INTRODUCTION

South Africa, like many other countries around the world, faces a problem of recruiting and retaining nurses in rural areas. In 2008, the ratio of nurses to 100,000 population in the North West province was 81.1 while it was 111.7 in Gauteng province, a much more urban province. These dynamics are compounded by the presence of the private health sector that is almost exclusively in urban areas. This document reports on the initial findings of a longitudinal study in South Africa that seeks to understand how nurses feel about living and working in rural areas and what interventions can be implemented to entice more of them to do so.

The nature of the study

The cohort study began in 2008 when 377 final-year nursing students were recruited to be part of the research. The objective is to track the cohort members, most of whom are currently doing community service, over a number of years to understand where they end up working and how and why they decide to take certain jobs in certain places, and not others. This will help to achieve the overall research objective of understanding what can be done to persuade more nurses to work in rural areas.

The cohort members come from 7 nursing training institutions located in Gauteng and North West provinces (to compare students from relatively rural and urban areas) and comprise both nursing colleges and universities (to compare different types of institutions). The initial findings are based on information obtained during the baseline data collection which took place between July 2008 and October 2008.

Brief profile of the cohort

In total there are 377 cohort members with an average age of 31 years.

<table>
<thead>
<tr>
<th>Sex</th>
<th>Marital status</th>
<th>Number of children</th>
<th>Place of birth</th>
<th>Type of training institution</th>
<th>Location of institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female, 86%</td>
<td>Single, 66%</td>
<td>No children, 39%</td>
<td>Gauteng, 57%</td>
<td>Nursing college, 81%</td>
<td>Gauteng, 57%</td>
</tr>
<tr>
<td>Male, 14%</td>
<td>Married/long term partner, 30%</td>
<td>1 child, 32%</td>
<td>Relatively rural, 36%</td>
<td>University, 19%</td>
<td>North West, 43%</td>
</tr>
<tr>
<td></td>
<td>Divorced/separated, 2%</td>
<td>2 children, 20%</td>
<td>Urban town, 38%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Widowed, 2%</td>
<td>3 children, 7%</td>
<td>Urban city, 16%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 or more children, 2%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

FINDINGS

Factors influencing the decision to take a rural job

The study assessed the relative importance of a set of pre-determined factors in influencing the cohort members’ decisions to choose either a rural-based or urban-based job. This was done by presenting cohort members with different hypothetical scenarios, each containing a mixture of factors, and asking them to choose either a rural or urban job, based on how attractive they found the combination of factors.
In terms of persuading nursing graduates to take up a rural job, Figure 1 indicates:

- A 30% rural allowance would have the largest impact on persuading nursing graduates to take up a rural job.
- Making specialisation easier, by enabling nurses to apply for study leave after 2 years of working, was more important to participants than a 20% increase in salary.
- A car allowance was more important to participants than a 10% increase in salary, even though it was actually worth less money.
- The respondents prefer a job in a clinic to a job in a hospital.
- Improved housing, more rapid promotion and having a more relational management culture (where facility managers emphasise teamwork, loyalty, and developing the full potential of staff) were the least important considerations, albeit still significant.

**Figure 1: Relative importance of job characteristics to choice of rural job**

### Table 1: Modelling the impact of different policy interventions

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Package of interventions</th>
<th>Details</th>
<th>Percentage who would choose a rural job</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>None</td>
<td>No interventions</td>
<td>33.2%</td>
</tr>
<tr>
<td>2</td>
<td>Minimum financial</td>
<td>10% rural allowance</td>
<td>45.9%</td>
</tr>
<tr>
<td>3</td>
<td>Maximum financial</td>
<td>30% rural allowance</td>
<td>71.2%</td>
</tr>
<tr>
<td>4</td>
<td>Non-financial</td>
<td>No Rural allowance; better housing; earlier study leave; quicker promotion and relational organisational culture</td>
<td>75.2%</td>
</tr>
<tr>
<td>5</td>
<td>All interventions</td>
<td>Located in clinic; 30% rural allowance; better housing; car allowance; earlier study leave; quicker promotion and relational organisational culture</td>
<td>97.8%</td>
</tr>
<tr>
<td>6</td>
<td>Practical package</td>
<td>Located in clinic; 10% rural allowance; better housing; earlier study leave and relational organisational culture</td>
<td>85.3%</td>
</tr>
</tbody>
</table>

Note: Study respondents showed they would be 4.98 times more likely to choose a rural job if given a 30% salary increase, compared to if they received their basic salary.

The study also sought to determine whether or not the characteristics of the respondents influenced their choices. In our analysis, the sex and age of the cohort members did not influence the choice of a rural job. However, students who were single, those that had any children, and those that studied at a university were less likely to choose a rural job. On the other hand, students born in a rural area, and those studying in the North West (more rural) province were statistically more likely to choose the rural alternative.

Statistical analysis also allows us to estimate how nurses might react and adapt their choices, based on changes in the job characteristics mentioned above. Table 1 depicts a range of scenarios, each with a different combination of the characteristics discussed in Figure 1, and shows an estimation of the impact of these different combinations on the job choices of the research respondents.
Doing community service in rural areas

At the time of the baseline fieldwork, which took place before the nurses’ graduation, the cohort members were asked to specify the three places in which they would prefer to do community service. Overall 28.7% of the cohort members identified a rural area as their first choice and 11.9% identified only rural areas as the places where they would prefer to do community service. These findings are shown in Table 2 which compares University students to those from nursing colleges in the two provinces.

Table 2: Cohort members’ preferences for rural posts during their community service

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total cohort</th>
<th>Gauteng Colleges</th>
<th>North West Colleges</th>
<th>Universities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st choice rural community service</td>
<td>28.7%</td>
<td>6.5%</td>
<td>67.0%</td>
<td>34.9%</td>
</tr>
<tr>
<td>All 3 choices rural community service</td>
<td>11.9%</td>
<td>1.6%</td>
<td>31.3%</td>
<td>11.9%</td>
</tr>
</tbody>
</table>

The averages, however, mask significant differences between cohort sub-groups. For example, very few cohort members from colleges in Gauteng expressed a preference for a rural community service posting, while this figure was higher for cohort members from universities and higher still for those from colleges in North West.

Selected perceptions about living and working in rural areas

Finally, the cohort members were asked to what extent they agreed with an array of statements about working and living in rural areas. On a scale of 1 to 6, where the former indicates strong disagreement and the latter strong agreement, the cohort as a whole agreed somewhat that one can earn more money working in a rural area (4.4), that one can get quick career advancement in rural areas (4.2) and that one has support from colleagues and supervisors in rural areas (4.7). However, they also thought working in a rural area is stressful (4.5).

There appears to be less enthusiasm for living in rural areas. On a scale of 1 to 6, where the former indicates strong disagreement and the latter strong agreement, the cohort as a whole tended to disagree somewhat with the statements that “Rural quality of life is very good” (2.7), “Rural social life is enjoyable” (2.8) and “The rural lifestyle appeals to me” (2.8). With regard to this last statement, there was a significant difference between college students from North West, who agreed somewhat with the statement (3.3), and those from colleges in Gauteng (2.6) and universities (2.8) who tended to disagree.

About the research

The research is being conducted by the Centre for Health Policy (CHP), a research unit within Wits University (www.web.wits.ac.za/Academic/Centres/CHP/Home). CHP is part of the Consortium for Research on Equitable Health Systems (CREHS). Under the auspices of CREHS, three comparative nursing cohorts have been created in South Africa, Thailand and Kenya.

For more information on the CREHS Cohort, please visit the study’s website http://cohort08.blogspot.com or contact:

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