

Title: Building institutions for health and health systems in contexts of rapid change

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Title:

Building Institutions for Health and Health Systems in Contexts of Rapid Change

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Key words:

health systems, institutional development, change management, complex adaptive systems

Abstract

Many Asian countries are in the midst of multiple interconnected social, economic, demographic, technological, institutional and environmental transitions. These changes are having important impacts on health and wellbeing and on the capacity of health systems to respond to health-related problems. This paper focuses on the creation of institutions to overcome information asymmetry and encourage the provision of safe, effective and affordable health services in this context of complexity and rapid change. It presents a review of literature on different approaches to the analysis of the management of system development and institution-building. There is a general agreement that the outcome of an intervention depends a great deal on the way that a large number of agents respond. Their response is influenced by the institutional arrangements that mediate relationships between health sector actors and also by their understandings and expectations of how other actors will respond. The impact of a policy or specific intervention is difficult to predict and there is a substantial risk of unintended outcomes. This creates the need for an iterative learning approach in which widespread experimentation is encouraged, good and bad experiences are evaluated and policies are formulated on the basis of the lessons learned. This enables actors to learn their roles and responsibilities and the appropriate responses to new incentive structures. The paper concludes with an outline of the information needs of managers of health system change in societies in the midst of rapid development.

Main paper

Implementing the un-implementable

If one had brought the world's top social scientists together thirty years ago, none would have predicted China's sustained economic growth and rapid social and institutional change. Nor would they have predicted the many changes taking place in much of South and Southeast Asia. History seems to have overtaken the consensus frameworks for analysing economic and social development. This has major implications for health systems, which have had to adapt to a rapidly changing context. The title of this section comes from the conclusion of a mid-term review of a large health project in China in the late 1990s. It stated that the project was "un-implementable", because of a number of structural problems (Bloom et al 2009. P. 20). Since the government was using this project to test its options for health system reform, the implication was that these reforms would also fail. Ten years later, after many of the structural issues had been addressed, the government launched a major health reform, which included many of the options it had been testing (Bloom 2011). This experience illustrates the need to understand health system development as a change management process in a context of rapid social, economic and institutional change. This presents special challenges for the research community.

The aims of this paper are to increase understanding of the management of health system development in dynamic and complex contexts and to identify key knowledge needs of participants in change processes. It reviews several analytical approaches that have gained traction in analysing the management of change and the creation of stable institutions in health and other sectors and it identifies frameworks for thinking that are applicable to health system development. The remainder of this section discusses the emergence of increasingly complicated health systems in a number of Asian countries. The following section applies the lenses of complex adaptive systems and historical institutionalism to an exploration of

strategies for building health-related institutions in complex and dynamic contexts. The section after that focuses on large-scale, non-linear change and transition, drawing on the concepts of socio-technical regime change, disruptive innovations in business and high reliability management. The paper concludes with a discussion of the implications for health system researchers in rapidly developing low and middle-income countries.

Many Asian countries are experiencing a number of rapid and interconnected changes. These include economic growth, alterations to the proportions of people employed in agriculture, industry and services and large movements of people into urban areas. Links between rural and urban localities have been strengthened as a result of improvements in transportation, the spread of mass media and the increasing use of mobile telephones and the internet. Rapid economic development has put pressure on ecosystems with risks to human health from hazardous substances and from zoonoses, associated with intensified animal husbandry. Economic activities have been stimulated by rapidly spreading markets and the emergence of new types of private organisation. The development of government and civil society arrangements to influence the performance of markets has lagged behind.

These rapid developments have enabled many people to escape poverty and build better lives. They have also exposed populations to risks, which are creating new patterns of economic and social inequality. Governments need to find ways to enable rapid development and encourage potentially risky innovation, whilst helping people avoid the worst consequences of mistakes and unintended outcomes. One strategy for achieving this is by strengthening the health sector's capacity to protect people from the adverse consequences of ill-health. Efforts to achieve this need to take into account the institutional context within which health service providers are embedded.

Several decades ago, post-colonial and post-revolutionary governments invested in the creation of state-owned health systems managed through command and control bureaucracies. In theory, health facilities and individual health workers in these state-owned

systems followed directives from above. In practice, incentives and local pressures also influenced them. A number of countries have transformed their health sector into a modern health system with similar rules-based institutions to those in the advanced market economies. There is no single explanation for this outcome. In concluding a multi-country review of “What makes a successful health system”, Balabanova, McKee & Mills (2011) emphasise government leadership, the provision of consistent financial and management support and a concerted effort to build capacity at the level of individuals and organisations.

In many other countries, a messier health system has emerged, in which the rules of behaviour are much less clear. There has been a rapid spread of formal and informal health markets and the boundaries between public and private sectors have become blurred (Bloom and Standing 2008). Health facilities and individual health workers can now respond much more strongly to financial incentives and to opportunities for independent action. Users of health services also have more choice. The number of channels of flow of information to providers and users of health services, through the mass media, mobile telephones, the internet, drug detail men and so forth, has grown, as has the number and variety of organisations that produce content for these channels. Civil society organisations, such as trade associations, professional bodies, citizens’ organizations and political parties also exert an influence. Governments of these countries face major challenges in playing an effective stewardship role and guiding health sector development.

Building institutions for an effective and fair health system

This section is concerned with efforts by governments and other stakeholders to create appropriate institutional arrangements for health systems in dynamic and complex contexts. It builds on the arguments of Gilson (2003) on the importance of relationships of trust to health systems, and on two papers that analyse the health sector as a knowledge economy, making widely available the benefits of specialised medical knowledge and commodities, such as drugs (Bloom & Standing 2008; Bloom, Standing & Lloyd 2008). These papers

argue that societies have established complicated institutional arrangements to support the development of trust-based relationships between providers and users of health-related goods and services. These relationships enable people to benefit from medical technologies safely and at an affordable cost. The development of these institutions and the degree to which they address the needs of the poor and powerless are strongly influenced by political and economic factors. There are no simple blueprint guidelines for institution-building. Nor, can a model that works well in one country necessarily be transferred to another (Fukuyama 2004). This section draws heavily on two literatures which focus on the way institutions and organisations emerge and develop; complex adaptive systems and historical institutionalism.

The concept of complex adaptive systems, which was first developed by natural scientists, is being increasingly applied in the analysis of social organisation (MacGuire & McKelvey 2011; Room 2011). This approach views actors as continuously adapting to their environment and learning from one another (Eoyang 2005; Milteton-Kelley and Ramalingam 2011). Porter (2006) focuses on the ways actors influence and are influenced by their environment and how organizations and their environment co-evolve. Economists, such as Harford (2012) and Beinhocker (2011), use the concept of the fitness of an entity to explore how organizations search for a niche through a process of trial and error. They show how diversification and responses to small errors enhance learning and contribute to success in a rapidly changing environment. Ramalingam et al (2008) apply this kind of thinking to international development and argue, for example, that debates about the relative importance of top-down and bottom-up approaches for managing change do not pay enough attention to the agency of development actors and the degree to which they react to internal and external stimuli. Bourgon (2011) applies this approach to an analysis of the new demands on governments in an increasingly complex context and an exploration of the implications for the theory and practice of public sector administration. All these analysts understand institution-building as an iterative process through which actors negotiate conflicting interests, learn new ways of doing things and co-construct new rules of the game.

Several recent publications have applied concepts of complex adaptive systems to the analysis of health system development in low and middle-income countries (de Savigny & Adam 2009; Paina & Peters 2011). They describe a health sector in which a large number of parts are co-evolving and in which actors (individuals, teams and organizations) respond to policies on the basis of their points of view, the incentives they face and the relationships they have with one another. Although this applies to all health systems, it is particularly relevant when institutions and their underlying rules of behaviour, are not highly developed. The findings of a recent retrospective study in low and middle-income countries are consistent with this way of seeing health system development. They showed that the quality of health system leadership and the processes of implementation had much more influence on outcomes than particular policy designs (Peters et al 2009).

The largely complementary perspective of historical institutionalism provides a political and social analysis of the evolution of institutions and the complex webs of relationship within which they are embedded. It understands institutions as a set of regularized practices in which actors expect rules to be observed and transgressors to be punished. Hall and Thelen (2009) argue that these rules are co-constructed by policy entrepreneurs in government and non-government organizations. Institutions are constantly tested and subject to political negotiation and pressure and they continue to change in response to these pressures.

A study of the development of markets for specific products or services in the advanced market economies by Fligstein (2001) found that the leading firms in a sector strongly influence the organisation of markets as an important element in their survival strategy. These firms might lobby, for example, for the creation of standards that create barriers to entry by potential competitors. The outcome of this lobbying is strongly influenced, in turn, by the responses of other firms, other stakeholders and the state. The specific forms that institutions take reflect the histories and political-cultural contexts of different countries. Once institutions have been established, they tend to be stable, because they embody social

norms. This makes the particular design of institutions highly path dependent. This has important implications for so-called emerging market economies, where markets have spread much more rapidly than the institutional arrangements to mediate relationships between actors and regulate their performance. These arrangements are presently being constructed with fewer constraints to the choice of alternative development pathways than is the case in more mature markets. The interaction between market innovators, other stakeholders and the state is likely to influence these pathways strongly.

The case of China illustrates this point. Two recent books by Tsai (2002 & 2007) analyse the development of China's financial sector. They show how local credit markets emerged and developed both informal institutional rules and new kinds of partnership with local governments. The patterns of institutional development differed considerably between provinces as a result of their previous history. Eventually, the government adopted some of the rules into a legal framework, but the financial sectors continued to follow different trajectories in different provinces. Florini et al (2012) outline a similar phenomenon concerning the emergence of institutions to make China's economy more responsive to the needs and interests of the population. They describe a number of local innovations and show how successful ones tend to spread if they secure political support from national leaders, who see the innovation as a way to address a problem they are trying to solve. They also suggest that media publicity has enabled some innovations to win public support. They argue that China faces alternative pathways for institutional development and that the one it follows will be a political choice.

The design of institutions reflects, amongst other things, the relative power of different actors and the degree to which their interests are reflected in the rules. At the same time, the degree to which individuals believe institutions to be legitimate and consequently internalise the rules as ethical or moral norms, influences an institution's stability (Fligstein 2001). This means that rules need to be widely accepted as socially and culturally legitimate. They have

to be seen to address the needs of everyone, to some extent, even if they strongly reflect the interests of powerful groups. This highlights the degree to which the creation of institutions is a political process.

Analysts from both of the above traditions emphasize the stability of institutions. There is a lot of evidence that health systems are highly path dependent (Wilsford 1994). Bloom and Standing (2008) argue that this arises from the importance people give to arrangements they believe protect them from serious health problems. This is illustrated by the pressure on all British political parties to affirm their support for that country's National Health Service.

Cornwall and Shankland (2008) argue that a similar phenomenon has occurred in Brazil, where the health system has been accepted as a national project by all political parties. The unwillingness of many countries to renege openly on their post-colonial or post-revolutionary commitment to provide universal access to health services, despite their obvious failure to achieve this aim, is another example of the political potency of health. On the other hand, a health crisis can challenge the legitimacy of a regime, as occurred in China during the outbreak of SARS (Saich 2006).

In many countries that are experiencing rapid economic and social development, health markets have spread much more rapidly than have the institutional arrangements to ensure that they take the public good seriously. These institutions are presently being constructed. We can expect this to be a highly political process involving market innovators, other stakeholders and the state (Pierson 2004). The institutional arrangements that emerge are likely to influence the overall structure of health systems for many years to come (Bloom and Standing 2008). The next section takes a closer look at transitions and non-linear change.

Disruption and major transitions

The word *transition* has come into increasing use to denote large changes such as from a command to a market economy or between socio-technical regimes of, for example, ways of

producing and using energy. The increasing use of this word reflects a belief that major changes in technology, the environment, and the organization of global markets are underway and suggests the possibility of a shift from one relatively stable arrangement, or regime, to another.

One approach for understanding this kind of transition arises from studies of the factors influencing the change between socio-technological regimes, such as a shift to low carbon forms of energy (Loorbach & Rotmans 2010). These studies have adapted an approach used to analyse socio-ecological systems (Folke et al 2004). Van der Brugge & Van Raak (2007) argue that a regime consists of the combination of ecological realities, technological infrastructures, rules of behaviour and the overarching ways that technologies and their use are understood. On the basis of an analysis of regime transitions in several sectors, they identify the following phases: preparation, take-off, transition and stabilization. During the preparation phase, they argue, individual actors can wield a lot of influence. Westley et al (2011) emphasise the key role of institutional entrepreneurs, who provide leadership, build trust between stakeholders, develop visions, and act as brokers between people and networks. Leach et al (2011) argue that there are many possible pathways of socio-technological change and that the choice of a pathway is the outcome of a political process. They recommend that governments and other stakeholders make special efforts to ensure that the interests and perspectives of the poor and relatively powerless influence this choice. We suggest that the health systems of many low and middle-income countries are at an early stage of a socio-technological transition and that the way that transition is managed will strongly influence future development.

Another approach for analysing major change derives from studies of disruptive organizational or technological innovations in business. These innovations often involve reducing the cost of an existing good or service and expanding the customer base. Christensen & Overdorf (2000) argue that large firms are adept at sustaining enough

capacity for innovation to survive in a continually evolving market place, but tend to shy away from innovations that require big changes. This is partly because they benefit from the status quo and also because disruptive innovations may initially be seen as an erosion of quality.

During periods of transition 'subversive' ways of doing things can be found, often in informal spaces. As individuals search for new ways of doing things, they may create shadow networks where new ideas arise and flourish and where people try new ideas and discover what works in a given context (Olsson et al 2006). Light (2004) draws a parallel between the transition from a command to a market economy in Eastern Europe and the opportunities that the spread of the internet provide for the emergence of 'subversive' companies that develop new ways of doing business. The decay of the institutions of the command economy and the time it took to design and enforce new regulations provided opportunities for people to move quickly into new niches, relying on informal networks for support and protection. Internet entrepreneurs today have similar opportunities due to an ability to operate on the boundaries of legality. Castells (1999) documents how the influence of the internet and the rise of the information economy is reconfiguring the structure of enterprises and driving major changes in the organization of economies.

Several recent papers highlight the potential importance of disruptive technologies in the health sector (Hwang and Christensen 2008; Pauly 2008). They argue that new technologies make it possible to employ a rules-based approach towards diagnosing and managing illnesses, which reduces the need for the expensive expertise and judgment of physicians in a large proportion of cases (Halford *et al.* 2010). The internet is making it possible for people to gain access to 'expert' advice at a growing number of websites. Despite the availability of new and less expensive ways of providing access to effective treatment, Lee and Lansky (2008) warn that resistance by stakeholders and a myriad of complex regulations may greatly delay their widespread use in the advanced market economies.

Rapid economic growth in many low and middle-income countries and the rise in the number of relatively poor people with some disposable income is creating enormous demands for goods and services that meet basic needs at an affordable price (Kaplinsky & Farooki 2010). This is creating major niches for providers of trustworthy, low-cost goods and services. A recent study commissioned by the World Economic Forum found that some of the most important innovations in health service delivery were emerging in developing markets (Ehrbeck *et al.* 2010). The authors suggest that this reflects both the urgency of demand for improvements and the lack of institutional constraints. A recent paper by Biswas *et al.* (2009) about India, applies the notion of disruptive innovation to an exploration of how the spread of mobile telephones and increasing access to the internet is transforming how people get access to information and creating possibilities for them to manage their own health problems. The authors are unclear about the kinds of organisation, in terms of ownership and governance, likely to move into this niche.

The demand for effective treatment of common illnesses is stimulating a variety of organisational innovations and some are likely to become important models for organising the health sector. These include new types of service delivery organisation that provide cost-effective treatment (Bhattacharya *et al.* 2008), the spread of retail pharmacy chains to ensure the quality of products and provide advice based on expert systems (Lowe and Montagu 2009) and the use of mobile telephones, the internet and other knowledge intermediaries to provide expert advice and, perhaps, also provide an easy way to purchase pharmaceuticals. The decreasing cost of getting access to the internet through mobile telephones and other devices is creating big opportunities for organisations with a variety of motivations to inform and influence large numbers of people. It is difficult to predict how quickly these new types of organisation might spread, although the rapid take-up of mobile telephone banking is an indicator of the rapidity with which new applications can become established (Batchelor 2008). The difficulty of prediction and the speed of change mean that

we need research that can spot and follow emerging trends and quickly get this information to decision-makers.

As a complex market system approaches a regime shift, a 'space of possibilities' opens up, often prompted by a crisis (Mitleton Kelley 2003). Managers try different things until they find something that 'fits'. If alternative ways of doing business are already sufficiently developed, they can become the newly dominant models (Westley et al 2011). New institutional arrangements also include organised social responses to the negative consequences of unorganised markets. Two emergent forms of social response in the health sector are based on locality and on a shared health problem. An example of the former is community-led total sanitation which builds village consensus on basic standards for the disposal of human wastes and encourages all households to build and maintain a toilet. Chambers (2009) describes the spread of this movement from village to village motivated largely by a form of village-level civic pride. An example of the latter is MoPoTsyo, a Cambodian NGO that organises people with diabetes for mutual support (van Pelt et al 2012). It relies on people with diabetes to play a key role in identifying others with the disease, using a simple dipstick technology, and organising meetings to help people manage their diet and medications and consult a doctor when necessary. These organisations are blazing a trail for quite new ways for people to manage many health-related problems as expert patients and/or active citizens, while seeking support from health service providers and other experts (Olmen et al 2011). These changes are altering the governance arrangements in health and other sectors. Several analysts of governance and climate change have documented the increasing importance of networked approaches at local national and global levels (Boydd and Folke 2012; Hale and Held 2011). Bourgon (2011) documents how a number of governments are creating new kinds of partnership to meet social needs.

The management of a system, such as health, is particularly challenging during a time of rapid change, during which managers need to preserve the system's capacity to respond to

needs, while overseeing major reforms, which could have damaging unintended consequences. Recent work on so-called *high reliability organizations* and the reliability professionals, whom they employ, provides useful insights into strategies for ensuring public safety and well-being in highly complex and rapidly changing contexts (Roe and Schulman 2008). Reliability professionals are responsible for preventing disasters and protecting public safety and well-being. They include fire fighters, nuclear power plant operators and managers of critical infrastructure, such as water and electricity. Roe and Schulman (2008) argue that the need to prevent prolonged blackouts of California's electricity grid illustrates the constant effort and vigilance needed to maintain stability in societies that depend on complex technologies. Reliability professionals constantly scan the horizon for potential disasters and act to prevent them. They 'act mindfully' to 'catch the unexpected' (Weick and Sukliffe 2007). This mindfulness includes a 'preoccupation with failure, reluctance to simplify interpretations; sensitivity to operations; commitment to resilience and deference to expertise'.

Managers of health systems in rapidly developing societies face major reliability challenges in identifying and responding to shocks that could potentially destabilise the health system or its capacity to protect the population. These shocks might include the emergence of a potential pandemic, the use of sub-standard drugs and the risk of dangerous medical practices. These can emerge as unintended consequences of previous policy interventions. The reliability professionals, in this case, include the managers of systems of disease surveillance and response, drug regulation and quality and safety of medical care. They also include health system leaders and members of the political elite who are concerned to avoid crises that could harm the legitimacy of the health system and/or the governing regime. The way they respond to the inevitable crises provides an important insight into relationships within the health system and can significantly influence the direction of development of the system.

The management of big improvements in the performance of complex health systems is a difficult task. In the field of governing climate change, it is increasingly recognised that actors need to take an adaptive management and adaptive governance approach, which emphasizes learning across and between multiple levels of change (Boydd and Folke 2012). Peters et al (2009) advocate a similar approach in the health sector to ensure rapid learning about what works and what does not and monitor for potentially damaging outcomes. Lagomarsino *et al.* (2008) outline a stewardship role for government in building partnerships to improve the performance and regulate the private sector. We take this further to suggest that the leadership of health-system change also involves support for mutual learning by key stakeholders about new ways of organising the delivery of services and facilitation of the co-construction of institutions that embody new understandings of the roles and responsibilities of different actors and of the norms and behavioural expectations that underpin these understandings. These institutional arrangements are essential for the effective performance of a sector that relies heavily on trust-based relationships between actors. The way that common understandings are built and conflicts of interest are negotiated will strongly influence the pathways of health-system development.

Conclusions

The previous sections have presented frameworks for understanding the management of health system development in contexts of rapid and complex change. They view the creation of organizations and the institutional arrangements within which they are embedded as a process of mutual adaptation between key actors. The establishment of stable institutions entails the creation of shared understandings of the rules of engagement between stakeholders. This is especially difficult in a complex health system, where no one has the full picture and the picture keeps changing. One way to understand institution-building is as a process of mutual learning about the functioning of the health system and of constructing

an agreed set of formal and informal rules. These rules need to be grounded in a widely accepted set of values in order to become stable. There is a constant iteration between general rules that mediate social and economic relationships and rules specific to the health sector.

Recent studies of successful health system development have demonstrated the importance of leadership that supports the creation of stable institutions and ensures that health system actors respond to the needs of the poor (Peters et al 2009; Balabanova et al 2011). Policy makers need skills in the management of change in complex and dynamic contexts to provide this kind of leadership (Bougon 2011). Analysts of the management of change emphasise the importance of mindfulness and the need for managers to be aware of system functioning and anticipate and react quickly to unintended outcomes. This has important implications for researchers, who can play an important role in generating this knowledge. The following paragraphs outline five areas of focus for researchers to support this kind of change management.

First is the creation of an understanding of the historical legacy of the health sector in a particular country or locality. The formation of institutions is a context-specific, historically informed, process. The outcome of an intervention is likely to be strongly influenced by the historical legacy. Research can provide a systematic documentation of the operation of the health system and the context within which it is embedded, a description of the constraints to the achievement of policy goals and the identification of strategies for overcoming them. Although this might seem to be an obvious step, it is notable how few countries use a systematic knowledge of their historical legacy as a basis for policy development. For example, despite the obvious spread of health markets in a large number of low and middle-income countries, there are very few studies of the structure and functioning of these markets and the institutional arrangements within which they are embedded. There are also relatively few studies of the formal and informal institutional influences on the behaviour of

providers of health services. The lack of systematic knowledge makes major unintended, if unobserved, outcomes of government policies more likely.

Second is the generation of systematic knowledge about the functioning of the health system. This includes the inter-relationship between contextual factors and the behaviour of health sector actors. Some of the literature on change management in complex contexts suggests that experimental interventions provide an important source of this kind of knowledge, especially if evaluations look at the factors influencing the outcomes, including unintended ones.

Third is the need to scan the environment for emergent innovations and study potentially important innovations in depth. The impact on the availability of safe, effective and affordable health services of a new technology and/or a new way of organising service provision depends greatly on the institutional context within which it is embedded. It is important that government and other health stakeholders are informed about these innovations to enable them to learn the implications for their role and responsibilities.

Fourth is an analysis of governance arrangements that influence health system performance. These cover all aspects of the construction and operation of effective institutional arrangements, such as partnerships, networks and relationships between health system actors. Effective governance also involves the creation of common understandings between actors and the emergence of behavioural norms and core ethical values. Studies are needed on attitudes and ethics to assess progress in building institutions that are perceived to be legitimate.

Fifth is an understanding of health system stewardship and change management. This could include historical studies of successful change processes, such as the one by Kwon (2005) on social welfare development in East Asia, and prospective studies of particular policy issues. It could also cover studies of the maintenance of system resilience through the work

of high reliability professionals in anticipating and responding to potentially destabilising shocks. This kind of understanding is particularly important during a potentially significant transition, when the choice of a development pathway can influence health system development for a very long time.

Although the preceding paragraphs are derived from the frameworks we reviewed, they also reflect a common sense approach to the management of rapid change. In spite of this, agendas for research have often not reflected these knowledge needs and decision-makers have often acted as if they could safely implement change in a blueprint fashion (Sheikh et al 2011; Gilson et al. 2011). Several factors may mean that policy makers, and the researchers they finance, will pay more attention to the need for effective approaches to change management. These include: (i) the pressure on governments to respond to demands for access to good safe and effective health services by populations, who have rising expectations; (ii) a concern that things could go wrong and that citizens will blame government; (iii) a growing recognition of the degree to which market relationships now influence the performance of health systems, (iv) a perception of the potentially disruptive roles of technological and/or organisational innovations and (v) the highly publicised experiences of some countries in managing very rapid change, by relying on local experiments and an ability to correct course, when major problems arise.

This paper has argued that social science has not created a widely agreed theory of the management of change and the creation of appropriate institutional arrangements for health and health systems. There is, however, a growing body of literature in health and other sectors on approaches for managing systems and system development in complex and dynamic contexts. This literature draws on a variety of conceptual frameworks in an effort to provide systematic learning from a range of cases in different sectors. There is general agreement on the importance of clear leadership, on the need to understand the development of institutions over time and of the need for a learning approach to the

management of change. As researchers work closely with change managers they will build a body of knowledge, which will contribute to theory building and to the more effective management of health system development.

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Research Highlights

- Much of Asia is experiencing rapid change which is enabling many people to escape poverty, but is also exposing people to significant risks
- An effective health system can mitigate these risks
- As a result of many social and institutional changes, many health sectors increasingly resemble a complex adaptive system
- Health can learn strategies from other sectors on how to create resilient institutions in dynamic and complex contexts
- Agendas for research should take into account the information needs of the people responsible for managing these complex health systems