Evidence Assessment: Summary of a Systematic Review

Who is this summary for?

This evidence assessment is for Doctors, Health Personel, Community Health Workers, health facility administrators and the stakeholders involved in mother and child health.

Health system and community level interventions for improving antenatal care coverage and health outcomes

Key findings

- Single interventions only marginally improved the numbers of women attending four antenatal visits.
- Single interventions led to modest improvements in the number of women who had at least one antenatal visit and who delivered in a health facility.
- There was no difference in the number of women attending four or more antenatal visits, maternal deaths, baby deaths, the number of deliveries in a health facility or the number of women who received intermittent preventive treatment for malaria, comparing one intervention with a combination of interventions.

Background

Healthcare during pregnancy is a priority because poor antenatal attendance is associated with delivery of low birthweight babies and more newborn deaths. Antenatal care also provides opportunity for nutritional and health checks, such as whether a woman has a disease like malaria or has been exposed to infectious diseases such as HIV (human immunodeficiency virus) or syphilis which may be transmitted to the baby if not managed appropriately.

Question

What are the effects of health system and community interventions for improving coverage of antenatal care and other outcomes?

Health system and community level interventions for improving antenatal care coverage and health outcomes in Cameroon: According to the 2011 Demographic and Health, maternal mortality is estimated at 782 deaths per 100,000 live births and infant mortality from 62 per 1,000 live births in Cameroon. The national average is estimated at one per pregnancy ANC for 83.3 to 85% of women in labor with only 60% received the minimum of four visits (INS, 2011). The government has entered into several commitments including the launch in 2010 of the Campaign for the Accelerated Reduction of Maternal Mortality in Africa (CARMMA). The implementation of these intervention at community level could improve maternal and child health.

Table 1: Summary of the systematic review		
	What the review authors searched for	**What the review authors found**
Studies	Randomised controlled trials (RCTs), quasi-randomised trials and cluster-randomised trials.	Thirty two randomized controlled trials met the inclusion criteria.
Participants	Professional health workers, Lay health workers, community members, pregnant women, women of reproductive age.	Women who were either of reproductive age or pregnant
Interventions	All interventions susceptible to improve coverage of ANC were eligible for inclusion in this review. These interventions could be aimed at the health system, the population or both. Owing to the potentially wide variety of interventions, there were no restrictions to duration or frequency of the intervention. Interventions aimed at the health system (policy changes, Health worker education, Re-organisation of health services) and interventions aimed at the community (mass media campaigns, social mobilisation, information-education-communication, financial incentives, behaviour change interventions).	Ten of the included trials aimed to evaluate health system interventions only. One trial with multiple arms aimed to evaluate health system and community interventions separately and together. Ten trials evaluated community interventions alone The rest of the trials (13) aimed to evaluate a combination of health system and community interventions.
Controls	No intervention	No intervention
Outcomes	**Primary outcomes** • Coverage of ANC: the proportion of pregnant women who attend at least four ANC visits during pregnancy. • Pregnancy-related deaths: the proportion of women who die during pregnancy or 42 days after, irrespective of cause. **Secondary outcomes** • Coverage of ANC: the proportion of pregnant women who attend at least one ANC visit during pregnancy; • The proportion of pregnant women who initiate ANC in the first trimester; • The proportion of pregnant women who receive ANC from professional health workers; • The proportion of deliveries in health facilities; • The proportion of pregnant women with a written birth and emergency plan by 37 weeks of pregnancy; • The proportion of pregnant women who receive • Intermittent Prophylactic Treatment (IPT) for malaria as per recommended guidelines.	**Primary outcomes** • Antenatal care (ANC) coverage: four or more visits; • Pregnancy-related deaths. **Secondary outcomes** • ANC coverage: one or more visits; • Pregnant women initiating ANC in the first trimester; • Pregnant women receiving ANC from a health professional; • Deliveries in a health facility; • Intermittent prophylactic treatment for malaria; • Proportion of women with tetanus protection at birth; • Proportion of women receiving treatment for syphilis; • Proportion of women with HIV who receive a complete antiretroviral course; • Perinatal mortality; • Preterm labour; • Low birthweight.
Date of the most recent search: 7 June 2015		
Limitations: This is a high quality systematic review**, AMSTAR =11/11**		
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Table 2: Summary of findings

Comparison 1: One intervention versus no intervention			
Patient or population: Pregnant women or women of childbearing age **Settings:** Argentina, Bangladesh, Brazil, Cuba, Ghana, Honduras, India, Malawi, Mexico, Mongolia, Nepal, Rwanda, South Africa, Tanzania, UK, Vietnam, Zanzibar, Zimbabwe **Intervention:** One intervention **Comparison:** No intervention			
Outcomes	**Relative effect (95% CI)**	**No of Participants (studies)**	**Quality of the evidence (GRADE)**
ANC coverage: four or more visits	1.11 [1.01-1.22]	45022 (10)	High
Pregnancy-related deaths	0.69 [0.45-1.08]	114930 (10)	Low
ANC coverage: one or more visit	1.68 [1.02-2.79]	19281 (6)	Moderate
Deliveries in a health facility	1.08 [1.02-1.15]	74299 (10)	High
Perinatal mortality	0.98 [0.90-1.07]	189074 (15)	Moderate
Low birthweight	0.94 [0.82-1.06]	27154 (5)	High

Applicability

Included trials took place in: Argentina (2), Bangladesh (4), Brazil, Cuba (2), Eastern China, Ghana, Honduras, India (3), Laos, Malawi, Mexico (3), Mongolia, Nepal (2), Pakistan (3), Rwanda, Saudi Arabia, South Africa (2), Southern Tanzania, Thailand, Uganda, United Kingdom, USA (3), Vietnam, Zanzibar and Zimbabwe. These interventions may be applied in other low resources settings such as Cameroon.

Conclusions

Single interventions may improve antenatal care coverage (women attending at least one visit and women attending four or more visits) and encourage women to give birth in health facilities. Combined interventions may also improve antenatal care coverage (at least one visit), reduce baby deaths and reduce the number of babies born with low birthweight.

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