HEALTH WORKERS' PREFERENCES AND POLICY INTERVENTIONS TO IMPROVE RETENTION IN RURAL AREAS IN THAILAND

CREHS

POLICY BRIEF
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INTRODUCTION

The human resources crisis in low-income countries has become increasingly apparent since the adoption of the Millennium Development Goals in 2000. The maldistribution of health workers within countries is a crucial problem felt most acutely in rural areas. Several international initiatives have stressed the important role played by human resources for health but despite this health worker shortages remains a key policy concern.

The shortage of doctors and nurses in rural areas of Thailand is a recurring problem. Over the past 20 years the Thai government has introduced a range of strategies aimed at recruiting and retaining more in rural areas. There is a dearth of empirical data on health worker flows and behaviours and their implications on policy. A range of financial and non-financial factors have been described as playing a role in health workers' decisions and motivations, yet their relative importance when considering a rural posting remains unclear. Effective retention strategies need evidence-based information to support their design and implementation.

This research set out to examine the job preferences of newly graduated doctors and nurses to identify effective policy interventions that could improve their recruitment and retention in rural areas. Similar studies were carried out in South Africa and Kenya.

This policy brief provides findings from the baseline for this research as well as from a cohort of 198 doctors and 342 nurses. It is hoped that this will help the Thai government to better understand the impact current and future policy interventions might have on employment preferences and their influence on recruitment and retention of doctors and nurses in rural areas of Thailand.

METHODS USED

Study participants were recently qualified doctors and nursing students selected using a stratified sampling technique.

- Doctors were selected from provinces stratified into 3 categories: poor (25 provinces), medium (25 provinces) and rich (25 provinces). Three provinces were randomly selected from each category. All doctors who had been working for less than three years after medical graduation in district and provincial hospitals were invited to participate in the study. In total 211 doctors were enrolled in the study.
- There are 25 Ministry of Public Health controlled nursing colleges in four regions of Thailand; North-Eastern, Central, Southern and Northern. One college from each region was selected based on its size and location within the region. All final year nursing students from each of 4 colleges were invited to enrol in the study (342 enrolled).

Multiple methods were used to evaluate individuals' attitudes, preferences and choices in relation to the likelihood of selecting a rural job posting.

- A self-administered questionnaire provided information on basic individual characteristics (age, sex, parents' education, religion, etc.). Questions related to educational background, attitudes towards living and working in rural areas, and reasons for their choice of nursing/medical career were also asked. The self-administered questionnaire was given to all study participants at baseline and again during a follow-up survey.
- A discrete choice experiment aimed at investigating participants' job preferences relating to possible policy interventions that could be used to attract them to rural job postings.
- Pre-baseline, key informant interviews were held with higher level Ministry officials and other relevant stakeholders to identify strategies that have been or could be developed to improve recruitment and retention of nurses and doctors in rural areas, noting successes and/or failures in policies.
- Focus group discussions were used to help inform the design of the discrete choice experiment. Focus groups were also used to gather information on job preferences and factors that may influence choice of nursing and medical jobs sought by nursing and medical graduates.

At follow-up, the self-administered questionnaire was designed to capture the actual choices and decisions made by nurses and doctors and to corroborate information collected over the 1-year follow-up period. It included a description of current job characteristics and job satisfaction.

KEY FINDINGS

CHARACTERISTICS OF THE STUDY POPULATION

Of the 198 doctors still completing their compulsory service and who agreed to participate in the study, the majority were in their first year of practice (60.1%). Female doctors (54.5%) made up slightly more of the sample than male doctors (45.5%). Of all study participants, 83.3% spent their childhood in urban areas. The majority of study participants graduated from regional universities (63.6%). The majority of doctors were recruited by entrance examinations (89.4%) with only 10.6% being recruited through the local recruitment system where students are recruited from rural areas by local mechanisms.

342 student nurses agreed to participate in the study. The study sample was relatively equally distributed between the four nursing colleges; although there was a larger group from the nursing college located in the North-Eastern region (34.2%). Female study participants represented 95.3% of the total sample. Overall 83.6% were born in a rural area with the majority coming from the North-Eastern region (68.4%) and relatively few from the Central region (1.2%).

CAREER CHOICES

Rural vs. urban areas

Overall Thai nurses and doctors had relatively positive attitudes towards rural areas.

A high proportion of doctors felt that working in a rural setting is not as stressful when compared to living in a city. One of the doctors' main concerns about working in rural areas centred on their belief that bringing up children in rural settings is difficult.

Nurses were even more optimistic about working in rural settings with almost all of them agreeing that working in rural settings is not stressful (97%). A very high proportion of nurses agreed that 'quality of life in rural areas is good', 'living in a city is stressful', and 'social life in rural areas is enjoyable'. Only 17% of nurses thought that 'working in rural areas meant being without support from colleagues/supervisors'. However, in agreement with their doctor colleagues they worried that 'bringing up children in rural areas is difficult'.

What incentives would encourage the doctors and nurses to work in rural areas?

Although the majority of doctors valued living and working in rural areas, their responses in the discrete choice experiment showed that only 20% would choose a rural post, see Table 1. The results show that a higher salary (45% increase for rural doctors), a workplace close to their hometown, working in smaller hospitals, less overtime, and especially better opportunities for specialist training would be possible incentives to attract more doctors to rural posts.

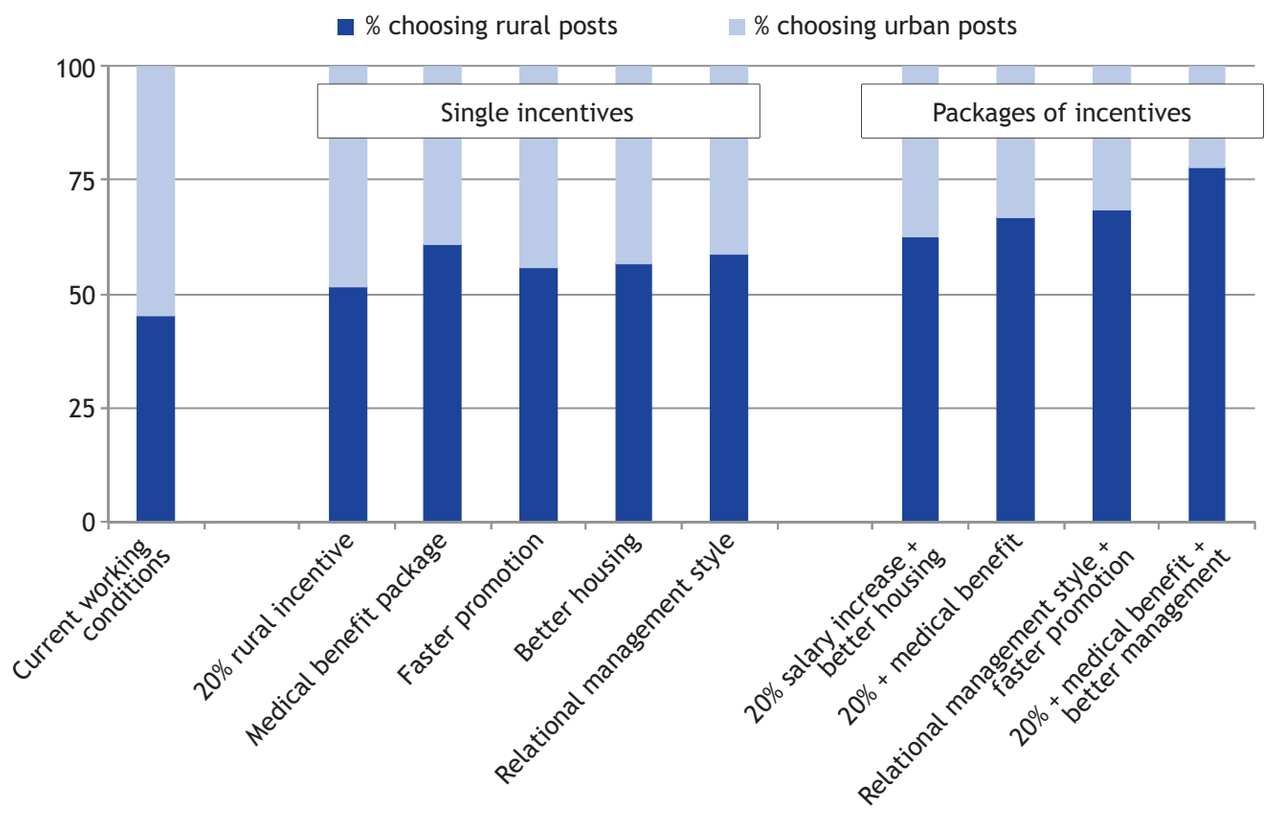
In comparison, nurses were more attracted by rural posts in the current working conditions (45%), with nurses from rural areas and from the North-Eastern region more likely to choose rural posts, see Figure 1. Results reveal that nurses were particularly sensitive to the type of facility they would be posted to in rural areas, with a very strong preference for hospitals over health centres. Results show there are several policy levers that could be used by policy-makers to make rural posts more attractive to nurses. In particular, more nursing graduates would choose rural jobs if medical cover was extended to include their family members.

Table 1:
Prediction of doctors' job preferences under different policy simulations

Policy intervention	% rural	% urban
Current working conditions	20.00	80.00
Single incentives		
30% rural incentive	24.09	75.91
45% rural incentive	38.20	61.80
Specialty training quota	42.65	57.35
Workplace close to hometown	45.88	54.12
Only 7 on-call nights/ month	35.40	64.60
Faster promotion	24.84	75.16
Education incentives + working environment		
Specialty training quota + faster promotion + 15% salary increase	49.58	50.42
Specialty training quota + only on-call nights	63.30	36.70
Specialty training quota + closer to hometown	76.93	23.07
Specialty training quota + only 7 on-call nights + close to hometown	87.96	12.04
Financial and career incentives		
30% salary increase + Faster promotion	29.55	70.45
45% salary increase + faster promotion	44.95	55.05
45% salary increase + only 7 nights a months on call	57.52	42.48
30% salary increase + faster promotion + specialty training quota	47.90	52.10
30% salary increase + workplace close to hometown	51.84	48.16
30% salary increase + workplace close to hometown + faster promotion	58.73	41.27
Financial and education incentives		
30% salary increase + specialty training quota	48.57	51.43
45% salary increase + specialty training quota	64.77	35.23

Note: The simulations are based on results obtained from the Discrete Choice Experiment.

Figure 1: Prediction of nurses' job preferences under different policy simulations



Note: The simulations are based on results obtained from the Discrete Choice Experiment.

FOLLOW-UP COHORT

Of 198 doctors at baseline, only 117 (59%) could be followed up. At follow-up the majority (91%) remained working in rural hospitals. Only 4.5% and 4% had moved to urban hospitals and had enrolled for specialist training, respectively (1 doctor resigned from their public hospital post). However, as many of the cohort members were compelled to provide public services for 3 years, real choices to move post were limited.

From the follow-up survey with doctors, 73 self-administered questionnaires were completed for analysis. The analysis revealed that the majority of doctors worked at smaller hospitals (79%), with approximately half of them working in their home provinces. Almost 90% of doctors reported their overtime duty to be more than 8 days per month, with 82% stating that there was no opportunity for specialist training. The majority of respondents (59%) stated that a case consultant was not present at their hospitals. When asked about their intention to stay in their rural posting (prior to a financial incentive package introduced in 2008 by the Thai Government) only 15% of them intended to stay at the same hospital, with 74% of them wishing to move to obtain specialist training. Following completion of compulsory public service, 3% indicated they would move to urban areas, while 8% said they would resign from the government sector altogether. Although there was some indication that financial incentives could encourage them to stay longer in a rural posting, the majority confirmed their intention to seek specialist training, with only 17% indicating their intention to stay at a rural hospital over the next 2 years.

One year following their graduation, 235 nurses could be followed-up and were asked about their actual workplace. 49% worked in rural settings and 51% worked in urban settings. Among the 51% who worked in urban settings, 38% worked in public hospitals, 9% worked in private hospitals, and 4% were not in direct nursing services. Analysis showed that there was a significant association between intention to work in a rural area and actual job of choice. Nurses who graduated from regional colleges were more likely than those who graduated

from the capital, Bangkok, to choose a rural posting (58.1% compared to 20.7%). Nurses who had a rural upbringing were more likely to choose a rural posting compared with nurses who had an urban upbringing (52.7% compared to 22.0%). Having a workplace close to their hometown was a strong determining factor for nurses to choose an urban area (25%). Other findings revealed that college locations and positive attitude towards working in a rural area were significantly associated with rural workplace choice. Those who obtained scholarships tended to choose rural areas, although this was not statistically significantly.

CONCLUSION AND POLICY RECOMMENDATIONS

- This research provides evidence from Thailand about the challenges of recruiting and retaining doctors and nurses in rural posts, and the potential of a range of strategies to address this. Quantitative and qualitative data indicates that a number of strategies could work to improve rural recruitment and retention, with a particular emphasis on salary enhancements for doctors and increased family medical cover for nurses.
- For doctors, the study showed that a 45% salary increase could be one of the most important factors to increase the uptake of rural posts. This finding has been corroborated by results from the follow-up cohort where the majority of doctors have remained in rural postings following a similar salary increase implemented by the government in 2008. However, other incentives could be used to secure long-term retention of doctors in rural areas. These include allowing doctors to be posted in hospitals that are located close to their hometowns and better opportunities for specialist training if they accept a rural post. In addition, smaller hospitals, fast-tracked promotion, case consultant provision and less overtime are also levers that policy-makers should consider.
- Most nurses in this study came from rural areas and had a positive attitude towards working and living in rural setting. Despite this, significant numbers of nurses do not choose a rural job posting. Rural recruitment and retention of nurses could be increased if medical insurance coverage was extended to include their family members. This policy measure alone, our research shows, would be more efficacious than fast-tracked promotion, salary increases (of up to 20%) or more training opportunities; although these remain important incentives as part of an overall package.
- The recruitment of student nurses from rural areas, who can access local training and be offered hometown job placements, in combination with financial and non-financial incentives, offers a good policy option for successful rural recruitment and retention.

RELATED PUBLICATIONS

Blaauw D, Erasmus E, Pagaiya N, Tangcharoensathein V, Mullei K, Mudhune S, Goodman C, English M, Lagarde M. Policy interventions that attract nurses to rural areas: a multicounty discrete choice experiment. *Bull World Health Organ. 2010 May;88(5):350-6.*

Mullei K, Mudhune S, Wafula J, Masamo E, English M, Goodman C, Lagarde M, Blaauw D. Attracting and retaining health workers in rural areas: investigating nurses' views on rural posts and policy interventions. *BMC Health Serv Res. 2010 Jul2;10 Suppl 1:S1.*

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