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The informal health sector and health care-seeking behaviour of mothers in urban Dhaka slums

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Abstract Infant and child mortality in Bangladesh has declined in recent years but early death rates remain high among Bangladesh's urban poor, even in comparison to rates in rural Bangladesh. Although they live close to the country's leading public hospitals and private health clinics, the urban poor continue to rely heavily on services and advice provided by the informal health sector. This paper examines the use of the informal health sector by urban poor children's main caregivers, their mothers, and the key role performed by pharmacists in treating these children. It explores the nature of the relationship between the mothers and the health providers and the implications for the broader health system. The study combines in-depth interviews with survey data.

Keywords Bangladesh · Urban slums · Health care-seeking behaviour · Infant mortality · Child mortality · Informal health sector

Background

This paper explores the infant and child health care-seeking behaviour of women living in the urban slums of Dhaka, Bangladesh, and their use of health services, particularly in the informal health sector. It focuses on the key role of pharmacists, who typically have

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little or no medical training, but perform a critical function in providing health services and advice for the urban poor. The nature of the relationship between health providers and caregivers and its implications for the broader health system are explored. Data are drawn, first, from the Bangladesh Urban Demographic Change Project which in 2005 conducted 847 interviews with ever-married women in three Dhaka slum populations, and then, to investigate the issues in greater detail, from in-depth interviews conducted in 2006 with 42 mothers and 18 health providers.

In recent years Bangladesh has had considerable success in reducing infant and child mortality, with the infant mortality rate falling from around 99 per 1,000 in 1990 to 38 in 2009 and under-five mortality from around 143 per 1,000 in 1990 to 48 in 2009 (UN 2011a). Nevertheless, infant and child mortality rates remain much higher among the poor than among their better-off Bangladeshi counterparts.

One population in which child mortality remains relatively high is the urban poor; health indicators for both children and adults are often worse for the urban poor than the rural poor (MOHFW 2001). In urban slums, infant and under-five mortality rates are higher than national levels. According to the 2006 Bangladesh Urban Health Survey (NIPORT et al. 2008), the infant mortality rate in urban slums was 63 per 1,000 live births, while it was 30 in non-slum urban areas and the national rate was 52. The issue is of particular urgency because the urban population is rapidly increasing: it is estimated that in 2011, of a national population of 150 million, 43 million (28 %) lived in urban areas, with 15 million (10 %) living in Dhaka; by 2025 it is projected that of 175 million people, 63 million (36 %) will live in urban areas, with nearly 23 million (13 %) in Dhaka (UN 2011b, 2012). Roughly 40 % of Dhaka's population live in poverty, the majority of them in slum settlements throughout the city (Islam and Shafi 2004).

The health of the urban poor is bad even though, compared to the rural poor, they live close to good medical services, including public and private hospitals and a range of qualified doctors. In one way the urban poor were until recently disadvantaged compared to their rural counterparts, for whom the Government had established primary health care services to provide basic care. The equivalent services were not provided in urban areas, on the basis that accessible health services already existed through public hospitals and private clinics, but the former are often inconvenient and the latter expensive. In recent years there have been programs introduced to overcome this anomaly, initially led by NGOs and greatly augmented since 2005 by the Asian Development Bank-funded Urban Primary Health Care Services Delivery Project. This project was designed to provide, through NGOs and other private operators, a package of essential primary health services emphasizing preventive interventions, with a focus on maternal and child health.

Informal health providers

In reality, however, even with these enhanced health services the urban poor, like their counterparts in rural Bangladesh, primarily use informal providers (Bhuiya 2009; Peters and Kayne 2003), a term that refers to providers who lack formal medical training. Who is defined as an informal provider varies according to the commentator's or researcher's concerns, but the term broadly covers unlicensed

pharmacies or drug sellers, traditional birth attendants, faith and religious healers, herbalists, homeopaths, and village doctors (Ahmed et al. 2009; Bhuiya 2009; Cockcroft et al. 2004: 85; Hosain et al. 2005; Mahmood et al. 2010).

The demand for formal health services in Bangladesh is unmatched by supply, particularly in the public sector (Joint Learning Initiative 2004); informal markets fill the gap. Non-graduate, informally trained allopathic practitioners and traditional healers greatly outnumber certified health care providers. Informal providers vary appreciably in their knowledge, the complexity of their organization and the positions they hold in a broader health market (Conteh and Hanson 2003; Shah et al. 2010).

In rural Bangladesh caregivers and patients largely use village doctors (Bhuiya 2009). But for many Bangladeshis, especially in urban areas, the principal health providers are informal pharmacies (or drug sellers), which remain unlicensed (Mookherji et al. 1996; Rahman 2007). The pharmacists do much more than just sell medicines: they are practically indistinguishable from formal allopathic medical practitioners in that they diagnose, provide treatment, and advise on a wide range of diseases and medical conditions (Ahmed et al. 2009; Bhuiya 2009).

In addition to care from the 'modern' informal health sector, many people also use traditional healers. A variety of different healers practise folk medicine, including faith healers, indigenous practitioners called *kobiraj*. There are also homeopathic practitioners who specialize in treating children.

Issues of great importance for understanding the prevalence of informal health providers in Bangladesh are how caregivers interact with the health system, the barriers to their use of formal health services, and arguably more critically, the factors that continue to encourage the use of the informal health sector. These are issues of particular relevance for mothers, who carry the bulk of responsibility for children's health care: fathers prefer to leave decisions regarding health care for children to their wives, believing them to be more knowledgeable (Darmstadt et al. 2006). Caldwell et al. (2002) found that in cases of emergency many husbands were working at the time, and could not easily be contacted anyway. Women, however, were often limited in their ability to access formal health services, because they were responsible for looking after the household and had only limited resources. In these circumstances they are heavily dependent on the informal health sector for advice and treatment.

The key contribution of this study to understanding the role of the informal health care sector among the urban poor in Bangladesh is its teasing out of the relationship between health caregivers and health providers. It focuses on the role of women, as they are the main caregivers for newborns and young children, and examines how they interact with the health system, concentrating on the informal health system and its main providers, the pharmacists. While quantitative data are presented, the major vehicle for exploring the relationship between caregivers and health providers is qualitative research.

Method

Quantitative data are drawn from 847 interviews with ever-married women aged 15–49 years conducted in 2005 in three Dhaka slums as part of the Bangladesh

Urban Demographic Change Project (BUDCP). Qualitative research was conducted in 2006 as a follow-up to the quantitative survey.

The BUDCP survey was conducted on behalf of the National Centre for Epidemiology and Population Health of the Australian National University by Mitra and Associates. The field sites were chosen to be broadly representative of the slums of Dhaka City. It was decided to conduct the survey in three localities to allow a broader investigation of demographic and health behaviour across the city. The sites chosen were in Lalbagh in Dhaka's old city, I. G. Gate Faridabad to the southeast of the central city, and Mohakhali to the north of the central city.

It was subsequently decided to undertake the qualitative research only in Lalbagh and Mohakhali. The decision to exclude the site in I. G. Gate Faridabad was taken for three main reasons: first, the logistics of three separate locations meant that it would have been difficult to study each site in depth; second, it was found that the people in the I. G. Gate Faridabad site were suspicious of the interviewers' motives, and potential informants were often not interested in participating in in-depth discussions. Third, there was a high level of crime and violence in the slum, which increased the risk for the two interviewers who would often have been on their own.

It is not being suggested that the data analysed below are perfectly representative of Dhaka's slum population, but it is posited that they are broadly representative of the situation in Dhaka slums. The selected areas were typical of Dhaka slums in structures and layout, with congested alleyways and flimsy housing. The slums had no proper roads or pavements, no government-provided services such as piped water, sewerage, electricity or gas (though unofficial or illegal connections, especially to electricity, were common), and no proper addresses (and hence no mail delivery). Poor water provision and sanitation meant that drains overflowed with rubbish, sewage and excrement, particularly during the rainy season. Skin infections were rampant. Given the absence of formal governance structures, slums were largely managed by *mastaan* (local thugs), who effectively controlled communities' access to services.

While no formal permission was sought for fieldwork, verbal permission was requested from the various leaders or gatekeepers in each of the field sites to do fieldwork; this was readily granted.

While all three slums were marked by poor housing and overcrowded conditions, each area had its own characteristics. The Lalbagh site was an older slum established over 30 years ago with houses precariously built on top of each other. The land and the houses on it were mostly owned by private landlords.

The second slum, included in the BUDCP survey but excluded from the qualitative study, near I. G. Gate Faridabad was also an older slum, but slightly less crowded than the Lalbagh site. Most people reported owning their own house but the land was government-owned. Whereas in the other two slums most houses had tin (galvanized iron) walls, in this slum most houses had *katcha* walls made of such materials as bamboo. In all three slums the roofs were mostly made from tin.

The third slum in Mohakhali was a more recent residential area, located close to a number of national hospitals. Most respondents reported that their houses were rented from landlords but the land itself was owned by the government. The population of this slum was under threat of eviction by the government during the

period of the field research, and around half the respondents in the area reported having been previously evicted from their houses. In all three slums many respondents reported that they had to move out of their houses during the monsoon season, but only in this slum did most respondents report this.

For the BUDCP quantitative survey the field sites contained a total of 1,036 dwellings, of which 16 were vacant. Among the remaining 1,020 occupied dwellings two surveys were conducted, first a survey with the household head on household structure and background characteristics, and second a survey which was aimed at all ever-married women aged 15–49 years in households surveyed in the household sample.

The household survey was conducted with 884 respondents; in 133 cases the respondent was away, while three refused. For the second survey there were 934 eligible women, of whom 847 were successfully interviewed; 82 were not at home, four refused and in one case the household had moved between surveys. Of the women interviewed 419 were in Lalbagh, 155 were in I. G. Gate Faridabad and 273 were in Mohakhali. The questions on children's treatment discussed below were covered by the survey of ever-married women. It included questions on fever, fever with a cough and diarrhoea, and the advantages and disadvantages of the various health sectors. Both surveys used structured questionnaires in Bengali.

For the qualitative research, in-depth interviews were conducted by a female and a male research assistant in 2006 under the supervision of Dr. Rashid, who participated in many of the interviews. The work conducted over the year involved training of the research assistants, rapport building with the communities, a first round of interviews, review, analysis and finally another round of interviews. At each of the two sites this took about 4 months.

The female interviewer talked to the women and female providers while the male interviewer talked to male providers and provided support in the field for the female interviewer. A total of 42 interviews with mothers ('caregivers') were conducted, 23 in Lalbagh and 19 in Mohakhali. In addition 18 providers who offered health services to slum populations in Dhaka were interviewed, the majority being in the informal health sector and being mainly untrained drug sellers working in unregulated pharmacies, and traditional healers. A few interviews were conducted with formal-sector providers, including a paramedic, a licensed homeopath doctor and a clinic worker.

The selection of the in-depth informants was not based on random sampling but they were chosen to be broadly representative of the categories to which they belonged, and also on the basis of relationships that had developed between themselves and the researchers that would allow complex subjects to be explored in depth. The mothers interviewed in depth all had young children (under 5 years), but varied by age and household characteristics.

All interviews were conducted in and around the slums: informants were interviewed more than once with case studies being developed. Key issues for investigation were developed for probing, but the research assistants were also encouraged to use their initiative in asking questions. On the basis of Dr. Rashid's participation in interviews, and transcripts from the interviews, the main

investigators suggested issues for further follow-up in repeat interviews with the same informants and subsequent interviews with other informants.

General discussions were held with individuals before probing further on their health-seeking behaviour, the role of health providers, and how women differentiate between providers when trying to get the best possible care for their children. In addition to in-depth interviews, interviewers' observations of interactions between providers and mothers fed into the qualitative dimension of the research.

Results of the survey of ever-married women

Pharmacists: the first port of call

In the quantitative survey ever-married female urban slum respondents were asked whether their youngest child aged less than 5 years had been ill with fever in the last 2 weeks. Of the 847 women interviewed, 513 had a child aged less than 5 years. Of these 513 children (the youngest child if a woman had more than one such child), 247 (48 %) had experienced a fever in the previous 2 weeks. In most cases, 199 (81 %) out of 247, treatment had been sought.

The respondents were asked from whom they sought care, with multiple answers being permitted. Of the 199 cases, in 124 (62 %) a pharmacist was cited as a source; in 115 cases (58 %) they were the sole providers; seven respondents (4 %) listed a traditional doctor as a source of treatment; nine (5 %) listed a homeopath; 27 (14 %) mentioned treatment by the government sector (usually a public hospital); 21 (11 %) cited treatment by a private MBBS doctor or clinic; 18 (9 %) listed treatment by an NGO health provider; and seven respondents (4 %) referred to a variety of other unspecified providers, who seem from answers to other questions primarily to have belonged to the non-formal sector.

Of 12 respondents giving multiple answers nine included a pharmacist. Of these nine cases, one respondent had also sought treatment from a traditional doctor, one from a homeopath, one from an NGO provider, three from the government sector only, one from a private MBBS only, and in two cases from both a government provider and a private MBBS provider. The remaining three respondents had sought treatment from the government sector in combination with a private MBBS doctor, an NGO provider and a traditional doctor.

In the total of 199 cases, pharmacists were either the sole provider or one source of treatment in 124 cases (62 %), and the formal sector (government sector, private MBBS doctors and clinics, and NGO sector) in only 62 cases (31 %).

Respondents were even more likely to list an informal provider, especially a pharmacist, if their child had diarrhoea. Part of the explanation for the high usage of pharmacies for this condition is that they are the main providers of packets of oral rehydration salts (ORS) the main treatment for diarrhoea. Of 46 respondents who had sought advice or treatment for a child with diarrhoea in the preceding 2 weeks 31 (67 %) had only been to a pharmacist while two had used a pharmacist in conjunction with a trained health provider, in one case a public hospital and in the other a private clinic. One respondent had used a traditional doctor, another a

homeopath while eight respondents (17 %) had used trained health providers only: three of these respondents had used a public hospital only, three an NGO clinic only, one a private MBBS doctor only and one had gone to both a public hospital and a private MBBS doctor. In addition three respondents had used ‘other’ (unspecified) providers.

The advantages and disadvantages of particular providers

The ever-married women respondents were asked about the advantages and disadvantages of the different types of health provider that they regularly dealt with. Overall they expressed most satisfaction with local providers, such as private doctors, pharmacists and traditional health providers who were seen as more convenient, friendlier and cheaper; and least satisfaction with hospitals and clinics, government and private, which were the opposite.

Of the 541 who answered this question regarding pharmacists (multiple answers were allowed), 487 (90 %) listed among their advantages easy accessibility or ‘proximity’ and 310 (57 %) the related answer ‘ease of travel’. The third most common answer, ‘medical competence’, was much less common with 114 responses (21 %).

In comparison, of 191 respondents who said they occasionally went to medically trained (MBBS) private doctors 141 (74 %) cited competence as a reason. Answers for government hospitals reflected the fact that they provide medical treatment for often complex conditions at a subsidized cost. Of 557 responses, two-thirds, 378 (68 %), cited free or low-cost treatment as an advantage of hospitals while over half, 307 (55 %), cited medical competence. Advantages cited for NGO clinics included, out of 385 responses, their being free or low-cost, 221 (57 %), medical competence, 213 (55 %), proximity, 137 (36 %), ease of travel, 94 (24 %), and the availability of doctors, 88 (23 %).

Overall respondents were satisfied with most health providers with only a minority indicating any disadvantages for any provider, the exception being government and private hospitals and clinics. Of the 541 respondents who commented on pharmacies, 407 (75 %) said there were no disadvantages. A few, 90 (17 %), said they were too expensive while a very few, 16 (3 %), noted that no trained medical doctor was available.

Of 191 responses concerning private doctors, 129 (68 %) said there were no disadvantages. Fifty respondents (26 %) said they were too expensive, a rather low proportion given that for the slum populations involved they can be quite expensive, but this may indicate that people expect them to be so.

In comparison, of 557 respondents commenting on the disadvantages of hospitals, only 204 (37 %) said there were no disadvantages; 228 (41 %) noted the need to wait a long time, 122 (22 %) that medicine was not always available, 59 (11 %) distance, 48 (9 %) expense and 20 (4 %) lack of transport. Of the 104 responses for private hospitals and clinics, 41 (39 %) said there were no disadvantages.

These responses reflect the preference to use a local provider, such as the ubiquitous pharmacists, as the first point of contact when a child is in need of

treatment. Hospitals in contrast are more distant, less convenient and more expensive, if all costs are included, and are only approached if there is no alternative.

Results of the qualitative interviews

Caregiver attitudes towards providers

Most mothers interviewed in the qualitative interviews perceived all healthcare providers, in both informal and formal sectors, to be respected figures in the community. The overwhelming majority preferred a provider, usually a pharmacy owner, but sometimes a *kobiraj* (spiritual healer), in the informal health sector. This preference was largely due to the informal providers being locals, which meant they were convenient and more familiar. Some informants preferred 'traditional medicines' and 'prayers' from *kobiraj* for babies aged less than 6 months. Doctors and health clinic workers were also sought for care, but usually after options in the informal sector had been exhausted.

The public sector was largely avoided or accessed as a last resort by caregivers. The in-depth interviews indicated that this was due to the perceived poor quality of care, and long waiting times at government-run hospitals and formal health facilities. Caregivers are told stories by family members and trusted friends of inept health providers, poor behaviour towards patients and low-quality treatments and services provided for children. Most providers used by caregivers in the slums were well known locally or referred through trustworthy acquaintances. Caregivers also described their attempts to investigate providers before approaching them for treatment, relying on testimonials from family members or neighbours to decide where to seek appropriate healthcare.

Most women interviewed did not clearly distinguish between pharmacists and physicians. Both were referred to as *daktars* (doctors), and while women may be aware of the differences between 'MBBS doctors' and drug sellers, this makes little difference when seeking care. Pharmacists tend to be the first source of care resorted to by many, as they are convenient, familiar, accessible and cheap. Only when a child's condition worsens is hospital or physician care considered.

One reason for the reluctance to use formal health care is a perception that allopathic ('conventional' or 'Western') treatments are 'too harsh' for infants and young children, some mothers believing they make sick children's symptoms worse, not better.

> The doctor asked us to give the baby the medicine for a month. … However, part of the swelling hardened after taking the medicine. … Everyone said that this was a result of taking prescribed medicine from the doctor of a government hospital. … We all thought it better not to revisit him since the first time he prescribed medicine, the swelling had hardened and we were not sure what the outcome might be [Sriti, 18 years old, mother in Mohakhali slum]

Despite this perception, allopathic treatments administered by providers other than doctors (such as pharmacy owners or traditional healers) are generally accepted by mothers. For example, a cough syrup prescribed by a pharmacy owner is not viewed as harsh medication for an infant, while a similar kind of syrup given by a doctor at a clinic might be considered too strong for such a young child. This indicates that mothers place more significance on the diagnosis and treatment being provided by an individual who is a familiar figure in their community than on the treatment itself when considering what care is appropriate for their child. It may also reflect a belief that they have more control over their dealings with pharmacists, and hence over the drugs a child receives. However, there is evidence that pharmacists are more likely than clinic doctors to overprescribe (Chowdhury et al. 1993).

Some mothers expressed a mistrust of pharmacy owners, describing the diagnoses and medications received from them as based on trial-and-error. Nevertheless, they continued to use pharmacists to care for their children. It is possible that while they were aware of these disadvantages they felt other advantages made up for them. They may also have felt these disadvantages also applied to other providers.

Several women said they were distrustful of government hospital physicians because of limited interaction between doctors and children. Some visits to hospitals were described as encounters where physicians gave medications for whatever disease a mother thought the child might have, rather than after personally examining the child and confirming the illness. In such cases mothers were not convinced of the advantage of attending a hospital over simply obtaining the medicine from a pharmacy.

Occasionally, mothers challenge the opinions of providers—usually pharmacists, and more rarely doctors in hospitals or the private sector—if they perceive them to be based on insufficient examination. Some mothers recounted returning to providers to demand a reason why medications did not work, or to seek a fresh diagnosis. More commonly, however, irrespective of the type of care provider, the in-depth interviews showed mothers failing to question the medications or treatments prescribed by a provider at the time of a visit. During the visit the mother is willing to try whatever is recommended by the provider, in the hope that it will result in a quick recovery and not lead to further treatments requiring additional payment by the family. Explanations as to why certain injections or tablets must be administered or why particular oils must be applied to the child's body for treatment are rarely given at the time they are prescribed, nor are they expected by mothers. However, this routine lack of communication can also result in mothers who perceive medicines not to be working switching between providers.

> He gave me the medicines and also described to me how to administer the medicines. But he did not tell me which medicine was given for which purpose. I also did not ask him …. All I care about is the solution of my child's problem [Nargis, 21 years old, mother in Mohakhali slum]

> After two days, there was no improvement in my child [so] I decided to not give the medicines anymore and to take my son to another doctor …. The

> landlady advised there was a good 'daktar' in the market place [Sultana, 26 years old, mother in Lalbagh slum]

Caregivers will change providers to find the right medicine, or ask the pharmacist for a new medicine before moving on. Some caregivers said they waited only a few days for signs of improvement before searching for another provider, and usually stopped the prescribed treatment when they decided they had not seen convincing signs of recovery in their children.

Concerns about provider behaviour

In addition to the preference for 'fast-acting' treatments for their children, caregivers also value approachability in a provider. In many interviews, mothers specifically mentioned appreciating providers who spoke kindly, exhibited patience, and swiftly attended to the needs of their children. Mothers were more likely to return for subsequent visits to providers who enabled them to maintain their self-respect and dignity. Conversely, providers who expressed irritation, passed judgment on the mothers and their families, or used harsh language intimidated mothers into not fully disclosing their concerns about their children's illnesses, and in many instances caused them to seek healthcare from alternative sources. Generally, caregivers found local pharmacists more approachable than providers in clinics or hospitals. Providers in the informal sector are seen as more integral parts of the community, owing to their proximity to slums, reputation among other caregivers, and greater familiarity. Their option to pay later or on credit also helps to create continuing relationships. In some cases, pharmacists will visit a mother and her child in the household to check how a treatment is working. Also, because their incomes often depend substantially on poorer clients or customers, pharmacists are conscious of maintaining good relationships and providing advice and medicines that are clearly understood. In contrast, hospitals and clinics, located sometimes nearby but usually outside the slums, typically have long waiting times and are perceived as treating poor patients badly, with treatment biased towards patients from higher socio-economic backgrounds.

> As the deceased patient's card had been lost, the female counsellor was … shouting so loudly that the first floor was almost shaking. There were a couple of patients in the health complex at the time the counsellor was shouting. They were quite taken aback and were scared as well. The environment had become quite unpleasant. It seemed to me that the patients lost their zeal as she continued to express her anger [Observed by interviewer, Satellite clinic of local healthcare complex in Lalbagh]

Given the class differences between the poor mothers in slums and the doctors in formal health facilities, most mothers prefer to seek care from more comfortable and accessible sources, and only as a last resort do they seek it from outside their social networks. In most cases, providers whose attitudes were perceived to be rude and dismissive were reported to work at larger hospitals in the city, or at government-run clinics.

Treatment cost

Cost plays a large role in determining the type of care mothers seek for their children. Mothers have only limited access to money, which in Bangladeshi culture is controlled by their husbands, but when a child needs treatment women will borrow money from kin or neighbours, obtain credit from local pharmacies or use money saved from that given by their husbands (for shopping) to pay for it. This means that they have to be careful with expenditure.

In the in-depth interviews many women stated that they preferred to take their children to informal health care providers such as pharmacy owners because pharmacy owners only charge the price of the medication, while a doctor demands a visiting fee in addition to the treatment price. The immediate cost of care at a government hospital is often significantly lower, with the cost of medication often waived for low-income patients and a nominal fee charged for the visit. However, there are other costs, such as for travel and in time away from home or work. In cases where a child's condition is not improving after several days, or where symptoms appear severe, usually no expense is spared and mothers are assisted by their husbands, parents, in-laws, and other relatives to meet the cost of healthcare. In a few interviews, however, mothers commented that visits to the doctor simply could not be afforded for a child.

> I cannot take him to a doctor. Let me save some money, I will go to the doctor. … I will tell my brother to buy some medicine after he gets his salary [Amina, 19 years old, mother in Mohakhali slum]

A complicating factor is that the expenses of treatment from a provider are not always known beforehand. This can be due to communication barriers between caregiver and provider resulting in mothers not understanding the treatment or course of action necessary for a particular illness. It can also be caused by findings which may emerge during diagnosis or the need for further tests. The uncertainty involved encourages mothers to seek care from pharmacies, where costs and payment can be negotiated. Seeking treatment from a known source is a less risky option when financial resources are limited.

Pharmacists and their perception of their role in the community

As previously noted, most health providers interviewed were pharmacy owners, with a few being traditional healers, homeopath doctors or formal-sector providers. Most of the pharmacy owners interviewed did not have formal training in pharmacy, although some claimed to have completed training or schooling related to pharmacy. One owner stated he had attended training for 6 months from the Pharmacy Council, and had acquired the rest of his knowledge through work experience and observing other pharmacists. However, as noted above, while some caregivers suspected that the pharmacists had little training, almost all continued to use them. Most pharmacists had been established in an area for many years, and were perceived as experienced and reliable by slum residents.

In general, the healthcare providers interviewed described the mothers and children living in slum areas as victims of circumstances, lack of education and limited financial means for obtaining health services and meeting living expenses. Some of the informal-sector providers claimed these challenges encouraged them to strive to provide care for as many patients as possible, irrespective of ability to pay. However, all providers were conscious of their reputations in the slum areas. Many pharmacy owners believed their standing with slum communities could be damaged if a child died while in their care. Pharmacy owners referred families with dangerously ill children to nearby government-run hospitals and clinics, so that the child would receive the care needed, and their reputation would be spared at the expense of those of the hospitals.

Pharmacy owners rarely treat their customers poorly, although one owner was observed attempting to use guilt to force a mother to pay more for medications for her son:

> Your son is so sick but you bring so little money? [Pharmacy owner to Salma, 25 years old, mother in Lalbagh slum]

Later, the mother told the interviewer that this pharmacy owner's attitude intimidated her, and although she had questions about her son's condition and the medication prescribed, she did not feel comfortable asking them. Nevertheless, most pharmacy owners interviewed were observed treating mothers seeking care for their children with patience and kindness. Most said they charged lower prices for poorer households, but may charge more if asked to make house visits or perform tasks outside their routine activities. Where pharmacists and families have a close and continuing relationship the pharmacists may also provide medications on credit if a mother is not able to pay the full cost during a visit, building further trust with community members. As part of maintaining this relationship, pharmacists are careful to ensure that debts involved do not become unmanageable for their clients, and in turn they are almost invariably paid back when clients are able to do so. In this way pharmacists cultivate strong relationships in the community and come to be relied on.

Kobiraj and homeopaths

Traditional healers may be distinguished as *kobiraj* (herbal medicine providers) or *fakir* (spiritual healers), but in practice the two shared characteristics and were generally indistinguishable. Here they are all referred to as *kobiraj*, as this was what they are called in the slums. The *kobiraj* interviewed all believed they possessed a spiritual connection to God, and could offer treatments for childhood illnesses not found at medical facilities or pharmacies. They strongly believed they were equipped with the ability to interpret the intentions of a higher spiritual power.

> I cannot cure anyone on my own. It's all up to Allah. He cures them. I am only a medium [Kaalir Ma, traditional healer in Lalbagh slum]

Methods of treatment range from tying amulets around a child's foot or neck to ritualistic handwashing accompanied by prayers. The traditional healers who were

interviewed said they relied on word of mouth among communities in the slums and the will of God to direct patients to them for treatment.

Most communities had access to several *kobiraj*, both male and female. Some of the female *kobiraj* also worked as *dai*, or traditional birth attendants.

Kobiraj did not have standard charges for services provided, instead accepting whatever was offered by mothers or other family members. This ranged from 10 taka to more than 100 taka (13 Australian cents to $1.30) per treatment. One *kobiraj* described her ability to care for the sick in this way as burdensome, but a gift she must share with those in need.

Homeopathy, a system of alternative medicine, was founded in 1796 in Germany by Samuel Hahnemann. It rests on the theory that a substance that causes the symptoms of a disease in healthy people will in an attenuated form cure similar symptoms in sick people. While respected, it nowadays has limited usage. One homeopathic doctor said he struggles to maintain his practice because allopathic medications have a reputation for working faster than alternative medicines, and most adult patients prefer medicines that will quickly cure illnesses. However, he noted that many mothers believe that allopathic medicines are too strong for children below a certain age, and most of the patients he did treat were young children. One homeopathic doctor suggested that financial compensation from the government or state support in the form of a health initiative for alternative medicine would boost interest in homeopathy and also bring more clients to homeopath providers.

> Homeopathy has lost its popularity …. Allopathic medicines work fast while homeopathic medicines take time. People want quick relief from diseases. That is why they go to allopathic doctors. Besides, homeopathy is neglected in both Government and private sectors in Bangladesh. This is why people do not have a clear idea about homeopathy. Little children are my primary patients …. Their parents bring them to me for treatment. Homeopathy medicines have no side effects. That's why parents of small children prefer to give them homeopathy medicines. There is also a general belief that homeopathy medicines are for children only [Najrul Islam, age 60, homeopath doctor, Mohakhali]

Medical providers

A few interviews were conducted with providers from the formal sector, mostly in the NGO sector. Providers working at free[1] clinics in the slums say that while the clinics offer a range of preventive and curative health services, they are widely perceived as offering only reproductive services for women and services for children.

> Sometimes people get the wrong idea that we only treat women's reproductive health related problems and give vaccination to the children. But actually we give primary health care services to men, women and children alike. But

[1] These may charge a nominal one-time membership fee for patients if affordable.

people think of us as only doctors for women. So no men come to us for treatment [Paramedic at City Healthcare Centre in Mohakhali]

While the providers working at free clinics believed they were providing services needed by local communities and some were undoubtedly motivated by their work, they also noted their lack of compensation compared to private-sector health workers with similar qualifications or professional licensing who provided services to a wealthier population. The providers who mentioned these financial struggles indicated that they would not continue to work in slum areas if they continued to receive low salaries. This may indicate a lack of empathy for local communities.

Attitudes towards other providers

Most providers expressed a general mistrust of other types of providers. Medical providers, in particular, questioned the treatments offered by informal providers. Pharmacists specifically challenged the services provided to infants and children in slums by traditional healers, calling the latter 'fakes' and 'cheats'. They viewed beliefs in the influence of witchcraft and spirits on illness as ultimately detrimental, delaying appropriate diagnosis and treatment of childhood illnesses. Pharmacists perceived themselves to be more educated than traditional healers, and part of the modern health care sector in Bangladesh. Homeopaths, and hospital and clinic workers, share a mistrust of pharmacists, blaming them for worsening patient health by dispensing medications without first examining patients. It is unclear from the interviews how this lack of trust among providers affects mothers seeking health care for their children, but it may lead to confusion arising from conflicting health advice for mothers seeking care. It also jeopardizes the potential for continuity of care when mothers seek care or treatment from multiple providers. A mother seeking care for her child from one provider is less likely to receive appropriate referral to another provider with more suitable treatment options if the two providers are not on good terms, or if the first provider does not view the second as a trusted source of health care. If all people sought treatment from medically-trained providers this might not matter, but in a situation where most people initially seek treatment from informal providers it is a clear problem.

In some cases, providers in the informal sector are content to co-exist with competing health services, and even collaborate with other providers to offer services to caregivers from slums. Traditional healers who were interviewed appeared to possess no ill-feeling towards other types of providers, and did not claim that medications or medical treatments administered by pharmacy owners, physicians or others were ineffective or detrimental. Indeed research has documented that some traditional healers are now including in their treatment practices medicines and pills purchased from pharmacies (Rashid et al. 2011).

Some pharmacy owners form relationships with doctors carrying MBBS qualifications, setting up arrangements where the doctor sees patients whom the pharmacy owner cannot easily diagnose and treat, and all medications prescribed by the doctor are then sold at that specific pharmacy. In these cases a visiting fee is charged for the patients to see the doctor. In other cases pharmacists refer patients to

'doctors', but in many of these it is difficult to validate whether the doctors are qualified and have indeed received MBBS certificates. It has been reported that some 'doctors' who sit in pharmacy shops and charge a fee to see patients are not medically qualified. Such arrangements are viewed by both the pharmacy owner and the doctor as beneficial (Rashid et al. 2011). However, financial incentives and profit margins mean that most pharmacists prefer to treat patients themselves, and while some do refer patients, they generally do so through informal relationships. In the current Bangladesh health system few formal links exist between informal sector pharmacies and public government facilities.

Discussion

The informal health sector in Bangladesh continues to perform a critical role in providing health care, particularly initial health care, for both the urban and rural poor. For the rural population this in part reflects a lack of alternatives: the absence of accessible doctors and trained health care workers (Bhuiya 2009; Mahmood et al. 2010). In the urban areas, however, hospitals and private medical clinics are much more common, and can be, and often are, accessed when needed. But even here caregivers are reluctant to use formal medical services, at least initially, in part because they are inconvenient and expensive, but also because the informal health sector, and particularly pharmacists, are perceived to provide adequate, and even good treatment. What this study has demonstrated is that the informal sector, and especially pharmacists, are much more effective than the formal health sector at engaging with most caregivers, and providing them with accessible and relatively cheap care while dealing with them in a generally respectful way. Importantly, pharmacists were able to provide caregivers with services that met their needs and over which they had some control, and they largely understood what was expected of them. In this sense they acted as gatekeepers, providing caregivers with access to modern health services. This role is particularly important given the key function that urban women perform in obtaining services for their children. The situation in rural Bangladesh has some similarities. A major study of an area of rural Bangladesh found that caregivers and patients similarly emphasized cheapness, the availability of credit, convenience and appropriate behaviour as reasons for using 'village doctors' and also emphasized their belief that they were getting good-quality care (Bhuiya 2009; Mahmood et al. 2010). In one sense, however, there is a difference. Among the Dhaka poor the effect of rapid urbanization has expanded the role of mothers as caregivers, a group who are particularly dependent on the services of pharmacists.

The fast-paced, densely packed nature of urban living has made the traditional joint family structure impractical for many Dhaka slum dwellers, resulting in smaller households and increased generational independence. This forces many caregivers, mostly women, to make decisions regarding the health care of their children with minimal input from family, and contrary to the traditional roles expected of women. In Bangladeshi culture, financial matters are generally the concern of men in the households; women, however, are finding themselves in

positions where they must make key decisions regarding child health care costs. Because slum inhabitants have limited financial resources, mothers often must choose economically prudent means of attending to their sick children, searching for inexpensive ways to obtain diagnoses, treatment and medications for illness. According to conventional customs men are the household members who interact with strangers and non-family members, while women stay indoors and have limited interaction with outsiders. Urban settings, where nuclear family structures are the norm and men are usually working in other areas of the city during the day, require women to speak regularly with strangers, including providers of health care for their children. These changes in societal norms mean that the types of care sought for children largely depend on the perceptions and concerns of mothers, especially in relation to expenses and trust in providers.

Provider and health worker attitudes play a large role in the comfort levels of women visiting health facilities for their children. While cost is a primary reason that caregivers avoid formal allopathic providers, most interviewed mothers also perceived these providers to be impersonal and hostile. Hospitals remain an undesirable option for seeking healthcare for children owing to associated additional costs, such as for transport and further testing, outside the hospital, as well as unfriendly behaviour towards patients. Pharmacists and other providers in the informal sector are seen as being cheaper overall, and as having better attitudes and being more approachable and receptive to the concerns of caregivers.

There is a large communication gap between many qualified providers and slum-dwelling mothers. Dismissive assumptions about caregivers and their families and the lack of proper explanations of treatments probably lead to misconceptions about illness and its causes, and to a lack of reassurance and trust. If one provider behaves disrespectfully during a visit, the mother may assume all providers from that facility, or similar facilities, will act the same way. This can discourage mothers from asking important questions about children's health, or from divulging details about child care, or giving other information which may be crucial for proper diagnosis and treatment of illness in their children. In order to establish strong relationships between mothers and health providers, providers need to avoid passing judgment or faulting families. This in turn should improve communication and ultimately heighten standards and quality of health care for children in urban slum communities.

Responses from the interviews indicate a difference in perception of disease between medically trained providers and slum-dwelling caregivers. While a mother may think her child needs to be thoroughly examined to determine the cause of an illness, a doctor may make a diagnosis on the basis of key symptoms, and not need to carry out a complete physical examination. Knowledge about modern health theory and appropriate medical practice is limited among uneducated populations in Bangladesh. While most women seek references from trusted family members or neighbours to identify dependable health providers, there is culturally based hesitancy among some women to use allopathic medicines on young children, and they therefore turn to traditional healers for assistance. When using allopathic medicine, if a medication does not immediately cure a child the mother may stop treatment in search of a faster, 'better' cure, assuming the first treatment has failed.

Incomplete medication regimens can exacerbate symptoms, building distrust and driving mothers to seek methods of care that may or may not benefit the child. Among interview informants, this had happened in many cases with city doctors, although it had also occurred to a lesser extent with traditional healers and pharmacy owners.

The informal sector may not provide high-quality health care to slum children, but as Bhuiya (2009) notes for rural Bangladesh, it offers low-cost treatments to caregivers with few available alternative options. Oral rehydration solution, antibiotics and other treatments for common childhood illnesses provided by pharmacy owners are likely to have contributed significantly to the decline in under-five mortality in recent years. If mothers had not had ready access to these medicines, the conditions of children would have worsened considerably and diseases would have spread further in Dhaka's congested urban slums. Even so, a number of gaps in access to quality health care are evident from the in-depth interviews. Although pharmacy owners consider themselves to be part of the modern health sector, few possess formal training and the experience to properly care for illnesses in children, particularly serious illnesses needing more extensive medical attention. These pharmacists also delay effective care for many infants and children by not providing needed referral to hospitals or other providers in a timely manner. Many insist on providing several different treatments to mothers if the conditions do not seem severe, and believe they will be able to treat illnesses without losing customers. However, this can prove dangerous for children and subject them to unnecessary and even harmful treatments before they receive appropriate care. Referral of slum-dwelling caregivers tends to be caregiver-driven, and vocal caregivers who press for more effective care are more likely to be referred to other more qualified practitioners than are those who are content to be advised by first-resort informal providers.

Conclusion

Bangladesh is facing an increasing demand for health services, unmatched by supply, particularly in the public sector. The role of informal medical markets and providers in the country continues to be neglected, yet recent empirical research reveals that poor women and men rely on informal providers for responding to a wide range of health problems. The spread of the informal sector has often been much faster than the capacity of the state and other key actors to establish regulatory arrangements to influence its performance (Rashid et al. 2011). Its rapid growth has created both opportunities and challenges. While it has produced convenient access to drugs and some form of medical advice for those who can pay, the quality of services is problematic and can lead to overprescription and inappropriate prescription (Bhuiya 2009), while boundaries between 'public' and 'private' remain unclear. Informal providers such as pharmacists are sought out as a first resort for care because of their cultural familiarity, easy accessibility and low cost, in combination with their willingness to negotiate payment and provide credit, which is valued by poor families struggling to pay out-of-pocket expenses for illnesses.

Women are also able to interact more freely with informal providers, who generally come from similar socio-economic backgrounds and are more likely to respect them (Rashid et al. 2011). Caregivers, particularly women, are able to build relationships of trust with these providers. In the case of pharmacists in particular, women often rely on their advice on how to obtain treatment that is inexpensive, and usually effective.

The referral system in Bangladesh is *ad hoc* and informal, with little engagement between the public government sector, the private sector and the informal sector. While the care offered by informal providers, including pharmacists, has many weaknesses, informal providers are by far the largest part of the frontline provision of health services to poor communities in urban as well as rural Bangladesh. Ignoring their role has serious implications for ensuring the provision of effective services for those most in need.

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