



**Chief Editor:**

Abdulrazak Abyad  
MD, MPH, AGSF, AFCHSE  
Email: aabyad@cyberia.net.lb

**Assistant to the Editor:**

Ms Rima Khatib  
Email: Rima@amc-lb.com

**Reporter and Photographer:**

Dr Manzoor Butt,  
Email: manzor60@yahoo.com

**Ethics Editor and Publisher:**

Ms Lesley Pocock  
medi+WORLD International  
572 Burwood Road,  
Hawthorn, Vic Australia 3122  
Phone: +61 (3) 9819 1224;  
Fax: +61 (3) 9819 3269  
Email: lesleypocock@mediworld.  
com.au

**Editorial enquiries:**

aabyad@cyberia.net.lb

**Advertising enquiries:**

lesleypocock@mediworld.com.au

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# From the Editor



**Abdulrazak Abyad**  
MD, MPH, AGSF, AFCHS  
(Chief Editor)

**Editorial office:**  
Abyad Medical Center &  
Middle East Longevity Institute  
Azmi Street, Abdo Center  
PO BOX 618  
Tripoli, Lebanon  
P + (961) 6 443684  
F + (961) 6 443685  
E [aabyad@cyberia.net.lb](mailto:aabyad@cyberia.net.lb)  
W [www.amc-lb.com](http://www.amc-lb.com)

A prospective study from Pakistan looked at the frequency of causes peculiar to secondary hypertension in a tertiary care hospitals. A total of 70 patients with confirmed diagnosis of secondary hypertension were randomly included. The authors concluded that thyrotoxicosis, pregnancy induced hypertension and pre-eclampsia, Cushing syndrome and glomerulonephritis, in their descending order are major contributors to the development of secondary hypertension in our patients.

A paper from Qatar looked at the usage of tobacco products. The author stressed that tobacco use is a major public health problem with prevalence of 37% and imposes a huge burden on health care services. The author described Qatar's approach in tobacco control, which is based on three strategies, are: legislative measures to raise public awareness, and providing smoking cessation services for smokers. The author stressed that a tobacco control strategy in Qatar needs

to be modified to tackle a number of challenges that have appeared recently.

A retrospective descriptive study was submitted from Jordan on all patients with the confirmed diagnosis of congenital heart disease referred for echocardiography. The author concluded that the majority of patients with CHD detected have non-cyanotic CHD. TOF is the commonest cyanotic lesion and VSD non-cyanotic lesion. In order to avoid complications, early detection of congenital heart disease is of utmost importance for proper management. 2D-echo with Doppler examination forms the gold standard for diagnosis.

A paper from Bangladesh assessed the knowledge and use of contraception of ever-married women of a district of Bangladesh namely Naogaon. The data analysis revealed that the current use rate of contraception is high enough (above ninety percent) and most women currently use modern methods.

A paper from Nepal looked at various GP newly graduated to looked at their capabilities in working in rural areas. The authors concluded that factors affecting GP recruitment in Nepal are complex and interacting. Addressing these issues requires a holistic and integrated response to encourage, place and appropriately use the skills of GPs.

A paper from Iran Looked at war. According to the statistics in the year 2000, mortality caused by war-related injuries has been estimated to be the 18th leading cause of death in Eastern Mediterranean Region (EMRO) of the World Health Organization (WHO), which justifies paying more attention to it. The author discussed the health impacts of the most recent war within the region i.e. the war in Iraq on the above patterns in order to highlight that this war has enormously deteriorated the fragile situation within the region.

A case report from Amman looked at Appendiceal duplication. The case was discovered incidentally intraoperatively. A 20-year old male patient admitted to a surgical ward in our military field hospital in Iraq, with symptoms and signs of acute appendicitis. Intraoperatively the patient was found to have appendiceal duplication. Appendectomy was performed successfully, with a smooth post operative course.

# Nepal's General Practitioners - Factors in Their Location of Work

**Key words:** Practice Location, General Practice Training, Recruitment.

*BW Hayes, K Butterworth, B Neupane*  
Nick Simons Institute, Nepal

## SUMMARY

**BACKGROUND:** The MD in General Practice is the one postgraduate programme specifically seeking to address the rural doctor shortage by training doctors for district hospitals.

**OBJECTIVE:** To explore the key issues of practice location of all MDGP graduates to enhance recruitment of doctors in rural practice.

**METHODOLOGY:** Study of demographic factors of 98 living graduates enhanced by qualitative study using triangulation of data from one postal questionnaire, one hand delivered questionnaire with semi-structured interview and focus group discussion.

**RESULTS:** The spouse growing up outside Kathmandu and whether the doctor had ever been a Health Assistant were the statistically significant factors in whether currently working outside Kathmandu.

The main themes arising with regard to improving recruitment of doctors to GP were:

- \* Selection of rural candidates
- \* Raising awareness of General practice both in the community and in undergraduate medical training
- \* Having GP input to training of undergraduate doctors
- \* Providing early positive rural experience during training
- \* Selective admission to postgraduate GP training programmes with provision of scholarships

**CONCLUSIONS:** Factors affecting GP recruitment in Nepal are complex and interacting. Addressing these issues requires a holistic and integrated response to encourage, place and appropriately use the skills of GPs.

## Introduction

The Medical Doctorate in General Practice (MDGP) began in 1982 as an initiative of the Tribhuvan University and the University of Calgary, Canada. Phases 1 and 2 had overseas components but Phase 3 from 1991 has been conducted entirely within Nepal. Subsequently BP Koirala Institute of Health Sciences (BPKIHS) started a MD in Family Medicine in 2001 and National Academy of Medical Sciences (NAMS) started an MDGP programme in 2005. This has been the one postgraduate programme specifically seeking to address the rural doctor shortage by training doctors for district hospitals. In the light of Nepal's shortage of rural doctors to address the health needs of this country (2005 Ministry of Health figures suggest urban doctor ratio of 1:1,057 and rural of about 1:41,000), a study of factors affecting a doctor's decision concerning practice location is helpful.

Studies from developed countries notably USA, Canada and Australia suggest a number of significant factors. The doctor's background especially growing up in rural area has generally been found to be the most important independent predictor of rural practice(1-3). Other factors suggested and studied have been exposure to rural practice during medical training both in medical school (4,5) and residency(6,7), personal intention and motivation - commitment to rural family medicine appeared to be a powerful factor (1,8,9) and various financial, professional and lifestyle issues(10). Fryar et al(3) concluded that personal characteristics and background may be useful considerations in selecting applicants for family practice residency programmes committed to reducing shortages of health care service in rural areas. Felix et al(11)

also concluded addressing community factors in recruitment efforts through community development activities may increase their success. There appear to be different factors in retention(1).

In a 2001 study of thirty-nine MDGPs(12), rural upbringing appeared the most significant in determining location of work. Because numbers were small, it was felt a repeat of the study in a developing country like Nepal with larger numbers may add more useful and robust information to what is already available from developed countries.

## Methods

This study was done by hand delivering or mailing a questionnaire to the MDGP graduates resident in Nepal between June and September 2006. It was the same questionnaire used in the 2001 study.

Information was collected about personal demography and current and previous places of work and work habits. Places of work were classified as whether within or outside the Kathmandu Valley since this is the major urban area of Nepal. The data results were compiled and analysed in SPSS and SAS programmes looking at what background factors influenced the current place of work.

There was also a qualitative study using triangulation of data from one postal questionnaire, one hand delivered questionnaire with semi-structured interview and focus group discussions during a national symposium on General Practice.

Two authors independently read and transcribed each of the questionnaire responses, identifying main themes emerging and performing initial

coding. A high level of agreement was found between raters on the main issues. There were no significant outlying data. The summary of focus group discussions and plenary notes were also independently read and transcribed by two authors. A full description of this symposium's findings is found in a separate paper (Building up General Practice for Nepal, 2006). The final analysis was developed in discussion with all authors.

## Results

Some contact was made with 75 of the 87 graduates living in Nepal and responses were received from 62 doctors, 39 from outside of Kathmandu valley and 23 from within Kathmandu, an overall response rate of 71%.

One graduate had died and eleven are overseas. At least three of these twelve had worked at some time in rural areas.

Where are Nepal's General Practitioners?

- **Fifty-three (62.1% of those in Nepal) were out of Kathmandu Valley.**
  - Thirty in government service, eight in Medical Colleges and fifteen in Private Institutions including mission hospitals/ Private Practice. Note - there are no females (out of 9 graduates) currently working outside Kathmandu.
- **Thirty - four (37.9% of those in Nepal) were in the Kathmandu Valley.**
  - Eleven in government hospitals, twelve in Medical Colleges and eleven in Private Institutions/ Practice. (Of these, at least five had at some time worked in rural areas.)
- **Eleven were overseas.**
  - Of these at least 2 had done some work previously outside Kathmandu.

The location of practice by region is illustrated in Graph 1.

### RESULTS and DISCUSSION of Factors in Location of Work

The univariate analysis using chi-

square of the independent variables and the 2 dependent variables of place of first practice and of current practice is shown below.

Where the doctor predominantly grew up was used as the independent variable since there is significant correlation/co linearity with birthplace (just 2 born outside Kathmandu grew up predominantly in Kathmandu) and schooling (just 1 who schooled outside Kathmandu grew up predominantly in Kathmandu and 1 who schooled in Kathmandu grew up predominantly outside Kathmandu).

- The strong association between age ( $\geq 45$  and  $< 45$ ), Years of GP practice ( $\leq 6$  and  $> 6$ ), and the phase of the programme (Phases 1 and 2 vs Phase 3) is understandable as they are essentially conveying the same information (i.e. co linearity).
- Phase 3 doctors were more likely to have a Health Assistant background and had undergraduate rural exposure. In fact all Phase 1 and 2 doctors had a science background. This probably reflects the availability of training.
- Doctors with  $>6$  years MDGP practice are more likely to have grown up outside Kathmandu.
- There is an association between spouses growing up in large urban centres and being more educated (a professional/graduate/health worker) probably reflecting opportunity.
- There is a strong association between the doctor's and spouse's place of growing up (rural and rural) which may also reflect opportunity for meeting/arranging marriage.
- There is a strong association between the 2 dependent variables indicating little movement of doctors.

For **place of first practice** whether in or out of the Kathmandu Valley, the factors which reached statistical significance ( $p < 0.05$ ) on multiple logistic regression are:

- the phase of the programme in which the graduate trained. Those trained in phase 3 were more likely to work outside the Kathmandu Valley (45/70) than those in Phases 1 and 2 (3/11).
- the age of the doctor. Those  $> 45$

(26/37) were more likely to work outside the valley than those  $< 45$  (13/28).

- where the spouse grew up. Where the spouse grew up outside Kathmandu (34/48) the doctor is more likely to have first practised outside Kathmandu than when the spouse grew up in Kathmandu (5/18).

For **current place of practice** whether in or out of Kathmandu Valley, the factors which reached statistical significance ( $p < 0.05$ ) on multiple logistic regression are -

- Spouse place of growing up. The doctor is more likely to be out of Kathmandu if the spouse grew up out of Kathmandu (35/48) compared to the spouse growing up in Kathmandu (4/18).
- Previous type of work. If ever been a Health Assistant (26/36) then more likely to be practising outside Kathmandu than if done Intermediate in Science (13/30).

Unlike much of the international literature, the doctor's rural background did not reach statistical significance on multiple logistic regression analysis in this study but there may be some relationship with the spouse rural background which was the most consistent significant factor in this study.

Regarding the phase there is only a small number in Phases 1 and 2 and the high predominance of them in Kathmandu (8/11) may reflect their age and seniority and their need to be in teaching positions in Kathmandu. Specifically these early graduates became the department faculty. The age relation is at variance with the phase and may reflect that the more recent younger graduates are less likely to be outside Kathmandu because of recent security issues and the greater number of females.

Unlike some<sup>(6,7)</sup> but not all overseas literature<sup>(2)</sup>, undergraduate rural exposure did not appear significant as a determinant of location.

From the qualitative arm of the study, the main themes arising with regard to improving recruitment of doctors to GP and rural practice were:

- Selection of rural candidates with involvement of rural/peripheral



communities in the process of selecting people they want as their doctor. This could be particularly applied to the already available 10 government seats in private medical schools.

- Raising awareness of General practice both in the community and in undergraduate medical training.
- Having GP input to training of undergraduate doctors. A number of MDGPs cited good role models as significant in their choice - "One of my senior doctors encouraged me."
- Providing early positive rural experience during training. Several doctors' rural experience contributed to their choice. "While working in periphery (Okhaldhunga), I realized that MDGP would be the best speciality to provide optimum service."
- Selective admission to postgraduate GP training programmes with provision of scholarships. Doctors can be encouraged and selected who have already shown a commitment to serve in rural areas.

### Limitations

One of the researchers and an assistant visited as many of the rural MDGP doctors as they could contact leading to a very high response rate of 75% (39/52). However, the focus group discussions were held in Kathmandu and many of the rural doctors were unable to attend due to the previously discussed problems associated with isolated practice in rural areas. This may have led to an over-representation of more urban-based physicians.

In addition, the focus of this study was how to improve recruitment of General Practitioners in rural Nepal. Many doctors expressed the opinion that General Practitioners should not be seen purely as rural physicians.

## Conclusion and Recommendations

- The spouse rural background and a HA background should be considered (along with doctor's rural background and interest in rural practice) in any selection of

candidates for training.

- A need exists to establish an integrated career pathway of education and training for rural practice, beginning at the pre-undergraduate level and continuing through undergraduate medical education to specific rural practice vocational training followed by appropriate continuing and university graduate education, practice structures and family supports.

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12. Hayes B, Gupta S Recruitment and Retention Issues for Nepal's General Practitioners. *JNMA* 2003; 42: 142-147. TABLE 1. Univariate Analysis of Factors in Location.

**Table 1. Univariate Analysis of Factors in Location**

	First Prac	CurrPrac	MeaAge	MeaChil	MeaGP year	GP Phas	DocGrewup	Prev Wor	Ugr exp	Spo Gro	Spo Training
<b>First Prac</b>											
<b>CurrPrac</b>	***										
<b>MeaAge</b>	*	ns									
<b>MeaChil</b>	ns	*	**								
<b>GP year</b>	ns	ns	***	ns							
<b>GP phas</b>	**	*	**	ns	***						
<b>Grewup</b>	*	*	*	ns	**	ns					
<b>Prev wor</b>	ns	**	ns	*	ns	**	ns				
<b>Ugr exp</b>	ns	ns	ns	ns	ns	**	ns	ns			
<b>Spo Gro</b>	**	***	ns	ns	ns	ns	***	ns	ns		
<b>Spo trai</b>	ns	ns	ns	ns	ns	ns	ns	ns	ns	**	

All tests were Chi-square with use of Fisher's exact 2 tail test where 2x2.

\* p = 0.05-0.15 \*\* 0.001 –0.05 \*\*\* < 0.001 ns - > 0.15 (not significant)

Those factors with p<0.15 were then subjected to Multiple Logistic Regression to identify the main statistically significant factors determining practice location.

Graph 1. Location of MDGP's by Development Region

