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Social values and health priority setting in China

Health priority setting in China

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Abstract

Purpose – The purpose of this paper is to provide an overview of the organisational and procedural arrangements for healthcare reform in China, and describe the role of social values in the relevant decision-making process.

Design/methodology/approach – An analysis of recent developments aimed at achieving universal coverage in China was undertaken in the context of describing the influence of underlying social values.

Findings – The key underlying social value was found to be social solidarity. Other values were implicit rather than explicitly stated, and were subservient to the overall aim of comprehensive coverage.

Originality/value – The paper shows that China is embarking on the largest-scale health reforms in the world. There is an eagerness to share experiences with other countries in an attempt to ensure the success of the reforms. There is an increasing understanding of the need to make the values underpinning the reforms more explicit and, in particular, those concerned with efficiency and appropriateness.

Keywords China, Health care, Social values, Government policy, Health care reform, Universal coverage, Social solidarity

Paper type Case study

1. Introduction

The primary objective of current healthcare reforms in China is to deliver universal coverage of essential health services with better provision than was ever achieved during the era of the planned economy. The introduction of market forces to the health care system in the 1980s led to escalating costs through over-use and increasing health inequalities, rather than the improvement in quality and efficiency which a market-based system was expected to bring. During this period, social discontent at unaffordable care and social inequalities became more prevalent. In 2002 China's politburo re-emphasised social solidarity as the central value underpinning health policy. Subsequent increases in government health expenditure followed, signifying a departure from a market-based approach and a sustained effort to involve the whole population in a social health insurance system.

A comprehensive healthcare reform programme for China's 1.3 billion population was implemented in 2009. The size and cost of these reforms has been unprecedented, with an additional \$125 billion being injected into health care expenditure. Government targets include social healthcare insurance for 90 per cent of the population by 2011, rising to 100 per cent by 2020. In order to contain this rising expenditure and meet the goal of universal health coverage, health care priority setting is required. Priority



setting is very much in its infancy in China. Early systems include an explicit “positive” drug list, naming those drugs that will be covered by insurance schemes, and a “negative” list for clinical services which, conversely, names those services that will not be funded.

The lists and the prioritisation processes have not been established through systematic application of the principles of health technology appraisal and lack scientific rigor and transparency. Objectives such as clinical effectiveness, cost-effectiveness and social justice are implicit but not formally incorporated into the process. A number of key questions that rest both on social and economic value judgments remain hotly debated, for example the scope of social health insurance, the nature of “basic health need” and the provision of drugs for “orphan” conditions. This paper will outline the main changes that have occurred in China’s healthcare system over the past decade, the existing tensions between process and ideology that have evolved, and the challenges that lie ahead for China in implementing a health care reform program.

2. Social health insurance systems

2.1 Population coverage

Reform of social health insurance in China has led to the development of three medical insurance schemes (Table I) and is regarded as being successful in attaining near universal population coverage. Each of the three schemes cover a specific demographic group managed by a specific governmental body or “ministry”: the basic social health insurance scheme for urban employees; the New Rural Cooperative Health Insurance for rural residents; and the health insurance scheme for urban residents (the elderly, students and children, and the unemployed). The Ministry of Labor and Social Security manages the two schemes for urban employees and urban residents, and The Ministry of Health manages the scheme for rural residents. For urban employees, the premiums come mainly from employers and employees. In contrast the government has assumed a greater responsibility for the two schemes for urban and rural residents who are characteristically less able to pay, and whose premiums are subsidised.

All three programs are government led. Inclusion in each scheme is determined by clearly defined employment and demographic criteria, rather than “health” status; both healthy and “sick” residents are placed into shared “pools” of health risk. Following substantial financial subsidy from the government social health insurance coverage has grown from 30 per cent in 2003 to 90 per cent at the start of 2010 (Chen, 2011).

In addition to these social insurance schemes, a further “level” of provision exists in the form of “medical assistance” (MA) for China’s poorest residents. The Medical Assistance scheme, similar to America’s Medicaid, is a form of safety net and pure welfare scheme for those outside of health insurance programmes. The Ministry of Civil Affairs runs its administration alongside other welfare schemes. Access to Medical Assistance commands either a flat rate or is free at the point of entry. Services covered by this scheme include outpatient services for chronic disease and inpatient services. Expenditure on this scheme by central government was estimated to be 15.2 billion yuan (US\$2.3 billion) in 2010, with approximately 60 million people thought to be benefiting from this provision (Li, 2011). Principles behind the social insurance schemes and this welfare scheme are different; the former is based on the principle of

Insurance scheme	Target population	Historical origins	Year founded	Number of population covered (end 2010)
Social health insurance scheme for urban employees	Urban employees	Evolved in 1998 from systems in place during the planned economy era including: The Free Medical Service program, founded in 1952, financed by central and local governments, for civil servants The Labour Medical Service program, founded in 1951, financed by employers for employees in industrial enterprises	1998	219.6 million
Social health scheme for urban residents	Urban residents (elderly, students and children and the unemployed)	–	Trial commenced 2007	181 million
New rural cooperative medical scheme for rural residents	Rural residents/ population	Rural cooperative medical scheme	2003	833 million

Source: Chen (2007); Ministry of Health (2009, 2010; paras 12.1, 12.3)

Table I.
China's three social health insurance schemes

equivalence (in terms of contribution and benefit) and the latter based on a principle of solidarity.

2.2 Service coverage and benefit for the three health insurance schemes

2.2.1 Urban employees.

The scheme for urban employees was established in 1998. Early debate focused on whether an individual account should be included and if or how it should co-exist with the pooling account. A pooling account takes a fixed contribution from employers and employees and “pools” these payments together providing the basis of social health insurance for all. An individual account requires additional contributions from both individuals (the major part) as well as from employers directly into the individuals’ own private accounts, which would have to be used for payment in addition to (or prior to accessing) the pooled account.

Two pilot schemes were started in different regions in 1995: the “channel model” and the “plate model”. Under the “channel model”, the individual account served as the primary source for both outpatient and inpatient expenditures. If there were insufficient funds in their individual accounts, then the patient had to pay out-of-pocket for the remainder, up to 5 per cent of their local average income (called the “deductible

line”) before the social pooling account kicked in to cover the remaining payments with certain co-payments from the patient.

Under the “plate model”, outpatient and inpatient services were separated. Outpatient services were to be covered by the individual account and inpatient expenses were to be covered by social pooling. No cross-financing between individual and pooling accounts was allowed under the plate model.

Analysis of the two pilot schemes revealed that the “channel model” introduced the risk of over-use in order to reach the deductible line: there was an incentive to spend more on health services in order to access contributions towards costs from the shared account. Consequently in 1998 the “channel model” was abandoned in favour of the “plate model” and the role of individual accounts was preserved (Ministry of Health, 2010; para. 12.1)

The plate model was rolled out nationally and financed by both individual and pooling accounts. It is financed by 8 per cent of employees’ payroll where employers contribute 6 per cent and employees contribute the remaining 2 per cent. All employees’ contributions go directly to their individual account, while 70 per cent of the contributions from employers are directed to social pooling. The remaining 30 per cent is allocated to the employee’s individual account. Outpatient services are primarily covered by the individual account while social pooling covers the inpatient expenses.

The division of funding between inpatient and outpatient services was introduced to increase government responsibility for management of critical diseases whilst limiting the burden on the social pooling account and preserving the individual’s responsibility for some health costs. The scheme is pooled at the municipal level reflecting the variation in economic status of different cities. In 2009 the financing amount was 1,007 yuan (\$155) per person monthly. It is projected that the average reimbursement rate for inpatient costs in 2011 would be 75 per cent.

2.2.2 Rural residents. In contrast to the scheme for urban employees, health coverage for rural residents is largely funded by central and local governments, with rural households paying a very low flat-rate. Because of the poverty and geographical separation of the rural population, the Chinese have developed the New Cooperative Medical Scheme (NCMS) where subsidies are provided to poorer regions. This is a government run voluntary insurance program that provides an initial subsidy of 120 yuan (\$18.4) per farmer, and the farmer is expected to pay up to 10 yuan (\$1.54) by themselves. This reflects a steady increase in government contributions from the first phase of reform where the central government contributed 20 yuan (\$3.1), local governments contributed 20 yuan, and households contributed 10 yuan (\$1.54) annually. Although these individual sums are very small in monetary terms, given the huge population to be covered (745 million in rural China in 2009) their aggregate cost for the government is vast. However, their real significance is that they are the first step taken by government to involve the rural population in health insurance, and there are government plans to further increase these subsidies.

Funds are pooled at the county level which, relative to arrangements for urban areas (determined by central government), provides rural communities with some degree of autonomy in which services they choose to provide, or how they distribute social contributions. The contributions from local government can also be higher in wealthier areas and, naturally, this serves to increase health inequalities between regions. The exact services and conditions to be covered by different sources of funding can vary

due to different interpretations of the “scope” of funding pools. For example, there is no formal definition of “catastrophic disease” in China. It is a more fluid concept and understood best as an economic, rather than a medical term, i.e. determined by how the insurance pool rather than a strict definition of predicted impact on life expectancy or quality of life. Different provinces have different policies relating to this determined both cost of treatment; predicted impact of illness and the health needs of the local population. This has not been the subject of formal “prioritisation” processes based to date.

Three main models of distribution exist: social pooling alone aimed at providing partial reimbursement for the inpatient services and catastrophic diseases (e.g. cancer, leukemia, critical heart disease); the “plate model” (as in the urban employees’ scheme) with both a pooling account and an individual household account; and finally a pooling account alone which covers both outpatient procedures and hospitalisation without an individual account.

Central government has encouraged wealthier counties to apply the last model, leading to a fall in reimbursement rates. Graduated reimbursement rates (see Table II) for inpatient and outpatient expenses have been introduced to create incentives for patients to access cheaper primary care outpatient services. For medical expenses incurred in township hospitals, the reimbursement rate for outpatient expenses is 10 per cent without an upper sealing on costs, whilst inpatient stays are subject to variable reimbursement rates set as a percentage of total cost incurred. The aim of this system is to reduce costly over-use of higher level hospital services.

2.2.3 Urban residents. This scheme only has a pooling account and primarily covers inpatient expenses. Patients have to pay personally for outpatient services. Since 2007, central government has requested that local governments provide a minimum subsidy of 40 yuan per person and financial support for disabled, low-income households, and the elderly. Central government shares at least 50 per cent of the costs of subsidies with local governments in financially disadvantaged regions. It is projected that in 2011, per capita financing will be as high as 170 yuan (\$26) annually; the reimbursement rate for inpatient costs will be 60 per cent and the capitation will be two times the average annual local income for the last year. These schemes vary between regions with richer localities providing larger subsidies (Bai, 2009, pp. 5-6).

Unlike the urban employee scheme, the schemes for rural and urban residents have no required minimum period of enrolment to qualify for benefits. These two schemes both provide annual protection and the insured would only have coverage for the current year.

Cost in yuan (\$)	Reimbursement rate (%)
< 500 (\$77)	0 – Deductible line
500-1,000 (\$77-154)	20
1,000-2,000 (\$154-308)	35
2,000-5,000 (\$308-769)	40
5,000-10,000 (\$769-1538)	50
10,000-20,000 (\$1538-3077)	60
> 20,000 (\$3077)	70 (capitation level 20,000)

Source: National Bureau of Statistics of China (2011)

Table II.
An example for
reimbursement rates for
inpatient treatment for
rural residents

These arrangements are complex but reflect a significant achievement in China's health care reform program. The systems have facilitated universal health care coverage in some form for a vast and diverse population. The government is trying to appease ever-increasing discontent resulting from lack of access to medical services amongst the most vulnerable groups. The arrangements are intended to redress prevalent health inequalities and ensure a minimal level of care for all, taking into account both ability to pay and need, and particularly for previously disadvantaged groups such as rural residents, the unemployed and elderly. The two latter programs for rural and urban residents, take the form of welfare measures to some extent, and aim at achieving social solidarity. Whilst the main principle behind the schemes for urban residents is that of equivalence, both in terms of contribution and benefit.

3. Drug formularies and clinical services lists

3.1 Drug formularies

Despite broad success in terms of achieving better health care coverage, China's implementation tools are still limited, and this restricts the potential for the social insurance system to translate into desired health and social outcomes. The generation of drug formularies is still largely an administrative process rather than an example of the application of evidence based decision making.

At the national level there is one "exhaustive" drug formulary listing all reimbursable drugs, and a negative clinical service formulary listing clinical interventions that are not reimbursable. The "negative" formulary was first developed in 1998 for the urban residents scheme, whilst formularies for the urban and rural residents programs followed and were developed on the same basis, although with fewer provisions. In the latest healthcare reforms, an additional "essential" drug formulary has been created. Drugs included in this "essential" drug list are primarily used in community health centres (primary care) in urban areas and in rural clinics and hospitals. They have a favourable reimbursement rate with the lowest co-insurance and are selected primarily on grounds of low cost rather than on considerations of efficacy.

These "formularies" are intended to serve as a benchmark for the three social insurance schemes. In practice however, there are disparities since the urban employees scheme has better provision than the schemes for rural and urban residents.

The "exhaustive" drug formulary categorises drugs into group A and group B according to their value. Medicines classified into group A are covered by social health insurance without co-insurance, while medicines in group B entail approximately 10 per cent co-insurance. In general, group A drugs are cheaper than those in group B. Patients have to pay out-of-pocket for medicines not included in the formulary. Provincial governments have discretionary powers to adjust the number of drugs included in category B in their area by 15 per cent.

Updated three times during 2000 and 2009, the final version of the 1998 "exhaustive" drug formulary used in the urban employees insurance scheme contains 1,140 items of western pharmaceuticals, 987 items of Chinese medicines, and 45 "ethnic" medicines.

The current "essential drug formulary" was generated in 2009 after the recent healthcare reform. This formulary was specifically designed for community health centres and rural health institutions. It also aimed to alleviate the cost of unaffordable

drugs. Drugs that were included in this formulary were to have a higher reimbursement rate and be guaranteed the lowest price. The final formulary version contained 307 drugs (205 western and 102 traditional Chinese drugs), and it was considered to be a milestone in terms of the government's ability to reign in drug costs. However, many practitioners have been sceptical about the feasibility of using this formulary due to the constrained options and the efficacy of the drugs included.

The drug formulary is maintained by the Ministry of Human Resource and Social Security (the "essential formulary" is maintained by Ministry of Health). The philosophy of the formulary is not to maximise cost-effectiveness, but rather to provide basic drug coverage and to contain costs. Selective contracting with different pharmaceutical companies is prohibited. The formulary only covers drugs with generic names: all the brand names for the same generic drug will be covered. Consequently the system provides limited coverage for drugs under patent.

3.2 Clinical service list

The national clinical service list is a negative list and is meant to cover all the clinical services except for some, such as plastic surgery, preventive services (immunisation and vaccines), dental services, and traffic accidents that will not be covered by social insurance. Advanced health technology such as CT and MRI scanning, coronary bypass surgery, and dialysis are conditionally covered with co-insurance from the patient. The amount of co-payment required is determined by cost (i.e. the higher the cost, the higher the co-payment); the perceived necessity of the service (non essential services requiring higher co-payment) and the rules of the specific social insurance scheme being used.

Using the national clinical service list as a guide, the province health authorities have the right to approve their definitive list, and health institutions must submit a service application to the local health and pricing authority before the service could be applied in their practice.

3.3 Development of the formulary and clinical services lists

To establish the exhaustive drug formulary, the Ministry of Human Resources and Social Security listed candidate drugs based on the National Essential Drug List and drugs covered by the formularies that had been developed under the planned economy. Pharmaceutical companies were not permitted to submit applications for inclusion of products in the list of candidate drugs. The Ministry then assembled a panel of experts comprised primarily of doctors, by randomly selecting from a pool recommended by the local governments. These experts voted on which drugs should be in the formulary and, if a drug was to be included, whether it should be listed under category A or category B, as outlined above.

Theoretically this drug selection process should happen every 2-4 years. However, there is no provision in the system for on-going review of the formulary as new information and new medicines become available, and any review of the formulary is dependent upon a decision by the Ministry of Labor and Social Security. The processes by which "experts" are selected to take part in any such review, and the processes by which they make their decisions are still not transparent.

4. Discussion

4.1 Identifying values underpinning health care provision and distribution

The primary value underpinning current health policy is clear: all individuals, regardless of their means should be able to access basic health care. Priority of universal coverage; risk pooling for the vulnerable; increased government financing and different insurance schemes for different groups of people evidence attempts to promote social justice through equity. The notion of “fairness” driving this system is apparent in the three stratified programmes where entry is broadly determined by likely needs and ability to pay. Each contributor shares in a “pool of health risk” contributing an equal proportion to other contributors sharing in that pool.

Beyond this however the social insurance system still lacks clarity and agreement with respect to what constitutes “basic” healthcare. There are no clear guidelines as to how the policy goal of basic healthcare for all is to be implemented or what in terms of outcomes, it means.

Standards of clinical effectiveness are at the discretion of physicians, and criteria used to judge cost effectiveness are not evidence rigorous – for example, they are often guided by simple “spend within budget” guidance – or evidence based. This lack of regulation, absence of cost effectiveness measures or explicit statement of what comprises “basic” need perpetuates the problems of the previous market driven systems whilst transferring escalating costs onto the government. Without explicit criteria regarding cost effectiveness and “basic” services to be provided, the current social insurance system reduces both individual incentives to limit demand and institutional incentives to restrict supply. Consequently inappropriate, ineffective and over utilisation of health resources places escalating financial burdens on government, employers and residents. There is therefore a considerable amount of work to be done in implementing the policy objective of universal health care for all in a way that translates to improvements in health care and attainment of socially valued objectives such as reduction in health inequalities.

4.2 A dilemma: what should be covered?

Since the beginning of insurance reform in China, debate has focused on what services and treatment (e.g. inpatient; outpatient; preventative; primary or specialist care) should be covered by the social health insurance program. At present social health insurance in China is designed primarily to cover treatment of “major diseases” (the three schemes mainly cover hospitalisation and catastrophic diseases) with the hope that morbidity-induced poverty can be decreased. The definition of “catastrophic disease” is not clearly defined.

Researchers have actively criticised this policy, highlighting that a major disease-oriented coverage strategy is contrary to basic principles of public health (prevention being better than cure) and also against the underlying principle of Chinese healthcare reform: “universal coverage of basic services” (Dong, 2009; Zhao and Lv, 2002). Coverage of primary care, outpatient services, and preventive services provide a more cost effective route to increase aggregate health and importantly reduce the progression of minor disease to more costly major illness. There is a significant international evidence base demonstrating that countries with health systems based on strong primary care have better healthcare at lower costs and lower levels of health inequalities (Starfield and Shi, 2007; Starfield *et al.*, 2005). International comparisons

have also shown that countries with health systems based on strong primary care have better healthcare at lower costs and more substantial reductions in health inequalities (Starfield and Shi, 2007).

Despite this critique a catastrophic disease-based insurance plan with high deductibles is generally favoured in China, based on the theory that the insured will benefit more by eliminating the risk of more costly procedures if insurance covers critical diseases as opposed to minor ones (Shuai and Zhang, 2008; Li and Wang, 2008). Preventative services are not covered as in theory they do not involve high risk outcomes, although it is accepted that it may be valuable to subsidise them (Rice and Unruh, 2009). The preference towards catastrophic disease coverage stems from a basic insurance rationale that insurance should cover “high risk” outcomes and recognition of the destructive impact by catastrophic diseases on vulnerable populations in China today. Implicitly this system suggests that greater value is placed on the avoidance of a catastrophic event for an individual than the general lessening of risk or smaller improvements in health for a larger number of people.

The difficulty in establishing the exact “function” and “scope” of social health insurance illustrates inherent inconsistencies in the Chinese move from a commercial to social health insurance system. The social insurance system in principle has both a social function and political objectives but these have not been clearly or explicitly laid out in terms of process or objectives. If its end is to promote aggregate health and reduce health inequalities it should be designed to provide coverage for the most common diseases or ensure a basic minimum coverage for purposes of equity.

It has been observed that chronic diseases have recently replaced infectious diseases to become the major disease burden in China (Wang *et al.*, 2005). In addition, costs for the treatment of chronic diseases and other preventable morbidity and mortality have now increased substantially (Yang *et al.*, 2008). The diagnosis and the treatment of chronic diseases ideally should be conducted in the primary care and outpatient services domain. Following the SARS outbreak, the Chinese government decided to invest in infrastructure for public health and primary care (Reddy, 2008). However there is clear ambivalence in how to manage these “new” public health challenges alongside historical prioritisation of “catastrophic” disease management. A social health insurance policy that excludes primary care and public health is no longer able to cope with the evolution of current population health challenges.

It is not feasible to cover every single procedure and treatment given limited health resources. A viable and sustainable social health insurance system has to be explicit in its objectives. To do this its systems and reimbursement schedules must be designed to produce incentives to reduce user fees for evidence based and cost effective treatments. Part and parcel of this is the requirement of policies to cover preventative care, encourage patients to engage in the referral system and disease management programs. There is clear scope for future policy to be directed at these ends.

4.3 Decision-making institutions and the formulary process

Governmental departments are the primary bodies responsible for deciding the content of the drug formularies and clinical lists. Before the latest healthcare reform, the Ministry of Health, the State Food and Drug Administration (SFDA) and Ministry of Human Resource and Social Security lead the process. There were key problems with

this system due to vested interests and tensions between different ministries and agencies.

From the beginning of the latest healthcare reform multiple bureaucracies and ministries have been involved in the process including; the Ministry of Health; the Ministry of Human Resources and Social Security; the Ministry of Finance, the National Development and Reform Commission in charge of pricing, and the SFDA. This is a more encouraging approach involving wider stakeholder involvement and greater coordination between relevant authorities. Given the complexity of the healthcare system and ideological and economic tensions regarding its intended outcomes, the move towards more open and democratic debate is a significant one.

4.4 Implications for research and practice

Despite these improvements China is still some way from developing an independent institution responsible for health technology appraisal or health priority decision-making reflected in the content of a national formulary. Where current decisions are largely made by bureaucracies' appropriate systems to engage and utilise relevant expert opinion is weak. Relevant stakeholder perspectives such as that of patient groups are negligible. The existing formularies are largely the product of subjective rather than evidence based decisions. This is due both to the limited quality of medical evidence in China and the absence of a formalised process to systematically appraise technology in the event of limited evidence. The few appraisal criteria that have been made explicit are ambiguous, e.g. necessary, safe and officially priced. They have not been formulated on the depth of ethical discussion required to determine a true consensus meaning or working application of terms, or indeed establish the legitimacy the criteria. Finally, the appropriate economic and ethical evaluation necessary to "realise" values driving health policy are wanting; the cost of proposed drugs or treatments and their potential impact in terms of quality of life improvements are largely ignored. These are the core questions and challenges that need to be explicitly addressed when developing future research and appropriate evaluation tools of China's health system and outcomes.

If the government's commitment to the principle of universal access to basic healthcare services is to be meaningful and as transformative as originally hoped, a scientific process for generating formularies has to be designed, implemented, and regularly reviewed. For such a process to be legitimate and relevant, it needs to adhere to a set of core principles such as scientific rigor, transparency, consistency, independence from vested interests, inclusiveness of all stakeholders, contestability, and timeliness.

This paper highlights that there are many challenges ahead for the Chinese health care system. The development of a stratified social health insurance systems has been an important step but its true potential will only be realised if adopted alongside a health technology appraisal system. Such a system is essential to reduce disparities between populations and realise its basic goals of aggregate health gains and reductions in health inequalities. The mushrooming of organisations such as the UK'S National Institute for Health and Clinical Excellence (NICE) provide important examples or models for China's health care planners in how to utilise cost effectiveness analysis to maximise health gains. These organisations however cannot work in an

ethical vacuum and China's biggest challenge will be to identify the core social values and change that it wishes to use these tools to achieve.

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