

Can developing countries achieve adequate improvements in child health outcomes without engaging the private sector?

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Abstract The private sector exerts a significant and critical influence on child health outcomes in developing countries, including the health of poor children. This article reviews the available evidence on private sector utilization and quality of care. It provides a framework for analysing the private sector's influence on child health outcomes. This influence goes beyond service provision by private providers and nongovernmental organizations (NGOs). Pharmacies, drug sellers, private suppliers, and food producers also have an impact on the health of children. Many governments are experimenting with strategies to engage the private sector to improve child health. The article analyses some of the most promising strategies, and suggests that a number of constraints make it hard for policy-makers to emulate these approaches. Few experiences are clearly described, monitored, and evaluated. The article suggests that improving the impact of child health programmes in developing countries requires a more systematic analysis of how to engage the private sector most effectively. The starting point should include the evaluation of the presence and potential of the private sector, including actors such as professional associations, producer organizations, community groups, and patients' organizations.

Keywords Child health services; Delivery of health care/methods/standards; Outcome assessment (Health care); Private sector; Quality of health care; Quality assurance, Health care/methods; Contract services; Social marketing; Legislation; Health knowledge, attitudes, practice; Developing countries (*source: MeSH, NLM*).

Mots clés Service santé infantile; Délivrance soins/méthodes/normes; Evaluation résultats (Santé); Secteur privé; Qualité soins; Garantie qualité soins/méthodes; Service contractuel; Marketing social; Législation; Connaissance, attitude, pratique; Pays en développement (*source: MeSH, INSERM*).

Palabras clave Servicios de salud infantil; Prestación de atención de salud/métodos/normas; Evaluación de resultado (Atención de salud); Sector privado; Calidad de la atención de salud; Garantía de la calidad de atención de salud/métodos; Servicios contratados; Mercadeo social; Legislación; Conocimientos, actitudes y práctica sanitarias; Países en desarrollo (*fuentes DeCS, BIREME*).

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Introduction

The global community's commitment to improving child health in developing countries was recently underscored by the Millennium Development Goals. These include a call to reduce child mortality by two-thirds by 2015, a goal that will require significantly expanded efforts. Inadequate progress has been achieved so far. It was estimated that in 1999, 10.5 million children died before reaching their fifth birthday, most of them from developing countries (1). A large proportion of these deaths are due to a few conditions, namely pneumonia, diarrhoea, malaria, measles, human immunodeficiency virus/acquired immunodeficiency

syndrome (HIV/AIDS), and malnutrition. With the exception of HIV/AIDS, these conditions can be relatively easily prevented and treated, as illustrated by the insignificant child morbidity and mortality they cause in developed countries.^a

The reasons for the mixed success of efforts to achieve improvements in child health outcomes in developing countries are still subject to debate. In a review of the last 20 years of experience in child health programmes, Claeson & Waldman questioned the traditional focus of child health programmes on public sector health service delivery alone, and called for an approach that focuses on people and households, in addition to providers and single-disease programmes (2). Although international

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^a Some would argue that that HIV/AIDS mother-to-child transmission can also be prevented relatively easily.

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institutions and governments in developing countries have concentrated on working with and through the public sector (3, 4), an increasing amount of data highlights the private sector's critical influence on child health in developing countries, including the health of poor children. Evidence is also emerging that it is possible for governments in low-income countries to achieve better child health outcomes by working with the private sector.

In this article we review the available evidence on the role of the private sector in child health in developing countries. We then discuss existing evidence on the usefulness and feasibility of various strategies to integrate these actors into initiatives to improve child health. Although financing is an essential element of policy-making, we do not address the financial implications of alternative strategies. Because our focus is on child health and the full range of its determinants, we follow the inclusive definition of the private health sector of Hanson & Berman, to include all actors outside government, such as for-profit, non-profit, formal, and non-formal entities (3). The article is intended to inform policy-making at the country level. Hence, although global public-private partnerships are becoming increasingly important for child health, we focus our attention on the analysis of issues and strategies that are the subject of domestic policy.

Where do sick children receive care?

In the past 10 years growing evidence has revealed that private and nongovernmental health care providers are more frequently consulted than those in the public sector for diseases that commonly affect children (5, 6). In Viet Nam, recent research revealed that the private sector provided 60% of all outpatient contacts (7). In India, more than 90% of children affected by diarrhoea are taken to private health care providers (8) (Fig. 1). In Nepal, more than 50% of children suffering from diarrhoea and acute respiratory infections (ARI) are treated outside the public sector (9). Similarly, a large proportion of children affected by these conditions received services from a range of private providers in Bolivia (10), Egypt (5), Guatemala, and Paraguay (10). Like diarrhoea and ARI, identification and treatment of malaria is frequently done outside the government health sector in many countries (11).

It has also become clear that even poor households often seek care for their children from private practitioners — often pharmacists, drug-sellers, and traditional healers. Gwatkin et al. demonstrated that in most countries children from poor households as well as rich are taken to private providers. Fig. 2 presents

data from District Health Services (DHS) in 38 countries on the treatment of ARI and diarrhoea for children from the lowest income quintile. The proportion of the poorest children receiving care from private providers ranged from 34% to 96% for diarrhoea and from 37% to 99% for ARI (12).

Although private providers deliver a large proportion of curative and preventive services to children, research has raised concerns regarding the technical quality of these services and how it affects children's health and nutritional status (13). Prescription practices of private providers are often worse than those of providers in the public sector. Numerous publications report unnecessary use of antibiotics for treatment of diarrhoeal diseases and non-complicated ARI (14–16). Insufficient utilization of oral rehydration salts (ORS) for treatment of dehydration by private providers has been reported in a number of countries, including Bangladesh, Nigeria, Pakistan, Sri Lanka, and Yemen (16–18). A recent study found that most private practitioners in Mumbai used diagnostic and treatment practices for malaria that are inconsistent with guidelines from WHO (19). In Viet Nam, research has shown that underdosing of antimalarials is common and there is lack of knowledge of the appropriate regimen (20).

Since private providers are playing such a large role in child health, governments and programmes that fail to integrate these actors in child health policy and programmes will be seriously constrained.

Are service providers the only private actors influencing child health?

Understanding the influence of the full range of private actors on the key determinants of child health is critical to designing and implementing effective policies and programmes. The different pathways through which the private sector can influence child health outcomes are illustrated in Fig. 3, adapted from Claeson et al. (21).

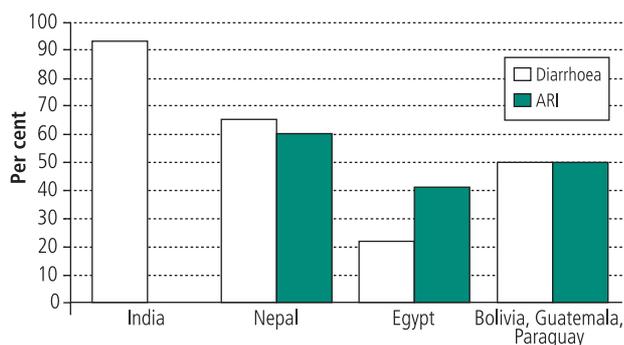
The influence of the private service provision on child health is self-evident: the quality of health and related services directly influences health and nutritional status. Furthermore, the availability and price of health services determines whether caregivers seek care for their children outside the home.

Private suppliers influence a range of other determinants of child health, including the availability and price of key goods such as insecticide-treated bed nets, fortified food, ORS, pharmaceuticals, soap and vaccines. Soap affects hygienic behaviours, which are important practices in preventing diarrhoeal disease in children (22). Private producers and suppliers also influence feeding practices. For example, the food industry can produce and distribute food fortified with vitamin A and iron, or iodized salt (23). The private sector can have a negative effect on feeding practices when it promotes unnecessary replacement feeding, such as baby formula (24).

What can governments do to better harness these private actors to improve child health?

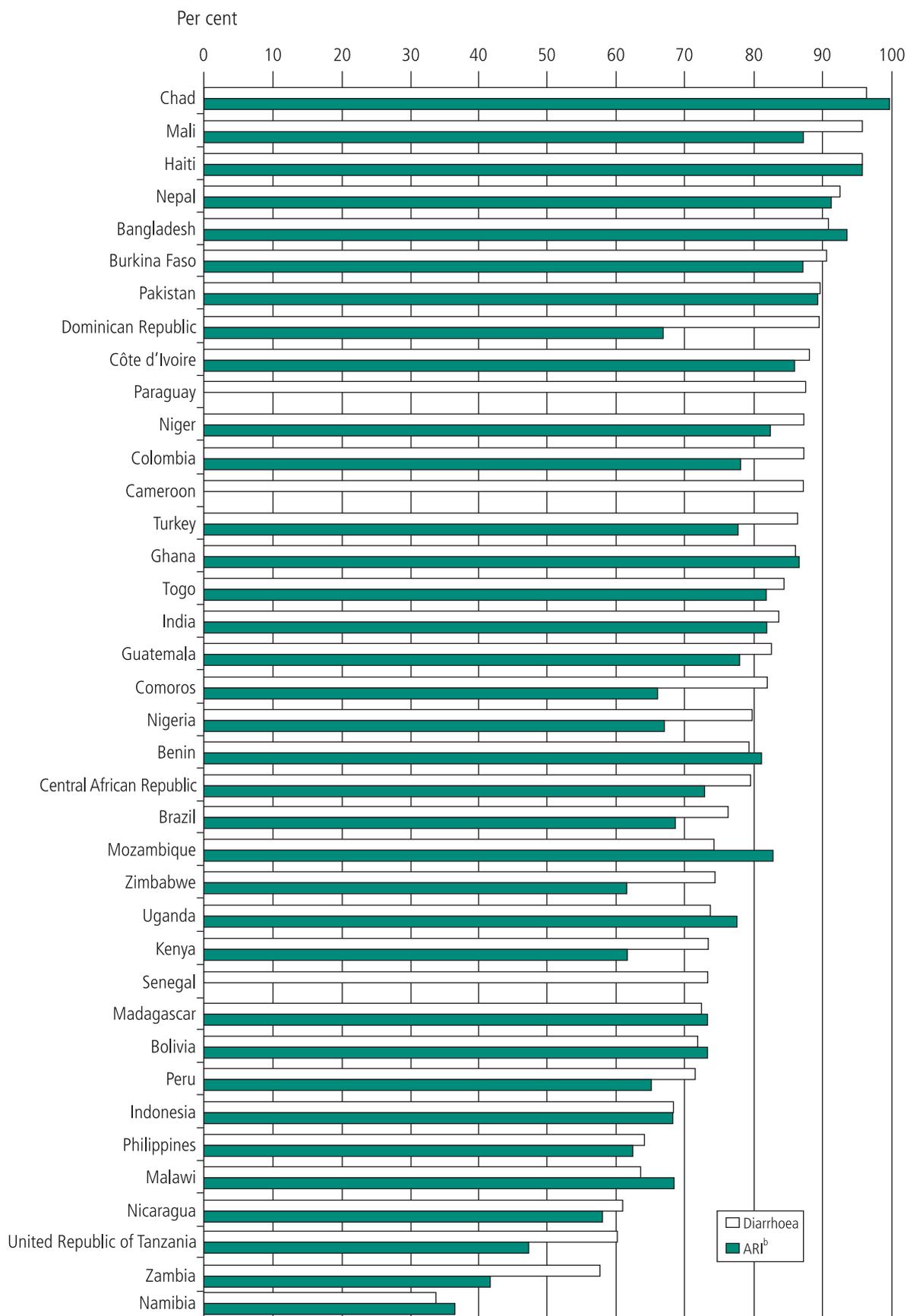
As described above, the private sector plays a significant role in child health in developing countries, and this role ranges from highly beneficial to very harmful. How can policy-makers increase the beneficial impact? How can the negative effects be reduced? Operational and implementation research in this area is limited. However, a number of strategies appear to be emerging and more governments are successfully using them to harness the private

Fig. 1. Percentage of children treated for diarrhoea and acute respiratory infections (ARI) by private providers^a



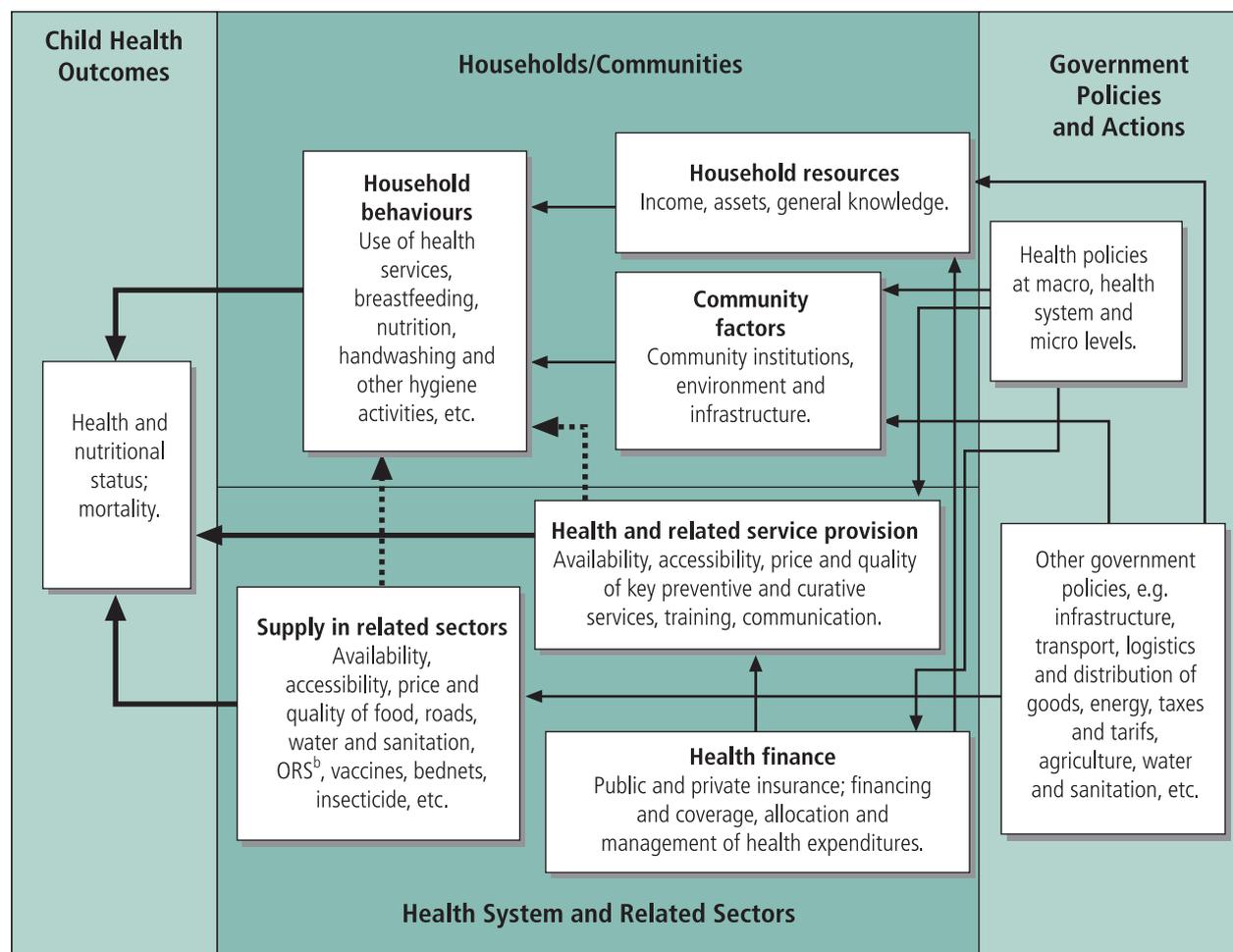
^a Source: Original references cited in ref. 5; figure developed by authors.

Fig. 2. Percentage of children treated outside the public sector for their most recent illness (poorest 20% of the population)



^a Source: data from ref. 12; figure based on authors' calculations.

^b ARI = acute respiratory infections.

Fig. 3. Determinants of child health outcomes^a

^a Source: adapted from ref. 27.

^b ORS = oral rehydration salts.

Note: solid arrows = direct influence from private sector on child health outcomes; dashed arrows = indirect influence.

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sector to improve child health in their countries. Table 1 characterizes each strategy by providing a definition and by identifying the actors, the targets, and the mechanisms through which the strategy influences child health. This conceptualization describes the mechanism through which the policy action translates into better health outcomes. The target of an intervention is the group of actors whose modified behaviour leads to improved outcomes. Policy actions usually work through intermediate actors, such as provider associations, whose direct links to the targets make them particularly useful for influencing their behaviour. We also identify potential constraints to replication of these promising strategies. Below, we provide examples from country activities to illustrate how each strategy works.

Contracting

Contracting with private providers for health and related goods and services is used to achieve a range of policy objectives, such as increased quality and coverage, lower costs, and reduced administrative burdens. Research on contracting for health services in developing countries has shown mixed results. Basic health services were provided more efficiently through contractual agreements with the private sector in some areas of Zimba-

bwe, while in South Africa, the overall costs were similar or higher than direct provision by the government (25–27). Compared to direct government service provision, evidence from India and South Africa suggests that the quality of services provided by contracting with private actors is similar or better for some aspects (e.g. cleanliness) and lower for others (e.g. dietary services) (25). There is not much documented evidence about expanding coverage to areas not covered by the government (28).

In Madagascar and Senegal, contracting was successfully used to provide nutrition services to poor groups on a large scale. Marek et al. report that in the areas covered by the project in Senegal, severe malnutrition went from 6% to 0% among children aged 6–11 months and moderate malnutrition among children aged 6–35 months decreased from 28% to 24%. In Madagascar, the proportion of malnourished children in the targeted region decreased from 30% to 10% between 1994 and 1997 (29).

Community nutrition workers were the targets of the intervention and were contracted to provide: growth monitoring of children; education sessions to women; referral to health services for children and pregnant women; home visits; and food supplementation to malnourished children. The contracting process included community participation in the selection of contractors.

Table 1. Strategies to improve private sector contribution to child health outcomes

Strategy	Definition	Intermediate actor	Target of intervention	Mechanism
Contracting	Private entities provide services of specified type and quality, in agreed quantities, to agreed recipients, over agreed time periods in exchange for public funds. May include child health preventive and curative services; support services; delivering supplies, or management services, or marketing, education, information dissemination services	<ul style="list-style-type: none"> Ministry of Health Contract management organization "Mother" or nodal NGO^a District health council Donor/ bilateral organization 	<ul style="list-style-type: none"> Provider Other health worker Contract manager Facility manager Auxiliary service providers Media organization 	<p>Expand supply for key services or services for key groups.</p> <p>Criteria and/or selection process for participation promotes quality.</p> <p>Specialization promotes efficiency.</p> <p>Competition, tender process, and criteria can be tied to licensing and accreditation, contract monitoring.</p> <p>Enforcement under company law further promotes quality and efficiency.</p>
Commercialization/social marketing	Producer/seller agrees to expand delivery to target populations in exchange for actions undertaken to make product or service more profitable	<ul style="list-style-type: none"> Ministry of Health, Ministry of Education Provider association Producer association Lead producer Lead provider organization Community organization Marketing organization Advertising organization Education organization Media 	<ul style="list-style-type: none"> Provider Producer Household 	<p>Government supports advertising; education; development and dissemination of promotional materials, tax or tariff reductions, pricing support; importation and distribution of related inputs.</p> <p>Reduce/reallocate public production or sale.</p> <p>↓ cost of operation; for target goods and services.</p> <p>↑ demand for key goods; for superior goods (fortified foods, treated nets), and services.</p>
Regulation/standard-setting	Setting rules related to provision of child health services, drug import, prescription, sale, etc. with provision for enforcement	<ul style="list-style-type: none"> Ministry of Health Regulatory agency Medical-professional association Pharmaceutical association Other health worker organization 	<ul style="list-style-type: none"> Provider Producer Seller Importer Pharmacist supports/mandates increased role in regulation for association(s). 	<p>Government rewards for compliance; punishes for noncompliance.</p> <p>Government empowers/</p>
Information dissemination/training	Providers/drug vendors/ retail pharmacists are trained to improve their dealing with key child illnesses (diagnosis; treatment prescription; drug-dispensing; advice). Individuals/ households are educated or given information about appropriate care, careseeking and treatment for common childhood illnesses	<ul style="list-style-type: none"> Educator Education organization District health council Health worker Provider association Producer association Pharmaceutical association 	<ul style="list-style-type: none"> Provider Drug vendor Retail pharmacist Household Caregivers <p>treatment, prescription.</p> <p>Knowledge improves caregiving, care-seeking behaviour and ↓ pressure on provider/seller to render inappropriate treatment.</p>	<p>Improved knowledge of providers, pharmacists, drug vendors, and sellers.</p> <p>↑ frequency of appropriate</p> <p>May increase demand for certain services that were "underconsumed".</p>

^a Nongovernmental organization.

In many countries, the lack of capacity to manage and supervise the contracting process is cited as a major obstacle. In Madagascar and Senegal, however, NGOs were the intermediate actors, brought in to perform this function. Universities and research organizations were also utilized to carry out operations research and impact studies. The mechanism through which this strategy aimed to improve children's nutritional status was an increase in the supply and quality of nutritional services. Potential constraints to replication of this project include that it used a project management unit for implementation and monitoring, which cost 13–17% of the total budget (29), and the financial sustainability of the project.

Contracting was successfully applied to increase access to child health services in Cambodia. NGOs were contracted to deliver a package of services at the health centre level, which consisted of preventive services such as immunization, family planning, antenatal care, and nutritional support; and curative care for diarrhoea, ARI, and tuberculosis. Utilization of facilities and coverage for services such as immunization and antenatal care improved for the population that used contracted services compared to the control group, which used services provided by the DHS and the Ministry of Health (30, 31). Better management, supervision, and higher salaries addressed the problem of health staff not coming to work regularly. The Ministry of Health was involved extensively in designing, monitoring, and managing the contracts.

The main targets of the intervention included the contracted NGOs and their health workers. The mechanism of this approach was an expanded supply of health services. A potential constraint to replication of this project is that the contracted districts received more resources than the government districts.

Commercialization and social marketing

Commercialization and social marketing are strategies used to improve child health in many countries. They have been applied to issues such as use of soap for handwashing to prevent diarrhoea (32), ORS to treat diarrhoea (33, 34), and insecticide-treated bednets to prevent malaria (35–37). Research has shown that commercialization and social marketing have positively influenced the use of ORS by increasing knowledge (34), motivation (34), and sales (33).

In rural areas of the United Republic of Tanzania social marketing of insecticide-treated bednets reduced child mortality due to malaria by almost 30% (36) and reduced the prevalence of anaemia by 63% (37). Treated bednets were packaged and branded after research had identified household perceptions of malaria, and preferences regarding mosquito nets and net treatment. Health workers, shopkeepers, religious leaders, and village government members were recruited in each village as sales agents (intermediate actors). Bednets were sold both through public and private outlets and a system of community door-to-door selling. Bednet producers and households were the targets of the strategy. Competition between producers was encouraged and taxes were removed from both netting material and treated bednets. Households were sensitized through a comprehensive information, education, and communication campaign. The mechanism to achieve reduced malaria mortality was the increase in production, demand for, and use of treated bednets.

Improved handwashing practices and reduced diarrhoeal rates were achieved in Central America using commercialization. This programme worked with private producers of soap and with the media to encourage better handwashing practices among rural groups with low socioeconomic status in Costa Rica, Guatemala, Honduras, and El Salvador. Handwashing behaviour improved and the prevalence of diarrhoea decreased by 4.5% among children under 5 years of age (32). A project task force developed public health messages, while soap producers used their marketing skills to promote handwashing with soap. The project conducted baseline market research to analyse the handwashing behaviour of the targeted population. Since this was a multinational initiative, national ministries of health and education were intermediate actors. Additional intermediate actors were NGOs, foundations, and the media, which implemented radio and television advertisements to promote the campaign. Households were the targets of the intervention and were involved through media campaigns, community outreach education efforts, and as recipients of soap samples. The mechanism for reducing the incidence of diarrhoea was to increase the demand for, and the supply of, soap for handwashing, as well as improved handwashing practices. If attempts are made to replicate this project it should be borne in mind that an external task force was a critical factor in the success.

Regulation and standard setting

Regulation and standard-setting are used to improve the quality of health and related goods and services. Most developing countries have some form of basic regulation concerning health personnel, such as registration and licensing requirements, restrictions against dangerous or unethical health services, and legislation on the production and distribution of drugs (38). Accreditation of health-care-providing institutions and medical staff has been suggested as an option to assure the quality of private sector health services (4). Research has shown that inadequate resources are often allocated to monitoring and enforcing regulations (4, 39–43), that there are gaps in existing regulatory frameworks (39, 44), and that regulation can lead to policy capture (45, 46).^b Although the record on regulation of the health sector in developing countries is mixed, there is evidence of successful regulatory strategies. We describe two such examples below.

As discussed above, private actors have a detrimental effect on feeding practices when they promote unnecessary use of infant formula. To address this, WHO and the United Nations Children's Fund (UNICEF) have developed an international code for the marketing of breast-milk substitutes. A number of countries have applied related regulation to the production and distribution of such substitutes (47). For example, this strategy was successfully used to decrease the distribution of free and low-cost infant formula in the Philippines (48).

In Lao People's Democratic Republic, pharmacists and drug sellers often provide prescription medicines without prescription, as well as advice on which medicines are appropriate. Care givers frequently seek care for sick children in such settings. The government undertook a pilot regulatory initiative in 1996, to improve the quality of supplied medicines, as well as the advice given on common illnesses by pharmacists (the targets of the intervention). The pharmacy association was the intermediate actor. The regulatory initiative included: four annual inspections of each private pharmacy, with a template of 10 indicators

^b Policy (or regulatory) capture refers to the use of inappropriate influence on the regulatory body by interest groups such as provider or professional associations.

to check; feedback to the pharmacists from the inspections; enhanced enforcement through application of sanctions for gross violations; and enhanced flow of information about applicable regulations to private pharmacies (49). Considerable improvement of private pharmacy service quality during the 18-month intervention period was found. The improvement was measured by indicators such as increase in the availability of essential drugs and information given to customers, and decrease in mixing different drugs in the same package. This positive evaluation is particularly significant given the low cost and the potential to replicate the strategy in other low-income, low-capacity settings (50). An issue that should be addressed in replication efforts of this kind of project is that government support for regulatory reform efforts is crucial.

Information dissemination and training

The strategies of information dissemination and training are used to influence the behaviour of both the private sector and the consumers of health and related goods and services. A recent review found that interventions addressing only provider knowledge are unlikely to succeed (51), and customary classroom teaching has achieved limited success (43, 52). More innovative approaches have achieved superior results. Interventions in Indonesia and Kenya that included one-on-one meetings between educators and pharmacists and drug sellers achieved significant increases in the sales of ORS and decreases in the sales of antidiarrhoeal drugs (53). Because private actors are influenced by patient expectations (54, 55), approaches that combine provider training with consumer education will be more likely to yield the desired behaviour changes (56). A project in Pakistan combined these two components and achieved important improvements in the clinical case management of sick children, as measured by how the providers applied the Integrated Management of Childhood Illness (IMCI) approach (57).

Another successful example is an intervention to improve the quality of care for sick children provided by private practitioners in the Indian state of Bihar. Substantial improvements in private practitioners' case management of ARI, diarrhoea, and fever were documented (56). The quality of care was evaluated through a verbal case review with mothers of children who had recently received care. The mothers were also informed of correct case management practices for different diseases. Deficiencies in care practices revealed during the review were then addressed with the provider through the following: provision of relevant information on case management; feedback on treatment practices; negotiation of a unpaid contractual agreement specifying changes in practice; and monitoring of compliance. In this case, the intermediate actors included NGOs and community health workers, who were responsible for carrying out the intervention. Private practitioners and mothers were the targets. The mechanism was a decrease in demand from mothers for inappropriate care, and increased receptivity for appropriate services. A potential constraint to replication of this strategy is that private providers are extremely heterogeneous, so that efforts to identify and motivate priority practice changes will need to be tailored appropriately.

Although we have mainly reviewed evidence on training of private providers, it is important to emphasize the potential importance of training conducted by private sector institutions.

Finally, a promising strategy for which evidence is emerging, but which still requires rigorous evaluation, is franchising.

Most franchising efforts to date have addressed family planning and reproductive health (58), but this strategy can also be applied to other health issues.

Conclusions

The Millennium Development Goals for child health will require substantial improvements in several areas of planning and programming in developing countries. Currently, it is considered unlikely that they will be achieved in many countries (59). As discussed above, the range and significance of private sector influence on child health is substantial, and goes far beyond service provision. Hence, the full range of private actors must be engaged. If they are not, it is unlikely that developing countries will achieve adequate improvements in child health outcomes.

Contracting, regulation, social marketing, and training and dissemination of information have all been used in several settings in developing countries and have brought about desired improvements. A number of constraints make it hard for policy-makers to emulate these approaches. Few experiences are clearly described, monitored, and evaluated. Formal publications and sharing of experiences are lacking. The costs and benefits of the strategies are poorly documented and no work has been done to evaluate the cost-effectiveness of the different approaches for engaging the private sector. In addition, the majority of initiatives are relatively small-scale and a number are financed with external sources, such as World Bank loans or bilateral support. Some others, such as the hand-washing experience in Central America, are influenced by and dependent upon external actors over which governments do not have influence. Therefore, sustainability and replicability are key concerns.

Many governments are experimenting with strategies to engage the private sector to improve child health. However, our assessment suggests that the way forward when designing programmes in developing countries requires a more systematic shift in approach. The starting point should include the evaluation of the presence and potential of the private sector, including actors such as professional associations, producer organizations, community groups, and patients' organizations. Collection of information about the private health sector and its willingness to collaborate is important. Guidelines for this assessment are currently being developed and will soon be piloted through joint collaboration between WHO, the World Bank, and other stakeholders.

With the renewed commitment to improve child health, we suggest that countries continue to utilize the described strategies to engage the private sector. The implementation of these strategies will benefit from studies and further experience gained at the country level. It will be particularly important to monitor and evaluate rigorously their cost and impact on child health, in order to generate better knowledge for future decision-making. ■

Conflicts of interest: none declared.

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Résumé

Les pays en développement peuvent-ils améliorer suffisamment les résultats des programmes de santé de l'enfant sans le secteur privé ?

Dans les pays en développement, le rôle joué par le secteur privé est déterminant pour améliorer la santé de l'enfant, y compris dans les couches défavorisées. Le présent article passe en revue les informations disponibles sur le recours au secteur privé et la qualité des soins assurés. Il fournit par ailleurs un cadre pour analyser l'influence de ce secteur sur les résultats sanitaires obtenus. Cette influence ne se limite pas à la prestation de services par des praticiens privés et des organisations non gouvernementales (ONG) : les pharmacies, les revendeurs de médicaments, les fournisseurs privés et les producteurs de denrées alimentaires ont eux aussi une influence sur la santé de l'enfant. De nombreux gouvernements essaient des stratégies

pour faire participer le secteur privé. Le présent article analyse quelques-unes des stratégies les plus prometteuses, et laisse entendre que les responsables politiques ont du mal à s'en inspirer. Peu d'expériences ont été clairement décrites, contrôlées et évaluées. Il en ressort que, pour rendre les programmes de santé de l'enfant plus performants dans les pays en développement, il faut que les moyens d'optimiser la participation du secteur privé soient analysés de manière plus systématique, en commençant notamment par évaluer la présence et le potentiel de ce secteur, en particulier des associations professionnelles, des organisations de producteurs, des groupes communautaires et des organisations de malades.

Resumen

¿Pueden los países en desarrollo mejorar los resultados de salud infantil prescindiendo del sector privado?

El sector privado tiene una influencia significativa y decisiva en los resultados de salud infantil en los países en desarrollo, sobre todo en la salud de los niños pobres. En el presente artículo se examina la evidencia disponible sobre la utilización del sector privado y la calidad de la asistencia. Se proporciona un marco para analizar la influencia del sector privado en los resultados de salud infantil. Esta influencia trasciende la prestación de servicios por dispensadores privados y organizaciones no gubernamentales (ONG), pues la actuación de las farmacias, los vendedores de medicamentos, los proveedores privados y los productores de alimentos también repercute en la salud de los niños. Muchos gobiernos están ensayando estrategias para hacer participar al sector privado en la mejora de la salud de los niños. El artículo

analiza algunas de las estrategias más prometedoras y señala que existen algunas limitaciones que dificultan la emulación de esos enfoques por parte de los formuladores de políticas. Son pocas las experiencias que se ha conseguido describir, vigilar y evaluar claramente. El artículo apunta que, si se quiere mejorar el impacto de los programas de salud infantil en los países en desarrollo, es preciso realizar un análisis más sistemático de la manera de hacer participar al sector privado con la máxima eficacia. El punto de partida debe incluir la evaluación de la presencia y el potencial del sector privado, incluidos actores como asociaciones profesionales, organizaciones de productores, grupos comunitarios y organizaciones de pacientes.

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