



## Original Article

# Migration by Graduates of the University of Ghana Medical School: A Preliminary Rapid Appraisal

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## Abstract

This is an exploratory descriptive study that examined migration of locally trained doctors from Ghana using graduates of the country's first medical school as a proxy. The objectives of the study were to describe trends in the loss of medical personnel to emigration and the influence this has on human resources planning, including forecasting of staff supply and requirements. It was also to provide some information towards the development of strategies to counteract such losses.

The methods included using classmates to recall the whereabouts of their colleagues, the examination of the graduation records of the Medical School from its inception, and retention data from Ghana's regulatory body, the Medical and Dental Council. The period from 1985 to 1994 was used for the detailed recall interviews. There was an average exit rate of 13.8% of each class per annum. This means 50% and 75% of each batch of graduates emigrate in 4.5 and 9.5 years, respectively. Some 60.9% of doctors produced between 1985 and 1994 had already left the country, mainly to the United Kingdom and USA.

Recommendations are made to enhance retention in the country and to encourage return of willing emigres through redressing excessive bureaucracy and increasing incentives.

**Key words:** doctors migration, brain drain, migration

## Introduction

The problem of brain drain is worldwide. In India, it is estimated that 40% of the doctors who work in the private sector migrate outside the country<sup>(1)</sup>. Whilst a number of *developing* countries suffer from 'brain drain', in the *developed* countries a growing glut of physicians has at times led to efforts to curb doctors and specialist training. In Europe, physician unemployment was estimated at 87,950 doctors in 1994 (out of a total medical population of 1.357 million, and an average population per doctor of 314)<sup>(2)</sup>. The World Bank estimated that in 1972, over 140,000 physicians making up 6% of all physicians worldwide resided outside the countries in which they were born or trained<sup>(3)</sup>.

The World Bank also estimated that there was one doctor for 22,970 people in Ghana in 1990<sup>(4)</sup>. Indeed, Ghana shows an increase in population per physician over the past 30 years compared to other African countries as illustrated in Table 1. The World Development Report 1993 also estimates that minimum essential clinical and public health interventions require about 1 physician per 10,000 population and indicates that sub-Saharan Africa has the lowest numbers of physicians<sup>(3)</sup>. Attrition (due in a large extent to migration) has been identified as a reason for the under-supply of health professionals in Africa, which has been particularly damaging as in most cases these professionals were trained with public funds<sup>(5)</sup>.



**Table 1 Some Sub-Saharan African countries with low doctor: population ratios.**

Country	Number of people per doctor	
	1970	1990
1. Niger	60,090	34,850
2. Malawi	76,580	45,740
3. Mozambique*	18,860	36,225
4. Burkina Faso	97,120	57,320
5. Ethiopia	86,120	32,650
6. Chad	61,900	30,030
7. Central African Republic	44,740	25,930
8. Rwanda*	59,600	72,990
9. Lesotho	30,400	24,095
10. Angola	23,725	na
<b>11. Ghana*</b>	<b>12,910</b>	<b>22,970</b>
12. Uganda	na	22,399
13. Kenya*	8,000	10,130

**Source:** World Bank: The World Development Report 1993.

\* - Countries with worsening trend.

Ghana, has recognized manpower losses since the 1970s.

The first batch of Ghanaian trained doctors graduated from the University of Ghana Medical School in 1969. An average of fifty-one doctors were produced from this school each year with a total of 1380 graduates by 1997. It is a widely held belief that a significant proportion of these graduates migrated outside the country, at times without completing “housemanship”<sup>a</sup> or their national service requirements.

Recently at an informal discussion with 43 final year medical students during a study on medical curriculum review, 40 stated their intention to leave the country immediately after qualification. The level of migration by locally trained professionals from the Ministry of Health, especially of doctors and nurses has never been fully studied and documented. Substantial

migration occurs without the MOH being formally informed and this coupled with poor record keeping has created human resources planning problems.

Furthermore, a recent review of reasons why doctors were not in rural areas of the Volta Region<sup>(6)</sup> revealed that most doctors posted to the region after “housemanship” either did not report to their new stations at all or had moved out of the country soon after reporting to their posts.

University education in Ghana (including medical training) is free and entirely sponsored by the government. The sponsorship includes tuition, board and lodging, transport and utilities as well as other costs of running the schools. In addition, a book and living expenses soft loan is provided by the Social Security and National Insurance Trust-SSNIT (at 5% interest compared to local bank rates of 24+%).

Ghana currently has three Medical Schools. The University of Ghana Medical School (UGMS), started in 1962, was the first Medical School in the country. This was followed in 1975 by the establishment of the School of Medical Sciences Kwame Nkrumah University of Science and Technology (KNUST-SMS) and most recently by the University of Development Studies School of Medicine and Health Sciences (UDS-SMHS) in 1996.

The current population of doctors working for the Ministry of Health (1191 in Oct. 1997) in particular, and the country as a whole (approximately 1600)<sup>b</sup> is well below the required manpower needs<sup>(7,8)</sup>. Table 2 gives the breakdown of sources of doctors in Ghana for 1991 to 1996. Given the number of doctors trained from both local and other sources there is no doubt about the substantial losses that are occurring from Ghana as both the public and private sector have retained only about 1,600 doctors.

<sup>a</sup> Doctors in Ghana are required to undertake 1 year pre-registration internship after graduation called “housemanship” as happens in other countries.

<sup>b</sup> Source: Integrated personnel and payroll database (IPPD) of Ministry of Health.

**Table 2 The relative supply of Ghanaian doctors from the main sources of training**

Year	Physicians Production For Ghana from Various sources				Total
	Locally Trained		Externally Trained <sup>c</sup>		
	UGMS	KNUST-SMS	USSR/E.Eu	CUBA	
1991	49	30	21	2	102
1992	59	37	33	0	131
1993	57	39	43	3	142
1994	58	24	24	5	111
1995 <sup>d</sup>	0	0	20	0	20
1996	53	78 <sup>e</sup>	40	8	179
<b>Total 91-96</b>	<b>*276</b>	<b>208</b>	<b>**181</b>	<b>18</b>	<b>683</b>
	<b>(40.4%)</b>	<b>(30.45%)</b>	<b>(26.5%)</b>	<b>(2.64%)</b>	<b>(100%)</b>

\* UGMS represents 57% of locally trained doctors, the KNUST 37%.

\*\* USSR/E.Eu products diminished dramatically to 7 in 1997 indicating the marked reduction in Socialist Country scholarships since 1990 for the normally 8 year courses for physicians

This study is an initial attempt by Ghanas Ministry of Health to document the migration pattern of Health Professionals from the country. It was conducted with the aim to establishing trends and reasons for loss of doctors between 1969 and 1996, and its implication on human resources planning. Graduates of the University of Ghana Medical School (UGMS) were used as a proxy for all doctors practicing in Ghana.

## Methods

### 1. Review of Graduation Records of UGMS:

Records on graduates of the UGMS were collected covering the period from 1969 to 1996. Data was collected on:

- Total and annual output of the institution (throughout its existence).
- Output details for the specific study period of **1985 to 1994**

### 2. Review of Records of the Ghana Medical and Dental Council

Data was collected on the total number of practitioners trained in the UGMS and registered to practice in Ghana as of December 1996. As the registration has to be renewed each year, the figures demonstrate the most current situation.

### 3. Interviews of UGMS Graduates:

Between 2 to 5 members of each class of graduates who qualified between 1985 and 1994 and who were still in the country, were identified and then interviewed on the whereabouts of other classmates. The target years (1985 to 1994) were selected for being relatively recent and with the likelihood of recall and contact between classmates remaining relatively high. Additionally, each interviewee was given a copy of the graduation list of his/her class and was asked to check the names of classmates who were currently living outside the country. Interviewees from each class then came together to reconcile and correlate their findings in the presence of the investigator. A total of 36 respondents (out of a projected 45) answered the questionnaires and correlated findings.

<sup>c</sup> Data from MOH Personnel Unit sources.

<sup>d</sup> Due to a lecturers' strike, no doctors passed out locally during this year.

<sup>e</sup> This represents graduation of both 1995 and 1996 classes of the KNUST Medical School.

Interviewees were further asked to provide their opinion on the reasons why their colleagues left the country. After conclusion/convergence was reached, the joint class lists were collected and analyzed.

Classmate recall was used because in our experience of the UGMS, class size was relatively small (40-50 persons), students lived in the same hostel for four of the six years of training, and the social intercourse during training meant most classmates were friends and kept in touch quite regularly and shared information about each other. Recall, confirmed by two classmates was felt to be adequately reliable for the study.

The study defined “migrants” as doctors living permanently outside the country and who were not on government sponsored training programmes. Doctors on holidays and annual leave outside the country were excluded. Doctors on prolonged leaves of absence without pay<sup>f</sup> outside the country were deemed to have migrated though their numbers were small.

#### Limitations of Study and Data:

1. The study covered only the Ghana Medical School, which is one of two medical schools producing doctors in the country. Furthermore, Ghana (especially before the fall of the Iron Curtain) had supported medical students to the former Soviet Union and Eastern Europe and these have also been one source of doctors for the country until the recent changes in those countries. Whilst the UGMS accounted for some 60% of locally trained doctors, it actually contributed to about 40% of all doctors practising in the country (during 1990-95).

There may exist variations in the migration rate by doctors produced from the various sources. For a period between 1983 and 1995, KNUST-SMS graduates were not easily accredited outside Ghana for postgraduate training as the school was not recognized

internationally. Ghanaian doctors trained from the Soviet Union who returned home were also deemed to be more likely to be retained at home than UGMS graduates. Thus the rates obtained for our proxy, the UGMS graduate, may not reflect the true trends for all doctors in Ghana.

2. Aspects of the study depended on the recall of classmates about the whereabouts of their colleagues, a task that was at times difficult, especially for the earlier class groups. For the 1988 cohort, only one graduate was found and he could not reliably give the whereabouts of his classmates and thus the class of 1988 was excluded in the final data analysis.

3. Though there is no direct information to that effect, annual registration with the Medical and Dental Council may not be entirely complete and in a few cases registration may not mean the practitioner was working in the country. Thus the absence of registration may not mean that someone was outside the country, but may simply reflect defaulters, delays in registration or a reflection of the incompleteness of registration by the Council.

Despite these limitations the study provided an insight into the problem of the migration of doctors from Ghana.

## Results

### 1. Turnover of graduates of the Ghana Medical School:

Table 3 shows the number of graduates produced by the University of Ghana Medical School from 1969 to 1997. As the table shows, a total of 1,380 doctors have been produced in 26 batches from 1969 to 1997. The highest number of graduates was recorded in 1976 (103), a year in which two classes completed their studies during the same 12-month period due to curriculum and course duration changes. The lowest number of graduates, 25, were found in 1970. The turnover is relatively steady at an

<sup>f</sup> Study leave without pay for more than two years was often extended and became the starting point of eventual full emigration.

average annual output of 51 doctors per year.

In 1977, 1984 and 1995 no graduates were produced. The 1977 episode marked the end of the schools first curriculum and a change in duration of training. The latter two episodes were due to closures of the university resulting, respectively, from political unrest and a lecturers' strike.

## 2. Review of registration records of the Ghana Medical and Dental Council

Records received from the Ghana Medical

**Table 3 Number of graduates by year of qualification from UGMS.**

Year	No. of graduates	Cumulative totals
1969	39	39
1970	25	64
1971	30	94
1972	53	147
1973	47	194
1974	50	244
1975	56	300
1976	103	403
1977	0	403
1978	56	459
1979	54	513
1980	57	570
1981	60	630
1982	60	690
1983	59	749
1984	0	749
1985	65	814
1986	64	878
1987	41	919
1988	42	961
1989	46	1007
1990	50	1057
1991	49	1106
1992	59	1165
1993	57	1222
1994	58	1280
1995	0	1280
1996	53	1333
1997	47	1380

**NB.** 1977 = curriculum change; 1984 = political unrest; 1995 = lecturers' strike

and Dental Council (GMDC) are summarized in Table 4. The total number of registrants<sup>g</sup> who were graduates of the University of Ghana Medical School was 376. The highest number of registered doctors in a year group was in the 1994 cohort, with 45 members remaining on the

**Table 4 Number of Graduates (UGMS) compared with number on GMDC Register**

Year	Graduates	On Register
1969	39	13
1970	25	8
1971	30	6
1972	53	7
1973	47	8
1974	50	14
1975	56	13
1976	103	15
1977	0	*1
1978	56	16
1979	54	16
1980	57	10
1981	60	18
1982	60	26
1983	59	8
1984	0	*1
1985	65	13
1986	64	14
1987	41	12
1988	42	8
1989	46	12
1990	50	12
1991	49	12
1992	59	37
1993	57	26
1994	58	45
1995	0	*5
Total	1280	376
	100%	29.4%
1985 to 1994**	489	183
	100%	37.4%

**NB.** Shaded area = study population;

\* 1977, 1984, 1995 No graduates were produced by UGMS in normal classes but a few repeat candidates from previous years passed referred examinations in these years.

\*\* excludes 1988.

<sup>f</sup> i.e. doctors paid up and licensed to practice as at December 1996.

rolls.

Though the figures from the GMDC were taken as the true reflection of registered practitioners within Ghana, there were registrations for the three years of 1977, 1984 and 1995 when no graduates were produced. These are likely the result of late registration of candidates who took referrals in the final examinations as well as delayed registration by doctors taking holidays outside or returning to re-register after a period away. The total number of such doctors is 7. However, in all 489 doctors graduated from UGMS (excluding 1988) during the period under review and 183 of them remained on the permanent register in 1996 (37.4%).

### 3. Interviews with representative class members :

Table 5 shows the results of these interviews. Of the 489 graduates, only 39% are confirmed by classmates to be currently living and working in the country<sup>h</sup>. The 1987-year group seems to have lost the highest proportion of classmates, with 85% of this class outside Ghana as of July 1997.

The 1991-year group has the highest cumulative annual loss rate of 18.8%.

The estimated average cumulative annual loss rate of doctors from Ghana for the 1985-1994 period (excluding 1988)<sup>i</sup> was 13.8%. This average cumulative annual loss means a 50% loss in 4.5 years, and a 75% loss in 9.5 years.

The estimated rate of loss was low for the graduates of 1985-1986, and 1992-1994. The cumulative average annual loss rate was quite high (16.25%-18.75%) for the batch between 1987-1991. The period between 1986 and 1991 saw a period of serious economic difficulties and the implementation of structural adjustment programs in Ghana which may account for the rise in annual migration (from 10% to 18%+) among graduates of those years. It was also a period of support from government for clinical Postgraduate Training abroad which saw few of such doctors returning. It is also likely that migration rises sharply after the third year post qualification as seen from the cumulative rates on table 5 changing after 1991.

The GMDC records reviewed, showed that 183 out of the 489 doctors produced remained

**Table 5 Analysis of 1985-1994 sample of doctors through recall interviews.**

Year	Years after graduation	Total no. of graduates	No. as of July 1997		% loss	Cumulative average annual loss	Estimate time for 75% loss (yr.)	Estimate time for 50% loss (yr.)
			in country	out country				
1985	12	65	22	43	66.2	8.3%	18.2	8.0
1986	11	64	20	44	68.8	10.0%	15.8	6.5
1987	10	41	6	35	85.4	17.5%	11.8	3.5
1989	8	46	11	35	76.1	16.3%	10.5	4.0
1990	7	50	12	38	76.0	18.5%	9.2	3.5
1991	6	49	14	35	71.4	18.8%	8.4	3.5
1992	5	59	34	25	42.4	10.5%	11.8	6.0
1993	4	57	34	23	40.4	12.0%	9.9	5.5
1994	3	58	38	20	34.5	12.8%	8.7	5.0
Total	66	489	191	298	60.9	13.8%	9.5	4.5

<sup>h</sup> Two of these are currently full time reverend ministers and so are not in active practice.

<sup>i</sup> 1988 was excluded because there was only one readily identifiable member of that year group. He was also not sure of the whereabouts of his colleagues.

on the register compared to the recall of classmates, which showed 191 remaining, reflecting a 1.6% difference which may be due to record keeping or recall shortfalls.

#### 4. Reasons for Migration:

All 15 doctors (out of 36) who provided reasons for why their colleagues left the country, gave the following reasons;

- Search for better remuneration and conditions of service. ('to seek greener pastures');
- Search for better postgraduate training opportunities (i.e. 'to enter into postgraduate programmes they are sure of');
- "To afford basic life amenities" ('to acquire basic things in life such as a car, domestic appliances, and descent housing').

Further reasons given include:

- "lack of incentives for hard work in Ghana";
- "frustration of junior doctors due to their

senior colleagues";

- "inadequate opportunities available for postgraduate training";
- "ill defined and poorly structured local postgraduate programmes"; and
- "delayed promotions".

More than half (54.9%) of the graduates were said to be in the **United Kingdom**, 35.4% in the **United States of America**, 6.2% in the **Republic of South Africa**, 1.2% in Canada and 2.3% located in Kenya, Saudi Arabia, Zimbabwe, Germany and Japan (Table 6).

#### Discussion:

There are a total of 175 hospitals and 610 health centres in the public and private sectors in Ghana<sup>k</sup>. Approximately 1200 doctors serve in the public sector whilst another 400 provide services in a variety of parastatal and private sectors. An average of 51 doctors are produced annually by the UGMS since 1969, and a total of 1,380 have been produced so far. Since 1982 when the second medical school started

**Table 6 Countries identified by respondents as location of their colleagues.**

Country Year	UK	USA	RSA	Canada	Others	Total
1985	12	20	7	2	1	42
1986	24	14	4	-	-	42
1987	No reliable information obtained					-
1989	12	5	3	1	-	21
1990	24	15	-	-	1	40 *
1991	15	16	1	-	2	34
1992	19	8	-	-	2	29 *
1993	25	5	1	-	-	31 *
1994	10	8	-	-	-	18
<b>Total</b>	<b>141(54.9%)</b>	<b>91(35.4%)</b>	<b>16 (6.2%)</b>	<b>3(1.2%)</b>	<b>6(2.3%)</b>	<b>257<sup>j</sup></b>

**NB.\***Figures likely to have included doctors not fully migrated, e.g., persons on Government sponsored study courses abroad, and some doctors may have returned from trips outside but this fact was not known to their colleagues.)

<sup>j</sup> Number less than Table 5 because some of the emigres have no information of whereabouts.

<sup>k</sup> Source: CHIM, PPME, MOH, Accra, 1996 data.

graduating doctors, the UGMS graduates have constituted approximately 60% of doctors trained locally. The average estimated annual emigration rate of 13.8%, coupled with an estimated annual retirement rate of approximately 2.5% (average working life of 40 years), however, provides a worrying statistic.

As medical training is almost entirely free of direct costs to the graduates (with the cost being borne by tax payers), the rate of loss to the country brings up issues of the cost-benefits of local training of doctors. It has also raised issues concerning the content of the training and whether this is more geared towards practice in developed countries than in Ghana. It has also raised the question of whether to train medical assistants<sup>1</sup>, in a way that would give them many of the skills normally reserved for doctors. Medical Assistants, due to the nature of their accreditation, are unlikely to find employment practice outside of Ghana's borders.

The many problems of a long history of losing personnel to migration, inadequate policies to stem the flow, and of poor documentation and data handling, have contributed to Ghana's difficulties with planning human resources for health. The migration problem also affects other health professionals including nurses and laboratory technicians who are internationally recognized cadres.

Many reasons were given why doctors leave Ghana. Like most sub-Saharan countries, it has had its share of political, economic and social problems. Salaries have remained very low, especially for health professionals in the public sector, the main employer. Some 30% of the population are defined as being below the poverty line with another 15% with incomes that are too low to make private sector care a profitable venture in most areas. Thus the scope for private medical practice is also limited.

Aside from poor pay and lack of training opportunities, other reasons have focused on the

reality that Ghana's pay system does not reward extra work and provides only a flat pay and allowance system throughout the country that does not recognize workload variation and unfavourable work locations. These problems were cited in the situational analysis in Ghana's Medium Term Health Strategy Document<sup>(9)</sup>. There was also an often expressed frustration with senior practitioners and supervisors. Though we do not have detailed information about these frustrations, they may be related to factors such as the 'generation gap', cultural patterns that require respect for elders, a rigid system of seniority, the low rates of turnover from local postgraduate programmes, making it seem a lot easier to obtain training and qualifications abroad than in Ghana.

Other reasons contributing to migration include delayed promotions and adverse and inefficient bureaucratic procedures which affect the country's civil service including employees of the Ministry of Health. Poor pensions and social security benefits with the visible distress that some senior practitioners have faced after retirement may also have contributed to the exodus.

Structural adjustment policies have led to reduced public expenditures and salary budgets. However these effects are occurring in a new environment of market liberalization and privatization which has raised the cost of social amenities such as education and the utilities beyond the means of some workers. These conditions have increased the pressure on health professionals to seek better working conditions and incomes outside the country.

The majority of migrated Ghanaian medical graduates are said to be in the United Kingdom (54.9%) and the United States of America (35.4%). South Africa has recently become a popular location. Saudi Arabia has attracted a number of Ghanaian doctors, especially those who have earlier on obtained specialist

<sup>1</sup> Medical Assistants are nurses with 5 years experience trained for additional year as prescribers providing services mainly in rural health centres.

qualifications from the UK. The Ghanaians in Saudi Arabia are mainly from class groups earlier than the 1985 to 1994 graduate groups studied. Graduates of the sampled years of 1985 to 1994 are likely to still be in specialist training or having recently completed training. Most external specialist training was often done in the UK and USA which have had historical and linguistic (English) links with Ghana's medical services and professions. There may be a difference in location between more recent graduates and more long standing graduates. Location of migrants may also be of a temporal nature. During the oil boom in Nigeria many Ghanaian doctors were employed there. However, from the mid 1990s, the Ghana MOH has been receiving small but increasing numbers of applications from Nigerians wishing to practice in Ghana.

### **Recommendations:**

It is quite clear that the government will find it extremely difficult to match the pay and service conditions offered by the competing countries which are at times 10 to 20 times higher than what it offers. What can health policy makers offer in such situations to alleviate the situation and reduce somewhat the haemorrhage of skill professionals?

It is also clear that in the Ghanaian situation, both "carrot and stick" options have not succeeded in the past (with the "carrots" still remaining substantially inadequate) and increasingly an aura of helplessness surrounds efforts to control the problem.

### **Bonding of Graduates:**

A system for bonding was operated when doctors and other professionals were trained in Europe before the establishment of the UGMS. However, despite the government's sponsorship of local training costs, there is no legal imperative on graduates to remain in the country. This has contributed to the increasingly early departure of graduates from the country. The Ministry has debated the reintroduction of bonding to promote retention for at least three to five years after

graduation. This proposal is, however, complicated by a number of issues related to the following:-

- The inability of the government and the MOH to enforce bonds.
- The absence of bonding for other university graduates especially general arts and other (non-health) professions who unlike doctors, are not guaranteed employment in the public sector and at times may suffer significant unemployment in the country. This makes a selective bonding for doctors seem unfair.
- The enforcement of collection on student loans schemes has been difficult with problems in tracing beneficiaries and their guarantors.
- The value of the currency has not been very stable resulting in quite rapid depreciation in value at times so that bonds based on the original amounts quickly lose their value and deterrent effect.

The government remains the sole sponsor of university and medical training and thus bonding could be further enforced by retaining and awarding the University's certificates and academic transcripts (which are usually required for admission into training or employment outside) only after an appropriate period of service has been completed. This is a core suggestion that the health authorities are discussing with the Ministry of Education to elicit support for its implementation.

It is clear however, that prolonged period of bonding may simply result in abuse of the system. Bonding needs to be reasonable, with clear further incentives available at the end of the bond period such as firm opportunities for specialist training and other advantages over other graduates who do not serve bonds.

Bonding requires a good information system and linkages with a variety of governmental agencies including the Ministry of Education (the certifying authority), the

immigration authorities and by an effective personnel administration system. There have been proposals to restrict consular privileges (e.g. passport renewals,) to doctors who have not completed bond or national service requirements before leaving the country. These restrictions can be very difficult to implement especially under the recent democratic dispensations so as not to infringe human rights.

Guarantors and security for bonds can be a tricky problem which can be compounded by the difficulties in the kind of security or surety that can be effectively obtained and enforced. In Ghana, this may mean restricting guarantors to public servants and contributors to the National Social Security Scheme (Social Security and National Insurance Trust - SSNIT) which will use guarantors' pension funds as security for the bonds. This system is currently being used to secure the book loans made to university students in Ghana. However, given low salary and pension levels in the country, the value of funds held as security may still be inadequate and may be more useful for effect than for recovering costs of training. Bonds and bonding periods may be reduced for persons who will serve in the most rural areas with added offer of early postgraduate training opportunity.

Full medical school fees are likely to be beyond the reach of ordinary Ghanaians and a fee system may simply reinforce disparities in opportunity between the rich and the poor. Under such circumstances, wealthier graduates will not be under bond and will have a much earlier opportunity to specialize or migrate. A scaled bonding system may be introduced so that medical students may have differing periods or costs of bonding to be related to the proportion of the true "full" costs that are directly paid by the student. This should help avoid a problem where the "full" fees paid by wealthier students will actually be subsidized by government so that all graduates may need to provide at least some period of service.

<sup>m</sup> Responsibility for parents, other siblings and for immediate nuclear family's health, education, and welfare etc., may create a situation of reduced ability to leave.

Another possibility is to remove scholarships offered for medical training for all students and target these to only those bonded to serve for specified periods after graduation. Other students will then be required to pay full fees and thus should remain free to migrate without any restrictions. This in a sense will be part of an attempt to turn uncontrolled migration into a deliberate export of medical personnel. Indeed it is known that transfer of moneys by Ghanaian emigrants to families and to the real estate sector in Ghana have become a major source of foreign exchange for the country.

### **Providing Incentives for Doctors:**

The authors recognize efforts being made as part of the reform process in Ghana to introduce better targeted incentives into the health services. For doctors, these incentive schemes include a proposal to introduce controlled intramural private practice in public health institutions. This is initially aimed at specialists (a qualified doctors find difficult to attain in Ghana and which was stated as one of the reasons for leaving the country). Hospitals with private systems can then raise additional income that can go to provide additional remuneration for non-specialists and other support staff. An extramural type of private practice, it is deemed, will tend to draw the wealthier patients away from the public health institutions and further intensify the income disparities between the private and public hospitals and their service providers.

A further suggestion is the introduction of "hardship location" incentives to attract doctors to rural areas<sup>(10)</sup>. Combined with a bonding system as proposed above, it may be useful to overcome the initial period of high migration that occurs within the first ten years of graduation and to allow for the natural growth of family obligations<sup>m</sup>, etc., and to bring about greater retention and reduced migration rates that are seen in later years. Incentive packages proposed have included cars, domestic appliances and housing loans obtained at subsidized rates.

Housing and transport seem to be some of the key needs of doctors and it is expected that the strategic effect is to hold doctors as they try to meet their loan obligations during the critical early years before leaving the country. A key factor in the success of these incentives will be the ability of the civil service bureaucracy to maintain transparency and efficiency in awarding these incentives and assuring that they go to only deserving doctors.

#### **Bureaucracy and Promotions:**

The restructuring of health service delivery under Ghana's Health Sector Reform is expected to contribute towards significant decentralization of authority and hence increase the efficiency and speed with which personnel administration functions are processed. As part of the institutional changes proposed, health services management is to be delinked from the civil service to reduce the stifling and centralized bureaucracy that has often frustrated health workers. Other reforms such as a decentralized personnel management authority with a transparent promotion and reward systems should greatly facilitate improvements in bureaucratic efficiency. A further suggestion is to re-organize salary administration to allow for extra remuneration if the number of doctors is less than the calculated or budgeted norm for the service point.

Of course in a decentralized system where management capacity is limited, poor monitoring and supervision of local management can quickly expand the potential for corruption and other problems.

#### **Post-Graduate (Career) Training Opportunities:**

There have recently been calls from the Ghana Medical Association<sup>n</sup> for a reform of postgraduate medical training in Ghana, with specific requests for a more structured and shorter training programme. Current "fellowship" programmes, which follow an "apprenticeship"

system, take a minimum of five years and an average of eight years training to complete. The new proposals could provide more opportunities for career advancement locally and encourage retention.

The proposals include the institution and recognition of shorter specialized training programmes in the form of diplomas or master degree programmes focused on practical clinical skills, with structured training lasting no more than 24 months (for Diplomas) 48 months (for Masters). These types of specialists were proposed to fill a much needed gap in clinical skill at district level as well as to encourage and reward doctors who have remained in the country. These programmes will run hand in hand with internationally recognized "fellowship" programmes which usually take a minimum of five years to complete. A new scheme of service has been proposed which will allow for middle level specialist careers to be fully recognized and rewarded. Hopefully the new training systems will provide an early and quicker specialist upgrade linked with opportunities to later upgrade through a fellowship.

#### **Will graduates return?**

Experience has shown that return rates have been minimal and often occur when doctors are about to retire or have had problems obtaining postgraduate qualification or keeping jobs abroad. At times doctors have returned only to face frustrations of placement, bureaucratic delays in employment (processes that can take up to a year or more), leading to return or relocation to other countries. There is a popular notion that the attachment Ghanaians have to family and friends will cause an increase in return when the appropriate incentives are provided. The question then, is whether the country can absorb the returnees, both in terms of having facilities for them to work in and whether the economy will be in a position to absorb them.

It may also be worthwhile to consider bilateral arrangements with recipient countries

<sup>n</sup> Annual General Meeting of Ghana Medical Association, October 1997.

(e.g., South Africa) that will allow practice by our doctors for prescribed periods (and in specialties needed by Ghana) and to agree to some formal means of repatriation of part of their earnings to enable the donor country to earn some indirect returns from its investment in training<sup>o</sup>. Ghana has had very little experience with such bilateral arrangements though recently the government reached agreement with an organization in the United Kingdom for nurses to work for a specified period of two years only in certain priority specialties and then return to Ghana. A similar agreement was reached with the Ministry of Health of Jamaica recently. These agreements do not include repatriation of earnings clauses but are aimed at providing a controlled external experience with a higher likelihood of return to Ghana. It is not clear how such arrangements can work with doctors but is likely to be a positive way to control and benefit from migration.

### Conclusion:

Serious policy decisions need to be made concerning how much investment tax payers should continue to make into training doctors, and the degree to which the country should begin to invest in the transfer of medical skills and delegation of some doctors' tasks to other cadres such as Medical Assistants and Nurse Practitioners. These cadres are relatively easier to retain, are more able to work in rural areas and have qualifications recognized only within the country. Tanzania and Malawi are examples of countries with similar cadres that have even been responsible for surgery in rural and district hospitals.

The feasibility of these suggestions needs to be tested and the strength of the various incentives and measures weighed against the strong pull of doctor remuneration in the target countries, which is thought to be at least 10 times higher than is possible in Ghana.

<sup>o</sup> Some proposals include mandatory bank accounts in Ghana into which some reasonable proportion of earning are paid directly which can be taxed in Ghana.

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