# The Notion of a Health Good in China and Elsewhere

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To understand the Chinese health system and its recent evolution, it is necessary to start by defining the global framework in which it is set. All countries have a mixed health system, combining pro-market elements with welfare state safeguards and China makes no exception. All reforms of the healthcare system implemented since the 80s have swung between both[2].

From 2003 and more intensively from 2009, a number of reforms have been implemented to facilitate universal access to basic cares. It is as a public healthcare coverage, designed for primary care improvement with a definition of a basic care basket accessible to all. All these reforms lean toward a pro-welfare state policy. End of 2013, following the Third Plenum of the 18th Central committee of the Communist party, a new set of reforms are launched, in favor of private hospital investment, including the privatization of some existing public hospitals, showing a clear shift toward a pro-market and competition policy.

Actually, what dominates is a lack of consensus between pro-market and a pro-welfare state policies in hospital management. Pilot experiments have been initiated in 2009 in 17 cities. Efficiency comparison between these experiments could have helped define a clearer direction, but major differences in the way they were carried out make these comparative studies quite inconclusive.

In reality, depending on the type of health good (primary cares, hospital cares, medicines…), directions taken in the reforms of the Chinese system cannot be interpreted in the same way. The goal of this chapter is to briefly present how economics define the notions of a public good versus a private good. The definitions presented here are those commonly used in economic literature. Amongst the well-known publications covering this, we can quote Cornes and Sandler (1986), Leach (2004), Hess and Ostrom (2006)[3]. We then introduce the specificities of health good in China and an overview of the situation of its healthcare system.

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[2] Yip,W and W. Hsiao. 2015. What Drove the Cycles of Chinese Health System Reforms?, Health Systems & Reform, 1(1), 52-61.

[3] Hess, C., E. Ostrom. 2006. Introduction. C. Hess, E. Ostrom, eds. Understanding Knowledge as a Commons: From Theory to Practice. The MIT Press, Cambridge, Massachusetts
Cornes, R., T. Sandler. 1986. The theory of externalities, public goods, and club goods. Cambridge University Press.
Leach, J. 2004. A course in public economics. Cambridge University Press: 155-156

# Health good definition and implications

## Public good and private good general definition

A good is defined as *rival* (or substractable) when its consumption by an agent implies it cannot be consumed simultaneously by another agent. As an example, the use of a tool by someone prevents others from benefiting from it at the same time. It is the same for a MRI scan. Going into more details, the consumption of an apple also falls into this category but it adds finality to it. For healthcare, medical consumable devices can only be used once for one patient. Its contrary, a perfectly non-rival good, is a good that can be consumed by every-one at any moment. For example, air or public lighting are non-rival goods.

So far, we have considered rivalry as a binary notion. In reality, many goods have partial rivalry. The notion of rivalry is more a continuum than anything For instance, the connection to a website is a rival good in the sense that more than one users can be connected at the same time but if too many are, congestion issues start to appear. It is the same for roads with the occurrence of traffic jams. Hospitals can have the same phenomenon, creating penury or waiting lines.

Pure free market conditions create a regulation through price, making it possible to solve, or at least reduce, the issue of penury and waiting lines. Yet, such a system implies that wealth is evenly distributed as a starting point. In case of inequalities within the population, such a free market regulation creates a financial roadblock. Choice is no longer a criteria as the financial constraints closes the access to the good.

A good is called *excludable* if it is possible to prevent consumers that don't pay for this good from benefiting from it. Oppositely, a good becomes non-excludable if it is not possible to restrain its use to consumers who pay for it. Public lighting for instance is a perfect example of non-excludable good. Any one, locals or tourists indistinctly, having paid for it or not can benefit from it. Nonetheless, as for rivalry, the use of a good by all has limits. In our example, it can be the number of people at a given moment in the street. Even though it may seem quite binary in the first place, it is actually a continuous notion: a good has a certain degree of excludability. As far as healthcare is concerned, this degree is high.

Pure private goods are defined as both rival and excludable, whereas pure public goods are both non-rival and non-excludable. Criteria for being non-rival and non-excludable can fluctuate over time, due to natural or political factors.

Some goods are defined as non-excludable but rival. These are called *common pool goods*. Others are non-rival but excludable. They are called *club goods*. To give example of the former, we can quote non-renewable natural resources. They are to some extent non-excludable, but their consumption leading to their disappearance, they are rival. For the latter, typical example is subscription to a gym, that's makes going to this gym non-rival but excludable.

Is health a public good? The individual her/himself is the main beneficiary of health. In that sense, health is a rival and excludable good, making it a private good.

Now, are health goods public goods? Goods and services established to give care to an individual are by definition rival and excludable, defining a private good. Yet, the specificities of these goods can lead the regulator to turn them into public goods. This can be explained by:

- The fact that some pathologies are communicable. In such cases, treating the patient has an obvious positive impact for this person but also for those around, by avoiding the spread of the disease. This is what is called a positive externality.
  The effect of the treatment impacts the patient himself but also his wider circle, even though only he was treated. It can be qualified as non-rival but excludable. The SARS epidemics in China in 2003 gives a very good example. The epidemics has been controlled by isolating affected people and strictly monitoring apparition of symptoms. Indeed, each contamination of an individual had a direct impact on his health but potentially also on that of people around him. Generally speaking, making vaccines public goods (non-rival through an increase in the number of professionals able to perform it and non-exclusive through gratuity or least affordability for every-one) tend to curb and finally stop the spread of viruses.
- One can consider health as a capital that is being depleted over time (Grossman, 1972). The better each individual maintains this capital, the better his productivity at work. Therefore, the sum of individual health goods has a direct impact on the total production at country level. Said otherwise, individual health goods, in spite of having the characteristics of private goods, have externality impact close to public goods. The cumulated effect of individual health levels implies, at macro level, a non-rivalry (a global good health status benefits to every each one allowing us to simultaneously enjoy a good health environment at each period of time) and a non-exclusivity (for each individual, a global good health level implies a better individual health level without additional cost. For instance, risks of infection will be lower, whatever the individual behavior in terms of risk prevention). A 2001 report from CMH-WHO[4] point out that a 10% increase in life expectancy at birth implies a surplus of economic growth by at least 0.3% per year, holding other growth factors constant.

## The health good and assumptions of pure and perfect competition

Pure and perfect competition theory has following assumptions:

*Atomicity,* i.e. an infinite number of suppliers and demanders for a same good. "Infinite" actually means sufficient to enable full competition between suppliers and between demanders. This implies that price has not been fixed by one side by is the result of market condition. It is said that the price is "price taker".

*Homogeneity of product*: health products or services are assumed identical, homogeneous, without differentiation, hence totally substitutable. In such case, consumers can make trade-off based on price only. In reality, there are differences amongst health goods. Yet, when these differences do NOT generate a non-substitutability, health goods can still be considered quite homogeneous. On the other hand, when there is non-substitutability, pure competition between health suppliers is no longer possible. This can explain the difficulties the Chinese regulator has in trying to improve the health system by setting up additional local health centers. For customers, being treated in a local center or in a excellent quality level hospital are indeed non-substitutable. This

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[4] Commission on Macroeconomics and Health _ CMH, WHO, 2001
http://www.who.int/macrohealth/infocentre/advocacy/en/investinginhealth02052003.pdf
accessed September 2017

also explains the congestions in the excellent quality level hospitals (called further level-3-hospitals).

*Freedom of entry and exit*: no barrier preventing a producer or a consumer to enter the market. Symmetrically, agents can leave the market at any time. This point emphasizes the asymmetry created by taxes imposed on a part of the healthcare market, namely the private sector. The public sector is immune of this financial burden. Besides, the opacity of land right regulation to set up private healthcare center may also explain the slow growth of a private healthcare institution market.

*Transparency*: the market delivers comprehensive information to the agents on the nature, quality and price of the available goods. We will see that this point will be a key point for the establishment of medicine drugs considered as essential, including for the generic medicine drugs.

*Mobility of production factors*: labor and capital can move from one market to the other in the pursuit of better profit. Here, the doctor's status and the medical staff level of training between the different areas including rural and urban ones will be a source of explanation of the healthcare Chinese inefficiency system.

When at least one of the assumptions of pure and perfect competition is not verified, the regulator must act to re-establish it. Assessing the validity of these assumptions for the actual healthcare market, we can see where market tends to fail:

- Quality level is not observable of imperfectly observable. Recent scandals in Chinese newspapers on product widely praised in search engines such but turning out to be hazardous show the fragile level of information of customers. Another story that made the headlines is about a 21 year old Chinese students suffering from cancer. To select his treatment and hospital, he searched for information on the quality of the available treatments on Baidu. This is the number 1 search engine in China and it controls 80% of the search market. Unfortunately, the information he gathered turned out to be wrong. He cried his distress about this wrongful information in a long post just before he died. [5]This drove Baidu into making a certain number of press releases on its ethics that should come before profit. But is it really the role of such a for-profit organization? What role should the regulator have in such cases? Shouldn't this kind of information be distributed by a non-profit or public service?
- In addition, there usually aren't that many suppliers on the healthcare market. For instance, for drugs or medical devices, patents often ensure a monopoly situations on many products for some years. Identically, hospital delivering high quality standards tend to be in a monopoly situation in the area they cater. They have autonomous management making possible for them to set prices themselves to a large extent.[6]. Healthcare demand has then no choice but to accept the price to undergo the treatment. Depending on the

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5 http://www.reuters.com/article/us-baidu-regulations-idUSKCN0Y203N
http://www.cnbc.com/2016/05/10/baidu-ceo-tells-staff-to-put-values-before-profit-after-cancer-death-scandal.html
http://www.nytimes.com/2016/05/04/world/asia/china-baidu-investigation-student-cancer.html?_r=0
http://www.scmp.com/news/china/policies-politics/article/1940511/china-launches-probe-baidu-over-paid-search-listings
http://www.scmp.com/news/china/policies-politics/article/1940668/baidu-scandal-spotlight-china-military-hospitals
http://searchengineland.com/chinese-scrutiny-baidu-ads-bogus-cancer-treatment-causes-death-249189
accessed September 2017

6 Situation is actually more complex. This will be explained in details in later chapters.

severity of the affection, two factors come into play. On one side, demand from patients and their relatives tend to become increasingly inelastic to price[7]: The health good shall be acquired, whatever its cost. Additionally, emergency is often linked to the severity factor of a pathology. Therefore, under the pressure of time, the price variable gets little scrutiny in the decision process, potentially leading to individual bankruptcy. This was a very common phenomenon in China before the implementation of public insurance[8]. These insurance schemes address the patient solvability issue, but market is still failing, as price is not the result of supply and demand confrontation but is set by the supplier.

- As far as healthcare is concerned, asymmetry is big between supply and demand. Supply has extensive information on the state of the patient that he doesn't even have. It is thus possible to generate unnecessary costs through over-diagnosis and over-prescription of drugs and exams. This phenomenon is called *induced demand* i.e. a surplus in demand that is caused by the supplier's behavior and not by the patient's actual health needs. This has been observed in hospitals with high quality standards and has been extensively documented in empirical literature[9]. In the case of China, a « zero mark-up »[10] policy has been implemented for a few years by the government, in order to control the price of medicine drugs prescribed to patients, with a very minimal margin rate for a list of medicine drugs considered as essential. Yet, government price control over hospitals that have financial autonomy is tricky, in particular in this case where information is asymmetrical, the regulator having little data feed from the ground level. For the regulator to actually assess the relevance of all procedures and prescriptions, a comprehensive information feed would be necessary as well adequate administrative resources to process this information.

All the failings of the market for health good scan justify an intervention from the regulator, be it for public goods or private goods. Nevertheless, we have considered here the health good as a whole, both homogeneous and perfectly defined. In reality, the health good regroups different items that are increasingly diverse, from medicine drugs to connected devices used for leisure purposes. They can be actual product, like a vaccine dose for instance, but also intangible items such as mobile apps. The latter category is becoming increasingly common. They can also include services involving actual contact, like regular medical consultations for instance, or only digital contact, like on-line consultations. The severity level also plays a part: shall we consider at the same level surgery to fix myopia and heart transplant? Price elasticity is a commonly use tool in economic sciences to sort them apart.

## Price elasticity

When the healthcare supply isn't regulated and that prices are fixed by the market, how does demand fluctuate with price? This is what price elasticity studies intend to determine.

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7 See next paragraph on price elasticity in the context of health goods.

8 Liu, Y. and K. Rao. Providing Health Insurance in Rural China: From Research to Policy (2006) Journal of Health Politics, Policy and Law, Volume 31(1): 71-92

9 Eggleston, Karen, Ling Li, Qingyue Meng, Lindelow Magnus, Wagstaff Adam, 2008. Health Service Delivery in China: A Literature Review. Health Economics 17(2), 149-165.
Hsiao, William C., Yuanli Liu, 1996. Economic Reform and Health—Lessons from China. The New England Journal of Medicine 335, 430-432.

10 This policy will be explained in more details later.

The elasticity of demand on price measures the variation in demand in reaction to a 1% increase in price, everything else being equal. When this variation is below 1%, it means that demand is little impacted by a price increase. It is said to be *inelastic*. First necessity goods fall into this category. As far as healthcare is concerned, it is usually considered that for acute pathologies, families are quite insensitive to the price of the treatment, causing many personal bankruptcies when there is no insurance in place to cover this spending.

Symmetrically, a good is considered elastic when demand goes down by more than 1% for a 1% price increase. The more the demand goes down, the more the good is elastic to price. For healthcare, goods in with such characteristics can be called *health comfort goods*. These are goods that don't affect the vital prognosis of the agent. Dental care, optical care or cosmetic care are amongst them. Still, one can wonder to what extent these so-called *comfort* goods do have an impact on agents, be it their quality of life or even their employability.

In studies on price elasticity of healthcare demand, income is usually considered as a given variable. Said otherwise, income is considered as having no impact on the decision to consume in relation to price. In a context of unequal distribution of revenues, elasticity can be observed the other way around, through income elasticity. For a healthcare demand that is considered fixed, there are 3 types of income elasticity. *Inferior goods* are goods whose consumption increased when income decreases. It means they are substitution goods to others that are no longer affordable. As an example, we can quote medicine drugs bought online: price is often the purchase trigger, as they are usually cheaper, but criticized for their dubious origin and quality. In that sense, they can be considered *inferior goods*. Similarly, on-line consultations are heavily debated as they have attractive pricing but lack guarantee on the quality of diagnosis. Implicitly, what critics of on-line consultations denounce is their character of inferiority. They don't make comprehensive examination and complete diagnosis possible and come in substitution to more expensive physical consultations[11].

*Superior goods* are goods whose demand increases with income. As far as healthcare is concerned, these usually encompasses goods that have little impact on vital prognosis. Finally, *normal goods* are goods whose demand is not sensitive to income. This category includes the goods that pose a threat of personal bankruptcy, as the patient hand his family will be likely to pay for the heath good until in financial difficult situation.

Depending on the affection severity and of the impact on life expectancy and quality of life, health goods can be considered superior, normal or inferior goods. In the case of a normal or inferior good, the question of a regulated market for healthcare is relevant. The regulator may want to ensure that his population has access to a given level of health or at least to a basic care basket. The bigger the scope of such basket, the mix between pro-market and pro-welfare state components of the system will tend to lean towards the latter.

## Should health be a good universally accessible or governed by law of supply and demand?

11 http://www.forbes.com/sites/brucejapsen/2015/08/09/as-telehealth-booms-doctor-video-consults-to-double-by-2020/#520077035d66
accessed September 2017

## Is health a good accessible to all?

The Word Health Organization (WHO) Constitution enshrines "…the highest attainable standard of health as a fundamental right of every human being."[12]. Nevertheless, the term "standard of health" encompasses both objective measurable indexes (e.g. glycemic level) and more subjective items (e.g. feeling of tiredness or depression). Depending on the criteria chosen to define good health, health policies and programs can be very different from one country to the other. For example, in some countries such as France, some cosmetic surgery procedures are commonly reimbursed provided the psychological effects what they are supposed to fix are observed and described by a doctor. In many other countries, such as China, cosmetic surgery is never covered by any public insurance.

Scientific and technological innovations will also create new ways to address health that were previously not considered. The part they are to play in the "health standard" is yet to be defined and is currently very variable from one country to the other. Obviously, internet and connected devices bring about a whole new set of tools improving the information to the patient and hence enabling him to improve his health. This encompasses apps for smartphones targeted to the general public or devices such as connected watches that can measure sleep cycles, number of steps and calories burnt. But there exist also more medically specialized devices like those aiming at supporting patients with diabetes, by measuring glycemic level through glucose captor in the abdomen or in the eye. They make possible to identify the optimal timing for insulin injection. Other objects can help address cardiac emergencies by measuring heart rate. Whether these devices should be covered by public insurance is currently a source of debate. Its depends, among others, on the nature of the good, superior, normal or inferior.

This issue of information collection by both public and private bodies is also quite acute. The operators of connected devices for instance collect an impressive amount of data coming from their users, which can be very valuable for public health research. For instance, the app GlucoSuccess from ResearchKit, targeted at diabetes patients, provides data to researchers from the Massachusetts General Hospital. [13]These data are used to improve the knowledge of patients with diabetes and the evolution of the affection. Yet, collection of personal medical data by private companies and the potential abuse it can generate does not go without controversy. Legal framework and jurisprudence are still constantly evolving in this area.

On social networks or discussion forums, many people reckon these connected devices should be covered by health insurance policies. Yet, so far there is to my knowledge no country reimbursing the cost of any connected device or health app. Is that a limit of the spread of these connected objects? The answer "No" implies that acquisition of connected devices is possible without any discrimination, as defined by WHO meaning whatsoever:

i) These devices must be physically available to all. This is probably generally the case thanks to online distribution.
ii) They must be financially affordable. The price of the device and app must be set so as to satisfy demand.

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12 http://www.who.int/mediacentre/factsheets/fs323/en/
accessed September 2017

13 http://www.stuffi.fr/objets-connectes-luttent-contre-diabete/
accessed September 2017 (in French)

iii) Finally, the regulator must ensure that information regarding the existence of such connected, their characteristics, medical use and limits, is widely available.

Moreover, the mass of collected data can lead to a screening of the population and to discrimination in the access to health insurance. People with higher risk of suffering from certain pathologies would then have to pay higher insurance fees. The regulator then, has to intervene to provide accessibility to a health insurance (public or private) or accessibility to healthcare for, at least, the excluded ones.

### Health as a private good and the healthcare

Affordability of care can be secured through one or various public insurance schemes. This does not necessarily implies that health providers, goods and services should themselves be public. For instance, in the US, health supply is mostly private[14]. Affordability is ensured by insurance policies subscribed by the individual or through his employer. Yet, for persons with higher risk, public insurances have been set up to secure the affordability of a predefined basket of cares.

In many countries, the healthcare market is highly regulated. It is the case in Europe for instance. But there are many other countries where the healthcare market is much less regulated and follows the law of supply and demand for many health goods. The notion of healthcare accessibility is then limited to a certain predefined category of goods. These goods are included in what is commonly called a basic care basket. These are health goods whose universal accessibility is considered mandatory, without any discrimination whatsoever. This accessibility must be both physical and financial.

This financial affordability is ensured through the implementation of public health insurance policies or through free care, as it is the case in countries that have set up a National Health System (NHS). The price of care can be either market-based or regulated. In a context where health spending are strongly monitored, the price for basic care basket is most commonly regulated. For instance, in the United States, patients over 65 years of age are eligible to Medicare public insurance scheme (Medicare). A payment mechanism has been set up to regulate hospital costs. It consists of a lump sum payment per Diagnoses Related Group (DRG) referring to both the pathology and the procedures used to treat it. The validity of this type of system is based on various factors. Among others, it implies that the lump sum is high enough to avoid private health suppliers voluntarily withdraw from the procedure, creating offer disruption and physical non-accessibility for the patient. In less extreme scenario, a lump sum that is not attractive enough tends to lead to a phenomenon of patient screening and skimming.

## Differentiated access according to the type of good

As it has been already mentioned, the access to care can be differentiated according to the type of health good. When public health insurance cover mostly a basic care basket, accessibility of other health good will be totally different, with often un-regulated price.

### Cases according to the vital prognosis (engaged or not)

14 With the exception of public dispensaries, public hospitals in limited numbers, and health centers for war veterans.

Recent evolutions in health system of OECD countries tend to converge toward some kind of coverage of costliest cares when the vital prognosis is engaged, through different types of mechanism. In European countries, be their organization from Beveridgian or Bismarckian inspiration, the care basket that is fully covered by the community is being reduced in terms of number of pathologies, but the most severe cases are better covered. Acute pathologies, affecting heavily the life expectancy of the patient and generating costly procedures are not only covered through well-established procedures but also those using technical innovation.

In countries where health good market is competition-oriented, public insurance schemes have been set-up, covering an increasing share of the population. For instance, in the United States, the Medicare program has been supplemented with the Obamacare. Not only are the elderly concerned but also the least well-off.

In cases when vital prognosis is not engaged, the public regulator intervention varies strongly from one country to another.

## Medical consultations: from physical to on-line

Health good in its wider sense include health services. The professional performing these services can be either self-employed or hired by an organization. Depending on his status, he can have different incentive to influence the number of consultations he performs. For instance, if the practitioner is salaried without any bonus scheme, he will have no incentive to increase his production. Oppositely, if he's self-employed with a per-consultation fee, he will have financial incentive to perform as many consultations as possible. This is what economists call *induced demand*. The supplier influences demand in order to increase it, even if not medically necessary.

These differences in the status of the supplier does not necessarily have implications on market regulation. For instance, in France, practitioners can be either salaried or self-employed, but the price of consultation is regulated in both cases. [15]It is fixed by a decree. Supply of the private sector can in some cases fix their own price, above that of the decree, but in such cases, public insurance just covers for the part of the cost equal to the official price, the surplus being paid by the patient. In the United Kingdom, the price of health services is also regulated. For some years, a private healthcare market has been developing fast, but patients using such services are not covered by the public health insurance (National Health Service, NHS).

Online health goods have been appearing over the last decade and have changed the landscape of health supply. To a large extent, they help in solving the issue of physical accessibility.

As far as financial accessibility is concerned, two factors come into play: price itself and insurance coverage. If the price is low, patients will be able to acquire the health good, whether or not it is covered by an insurance. On the other hand, if the price is borderline with the patient's ability to pay, its financial accessibility can only by granted through health insurance coverage, even partial.

Among health goods available over the internet, online medical consultations are now authorized in an increasing number of markets. We can quote Switzerland, Sweden, Finland, UK or France (since end of 2010) as examples. One of the main arguments of the supporters of such development is that it improves the financial accessibility but also eases the monitoring of the suppliers' shortage. Nevertheless, many countries strictly regulate this market to control its

15 Most of the French medecine doctors belong to the group of practitioners called « secteur I ».

development. In France for instance, the possibility for a practitioner or a group of practitioners to offer online consultations is bound by a formal authorization from its regional health regulatory agency (ARS, Agence de Santé Régionale). The project will only be accepted if there is a recognized penury of healthcare supply in the region. Online consultations are thus only seen as a way to mitigate the lack of physicians in certain, mostly rural, areas. The flip side of this rigidity is that the cost of online consultations is fully covered by the public health insurance system in these European countries.

Online consultations is to be differentiated from online medical advice that does not lead to official medical diagnosis and prescription. Services of online medical advice also develop quickly, even at a faster pace than online consultations. One of the reason is the very loose regulatory framework in which they operate. In addition to these, online medical services also include monitoring. They help develop home-based care replacing hospitalization. Physicians can analyze data collected via connected devices, a visiting nurse or directly sent by the patient himself. This type of monitoring is particularly well suited for chronic diseases and care of the elderly.

Another sector of use of online health services is between "P2P", i.e. physician to physician, be it online coaching/tele-expertise or online assistance/telehealth monitoring. *Tele-expertise* means asking for advice on a particular case of a fellow physician with a rare or locally unavailable skill. For instance, the emergency physician can ask for the advice of a neurologist if he has to treat a stroke. Progress of medicine often implies the need of increasing specialized advanced knowledge. Internet is then a very precious tool to pool this knowledge as much as possible. *Online assistance* or *telehealth monitoring* is more intrusive in the support given by the fellow practitioner, with direct intervention in the medical procedure. A famous example of such assistance is the collaboration between Shenzhen No 2 People's Hospital in China and two physicians from the University of California in San Francisco (UCSF), in which they have remotely supported the surgery of a brain tumor[16].

In a totally free healthcare market, the price of such acts should be defined only be supply and demand. On the other hand, in the case of a regulated healthcare markets, such cooperation is handicapped by unstandardized reimbursement schemes.

## Prescription and non-prescription drugs

The question of accessibility to medicine is quite acute on a global scale. Price for drugs not only depends on the price set by the pharmaceutical lab but also on the margin applied by all intermediaries in the distribution channel up the patient. Drug price can be regulated in cases when it covered by a public insurance scheme. The more a drug is reimbursed, the more, the more actual demand will tend to converge towards potential demand level (numbers of patients that would use this drug for medical reasons, independently from financial considerations).

When a new drug brings innovative molecule, its price is set by the pharmaceutical company. If this drug is reimbursed by a public health insurance, its price will then be the outcome of a negotiation between regulatory bodies and pharmaceuticals. When a molecule becomes old enough, its patent falls and other labs can start producing it. These new comers are called

16 http://www.szdaily.com/content/2016-06/29/content_13540312.htm
accessed September 2017

generics. Logically, they can sell only if their price is set below that of the original medicine using the same molecule and having same mode of intake. As barriers to entry have supposedly fallen, the equilibrium price is in theory equal to the marginal cost to produce the drug. As a consequence, price of generics, when they exist, is considered the lowest possible for a determined molecule.

A vast majority of OECD countries have defined a basic basket of drugs to be covered by the community. China is in a similar situation. The National Essential Drug List was established in 2012, with competition organized at provincial level and a zero mark-up policy for all primary care providers. These basic baskets vary from one market to the other but usually give priority to generics, in order to minimize cost.

In parallel, competition on the drug market can be increased through the use of internet, the online market of healthcare products being de facto open to any-one connected. From supply side, this online market raises various questions. Which kind of medicine should be sold online? Only non- prescription drugs or any drug? Should there be any specific procedure or should they be treated as traditionally distributed drugs? Behind all this lies the lingering question of the quality level of drugs sold online. How can it be controlled? How to prevent counterfeit drugs to enter the market? In Europe, online sales of medicine drugs are soaring. In Spain, Belgium, France and Italy, it is only allowed for non-prescription drugs. In other markets such as UK, Germany, Switzerland or Sweden, Norway or Portugal, online sales are legal for any kind of medicine, be it prescription of non-prescription. Same situation applies in the United Stated. According to the Food and Drug Administration, only 3% of online pharmacies are fully safe, from medical and legal standpoints[17]. To improve such situation, some countries have established a comprehensive list of websites allowed to sell medicine drugs. It is the case in France, where its custodian is the National Orders of Pharmacists. Other attempts to improve the buyers' safety include the establishment of a logo by the European Union, for customers to be able to quickly check the legality of the online purchase they intend to make.

## The specificities of the health good in China

Defining the health good in China implies to describe the Chinese healthcare system and its specificities, bearing in mind that the structure of the healthcare market is complex.

The first specificity is that today, most patients go for treatment to public hospitals. This is true for in-patient care but one of the specificities of China is that it is also the case for out-patient care. Major public hospitals account for more than 90% of in-patient admissions and more than 50% of out-patient consultations, with between 60 to 80 consultations per day and per physician.[18].

Then, the "consultation and prescription phase" is merged with the "medical act and medicine drug acquisition" phase. After the consultation itself, the patient will go the pharmacy counter where he will be given the prescribed medicine. Whenever the structure makes it possible, all tests such has blood sampling and analysis, radiography, etc... will also be performed on site.

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17 http://abcnews.go.com/US/order-prescription-drugs-safely-online/story?id=31047387 accessed September 2017

18 Yip W, Hsiao WC. What Drove the Cycles of Chinese Health System Reforms? . Health Systems & Reform. 2015 Feb 25; 1(1): p. 52-61.

Finally, the patient will proceed to check out where he will have to pay for the total amount of the whole process, in one single invoice. He has no possibility to cherry-pick amongst the analysis and medicine prescribed by the practitioner. This is commonly accepted by Chinese patients, when most Westerners would probably have a hard time complying with such way.

Last, the structure of public hospitals is also very specific to China. On one hand, they are very much like a public administration. For instance, in terms of personnel, it means that salary scale and career development are managed by the Ministry of Social Security and Human Resources. On the other hand, hospitals have a wide financial autonomy. Direct funding by the central or provincial governments accounts for a very marginal part (less than 10%). In parallel, hospitals have been incentivized to modernize their equipment and improve their quality. As a consequence of this, public hospitals can make profit. They usually enjoy a monopoly situation in their area of influence (except maybe in tier 1 metropolis) while acting very much like private companies.

Physician and other medical staff receive bonuses indexed on the profit made by the hospital. This can lead to a behavior aimed at maximizing profit through over-diagnosis and over-prescription. The health good when it concerns health services is then governed by market rules. This generates an accessibility issue for many. As a countermeasure, public insurance schemes were implemented in the first decade of 2000, as a pro-welfare state policy tool (New Cooperative Medical Scheme _NCMS for rural zones and Urban Employee Basic Medical Insurance _UEBMI for employees in urban zones and Urban Resident Basic Medical Insurance _URBMI pour urban residents who are not covered by UEBMI).

A new round of reforms have been started in 2009. [19] One of the objectives was the implementation of a free market, in particular for primary care, in order to ease the congestion in public hospitals. This has encountered mixed results as patients have so far little trust in the level of quality offered by these newly set-up centers. In parallel, public health insurance scheme for both rural and urban areas have been upgraded to include a wider range of care and better coverage rate. Financial accessibility to medicine drugs was aimed. A *zero mark-up* policy for a predefined basket of drugs has been implemented in primary care centers. Finally, profit sources of hospitals have been more closely monitored.

Since 2013, the latest set of reforms foster private investors in hospital market. In parallel, a policy incentivizing the development of private insurance schemes is implemented. A more concentrated organization, modelled on the Health Maintenance Organizations (HMO) existing in the US, is encouraged, either through acquisition of existing facilities or creation of new hospitals. In such model, private insurance would take care of both primary care and hospital admissions, as part of a bundled package. As in the case of US Medicare federal program, financial transfers between public and private insurance funds would compensate insurance companies for patients eligible to public programs (NCMS, URBMI, UEBMI).

The 13th five-year plan (2016-2020) showcases the concept of « competition » but also those of « fairness, equity and justice », leaving some ambiguity to the finality of reforms. As explained by

19 Thompson D. China's health care reform redux. 2009.

Yip et Hsiao (2015)[20], « *the market does not address issues of equity or fairness. It assumes that the income/wealth of the society is already equitably distributed* ».

This shows that the health good cannot be defined in China today as the public good it was considered to be before the beginning of the economic reforms. Yet, it cannot be considered as a 100% private good, as it could largely be at the beginning of the 2000 years, with a few exceptions.
What with the fragmented character of the Chinese initial healthcare system, the co-existence of various insurance schemes and the economic and social inequalities throughout the vast Chinese territory, one can wonder whether the country is headed toward a single homogeneous definition of the « health good » or toward a multiplicity of definitions, depending on local and other specificities.

To start addressing this question, the next chapter focuses on the history and evolution of healthcare supply in China.

20 Ibid : Yip W, Hsiao WC. What Drove the Cycles of Chinese Health System Reforms? . Health Systems & Reform. 2015 Feb 25; 1(1): p. 52-61.