

“Mother and Baby 7 day mCheckprogramme by WHO”

In India, the recent years have shown a reduction in infant mortality rate 42 (2012) deaths per 1000 live births and maternal mortality ratio 190 (2013) deaths per 10,000 live births. Still the country has a long way to achieve the millennium developmental goal (MDG), IMR to 28 and MMR to 109 by the year 2015. An observational study conducted in Karnataka, India revealed that counseling on the major causes of maternal and neonatal deaths¹ at the time of discharge after delivery occurred less than 1%. In the Wardha region of Maharashtra state, India 67% of mothers knew of one danger sign. Another study in the Wardha region of Maharashtra, India demonstrated health education delivered through simple e-Health messages using local words for newborn danger signs and pictures to pregnant women's groups significantly improved the mothers' knowledge regarding newborn danger signs. These studies showed that education provided on danger signs with the use of simple appropriate tools increased their knowledge on danger signs. Considering these facts, the Mother/Baby 7-day mCheck programme was developed by WHO Patients for Patient Safety Champions, a network of patients from around the globe who are committed to improving patient safety by empowering patients. The mCheck intervention educated mothers using a paper tool, a video film, and reminder voice messages. The six danger signs for mothers² and six danger signs for babies³ were explained to mother with the help of the paper tool and the video film after delivery. Automated reminder voice messages were sent to mothers on their mobile phone during the first 7 days of delivery. Each day message had one mother and one baby danger sign mentioned and advised the mother to refer to the paper tool given in the hospital and on identifying any danger signs, was advised to seek medical care immediately. After 7- 21 days of getting discharge from the hospital, mothers' knowledge was assessed.

FRHS and WHO with the funding support of Bill and Melinda Gates foundation conducted a study in Mysore district of Karnataka from April- October 2013 to assess the impact of mCheck intervention on educating mothers on danger signs in order to improve their health seeking behavior. The study was conducted in three government health facilities. The study measured the improvements in mother's knowledge of danger signs, ability to identify complications and their health seeking behaviour as a result of the program interventions. Comparison was made between the knowledge of two groups of mothers- those who did not undergo the mCheck program interventions and those who went through the mCheck intervention.

The study found significant improvement in mothers' knowledge of maternal and neonatal danger signs (see table 1). Ninety percent of mothers in the intervention group could recall at least one mCheck danger sign as compared to 25% in the non-intervention group. Strikingly, the number of mothers recalling 3 or more signs was 2 % in mothers who received no intervention as compared to 73 % in the group where mothers received mCheck intervention. In the group where mothers were not exposed to the mCheck intervention, none were able to enumerate all

¹ Hemorrhage, infection, obstructed labor, and hypertensive disorders, intrapartum-related stillbirths and neonatal deaths (i.e., intrapartum-related events, infection, and complications of prematurity)

² Mother danger signs – severe bleeding, headache / blurred vision, fever, foul smelling vaginal discharge, difficulty breathing and problems with urination

³ Baby danger signs – difficulty breathing, jaundice, baby not feeding well, fever, baby's body cold to touch and floppy baby.

important maternal dangers signs (severe bleeding, headache/ dizziness (for high blood pressure), and foul smelling vaginal discharge (for sepsis) as compared to 26.5% in mCheck intervention group. Besides improvement in the knowledge of mothers, the study found that the proportion of mothers who identified a complication at home was 5.6% in mCheck intervention group as compared to 3.2% in non-intervention group. 72% of the intervention mothers who identified a complication at home sought help as compared to 37% in the non-intervention mothers.

With regard to baby danger signs, almost 99% of mothers in the intervention group were able to recall at least one mCheck baby sign as compared to 31% in the non-intervention group. 15.7% of the intervention mothers were able to enumerate 3 danger signs- breathing difficulty, baby feeling cold to touch (hypothermia) and fever (for pneumonia), while none were able to do so in the non-intervention group. However, there was no improvement in identifying baby complications at home between the intervention (5%) and non-intervention group (3.8%). Similarly, health seeking behavior for baby complications did not improve between the two groups probably because it was already very high (92% and 89.5%).

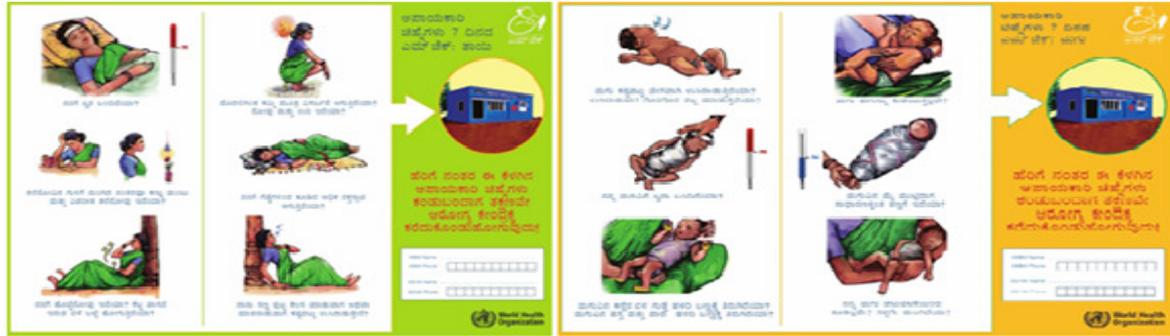
Educating the mothers on maternal and neonatal danger signs using mCheck tool has improved the knowledge of danger signs and improved the health seeking behavior of mothers. Using appropriate tools to educate mothers and their family members will reduce maternal and infant deaths and help in reaching the millennium developmental goals.

Results

Indicators	Mothers with no Intervention (a)	Mothers with no Intervention (b)	% gain after intervention (c)	Significance (Z-proportion test)
	N=500	N=516	C=b-a	
% mothers knew at least one mother danger sign	25.2 (126)	98.3 (508)	73.1	0.0000**
% mothers knew at least one baby danger sign	31.2 (156)	98.8 (510)	67.6	0.0000**
% mothers who identified danger sign in herself at home	3.2 (16)	5.6 (29)	2.4	0.0607
% mothers sought treatment for mother danger signs after discharge from hospital	37.5 (6)	72.4 (21)	38.4	0.0000**
% mothers who identified danger sign in her baby at home	5.0 (25)	3.7 (19)	-1.3	0.3106
% mothers sought treatment for baby danger signs after discharge from hospital	92.0 (23)	89.5 (17)	-2.5	0.168
% mothers reported getting advice on mother danger signs during stay in maternity ward	3.4 (17)	96.3 (497)	93.0	0.0000**
% mothers reported getting advice on baby danger sign during stay in maternity ward	2.6 (13)	95.9 (495)	93.3	0.00000**

** indicates significance at 95% Confidence Interval at both one sided and two sided.

mCheck tool used



Danger sign - Mother

Danger sign - Child

mCheck paper tool