



# IMPROVING MATERNAL AND NEWBORN CARE COUNSELING IN BENIN: OPERATIONS RESEARCH ON USE OF JOB AIDS AND TASK SHIFTING

## Background

The clinic-based antenatal and postnatal periods present an important opportunity for health care workers to improve mothers' understanding of care for themselves and their newborns. Yet, information is lacking on what types of messages are provided to women. Studies examining antenatal and postnatal counseling suggest that information sharing is often less than guidelines recommend.

Efforts to improve counseling must do so in contexts where skilled personnel have limited performance support and face multiple demands in delivering clinical services along with health advice to women. One potential strategy is to employ job aids: verbal or pictorial instructions designed to enhance worker performance. Recent evidence has shown that job aids can serve as a low-cost, effective strategy to help workers correctly perform specific tasks. In the context of counseling, these tools help providers remember and convey key messages using simple text and imagery. However, much of the evidence on job aids relates to HIV and AIDS, infant feeding, or malaria with few studies examining their effectiveness in communication on maternal and newborn care.

There is also growing interest in task shifting as a strategy to improve the quality and coverage of health care services. Task shifting is the delegation of non-technical tasks traditionally performed by professional workers to less skilled personnel to allow professional workers

to focus on more clinical, life-saving roles and expand care to settings with shortages of skilled personnel. Evidence shows that trained lay workers with clearly defined roles can support services provided by more skilled workers, but questions remain regarding the impact of task shifting on the quality of care provided and what resources are needed to support less skilled workers.

## Objectives

This study examined whether a pictorial set of job aids could improve the quality of maternal and newborn care counseling by skilled providers and whether similar performance levels could be achieved by clinic-based lay providers as part of a task shifting initiative to expand their role.

## Improvement Strategy

The job aids developed in this study were a set of pictorial counseling cards designed to enhance information sharing to women. Nineteen cards were organized into four modules that prioritized messages according to the stage of pregnancy or time following birth. The front of each card depicted an image to support communication with printed text of key messages on the back.

The improvement strategy had three components: training, field support, and organizational changes. Skilled providers and lay nurse aides were trained to use the job aids with an added module on supervision for skilled personnel.

The training sessions were followed by field support visits to strengthen communication processes and support the task shift. Site-level improvement teams identified changes in the organization of counseling such as designating a place for counseling or grouping women according to prioritized modules.

## Research Methodology

This study used a randomized group trial pre-post study design. Data were collected prior to



**Maternal and Newborn Health Job Aids**

and after introduction of the job aids among skilled personnel, as well as after the task shift among lay providers. The study evaluated two outcomes: quality of counseling and maternal knowledge. These were assessed through direct observation of counseling sessions and patient exit interviews across topic areas relating to maternal and newborn care. Provider perceptions around the job aids and task shifting were also assessed.

Data were analyzed using STATA 9.2 using difference-in-differences analyses of hierarchical mixed models. To compare performance levels of skilled versus lay providers, the study employed a non-inferiority analysis where non-inferiority was demonstrated if the lower confidence limit of the difference in performance between the two provider types did not exceed a margin of 10 percentage points. Statistical significance was considered at  $p < 0.05$ .



**Two nurse-midwives role-playing during job aids training**



**Lay nurse aide counseling recently-delivered woman using a job aid**

May 2009

## Results

### Job Aids among Skilled Providers

Findings show that the mean percentage of messages provided (out of the total recommended messages) significantly improved in areas such as birth preparedness (56% to 81%), danger sign recognition (38% to 66%), immediate newborn care (13% to 48%), and healthy home practices (52% to 76%) with few changes over time in the control arm (Table 1). Improved communication was also associated with significant increases in the proportion of women knowing at least three key messages for birth preparedness (20% to 52%), danger sign recognition (52% to 87%), and healthy home practices (58% to 86%, Table 2). There were no significant improvements in the quality of counseling or maternal knowledge for messages related to general antenatal care.

The job aids were found to be easy to implement, consistent with existing practices, and acceptable by providers and women. Time constraints remained among skilled providers who were also engaged in other clinical services.

### Task Shifting to Lay Nurse Aides

Findings demonstrate that the quality of counseling by nurse aides when supported by job aids was comparable or "non-inferior" to counseling provided by skilled providers (nurse-midwives) in areas such as birth preparedness (95% CI: -9, 9) and danger sign recognition (95% CI: -5, 15, Table 1). Nurse aides demonstrated superior performance for messages related to general antenatal care (95% CI: 7, 24) and healthy home practices (95% CI: 5, 12). The lower limit fell outside of the margin of non-inferiority for messages related to newborn care (95% CI: -23, 8), yielding inconclusive results.

Communication by lay nurse aides was also associated with significantly higher levels of maternal knowledge as compared to women counseled by skilled providers for all topic areas except newborn care where results were comparable (Table 2). Although skilled workers indicated that the shift gave them more time for clinical services, following the task shift, both skilled and lay providers preferred "task sharing" rather than a full delegation given shortages of both types of personnel. Nurse aides also stated that the shift provided more regard and clarity to their role. However, increased communication was associated with longer consultations.

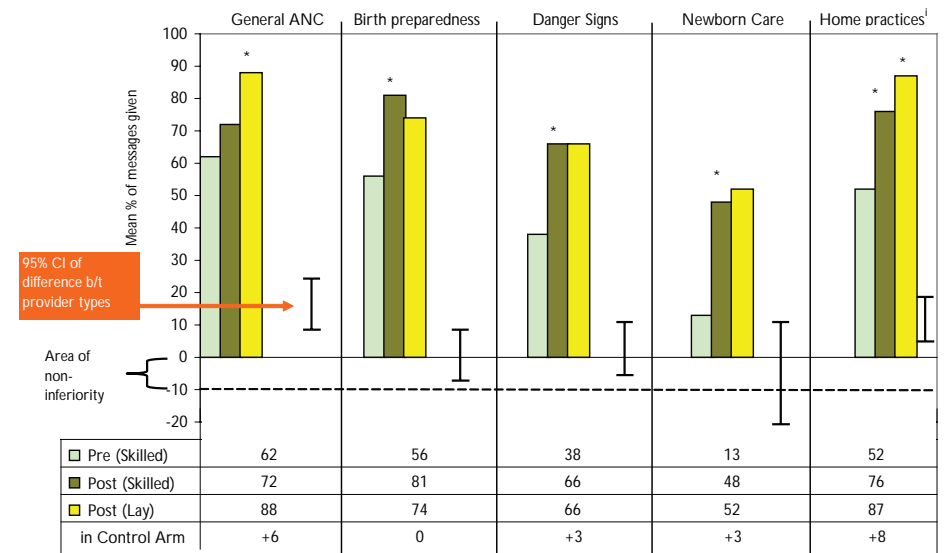
## Implications

This study demonstrates that job aids are an effective tool for improving provider communication in maternal and newborn care

and can be integrated into routine antenatal and postnatal care services. Building capacity of health personnel along with field support and organizational changes was crucial in improving overall communication. Results from the task shifting study suggest that there is little reason to exclude lay nurse aides in efforts to improve facility-based maternal and newborn care counseling provided they receive

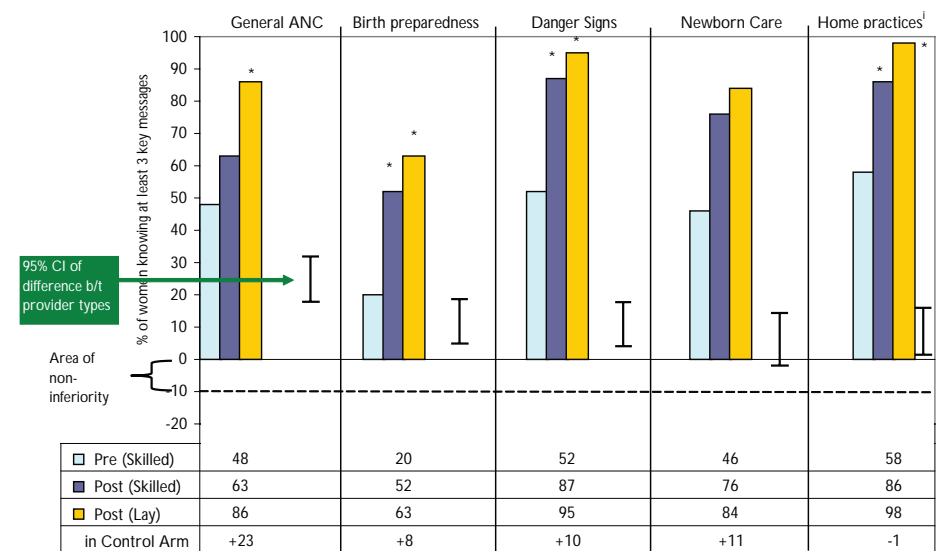
adequate training and support. However, efforts are needed to ensure that improvements are sustained over time and that facility-based counseling is linked with other modes of care, such as community-based strategies. Implementing long-term task shifting or task sharing approaches will also require broader efforts to improve management of human resources.

**Table 1. Improved quality of facility-based maternal and newborn care counseling by skilled and lay health providers using pictorial job aids in Zou/Collines, Benin**



Source: Direct observation of counseling session \* Significant at p<0.05 (Unadjusted); Note: [i]= recently-delivered women  
Sample size: Pregnant women Pre-Skilled N= 211; Post-Skilled N=204; Lay N=203; Delivered women: N=95, N=161, N=162, respectively

**Table 2. Increased knowledge of pregnant and recently-delivered women following counseling of job aid-supported skilled and lay health care providers**



Source: Patient Exit Interviews \* Significant at p<0.05 (Unadjusted); Note: [i]= recently-delivered women  
Sample size: Pregnant women Pre-Skilled N= 211; Post-Skilled N=204; Lay N=203; Delivered women: N=95, N=161, N=162, respectively