. No fault compensation for a wide range of accidents has been implemented in NZ.

Listening to the patient's experience

In the remaining sections of this chapter we review in more depth a number of methods and mechanisms of particular relevance to management.

Our focus in this section is on obtaining consumer feedback; listening to the patient's experience or involving the client in evaluating and improving health care. These different terms - patient, consumer and client – all have different connotations and reflect different aspects of the patient/consumer/client experience. See Table 12, below.

- 'Patient'
  - the person who suffers
  - passive recipient of care (lacking information, vulnerable to exploitation)
- 'Consumer', implying:
  - commercial transaction?
  - active purchaser?
  - informed choice?
- 'Client'
  - information provision
  - choice of provider

Table 16. Different terms (patient, consumer, client) construct the health care relationship differently

Preferences for these different terms reflect deeper concerns about the nature of the health care relationship. These concerns have to do with:

- information as power and the vulnerability of 'patients';
- information provision to 'clients' as a core element of service provision; and
- informed 'consumer' choice (including perhaps third party (surrogate) purchasers).

The vulnerability of patients to exploitation (for example overservicing and overcharging) raises questions of wider accountability structures (see Chapter 1).

Information provision is a key element of service provision and there is a need for appropriate guarantees and protections from both a rights perspective and an accountability perspective. However, there are many aspects of clinical decision making which cannot be simply 'shared' with individual consumers and it is necessary also to acknowledge the limits to such information sharing.

Informed consumer choice is an important principle in health care design but limits to information transfer and the opportunity costs of supporting a wide range of providers to facilitate 'choice' also need to be acknowledged. Those policy makers who are ideologically committed to constructing health care as a 'free market' sometimes underestimate the limits and are prone to overstating the feasibility and effectiveness of informed choice.

There are many different methods used for listening to the patient experience.

• Observation (perhaps with checklists) • Patient satisfaction surveys • Semi-structured interviews (with carers and patients) • Focus group discussions (patients, carers, frequent users, chronic illness groups) • Patient diaries • Structured discussions (professionals, patients and carers) • Interviews with staff • Joint problem solving

Table 17. Methods of listening to the patients' experience and obtaining feedback

'Patient satisfaction' is a problematic concept. Patients' experiences are very heterogeneous and the things which they appreciate or which they see as negative vary widely. A singular measure, 'satisfaction', may obscure very important commentary and preferences, even when accompanied by 'sub indices'. Patient satisfaction tools are a passive way of tapping patients' opinions. Their responses are constrained by the questions which they are asked and the options available for responses.

We often don't know what trade-offs people make in reaching a view about their experience. Some patients who report themselves to be satisfied or even very satisfied may nevertheless be very critical of certain aspects of their care. Because of the limitations of different methods of collecting feedback it is good practice to use multiple methods.

Good surveys:

- have a clearly defined purpose;
- cover the main aspects of each episode of care;
- cover issues that matter to patients (not only those that matter to hospital staff);
- focus on listening to patient experiences (not just eliciting a satisfaction score);
- use language that make sense to patients;
- engages the patient in reflecting on the experience; and
- include space for open ended comment.

System wide frameworks for action

In contrast to these 'partial mechanisms' we need to consider three system-wide frameworks for quality and safety; risk management, organisational performance management and clinical governance.

Risk management

The concept of risk management has provided an integrative framework within which a whole range of strategies and models can be considered at the institutional level and can be considered in the context of the range of functions executive management needs to worry about.

The risk management framework enables information from a wide range of different sources to be considered and analysed and possible strategies to be prioritised. The risk management framework enables the investments in safety and quality to be evaluated beside the other purposes of executive management.

The modern paradigm of 'clinical risk management' includes what was missing in the earlier concept of clinical quality assurance, namely action and accountability. Clinical risk management is a responsibility of executive management; not just a group of enthusiastic clinicians with no leverage over management. The calculus of risk enables quality to be considered as a responsibility of executive management in relation to other uses of resources.

The principles of clinical risk management provide us with a systematic approach to identifying risk, understanding the root causes, estimating likelihoods and consequences and evaluating the costs of reducing the risk.

Risk assessment

The framework starts with risk assessment which is based on the collection and review of data from a wide range of data systems which identify risk.

• clinical indicators • clinical pathway variance analysis • infection control surveillance • death audit • complaints review • adverse event screening • incident reports (including near misses) • sentinel events • occupational health and safety incidents • clinician referral • litigation claims

Table 18. Data systems which help to identify risk

The collection of 'near miss' data is essential as they are generally much more frequent than adverse events and their analysis may yield rich data about both the errors and the buffers which prevent errors proceeding to harms. In some jurisdictions the term 'sentinel events' is restricted to those adverse events which hospitals are required to report to their appropriate government authorities.

It is apparent that the collection and reporting of all of these data needs to organised and funded. The collection of clinical indicators and clinical pathway variance is expensive and requires appropriate computer systems.

The critical aspect of this list of different data systems is that in each case the data are collected, analysed and reported to a single risk management committee (however named) or multiple committees as appropriate for further analysis and discussion and as appropriate recommendations for action.

The reports of these risk management committees including recommendations is then forwarded to the appropriate board committee for review at the highest level, including approval of projects as required for enacting change.

Understanding causation

Understanding causation is a critical part of the system. This starts with the clinicians or project officers involved in each of the separate data collections and proceeds in the risk management committee/s. Engagement in collecting data and analysising causes is part of building the culture of total quality management.

The tracing of cause ('root cause analysis', RCA) starts with the individual event (eg near miss or adverse event) and the decision that the issues are of sufficient importance to assemble a team to undertake the RCA. The first step is a detailed event flow chart tracing exactly how the event unfolded and the upstream events leading to it. This provides a framework for examining each event in the sequence: why, why, why, why, why? The kinds of questions we are asking at this stage have to do with: What was routine; what was abnormal? What was the contribution of staff competence, equipment, environment, information, communications, policies and guidelines, safety mechanisms, fatigue, etc?

The results of this questioning can now be put together in the form of a fishbone diagram in which all of the contributory factors (proximal, intermediate and distal) can be located in relation to the unfolding of the adverse event. In making judgements about causation, the following rules can be very helpful:

1. Causation statements must show the cause and effect relationship
2. Negative descriptions should not be used
3. Each human error must have a preceding cause
4. Violations of procedure are not a cause; they also must have a preceding cause
5. Failure to act is only causal when there is pre-existing duty to act

The next question is 'what could we have done better?' Returning to the event flow chart what kinds of defence barriers were in place or could / should have been in place? Recall the principle of resilience; and the defence barriers which prevent errors becoming harms.

The report of this analysis will include an analysis of this event (active or latent failures, factors affecting performance, failures of defences); and proposals for change and other commentary (eg potential for similar incidents and possible consequences, critical defences, priorities and action plan, resource requirements and budget, cost/benefit analysis)

Action

Ideas for action will emerge, initially from those involved in the data collections; then from the risk management committee/s and finally for authorisation and budget commitment by senior management.

The conservative response to adverse events is to focus on the individuals involved and initiate counselling or further training or more serious sanctions. However, the most common causes of adverse events are organisational, including the failures of defence mechanisms regarding human error.

The project is at the heart of safety and quality improvement. The project is the fulcrum of change. Unstructured 'shoulds' which do not specify responsibilities or accountabilities do not lead to change.

The project needs to be documented in terms of objectives, logic, timelines, responsibilities, budget, reporting, etc. It needs to be authorised at the appropriate level of management, properly funded and the project manager needs to be accountable.

Project outcomes will include: improved systems, environments, etc; the rate of similar events reduced; knowledge transferred to the next generation of clinical staff in that area; knowledge transferred to clinical staff in other areas.

The kinds of projects which emerge from this risk management approach are shown in Table 20, below.

- System level
  - collaboration on improving handovers
  - collaboration on emergency department performance
  - new clinical guidelines
- Agency level
  - improving hand washing
  - reducing frequency of falls
  - reducing frequency of adverse drug reactions
- Department level
  - implementing specific clinical guidelines; eg intra operative use of antibiotics
  - implementing new clinical pathways
- Practitioner level
  - acquiring specific new skills

Table 19. Projects which effect change

Executive accountability

Quality and safety must be included in the responsibilities of executive management.

Programs for collecting data about adverse events, near misses, complaints, litigation, etc and the outcomes of clinical review programs need to be monitored for the rigour of their collection and the systemic analysis (including root cause) of causes and possible reforms for safety and quality improvement.

The deliberative forums where patterns of care are reviewed, causes considered and priority initiatives for action are designed must also be accountable within the administrative hierarchy and senior managers need to be accountable for ensuring that priority issues are addressed.

As noted above, the project is the fulcrum of change, which means that the change projects which emerge from the process of review and analysis are authorised, supported and monitored from within the central management hierarchy.

Clinical governance

One of the most important lessons from business has been the importance of mainstreaming quality and safety as one of the core responsibilities of executive management. This concept of the mainstreaming of responsibility for safety and quality has been operationalized in the UK under the rubric of ‘clinical governance’.

The term ‘clinical governance’ derives from the corporate world and the principles of corporate governance. Implementing clinical governance requires appropriate and

comprehensive data gathering; thorough analysis; upwards reporting and horizontal feedback; and explicit relations of accountability including to parliament and public.

The British Government defines 'clinical governance' as a "framework through which NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish".

In exploring the practical implications of 'clinical governance' it is useful to consider separately the kinds of institutional practices which mediate the objectives of clinical governance, from the regulatory and institutional mechanisms which, in any particular jurisdiction, might constitute the governance framework needed to promote those institutional practices and ensure they are working as they should.

The kinds of institutional practices which mediate the objectives of clinical governance include:

- comprehensive clinical audit,
- effective risk management,
- rigorous complaints handling,
- systematic sentinel events monitoring,
- implementation of evidence based practice,
- individual performance review,
- continuing professional development,
- improved information systems, including performance indicators,
- strengthened accountability,
- encouragement for innovation, and
- culture change.

Governments can issue policies and instructions which say that everybody should, or that everybody must, implement such systems. But how to make it happen?

In the NHS the implementation of clinical governance involved the creation of a number of new institutions (and the reform of some older ones) with responsibilities such as producing guidelines, monitoring compliance with standards, supporting the change process etc. These new national level institutions included:

- Care Quality Commission
- National Institute for Clinical Excellence (NICE)
- Annual Health Check
- National Service Development Frameworks
- National Patient Experience Survey
- NHS Litigation Authority
- National Patient Safety Agency
- National Clinical Assessment Service
- Controls Assurance
- National Institute for Innovation and Improvement
- Leadership Centre

The ongoing reform of the NHS has involved the establishment of a number of new national level institutions with new roles, responsibilities and powers. These new institutions are designed to provide the drive and resources needed to put in place the required systems and practices on a comprehensive and universal basis.

The Care Quality Commission

The Care Quality Commission commenced operations in April 2009 and inherited the responsibilities of three pre-existing commissions dealing respectively with general health, mental health and social services. The Care Quality Commission was the third body since 2001 to provide leadership in relation to quality of care.

The first of these was the Commission for Health Improvement operated from 2001 to 2004. The stated aims of the Commission for Health Improvement were: to reduce unacceptable variations in care, and to ensure that every NHS patient receives a high level of care. The main activity of the Commission was to conduct "clinical governance reviews" in all NHS organisations on a rolling programme. It was also responsible for investigating serious service failures in the NHS (read: 'scandals'). The clinical governance reviews were discontinued when the CHI was replaced by the Healthcare Commission in 2004.

When it was established in 2004 the Healthcare Commission took over the Performance Indicators program from the Department of Health and rebadged it as the 'Annual Health Check'. The Annual Heath Check was continued when the Healthcare Commission was absorbed into the Care Quality Commission in 2009.

This Annual Health Check has several components: firstly there is a set of core standards in relation to which the agencies must report regarding compliance. The Healthcare Commission may choose to reject the claim of an agency to be in compliance with any particular standard on the basis of other evidence in their possession. There are seven domains of core standards for acute care agencies, each of which includes a statement of the standard and a number of elements which set the criteria for determining whether the agency complies or not.

The Care Quality Commission may also choose to mount an inspection of an agency where they are concerned about compliance. The second set of data which is collected under the Annual Health Check comprises an extended panel of performance indicators reflecting on a wide range of clinical programs and evaluation parameters. The third component of the Annual Health Check is the provision of consumer oriented advice in the form of ratings for quality and 'management of resources' for all health care agencies.

The hospital's claims regarding their achievement of standards and the Care Quality Commission's acceptance or otherwise of those claims are published on the Commission's website.

The National Priority Indicators for acute care agencies (the results of which are also published) include:

- infant health and inequalities: smoking during pregnancy and breastfeeding initiation,
- experience of patients,

- participation in heart disease audits,
- engagement in clinical audits,
- stroke care,
- incidence of MRSA bacteraemia,
- experience of patients – safety domain(s),
- incidence of Clostridium difficile,
- 18 week referral to treatment times,
- all cancers: two week wait,
- all cancers: one month diagnosis to treatment (including new cancer strategy commitment),
- all cancers: two month GP urgent referral to treatment (including new cancer strategy commitment), and
- NHS staff satisfaction.

There is also a long list of national targets largely dealing with access, waiting lists and delays.

The Care Quality Commission also conducts an annual National NHS Patient Experience Survey designed to:

- track changes in patients' experience at hospitals, year on year;
- provide information to support local quality improvement initiatives; and
- inform the national performance ratings and the performance indicators.

The National Survey of Patient Experience is expected to provide annual feedback on the things that matter most to patients, carers, and service users - from the quality of food to pain relief. The Survey can could trigger further investigation if services in a particular area of the Survey shows services in that area are consistently failing to deliver patient satisfaction.

The National Institute for Clinical Excellence (or NICE)

The role of the National Institute for Clinical Excellence is to produce or commission clinical guidelines. These are recommendations for the care of individuals by healthcare professionals based on the best available evidence. NICE produces guidelines and audit advice regarding any aspect of management, from prevention and self-care through primary and secondary care to more specialised services.

The Government selects topics for guideline development which are produced by six National Collaborating Centres, funded by NICE. The work of NICE complements the work of CQC. The CQC pressures hospitals to undertake clinical audit. NICE provides audit guidelines which correspond to evidence-based best practice.

National Service Frameworks

The National Service Frameworks (NSFs) (launched in April 1998) are basically service delivery models for defined services or care groups with national standards for care deriving from these service models. The rolling programme of NSFs covers: pre-exising frameworks on cancer and paediatric intensive care; mental health; coronary heart disease; the national cancer plan; care for older people and many others. The NSF also includes strategies to

support implementation and performance milestones to measure progress. The national service frameworks are basically planning guidelines but they also feed into the performance indicator process.

The National Patient Safety Agency

The role of the National Patient Safety Agency (NPSA) is "to co-ordinate the efforts of the entire country to report, and more importantly to learn from, adverse events occurring in the NHS". As well as making sure that events are reported in the first place, it is also part of the NPSA's job to promote a open and fair culture in hospitals and to encourage doctors to report incidents without fear of personal reprimand.

The Agency collects reports from throughout the country and aims to initiate preventative measures, so that the whole country can learn from each case, and patient safety throughout the NHS will be improved every time. The system uses:

- standard definitions of adverse events and near misses for logging and reporting;
- common reporting forms; and
- best practice methods to determine the causes of adverse events and near misses.

The Agency also operates the National Clinical Assessment Service which provides advice and assessment in the case of doctors whose performance is reported as problematic. Its clients are health authorities, primary care trusts, hospital and community trusts who are faced with concerns over the performance of individual doctors. The NCAS is an advisory body and the employer organisation remains responsible for resolving the problem once the NCAA has produced its assessment.

The NHS Institute for Innovation and Improvement

The NHS Institute for Innovation and Improvement was established to support the NHS to transform healthcare for patients and the public by rapidly developing and spreading new ways of working, new technology and world class leadership.

The NHS Litigation Authority.

In some cases it is too late to monitor and prevent. The damage has already been done. However, this area too has also been subject to reform, focusing on more effective learning from experience and more effective prevention.

The NHS Litigation Authority was established in 1994 to take over the functions of controlling exposure to clinical negligence liability; the defence of liability claims and underwriting compensation payments. Prior to this time these functions were managed directly by the hospitals through direct contracts with private insurers.

The Clinical Negligence Scheme for Trusts (CNST) is the main tool through which the Authority manages clinical negligence risk. Clinical Negligence Scheme for Trusts provides legal defence against litigation claims and underwrites any payouts which are ordered or agreed to. The Trusts all contribute to the cost of litigation defence and payouts. These contributions or premiums are related to the staffing levels and the particular specialties which are offered and the number of births per year.

Trusts can gain significant discounts on their premiums if they are judged to have appropriate clinical risk management arrangements in place. This is determined by the

clinical risk management assessors who visit the trusts and assess their risk management programs in terms of seven core standards.

From 'Clinical Governance' to 'Informed Consumer Choice'

The NHS has experienced continuing reform since it was established. The scandals of the 1990s focused increased attention on quality and safety and in the period 2001 – 2004 the reform was focused around the slogan of 'clinical governance'. We have reviewed some of the national level institutions which were put in place or mobilised to support the objectives of clinical governance.

However, the discourse has since shifted to give greater focus on informed consumer choice. This has involved a strong focus on the measurement and collection of a wide variety of performance indicators and the creation of websites where consumers can access simplified guidance regarding the performance status of local institutions. This provision of increased information to consumers is linked with increased flexibility of funding as part of creating competition within the NHS so that funding may be driven by patient choice.

The move to re-imagine the NHS as a market is in part driven by the global economic crisis and the pressures on governments to privatise publicly owned assets to reduce the pressures on revenue and provide new markets for private enterprise. As discussed in Chapter 2 there are reasons for having some scepticism about undue reliance on market mechanisms in health care.

Organisational performance management

Quality and safety as core objectives of strategic management

The idea that quality and safety are elements of organisational performance generally and central objectives of strategic management at the executive level is at the heart of the notion of clinical governance.

The responsibility of executive management is not to investigate and conciliate the individual case or episode. Rather the role of executive management is to form a picture of quality and safety across the organisation as a whole and to relate this to how the organisation as a whole works, its structures, procedures, systems and cultures. Most importantly it is to identify the large scale system level changes which will contribute to improved quality and safety and to assign responsibility to ensure that these changes are implemented and achieve their objectives.

Returning to the clinical logic model of structure, process and outcome we can say that the role of executive management is to create an organisational environment ('structure') which is most suitable for cultivating the 'processes' which will deliver the 'outcomes'.

Executive managers will from time to time need to undertake a comprehensive stocktake of quality and safety. However, once they have a clear sense of the key strategic directions which are needed to create an environment for quality and safety, the more important challenge is to ensure that those strategies are being implemented and are leading to improved outcomes.

Tensions between different organisational objectives

The 'mainstreaming' of quality and safety (clinical governance) places new pressures on managers by making them more directly accountable for the quality and safety implications of the various compromises that they are obliged to make on a daily basis.

The most familiar of these contradictions is that between quality and quantity; quality of care for a few or adequate care for the many. In publicly funded systems the choice may be between intensive and expensive services versus clearing the waiting lists. In fee for service systems the choice is more often between quality of care for the rich and basic care for the poor.

The consequence of 'mainstreaming' is that managers take more explicit responsibility for the quality, quantity, equity, revenue and efficiency outcomes and the compromises which are struck in dealing with these contradictions. It is the job of managers to make these judgements but the principle of 'mainstreaming' or 'clinical governance' requires that the compromises are seen more explicitly in terms of quality and risk as well as the more traditional parameters of volume and balance sheet.

Traditionally these compromises have been conceived primarily in terms of managing stakeholder interests because it is the political pressure from the various stakeholders which have mediated these contradictions. The politics of stakeholder pressure clearly impose significant constraints on the choices open to managers in balancing various organisational objectives while promoting quality and ensuring safety. Beyond the immediate pressures of different stakeholders is the wider complex of incentives which arise within the wider policy, funding and regulatory environment within which the health care agency operates.

Measurement of organisational performance

A number of different frameworks have been developed to assist managers to identify the minimum but most strategic set of performance indicators. Such indicator sets need to have breadth and depth.

They will have breadth in that they encompass the core strategic objectives identified for the organisation, including the strategic objectives which deal with quality and safety.

The panel of indicators must have depth also in that they encompass outcomes, outputs, processes and the core structural conditions, including culture, which frame what is possible. The indicators which executive management draws upon to monitor their core strategic objectives must range in temporal reach from (i) *ultimate outcome measures* (measures of achievement of our goals including quality and safety); (ii) to *performance indicators* which provide current indicators or predictors of the ultimate outcomes of care; and (iii) *system and process indicators* which monitor the implementation and maintenance of those core structural, procedural, systemic and cultural conditions for improving quality and ensuring safety as currently operating. This is the domain (of structure) where management holds the levers of change, the determinants of quality and safety.

These three different levels of indicators stand in a causal relationship to each other: changes in the systems and process indicators lead to changes in performance indicators which indicate and predict whether the ultimate outcome indicators are going to be

achieved. This is ‘double-loop learning’: are we doing the rights things? And are we doing them right?

Health care is very complex. There is a huge number of possible indicators. Good information is expensive; detailed reporting risks micro management. It is important to recognise how personal judgement (observation and experience) supplements measurable indicators.

One of the problems about measuring performance as part of your accountability to external stakeholders is what is known as “goal displacement” or “you manage what you measure”. In other words the indicators become the goals. Indicators are supposed to be signposts - if the scores or levels start changing, that is supposed to alert you to the possibility that something is either going wrong or improving. But there is a tendency for the measurements themselves to become the goal, particularly if bonuses or promotions or continued funding depend on getting good scores.

Measures can be distorted when the stakes are high or when they are used for different purposes than the ones they were originally collected for. The incentives they produce can also have a tendency to make different parts of the organisation, or different individuals, work against each other, or in a way that benefits one part but doesn’t really contribute to the organisation as a whole. In Australia, at least one bank collapsed in the early 1990s because the performance of the staff in charge of loans was measured according to how much money they lent, rather than whether the money was repaid.

Purpose, mission, vision, strategy, operations

It is commonly said that ‘what gets measured gets managed’. If so the indicators adopted to measure organisational performance are critical in shaping executive management.

It is useful to start with *purpose* of the institution. From purpose we can define the *goals* of the organisation. Purpose and goals may be conceived in terms of broad social policy terms, including meeting health care needs, improving quality, safety and efficiency, financial sustainability, organisational development, fulfilling employment, etc. Or purpose (and goals) may be conceived in terms of the demands of the various stakeholders who exercise influence over senior management. These stakeholders include government, owners, professions, workforce, unions, communities, etc.

These two conceptions will overlap to some degree. How much they overlap will depend on structural relations of the institution with the various stakeholders; the relative influence of the different stakeholder over management. The *real politik* is that managers cannot ignore the interests of powerful stakeholders.

Stakeholder analysis

- Who are our stakeholders?
  - government
  - staff
  - patients
  - communities
- How do we add value to their interests?
- Can we articulate our purpose in a way that acknowledges
  - stakeholder interests and power
  - need for an inspiring vision statement?
- Do we need to work towards rebalancing stakeholder leverage?

Table 20. Stakeholder analysis

Stakeholder analysis is used to improve understanding of the expectations of others, and how those expectations relate to the organization's goals. The first step is to figure out who the major stakeholders are – ie to answer the question who has a strong interest in how we perform or depends on our achievements? The second step is to figure out what those expectations are – ie to answer the question how do we add value to their interests? It is useful to decide which stakeholders are more important – do the patients, and society generally, come first? Or is it the government or owner, or the staff? Most organisations believe that they put the patients first, and almost all of them say they do.

It is essential to consider the ways in which the stakeholders interests are in conflict or tension with each other, and to look for ways of resolving or at least managing that situation. There is always pressure to serve the interests of the most powerful – this is why some governments require patient representatives on hospital boards of governance – to try to rebalance the power in favor of consumers.

Managers can assume to themselves the role of defining organisational purpose but there are a number of other agents who also attribute purpose to your organisation through their practice: your staff, your clients / patients, other organisations in your service system (suppliers, competitors, customers, partners) and policy makers.

Conflicting definitions of organisational purpose will make the achievement of any particular set of objectives more difficult. From the managers' perspective, 'performance' meaning the achievement of purpose, will be greatly facilitated by encouraging a common sense of purpose.

Creating common purpose is part of the leadership challenge. Working with staff to build a shared understanding of context and purpose. Working with managers from interacting organisations across the service system to create a shared understanding of the way the service system might work better. Working with policy-makers to create a shared appreciation of priorities and opportunities.

If the demands on senior management are too divorced from the social policy objectives of access, equity, safety, quality and efficiency then the policy challenge is to restructure management accountability so that stakeholder pressure is more closely aligned with those objectives. This might mean strengthening the accountability of the agency to the communities from which its consumers come.

The *mission statement* is the key reference in strategic planning. The mission of the organisation is the set of tasks that the organisation has to perform in order to achieve its goals.

Vision is critical for planning. Having regard to our Mission and to the changing context in which we are operating, what do we want our organisation to look like in ... (say 5 or 10 years)? A vision statement may include quantitative projections with respect to facilities, patient throughput, financial outcomes, etc as well as less quantitative values such as reputation and excellence.

Strategy is how we will achieve our goals. How will we increase our service volumes, improve quality and safety, strengthen the financial outlook, etc? What initiatives will we put in place now? What are the current limits on service volumes? How to expand those limits? How will we know whether our strategies are working? Strategies and associated programs of action are defined by measurable objectives and time-specific indicators of progress on the implementation of our strategies.

Operations are the routine activities through which the functions of the organisation are carried out. Routine operations constitute the field in which our strategies of change are to be implemented. Strategies act on operations. How do we know that strategies are working? Measurable objectives tell us whether our strategies are working but if they are not working we need to know why. So perhaps we will need to follow some indicators of our routine operations (basic business processes) so we can learn from our attempts to implement new strategies and perhaps revise and improve those strategies.

The relationship between strategies, objectives and operations is in some respects a research relationship. The strategy and its objectives reflect an hypothesis about the limits we are facing in our routine operations and opportunities for change. If we achieve our objectives we are in a sense confirming those hypotheses. However, if we don't achieve those objectives, perhaps it is because our hypotheses were wrong (strategies misconceived). So to follow the implementation of their strategies (and be ready to change them) managers need to follow both the objectives and the basic business processes upon which those strategies are operating.

Performance measurement thus involves monitoring at senior executive level:

- organisational performance (the achievement of purpose, goals, mission);
- developmental goals (the transformations we are trying to achieve, our vision); and
- effectiveness of our strategies (achieving desired outcomes through reshaping structures and systems).

The indicators selected should be timely, valid, reliable, strategic, cost-effective and limited (comprehendable) but sufficient.

Performance management involves the re-allocation of resources and the re-engineering of systems in order to achieve our mission and our developmental goals.

Example

Sunbeam Hospital's Strategic Plan identifies improved efficiency as one of our top level goals. We have identified the following strategies to achieve this goal.

- Goals
    - patient care more efficient (reduce cost per outcomes)
- Strategies
    - measurement and benchmarking
    - mapping and re-engineering clinical processes
    - implement clinical pathways
- Operations
    - measurement and benchmarking processes
    - compliance with clinical pathways

How might we measure our Goal achievement? How might we measure whether our Strategies are achieving the Objectives we have set for them? How might we monitor the basic Operations which these strategies are supposed to be transforming so that we know whether our strategies are working and if not why not?

Managing perverse incentives

Management is easiest where the incentives acting upon staff, departments and the organisation are closely aligned with the strategic objectives of the organisation. Under such circumstances the organisation manages itself.

However, incentives and objectives are sometimes malaligned. One way of looking at the role of the manager in such circumstances is in terms of achieving closer alignment of incentives and objectives at all levels. Unfortunately many of the perverse incentives which jeopardise quality, safety, efficiency, equity etc arise in the external environment, particularly in the regulatory, funding and market environments.

While this constrains management choices managers always have some room to move, ameliorating the influence of some pressures, insulating clinical decision makers from the influence of others. Even where managers have exhausted their room to move locally they may contribute to structural reform in the funding, regulatory and market environments: participating in policy reform through (i) innovation, evaluation, research and publication and (ii) speaking with policy makers through professional organisations. See Chapter 3 for further discussion of health service managers' contribution to policy making.

Quality and safety at the jurisdictional level

Many of the principles, perspectives and methods which we have reviewed so far are also relevant at the policy or jurisdictional level.

The structure, process and outcome paradigm points to a number of useful starting points including: practitioner registration and recertification, agency accreditation, support for evidence based clinical guidelines, system-wide performance indicators, etc.

The complaints and tort tradition point to a number of important policy issues including formalised complaints systems and no-fault medical misadventure compensation as in NZ.

The idea of learning from business points to a number of initiatives which can be taken at the system level which will help to realise the principles of CQI, TQM and OL. These could include: system wide measurement, support for benchmarking, funding for 'modernisation' initiatives, funding for innovation in health care, changing the parameters of the market place through better information, etc.

The principle of mainstreaming (the core principle of clinical governance) is presumed to contribute to quality and safety by making managers more explicitly accountable for the quality and safety consequences of the choices and compromises that they make.

As we have seen from the NHS example, strengthening clinical governance depends on decisions at the jurisdictional level involving: regulation, institutional development and resources.

There may be other initiatives which can be taken at the jurisdictional level which re-balance stakeholder power, strengthening the representation of patients' and communities' interests and which re-align the incentives at the organisational level in favour of improving quality and ensuring safety.

5. Population health: protection and improvement[7]

Our purpose in this chapter is to explore how the workforce and institutions of public health can be strengthened. We start with an exploration of how population health improves and the role of public health in such processes.

The terminology in public health varies widely. In this chapter, 'population health' means the health of populations; 'public health' means the deliberate social project of protecting and improving the health of populations (methods, practitioners, institutions).

The meanings of other terms such as health protection, disease prevention, disease control and health promotion will be clarified in context.

Contemporary population health achievements and challenges

Significant improvements have been achieved in population health in many countries over the last century (particularly in the control of communicable disease) and these trends continue, particularly with respect to heart disease, smoking related diseases and road trauma. However, the non-communicable disease epidemic gathers pace with increasing prevalence of obesity and diabetes; closely associated to changes in diet associated with globalized food systems. The co-existence of childhood obesity and stunting in several countries points to serious nutritional challenges.

With increasing expectation of life and shrinking family size older people constitute an increasing proportion of the population. As degenerative disease becomes increasingly common with age the total burden of morbidity is increasing and likely to continue to do so. The increasing burden of morbidity is paralleled by technological advances in the capacity of therapeutic medicine and health care and concomitant increases in cost pressures.

One source of contemporary challenges is globalisation which is affecting the conditions for health and the changing structures of health systems. The implications of globalization for include:

- the role of transnational corporations in shaping global food systems;
- degradation of the environment at the local and global levels; and
- new constraints on national regulatory ability through investor protection provisions in trade agreements.

Meanwhile continued vigilance is needed in relation to the regulations and facilities which are legacies of the 'old public health'. While many cities are still developing urban sanitation and reticulated clear water, a new threat has emerged in established sanitation systems which is the spread of bacteriophages through the sewerage system carrying antibacterial resistance from hospitals to the community. In occupational health the mortality associated with underground mining or ship breaking remains high while in other countries the focus is on shift-related sleep disorders and the emotional costs of fly in fly out labour. Clean air remains a challenge in many parts of the world, ranging from smoke from forest fires, to soot from indoor fires to nitrous oxides from diesel fuels. In the field of food regulation new challenges have emerged including the threat of pandemic influenza and the reality of antibiotic resistance emerging from industrial meat production. The experience of

7. This chapter includes material developed by David Legge, Deborah Gleeson and George Liu.

SARS, Ebola and avian influenza in recent years points to the continuing relevance of the disciplines of communicable disease control from 'the old public health'.

How health improves

One of the simplest stories about how health improves gives priority to the discovery of cause. John Snow's role in the removal of the pump epitomises this. There are problems with this story: first, there have been many passages of health improvement which happened before causes had been elucidated (eg improved nutrition associated with economic development); secondly because from identifying cause to implementing effective community wide action (eg city wide sanitation following John Snow) can take many years and complex social and political engagements.

Causation can be conceived at different levels. Another famous story concerns Rudolf Virchow's report on typhus in Upper Silesia. Virchow correctly identified poverty, poor housing, low morale, and alcohol as all contributing to the typhus epidemic. Further he excoriated the government officials for neglecting the affected communities and argued that lack of government accountability was the fundamental cause. However, the one thing missing from Virchow's diagnosis was an understanding of the role of the louse and the rickettsia. Nonetheless, Virchow's diagnosis was fundamentally correct despite the lack of a clear understanding of the science.

Neither the Snow, nor the Virchow example, tell us about the social, political and economic processes through which, first, London's sewerage system was rebuilt, and second, how the social conditions which gave rise to epidemic typhus were ameliorated.

The story of Vitamin C and scurvy takes us a further in this direction. Prior to James Lind there had been a number of reports linking citrus to the recovery from scurvy. Lind's contribution (1747) was to confirm the efficacy of lemon juice in the first ever clinical trial. However it was not until James Cook 20 years later that the practical effectiveness of dietary supplementation was demonstrated in a real world setting. Nevertheless there was a lot of forgetting, repeated tragedies and research in the control of scurvy before ascorbic acid was identified 140 years later.

Much of our knowledge of how population health improves has arisen from historical epidemiology, much of which has centred on the UK as the first industrial nation and because of its excellent records. We can get a glimpse of this field of research through recalling the Szreter critique of the McKeown hypothesis.

McKeown studied the improvement in the health of Britain during the 19th Century. He demonstrated that the mortality rates associated with various infectious diseases were declining well before vaccines or specific treatments were introduced. He concluded that much of the improvement could be attributed to improvements in the standard of living, in particular, improved nutrition. In this sense it was simply a consequence of gradual economic development and increased household resources (through jobs and adequate wages).

Szreter approached the same question, how did health improve, some decades later and benefitted from the availability of better mortality data. Szreter argued that McKeown had over-estimated the role of improved nutrition and under-estimated the benefits of

improved sanitation, particularly in provincial cities. Szreter demonstrated how the gradual achievement of voting rights progressively changed the political balance of forces regarding municipal sanitation. He argued that public health campaigners around housing, sanitation and clean water contributed to the demand for voting reform and thereby to the ultimate implementation of sanitary reform.

Black lung (or miners' lung) in the field of occupational health illustrates a different set of influences including science and the demonstration of the damage cause by silica as well as the role of labour unions in fighting for improved conditions in the mines. Black lung also illustrates the ways in which globalization has impacted on the distribution of different kinds of work and different working conditions. While rich country mining is now much safer, underground miners in China and India are still exposed to very dangerous levels of dust.

Tobacco control illustrates a different conjunction of influences. As before, the elucidation of causes played a critical role but from there on there have been multiple different strategies deployed ranging from health education (including in the clinic), to social marketing, to litigation regarding second hand smoke, to prohibitions on smoking in public places, to an international treaty (the Framework Convention on Tobacco Control) and most recently the 'tobacco carve-out' in the TPP.

The tobacco case illustrates the role of commercial interests in opposing public health improvement. The role of global food companies in driving the NCDs epidemic illustrates a similar dynamic but the regulatory challenge is more complicated. While tobacco kills when used as prescribed, food is one of life's necessities.

Not all of our knowledge comes from the rich world. *Health by the People* was the name of a very influential book published in 1975 just three years before the Alma-Ata Conference and Declaration in 1978. *Health by the People* comprised a collection of case studies of health improvement in developing countries including three particularly influential accounts of primary health care in action in Indonesia, Guatemala and India. The health improvements described in these stories reflected primary health care practitioners working with their communities to address the wider determinants of health in the context of providing clinical services. These cases reflected particularly clearly the power of community engagement in driving health improvement and were particularly influential in the lead up to Alma-Ata.

In recent years there has been an explosion of publications exploring the 'social determinants of health' (eg Marmot). These include studies of health inequalities (eg Kawachi), of migrant studies (Berkman), the lifetime implications of early childhood exposures (Barker) and the role of social capital. These studies point towards the health effects of alienation, powerlessness and social exclusion with implications for the social environment, the social conditions in which we grow, work, play and age.

While comparative studies underline the influence of inequality and exclusion there is less research demonstrating improved health as a consequence of countries deliberately electing to reduce inequalities and promote inclusion. One such case however is instance of Brazil which in 1988 embedded the right to health in the new constitution and in the subsequent years introduced a number of social programs directed at ensuring access to

basic health services and universal social protection with demonstrable improvements in health status following.

The WHO Commission on SDH was unequivocal in recommending policies of social protection (including minimum wages, aged pension, public housing etc); public services (education and health) and urban infrastructure (transport, power, telecommunications, water, sanitation). The implementation of these kinds of social policies involves complex collective choices for community solidarity over social Darwinism.

Pathways, agents and partnerships for better health

In this section we outline a framework for making sense of health development and the role of public health. The framework involves three broad pathways to better health; and the recognition of the 'other agents' of health improvement; other agents, beyond the institutions of public health who also contribute to health improvement.

We suggest that the role of public health can be thought about in terms partnerships with these other agents; partnerships which drive improvement through each of the three broad pathways.

The three broad pathways to better health are:

- improvements in health care, including personal preventive services;
- choices towards healthier and safer ways of living; choices which are individual and collective; and
- progress towards safer, healthier and more supportive environments.

The idea of 'other agents' of health improvement refers to the many people, beyond public health, who contribute to better population health; the grandmothers, teachers, road traffic engineers, pathology technicians, and farmers. There is a very wide range of agents whose work contributes to creating the conditions for population health most of whom do not conceive their projects and strivings in terms of better population health.

For our present purposes we can identify three broad groups of 'agents' from beyond the institutions of public health who contribute to better population health. These are:

- the managers, practitioners and organisations of the individual health care system;
- the policy makers, practitioners and institutions of other social sectors (education, industry, media, law, etc); and
- citizens (as individuals, as members of families and communities, as members of organisations and as participants in social movements).

Much of the work of public health practitioners is undertaken in partnership with these other 'agents' of health advancement variously driving health development down one of more of the three pathways. The matrix presented in Figure 1 depicts the range of different partnerships and projects which are part of the public health project.

Pathways to better health	Partnerships between public health (practitioners and organisations) and the 'other agents' of health improvement		
	the practitioners and organisations of the health care system	**practitioners and policy makers in other sectors**	**citizens (individuals, families, organisations, social movements)**
Improvements in health care, including personal preventive services	• access to effective health care • comprehensive disease/injury programs • provision of effective screening • effective immunisation programs • health services research	• innovation and access to pharmaceuticals and other medical products • workforce relevant policies in the educational sector	• support access to information and skills • support active participation in health care including self-care and self-help • support for consumers' rights
Choices towards healthier and safer ways of living; choices which are individual and collective	• providing communities with information about choices towards healthier and safer ways of living	• collaboration in working towards safer and healthier ways of living (food, transport, work, etc) • working with the media; social marketing	• collaboration in working towards safer and healthier ways of living (diet, exercise, smoking, driving, drug abuse, etc)
Progress towards safer, healthier and more supportive environments (physical and social)	• supporting the involvement of clinicians with their communities, on population health issues (road safety, safe water, healthy food)	• intersectoral policy collaboration (regulation, education, infrastructure) • policy coherence in foreign policy	• supporting and working with citizens' organisations and social movements

Figure 13. Pathways, agents and partnerships for better health

Working with the practitioners and organisations of the health care system

The various partnerships between public health and the practitioners and organisations of the health care system are quite central to the work of public health.

The model of comprehensive primary health care elaborated at Alma-Ata envisages primary health care practitioners working with their communities on the social conditions which shape their health as well as providing clinical services. The Declaration emphasises intersectoral collaboration at the local level as well as at the policy level. It places great weight on the agency of community in working towards the conditions for better health and an important part of this is the role of community health workers (CHWs) mediating between health care organisations and communities.

The important role of the public health system in providing support of the PHC sector is assumed in the Declaration. This will range from collaboration around immunisation and screening services, to educational programs about risk factor reduction, to collaboration around environmental issues from road trauma to safe water to girls' education.

Another facet of this partnership is in infectious disease reporting and the reporting of adverse drug reactions. Modern information technology can enable real time reporting with very low transaction costs for the practitioner.

Organised disease control programs which link prevention and care (eg cancer, chronic disease, trauma, etc) are a key element in the partnership between health care and public health. An integrated road trauma program will include provision for retrieval, emergency care and rehabilitation. It will also involve the trauma surgeons in reflecting on patterns of injury and in developing and implementing programs designed to prevent road trauma.

Similar disease control planning in relation to cancer, heart disease, midwifery and many other sectors of health care will include provision for seamless care for patients and for research into patterns and trends and campaigns around prevention.

Chronic disease management programs also illustrate the importance of this partnership. These involve public health practitioners working with clinicians to implement coherent programs of care and prevention in chronic conditions such as asthma, arthritis and diabetes.

Finally an important part of this partnership is the role of the public health researchers in contributing to health services research and policy.

Also choices and environments

Working with practitioners and policy makers in other sectors

Many examples can be cited of public health practitioners working with policy makers and practitioners in 'the other sectors'.

One aspect of communicable disease control concerns hygiene in food serving establishments. Increasingly public health authorities are moving from rigid standards and regular inspection to the more focused strategy of HACCP (Hazard Analysis and Critical Control Points) which involves a more collaborative relationship with those establishments.

One of the legacies of British public health is the central local relationship which involves a central board of health setting the standards and guidelines and the local board of health (usually the local government authority) implementing those guidelines. This model has been used in many jurisdictions for a range of regulatory purposes.

One of the core functions of public health is public communication, variously referred to as health education, health promotion and social marketing. Increasingly this involves a partnership with media organisations in shaping and communicating health messages.

Road safety is another field of partnership, in this case with the road engineers and vehicle designers as well as the media agencies in developing social marketing campaigns. In

many jurisdictions road safety campaigning also involves the insurance sector through their involvement in no-fault compensation schemes.

Occupational health and safety has evolved with its own set of institutions, commonly variants of the tripartite model involving employers, employees and government.

Working with citizens (individuals, families, civil society organisations, social movements)

The agency of citizenship can be a powerful force for health improvement.

Tobacco control provides a contemporary illustration of its power. As communities become more aware of the dangers of tobacco smoking, and the risks of second hand smoke, a sentiment strengthens against the practice of smoking. This sentiment has been critical in supporting progressive strengthening of regulatory restrictions on smoking and on tobacco marketing. In those jurisdictions which have been most successful in addressing tobacco disease public health has worked closely with the agency of citizenship.

Action on maternal mortality provides a similar example from a completely different setting. Many of the countries with the highest rates of maternal mortality are characterised by stark gender inequalities which are demonstrably contributing to the deaths of young women. These include under-nutrition and barriers to accessing care. In this context there is a strong case for partnership between public health and the women's movement.

Building a more effective public health system

We have defined 'the public health system' as that set of roles and institutions where people's daily work is, to a significant extent, structured around the explicit project of contributing to preserving and creating the conditions for better population health. What defines the public health practitioner is that his/her daily routine is explicitly organised around this purpose.

The key elements of the public health 'system' include:

- the core functions (surveillance, intelligence, investigation, research, communications, regulation, policy development);
- the breadth of expertise required including across the sub-disciplines (communicable disease, food, poisons, water, etc) and across the methodologies (epidemiology, social marketing, community development, policy development);
- the collaborative principle (advice, advocacy and partnership)
- relationship building for collaboration: with managers and clinicians in the health care sector; with policy makers and practitioners in the 'other' sectors; and with communities and civil society;
- institutional structures (bureaucratic, regulatory, academic; central versus local); and
- workforce development: vocational training for public health practitioners and extension training for practitioners in health care, other sectors and civil society.

What emerges from this partnership analysis is the central role of public health in providing advice, in undertaking advocacy and in collaborating with other agents of health improvement. What public health brings to this advice, advocacy and collaboration is based

on surveillance and intelligence, investigation, research and innovation, and policy development. These are the core functions of public health.

Surveillance is central; monitoring the full range of hazards, risks, vulnerabilities and outcomes and using modern technologies to collect, collate and analyse such data. Rapid flexible investigation capacity using the methods of applied ('shoe leather') epidemiology is also a core function. This is closely linked to research both within the bureaucratic side of public health and in the academic sector. Regulation is essential, both implementing existing regulation and developing new regulatory strategies to match the evolving challenges. The regulatory obligations of public health call for a strong base in public health law and close links with parliamentary counsel. Finally, a strong policy capacity is core; analysing policy options; working with the politicians to develop appropriate policies for health protection and improvement.

These core functions depend on a breadth of expertise across the sub-disciplines and the specialist methodologies of public health. The sub-disciplines include communicable disease, water, food, work, physical exercise, town planning, etc. The specialist methodologies include epidemiology, social marketing, community development, policy development, regulatory strategies. Specific methods and models include litigation, social marketing, PHC, HACCP, and the working of central local relationships.

According to this analysis the collaborative principle is central to public health practice. Capacity building for collaboration is about relationships; developing an understanding of the 'other sectors' (their priorities and their culture) and building relationships for collaboration.

Community engagement is a critical part of relationship building. This is partly about working through the PHC sector but in some degree working directly with civil society organisations and social movements.

The institutional structures of public health need to be somewhat dispersed to support this combination of core functions, intersectoral relations and capacity for community engagement. Some resources will be located within the government bureaucracy; some within academia, some in health care organisations and some in professional bodies. Some resources are centralised while others are locally based, often within municipal government.

The distribution of public health resources across these different loci, and the relationships (communication, collaboration) between them can be critical in terms of building institutional effectiveness.

Finally we need to consider workforce development. This involves strong training programs for career public health practitioners which typically includes the basic MPH plus advanced training in applied epidemiology and further training and experience in disciplinary and methodological specialisms. The MPH also provides opportunities for health care practitioners to gain familiarity with the functions, disciplines and methodologies of public health; not necessarily to make the shift career-wise but as part of broadening their role in health care settings.

Building public health capacity in the health care system is a key strategy for strengthening public health generally. Clinicians with a public health orientation will find

many opportunities for deploying such skills and insights including: working on quality and safety; developing and evaluating integrated disease control programs; and working with communities on social and environmental issues.

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