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## Mapping and Analyzing Stakeholders in China's Essential Drug System by Using a Circular Model: Who We Should Deal with Next?

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#### ABSTRACT

Objectives: To predict the prospects of the essential drug system by using the Stakeholder Impact Index (SII) and evaluate the current performance of each main stakeholder and suggested dangerous stakeholders and dormant stakeholders. Methods: A Delphi method was used, involving 36 experts with experience in implementation and evaluation of the essential drug policy, to construct the circular model as well as evaluate the performance of each stakeholder. Results: The central government was a dominant stakeholder of the whole essential drug system. The provincial governments were definitive stakeholders, whereas local governments and medical institutions were dependent stakeholders. Furthermore, media and drug stores were dormant stakeholders and pharmaceutical manufacturers and delivery enterprises were dangerous stakeholders. Patients, community residents, and medical insurance programs were discretionary stakeholders. The SII for the essential drug system was positive (SII $_{proj}^{*}$  = 2.72). Conclusions: The overall anticipation of the essential drug policy is optimistic. Letting definitive stakeholders (provincial governments) having more autonomy can efficiently accelerate the pace of implementation of the essential drug policy in the current situation. Central government, however, also needs to construct an experience exchange platform with the aim of building versatile methods for running the essential drug system in all provinces. Pharmaceutical manufacturers and delivery enterprises were dangerous stakeholders for the essential drug policy. Because of their potential threat to the implementation of the policy, the central government should motivate them to support the construction of the essential drug system spontaneously. In that case, provincial governments need to construct a fair, balanced, and self-stabilized bidding platform. *Keywords*: essential drug, system evaluation, stakeholder analysis,

Regulation, stakeholder analysis Delphi method.

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## Introduction

Essential drugs, as defined by the World Health Organization, are "those drugs that satisfy the health care needs of the majority of the population; they should therefore be available at all times in adequate amounts and in appropriate dosage forms, at a price the community can afford" [1]. Within the last 30 years after this definition was put forward, many countries started to construct their own Essential Drug Operation System (EDOS) [2].

China's central government's "Measurements for Implementing Essential Drug Policy" and "Essential Drug List (EDL)," introduced in August 18, 2009 [3], have had a profound influence on Chinese citizens in terms of improving physical and financial access to basic medication. The national EDL is categorized into three broad categories: Chemical Drugs and Biological Products, Chinese Patent Drugs, and Chinese Medicinal Decoction Pieces. There are 317 subcategories of drugs under Chemical Drugs and Biological Products, whereas Chinese Patent Drugs contain 207 subcategories. Every province is authorized to construct a provincial EDL that can work as a supplement to the national EDL. Drugs are included in the EDL for the purpose of fulfilling citizens' basic medical needs by providing fair and cheap medicines and promoting universal access. The essential drug policy reduces medication costs for citizens through more governmental financing and introduction of a provincial drug-bidding platform. It reshapes profit distribution among all stakeholders in the EDOS by altering the net benefits among pharmaceutical manufacturers, delivery enterprises, and health care providers [4].

The current EDOS, including its bidding, pricing, and delivery system, required full cooperation of stakeholders, and citizens would gain benefits only if most of the stakeholders are willing to participate in the EDOS. For example, more pharmaceutical

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manufacturers bidding for a class of essential drugs would increase the drug quality and reduce its price. Therefore, if some of the stakeholders lose benefits under the implementation of the essential drug policy, there would be foreseeable motivations for them not to participate in the system for their own good, and it was where the potential risk for the EDOS came from [5].

Figure 1 shows the ordinary operation system for medicines: it has a structure of radiation diagram with a central piece marked "Medical institutions." In this system, medical institutions were the dominant stakeholders. They have the power to decide not only which drug to buy from a drug manufacturer but also the prescription behaviors.

This ordinary operation system for medicines has certain drawbacks: by letting providers have the autonomy of buying and selling medicine, economic factors often outweigh other concerns, such as social responsibility and service quality, with for-profit pharmaceutical companies having more control of the drug market [6]. Information asymmetry, where patients often do not have adequate information relevant to choosing or using medicine, can increase the burden on patients if the market is left unregulated [2]. Compared with the radiation diagram we drew in Figure 1, the EDOS presents a different picture (Fig. 2). In this system, the Chinese provincial governments are in charge of purchasing medicines for the medical institutions instead of letting medical institutions buy medicines themselves. They set up bidding platforms to modify the behavior of pharmaceutical manufacturers and implement prescription standards to regulate the medical institutions' drug-prescribing practices. By doing so, pharmaceutical manufacturers must lower their price and enhance the quality of their products to compete in the bidding process. Simultaneously, medical institutions are not allowed to use more expensive and unnecessary drugs when an essential drug can be used in the situation. These regulations enhance the governments' ability to exert control in the drug market and ensure provision of drugs to ordinary citizens at minimal costs [7]

Stakeholder analysis has a history of almost 30 years and is one of the current important methods to help decision makers get a clear understanding about the operation system as a whole [8]. Because of the diversity of stakeholders, some of them may influence the project far greater than do others. We browsed six



Fig. 1 – Operation system for medicines out of the essential drug list.



authoritative articles and screened out 11 major stakeholders for the EDOS [9-14]. The primary purpose of this study was to categorize diverse stakeholders in the EDOS by using three key attributes: power, legitimacy, and urgency. The "power" of stakeholders is their ability to mobilize and withdraw social and political forces. The "legitimacy" is constructed by both normative legitimacy and derivative legitimacy: normatively legitimate stakeholders are those to whom the organization has a moral obligation based on fairness; derivatively legitimate stakeholders are those whose actions might affect normatively legitimate stakeholders and thus need to be accounted for by managers [15]. The "urgency" is based on sensitivity and criticality: the former is the degree to which managerial delay is unacceptable when dealing with claims; the latter is the importance of the claim to the stakeholder [16]. According to the definition by Mitchell et al. [16], dangerous stakeholders were those who have power and urgency but no legitimacy. Therefore, this category of stakeholders tended to chase their own interest (i.e., profit) without concern for social outcomes and needed to be paid serious attention. Other categories of stakeholders are presented in Table 1. For more details related to the characteristics of each category of stakeholders, we refer readers to Mitchell et al.'s article [16].

The primary objective of this study was to evaluate the current role and its performance of each major stakeholder in the EDOS. Through the stakeholder analysis, we would be able to get a clear picture of how each stakeholder would react in response to the implementation of the essential drug policy. After that, certain stakeholders that are more influential in the EDOS would be further discussed. Our ultimate goal was to evaluate and predict the likelihood of success for this new essential drug policy through a thorough evaluation of the compliance of all the major stakeholders involved.

## Methods

#### Data Source

Literature articles and expert opinion related to stakeholders for the essential drug policy were used to identify 11 main stakeholders. These were central government, provincial governments, patients, mass media, community residents, pharmaceutical manufacturers, delivery enterprises, medical insurance institutions, local governments, medical institutions, and pharmacies. Download English Version:

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