RECRUITMENT/RETENTION TO IMPROVE RURAL SERVICE

DESK REVIEW

AIDSTAR-One
AIDS SUPPORT AND TECHNICAL ASSISTANCE RESOURCES

SEPTEMBER 2010

This publication was produced by the AIDS Support and Technical Assistance Resources (AIDSTAR-One) Project, Sector 1, Task Order 1, USAID Contract # GHH-I-00-07-00059-00, funded January 31, 2008.

AIDS Support and Technical Assistance Resources Project

The AIDS Support and Technical Assistance Resources (AIDSTAR-One) project is funded by the U.S. Agency for International Development under contract no. GHH-I-00-07-00059-00, funded January 31, 2008. AIDSTAR-One is implemented by John Snow, Inc., in collaboration with Broad Reach Healthcare, Encompass, LLC, International Center for Research on Women, MAP International, Mothers 2 Mothers, Social and Scientific Systems, Inc., University of Alabama at Birmingham, the White Ribbon Alliance for Safe Motherhood, and World Education. The project provides technical assistance services to the Office of HIV/AIDS and USG country teams in PEPFAR non-focus countries in knowledge management, technical leadership, program sustainability, strategic planning and program implementation support.

Recommended Citation

Smith, Tamara. 2010. *Recruitment/Retention to Improve Rural Service, Desk Review*. Arlington, Va.: USAID | AIDSTAR-One Project, Task Order 1, 2010.

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Geographical imbalances in the health work force have been a consistent feature of nearly all health systems, but the problem is particularly exacerbated in developing countries where the disparities in infrastructure between urban and rural areas are so great. Data on human resources (HR) policies that improve health worker recruitment in rural areas is generally poor, but several studies provide evidence that may improve rural recruitment.

For example, in a study in Indonesia using a discrete choice experimental method, Chomitz et al. showed significant differences in posting preferences among medical students in Indonesia (Lagarde and Blaauw 2009). Male medical students from public schools and an urban background were not in favor of a rural posting, but valued the opportunity to specialize or to work in the public service. Male graduates from public schools and more rural backgrounds were also opposed to rural service, but were less negative than their urban counterparts. However, they did not attach a negative value to contract length. Male graduates from private schools and urban origins were strongly opposed to any time in public service, while they favored working in the province where they had studied. Female graduates from public medical schools and nonrural backgrounds showed higher negativity than men for positions offered in remote areas. Lastly, female graduates with rural origins attached a high value to being able to work in their birth region or the area where they studied. This study is important because of its use of a strong research methodology to evaluate student preferences.

A study in Tanzania demonstrated that several factors were related to lack of interest in rural service. Being over the age of 26 improved the likelihood of accepting a rural posting by 30 percent. And, if parents are present in the rural area, the chances of accepting a posting in that area increase by 50 percent (Leon and Kolstad 2010). Interestingly, a plan to specialize in public health significantly decreased the likelihood that a student would be willing to accept a job in a rural area. Students that plan to study public health are 50 percent less likely to accept a rural posting.

Another discrete choice experiment in Ethiopia (Lagarde and Blaauw 2009) showed that the most important job characteristic for doctors was the possibility of working in the private sector, followed by a pay increase. Doctors then chose provision of improved housing, being posted in the capital (compared to a regional city), or better equipment as their priorities. Compulsory service in the public sector in exchange for medical training received was their least important preference. When nurses were asked similar questions, the respondents fell into two general groups: those willing to work in a rural area for a relatively low wage, and those willing to work for a relatively high wage (Serneels et al. 2007).

Interventions to reduce health worker shortages in underserved areas include selective recruitment of those individuals into health care education who are most likely to work in such areas; training specifically for underserved practice; improvements in working or living conditions in underserved areas; and compulsion or incentives (Bärnighausen and Bloom 2009). Financial incentive programs have a number of advantages and disadvantages compared to other interventions to increase the

supply of health workers to medically underserved areas. Unlike nonfinancial incentives, they establish legally enforceable commitments to work in underserved areas; however, they may not improve the working or living conditions in underserved areas, which are important determinants of health workers' long-term retention in those areas. Unlike compulsory service policies, they will not be opposed by health workers; however, they cannot guarantee that they supply health workers to underserved areas who would not have worked in such areas without financial incentives. Financial incentives, nonfinancial incentives, and compulsory service are not mutually exclusive and may positively affect each other's performance.

In a World Bank-sponsored study of doctor absenteeism in Bangladesh (Chaudhury and Hammer 2003), living in the same town or village as the health facility was a key determinant of a doctor's presence at the health facility at some time during the day. Because female doctors rarely lived in the same village as their assigned facility, they had higher overall absentee rates. Finally, access to a road strongly influenced the absentee rates of providers. It directly reduced the absentee rate, it had an indirect effect by making residence in the area of the facility more attractive, and better access to the health facility partially mitigated the effect of living away from the facility by increasing attendance more for nonresident doctors.

A review conducted of almost 15,000 articles published between 1995 and 2009 on recruitment and retention of health workers to rural areas (Dolea, Stormont, and Braichet 2010) found no randomized controlled trials analyzing the effects of retention interventions in rural or remote areas. The review showed a skewed geographical distribution of studies on the effectiveness of rural retention interventions. Most of the studies came from high-income countries, with very few studies originating in developing countries in Africa, Latin America, or Southeast Asia. Significantly, the review findings showed that rural retention interventions are rarely implemented as a result of an analysis of the choices of health workers to practice in rural areas; in other words, health worker preferences are rarely studied prior to designing HR policy interventions.

The authors of a review article on rural staff attraction and retention examined 600 papers and chose 55 for the review (Lehmann, Dieleman, and Martineau 2008). Although retention of health care personnel in rural areas is a significant problem in both developed and developing countries, strategies for addressing attraction and retention are generally barely effective. The strategies they examined were the following:

- Recruitment and training for rural practice
- The use of incentives and compulsory services
- Improving working conditions
- Improving living conditions.

The authors were not able to "find evidence in the literature that, having identified the factors impacting on attraction and retention, government employers developed appropriate HR [management] strategies in direct response to such findings. From the literature review, it is evident that certain strategies, such as targeted recruitment and training as well as incentives and compulsion are frequently reported. However, strategies which address immediate living environments are less commonly described in the literature, even though such strategies would be investments not only for the health sector but for the entire population. Interestingly, the literature also reports little evidence of strategies which address management and working conditions at the work place, although the

importance of the immediate working environment on attraction and retention has been identified in numerous studies" (Lehmann, Dieleman, and Martineau 2008).

The authors' analysis concluded that because HR managers often lack knowledge, skills, and authority to improve local working conditions and because the power to make decisions that will improve working and living conditions lies across lines of authority of many different ministries, simple, ineffective solutions replace complex, effective ones.

One review article looking at health worker motivation and retention (Willis-Shattuck et al. 2008) listed the following seven factors affecting motivation of health workers: financial rewards, career development, continuing education, hospital infrastructure, resource availability, hospital management, and recognition and appreciation. The authors concluded that "financial incentives, career development and management issues are core factors affecting motivation. It is clear that recognition is highly influential in health worker motivation; furthermore adequate supplies and appropriate infrastructure are factors that can significantly improve morale. Hence, financial incentives by themselves are not the appropriate response" (Willis-Shattuck et al. 2008).

The World Health Organization position paper on rural retention (Dolea 2009) selected 31 studies for which there was fairly weak evidence, and summarizes the conclusions as follows:

Education and regulatory interventions

- Health professionals from rural backgrounds are more likely to practice in rural areas (consistent findings from observational studies).
- Clinical rotations in a rural setting may influence medical students' subsequent decision to work in an underserved area (quasi-randomized trials).
- Adapting curricula to include rural health issues improves competences to work in rural areas and creates more interest to work in these areas.
- The effectiveness of compulsory placement has been assessed by descriptive surveys with inconclusive results (it addresses the short-term maldistribution, but is criticized for alienating people from the profession, and for the difficulties in administration and enforcement).
- Loan repayment schemes, direct incentives, and medical-resident programs to encourage rural placement have the highest service completion rates and physician retention rates.

Type and level of remuneration

- Direct financial incentives to practice in rural areas may encourage rural practice, especially in developed countries, but reports from developing countries are not positive.

Management, environment, and social support

- Professional and community support to rural workers encourages rural practice (but there are no quantitative results from an actual intervention); it can be achieved by supportive supervision, internet access, and community involvement projects, as well as by professional networks.
- Very few countries have implemented large-scale interventions to improve the infrastructure and living conditions. This is despite the fact that factors ranking highest in workers' preferences and choices of location are precisely those related to the local infrastructure, isolation, and working conditions.

SUMMARY

A summary of key points is as follows:

- Indonesian male graduates from public medical schools and more rural backgrounds were opposed to rural service, but were less negative than their urban counterparts.
- Among Tanzanian medical students, being over 26 years of age improved the likelihood of accepting a rural posting by 30 percent. And, if parents are present in the rural area, the chances of accepting a posting in that area increase by 50 percent.
- Tanzanian medical students that plan to study public health are 50 percent less likely to accept a rural posting.
- The most important job characteristic for Ethiopian doctors was the possibility of working in the private sector, followed by a pay increase.
- In general, strategies by governments to address to rural retention and recruitment are not aligned with the barriers to rural living and working identified by health staff. Simple interventions are introduced to attract and/or retain staff when, in fact, rural service incentives are complex.
- Financial incentives are generally ineffective when used alone.
- Evidence for all retention strategies is relatively weak.

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