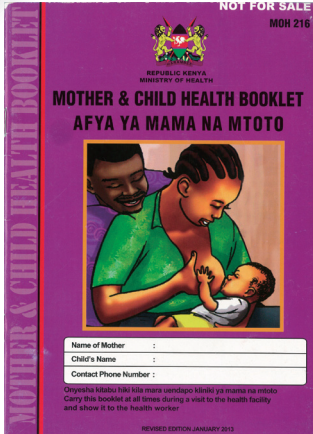




## KENYA: Is MCH Booklet useful as educational and behavior change tool?



Maternal and Child Health Handbook, Kenya, 2013

### Background

It has been reported that maternal and child health (MCH) Handbook and immunization card serve as the important tool that provides health workers with tangible information on clients' maternal and child health. They help health workers deepen their understanding on clients' health status and thereby provide appropriate treatments. Yet, more importantly, MCH Handbook can provide pregnant women and caregivers with health knowledge, too. Some Asian and African countries have developed and been distributing their country-specific MCH Handbooks or booklets. For example, the Kenyan Ministry of Health developed a handy-sized (A5), 34-pages, MCH Booklet and nationally launched it in 2010. It is given to mothers at or any time after first antenatal care visit. Development and sustainable supplies of the MCH Booklet are not an easy task for the resource-constrained countries like Kenya. Therefore, presentation of the effectiveness of the MCH Booklet was the key to justifying continuous budgeting for its printing and distribution.

### Does MCH Booklet increase health knowledge and change health behavior?

To answer this fundamental question, two studies were conducted. One is the study that attempted to estimate the increase in knowledge and changes in behavior on maternal and child health through the MCH Booklet in Kenya. The other is a randomized control trial (RCT) of re-designed immunization card and facility-based health education in Pakistan. These two studies not only answer the aforementioned question, but also provide policy makers with insights on and practical tips for further implementation of the MCH Booklet.

In the former study, a community-based cross-sectional survey was conducted, using a structured questionnaire in Nyanza province, a rural western Kenyan province, in 2011. A total of 2,560 mothers with children aged 12-24 months were the study target. In this study, possession of an MCH Booklet was categorized as either into 'Possess an MCH Booklet' or into 'Lost or never owned an MCH Booklet'. Despite the cross-sectional survey, propensity score matching (PSM) method enabled the effectiveness of the MCH Booklet to be reasonably estimated. After controlling and matching the possible confounding factors such as wealth and education levels by PSM method, a significant increase was detected among those having the MCH Booklet compared with those not having it, in terms of: (i) health knowledge; (ii) health seeking behavior for childhood fever; (iii) health seeking behavior for childhood diarrhea, by 5.9%, 9.4% and 12.6% respectively. However, there was no significant difference in full vaccinations between the MCH Booklet users and its non-users. It was found that the MCH Booklet could encourage mothers to seek appropriate health care services through equipping them with essential health knowledge. Yet, this study did not identify its effectiveness in vaccination rate. Since



Interviewing an MCH Booklet user in Nyanza, Kenya

the vaccination status of children not having the MCH Booklet was reported by mothers/ caregivers, quality of its information is likely to be questionable due to recall bias.

In addition, it is relatively easier for a mother to provide accurate information on health knowledge and health-seeking behavior, because the former stands for the current status and the latter is based on relatively fresh memories of events in the previous month.

The latter study was an RCT conducted in Pakistan that was aimed at estimating the effectiveness of the graphic-assisted immunization card (similar to the MCH Booklet

except maternal health part) and facility-based health education. It was found that those receiving both the immunization card and health education were significantly less likely to drop out from the immunization program (DPT1-DPT3) than the other groups. These two types of interventions (i.e. graphic-assisted card and facility-based health education) are likely to have significantly increased the DPT3 completion rate. Moreover, it is found that synergetic effect is likely to have been created, when using the user-friendly immunization card for facility-based health education events.

## Conclusion

The MCH Booklet is likely to be an appropriate educational tool for mothers and caregivers, by covering a wide range of essential information (e.g. danger signs during pregnancy, childhood illnesses, and child vaccination schedules). The MCH Booklet could encourage mothers and caregivers to opt for appropriate health seeking behaviors, through providing them with health knowledge. In addition, greater user-friendliness through its graphic-assisted design, format and layout serves as the powerful element in increasing the effect of the MCH Booklet. To further promote its utilizations, it is recommended that a series of health education sessions be conducted using the MCH Booklet.

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Mother with the MCH Booklet in a waiting space of the health facility

▼ **Table 1. Average effect of treatment on the treated (ATT) of the three dependent variables in the PMS study**

Dependent variables	Having	Not having	ATT(%) <sup>a</sup>	Std. Error <sup>a</sup>
Higher health knowledge	1331	649	0.051*	0.023
Proper health seeking behavior for child's fever	1012	473	0.095***	0.024
Proper health seeking behavior for child's diarrhea	566	264	0.119***	0.033
Full vaccination	1319	585	0.030	0.020

<sup>a</sup> Bootstrapped standard error of treatment effect with 100 replications

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

### Further readings

1. Brown DW. Child immunization cards: Essential yet underutilized in national immunization programmes. *Open Vaccine* 2012; **5**(1): 1-7.
2. Kawakatsu Y, et al. Effectiveness of and factors related to possession of a mother and child health Handbook: an analysis using propensity score matching. *Health Educ Res* 2015; **30**(6): 935-46.
3. Usman HR, et al. Redesigned immunization card and center-based education to reduce childhood immunization dropouts in urban Pakistan: a randomized controlled trial. *Vaccine* 2009; **27**(3): 467-72.