

Foreword: Vaccines and health systems research

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Vaccines are one of the mainstays of any country's health system. They address major causes of child morbidity and mortality; they reduce the magnitude of the burden of treating infectious diseases which otherwise would fall on health services; and they also protect households from the costs they would face in caring for sick children. High levels of vaccine coverage have led to major successes in reducing the burden of diseases such as polio and measles.

Developments in vaccine technology are expanding the number of diseases that can be prevented. Such vaccines include the DPT-HepB-Hib pentavalent vaccine, the pneumococcal vaccine, and the rotavirus vaccine. Moreover, increased vaccine financing through the creation of the GAVI Alliance has put these more expensive vaccines within the reach of low and middle income countries.

However, the introduction of these new vaccines adds to the challenges many countries already face in ensuring effective and efficient vaccination services that reach the great majority of the child population. While vaccination might be a more straightforward technology than many health interventions, it nonetheless requires trained health workers and supervisors, an efficient supply system that can extend throughout a country, even to the most remote areas, maintenance of a cold chain, and effective systems for planning and management. All of these require adequate funding.

Introduction of new vaccines increases the workload of health staff, and may add new requirements such as additional visits and surveillance of adverse effects. Communities need to be informed about the new vaccines, so acceptance is high and refusals few. Increased funding is needed to some extent in the short term, even given external support, and especially in the longer term when countries are expected to increase their share of the financing.

Health systems research can help countries address many of these challenges. Health systems research is a relatively recent entrant to the health research field. It is concerned with how health services are organised, financed and delivered and how these functions are linked within a health system with its associated policies and institutions (1). It can be applied not only to assess how well a health system is functioning at the systems level – for example, in terms of overall effectiveness, efficiency, and responsiveness to population needs – but also to assess the functioning of specific programmes at lower levels. While the volume of health systems research in low and middle income countries is still relatively small, there has been rapid growth and an expanding capacity in universities and governments to undertake such research.

The research reported in this volume is an excellent example of how health systems research is beginning to

address some of the key health system challenges facing countries. Historically, vaccine research was primarily biomedical and epidemiological research, focusing on vaccine development, testing, and efficacy. However, it has increasingly been recognised that the existence of an efficacious vaccine goes only so far in being a solution to a disease problem – the vaccine has to be delivered to the population in a way that ensures effectiveness in preventing the disease, and efficiency in service delivery is needed to ensure that scarce resources can stretch as far as possible. Moreover, prior to this, countries need to be able to make an informed choice on the degree of priority to be attached to a new vaccine.

Issues of the process for deciding on new vaccines to be introduced, and the consequences of their introduction for already overstretched health systems, have attracted increasing attention as new vaccines have become available. The research reported here addressed both these key questions, looking at what influenced the decision to adopt PCV-10, and at the consequences of adoption for the Ethiopian health system. In addition, the volume assesses the routine immunisation system, and the effects of accelerated measles elimination activities on immunisation services and the general health system.

This research was part of multi-country studies on vaccination and health systems. Comparative papers have been published elsewhere (for example on national decision-making processes for new vaccine adoption in seven low and middle income countries) (2), this volume focuses on the studies done in Ethiopia. While they will hopefully be of value to local decision-makers, they also have broader relevance. Ethiopia has been a pioneer in many respects – in its insistence on leading its own health development; in its strong focus on developing community based services; and in its emphasis on health system development. It is also a country which struggles with circumstances which render health services delivery difficult – challenging economic and geographical contexts, great shortages of trained health workers, and very limited funding. The papers in this volume should hence also be of interest to other countries facing similar challenging circumstances.

References

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