Introduction – the importance and potential of the private sector in child health

There is great potential for working with private health care providers to both improve existing child health services and to expand and rationalize the coverage of these services. Currently, in many countries private and non-governmental providers are more commonly consulted for child health illnesses than public providers. In India, where approximately 80% of registered doctors work in the private sector (Rohde 1997), a 1998–99 national survey showed that more than 80% of children treated for diarrhoea or acute respiratory infection (ARI) were seen by a private provider (International Institute for Population Science 2000). The private sector distributes 65 to 70% of the oral rehydration salts (ORS) used in the country (Chakraborty 1998). In Egypt, private physicians treat approximately 41% of childhood ARI cases and 22% of childhood diarrhoea cases (Hudelson 1998).

There is a demonstrated willingness to pay for private services that are perceived to be of higher quality than publicly provided health care. Families spend relatively large amounts of money for curative services in the private sector, even when cheaper public sector alternatives are available. Globally, in low-income countries 41% of all health financing comes from private, out-of-pocket household payments, compared with 33% in middle-income countries and 22% in high-income countries. In Vietnam, 68% of health financing comes from the private sector, including households. The private sector accounts for approximately 50% of the provision of services (Krasovec and Shaw 1999). Use of private sector practitioners is not limited to wealthier socioeconomic groups. In India, private practitioners provided 79% of all outpatient care for those below the poverty line in 1995–96, although they delivered less than 10% of the childhood immunizations (Peters et al. 2002).

Despite users' perceptions, in many settings private providers are unregulated, and the technical quality of the services they provide is questionable and governments’ capacity to regulate them is limited. This article assesses the actual and potential contributions of the private sector to child health, and classifies and evaluates public sector strategies to promote and rationalize the contributions of private sector actors. Governments and international organizations can use a variety of strategies to collaborate with and influence private sector actors to improve child health – including contracting, regulating, financing and social marketing, training, coordinating and informing the public. These mutually reinforcing strategies can both improve the quality of services currently delivered in the private sector, and expand and rationalize the coverage of these services.

One lesson from this review is that the private sector is very heterogeneous. At the country level, feasible strategies depend on the potential of the different components of the private sector and the capacity of governments and their partners for collaboration. To date, experience with private sector strategies offers considerable promise for children's health, but also raises many questions about the feasibility and impact of these strategies. Where possible, future interventions should be designed as experiments, with careful assessment of the intervention design and the environment in which they are implemented.

Key words: child health, private sector, health financing, contracting, training, social marketing

Working with the private sector for child health

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Private sector providers are the most commonly consulted source of care for child illnesses in many countries, offering significant opportunities to expand the reach of essential child health services and products. Yet collaboration with private providers presents major challenges – the suitability and quality of the services they provide is often questionable and governments’ capacity to regulate them is limited. This article assesses the actual and potential contributions of the private sector to child health, and classifies and evaluates public sector strategies to promote and rationalize the contributions of private sector actors. Governments and international organizations can use a variety of strategies to collaborate with and influence private sector actors to improve child health – including contracting, regulating, financing and social marketing, training, coordinating and informing the public. These mutually reinforcing strategies can both improve the quality of services currently delivered in the private sector, and expand and rationalize the coverage of these services.
Bangladesh, Sri Lanka and Yemen (Tomson and Sterky 1986) have found that ORS is under-prescribed – and drugs heavily over-prescribed – for childhood diarrhoea cases.

Despite the widespread availability of private child health services, there is a shortage of systematically documented interventions showing how governments have worked with the private sector for child health. An asymmetry in information between patients and providers that allows private practitioners to offer more diagnostic tests and services than are needed, the complexity of pricing private health services and the lack of information on private practice have also been shown to be significant problems for governments dealing with the private sector (Peters 2002). This article reviews the evidence available concerning public sector efforts to work with private health services providers and other components of the private sector, in order to both improve the quality of these services and to rationalize and expand their coverage.

Classifying private sector service providers

Private sector service providers are classified here by general category in order to advance the discussion of feasible strategies for public–private collaboration for child health care. Formal sector providers include formally trained physicians and other types of health care workers that are accredited or registered, and thus function within the context of a regulated health system. Informal providers are not formally trained or legally recognized and are typically outside of the realm of government regulation. In many settings, the quality and consistency of care provided by this group is particularly problematic.

Private employers are a significant source of both health care provision and financing in many countries. Non-governmental organizations (NGOs) include church-based and other not-for-profit health care providers indigenous to the country or settings. Private voluntary organizations (PVOs), on the other hand, are international organizations that have a physical presence and provide health care in a given country. Finally, the category of traditional healers covers many different types of providers, all practicing some form of traditional medicine and typically outside the purview of government regulation.

Classifying other private health sector actors

In addition to service providers, a variety of other actors in the private sector influence the behaviours of both households and health care providers. Pharmaceutical companies influence the price and availability of medications. Governments directly regulate the pharmaceutical industry. In addition, commercialization and social marketing interventions work with pharmaceutical companies to make drugs that are essential for child survival widely available at affordable prices.

In many low- and middle-income countries, private pharmacies and drugs vendors have an enormous influence on household behaviours and, ultimately, children’s health status. While private pharmacies are generally regulated by governments, the term ‘drugs vendors’ is used here to represent drug sales that are unlicensed and unregulated.4

Food producers and shopkeepers affect the types of foods produced and sold. Food manufacturers are potential partners in food fortification programmes. Shopkeepers can directly influence household behaviour related to child feeding and care-giving. In most countries, the media has a strong impact on households and represents one of the principal channels for governments and their partners to affect households’ behaviour related to child health. Private suppliers are a group that includes suppliers of medical equipment to hospitals and private providers as well as the manufacturers and distributors of non-pharmaceutical products – such as handwashing soap and bednets – used to improve child health at the household level.

Finally, the private sector plays a major role in the health sector in many countries by pooling financial resources and helping households to insure against risk. Private health insurance companies also directly affect provider behaviour through payment mechanisms, incentives and setting standards. Because health insurance and contracting mechanisms are of intrinsic importance to health systems in general and go well beyond child health care, they are not treated in depth in this paper.

Classifying interventions to work with the private sector for child health

In order to classify documented interventions working with private providers, and to analyze the potential for encouraging greater contributions by the private sector to child health, this article applies an analytic framework for analyzing the contributions of the private sector to child health care, and for classifying and evaluating public sector strategies to promote and rationalize the contributions of private sector actors in low- and middle-income countries. The framework used here (Figure 1) derives from Mosley and Chen’s (1984) portrayal of the determinants of child health outcomes, as well as the World Bank’s Poverty Reduction Strategy Framework (Claeson et al. 2001). Mosley and Chen laid out a series of proximate determinants of children’s health status, including maternal factors, environmental contamination, nutrient deficiency, injury and personal illness control. The framework focuses on the last of these, personal illness control, as the entry point for interventions working with the private sector to influence households’ actions related to child health.

A child’s health and nutritional status, and ultimately, survival, are most immediately influenced by conditions and actions at the household level (Point 6 in Figure 1).6 Households’ behaviour and risk factors directly influence whether children become sick. When children do fall ill, treatment at the home and care-seeking behaviours have a strong effect on the evolution of the illness, and ultimately, the possibility of death. Household behaviours are in turn influenced by additional factors at the household level, including available financial resources, the physical environment and possible
contamination of the household and surrounding community, and cultural attitudes, values and knowledge relative to children and their health (Point 5 in Figure 1).

Once caregivers have made the decision to take a child to a service provider, whether for preventive or curative health care, the provider directly influences the child’s health status (Points 3 and 7). In addition, health care providers directly affect households’ behaviour, through health education, financial incentives and other channels. Both public and private providers clearly play this role; public providers are omitted from this framework as it focuses on the role of the private sector.

Governments and the international organizations that support them have a variety of strategies at their disposal to target the components of the private sector with the ultimate goal of improving child health outcomes. The principal strategies available can be classified as follows (Points 1 and 2 in Figure 1):

- **Regulating** – setting and enforcing standards for the private sector.
- **Contracting** – purchasing services from the private sector.
- **Financing and social marketing** – providing financial incentives for private services and products to meet public objectives.
- **Training** – educating and supporting private service providers.
- **Coordinating** – coordinating and creating alliances among private and public sector actors.
- **Informing** – educating consumers about healthy behaviours and the role of the private sector.

The first five strategies directly target private sector providers and other private health sector actors. The sixth – Informing – targets households in their role as consumers of private sector health services. These strategies are not mutually exclusive. They are generally applied in combinations to reach two important goals: (1) improving the quality of care delivered by existing service providers; and (2) expanding the coverage of private sector services and rationalizing this coverage with that of public sector providers. Regulating – including setting standards, licensing and accrediting – is primarily directed at improving quality of care. Contracting and coordinating address quality of care as well as expansion and rationalization of coverage. Providing financial incentives, social marketing, training providers and informing the public are key operational activities, generally used to reinforce the other strategies.

**A review of interventions to work with the private sector for child health**

This section reviews literature documenting and evaluating interventions to work with private providers, focusing on the six strategies described above: regulating, contracting, financing and social marketing, training, coordinating and informing. Many of the interventions identified are currently or potentially applicable to a broad range of public health concerns. The review focuses on the application of these strategies in lower and middle-income countries. The focus
on child health here derives from the relatively focused nature of actions targeting child diseases, including oral rehydration therapy (ORT), immunizations, and treatment of malaria, respiratory infections and malnutrition. In many cases, however, the interventions – including regulating, contracting and informing the private sector – cannot conceptually be limited only to child health. The experiences working with private sector providers documented in this article can rather be considered as pilot experiences from which a broader collaboration with private health providers can be built.8

The electronic databases Pubmed and Popline were used to identify both published and unpublished literature, from 1980 to the present, using keywords including: private sector, child health, privatization, contracting, regulation, subsidy, social marketing and commercialization. We also combined these terms with specific types of private sector entities (traditional healer, midwife, drug seller, manufacturer) and common child health concerns (immunization, nutrition, ORS, diarrhoea, ARI). Additional references were identified through the bibliographies of these articles. Articles from promotional publications, unpublished trip reports and articles lacking references were excluded.

Of the 94 non-spurious references we identified through these searches, 42 described specific interventions for working with the private sector. Six of these could be considered ‘controlled’ trials in that they compared results in two or more groups. Ten had a pre-post evaluative component, but no comparison group; four were based on cross-sectional survey data; and the remaining 22 were descriptive case studies (Table 1).

Regulating: setting and enforcing standards for the private sector

Regulation is a principal means by which governments can influence the behaviour of private organizations in health and related sectors. Regulation of the labour market for health care includes pre-service and in-service training, licensing and certification of providers, continuing education, and incentives for professional providers to locate in certain areas. Regulation of the pharmaceutical market includes essential drug lists and their enforcement, the promotion of generic drugs, import regulations, registration, encouragement and regulation of local production, and quality and price regulations for for-profit retailers.

There is to date very little documentation of public health regulatory interventions in low- and middle-income countries. One of the better designed studies reviewed involved a randomized controlled trial of a regulatory intervention in private pharmacies in Laos (Stenson et al. 2001). The intervention included inspections of pharmacies, provision of information to drug sellers, and sanctions. Results indicated a 34% increase in the availability of essential materials for dispensing and significant increases in the amount of information given to consumers, among other improvements. Almost all countries impose some level of regulation on the role of the private sector in distributing and selling pharmaceutical products. In another example, the government of Sri Lanka developed an essential drug list in order to regulate the public sector, and found that over 70% of the pharmaceutical products registered by the private sector are taken from this essential drugs list as well (Weerasuriya 1993).

Consumer laws are another possible way to protect the health of children. In India, the Consumer Protection Act (COPRA) was passed in 1986 to promote and protect the rights of consumers, provide accurate information, protect consumers against unfair trade practices, and ensure that consumer interests receive due consideration in appropriate forums. Thus far, according to Bhat (1997), COPRA has had limited effectiveness for changing provider behaviour to improve quality standards. Misra and Kalra (2000) found that the consumer courts were very busy, but saw few medical cases, took a long time to process and were biased towards wealthier and literate complainants.

Kumaranayake et al. (2000) reviewed the existing regulatory framework for the health sectors in Tanzania and Zimbabwe. Both countries have established licensing requirements for providers, drugs and health facilities, which outline market entry requirements and quality standards. Professional organizations have also been formed. However, there are few regulations on the books related to pricing or competitive practices, and few consumer protection laws. Hongoro and Kumaranayake (2000) found similarly in Zimbabwe that there was limited knowledge of basic regulations among government agencies and private providers, and a strong perception that regulations are not being enforced effectively.

Some countries are loosening regulations that limit the sale of public health products by private providers in order to increase access to these products. For example, in some sub-Saharan African and Latin American countries, private pharmacies can provide immunizations after obtaining approval to sell vaccines from the government (Slater and Saade 1996). In countries where NGOs play an important role in service delivery, involving them in the regulatory process may lead to improved public–private coordination and compliance with standards. INSALUD, a coordinating organization for more than 100 NGOs in the Dominican Republic, participates in the National Commission for NGO Qualification and Accreditation. It collaborates with the government to ensure that NGOs receiving public funding comply with minimum requirements, standards and norms. Similarly, the Ministry of Health in El Salvador has contracted with an NGO to establish quality-of-care requirements and assess compliance (Rosenthal 2000).

Contracting – purchasing services from the private sector

Because preventive and curative child health services are generally cost-effective and often carry positive externalities, governments should ensure that these services are widely available, either by directly providing services or by purchasing them from the private sector (World Bank 1993). Formal contracting specifies the type, quantity and time period of
### Table 1. Categorization of private sector interventions in child health according to study type

<table>
<thead>
<tr>
<th>Intervention type</th>
<th>Randomized controlled interventions</th>
<th>Non-randomized controlled interventions</th>
<th>Uncontrolled (before-after) interventions</th>
<th>Cross-sectional studies</th>
<th>Case studies, descriptions and qualitative research</th>
<th>Total involving child health</th>
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<tr>
<td>Regulating</td>
<td>Stenson et al. 2001*</td>
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<td>Bhat 1996*</td>
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<td>Bhat 1997*</td>
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<td>Konde-Lule et al. 1998*</td>
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<td>Stenson et al. 1997*</td>
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<td>Weerasuriya 1993*</td>
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<td></td>
<td>Hongoro &amp; Kumaranyake 2000*</td>
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<td>Social marketing</td>
<td>Kenya et al. 1990</td>
<td>Schellenberg et al. 2001</td>
<td>Winfrey et al. 2000*</td>
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<td>Mantra &amp; Davies 1989</td>
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<td>Sobti 1988</td>
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<td>Sinniah et al. 1994</td>
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<td>Slater &amp; Saade 1996</td>
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<td>Coordinating</td>
<td>Saade et al. 2001</td>
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<td>Ferraz-Tabor 1993</td>
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<tr>
<td>Informing</td>
<td>Chowdhury et al. 1997</td>
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<td>Lynch 1993</td>
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<td>Chaudhuri 1990</td>
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<td>10</td>
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<td>2</td>
<td>10</td>
<td>1</td>
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* Denotes a study that did not specifically deal with a child health intervention or child health outcome, but addressed health services generally, including for children.

**Definitions:**
- **Randomized controlled interventions:** studies that involve a random allocation of the intervention and comparison (e.g. usual care) to different study groups, including before and after measurements.
- **Controlled interventions:** non-randomized studies containing a before and after measurement that compare results in two or more groups. The comparison intervention may be ‘usual care’ or a different intervention.
- **Uncontrolled interventions:** non-randomized studies containing a before and after measurement looking at one intervention, but without a comparison group.
- **Cross-sectional studies:** studies based on health surveys or qualitative interviews, with data collected on one occasion only.
- **Case studies:** descriptive information or qualitative analysis only.
services provided by a private provider on behalf of government, along with payment arrangements, in a legally binding fashion. Informal or ‘relational’ contracting consists of more implicit agreements between the government and private sector agents, and tends to be based on trust and long-term relationships (Palmer 2000). District types of contracting in health care can be usefully distinguished, including contracting for: (1) health services; (2) ancillary services; and (3) management contracting (Rosen 2000).

There are several examples of contracting in low- and middle-income contexts. The governments of Senegal and Madagascar have successfully contracted with NGOs to offer nutrition services in high-poverty areas not served by public or other private providers (Marek et al. 1999). In both countries, local NGOs were contracted via an open tendering process, with stated eligibility criteria. Rates of severe and moderate child malnutrition decreased significantly in the target areas of both projects, although this was measured via cross-sectional surveys and there were no controls. Both interventions lack follow-up evaluations.

The governments of El Salvador and Guatemala have experimented with contracting primary health services to NGOs and PVOs in areas where formal health coverage is minimal, but evaluative results are unavailable (Rosenthal 2000). In Cambodia, the Ministry of Health is conducting a randomized trial to contract essential health services to NGOs and for-profit firms in 12 districts. The preliminary evidence suggests that contracting care yielded higher antenatal coverage, immunization coverage, health service utilization and quality of care, and lower out-of-pocket costs, than did the usual government services (Loevinsohn 2002).

Mills et al. (1997) examined informal contracting arrangements in Zimbabwe, comparing costs and quality at two government facilities and two rural mission hospitals receiving substantial government grant money. In a controlled trial, the two mission hospitals were found to provide similar services to the government hospitals, but at much lower unit cost. In South Africa, Mills et al. found that while three for-profit contractor hospitals provided care at lower unit costs than three government-run hospitals, the private entities also reaped most of the efficiency gains, keeping cost savings to themselves.

There are significant restrictions on the potential for contracting out health care services in lower and middle-income countries. Limited competition among potential contractors reduces market incentives for efficiency and quality improvements. Public financing and administrative capacity may be insufficient, and transaction costs high. Palmer (2000) points out that the institutional infrastructure necessary to support a comprehensive contract is lacking in most cases, resulting in contracting arrangements that tend to be ‘relational’ and flexible. In sum, significant investments in human resources and information systems are needed to make contracting feasible in many low- and middle-income country contexts (McPake and Ngalande-Banda 1994).

Financing and social marketing – providing financial incentives

The terms financing and social marketing are used here to represent a variety of financial incentives used to influence the actions of private health sector actors, including direct subsidies or grants, tax incentives or non-monetary (in-kind) support. In the framework, we draw a distinction between contracting – delegation of service provision to private entities and direct payments to these entities – and financial support, which involves a broader range of incentives and subsidies that do not necessarily entail delegation of service provision but may target a few specific commodities, services or populations. Social marketing or commercialization of public health commodities often involves public subsidies. Tax breaks can encourage the purchase and distribution of essential drugs and vaccines. In-kind support, including technical assistance or provision of land or equipment, can supplement or replace direct financial payments.

In almost all lower and middle-income countries, government regulatory bodies give preferential tax and import treatment to products classified as essential drugs or vaccines (Krasovec and Connor 1998). The government of Pakistan provides tax incentives to private primary health care providers who set up operations in rural areas (Bennett et al. 1997). Governments and donors can utilize subsidies and technical assistance to encourage private companies to provide health services in remote areas. Fifty-eight tea estates in Malawi collaborate with Project HOPE to provide maternal and child health (MCH) services to their employees’ families, covering 270 000 individuals and resulting in documented improvements in well-child visits, exclusive breastfeeding, and water and sanitation (Burkhalter 1998).

In-kind assistance may be feasible in situations where direct government payments are not. The government of Malaysia provided free immunizations and informational materials to the United Planting Association of Malaysia in exchange for immunization coverage of its employees and their families – about 7% of the Malaysian population (Sinniah et al. 1994). The Government of Peru provides child vaccines to private sector providers at no cost, on the condition that the providers deliver child immunizations. Public insurance can also effectively influence the types of services provided in the private sector and increase access to child health services through the private sector. The government of South Korea provides medical insurance for most of its population, and this insurance covers the cost of immunization services obtained through private sector facilities (DeRoeck and Levin 1998).

Governments and international donors have been successful in collaborating with private suppliers and pharmaceutical companies to make public health commodities available to populations at low prices (Slater and Saade 1996). To support these efforts, governments and donors have conducted market research, developed logos, brand names and messages for target audiences; and created promotional materials for pharmacies and shops. As with other strategies involving the private sector, the key challenge facing
commercialization strategies has been the sustainability of the efforts once external funding support is no longer available.

**Training – educating and supporting private service providers**

Training private health care providers is among the most logistically feasible activities that governments and donors can undertake to improve the quality of child health care. It is a discrete activity, generally with limited recurrent funding commitments. A wide variety of private sector components have been targeted for training, including pharmacists, physicians, nursing aides, midwives and traditional healers. Unfortunately, there is little evidence of sustained impact for training interventions, in part because most training efforts to date have been one-time events rather than institutionalized, continuous processes.

Most of the available literature emphasizes in-service training. A study in Bihar, India found that training accompanied by ‘verbal case reviews’ (feedback from mothers to providers) resulted in statistically significant improvements in providers’ history-taking, examination and counselling practices for ARI, diarrhoea and fever (Chakraborty et al. 2000). A similar behavioural intervention in Pakistan resulted in significant improvements in childhood illness case management, including reductions in the use of unwarranted injections from 70 to 56% of cases (Luby et al. 2002). The Indian Medical Association (IMA) developed a national ORT training programme in the late 1980s to improve private physicians’ management of childhood diarrhoea, and had trained almost 22 000 physicians by 1988. The IMA successfully used its organizational structure to promote the training, and documented improved knowledge and practice among trainees (Sobti 1988).

Private pharmacists and their staff represent a logical target for training because of their strong influence on care-givers’ behaviour. Ross-Degnan et al. (1996) report results of a controlled intervention by the Indonesian government to influence pharmacists’ sale of anti-diarrhoeal therapies. The intervention utilized ‘detailing’ – a technique common to the pharmaceutical industry consisting of short, interactive face-to-face sessions between outreach educators, pharmacists and counter staff. ORS sales increased significantly and sales of anti-diarrhoeal drugs decreased significantly in intervention pharmacies.

**Coordinating and creating alliances among private and public sector actors**

When multiple private sector actors are present, a fundamental role of government in the health sector is to ensure coordinated minimum standards for health service delivery across geographic areas and social groups (World Bank 1993). Despite the importance of this coordinating role, there is only limited literature documenting collaboration between private and public health providers in child health.

National efforts at polio eradication have often involved extensive collaboration between public and private sector actors, as have other immunization campaigns. One documented example comes from Calcutta in the late 1980s. A ‘Universal Immunization Program’ immunized more than 85% of the children in Calcutta against major diseases, bringing together government figures, private sector representatives, UNICEF and non-profit organizations. The organizations pooled together their cold chain equipment to increase the effectiveness of their outreach. Collaboration between public and private sectors was essential; private providers provided easy access to the general populace, while the public sector coordinated logistics (Chaudhuri 1990). Despite increased interest in the coordination of health service provision among public and private providers, there is to date only limited documentation, and less rigorous evaluation, of coordination efforts between the public and private health sectors.

**Informing – educating consumers**

Educating consumers can improve health-promoting behaviours, help care-givers cope more effectively at the household level with common childhood ailments, and help them recognize when to seek care from a health service provider. Governments also have a role to play in reducing information asymmetries between consumers and providers. Because consumers lack sufficient information to evaluate the technical quality of care provided by private sector practitioners, public intervention to correct this imbalance is warranted.

Families themselves are a critical component of the private health sector, particularly for child health where a large portion of care is provided in the home. An important component of social marketing of public health products is informing consumers about the benefits of a product and where it can be purchased. In Guatemala, Honduras, El Salvador and Costa Rica, the BASICS project worked with private mass media organizations and soap manufacturers to promote a regional hand-washing campaign. Soap sales increased, hand-washing behaviours improved significantly among certain populations, and the prevalence of diarrhoea among children under five decreased by an estimated 4.5% (Saade et al. 2001).

**Conclusions**

The private sector plays a major role in child health care in many low- and middle-income countries. The literature reviewed in this article suggests that policy-makers have a growing interest in trying to capture the potential benefits of the private sector, while attempting to counteract its failings. Although governments are gaining experience in using the tools of contracting, regulating, financial incentives, training, coordinating and informing to influence the private sector, the evidence concerning their effectiveness remains weak, particularly for how these tools can be used to improve child health outcomes. Much of the applicable literature is descriptive rather than evaluative, detailing experiences that may have great potential without rigorously testing their effectiveness.
To make private sector strategies work to promote child health, the public sector needs to use different skills than those relied upon in the past. The range of new skills may include how to structure and negotiate contracts, how to monitor performance outside their own organization and how to interact effectively with private sector actors. Since many Ministries of Health in low- and middle-income countries have hierarchical organizational patterns, learning how to influence outside organizations may require changing skills and attitudes in the public sector.

This review suggests that the environment in which private sector strategies are implemented matters a great deal. Where the rule of law is stronger and where the public has higher expectations of transparency and accountability from government and the private sector, working with the private sector has a greater chance of success. It is not clear, however, whether strong government organization and capacity is a precondition for the success of strategies seeking to work with the private sector (Atkinson et al. 2000). These considerations are particularly relevant for those strategies that involve multiple actors and require the public sector to play an intermediating role, such as for contracting and regulating. Governance issues and the level of social capital may not be as important for those strategies that do not place as many new demands on the public sector, such as social marketing or training private providers.

Looking across the range of strategies for involving the private sector in child health, relatively more is known about contracting, training and social marketing than the other interventions. Less is known about how to regulate well, or how well informing the public and other demand-side interventions can work. Powerful interest groups, such as commercial interests in the private sector, unions in the public sector or ideologically based political organizations, may have strong opposition or support for specific measures. Probably least is known about how to identify and work with these interest groups in designing or implementing private sector strategies (Brugha and Varvasovszky 2000).

What should be the next steps? We propose that there are two main types of steps that would both enhance countries’ experience in dealing with the private health sector and expand the broader knowledge base: (1) collecting country-specific information on the size and behaviour of key segments of the private health sector; and (2) conducting robust experiments with private sector interventions in child health.

A key lesson from this review is that future interventions need to pay more attention to experimental design if they are to answer important questions about what type of strategies work. The outcome measures may include short-term changes in child health service use, their quality or changes in healthy behaviours. Impact measures in terms of childhood malnutrition, morbidity and mortality are the long-term objectives that should be measured in these interventions, along with levels of financial risk due to illness and degree to which the health system responds to peoples’ demands (WHO 2000). A common problem with many of the recent efforts is that they lack clear definitions of objectives of the interventions, so that corresponding outcome indicators are rarely measured. It is especially important to measure the variables of interest prior to the intervention and after its implementation.

To date, the experience with private sector strategies offers considerable promise for children’s health, but also raises many questions about the feasibility and impact of these strategies. The dominance of the private sector market in low- and middle-income countries makes it all the more important that this research agenda be pursued.

Endnotes

1 In Papua New Guinea, a survey of 325 patients attending six private clinics in Port Moresby found that the most common reason cited for choosing private care was that it was faster than public sector care. Many respondents felt that private clinics had better doctors or gave better medicine (Mulou et al. 1992).


3 This categorization of providers is intended to provide a straightforward means of analyzing interventions targeting the private health sector in a variety of countries and settings. More complex categorizing structures are available in the literature. Smith et al. (2001) categorize providers by their level of organizational complexity and profit or non-profit status. Slack and Savedoff (2000) organize providers by the type of mechanism used to pay them.

4 Such drug sales are widespread. A study by the BASICS Project in Eritrea found that drug vendors are the main source of medicine sales in rural areas. Overall in Eritrea, the private sector – both regulated and unregulated – dispenses more drugs than the public health system (Murray et al. 1998). Evidence from Dakar, Senegal (Fassin 1988) and rural Guatemala (van Der Stuyft et al. 1997) presents a similar story.

5 For the purposes of the article, low- and middle-income countries differ considerably from high-income countries, with higher child mortality rates and generally less institutional capacity for public–private collaboration. This article classifies countries by income level using the following categories from the World Development Report 2000 (World Bank 2000):

\[
\begin{align*}
\text{Low income} & = \text{per capita} \\ 
\text{Lower middle income} & = \text{per capita} \\ 
\text{Upper middle income} & = \text{per capita} \\ 
\text{High income} & = \text{per capita}
\end{align*}
\]

6 Mosley and Chen identified individual and household-level variables, including wealth, norms and attitudes, as critical parts of a series of socioeconomic determinants that also includes the ecological setting, political economy and the health system.

7 All of the strategies cited are also important parts of working with the private sector to improve the health of the entire population. For a broader perspective beyond child health, see Preker et al. (2000).

8 See Mills et al. (2002) for a discussion of the challenges and potential in working with private health care providers in low-income countries in general.

9 For examples of controlled trials of social marketing interventions see Kenya et al. (1990), Muller et al. (1997), Fraser-Hurt and Lynam (1998).

10 There are several examples of successful training programmes from the Integrated Management of Childhood Illness (IMCI) initiative; see Hudelson (1998).

11 At the international level, there are a number of examples of public–private collaborative efforts in child health, such as the Global Alliance for Vaccines Initiative, the Global Polio Eradication
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Initiative, Rollback Malaria, International AIDS Vaccine Initiative, among others.

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