

Versão Original

LEGISLATIVE EFFORTS FOR RARE DISEASE IN CHINA - ANALYSIS OF THE LEGAL GROUNDS AND CALL FOR A REGULATORY FRAMEWORK

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ABSTRACT

In response to the challenges posed by rare diseases, some developed countries have set up regulatory frameworks since 1980s. Should developing countries follow suit? This article argues that the limited resources of a developing country, although a major factor for carefully considering just distribution of health spending, should not be used as an excuse to reject the need for such a regulatory framework. It provides both policy and legal arguments for establishing such a framework in developing countries. It also reports the recent development of rare disease legislative efforts by local authorities in China, explains the reasons of a new definition of rare diseases adopted, and elaborates the necessary blocks in an integrated rational framework for rare diseases suitable for China.

Keywords: China; Justice; Human Rights; Rare Diseases, Regulatory Framework.

I. The rarity of rare diseases poses new challenges and calls for a new regulatory framework

The term “rare diseases”, by its very name, clearly denotes that they have a relatively small number of incidences, therefore pose novel challenges to medical science and create new barriers for patients who are desperately

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seeking medicine and treatment. Rare diseases do not only inflict enormous pain and suffering on the patients and their families,⁽¹⁾ but also impose detrimental impacts on the whole society and hamper social development and individual fulfillment.

Generally speaking, the main tasks of law, public policy and the relevant regulatory mechanics in a country are designed to address conventional issues and routine problems arising from daily life. However, rare diseases are exceptional cases, and as such they pose novel, although often neglected, challenges to medical science and the pharmaceutical industry, such as lack of information and training in society and even within the medical profession, deficient diagnostic systems, high price,⁽²⁾ difficulties in developing and testing new drugs due to their low frequency and uncertain market returns. Furthermore, they also pose new challenges to the whole society, such as enormous economic burdens on patients and their families due to the high prices of orphan drugs,⁽³⁾ significant psychological stress due to social isolation, unemployment, uncertainty about the future,⁽⁴⁾ the stigma associated with rare diseases and limited insurance coverage. All these questions are novel to the traditional legal and regulatory frameworks, which means that the existing systems cannot effectively deal with these new challenges. The infrequency of rare diseases stands in stark contrast to the prevalence of common diseases and, therefore, calls for new legal devices and a specially designed regulatory framework. In this regard, the urgent need for proper and adequate legal devices, at both the national and international levels, to cope with this exceptional issue of rare diseases is keenly felt not only by the patients and their families, but also by the medical professionals and more citizens. These new legal devices and a specially designed regulatory framework should be distinct from the conventional systems, due to the exceptional nature of the new issues brought to the fore by rare diseases.

"In response to this, the first orphan drug legislation was introduced in the United States of America (USA) in 1983. Other countries (e.g., Australia, Japan, Singapore) followed in 1990s, and in 2000 the EU established its own orphan drug legislation."⁽⁵⁾ "Indeed, [in Europe] during the past two decades, recognition that rare diseases are an important medical and social issue has been constantly growing in the public consciousness as a result of work by active advocacy

¹ JIE, Zhao; QIAOWEN, Xu et al. China has more than ten million rare disease patients and the majority are dying without affordable drugs. *News Report by Guangzhou Daily*, March 21, 2011.

² STOLK, P.; WILLEMEN, M.J.; LEUFKENS, H.G. Rare essentials: drugs for rare diseases as essential medicines. *Bull World Health Organ*, n. 84, p. 746, 2006.

³ *Ibid.*

⁴ ZURYNSKI, Y.; FRITH, K.; LEONARD, H.; ELLIOTT, E. Rare childhood diseases: how should we respond? *Arch Dis Child* n. 93, p. 1071-1074, 2008. originally published online August 6, 2008. Available at: <<http://www.adc.bmj.com>>. Accessed in: March 3, 2012.

⁵ STOLK, P.; WILLEMEN, M.J.; LEUFKENS, H.G. *op. cit.*

groups that include academics (clinical and basic researchers) and politicians.” Rare diseases have become “an important medical and social issue”.⁽⁶⁾

II. Should developing countries have such a framework as well?

In contrast, in most developing countries such a regulatory framework for rare diseases is absent. Apologists of this situation contend that the primary concerns for legislation and public policy should focus on issues relating to the majority of people, such as poverty, shelter and primary medical care, etc. Accordingly, the governments of developing countries have insufficient resources, expertise and capacity to deal with rare diseases. As a result, the need to deal with the conventional issues often overshadows the request for and legitimacy of the regulatory framework for rare diseases. Should developing countries establish such a new regulatory framework? Should a small group of people (rare disease patients) claim a disproportionate share of the limited national resources, on the basis of distributive justice?

It cannot be denied that the argument above does contain some truth, which is that the regulatory frameworks for rare diseases depend largely on the availability and sufficiency of resources. The particular social policies and laws of a given country cannot be dislocated from their social context, particularly from the resources available. Fully recognizing that the limited social resources are major constraints for further spending on rare diseases, this article argues that, since social resources are always relatively limited, inadequacy of resources cannot be used as a convincing reason for ignoring entirely the existence of rare diseases and for blocking or even striking down the need for such a regulatory framework for rare diseases. As a matter of fact, some rare diseases do not require large expenditure by governments since prevention, early diagnose and early treatment are less expensive and more effective. Furthermore, inventions of orphan drugs can further stimulate “new avenues of investment in pharmaceutical industry”,⁽⁷⁾ study of rare diseases can contribute to the advancement of medical science by preventing tomorrow’s major public health problems, by finding means of cure and control of formally lumped-together syndromes and by shedding lights on human biology,⁽⁸⁾ and thus promote public health and improve the collective quality of life. The allocation of resources for rare diseases may be limited in size; but it will nevertheless help some rare diseases patients, demonstrate a humane policy orientation, and thus achieve a much more valuable social goal.

⁶ SCHIEPPATI, Arrigo; HENTER, Jan-Inge; DAINA, Erica; APERIA, Anita. Why rare diseases are an important medical and social issue? *The Lancet*, n. 371, p. 2039-2041, 2008. Available at: <<http://www.mylin.org/en/art/34/>>. Accessed in: Jan. 25, 2012.

⁷ Id. *Ibid*

⁸ DODGE, John A; CHIGLADZE, Tamara; DONADIEU, Jean, et al. The importance of rare diseases: from the gene to society. *Arch Dis Child*, n. 96, p. 791-792, 2011. Originally published online August 12, 2010. Available at: <<http://www.adc.bmj.com>>. Accessed in: March 3, 2012.

This paper proposes three basic arguments to support a new legal and regulatory framework for rare diseases. First, this framework will further promote scientific discovery, medical development, and new biopharmaceutical industry development. It is true that the new framework will take some resources. Nevertheless, while considering expenditure for rare diseases, a government needs to consider the amelioration of rare disease patients and their families and the social advancement. In this regard, a long-term plan and a comprehensive view should be adopted, that should not only look at economic and market returns but also consider social development and human accomplishment.

Secondly, to distribute resources equitably does not simply mean to distribute equally. "Equity means social justice" and "Equity is not as same as equality".⁽⁹⁾ In this regard, legislation for rare diseases involves a philosophical question of redistribution of resources as social justice. Distribution of resources is based on the concept of distributive justice advocated by Aristotle. The modern concept of distributive justice is quite different from the Aristotelian concept⁽¹⁰⁾ and serves as the very philosophical and political foundation for the modern welfare system. It stresses equity rather than equality in allocating resources among different social groups, particularly in favor of the disadvantaged groups in order to maintain a basic quality of life. Some rare diseases do not require expensive drugs and treatments, but early screening, early intervention and early treatment entail actually low costs. In this regard, it is not fair to turn our backs on rare disease patients simply because their illness falls unfortunately into the category of "rare". The doctrine of distributive justice supports putting some orphan drugs into the list of essential drugs⁽¹¹⁾ and providing health coverage to rare disease patients.

Thirdly, human life and health are universally considered the most sacred values. "The right to health as set forth in the WHO Constitution and international human rights treaties is the right to "the highest attainable standard of health.""⁽¹²⁾ Based on this moral and legal judgment, a regulatory framework of rare diseases has a solid and justified legal ground.

For developing countries with relatively a high economic progress, such as China and Mexico, the need for a regulatory framework for rare diseases must be fully recognized and established without delay. Economic development produces a larger pie of the national revenue and lays the material ground for such a regulatory system. As the expanding social welfare system pushes for a wider coverage beyond conventional primary medical care and the sense of social

⁹ BRAVEMAN, P.; GRUSKIN, S. Defining equity in health. *Journal of Epidemiol Community Health*, v. 57, n. 4, 2003. In this article, they claim: "The concept of equity is inherently normative—that is, value based; while equality is not necessarily so".

¹⁰ FLEISCHACKER, Samuel. *A short history of distributive justice*. Harvard: Harvard University Press, 2005. p. 13.

¹¹ REIDENBERG, Marcus M. Are drugs for rare diseases "essential"? *Bulletin of the World Health Organization*, v. 84, n. 9, Sept. 2006.

¹² BRAVEMAN, P.; GRUSKIN, S. op. cit.

justice encourages more protection for the disadvantaged people, a regulatory framework for rare diseases should be included into the legal system. In recent years, with the increasing social awareness of rare diseases, efforts pushing the government to design such a policy and legal framework have been made in China.⁽¹³⁾ It is, however, crystal clear that “decisions cannot be based on economics alone, and must be considered within the context of evidence from medical research and ethical and moral principles.”⁽¹⁴⁾

III. Legal grounds for a regulatory framework for rare diseases in China

As a prerequisite, every proper public policy and legislation must have legitimate grounds. What are the legitimate grounds for such a framework of legislation and public policy for rare diseases in China? They include the followings.

Rare diseases are not only medical issues but also social issues concerning basic human rights of the patients. The right to health is a recognized legal right in China. Article 33 of the PRC Constitution stipulates “The State respect and protect human rights.” Right to health is the most fundamental one. *René Descartes* says: “... the preservation of health is... without doubt the first good and the foundation of all the other goods of this life.”⁽¹⁵⁾ The reason that health is so important is that (a) it is directly constitutive of a person’s wellbeing, and (b) it enables a person to function as an agent - that is, to pursue the various goals and projects in life that she has reason to value.⁽¹⁶⁾ In the process of building a harmonious society with the principle of “people foremost”, public policy and legal devices cannot overlook the issue of rare diseases simply because of their rarity and low prevalence.

Article 21 of the PRC Constitution stipulates that “The state develops medical and health services, (...) to protect the people’s health.” Article 45 goes further: “Citizens of the People’s Republic of China have the right to material assistance from the State and society when they are old, ill or disabled. The State develops social insurance, social relief and medical and health services that are required for citizens to enjoy this right.” This article imposes a legal obligation on the governments and confers a right of citizens. It provides the constitutional grounds for formulating public policies and legal devices to cope with rare diseases in China.

Along with the social and economic development, China now has better resources and material conditions for offering more assistance and protection

¹³ WANG, Jing-Bo; GUO, Jeff J.; YANG, Li.; ZHANG, Yan-De.; SUN, Zhao-Qi; ZHANG, Yan-Jun. Rare diseases and legislation in China. *The Lancet*, v. 375, n. 9716, p. 708-709, Feb. 27, 2010.

¹⁴ ZURYNSKI, Y.; FRITH, K.; LEONARD, H.; ELLIOTT, E. op. cit.

¹⁵ DESCARTES, René. *Méthode* published in 1637, cited from Author Affiliations, The Concern for Equity in Health. *J Epidemiol Community Health*, 2002. Available at: <<http://jech.bmj.com/content/56/7/485.full>>. Accessed in: Jan. 26, 2012.

¹⁶ Id. Ibid.

to rare diseases patients, as well as for promoting medical research and the pharmaceutical industry. To achieve social justice, it is imperative to offer more affirmative assistance and protection to rare diseases patients.

On the basis of the above analysis, this paper proposes the following general principles for formulating public policy and drafting regulations for rare diseases: (1) the principles of protection of human rights and people foremost; (2) the principles of distributive justice and equity with affirmative concerns for disadvantaged groups; (3) the principles of seeking truth from facts and taking progressive and scientific approaches in the law making process; (4) the principles of taking comprehensive views for synthesizing all public and private efforts in coping with rare diseases, such as promoting the orphan drug industry and scientific research, providing adequate medical service and health coverage, and setting up national networks of information, education and experts; and (5) the principle of emphasizing early diagnosis, timely prevention and effective treatment.

IV. Proposed definition of rare diseases and the regulatory framework in China

On May 17, 2010, a group of experts of medicine, sociology, law and economics gathered in Shanghai to discuss the issues of how to form a regulatory framework for rare diseases. Realizing that it would be difficult to craft legislation on rare diseases at the national level due to a lack of understanding of rare diseases and a lack of experience in coping with them, the experts concluded that local and provincial governments, such as Shanghai, should take initiative to begin crafting their own legislation.¹⁷

The definition of rare diseases is the first legal issue facing the legislative efforts. So far there has been no internationally accepted legal definition of rare diseases, but rather specific definitions by individual countries, derived from their respective social context.

The US Rare Disease Act of 2002 defined rare diseases based on prevalence. Any condition afflicting fewer than 200,000 people in the US (about 1 in 1,500) was given this status; not much of a change from the definition in the Orphan Drug Act of 1983 that was supposed to encourage research into rare diseases and possible cures. The Japanese defined an orphan disease as one (...) affecting fewer than 50,000 people in Japan (1 in 2,500). Europe, on the other hand, defined these diseases based, not on prevalence, but on their life-threatening or chronically debilitating nature and how much special combined effort would be needed to

¹⁷ This effort has resulted in positive responses from Shanghai, Guangzhou and Beijing governments. Shanghai in particular has started its legislative study and drafting in 2011 and the other two have received legislative proposals for rare diseases.

tackle them. By virtue of this definition, threshold of prevalence for the majority of those conditions was 1 in 2,000; half way between the definitions used in the US and Japan.⁽¹⁸⁾

The WHO has suggested a frequency of less than 6.5–10 in 10,000.⁽¹⁹⁾ Thus far China has no specific regulations dealing with rare diseases, let alone a legal definition. That fact is clear that no matter which foreign or international definition applies, the patients struck by rare diseases in China still constitute relative a large group of people on the basis of the huge national population.

Taking into consideration the demographic and economic situation in China, these experts took a very cautious and realistic approach and proposed to define, for the time being, a disease which affects less than one in 500,000 people, and less than one in 10,000 infants, as a genetic rare disease. For the purpose of providing adequate and effective treatment, they also proposed to list 23 diseases as the first group of rare diseases.⁽²⁰⁾

The reasons for proposing such a definition and the list are the follows. Firstly, the standards formulated in other countries do not fit into the striking phenomenon of China's huge population. A sensible ratio should be drafted on the basis of demographic and economic reality. Secondly, since genetic diseases comprise more than 80% of rare diseases, and 50% of rare diseases affect children,⁽²¹⁾ it is most practical and feasible to start with genetic rare diseases by providing early diagnosis and effective treatment systematically to new born babies. Thirdly, since there are "6,000 to 8,000 rare diseases" and "there are often no existing effective cures" for most of them,⁽²²⁾ it is reasonable to name 23 rare diseases which are curable by current medicines and are coverable within the governmental financial capacity. Namely, the first group of rare disease patients to qualify for health insurance coverage and medical treatment should not be so large to scare away the governments and other organizations; and the defined rare diseases should be currently curable by the medicines or treatments available. As the result of this proposed definition, the total number of rare disease patients recognized by this definition is approximately less than 1% of the total number of rare disease patients in China. The meeting also suggested that corresponding definitions be made for orphan drugs, local public policies and regulations should be drafted regarding their research, production and marketing. This definition has received a positive response from local governments such a Shanghai.

¹⁸ BRADLEY, David. *Rare diseases and rarer treatments*. Available at: <<http://www.sciencebase.com/science-blog/rare-diseases-and-rarer-treatments.html>>. Accessed in: Jan. 25, 2012.

¹⁹ ARONSON, J. K. *Rare diseases and orphan drugs*. Available at: <<http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2125.2006.02617.x/full>>. Accessed in: Jan. 26, 2012.

²⁰ MINUTES of Experts Meeting on Rare Diseases in Shanghai, May 17, 2010. What is a rare disease? Available at: <<http://www.rarediseaseday.org/article/what-is-a-rare-disease>>. Accessed in: Jan. 26, 2012.

²¹ Id. *Ibid.*

²² *Supra.*

This definition was officially incorporated into Notification on Including Special Drugs for Rare Diseases into the Coverage of Shanghai Mutual Funds for Infants and Children (hereafter “N.39 Notification”) by Shanghai Management Office of Mutual Funds for Hospitalization of Infants, Elementary and Secondary School Pupils on August 29, 2011.⁽²³⁾ It listed just four rare diseases⁽²⁴⁾ being treated or to be treated by three hospitals in Shanghai.⁽²⁵⁾ Although this is a small step forward, it begins to fill the void left by the absence of such a legal framework in China. Health Minister Chen Zhu recently stated that, for orphan drugs, the State shall adopt uniform production at designated places, uniform bidding and purchase, uniform distribution, and uniform deposition of orphan drugs; with the aim of guaranteeing the supply of orphan drugs.⁽²⁶⁾

On the basis of the above mentioned public policies and regulations, the proposed regulatory framework should take into consideration the need for nation-wide comprehensive planning and coordinative efforts, should coordinate efforts from both public and private sectors, and should combine together rather than segment all areas ranging from the pharmaceutical industry and medical sciences, to health coverage and public education. It needs to include the following building blocks, each of which would act as a corresponding sub-system.⁽²⁷⁾

1. Good healthcare services, which provide access to effective and timely medical services and treatment to rare disease patients. They shall encompass: (a) early checking and diagnosing rare diseases among new borne babies; (b) treatment and rehabilitation; (c) functional networks of rare disease experts and platforms for long-distance medical assistance; (d) national and regional centers for information databases and exchanges; and (e) educational networks for professional training and public education.
2. A well-functioning orphan drug industry and business, which encompasses the following parts: (a) dynamic orphan drug industry, which includes areas of research, production and distribution; (b) efficient drug administration, including testing, approval, registration and safety control by government organs; (c) adequate financing for the orphan drug industry; (d) speedy approval of foreign registered orphan drugs and their international distribution; and (e) effective incentives for the orphan drug industry and distribution,

²³ NOTIFICATION on Including Special Drugs for Rare Diseases into the Coverage of Shanghai Mutual Funds for Infants and Children, N. 38, [2011], by Hu-Er-Ji-Jin-Ban (Management Office of Mutual Funds for Hospitalization of Infants, Elementary and Secondary School Pupils) on Aug. 29, 2011.

²⁴ The four diseases listed are Pompe Disease, Gaucher Disease, Mucopolysaccharidosis and Fabry Disease.

²⁵ The three hospitals designated for treating the four rare diseases are Xinhua Hospital attached to Jiaotong University, pediatric Hospital of Fudan University and Ruijin Hospital attached to Jiaotong University.

²⁶ ZHIMEI, Fu. The State Should Guarantee Supply of Orphan Drugs by Uniform Production, Purchase, Distribution and Restoration. *People's Daily*, Dec. 21, p. 13, 2011.

²⁷ CHENGUANG, Wang. To establish a suitable rare diseases mechanism in China. *Chinanews*, Special Issue on Rare Diseases Prevention and Cure, p. 19, Mar. 2011.

such as legal devices for intellectual property protection, exclusive market monopoly, tax benefits, financial support and marketing networks, etc.

3. Proper medical and social insurance, the purpose of which is to make medical care and drugs more affordable to patients, to alleviate the burden on them and their families, and to provide basic living conditions for them. It consists of the following parts: (a) Price control. On one hand, the policy seeks to provide affordable services and drugs to patients by either controlling prices or by providing subsidies to patients, and, on the other hand, to enable the orphan drug researchers, producers and distributors to realize proper market returns. (b) Devices to include some orphan drugs into the list of essential medicines. (c) Health insurance and social assistance. There should be legal grounds for requiring insurance companies to offer health coverage to rare disease patients. Proper incentives and procedures shall be established for mobilizing charitable and social organizations to provide financial and professional assistance to disadvantaged patients, such as the poor and disabled. (d) Networks of mutual assistance. They shall encourage diversified organizations such as patient association, NGOs and professional aids.
4. Active research institutes and public education platforms. The purposes of these devices are to promote public awareness of rare diseases, to disseminate knowledge of rare diseases, to eliminate social bias against rare disease patients, and to establish a public platform of information exchange.
5. Efficient coordination and management. Rare diseases are uncommon and their incidences scatter widely. Therefore, access to effective medical service and proper drugs is often blocked or delayed. In such a social context, integrated management and coordination is crucial in coping with rare diseases. This section includes: (a) orphan drug and equipment coordination offices at both national and local levels responsible for drafting relevant rules, promoting orphan drug research, production, and coordinating distribution of orphan drugs and equipment; (b) rare diseases treatment coordination offices at both national and local levels, which are responsible for establishing expert networks, information platforms, long-distance medical service center training of professionals; (c) national and regional insurance coordination offices for coordinating cross-region medical and social insurance; (d) organizations of rare disease patients which provide information and assistance regarding orphan drugs, treatment, recovering and rehabilitation counseling; and (e) organs for international and external cooperation, which are responsible for regional and international mutual assistance, information sharing and coordination, etc.

These building blocks and their composing parts are interdependent, and together they make an integrated and comprehensive regulatory framework. Governments should utilize the joint efforts from both the public and private sectors to shoulder this legal and moral obligation, and take the lead in forming such a framework.

Rare diseases pose new challenges to human society, particularly to developing countries. The successful tackling of these challenges depends on whether we are able to make systemic innovations and to develop a new regulatory framework. In this regard, the significance of the proposed framework for rare diseases goes beyond the scope of medical science and reaches into the field of social institutional innovation and reform.

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