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Abstract #: *2.015_MDG*

Reducing childhood mortality through the private medical sector: An evaluation of world health partners' social franchising and telemedicine network in Bihar, India

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Background: The under-five mortality rate in India is 48 deaths per 1000 live births, well above the 4th Millennium Development Goal of 38. Many of these deaths are due to pneumonia and diarrhea, the leading causes of mortality in children under 5. Most children in India access care through the private medical sector, but current evidence demonstrates that these providers adhere poorly to national treatment guidelines. Social franchising has emerged as an intervention to improve quality of care within the existing private sector, but few studies have evaluated the impact of social franchising on child health, which is the aim of this paper.

Methods: A secondary analysis was conducted of a cross-sectional data collected from June-July of 2013 in 209 clinics within a social franchising network in Bihar, India. 148 clinic visits with children under 5 were observed. Two primary outcomes were measured: 1) provider knowledge of WHO diarrhea and pneumonia management guidelines and 2) adherence to these guidelines. A semi-structured questionnaire and clinical observation checklist were used to assess these outcomes. Bivariate analysis using Fischer's exact test and a significance threshold of $p \leq 0.10$ was used to determine the association between provider knowledge and clinical adherence. Approval for this secondary data analysis was obtained from the University of California, Berkeley Institutional Review Board.

Results: Of the 45 children presenting with diarrhea, 44% received oral rehydration solution (ORS) and 29% received zinc supplementation. 10% of the 63 children presenting with acute respiratory illness were treated with amoxicillin, and about half were treated with an unspecified injectable medication. Knowledge of ORS for diarrhea management was significantly associated with prescription of ORS for diarrhea compared to providers without reported knowledge of ORS for diarrhea (56% vs. 8%, p=0.005).

Discussion: Despite the association between provider knowledge and appropriate management of diarrhea, nearly half of providers who reported knowledge of ORS did not prescribe ORS. Possible reasons include poor symptomatic relief, misperceptions of effectiveness, and insufficient incentives. Given these barriers, improved provider training and incentives, patient education, and enforcement mechanisms are needed to maintain social franchising as a viable option to reduce preventable childhood mortality.

Abstract #: *2.016_MDG*

Kybele-adding postpartum uterine massage to decrease postpartum bleeding in a rural armenian hospital

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Background: Rural Hospitals in Armenia have limited access to uterotonic medications, medical supplies and blood bank services. Uterine massage (UM) was introduced in hopes of decreasing the risk of uterine atony and prevention of postpartum hemorrhage (PPH). The goal was to determine if adding a simple procedure as part of the standard care of the active management of 3rd stage or labor (AMSTL) could lead to improve outcomes for patients at minimal additional cost.

Methods: This is an observational study that included all women with normal spontaneous vaginal delivery (NSVD) in 2013 (n= 864) and in 2014 (n= 883) at Akhurian Hospital. AMTSL included administering Oxytocin 10 units intramuscular after delivery of the anterior shoulder and controlled cord traction. UM was demonstrated by fundal uterine massage after the delivery of the placenta every 10 minutes for about 2 hours. UM became a part of AMTSL standard care in 2014. Primary outcomes was the rate of PPH, uterine atony, bleeding <24 hours or >24 hours and the amount of blood loss if >500 ml or >1000 in all NSVD that occurred in 2013 and 2014. Secondary outcomes included retained placenta, trauma and endometritis.

Findings: Primary finding was a relative risk reduction of 64% for PPH. PPH occurred in 23 NSVD in 2013 compared to 10/883 NSVD in 2014. Uterine atony decreased from 1.7% to 0.6% (p = .02) bleeding < 24 hours decreased from 2.2% to 0.8% (p= .02) and blood loss > 500 ml significantly decreased from 1.9% to 0.8% (p=.02). UM did not significantly decrease bleeding > 24 hours, blood loss >1000ml, retained products, trauma or endometritis.

Interpretation: Study showed that implementing a simple and standard maneuver is associated with 64% risk reduction for PPH. While we recognize the limitations of observational studies the only standard practice that changed was the addition of UM. While there potentially could have been population factors that impacted the findings this seems less likely in a rural area of Armenia with limited migration. These finding show that simple inexpensive interventions can have a marked impact on the health of populations.

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Utilization of health services in a resource-limited rural area in Kenya: prevalence and associated household-level factors

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