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Comparative quality of private and public health services in rural Vietnam

TRAN TUAN,[1] VAN THI MAI DUNG,[1] INGO NEU[2] AND MICHAEL J DIBLEY[3]
[1]Research and Training Center for Community Development, Hanoi, Vietnam, [2]Lux-Development SA, the Government of Luxembourg and [3]Centre for Clinical Epidemiology and Biostatistics, School of Medical Practice and Population Health, Faculty of Health, University of Newcastle, Australia

Background: Private health care services were officially recognized in Vietnam in 1989, and for the last 15 years have competed with the public health system in providing primary curative care and pharmaceutical sales to rural populations. However, the quality of these private and public health care services has not been evaluated and compared.

Methods: A community-based survey was conducted in 30 of the 160 communes in Hung Yen, which were selected by probability proportional to population size (PPS) sampling. All commune health centres (CHCs) and private health care providers in the selected communes were surveyed on human resources, services provided, availability of medical equipment and pharmaceuticals, knowledge and clinical performance for acute and chronic problems. Patient satisfaction and cost of care associated with recent illness were measured using a random household survey covering 30 households from each of the selected communes.

Results: There were 11.5 private providers per 10 000 population, compared with 6.7 public providers per 10 000. A quarter of private providers were employees of the public health sector. Less than 20% of the private providers had registered their practice with the government system. Eleven per cent (26/234) had no professional qualifications. Fifty-eight per cent (135/234) provided treatment as well as selling medications. Public sector infrastructure was superior to that of the private providers. The quality of services provided by public providers was poor but significantly better than that of private providers. Patient satisfaction and costs of care were similar between the two groups.

Conclusions: Private providers are successfully competing with the public health centre system in rural areas but not because they provide cheaper or better services. The quality of private health care services is not controlled and is significantly poorer than public services. Current practice in both systems falls below the national standard, especially for the management of chronic health problems. The low quality of health care services at a community level may help explain the previously observed phenomena of high levels of self-medicating, low utilization of commune health centres and over-utilization of tertiary health care facilities.

Key words: quality of care, private providers, public providers, rural, Vietnam

Introduction

Evaluating the quality of basic health care services available at the community level is a key concern for any government in developing an equitable, affordable and accessible health care system. This is extremely important for developing countries like Vietnam, where the economic gap between the rich and the poor is rapidly increasing and approximately 75% of the total population and 90% of the poor in the country live in rural areas (The Government of Vietnam-Donor-NGO Poverty Working Group 1999).

The government of Vietnam used a model of 'market-oriented socialism' in which privatization and market forces supplemented public sector services to meet community needs and improve the efficiency of the public sector. In 1989, the public-private mix in health care in rural Vietnam was formally established when private practice, commercial sales of pharmaceuticals and fee-for-service medical care were endorsed by the government. The existing public health care system, with commune health centres (CHCs) as the basic unit for rural areas, was expanded (Hung et al. 2000).

The last 15 years have seen strong support from the government for the development of the CHC system in rural Vietnam, and the quality of CHC services has improved significantly (Hung et al. 2000; Ministry of Health 2000; World Bank et al. 2001). But there has also been a rapid development of private health care services

(Tram 1999; Cu 2001; Ha 2001; Ha et al. 2002). Two Vietnam Living Standards Surveys (VLSS) showed that the annual health service contact rate for CHCs was 0.19 per person in 1993, increasing to 0.66 in 1998. For private provider facilities, it was 0.66 and 1.76, respectively (World Bank, cited in Trivedi 2002). In 1996, the Ministry of Health estimated that the number of private practitioners in rural communes had exceeded the number of CHC staff in all the North, Central, as well as South of Vietnam (Tuan et al. 2000; Cu 2001) The private sector has competed successfully with the CHC system in terms of providing primary curative care and pharmaceutical sales to rural people (Trivedi 2002).

As a result of this growth, there has been an increasing number of calls for the government to further regulate private health care providers in Vietnam in order to provide a higher quality of care and help to achieve the government's goal of assuring health care for all citizens (Ha 2001; Ha et al. 2002; Trivedi 2002). For this reason, it is imperative that the quality of private health care services be scientifically evaluated relative to the quality of the same services provided by public health facilities.

In Vietnam, most research related to the quality of private health services has focused on urban areas, either Ho Chi Minh City or Hanoi (Chuc and Tomson 1999; Lonnroth 2000; Chuc et al. 2001). Most feedback on the quality of private health care providers in rural areas has come to the Ministry of Health through field visit reports conducted by government staff or from the routine health information system, and has revealed non-registered private providers (Cu 2001). The research presented in this paper used community-based surveys in rural areas to gather evidence about the availability and quality of the community health system in general, and private health services in particular. Ethical approval was granted by the Hung Yen Health Service Department and the Research and Training Center for Community Development of the Vietnam Union of Science and Technology Associations.

Research methods

Study area

Hung Yen is a lowland, agricultural province with a population of 1 069 000 (1999). The average population density of 1200 people per km^2 is one of the highest in Vietnam. The province was ranked as having a moderate level of poverty, based on poverty headcounts estimated from the 1998 VLSS survey (Minot and Baulch 2002), and classified in the 'better-off' group of provinces, based on the human development index (National Center for Social Science and Humanity 2001). At the time of the research, the public health system in Hung Yen consisted of 3 provincial hospitals situated in Hung Yen town, 10 district hospitals, and 160 CHCs. There were no private hospitals in the province (Hung Yen Provincial Health Department 2001).

Study design

Cross-sectional surveys were conducted using the framework for evaluating quality of health care for developing countries recommended by the World Bank (de Geyndt 1995). Study variables came from the three model components: structure, process and outcome of care. They were selected using the criteria of (1) being concrete, feasible and measurable, and (2) allowing comparisons of their distributions in the private provider system versus CHC system. The 'structural component' variables were: availability of equipment, of pharmaceuticals, and the quantity and the quality of health personnel in terms of their medical training. The 'process of care component' variables were: the quality of professional performance of health personnel related to diagnosis and the treatment of selected common health problems at the community level, namely, for acute health problems, acute respiratory infections (ARI) and diarrhoea in children, and for chronic health problems, hypertension in adults. Finally, for the 'health system outcome component', variables were patient satisfaction with services received and costs of medical care. Health outcomes reflecting the impact of the health system on community health, such as infant mortality, maternal mortality or quality of life, were beyond the scope of this study.

The main survey instruments were structured, pre-coded questionnaires specifically designed for each component of the survey. A checklist was used to describe infrastructure, equipment and drugs available at the provider sites. Face and content validity of survey instruments were approved by a group of experts involved in designing questionnaires for the National Health Survey 2001 and the Vietnam Living Standards Surveys 1993/98.

Starting in June 2001, the survey was conducted over a 3-month period by the Research and Training Center for Community Development, an independent research institution in Hanoi, which has implemented health system development surveys in other provinces of Vietnam since 1999 (Tuan et al. 2000).

Sampling design

A multi-stage cluster sampling design was used with 30 communes of 211 131 persons selected in the first stage using the probability proportional to population size (PPS) technique. All CHCs and private health care providers practicing in the selected communes were chosen for the public and private provider surveys. In the second stage, 30 households were chosen randomly from each of the selected communes, and all people living in these households were surveyed on their use of health services when ill, the cost of this care, and satisfaction with the services received. This sampling design provided a sufficient number of providers and users of health care services to examine the research question on quality of services with at least 80% power.

Definition of study variables and measurements

Private providers

Private health care providers were those who provided private health care services, including drug vendors and traditional practitioners, where ownership of the business/activity was private and users had to pay fees, in cash or in kind. Firstly, a list of all private health care providers practicing in each commune was obtained through interviews with community leaders. Additional private providers identified from the health service utilization component of the household survey were added to the list.

Health system structural indicators

The availability of medical equipment and pharmaceuticals was assessed by interview using the same checklists for public and private providers, combined with observation. The checklist consisted of the 27 basic items of medical equipment and supplies defined by the Hung Yen provincial health service, and 20 essential drugs proposed for CHCs by the Central Ministry of Health.

Health care professionals were categorized by the highest level of their prior professional training into: physician (6 years of medical training programme or equivalent), assistant physician (3–4 years of medical training programme or equivalent), midwife, nurse, and pharmacists of primary, secondary or tertiary pharmacy education.

Health system process indicators

The knowledge and clinical performance of providers who directly provided patient care services and were not classified as pharmacists/drug vendors was assessed. Pharmacists/drug vendors were excluded from this analysis to ensure there were comparable groups of providers for comparison between the public and private sectors. Those who provided child care services were asked to:

(1) describe common symptoms of ARI in a child of under 5 years;
(2) identify medications from a list of 12 common drugs, including antibiotics (seven items), fever relief (one item), cough relief (two items) and corticosteroids (two items), that would or would not be appropriate for treating a child under 5 years with cough and fever; and,
(3) identify which symptoms should be monitored in the case of diarrhoea in children.

Providers treating adults were asked what questions they would raise with a 58-year-old man presenting with high blood pressure.

Variables specific to private providers were identified by interviewees' including:

- the type of health care services provided (stratified into three categories: drug sales only; examination and treatment only; examination, treatment and the sale of drugs);
- whether private services were registered with the local government; and
- history of working for the public health system (categorized as never, previously, or currently working in the public health system).

Outcome indicator

Patient satisfaction and costs associated with care were assessed from the household survey. People who reported having an episode of illness within 1 month of the survey and who sought care from CHCs or private health care providers were asked about the costs of medical services. In this study, medical costs consisted of examination fees and costs of drugs and medical supplies incurred in the visits. For patient satisfaction, they were asked to score their satisfaction with three service dimensions: attitude of physicians, trust in professional skills, and sanitation at the health care facility. The score scale ranged from 1 as the lowest to 10 as the highest.

Data analysis

Stata 8 software (StataCorp. 2003) was used to analyze the data. Means with 95% confidence intervals were calculated. Using two-tailed significant tests, categorical data were tested with Pearson's chi-square test, and normally distributed continuous data with Student's t-test.

Private providers were classified by whether they were currently working in public health care facilities. Those who were not were classified as *private only*. Those currently employed and receiving a salary from the public health care system were classified as *public-private practitioners*.

Two approaches were used to assess health care providers' knowledge and clinical practice in the areas of child care and adult hypertension. The first approach required a minimum number of correct answers to a clinical problem on child care. This approach was used to analyze results on identifying a probable case of ARI and treating diarrhoea without fever in children. The results are presented as the percentage of correct answers in each group of health care providers.

- The criterion for a health care provider at communal level considered to have correctly identified a probable case of ARI in children[1] was indicating two or more of the following: breathing $\geq$50 times/minute, chest indrawn, fever >37.5°C, and cough.
- Appropriate recommendations given to a mother whose child had diarrhoea without fever were to give the child oral rehydration solution (ORESOL), to continue feeding and/or breastfeeding the child as normal, and to take the child to health care facilities depending on severity and response to treatment.

The second approach was to calculate the *percentage of correct items* a health care provider gained out of the total number for that question. The results for each health care

provider were grouped relating to a specific question and presented in three categories: <50%, 50–69%, and ≥70% of the total. This approach was used to analyze the results on which medications should be used to treat a child with cough and fever, and key questions that should be asked of a male patient with hypertension.

- From the list of 12 drugs, the correct answer for medicine used to treat ARI in children included the following six items: (1) penicillin tablet; (2) ampicillin tablet; (3) amoxicillin; (4) erythromycin tablet; (5) paracetamol, and (6) Biseptol/Bactrim. Other drugs in the list were those that the Hung Yen provincial health service prohibited primary health care providers from prescribing to a 3-year-old child with ARI: tetracycline, penicillin injection, prednisolone, dexamethasone tablet, anti-cough syrup and anti-cough tablet. Questions about treatment of ARI were not linked to the earlier questions about diagnosis.
- Questions that should have been asked of a male patient with hypertension were: (1) symptoms of headache, dizziness, blurred vision, chest pain, and their duration; (2) history of high blood pressure; (3) history of other diseases; (4) current medications; (5) family history of high blood pressure; (6) occupation and age; (7) usual diet; (8) history of smoking and alcohol intake; (9) frequency and amount of physical exercise; (10) stress levels; and (11) and sleeping patterns.

Results

A total of 234 private health care providers in the 30 studied communes, and 30 CHCs (30/160, ~19% of all CHCs in Hung Yen province) with 126 staff, were surveyed on structure and process variables of the CHC system. In addition, 3498 people were surveyed on morbidity and access to health care services. From these, 43 patients without health insurance who used CHC services and 110 patients who used private providers' services were interviewed about patient satisfaction with services used and costs of care.

The comparison between private and CHC systems is presented in this paper in four sections. The first section looks at the main characteristics of the human resources. The second examines the availability of medical equipment and drugs. The third compares the performance and skills of the private and public providers who directly delivered patient care services. And the final section has data from the household survey on costs of care and patient satisfaction with services provided by private versus CHC providers.

Health system human resources

Two hundred and thirty-four private providers gave a mean ratio of 7.8 (95% CI: 6.2–9.4) private providers per commune, or 11.5 (95% CI: 9.4–13.7) per 10 000 population. For the public health workforce at a communal level, these indicators were 4.2 staff (95% CI: 4.0–4.4) per CHC or 6.7 CHC staff (95% CI: 5.6–7.8) per 10 000 population. On average, the private workforce was 1.9 times (95% CI: 1.5–2.4) higher than the CHC workforce.

Table 1. Professional background training of commune health centre (CHC) staff and private providers

Professional training category	Private providers (n = 234)	CHC (n = 126)	Private/public ratio
Physician	20 (9%)	10 (8%)	2
Assistant doctor	73 (31%)	61 (48%)	1.2
Midwife[a]	17 (7%)	32 (25%)	0.5
Nurse and equivalent[b]	52 (22%)	21 (17%)	2.4
Traditional practitioners	19 (8%)	1 (1%)	19
Pharmacist[c]	27 (12%)	1 (1%)	27
No professional qualification	26 (11%)	0	

[a]Including those with a certificate of elementary and secondary midwife training.
[b]Including nurses and those with a certificate of elementary level of medical education.
[c]Including those graduating from pharmacy school (elementary level or higher).

Table 1 compares the professional qualifications of private providers and CHC staff in Hung Yen. All CHC staff had medical training, and 98% were physicians, midwives, assistant physicians or nurses. In the private system, 11% had no medical qualifications, and traditional practitioners and pharmacists accounted for 20% of the private workforce.

Table 2 summarizes the main characteristics of the private providers. On average they were middle-aged and provided services from their home. Around 80% also sold medications and less than 20% were registered with the local government. Private providers also working in the public health system were younger, had a significantly lower registration rate (8% versus 22%; $p = 0.02$) and were more likely to sell medications (95% versus 75%; $p < 0.0001$) than those not working in the public system.

Infrastructure characteristics and availability of drugs and medical equipment

Private health care providers who provided treatment services (n = 182) were interviewed about facility hygiene conditions and medical equipment and supplies. Compared with the public sector, the private sector had much less in terms of equipment and supplies. Most of the investigated items were available at the CHCs, except disinfectant and urine-protein testing paper which were found at less than 30% of CHCs. Equipment for dental services and simple surgery was found at less than 10%. Most private health care providers had minimal equipment and medical supplies, notably, stethoscope (73.0%), sphygmomanometer (63.2%), sterilizing alcohol (86.3%) and disposable plastic syringes (80.8%) (Table 3). In terms of the availability and costs of pharmaceutical and

Table 2. Main characteristics of private providers in the 30 surveyed communes

Characteristics	Private only (n = 174)	Public-private (n = 60)	Total (n = 234)
Gender distribution (% female)	33	47	36
Age distribution, in years ($\bar{x} \pm$ SD)*	51.4 ± 13.8	37.2 ± 7.3	47.7 ± 13.9
Medically trained (%)**	85	100	89
Services provided*			
Drug sales only (%)	26	12	22
Treatment including selling drugs (%)	49	83	58
Treatment only (%)	25	5.0	20
Place of practice			
At home only (%)	70	77	71
At home combined with others[a] (%)	20	15	19
Others only (%)	10	8	10
Registered with local government*** (%)	22	8	18

*0.01% significance level.
**0.1% significance level.
***2% significance level.
[a]Others include private clinics at rent houses, at public place such as pagoda, or at the public health care facilities (out of office hours).

medical supplies, no significant difference was found between the two systems.

Figure 1 shows that the CHC facilities had more hygienic conditions than private providers in terms of clinic and toilet cleanliness, and availability of clean water. These differences were statistically significant for cleanliness of toilets ($p = 0.001$) and availability of clean water ($p < 0.001$).

Clinical performance and provider skills

In terms of diagnosis and treatment of common acute health problems, CHC staff performed better than private providers, especially the 'private only' group. Statistically significant differences were found in identifying proper medicine for treating a child with ARI, and in providing correct advice to the mother of a child with diarrhoea without fever (Table 4). However, both private providers and CHC staff scored poorly in the area of chronic disease (taking a history from a man with hypertension). Most health care providers identified less than 50% of the questions that should have been asked. Only two of the 211 providers could specify 70% and over (Figure 2).

Costs of care and patient satisfaction

One hundred and fifty-three outpatients without health insurance had sought care at CHCs (n = 43) or from private providers (n = 110) in the 4 weeks prior to the survey. Medical costs were not significantly different between the private service group (mean 59 500 VND; 95% CI: 35 400–83 500) and the CHC service group (mean 47 000 VND; 95% CI: 9900–74 000). Patient satisfaction

Table 3. Comparison of available medial equipment and supplies between private and commune health centre (CHC) systems, Hung Yen

Items	CHC (n = 30) n (%)	Private (n = 182) n (%)
Medical equipment available:		
Steam sterilizer	30 (100)	17 (9.3)
Sphygmomanometer	30 (100)	115 (63.2)
Microscope	30 (100)	2 (1.1)
Delivery/family planning table	30 (100)	0
Newborn scale	30 (100)	1 (0.6)
Pelvis measurer	30 (100)	1 (0.6)
Foetal heart-beat instrument	30 (100)	7 (3.9)
Stethoscope	30 (100)	133 (73.1)
Thermometer	30 (100)	152 (83.5)
Adult scale	30 (100)	1 (0.6)
Gynaecological and family planning sets	30 (100)	1 (0.6)
Eye vision measure	30 (100)	2 (1.1)
Otorhinolaryngological set	30 (100)	39 (21.4)
Electronic acupuncture apparatus	30 (100)	32 (17.6)
Picture of body point system	30 (100)	38 (20.9)
Child growth charts and nutritional scales	30 (100)	5 (2.8)
Equipment set for simple surgery	2 (6.7)	0
Equipment set for dental examination	2 (6.7)	0
Communication equipment:		
Telephone	30 (100)	29 (15.9)
Chemicals/medical supplies:		
Sterilizing alcohol	30 (100)	157 (86.3)
Iodine alcohol	30 (100)	62 (34.1)
Gloves	30 (100)	59 (32.4)
Disposable plastic syringes	30 (100)	147 (80.8)
Bandages	29 (96.7)	47 (25.8)
Quick stick (pregnancy test)	23 (76.7)	28 (15.4)
Urine-protein testing paper	9 (30)	5 (2.8)
Disinfectant	6 (21.4)	47 (25.8)

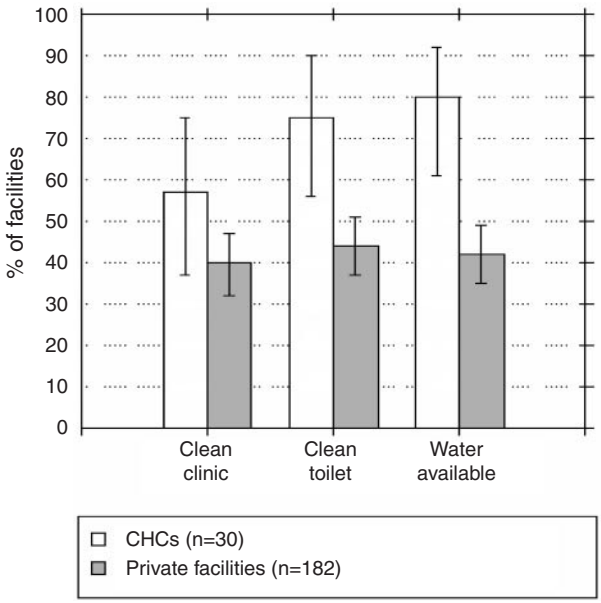

Figure 1. Comparison of hygiene conditions in commune health centres (CHCs) and private provider health care facilities with the percentage and 95% confidence intervals for facilities having clean clinics, toilets and water available

Table 4. Comparison of clinical performance and skills between the 182 private health care providers and the commune health centre (CHC) staff in the treatment of acute respiratory infections and diarrhoea in children

	Private practitioners			CHC staff (n = 30)
	Private only (n = 129) n (%) [95% CI]	Public-private practitioners (n = 53) n (%) [95% CI]	Total private group (n = 182) n (%) [95% CI]	n (%) [95% CI]
Correct identification of a child as a probable case of ARI	94 (72.9) [64.5–79.9]	50 (94.3) [83.7–98.2]	144 (79.1) [75.2–84.5]	26 (86.7) [68.0–95.2]
Correct advice given to mother of a child with diarrhoea	33 (25.6) [18.7–33.9]	32 (60.4) [46.6–72.7]	65 (35.7) [29.0–43.0]	24 (80.0) [60.8–91.2]
≥70% of correct answers for medicines used to treat ARI case	32 (24.8) [18.1–33.1]	26 (49.1) [35.9–62.4]	58 (31.9) [25.5–39.1]	16 (57.1) [37.5–74.8]

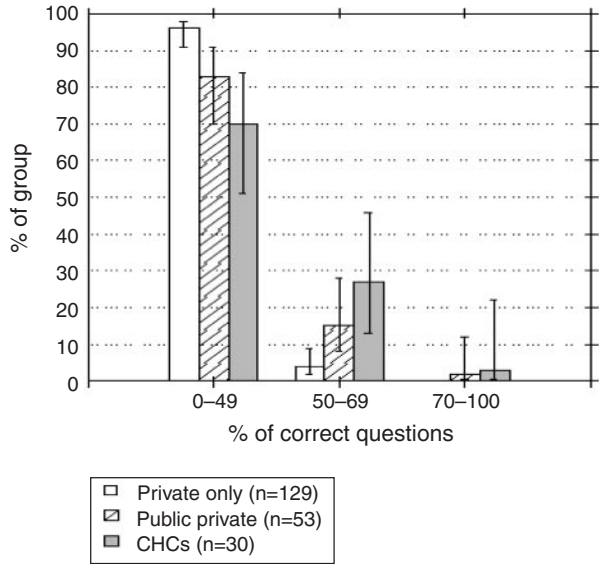

Figure 2. Comparison of the correct answers identified by private only, public-private, and commune health centre (CHC) staff (percentage and 95% confidence intervals), about what questions should be asked of a 58-year-old patient with suspected hypertension

with all dimensions of service quality received was similar between the two groups (Table 5).

Table 5. Mean scores of patient satisfaction with outpatient services by type of health care facility

Dimensions of patient satisfaction	Commune health centre (n = 43) Mean scores* [95% CI]	Private health care providers (n = 110) Mean scores [95% CI]
Attitude of physicians	9.3 [8.9–9.6]	9.5 [9.2–9.7]
Trust in professional skills	8.5 [8.0–9.1]	8.8 [8.4–9.3]
Clinic environment	8.1 [6.8–9.4]	9.1 [8.7–9.4]

*Patients gave scores, with the lowest being 1 and highest 10.

Discussion

This study provides community-based evidence that private providers are successfully competing with the public health centre system in rural areas of Vietnam. This is occurring even though the direct costs of their care are no lower and the quality of their service not better than the public sector's. The quality of private health care services is not controlled and is significantly poorer than the public service. Current practice in both systems falls below the national standard.

This is the first detailed description of rural private health care providers in Vietnam. The private providers were identified through interviews with the staff of the Commune People's Committee, and cross-checked in the household survey. The number of private providers who refused to participate was low (5.6%). Therefore, the size and structure of the private system was estimated with high reliability. The assessment of clinical performance was conducted separately for each group of private, public-private and CHC staff responsible for specific programmes so that any real differences between the systems were easily identified. Cost of care was calculated from the expenditure of patients without insurance for each type of health care provider in order to estimate patient costs for each system.

As this study was conducted by a survey team from a local, independent research institution not linked with either public or private health care system, the evaluation was kept as neutral as possible. However, as quality of health care has multiple dimensions, this study was not able to cover all aspects at the community level. For example, there were no qualitative data collected observing actual clinical performance or prescription. This cross-sectional study therefore provides a snap-short of a social system in Vietnam, which is under the current structural adjustment and sectoral reform.

We found evidence of the development of the private health care sector in rural Vietnam 15 years after the

adoption of a public-private mix for primary health care. The rural private health sector concentrates on the treatment of illness and drug sales (Table 2). It has a wide coverage (11.5 providers/10 000 population), double the size of the CHC system, and handles more than two-thirds of all illness episodes (108/151) of patients attending community health care services. However, the direct costs of private care are no lower than in the public rural health care system and the quality of care is below that of the public system, and is not under the control of the government.

The private sector is far bigger than stated by the government data, which gives the number of providers as only 9.4% (146/1557) of the mean number projected in this survey (Hung Yen Provincial Health Department 2001). However, compared with other developing countries, the private health care sector in Vietnam is not large. Hanson and Berman (1998) reported on the private health care sector in 35 countries, presenting data that included only providers who were officially registered and worked full-time in the private sector. They found a mode range from two physicians per million in Burundi, to 657 per million in Chile, with an average across the sample of 213 per million (Hanson and Berman 1998). Our estimate of 97 private physicians per million rural population regardless of whether or not they work full-time in the private health care sector, or are registered, suggests that Vietnam is below the international average of private providers.

The costs of care reported in this study reflect the trend of private services being more expensive than public services (CHCs), which was observed in the 1993 and 1998 VLSS. The costs of medical care observed in our study (59 500 VND for private and 47 000 VND for CHCs) were higher than in the 1998 VLSS (32 730 VND and 19 940 VND, respectively) (World Bank et al. 2001). During our provincial survey results workshop, participants found our cost estimates to be realistic and to reflect the trend of increasing health care costs in Vietnam. Similar results have been reported in India, with the average expenditure incurred per consultation being higher for private practitioners (46 Rs.) compared with government doctors (38 Rs.) (Bhatia and Cleland 2001). The private medical costs in our study (approximately US$4.0 adjusted for 2001 prices[2]) were almost eight times higher than those reported from the Delhi Health Project in India (50 cents for a visit to the doctor including prescription of medicines) (Das and Hammer 2002) and 2.7 times higher than that reported from Karnataka State, India (46 Rs., ~US$1.5) (Bhatia and Cleland 2001).

Mills et al. (2002) remarked that in low-income countries, private services are popular because they '... are often cheap ... (and) are adjusted to the purchasing power of the clients, as when partial doses of drugs are sold'. This study, together with the results of the two VLSS surveys, shows that the popularity of the private sector in Vietnam is not explained by lower direct costs of care. The availability of private providers in rural areas found in this study (11.5 private providers per 10 000 population compared with 6.7 public providers per 10 000) indicates that accessibility is more important in explaining the popularity of private services in rural Vietnam.

Poor quality of private health care services has been reported in other developing countries, such as in India for treatment of tuberculosis (Uplekar 2000) and in South Africa for sexually transmitted diseases (Chabikuli et al. 2002). In urban Vietnam, private providers have been found to have less effective treatment practices for tuberculosis (Lonnroth 2000). This study found similar evidence regarding other common diseases in children, such as ARI and diarrhoea (Table 4). Poor treatment practices were higher among private providers with no connection to the public system (the private-only group). Even when controlling for education background, the private-only group still had poorer quality of management of diarrhoeal cases and diagnosis of a child with probable ARI than the public-private practitioners did. It can be assumed that this group had not participated in the disease-specific preventive programmes for ARI and control of diarrhoeal diseases (CDD) conducted in Vietnam over the last 15 years.

The intensive government support for the public health sector has not enabled CHC staff performance in rural areas to reach the national health programme objectives set by the Ministry of Health for the CHC system (Ministry of Health 1999). Around 20% of CHC staff responsible for the CDD programme could not correctly advise a mother of a child with diarrhoea, and 40% of CHC staff responsible for the ARI programme had 30% of their answers wrong regarding medicine used to treat a child with acute respiratory infections (Table 4).

Like other countries in the South-East Asian region, Vietnam is undergoing an epidemiologic health transition. Chronic disorders and health problems of aging populations are increasing (World Bank et al. 2001). Seventy per cent of CHC staff responsible for internal medicine and 96% of private health care providers were unable to identify half the essential questions to be asked of a patient with hypertension. Clearly both sectors need further training to strengthen the quality of community-level care for adult chronic diseases.

The fact that users reported similar mean satisfaction scores for public and private services (Table 5) is consistent with the recognized inability of consumers to assess the technical quality of services (Mills et al. 2002). Users' acceptance of quality of care is highly related to service availability, waiting times, providers' attitude and costs of care, rather than medical competence (Brugha and Zwi 1998; Mills et al. 2002). Even in developed countries, users hardly ever differentiate between the technical quality of medical services (Sitzia and Wood 1997). This partly explains why the 11% of private providers who have no formal medical training could still make a living providing medical services in

rural areas. In order to strengthen the quality of community health services in a sustainable way, health education for consumers must be an integral part of the overall plan.

The observation that approximately 25% of all private providers are public health staff (or 37% of CHC staff have medical private practices), that 11% of private health care providers have no medical training, that approximately 80% of the private health care workforce are practicing without registration, should indicate to the government the need to consider the private sector as an integral part of the community health system. They should be included in any government plan to strengthen the community health system.

The study shows that the privatization of health care in Vietnam over the last 15 years seems to be more a passive response to economic reform than programmed or active health system privatization, a common phenomenon for most developing countries (Uplekar 2000). Active planning first requires information on the benefits and constraints of private health care for rural populations in relation to that of the public sector. The poor quality of curative services at the community level directly contributes to the phenomenon of high levels of self-medication, low utilization of CHCs and over-utilization of tertiary health care facilities reported in recent evaluations of the health system (Jerve et al. 2001; World Bank 2001). Addressing the quality of both public and private community health care services will, therefore, improve the quality of care in the entire health sector in Vietnam and contribute to reducing rural poverty.

Endnotes

[1] Criteria for correct answers to all clinical management questions in this study were based on the Hung Yen Provincial Health Department training modules on ARI and CDD programmes, and the guidelines to manage medical problems at the communal level.

[2] Exchange rate June 2001: US$ = 14 720 Vietnamese Dong (VND).

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Biographies

Tran Tuan, MD, Ph.D., is Director of the Research and Training Center for Community Development (RTCCD), Hanoi, Vietnam. He is a principal investigator on 'Young Lives' Vietnam, a four country, international cohort study of child poverty. Tuan was Takemi Research Fellow 1994/95 at Harvard School of Public health and obtained a Ph.D. in Epidemiology and Population Health at the Centre for Clinical Epidemiology and Biostatistics (CCEB), The University of Newcastle, Australia (1994).

Van Thi Mai Dung, MD, MSc, is a paediatrician and head of the Health and Nutrition Unit at RTCCD, Hanoi, Vietnam. She worked in a public hospital at the district level for 7 years and with the International Federation of Red-Cross and Red-Crescent (IFRC) for 3 years implementing a project on community-based first aid and primary health care in Vietnam. Her main research interests are quality of child care at community level, control of micronutrient deficiencies and malnutrition in children. [Email: yte@rtccd.org.vn]

Ingo Neu, MD, MPH, is a medical doctor with a Masters of Public Health working for international organizations, mainly in South-East Asia.

Michael J Dibley, MBBS, MPH, is a Senior Lecturer in Epidemiology at the Centre for Clinical Epidemiology and Biostatistics, School of Medical Practice and Population Health, Faculty of Medicine, The University of Newcastle, Australia. He trained as a physician and specialized in clinical paediatrics at the University of Sydney, Australia. Subsequently, he completed public health training at the Centers for Disease Control and Prevention, and obtained a Masters of Public Health from the Emory School of Public Health, in Atlanta, USA. His research interests are in the areas of primary health care, nutrition and infectious diseases, and the role of micronutrients in health. He is currently involved in research on these topics in Vietnam, Indonesia and China. [Email: michael.dibley@newcastle.edu.au]

Correspondence: Tran Tuan, Research and Training Center for Community Development, No. 39, Lane 255, Vong Street, Hanoi, Vietnam. Tel: +84 4 6280350; Fax: +84 4 6280200.
E-mail: rtccd@hn.vnn.vn