A learning experience from price negotiations for vaccines

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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 abovementioned 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.

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43 The experience of medicine price negotiation in Thailand

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

49 1. Establishing reliable and manageable process and mechanism

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

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

68

69 2. Making evidence-based price negotiation

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

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86 **Box 1 Experience of using evidence to lower the price of HPV vaccine in Thailand**

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

106

107 3. Creating incentives for industry

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

117

118 Conclusion and challenges

119 The three principles mentioned above are likely to be applicable for vaccine price
120 negotiation, although it has some challenges. For example, the market for newly developed
121 vaccines is more likely to be a monopoly or oligopoly compared to the medicines market due
122 to the lack of alternatives. Another challenge is that there are fewer available vaccines
123 compared to medicines, resulting in mechanisms that are put in place that are not used
124 often; therefore, price negotiation for vaccines may need to be part of medicines price
125 negotiation. The difficulty is that vaccines and medicines are different in many ways,
126 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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References

1. Burchett, H.E., et al., *National decision-making on adopting new vaccines: a systematic review*. Health Policy Plan. **27 Suppl 2**: p. ii62-76.
2. Kaddar, M., et al., *Global support for new vaccine implementation in middle-income countries*. Vaccine. **31 Suppl 2**: p. B81-96.
3. Burchett, H.E., et al., *New vaccine adoption: qualitative study of national decision-making processes in seven low- and middle-income countries*. Health Policy Plan. **27 Suppl 2**: p. ii5-16.
4. Teerawattananon, Y., et al., *The use of economic evaluation for guiding the pharmaceutical reimbursement list in Thailand*. What is the contribution of health economic evaluations to decision-making in health care? Experiences from 7 selected countries, 2014. **108**(7): p. 397-404.
5. Praditsitthikorn, N., et al., *Economic evaluation of policy options for prevention and control of cervical cancer in Thailand*. Pharmacoeconomics, 2011. **29**(9): p. 781-806.
6. Yothasamut, J., et al., *Scaling up cervical cancer screening in the midst of human papillomavirus vaccination advocacy in Thailand*. BMC Health Serv Res, 2010. **10 Suppl 1**: p. S5.