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## **Influences on, and Measurement of, Maternal and Newborn Health Care Providers' Motivation at primary care level in rural areas of Tanzania and Burkina Faso**

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**Introduction:** There is keen, current interest in strategies to enhance health worker motivation, especially in developing countries. The reason for this is closely linked with the drive to improve the quality of health care services and, ultimately, health outcomes. This study took place in the context of the 'Quality of maternal and neonatal health (MNH) care: Bridging the know-do gap' (QUALMAT) research project which will pilot two interventions - a Clinical Decision Support System and a package of performance-based incentives - designed to positively influence MNH provider performance and motivation. In a first phase this study sought to establish which factors influence the motivation, performance and job satisfaction of MNH providers at rural primary level facilities in Tanzania and Burkina Faso, as well as which incentives such providers themselves propose. It was also the intention to explore the similarities and differences between the findings from the two countries. In a second phase, the development of an instrument to assess any changes in MNH provider motivation due to the pilot interventions was aspired to.

**Methods:** At the outset the necessary steps were taken to obtain ethical clearance for the study. Next, a scoping review of the literature was undertaken. Based upon this a conceptual framework for the QUALMAT project was elaborated. It outlined how individual, organisational, health system, policy, community and cultural factors, as well as the nature of the work itself might impact upon provider motivation and performance. For phase one a qualitative methodology was selected and a topic guide for in-depth interviews put in place. A total of 35 interviews were carried out with MNH providers and their managers in each country in mid 2010. The transcripts were coded and analysed with support of the software NVivo. The writing up of this phase was completed by March 2011 - in time to inform the development of the instrument to assess provider motivation from the outset, as well as the process of elaborating the incentives package.

With regards the second phase, although a large number of psychometric tools for measuring worker motivation exist in the West, none have been validated for use in developing countries. Consequently, constructs were proposed where changes were expected as a result of the two pilot interventions. Items were then developed for each construct. These were presented to a panel of experts from all the three sub-Saharan African countries involved in QUALMAT for confirmation of face validity. Use was made of a 4-point likert scale. For language reasons the pre-test was carried out with 70 providers in Ghana (although this study in fact focused upon Tanzania and Burkina Faso). Exploratory factor analysis revealed a latent, three factorial structure comprising management, performance and individual dimensions. All three factors relate back to the conceptual framework. Based upon this analysis and reliability testing a final, parsimonious version of the instrument was created. This was then translated into Kiswahili and French and used with MNH providers from 12 rural primary level facilities (6 intervention and 6 non-intervention) in each country in September 2011. Analysis of the baseline data was conducted with the software SPSS. Unweighted mean responses to the three main dimensions (management, performance and individual) were compared between the intervention and non-intervention groups and across the demographic variables for any differences of significance.

**Results and Discussion:** Phase one revealed that understandings of the terms and concepts pertaining to motivation differed between the two countries. The effect that this may have had on how the respondents described and perceived their own levels of motivation requires greater clarification. Community appreciation was valued by respondents in both countries, but the importance attached to the views of superiors varied - with facility managers in Tanzania shown to face particular challenges. In both countries the use and acceptability of performance management tools was found to be limited. Moreover, definitions of the term 'good performance' were shown to be rather loose, which is a concern given the current policy focus on rewarding performance with incentives.

Factors that encouraged or discouraged MNH providers showed commonalities between the two countries. On-the-job learning and improvements in the availability of equipment at facilities were the most widely mentioned encouragements. Apart from low salaries, the most frequently mentioned discouragements included: inconsistencies of overtime and leave arrangements, allowance entitlements, malfunction of the promotion system and facility understaffing. There were also strong similarities regarding the incentives proposed by MNH providers in both settings, but not by those from different levels of the health system in each country. In Tanzania incentives for individuals were preferred, but in Burkina Faso incentives for teams were favoured.

The main results from phase two were the development of an instrument to assess changes in MNH provider motivation over time, and its successful implementation with health workers of varying levels of education and training in both countries. These results in themselves provide a replicable, well-documented procedure that others can now take advantage of. The findings from the first use of the instrument in Burkina Faso showed a significant difference between the intervention and non-intervention groups, which had not been anticipated at baseline. The former were more positive in their responses to the management dimension. A focus group discussion was held to analyse this and it was attributed to the better staffing situation in Nouna, possibly due to the presence of the research centre. In both countries most of the variables did not have an effect upon the mean responses to items from any of the three dimensions at baseline. In Tanzania the provider's age, the number of dependents they were financially responsible for, and the time they had spent at the current facility were exceptions. In Burkina Faso age and length of time spent at one's current position were exceptions. In both countries, the longer a respondent had been at their current level or facility, the more positive their responses regarding the management dimension became. It is possible that with time health workers gain a greater understanding of the difficulties of managing a rural facility. Older respondents in both countries were significantly more positive about the performance dimension. This could be due to the greater respect elders generally enjoy in these societies, as well as because their work experience is likely to be appreciated by their co-workers and patients alike.

**Conclusions:** The factors found to influence MNH provider motivation, performance and job satisfaction during phase one, spanned the different levels outlined in the conceptual framework. They also displayed strong similarities between the two countries, as did the types of financial and non-financial incentives the MNH providers themselves suggested. However, there were important differences regarding the incentives proposed by those at higher and lower levels of the health system, as well as regarding the modalities for awarding incentives. These differences underscore the importance of preliminary, country-specific qualitative research to reach common understandings of the concepts and terms pertaining to motivation, as well as to inform the development, and accompany the introduction, of performance-based incentives packages.

To tackle the main causes of MNH provider discouragement and extend the encouragements, both ongoing policy level action (salaries, allowances, promotions), and the strengthening of rural facility management (leave arrangement, on-the-job training, health and safety, maintaining equipment) are required.

Despite the reservations of other researchers, phase two of this study showed that it is possible to work with psychometric tools at primary health care level in sub-Saharan Africa. The care taken to root the instrument in the setting of its future application, to keep it as straight-forward as possible, and to introduce it in an appropriate and detailed manner all played an important role in this achievement. However, it is cautioned that such instruments require very lengthy preparatory periods. Moreover, the effort needed to adapt such instruments for use in other languages in different countries within the same region should not be underestimated either.