ECONOMIC ASPECTS OF HUMAN RESOURCE DEVELOPMENT IN HEALTH & FAMILY PLANNING IN BANGLADESH:

Dual Job-Holding Practitioners: An Exploration.

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Acronyms

AHI	Assistant health inspector
ARI	Acute respiratory Infection
BCPS	Bangladesh College of Physicians and Surgeons
BIRDEM	Bangladesh Institute of Research & Rehabilitation in Diabetes, Endocrine and Metabolic Disorders
BMA	Bangladesh Medical Association
BMDC	Bangladesh Medical and Dental Council
BRAC	Bangladesh Rural Advancement Committee
CHW	Community Health Worker
CMC	Chittagong Medical College
CME	Continuing Medical Education
DFID	Department for International Development
DGFP	Director General Family Planning
DGHS	Director General Health Services
DMC	Dhaka Medical College
EPI	Expanded Programme of Immunisation
ESP	Essential Service Package
FCPS	Fellow of the College of Physicians and Surgeons
FP	Family Planning
FPI	Family Planning Inspector
FWA	Family Welfare Assistant
FWC	Family Welfare Visitor
FWVTI	Family Welfare Visitor Training Institute
GoB	Government of Bangladesh
GP	General Practitioner
HA	Health Assistant
HPSP	Fifth Health and Population programme
HEU	Health Economics Unit
HRD	Human Resource Development
ICDDR, B	International Centre for Diarrhoeal Disease Research, Bangladesh
IPGMR	Institute of Postgraduate Medicine and Research
IRR	Internal Rate of Return
LIP	Local Initiatives Programme
MA	Medical Assistant
MBBS	Bachelor of Medicine, Bachelor of Surgery
MC	Medical College
MCH-FP	Maternal and Child Health and Family Planning
MCPS	Member of the College of Physicians and Surgeons
MMCH	Mymensingh Medical College Hospital
MO	Medical Officer
MOHFW	Ministry of Health and Family Welfare
NGO	Non-governmental Organisation
NIPORT	National Institute of Population Research and Training
NIPSOM	National Institute of Preventive and Social Medicine
NPV	Net Present Value
ODA	Overseas Development Assistance
PHC	Primary Health Care
PhD	Doctor of Philosophy

RCT	Regional Training Centre
SSMC	Sir Salihmullah Medical College
STD	Sexually Transmitted Disease
TBA	Traditional Birth Attendant
TFPO	Thana Family Planning officer
THC	Thana Health Complex
THFPO	Thana Health and Family Planning Officer
Tk	Taka
UNICEF	United Nations Children's Fund
USC	Union Sub-centre
WDR	World Development Report
WHO	World Health Organisation

Executive Summary

The Government of Bangladesh has committed itself in its Fifth Health and Population Programme (HPSP) to institutionalise a needs based approach to Human Resources Development (HRD). Expenditure on human resources by public and private health care providers represents the largest part of total health sector resources. Obtaining value for money on this expenditure is a high priority. Under the current financial pressures it is increasingly important to look carefully at the roles and contributions of different health care professionals and to adapt the skills of each to service needs so that needs are met in a more efficient way.

The HRD-project of the MOHFW has carried out valuable work on the present situation and developed a strategy for change of human resource development in Bangladesh (HRD 1997). The aim of this series of reports (HEU Research Papers Nos. 12, 13 and 14), of which this paper is a part, is to complement this work by analyses on the cost of staff supply, on economic incentives and on the organisation and financing of training.

The reports address key economic aspects of the HRD process by exploring ways of

- Providing staff in a way which ensures a better match between service needs and professional skills,
- Improving performance management through appropriate incentives to staff to provide services efficiently and to high quality standards.
- Improving efficiency in education, training and continuing staff development

The different components of the project are presented in three Research Papers.

Research Paper 12 focuses on the flow of funds in health care human resources under the current arrangements in the government health sector. Based on preliminary work by the HRD project we developed a cost model that provides expenditure estimates by professional categories, geographical areas, function and level of service, civil service class and mode of financing. The study provides also data for modelling the consequences of a unified service structure between DGFP and DGHS.

Research Paper 13 uses a framework of quantitative and qualitative research to study earnings profiles of medical doctors and to investigate the current structure of economic incentives for the medical profession. Emphasis is being placed on exploring strategies to improve medical staff supply in rural areas

Research Paper 14 evaluates the cost of education and training for health professionals in Bangladesh. Based on the assessment of annual equivalent cost the study models the economic consequences of staff attrition and explores options to improve efficiency of training. It addresses also the question of who should pay for education and training and evaluates options of cost recovery from private sector providers.

The following provides short summary of this Research Paper.

Objectives:

- To develop a profile of fee levels and earnings of multiple job holding practitioners in Bangladesh.
- To analyse the system of economic incentives underlying job preferences of doctors and identify the changes required increasing their involvement in the priority areas of care.

Design:

A combination of quantitative and qualitative research methods using a questionnaire based survey and in-depth interviews. Analysis of differences between subgroups of respondents and regression analysis identifying predictors of income.

Subjects:

One hundred government-employed doctors with private practice, across all levels of care and geographical regions. In-depth interviews were carried out in a sub-sample of 28 respondents.

Main results:

Seventy-one percent of the respondents reported additional monthly earnings from private practice of Tk.20,000 per month, 9% between Tk.20,000 and Tk.30,000, 10 % between Tk.30,000 – Tk.50,000 and 10% above Tk75,000. Consultation fees were Tk.120 on average (range Tk.20 – Tk.300) and, correlated with the qualification of the practice owner: GPs charged Tk.50 on average; doctors with a diploma Tk.125; and specialists Tk.200. Significant predictors of total income included the number of patients seen in private practice ($p=0.000$), employment in a secondary or tertiary care facility ($p=0.001$) and ownership of premises for private practice ($p=0.033$). Age was found to be marginally significant ($p=0.084$). No association was found between total income and specialisation, private practice costs, level of government salary or a degree from abroad.

All doctors at Thana level reported that they would give up private practice if they were paid a higher salary, but only 54% of the respondents in secondary and tertiary did so. Only a minority of doctors would give up government employment to set up full time in private practice.

If given the opportunity a majority of respondents (68%) would like to set up their private practice in government facilities. Other areas identified for improvements in private practice related to regulation and quality improvement. Respondents saw a combination of different issues that need to be addressed by government to improve working conditions of doctors and to attract more medical staff to rural areas. Thirty-eight percent of all answers mentioned better career opportunities, followed by improved housing, and higher salary (17% each). Less frequently mentioned (13 % each) were improvements of training conditions, education facilities for children and better supply with drugs and equipment. Seven percent of the answers referred to improvements of status and social security and 4 % to other proposals such as development of transport and infrastructure. Only a minority of respondents

considered in the public health field or in primary health care for career development. However, the strong demand for further training may open up an opportunity to reorient career pathways and continuing medical education to the needs of primary health care.

Conclusion:

Most dual job holding doctors in the study sample are able to double their income by engaging in private practice. The propensity to give up one of the jobs in favour of the other was found to be low. The data suggest that doctors have adopted individual strategies to accommodate the advantages of both government employment and private practice in their career development, thus maximising benefit from the incentives provided to them e.g. status of a government job, and minimising opportunity costs of economic losses e.g. lower salaries. Financial incentives to increase numbers of doctors in rural areas, such as a non-private-practice allowance, are more likely to be appreciated by younger doctors who are at the beginning of their career. The responses showed that improved training and access to career opportunities appear to be of high importance to increase job satisfaction of doctors posted in rural areas.

1. Introduction

In Bangladesh like in many other Asian countries the contribution of the private sector to health care services has increased substantially during the last decades. This development has improved access of the population to medical care especially in urban areas, but has left large parts of the population unserved. Much of the population has access only to a limited range of services, and 60% do not use formal health care. 75 % of pregnant woman do not receive antenatal care or assistance from a trained attendant at the time of birth. (MOHFW 1998)

The government of Bangladesh is addressing these inequities and intends to target the priority areas of care more effectively with its Health and Population Sector Programme (HPSP). At the centre of HPSP is a policy that channels scarce public resources into an essential service package (ESP) of cost-effective interventions to meet the basic needs of the most vulnerable parts of the population. Given the high levels of expenditure on expensive curative care government wants to encourage private sector provision to meet the increasing demand for these services.

Policies encouraging private sector participation will be based on a sector wide approach to management that seeks to integrate private sector and NGO activities into the planning process. It is also intended to review and update the regulatory framework and to explore the options of franchising elements of care to specially trained private providers who will be obliged to charge fees that are affordable for low income groups. Strategies envisaged in the HPSP also include encouraging providers to give more attention to preventive care, and to expand collaboration with the private sector in regions where government health services have only a limited infrastructure (MOHFW 1998).

In pursuing these objectives, policies that influence the behaviour of the medical profession will play a key role. A higher quality of input from doctors, including more time spent on providing services in public facilities, will be needed to implement the ESP. Likewise the quality of care of the poorly regulated private sector needs to be improved to achieve adequate standards. It has been recognised that professional organisations should play a larger role in achieving these goals and in maintaining professional standards.

2. Background

The private sector in Bangladesh comprises a heterogeneous mix of agencies with varying forms of ownership, motives and value orientations. Ambulatory care is provided mainly by pharmacists and a range of private practitioners of different types and qualifications (allopathy, homeopathy, unani, ayurveda) (Feldman 1983) .

Government-employed doctors who also work in their own private practice cover a large share of this market. Though multiple job holding by government doctors is common, little is known about the organisational and economic aspects of these arrangements. It is believed that more than 80% of the government doctors engage in private practice. Though attempts have been made to regulate fees in the early 1980s, these rules are not enforced (Abdus Shahid 1997).

It is a major concern that combined private/public practice interferes with work performance in the public sector, and may have undesirable effects on the overall functioning of the health services. In the 1980s, the international discourse on multiple job holding practitioners has been dominated by normative statements criticising these arrangements and requesting improvements of work performance in public health care facilities. Only few empirical studies have tried to address the individual social and economic factors that shape attitudes and behaviour of these practitioners. Roenen et al. (1997) have studied doctors in sub-Saharan Africa and emphasised the aspect that extra income generating activities take the form of individual coping strategies to maintain an acceptable standard of living. Private practice was perceived as being more legitimate when the government salary covers only a small part of necessary living expenses. This is the case in many developing countries, where the economic crisis has led to substantial cuts in public expenditure and a declining buying power of government employees.

Joint private/public practice is the backbone of ambulatory care in many Asian countries. A number of studies have described both the opportunities and negative side effects of these arrangements (Chunharas S and Kittidilokkul S 1992, Bhat R 1993, Chawla M 1995, Newbrander W 1997). Berman (1997) has emphasised the potential conflict of interest related to joint private/public practice and put forward the argument that resources may be diverted from the priority areas of health care to the private-for-profit sector. He emphasised however that the net social effects of multiple job holding are not known. For example, better-regulated qualified private practice could be more efficient than wide spread unregulated services offered by unqualified practitioners. From Bangladesh and from other Asian countries there is also evidence that private services are used by people of all income levels, and though fees are regressive, the poor spend substantial amounts on private health care (HEU 1997). Most governments have a permissive attitude to joint public/private practice, because they see it as a way to mobilise further resources and to retain qualified staff in the public health sector.

3. Aims of the study and conceptual framework

This study focuses on the private market for ambulatory care in Bangladesh as a means to investigating working conditions and income opportunities of doctors who work both in government services and in their own practice.

The conceptual framework to investigate these arrangements is based on the assumption that doctors' job preferences are shaped by underlying attitudes, beliefs and economic incentives. It is hypothesised that depending on the market and institutional context, doctors' behaviour is influenced by an internal trade-off between the rewards derived from the government job and those derived from private practice.

Like actors in any organisation, doctors pursue their various interests related to professional self-realisation, social prestige and income. At the aggregate level these goals and actions have the characteristics of 'emergent strategies' (Mintzberg 1996) that, though not centrally planned, have considerable effects on the delivery of health care.

In controlling the undesirable side effects of this behaviour, provider payment methods play a major role as these generate both adverse and beneficial incentives, which affect volume, quality and mix of services. Other areas that are addressed are related to non-financial incentives such as training, career opportunities and prospects of social security.

It is the aim of this study to investigate the system of incentives underlying the current arrangements of joint public/private practice and to explore options that ensure a more appropriate allocation of resources to the priority areas of the health sector.

4. Objectives:

The major objectives of this study are:

- to develop a profile of private practice of multiple job holding practitioners in Bangladesh, in terms of regional distribution, level of care, specialisation and other provider characteristics.

- to establish fee levels charged for consultation and develop profiles of earnings from combined private/public practice

- to assess the level of market segmentation in terms of differences between subgroups of doctors and to identify predictors of income

- to assess providers' beliefs and attitudes towards, public and private health services and to evaluate the career and training opportunities available to them.

- to evaluate the system of economic incentives underlying job preferences of doctors and identify the changes required increasing involvement in the priority areas of care.

5. Methods

During the second half of 1997, interviews were carried out with 100 multiple job holding medical doctors, who were employed in GOB health services and had their own private practice. The sampling method was purposive to ensure representation from all levels of service (primary, secondary and tertiary) career positions, and geographical areas of the country.

The survey used structured interviews, which were conducted face to face by trained interviewers of the same ethnic background as the respondents. The questionnaire schedule started with questions on age, current career position and qualification. More specific questions addressed the profile of private practice, the location, the spectrum of services offered the time spent daily for private practice and the number of patients attending weekly. Direct and indirect questioning then addressed indicators of total income, including consultation fee levels, government salary package, recurrent costs, capital expenditure and the range of monthly income earned from private practice. The questionnaire concluded with the exploration of views and attitudes towards non-

financial incentives, such as training CME and career opportunities. A subset of questions tried to elicit views on perceived service quality of private and public health services and to evaluate the respondents views on the future role of private practice in the public/ private mix.

To obtain more reliable answers on sensitive questions in a sub-sample of 28 doctors the interviews were conducted in the setting of semi-structured interviews using the questionnaire as a topic guide. The in-depth interviews were conducted either in the office or the home of the interviewee, to ensure privacy and a good rapport by one trained interviewer in the presence of an assistant. The participants were allowed to direct the flow of conversation and encouraged to put forward their views on the subjects. Towards the end of the interview, the recorded notes of the interview were discussed and approved by the interviewee. The participant was also asked to write down the two single most important policies that in his/her view could improve the incentives for doctors in rural areas. This was sealed in an envelope for later evaluation and comparison with the recorded answers.

6. Data analysis

All answers were coded and frequencies and percentages calculated, where appropriate. In open-ended questions, multiple answers were classified by categories and the frequencies evaluated. Descriptive statistics were calculated for quantitative variables. Total income was defined as the sum of government salary and private practice income, taking the mean points of the recorded ranges of earnings. Differences between subgroups of respondents were assessed by independent sample t-tests. Predictors of fee levels and total income were identified by multiple linear regression (SPSS). Frequencies of responses were compared between sub-samples by Chi-square tests.

7. Results

7.1. Characteristics of the study sample

a). Personnel characteristics

Of the 100 doctors participating in the study, 10 were female and 90 were male. The average age was 39 years (range 27 to 57 years). 94% of the participants were married, 50% of the spouses were housewives, 31 % had a professional occupation. The number of dependants was 2.4 on average (range 1–9).

b). Career status and qualification

44 of the participants held a senior position as professor, consultant or THFPO, 26 were Medical Officers 30 were registrars or held other job titles. The practitioners reported to be in their current career post for 3.7 years on average. 28% had no postgraduate training, 27% had up to one year of postgraduate training (Diploma or similar) and 45 % had degrees requiring more than one year of postgraduate training (FCPS, PhD). Doctors with up to one year of training were younger than (37.9 years on average) than specialists (40.5 years). 11 participants had obtained a postgraduate

degree abroad. 46% of the participants had their private practice in the metropolitan areas of Dhaka or Chittagong, 54 in other locations of the country. Annex 1 shows the distribution of the sample by location of workplace.

7.2. Differences between the sample and the medical workforce in government health services in Bangladesh

As the method of sampling was purposive to ensure a large enough sub-sample of doctors with higher degrees, the sample was in some aspects different from the composition of the medical workforce in general. In government services the proportion of female doctors is somewhat higher (15 %) and the proportion of specialists is lower (9% FCPS or equivalent, 12 % doctors with postgraduate diploma).

7.3. Characteristics of private practice

The doctors had been working in private practice for 7.3 years on average. The reported average daily time spent in private practice was 2.7 hours (median 3.0h; range 1-8h). This means that in addition to official full time working hours doctors reported to spend approximately 15 hours per week in private practice.

The majority of doctors were seeing patients in their own establishment, in a private clinic (n=56) or in a local pharmacy (n=22). Only 11 doctors used a hospital or government residence for private practice. The number of patients seen privately per week was 48.5 on average.

The large majority of practitioners reported to provide health services that were similar to government services (79%). Those who reported to offer different services (21%) mentioned to offer better equipment, a wider range of investigations and more time to patients.

51% of the practitioners reported to have employed their own support staff. 13 % also employed medical staff. Only a minority of doctors (9%) reported to being the owner of a private clinic or to being a partner in a joint venture of private health care facilities.

7.4. Costs and income derived from private practice

a). Average consultation fee levels

Table 1 presents the average, median and range of fees per consultation by level of postgraduate training of the practitioner, reported by the respondents. Fees were found to be Tk 120 on average (range Tk 20-Tk 300). GPs (with MBBS qualification) had lower fees than the average of the study sample (Median Tk 50, range Tk20-Tk 120), Doctors with Diploma reported to charge Tk125 on average (range Tk 30-Tk200) and doctors with a specialist degree (FCPS or similar) Tk 200 (range Tk 50-Tk 300).

Table 1: Reported average consultation fee per patient (Tk)

	Mean	Median	Maximum	Minimum	Std Deviation
GP	57	50	120	20	27
Specialist	155	150	300	50	58
Diploma	124	125	200	30	48
Total	120	120	300	20	63

b). Predictors of fee levels:

Predictors of fee levels were identified by standard multiple regression. **Table 2** shows the regression coefficients and 95% confidence intervals for the independent variables whose influence on consultation fees was measured. In this model the degree of specialisation, surgery or hospital admissions, and employment of own staff were significant predictors at the 0.05 level. The level of care, with expected higher fee charges by doctors employed in tertiary care, was marginally significant (p=0.065) Ownership of facilities, practice in Dhaka and Chittagong and the number of patients seen were not found to predict fee levels.

Table 2: Multiple regression model identifying predictors of consultation fee levels (Tk)

					95% CI for B	
Variable	B coefficient	Std. Error (B)	Beta (stand)	p-value	Lower	Upper
Intercept	102.5	86.19		0.241	-71.43	276.44
Specialty	26.3	11.79	0.27824	0.031	2.48	50.07
Practice in Dhaka or Chittagong	-4.5	19.75	-0.03466	0.819	-44.40	35.32
Number of patients seen	0.0	0.12	0.046892	0.709	-0.20	0.29
own staff employed	-34.9	16.75	-0.26607	0.043	-68.68	-1.07
Ownership of health care facilities	36.8	25.72	0.168839	0.160	-15.14	88.67
Surgery and private hospital admissions	-48.8	18.52	-0.319	0.012	-86.18	-11.41
position in tertiary care	41.6	21.99	0.279425	0.065	-2.76	85.98

7.5. Bias analyses

The methodological difficulties of obtaining estimates of doctors' income from private practice made it necessary to combine different sources of information.

Generally in the absence of reliable income tax information, and third party payment for private practice, there is a tendency to underreport revenue from private practice.
To check the robustness and reliability of the estimates we compared the reported income levels with information from the following sources:

1. Reported fee levels were checked for plausibility and compared to values obtained from key informants' interviews in preparation of the survey. The values obtained from these sources were in line with the reported values of the survey.
2. One of the survey questions assessed personal ownership of durable consumer goods serving as a proxy indicator of available income. The distribution of items such as a motorbike, an air conditioner, a private car and a mobile phone was found to be significantly different between subgroups with expected income differences. Significant differences were found ($p<0.00$) for the reported ownership of motor bikes (reported by 30% of the GPs and 4 % of the specialists), cars (44% of the specialists and only 20% of the GPs) and air conditioner in residence (reported by 20% of the specialists and 2 % of the GPs). These data are in line with the recorded income differences between both groups.
3. Reported fee levels were multiplied with the reported number of daily seen patients and extrapolated to monthly revenue. These values were analysed with a paired samples t- test to reject the hypothesis that there was no difference between estimated and reported values of private practice income. The observed difference was not significant ($p=0.138$).
4. In a subset of 28 doctors in-depth interviews were carried out to obtain more reliable information which is more likely to be disclosed in a questionnaire based survey. This sub-sample of doctors had a higher proportion of doctors trained abroad and reported slightly higher government salaries than the rest of the sample. However no difference between both subgroups could be observed in terms of reported private and total income.

7.6. Income distribution

The income distribution of the study sample is shown in **Table 3**. 84 % reported to receive a monthly government salary package between Tk5,000 and Tk10,000. Only 16% reported a higher salary between Tk10,000 and Tk15,000 per month.

Table 3:Frequency distribution of reported range of monthly income from government and private practice (N=100)

	Government	Private practice	
Tk per month	Percent	Percent	Cum. %
5000 or less	5.00	20	20
5000-10000	79.00	22	42
10000-15000	16.00	18	61
15000-20000	NA	11	72
20000-30000	NA	9	81
30000-40000	NA	4	85
40000-50000	NA	7	92
50000-75000	NA	4	96
75000-100000	NA		
100000 and above	NA	4	100

71% of the doctors reported additional earnings from private practice of up to Tk 20,000 per month. 9 doctors reported earnings between Tk 20,000 and Tk 30,000 per month and 10 between Tk 30,000 – Tk50,000. Only a small number reported earnings above Tk75,000 per month, among those were four respondents reporting earnings of Tk 100,000 and above.

In relative terms, 56% of the respondents reported to have higher earnings from private practice than from government salary, 21% reported to earn a similar amount and 19% less than their government salary. Where private practice made up the major part of total income, reported earnings of more than 4 times the salary were not uncommon (20% of the respondents). Seventeen percent of the sample reported to earn between 2 and 4 times as much as being paid by government.

7.7. Recurrent and capital costs

The reported recurrent costs of providing private services were Tk4,080 on average (range 0-Tk 130,000). This included expenditure for rent of premises, salaries, supplies and equipment as well as expenditure for utilities and maintenance. 33 participants reported to have no expenditure at all in providing private services. Of those who reported not paying rent for premises for private practice(n=51), most used privately owned rooms (n=23) or a local pharmacy (n=17).

Nineteen participants, mainly owners of larger practices reported that they incur costs in all expenditure categories. Analysis of the cost structure of this subgroup of practices showed that 32% of the expenditure was on rent of premises, 37% on salaries, 16% on supplies and equipment and 15% on utilities and maintenance.

Forty-eight percent of the study participants reported to have invested private capital in their practice facilities. Capital investments of Tk 100,000 and above (n=6) were associated with ownership of diagnostic or therapeutic facilities. The majority of doctors (n=42) had invested smaller sums of Tk27,000 on average. Only 4 doctors had taken up bank loans to finance private practice expenditure (Tk 50,000 on average).

7.8. Income differences between subgroups of doctors

This section investigates differences in income levels between subgroups of respondents defined by age, sex, speciality, location of practice and type of services provided. Differences were calculated for total income rather than private practice income because the distribution of this variable was less skewed. A highly skewed distribution may invalidate the use of multiple regression techniques.

a). Analytical methods used:

First, income differences between GPs and Doctors with diplomas were assessed. As these were small and not statistically significant, further subgroup analyses were performed between the pooled sample of doctors with up to 1 year of postgraduate training (MBBS & Diploma) and specialists (FCPS and other degrees with more than 1 year postgraduate training). Differences between subgroups were analysed by means of independent samples t- tests. Predictors of total income were identified by standard multiple regression, which took account of various confounding factors.

b). Results of unadjusted differences:

Unadjusted income differences between subgroups of study participants are presented in **Table 4** (over page). A significantly higher average income was found for senior doctors (33 years and older) and specialists trained abroad. A significantly higher income was also found for doctors who were set up in private practice for more than 3 years and doctors in secondary and tertiary care facilities, practitioners who had employed own staff and those who demanded above average fees from their patients (>=Tk120).

In the unadjusted analyses no difference in income levels were recorded between male and female doctors, and those who had reported: (i) ownership of health care facilities; (ii) provision of a service spectrum different from government services; or (iii) income from surgery and patients admitted to hospital.

Income levels were found to be higher in doctors holding an advanced postgraduate degree than in GPs and practitioners with a diploma. A significant difference between both groups could also be observed for the reported levels of recurrent expenditure and the estimated revenue, calculated as a product of fee times number of patient visits.

Differences in the reported *government* salaries were not significant between both groups. This is due to the distribution of GPs, diploma holders and FCPS across the income categories. An advanced degree does not automatically lead to a higher salary and a number of GPs were found to hold senior posts, which are related to higher government salary.

Table 4: Differences between subgroups of private practitioners, total income (Tk per month)

Subgroup		N	Mean	Std. Deviation	P-value
Age	>= 35,00	86	29534	23962.	
	< 35,00	14	16250	6985	0.000
Sex	Male	89	27977	22264	
	Female	10	27000	28910	0.899
Family (spouse) living at location of practice	Yes	87	28218	23649	
	No	13	24038	16505	0.434
Time in practice	>= 36 months	21	28571	18431	
	< 36 months	15	14833	8684	0.006
Trained abroad	Yes	11	40000	37980	
	No	89	26151	20017	0.057
Practice in Dhaka or Chittagong	Yes	46	26195	23444	
	No	54	28935	22421	0.552
Offering services that GOB health services do not supply	Yes	21	27380	22905	
	No	79	27753	22946	0.948
Own staff employed	Yes	51	36127	28135	
	No	49	18877	9736	0.000
Ownership of health care facilities	Yes	9	25277.78	18559.21454	
	No	87	27528.74	22008.5021	0.741
Average fee/consultation	>= 120,00	49	32142.86	25489.98987	
	< 120,00	47	23723.4	19883.30316	0.074
Income from surgery or patient admitted to clinic	Yes	12	42083.33	31583.82306	
	No	43	28372.09	25153.59792	0.186
Practitioner employed in PHC facility	Yes	14	15357.14	4143.709651	
	No	86	29680.23	23978.53363	0.000

7.9. Predictors of total income

Table 5 shows the regression coefficients and 95% confidence intervals for all independent variables whose influence on total income was measured. In this model a position in secondary or tertiary care, owning premises for private practice and the number of patients seen were significant predictors at the 0.05 level. Age was found to be marginally significant. In contrast to the unadjusted analyses the model shows that there is insufficient evidence to support the hypotheses of a relationship between total income and levels of recurrent expenditure, level of specialisation, the reported earnings from government salary or a degree from abroad.

Table 5: Multiple regression model identifying predictors of total income

					95% CI for B	
Variable	B coefficient	Std. Error (B)	Beta (stand.)	p-value	Lower	Upper
Intercept	-83079.75	24549.5		0.001	-131859	-34300.4
Recurrent expenditure	0.04	0.2	0.024	0.829	-0.32	0.40
Age	849.41	486.4	0.187	0.084	-117.00	1815.81
Position in secondary or tertiary care	16356.24	4873.5	0.251	0.001	6672.76	26039.73
Own premises for private practice	9028.86	4160.7	0.165	0.033	761.57	17296.15
Number of patients seen per week	194.81	52.0	0.461	0.000	91.50	298.11
Specialty	520.92	2412.0	0.017	0.830	-4271.76	5313.60
government salary	1.22	0.8	0.120	0.138	-0.39	2.84
time since opening private practice	20.11	31.4	0.066	0.523	-42.24	82.47
degree from abroad	5117.21	5734.3	0.071	0.375	-6276.69	16511.1

7.10. Income expectations and perceived importance of the government job for private practice

The majority of respondents had positive income expectations when asked if they would expect their income to rise, stay constant or fall during the next year. When analysed separately by level of training, the proportion of respondents believing that their income would rise was higher in GPs than in specialists (74% versus 57 %). The rest of each subgroup thought that their income would stay constant and only 3 doctors believed that their income would fall during the next year. It shows that the respondents tend to take an optimistic view of the potential growth of their practice, and it suggests also that a growing income provides stronger economic incentives for younger doctors, whereas the more established senior staff appear to have reached a more saturated level of income expectation.

Younger doctors also appear to derive more reputation from their position in government services. A majority of doctors under 33 years of age stated that their position in government services is important for their private practice, whereas only 30% of the more senior doctors did so. Senior doctors appear to be more established in private practice and they tend to position themselves as less reliant on and more independent from government services. A majority of the senior respondents found

their government position only 'somewhat important' or 'not important' for their private practice.

7.11. Would doctors like to set up their private practice in government facilities?

Only few respondents reported using government facilities or their government residence for private practice. We asked, following recent policies in other countries to allow private practice in government premises, whether doctors would be interested to practice in government facilities. A majority (68%) answered yes, and this tendency was more pronounced in the subgroup of doctors employed in tertiary care.

7.12. Adherence to current job status and perceived difficulties of private practice

a). Under what conditions would doctors give up private practice?

A majority of doctors reported they would reduce or give up private practice if government would pay higher salaries. However the emerging pattern was different when subgroups were considered. All doctors in PHC (at Thana level and below) answered unanimously that they would give up private practice if they were paid a higher salary. The proportion of doctors in secondary and tertiary care was notably lower. Only 54% would give up private practice, 31.8% would consider reducing the activity and 14.1 % would prefer not to change their private practice. These results show that doctors at PHC level display a higher level of adherence to government health services. This suggests that financial incentives appear to be more powerful in changing behaviour of medical staff in PHC facilities than of doctors working in higher levels of care.

b). …or their government job

We asked also what would be required to encourage doctors to leave the government job and become a full time private practitioner. Sixty-five percent did not consider giving up their government job. The most frequently mentioned conditions by those who would consider leaving government services: were payment of a compensation for transition (n=18); a social pension scheme (n=13); tax relief (n=7); and credit offers (n=6). This suggests that leaving government services is not considered as a viable option for career planning by most of the respondents.

The main reasons for adherence to the government job appear to be payment of a tax-free regular income and social security offered by the public pension scheme. The in-depth interviews also revealed reasons, which were not mentioned, in the structured interviews. For example, government services were perceived to offer a social status that increases credibility as a doctor and to offer opportunities to teach medical students. Some respondents emphasised that they can offer services to the poor, as an important aspect of the government job.

7.13. Perceived problems of private practice

As one would expect from the previous section private practice is not seen as free of difficulties. We tried to elicit these views by asking the respondents to rate a number of potential problems associated with private practice (table 6).

Most doctors saw lack of infrastructure and lack of qualified support staff as a major problem. Income tax was considered a problem by 46% of the sample, with a notable difference between subgroups of respondents: Specialists and doctors practising in Dhaka and Chittagong rated tax related problems more serious than GPs (p= 0.017) and doctors practising outside the metropolitan areas (p=0.019). As expected, lack of infrastructural facilities was perceived as a more severe problem by doctors practising in PHC and by doctors who had their practice outside Dhaka and Chittagong. Similarly, the lack of support staff was perceived as more of a problem outside the large cities (p=0.03). Fears of too much competition between doctors was more pronounced in metropolitan areas where the physician density is higher than in other areas of the country (p=0.024).

Interestingly regulatory barriers of access to private practice were not reported as a problem. This underpins the lack of extensive regulation of private practice and the failure of government to enforce the existing rules. Twenty-one respondents mentioned additional difficulties they had encountered in providing private practice. Most often mentioned were local mafia-like structures (*mastaans)*, lack of social security and competition from quacks or unqualified practitioners.

Table 6: Perceived problems of private practice

Issues	N	Not a problem (%)	A problem (%)
Income tax	92	54.3	45.7
Infrastructural facilities	81	34.5.	65.5
Availability of support services (e.g. qualified nurses)	83	33.7	66.3
Too much competition	84	53.6	46.4
Regulatory barriers	64	68.7	31.3
other (hoodlums, quacks)	21	9	91

What should government do to improve opportunities for private practice?

Ninety-two percent of the respondents commented on this question and many gave up to 4 different answers. Most of the answers (26%) referred to regulatory issues. Most frequently mentioned were proposals to enforce adherence to existing regulations, to fix fee levels, to increase the proportion of prescription drugs on total drug sales, to ban quacks and restrict practice to registered physicians only, or more generally to impose systematic rules on private practice. Only a minority of respondents (n=4) wanted to restrict or forbid private practice for civil servants.

19% of the responses referred to general measures of quality improvement. Frequently mentioned was better training for junior doctors and supportive staff, better investigation facilities, the introduction of audit and continuous medical education.

A number of answers (17%) expressed expectations in decisive government action to improve the infrastructure, ensure security (for example to stop harassment from local '*mastaan*'), and offer tax relief for private practices. Only few respondents supported a *laissez faire'* approach in proposing that government should not interfere at all in private health care'.

Strategies strengthening appropriate referral were emphasised by a relatively high number or respondents and this group made up 17% of all answers. Most answers stressed the need of a better referral system between private and public sector and the different levels of care. Similarly, some respondents put forward that the number of cases treated by one doctor should be restricted and complicated cases should be referred to senior doctors.

Improvement in organisation and finance of private practice was the topic of 11% of the responses. This included a variety of proposals such as introducing group practices, a GP-system or developing 'consultation centres' or curative disease centres'. Loans for financing private practice should be made available and easily accessible at low interest rates.

Only few answers emphasised the need to raise the health awareness of the population and to improve the ethical standards of the medical profession.

7.14. Perceived quality of care of government and private health services

How do doctors perceive patients' preferences for private health services?

Patients' preferences for private health services are usually explained by interaction of various demand and supply side factors among which the perceived quality of care plays an important role. This part of the survey evaluates respondents' views on the processes attracting patients to private care. The participants were asked to agree on a range of possible explanations why patients prefer paying for private services though they could get public health care for free. As multiple answers were allowed we evaluated the frequencies of similar response (table 7). This question had also the purpose of eliciting indirectly some aspects of the potential conflict of interest related to joint public/private practice.

We found the highest level of agreement (63% of the answers) on views that put forward technical aspects of quality of care. The most often agreed opinions referred to lack of drugs and equipment (22%), long waiting times (17%), lack of doctors and nurses (13%) and lack of cleanliness in government facilities (11%).

A relatively large proportion of the answers (37%) saw patients' preferences for private care based on interpersonal aspects of care. Twelve percent agreed with the view that patients are badly informed, which implies they could change their mind if being supplied with the necessary information to make an informed choice. Thirteen percent of the answers related to the view that doctors' attention to patients in government facilities was inappropriate. A number of respondents emphasised the role of class 3 and 4 employees or of the 'Dalal' (middleman) in diverting patients to

private clinics. Some respondents saw these staff as playing a negotiating role, others suggested that patients feel deterred by the inappropriate behaviour of these staff.

Table 7: Doctors' perception of patients' preferences for private health care:

Reasons	Percent of answers
lack of drugs and equipment	22%
Lack of doctors and nurses	13%
Long waiting times	17%
Lack of cleanliness in facilities	11%
patients are badly informed	12%
doctors or other staff behave inappropriately	13%
doctors divert patients to private practice	4%
other	8%

Eight percent of the answers mentioned general views like loss of trust in government services or the perceived higher quality if patients have to pay more for private services. Only 4 % of the answers agreed with the view that doctors divert patients to private practice though treatment is available.

7.15. How do doctors rate quality of government health services?

Respondents were asked to rate the quality of four types of government health services: reproductive health, EPI, MCH and curative services. The best service quality was attributed to the extended programme of immunisation (EPI) which was rated by 52% of the respondents as excellent. All other programmes were rated average or below. Approximately 32% of the doctors perceived quality of curative services as poor and these services had the worst rating with only 23 % of the respondents attributing a score above average. In declining order of perceived quality this was followed by Mother Child health care (MCH) and reproductive health services.

7.16. How should government improve service quality and attract doctors to rural areas?

a). What should government do to improve health services

In a question that allowed an open-ended answer we asked how government should improve service quality. Most answers referred to improvements in human resources development, and a smaller proportion to financial, technological and administrative changes.

27% of the responses stated that health manpower should be increased according to the growth of the population. A number of responses referred to better supply with drugs and equipment, expansion of outpatient and emergency services, better anaesthetist services or an increase in the number of hospital beds.

The second most frequently mentioned answers were related to financial and administrative improvements. Most doctors who gave this or similar answers thought that better managerial support at facility level could improve service quality. A

significant number suggested that accountability of staff, service decentralisation and autonomy of facilities should be increased. Similarly some respondents demanded 'less political interference' at institutional level 'better control of class III and IV staff' ' less trade union influence on lower class staff' and 'reduced formalities to deliver a service'. 5% of all answers supported also increased fees for services with exemptions for the poor: Only few respondents favoured privatisation 'of at least some aspects of health services'

Improvements in the quality of teaching and better training opportunities were mentioned in 17 % of the answers. The number of teaching hospitals should be increased, there should be better training for medical teachers, better skills should be developed through training opportunities and teaching and consultancy time should be separated and those who are interested in teaching should have higher salaries, better residence and transport.

Only a relatively small proportion of answers was specifically related to better payment for doctors and other health staff (8%) and better technology (7%), for example to introduce more investigative facilities or 'the latest technology'.

As these results suggest there appears to be a discrepancy between the recorded views and the government priorities as declared in the HPSP. Most answers focus on improvement of curative services, though many respondents had identified deficits also for preventive and public health programmes. Only 3 % of the answers proposed specific improvements of health services quality in rural areas. None of the participants mentioned the introduction of an essential package of health services (ESP) as a policy instrument to improve quality of care, though this was high on the government policy agenda at the time of the survey. Overall, many answers focused on the medical profession and only few credited the contribution of nurses or PHC staff to service quality. This underpins that quality improvements are seen as a clinical rather than a public health issue and that the prevailing attitude towards quality of care is largely shaped by the perception of the own role and experience in curative health services.

b). Views on improvement of working conditions in rural areas

We then asked, separately, what issues government should address to improve the working conditions for doctors in rural areas. As no differences between subgroups were observed the answers were evaluated for the whole sample. Most respondents saw a combination of several issues. The focus was on better career opportunities (38% of all answers), followed by improved housing and higher salary or allowance for doctors serving in rural areas (17% each). Less frequently mentioned (13 % each) were improvements of training conditions, education facilities for children and better supply with drugs and equipment. 7% of the answers referred to improvements of status and social security and 4 % to other proposals such as development of transport and infrastructure.

Some of the views emerging from the in-depth interviews are quoted here to illustrate the prevailing views:

> 'Training received in rural areas is very inadequate. Orientation courses should be run at regular interval. Career prospects should be structured so that doctors are not unduly

concerned about their future and can devote their time for patient care, Malpractice by other doctors and medical practitioners who have minimum or no training must be stopped.'

'Train doctors in a way that they are able to perform emergency and intermediate surgery such as caesarean sections'

' Increasing salary is not an important factor. Improved training facilities and ensuring proper career development with better housing and communication are to be addressed'

Some views revealed also concerns about corruption, security, local power structures and lack of professional development in rural areas:

' Housing is usually good in THCs but drugs and supplies which are sent to rural health centres are usually stolen by the civil surgeon and other administrative staff. That trend has to stop'

' Doctors working in rural areas should have more administrative power. There should be no political and bureaucratic pressure to issue certificates. 3rd and 4th class employees should be made accountable.'

' Supplies are extremely inadequate and the little supply rural health centres receive is usually siphoned out by the authority or the employees.'

' Doctors have to be protected from unruly public and local muscle-men'.

7.17. Training opportunities

What is the current status of continuous medical education and how are training opportunities rated by the respondents?

Participation in training programmes and continuing medical education could be an important non-financial incentive and we asked participants how often they had an opportunity to attend courses or lectures or meetings and how often they studies medical journals. A majority (63%) had access to medical journals, 33% reported to read these every week and 30% every month. A majority of respondents (63%) also reported attending meetings every 1-6 months and this figure also included meetings at their own facility. Only 38% reported to have attended lectures and 35% had attended a special course, most of them once during the last three years.

However, a different pattern emerged when the response rates were analysed separately by level of care: Journals were not accessible to doctors in primary and secondary care facilities and very few doctors in district hospital attended lectures. It appears that availability of CME is inversely related to the needs of further education, i.e. opportunities are available to a small number of doctors in tertiary care, but not in places where most of the publicly employed doctors live and work

A similar picture emerged when we asked the participants to rate the training opportunities in their hospital/health centre. Overall 41% of the respondents rated the training opportunities at their current work place as poor but this result was different when the data were analysed separately by level of care. More than 66% of the doctors in primary and secondary care considered training opportunities to be poor, as opposed to 33 % of the doctors in tertiary care facilities.

In a question, which allowed an open-ended answer, we asked what should be done to improve training and continuous medical education. Twenty-five percent did not comment on this question and among the respondents the single most frequent answer (22%) was that doctors should receive proper training and upgrade their concepts either from neighbouring or western countries. Twenty-one percent of the responses made proposals related to CME programmes such as regular clinical discussions and seminars to be held at regional and central level or books and journals to be made available to doctors. Only few respondents mentioned short courses and two of them proposed re-certification as a prerequisite of maintaining license to practice.

Another group of answers was concerned with the quality of teaching (19%) and proposals were made to increase the number of skilled teachers. Some doctors took the view that regular and documented doctors' visits to wards and cabins could improve quality of training and that teaching staff should give up private practice and dedicate more time to training junior staff.

Many responses (19%) stressed that better staffing and equipment would improve training opportunities. For example, more technicians and modern medical equipment would be essential to update medical education, or employing more anaesthetists would provide a better training in surgery.

There was also a smaller number of more general comments, such as, government should increase its attention to training issues or existing training programmes should be better co-ordinated by government. Some respondents also suggested that the salary structure of medical staff should be changed and trainers and trainees be better paid.

Only few comments referred specifically to the situation in rural areas. Some respondents suggested that the existing system of posting, transfer, promotion, scholarship and recruitment should be changed. Doctors should be posted on the basis of training they have done. Others put forward the idea of field training, for example that senior doctors should be sent temporarily to THC and USC to share their skill with the juniors. Doctors in THC and USC should be attached on a rotating basis to the major departments in medical college hospitals for upgrading the knowledge.

From the spectrum of the answers given it appears that the respondents tend to identify training and CME with training for clinically and technically advanced medicine, mainly orientated on training programmes from abroad. The concept of field training for PHC or of community medicine was not mentioned as an option by most of the respondents.

87% of the doctors with MBBS and Diploma were interested in obtaining a higher postgraduate degree. Those who did not want to go for further training had personal reasons (age, physical disability) or did not comment on the reasons. Also a number of specialists who had already acquired an advanced degree were interested in further postgraduate training.

7.18. Career development

Most of the participants intended to change their current position (86%), mainly for professional development (66%) and better income (21%). Approximately 10% wanted to change because of better education facilities for children.

We asked those who wanted to change, what position they would like to achieve next or in five years. Most of the respondents considered a career as a consultant, followed by an academic career. When assessing the responses separately by level of care, still 41 % percent of the doctors in district hospitals and in THCs wanted to achieve an academic post. Only a minority considered a career in the public health field (civil surgeon) or in PHC (THFPO).

Most respondents (63%) were worried about their future career prospects and there were no differences between subgroups of doctors by speciality or level of care. However a distinctive pattern emerged when the study participants were asked to rate the career opportunities of their current position. 54% of the respondents perceived the career opportunities at their health centre/hospital as poor. When analysed separately by level of care a larger proportion of doctors in primary and secondary care (83%) rated their career opportunities to be poor, whereas only 45% of doctors in tertiary care facilities did so. Correspondingly in tertiary care a notable number of doctors rated their career prospects better than average. These differences were significant at the 5 percent level ($p=0.015$)

In our interpretation the data reveal a gap between the personal career ambitions of the respondents and the perceived career prospects in their current position. A career in PHC was generally not seen as an option. Ambitions of most respondents were directed towards tertiary care facilities. This trend is understandable as an academic career opens a better prospect of promotion than other government health services and allows combining academic duties with extended opportunities for private practice.

8. Discussion and Conclusions

Much of the debate on mixed private/public practice is related to concerns that scarce human resources are diverted to areas where they arguably produce lower returns on investment to health than in priority areas of the sector. There is also a potential that, as a consequence of market failure in health care, private providers tend to under-supply socially desirable services because of lower willingness to pay (Berman 1997). We found no evidence that private curative services differ substantially from government health care. As the interviews suggest, private services are also used to treat diseases of public health importance such as diarrhoea, ARI, TB and STDs, though further research would be needed to assess exactly the spectrum of services provided. The data show that similar to reports from other Asian countries (Gani 1997) the quality of private clinics is perceived to be better than public health care and as offering more choice to patients who are able to pay.

However private practitioners may have substantial control over demand and take advantage of supplying more services than required. The study has revealed the questionable practice, which is illegal in many countries, of diverting patients to private practice who could have benefited equally from government services. Also,

the demonstrated ownership of ancillary services and the close contractual relations between doctors and pharmacies or laboratory facilities suggests potentially high levels of supplier induced demand (Mitchell and Sass 1995).

Though we found private services to be offered by doctors at Union level, it is assumed that the majority of the population in rural areas does not have access to qualified physicians. It was beyond the scope of this study to investigate the demand-related issues and the care seeking behaviour of patients attending these practices. From other sources it is well known that cost is an important determinant of choice of treatment. Many patients prefer practitioners or pharmacists who charge a single fee for diagnosis prescription and delivery of drugs (Feldman 1983; HEU 1996).).

As the stratification of fee levels suggests, the market is price sensitive to demand related factors, and differentiated by area, specialisation and types of services offered. In the absence of third party payment and government regulation, the price for a consultation appears to rely mainly on the market forces of supply and demand though the conditions are far from perfect competition. Fees are lower in rural areas where ability to pay is low and doctors face more competition from other types of practitioners. In urban areas where physician density and demand levels are higher, fees are more uniformly distributed, with many doctors either charging Tk100 or Tk 200 per consultation. Higher fee levels are related to higher recurrent costs and to services for which demand appears to be more inelastic, such as surgery.

In the absence of reliable tax records or third party payment, it is difficult to obtain robust estimates of earnings of private practitioners. We have validated the reported income by triangulation of information from different sources, such as in-depth interviews, calculated practice revenue and ownership of durable consumer goods. Though mis-reporting in absolute terms cannot be excluded, the data allow a robust basis for establishing earnings profiles and to identify predictors of total income. Most doctors manage at least to double their government salary through private earnings, though there are many practitioners who achieve higher amounts. The relationship between earnings from private and public sources appears to differ from many countries where public salaries cover only a small proportion of the income and health professionals have found themselves using income-generating activities outside the public sector, to supplement their incomes (Roenen et al. 1997).

Most doctors expected their income to increase in the following year. This may be interpreted as an indicator of confidence in the economic situation and in the dynamics of the private health care markets. The average total income of Tk.27,500 per month is considerably higher than the amount reported for the highest income group reported in the national labour force survey (Tk.14,200 in 154 self-employed individuals earning more than Tk.8,000). Only 4.1% of the general population fall in this group (Bangladesh Bureau of Statistics, 1995).

The study has provided some insight into the system of economic incentives underlying the choice for joint public/private practice, though survey data are clearly limited by the phenomenon that respondents tend to give socially acceptable answers to sensitive questions. The views and attitudes emerging from the interviews are socially constructed views between interviewer and respondent, which may not always indicate actual behaviour. Given these limitations, we derived two major

tracks of interpretation from these data. First, that the recorded views reflect behavioural responses to financial and non-financial incentives, and second, that these views and attitudes reveal to some extent the perceived legitimacy of joint private/public practice.

The propensity to give up one of the jobs in favour of the other was found to be low. The data suggest that doctors have adopted individual strategies to accommodate the advantages of both jobs in their career development, by maximising benefit from the incentives provided to them, such as the status of a government job, and minimising opportunity costs of economic losses, such as lower salaries. However, adherence to government services was found to be greater among doctors at Thana level and below who would reported they would give up private practice if paid a higher salary.

Whether mixed private/public practice is perceived as legitimate could only be elicited by indirect questioning. Doctors appear to be aware of the conflict of interest related to multiple job holding as some of the answers revealed. Levels of perceived legitimacy appear to be high, as government permits dual job holding, and due to the perceived better quality of care. Only few respondents proposed to ban joint public/private practice. A more complex picture emerged when distinct activities were considered. Not all strategies attracting patients to private clinics were considered equally acceptable and the existence of these activities was admitted on the part of the medical profession or attributed to undesirable behaviour of other staff. Some of the in-depth interviews revealed also illicit practices of transfer of subsidised resources to the private sector.

As the revealed preferences for training programmes and career opportunity indicate, the professional identity of the respondents is largely influenced by the status image provided by tertiary care and advanced technology from abroad. On the other hand western medicine in Bangladesh and elsewhere in South Asia countries still has the characteristics of an ‘implanted profession’ (Smith 1982) which is struggling to achieve a monopoly over other providers in a factually unregulated environment. As the concerns about security of doctors in rural areas indicate, the professional role and status of doctors appears not to be fully accepted by the population, in particular of those doctors who are posted from different parts of the country.

Given the imperfect process of professionalisation it was not surprising that the interviews revealed a strong trend in favour of regulation of private practice. The views pertained to protection of professional interests rather than public interest, which is congruent with the theory of regulatory capture in the self-interest of the profession (Freidson 1975, Graddy 1991). In improving conditions of private practice the expectations were exclusively directed towards government, professional organisations were not mentioned to play a role in this process.

Opportunities for change

The study has displayed a variety of opportunities to change the current arrangements of the public/private sector mix. The differences between subgroups of the sample suggest, that financial incentives are likely to be more appreciated by younger doctors, by those who are posted in rural areas and at the beginning of their career.

However a policy of providing an allowance for non-private practice, though not uncommon in some developing countries, would have considerable impact on government resources. If all doctors in PHC were paid an extra allowance of the size of their salary, total expenditure on health care human resources under DGHS would increase by 8.5% (Tk262m). If this policy was extended to doctors in secondary and tertiary care facilities, total staff expenditure would grow by 17.5%. To limit the strain on resources, the allowance could be focused on rural areas where there are difficulties in attracting staff.

The responses have also made clear that payment is not considered the most important issue to improve working conditions in rural areas. Improved training and career opportunities appear to be of higher importance to increase job satisfaction. This is in line with an earlier study on Medical Officers at Thana level (Yasin Mollah 1992) which found high levels of dissatisfaction with prospects of career development and promotion.

The strong demand for further training opens an opportunity to reorient career pathways and CME to the needs of primary health care. Community training and general medicine is a common option of postgraduate training in many countries and special curricula have been designed and successfully applied for developing countries (Boelen C 1997, WHO 1996).

Many doctors would also like to see their private patients in government facilities. This is common practice in a number of countries as it provides additional revenue for the public sector and allows a better use of facilities and control of negative side effects of private practice (Frenk 1993). The BIRDEM hospital in Dhaka has started such a model based on higher salaries as a compensation for private practice income (Azad Khan 1997). Patients pay fees only to the hospital, which means that rent-seeking behaviour of other staff, and unofficial fees had to be abandoned.

Though many governments in developing countries are reluctant to regulate private health care markets because it involves high transaction costs, the revealed self-interest of the practitioners offers a starting point to reconsider government intervention into the joint private/public market. In areas which government can control, a fee schedule could be applied which encourages preventive services and which is not regressive with respect to patients' income. Contracting out of services, for which supply should be encouraged, to the private sector is another option, which has been envisaged in HPSP. These arrangements require measures of quality control and generally a combination of different payment methods to avoid undesirable side effects.

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