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Discussion

A learning experience from price negotiations for vaccines

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1. Context

Vaccines are regarded as one of the most successful health measures to date and there is no doubt that vaccination is ideal for health decision makers, health practitioners, and the public because it is a preventive measure that is in most cases – once provided – effective in the long-term. However, although there have been a number of newly developed vaccines available in the market over the past few decades, many of them have not been widely taken up, especially in low- and middle-income countries (LMICs), which comprise approximately 80% of the world population. Many scholars have found that the affordability of vaccination is among other important constraining factors, including a lack of local policy-relevant information for making decisions and political prioritization of vaccination or vaccine-preventable disease [1].

As a result, the GAVI Alliance was established to ensure equitable access to new and underused vaccines by negotiating for significantly lower prices compared to the market price. However, these negotiated prices are provided only to eligible GAVI countries. In addition, the UNICEF Supply Division introduced a vaccine procurement program to make some vaccines available for GAVI ineligible countries at a relatively low cost by tapping into economies of scale through a call for tender. However, some vaccines, such as PCV and rotavirus, are still unaffordable for some countries, which result in relatively low uptake through UNICEF. Similarly, the Pan American Health Organization's (PAHO) Revolving Fund negotiates vaccine prices for countries in Latin America [2]. While these initiatives are regarded as effective methods for price negotiation, limitations persist; for example, countries with different levels of economies, such as Haiti and Chile, pay the same vaccine costs under this regional price negotiation.

For countries that are unable to procure vaccines at affordable prices through the above mentioned mechanisms and instead anticipate price drops in vaccines over time, evidence indicates that price drops are usually less than expected [3]. This leads to unnecessary delays in vaccine adoption by countries. As a result, vaccine price negotiation is very important, although vaccine price negotiation principles and processes at the country level are either not practiced or well documented in literature. This paper aims to discuss the experiences of medicine price negotiations in Thailand with the aspiration of adapting these experiences to vaccine price negotiation.

2. The experience of medicine price negotiation in Thailand

The Thai government has systematically established price negotiation mechanisms for medicines, which is recognized as a successful example in an LMIC. The government can introduce previously unaffordable medicines into public programs from the process and make its universal healthcare coverage scheme sustainable. The success of this process can be attributed to three core principles:

1. Establishing reliable and manageable process and mechanism.

   Price negotiation is often seen by the public as a mysterious and endless process that industry uses to lobby decision makers to introduce new technologies. Therefore, it is important to make the price negotiation process trustworthy and manageable by being transparent about who is responsible for the negotiation, how to manage potential conflicts of interest, and what the timeline is for each step of the process. For example, the Thai government established the Working Group on Price Negotiation, comprising multiple stakeholders such as representatives from health insurance agencies, academics, and health professionals, under the national body responsible for designing the pharmaceutical reimbursement list in Thailand [4]. The working group members need to declare conflicts of interest and publicly document the process and information used.

   The working group begins the process of price negotiation once the national body has expressed interest in a particular medicine without yet committing to include the medicine in the reimbursement list. This makes price negotiation more meaningful and effective because industry is aware that the government has not yet decided on inclusion of the particular medicine. This is contrary to common practice in many countries, which conduct price negotiations after the decision has already

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Box 1: Experience of using evidence to lower the price of HPV vaccine in Thailand.

In 2007, when two companies were applying for Human papillomavirus vaccine (HPV) licensing in Thailand, the Thai government knew that the vaccine could have a potential role to reduce the high burden of cervical cancer. The Health Intervention and Technology Assessment Program (HITAP) was requested to conduct an economic evaluation and budget impact analysis in order to inform the government about the introduction of the vaccine as part of public health programs in Thailand. The findings were revealed in 2009, showing that at the price of US$450 per course (three doses), HPV does not represent good value for money for public investment. The report indicated that the price of the vaccine needed to be reduced by approximately 60% in order for the vaccine to become cost-effective at the threshold of 1 Gross Domestic Product/capita/Quality-adjusted Life Year gained [5]. The results were made publicly available and the government decided not to include the vaccine, rather emphasizing cervical cancer screening (a comparator to the vaccine in this study) as a preventive measure. The two companies examined the report and agreed with the findings. Three months later, the companies reduced the price of the vaccine as per the recommendation of the report [6]. Although the government still has not included the vaccine in the public program as of 2014 due to high budget implications, Thai households benefited from the significant price reduction in the private market, from US$450 to US$200 per course. This illustrates how evidence can persuade the private sector to reconsider price strategies of vaccines in a country.

been made to adopt a particular medicine, giving industry the advantage.

2. Making evidence-based price negotiation.

   Although many people recognize price negotiation as an art rather than a science, the Thai experience suggests that price negotiation can be more effective with evidence-based negotiations (see example in Box 1). The working group always requests for economic analyses from health technology assessment (HTA) agencies on value for money and potential budget impact of introducing new medicines in the reimbursement list. If the medicine does not represent good value for money, the working group will request for an assessment to be carried out on the price at which the medicine would become good value for money. Although in other countries the reference prices of medicines in similar classes or in other settings are often used, information on value for money and budget impact analyses that incorporate the costs and benefits of introducing new medicines in comparison to other alternatives as well as the size of the problem signify whether the medicine is necessary and affordable. Using this information ensures that the working group negotiates for medicines that are conclusively needed by the population.

3. Creating incentives for industry.

   While the above two principles may seem stringent, it is necessary to recognize the importance of industry's innovations and productions for health systems. Therefore, in negotiating prices it is critical to create incentives to lower prices as well as ensure the sustainability of industry. Thailand has created incentives by committing to procuring large amounts of products so that the company can still make profits from lower price margins and increased quantity of products sold. This issue has been taken very seriously by the Thai government in introducing and adopting a "one choice" policy for medicine negotiations, which means that the winner of the request for tender is entitled to providing medicines for all public health providers.

3. Conclusion and challenges

The three principles mentioned above are likely to be applicable for vaccine price negotiation, although it has some challenges. For example, the market for newly developed vaccines is more likely to be a monopoly or oligopoly compared to the medicines market due to the lack of alternatives. Another challenge is that there are fewer available vaccines compared to medicines, resulting in mechanisms that are put in place that are not used often; therefore, price negotiation for vaccines may need to be part of medicines price negotiation. The difficulty is that vaccines and medicines are different in many ways, including the need for special supply chain and logistics for vaccines that should be included as part of vaccine procurement. Similarly, price negotiation plays a role in vaccine procurement.

As long as affordability is a major factor in making vaccines available in public programs, vaccine price negotiation will become a more important and significant process. As such, it is important to make the price negotiation process more effective than it is currently. Thus, global organizations, both public and private, and academics should provide better support and conduct more research in order to increase scientific evidence as well as document the process for better implementation of vaccine price negotiation.

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