Better Births Initiative

Improving health through evidence-based obstetrics

A programme for action in middle and low-income countries

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What is the Better Births Initiative?

The Better Births Initiative aims to ensure that clinical policies and procedures used in essential obstetric services are grounded in reliable research evidence. It is targeted at health care providers and assists them in understanding research evidence, making decisions about best practice, and establishing implementation procedures to assure change. It's aimed at middle and low-income countries, where resources for health care are limited and better services will reduce maternal mortality.

Good quality obstetric care needs good infrastructure, trained staff, equipment and drugs. Many governments and donors are striving to establish and maintain these services. The Better Births Initiative complements these efforts, and helps ensure the procedures staff use are based on the most reliable research evidence.

Policy makers, managers, midwives and doctors all have a role to play in effecting change towards evidence based practice.

Better quality

Making clinical policies and practices more evidence based will improve quality, and will improve health outcomes in women and their babies. The Better Births Initiative encourages health workers to abandon practices that are painful, potentially harmful and have no evidence of benefit. This means women will have a better experience of childbirth. This will help enhance the reputation of the provider, and encourage women to use the service, particularly those from disadvantaged groups who are often frightened to attend.

What is research evidence?

Any health care practice has benefits and harms, and researchers assess these effects through research, usually randomised controlled trials. Over the years, researchers throughout the world have carried out many such trials, and bringing together the totality of this research is the job of research synthesis. Research is synthesised through systematic reviews, which are carefully done and updated over time. With these results, policy makers, health professionals and users of health care can make more informed decisions about the best care appropriate for an individual's circumstance.

Despite huge efforts by the Cochrane Collaboration and others in synthesising existing research evidence, there remains a gap between this information and health provider practice. It's not easy for individual health professionals or teams to change the way they have been taught to do things, and the way they are used to behaving. Research evidence has shown quite clearly that information about best practice is insufficient.

People need to be motivated to change, and to organise how this actually is implemented in practice, and monitored over time.

The Better Births Initiative focuses on particular areas of obstetric practice which are frequently deficient, where it is reasonable to expect people to change, and where any resource implications of the change are probably realistic and affordable.

What practices does the Better Births Initiative target?

Systematic review findings can help providers change practice for the better. The Better Births Initiative targets practices that can help save lives and improve the quality of care, and practices that are harmful or unnecessary. The Better Births has identified practices relevant to middle and low income countries where research evidence available through the WHO Reproductive Health Library provides some guidance on best practice. The interventions are grouped around three areas: saving lives, improving quality and avoiding harms (see Annex 3 for references).

SAVING LIVES

Practices that can prevent maternal and infant deaths, such as:

Routine oxytocic drugs given to the mother after the baby is born. It reduces the risk of postpartum haemorrhage.

Magnesium sulphate for women with eclampsia. It reduces the risk of further convulsions.

Antiretroviral drugs given to women who are HIV positive. They reduce the risk of mother to child transmission.

Prophylactic antibiotics during caesarean section. This reduces serious postpartum maternal infection.

Prophylactic antibiotics given to women with prolonged rupture of membranes. They reduce the risk of maternal and neonatal infection.

Prophylactic steroids given prior to preterm birth. They prevent respiratory distress syndrome and reduce neonatal mortality.

IMPROVING QUALITY

Practices that can improve the health of women and infants, such as:

Companionship provided by a family member or lay carer during labour. This improves maternal satisfaction, shortens labour, and improves breastfeeding. It also reduces the need for pain relief and assisted delivery.

Being mobile during labour. This shortens labour and reduces the need for pain relief and assisted deliveries.

Routine antibiotics for preterm, prelabour rupture of membranes. They improve maternal and neonatal outcomes.

Keeping the umbilical cord clean at delivery. Poor hygiene is associated with neonatal tetanus and sepsis.

AVOIDING HARMS

Practices that are degrading or painful, such as:

Routine episiotomy is associated with more pain, poor healing, and longer hospital stays. Episiotomies should only be done where clinically required.

Routine enemas. They are uncomfortable, make a mess, and are of no benefit. Enemas should be used only if requested.

Perineal shaving. Degrading, and of no demonstrable benefit.

Withholding oral fluids. Uncomfortable and unjustified.

Routine artificial rupture of the membranes (AROM). Painful, and of no value unless progress in labour is abnormal.

Supine position for delivery. Affects blood flow in the uterus and interferes with progress of second stage of labour.

What is the process for implementing change?

Implementing changes in obstetric practice requires commitment from policy makers, managers and doctors and midwives working in maternity units. The steps outlined here suggest activities that can be initiated at all levels to ensure change is institutionalised and maintained.

1. Political commitment

Discuss with policy makers, hospital managers, and senior midwives and doctors about international trends in evidence-based approaches, sources of evidence, how practice could be changed and its potential impact.

2. Evidence-based training

Arrange with health professionals in each unit to visit them. Communicate evidence based concepts and use specific examples in evidence based approaches, with trainers that understand evidence-based approaches and are familiar with Cochrane Reviews and the Reproductive Health Library. Use learning materials to guide health workers through the process. All levels of staff should be encouraged to attend and discuss the feasibility of changing practice.

3. Design local implementation package

Health professionals at individual units need to agree specific changes that are achievable, and could dramatically improve women's experiences during labour. A baseline study of current practice, using a patient note audit or survey method, can help identify gaps between evidence and practice and where change is needed most.

Agree on a strategy that will introduce the practice changes and encourage all levels of maternity staff to implement them. Methods that have been used to help health professionals change their practice include audit and feedback, small group workshops, opinion leaders and incentives. A combination of provider targeted approaches is more effective than formal educational methods alone (see Annex 4 for references to systematic reviews of interventions to change health professional behaviour).

4. Reinforcing change

For change to be implemented, all labour ward staff should be made aware of the strategy for change. Respected local opinion leaders can help to establish new norms and reinforce new practices. Selecting respected peer leaders at individual maternity units, and involving them in disseminating the agreed changes can help to institutionalise new practices.

5. Monitor progress

Encourage staff to develop mechanisms to assure quality and monitor progress. Regular audit of maternity register entries or patient notes can help to monitor changes to practice over time. Establish a forum to feedback progress to all maternity staff; using existing meetings could facilitate this process (see Annex 5 for methods to monitor and evaluate progress).

Annex 1.

Implementing change in low and middle income settings

South Africa project

The BBI International Group has developed a health provider targeted change package that introduces the evidence-based standards and encourages labour ward staff to consider potential benefits and harms of procedures they use.

The Better Births Initiative package focuses on a few key obstetric practices, and comprises core materials to raise the demand for change, and innovative management strategies that involve providers in the process of change. The rationale behind the package is to encourage labour ward staff to consider the potential benefits and harms of procedures used during childbirth; and to introduce a set of (evidence-based) changes that are achievable with existing resources. The package is presented as an interactive workshop with colourful materials including a workbook, reference booklet, posters, a presentation, video material and a self-audit mechanism (see Box 1).

Box 1 Materials included in the Better Births Initiative change package

Workbook	To guide group discussion around benefits and harms of procedures; exercises examine current practice, and identify ways to change practice.
PowerPoint presentation	An introduction to evidence-based practice, which summarises the evidence for obstetric procedures.
Reference booklet	A summary of the best evidence; concise, quick-reference style.
Journalistic style video	Real experiences of implementing companionship in labour wards in South Africa.
Posters	Showing procedures that the Initiative promotes; designed to be displayed in labour wards and antenatal clinics.
Self audit	A method for monitoring practice and introducing change.

The Better Births Initiative was piloted in Gauteng province in 2000-1, and is being implemented in collaboration with provincial Maternal and Child Health Directorates in two provinces, Kwazulu-Natal and Eastern Cape.

China

Fudan School of Public Health, Shanghai, conducted an observational study to explore actual practice, women's preferences and provider's views. The results showed variation in clinical practice at government hospitals in Shanghai, and highlighted important barriers to changing practice. On the basis of this study, and in response to the positive reaction of health professionals in China, the BBI materials

will be translated and adapted for use as a training course in evidence-based childbirth care.

Findings from this observational study in China are published in BioMedCentral: Xu Qian, Helen Smith, Li Zhou, Ji Liang, Paul Garner. Evidence-based obstetrics in four hospitals in China: An observational study to explore clinical practice, women's preferences and provider's views. BMC Pregnancy and Childbirth 2001, 1:1 (http://www.biomedcentral.com/1471-2393/1/1/).

Zimbabwe

An observational study was used to explore actual practice, differences between evidence and practice, and women's views about childbirth at a government hospital in Harare. Using indicators of good obstetric care helped to identify the gap between knowledge and actual practice. The study also helped maternity staff identify barriers to implementing research findings at the organisational, social and individual level.

Tanzania

The African Midwives Research Network, Dar Es Salaam have designed an implementation study to promote the use of more upright positions for birth, and mobility during labour. The study builds on findings from the South Africa implementation, and will use adapted BBI materials in a training programme to enhance the skills and confidence of midwives in changing their practice.

Annex 2.

Establishing basic obstetric care: A resource guide

To implement the changes specified by the Better Births Initiative requires maternity facilities that provide basic obstetric services. Managers have a key role in ensuring that components of basic obstetric care are in place.

Elements of basic obstetric care include[1]:

- Working with communities to **improve access** to maternity care.
- **Strengthening the referral system**.
- **Improving human resources** by offering in-service training and skills updating opportunities for staff.
- **Strengthening midwifery skills** for midwives, nurses and doctors.
- **Monitoring standards for practice** in maternity care.
- **Using health information to improve quality of care**: improve record keeping; analyse maternal deaths and near misses through audit; identify substandard care and avoidable factors.
- **Continuous revision and updating of practice guidelines** and protocols.

Resources

Strengthening midwifery skills

The Perinatal Education Programme (PEP) is a useful course for updating midwifery skills. The PEP course offers an educational opportunity to all nurses and doctors who are not able to access traditional training programmes in maternal and newborn care.

Contact:
Perinatal Education Programme
P.O.Box 34502
Groote Schuur, Observatory, 7937
South Africa
Fax/phone +27 (0)21 671 8030
info@pepcourse.co.za
http://www.pepcourse.co.za/index.html

Using health information

WHO/RHT/HRP. Reproductive health indicators for global monitoring: report of the second interagency technical meeting. Geneva: World Health Organization, 2001. (Unpublished document, available on request from Reproductive Health and Research, World Health Organization, 1211, Geneva, Switzerland).

[1] Adapted from WHO/UNFPA/UNICEF/World Bank. Reduction of maternal mortality: a joint WHO/UNFPA/UNICEF/World Bank statement. Geneva: World Health Organization, 1999.

WHO/FHE/MSM. Safe motherhood needs assessment. Part VI: Maternal death review guidelines. Geneva: World Health Organization, 1995. (Unpublished document, available on request from Reproductive Health and Research, World Health Organization, 1211, Geneva, Switzerland).

Monitoring standards

WHO/FRH/MSM. Care in normal birth: report of a technical working group. Geneva: World Health Organization, 1997. Available online http://www.who.int/reproductive-health/publications/MSM_96_24/MSM_96_24_abstract.en.html and on request from Reproductive Health and Research, World Health Organization, 1211, Geneva, Switzerland.

Updating and revising guidelines and protocols

For the most up to date evidence on reproductive health topics that are relevant to developing countries, see the WHO Reproductive Health Library, Issue 5, 2002. The RHL includes Cochrane systematic reviews, expert commentaries on the relevance of systematic review findings to developing countries and practical advice on the management of the specific reproductive health problems in resource-poor settings. The RHL is published annually and is available on a free subscription basis in developing countries. Send your postal details to: WHO Reproductive Health Library, Special Programme of Research, Development and Research Training in Human Reproduction, World Health Organization CH-1211 Geneva 27, Switzerland. Tel: +41 22 791 3380; Fax: +41 22 791 4171; Email: RHL@who.ch.

Annex 3.

Systematic reviews in obstetric care.

The Cochrane Library and the WHO Reproductive Health Library (RHL) are the main sources of evidence for the Better Births Initiative. The RHL is an electronic journal that includes Cochrane Reviews on reproductive health topics that are relevant to developing countries. The reference list below highlights reviews that are available in the RHL[2].

Saving lives

Routine oxytocic drugs for haemorrhage

RHL Elbourne DR, Prendiville WJ, Carroli G, Wood J, McDonald S. Prophylactic use of oxytocin in the third stage of labour (Cochrane Review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

Magnesium sulphate for eclampsia

RHL Duley L, Henderson-Smart D. Magnesium sulphate versus diazepam for eclampsia (Cochrane Review). In: The Cochrane Library, Issue 2, 2001. Oxford: Update Software.

RHL Duley L, Gulmezoglu AM. Magnesium sulphate versus lytic cocktail for eclampsia (Cochrane Review). In: The Cochrane Library, Issue 2, 2001. Oxford: Update Software.

RHL Duley L, Henderson-Smart D. Magnesium sulphate versus phenytoin for eclampsia (Cochrane Review). In: The Cochrane Library, Issue 2, 2001. Oxford: Update Software.

Antiretroviral drugs

Brocktehurst P. Interventions aimed at decreasing the risk of mother-to-child transmission of HIV infection (Cochrane Review), in: The Cochrane Library, Issue 2, 2001. Oxford: Update Software.

Dabis F, Msellati P, Newell ML, Halsey N, Van de Perre P, Peckham C et al. Methodology of intervention trials to reduce mother-to-child transmission of HIV with special reference to developing countries. AIDS 1995;9 Suppl A:S67-S74.

Landesman SH, Kal'ish LA, Burns DN, M'mkoffH, Fox HE, Zorilla C et al. Obstetrical factors and the transmission of human immunodeficiency virus type 1 from mother to child. N Engl J Med 1996;334:ie17-23.

Prophylactic antibiotics for caesarean section

RHL Smaill F, Hofmeyr GJ. Antibiotic prophylaxis for caesarean section

[2] World Health Organization. The WHO Reproductive Health Library, Issue 4,200. WHO/RHRMRP/RHL/3/00. Oxford: Update Software. The RHL is published annually and is available on a free subscription basis in developing countries. Send your postal details to: WHO Reproductive Health Library, Special Programme of Research, Development and Research Training in Human Reproduction, World Health Organization CH-1211 Geneva 27, Switzerland. Tel: +41 22 791 3380; Fax: +41 22 791 4171; Email: RHL@who.ch

(Cochrane Review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

Prophylactic antibiotics for pre-term, pre-labour rupture of membranes

Kenyon S, Boulvain M, Neilson J. Antibiotics for preterm premature rupture of membranes (Cochrane Review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

Improving quality

Companionship during labour

RHL Hodnett ED. Caregiver support for women during childbirth (Cochrane Review). In: The Cochrane Library, Issue 2, 2001. Oxford: Update Software.

Department of Reproductive Health and Research, WHO (1999). Care in Normal Birth: a practical guide. Geneva: World Health Organization.

Hofmeyr GJ, Nikodem VC, Wolman WL, Chalmers BE, Kramer T. Companionship to modify the clinical birth environment: effects on progress and perceptions of labour, and breastfeeding. Br J Obstetrics and Gynaecology 1991;98:756-764.

Being mobile during labour

Department of Reproductive Health and Research, WHO (1999). Care in Normal Birth: a practical guide. Geneva: World Health Organization.

Routine antibiotics for preterm, prelabour rupture of membranes

RHL Kenyon S, Boulvain M, Neilson J. Antibiotics for preterm premature rupture of membranes (Cochrane Review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

Prophylactic steroids prior to preterm birth

RHL Crowley P. Prophylactic corticosteroids for preterm birth (Cochrane Review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

Keeping the umbilical cord clean

RHL Zupan J, Garner P. Topical umbilical cord care at birth (Cochrane Review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

Avoiding harm

Restrictive use of episiotomy

RHL Carroli G, Belizan J. Episiotomy for vaginal birth (Cochrane Review). In: The Cochrane Library, Issue 2, 2001. Oxford: Update Software.

Department of Reproductive Health and Research, WHO (1999). Care in Normal Birth: a practical guide. Geneva: World Health Organization.

Enemas during labour

Cuervo LG, Rodriguez MN, Delgado MB. Enemas during labour (Cochrane Review). In: The Cochrane Library, Issue 2, 2001. Oxford: Update Software.

Department of Reproductive Health and Research, WHO (1999). Care in Normal Birth: a practical guide. Geneva: World Health Organization.

Perineal shaving

Basevi V, Lavender T. Routine perineal shaving on admission in labour (Cochrane Review). In: The Cochrane Library, Issue 2, 2001. Oxford: Update Software.

Department of Reproductive Health and Research, WHO (1999). Care in Normal Birth: a practical guide. Geneva: World Health Organization.

Withholding oral fluids

Mangesi L, Hofmeyr GJ. Early compared with delayed oral fluids and food after a caesarean section (Protocol for a Cochrane review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

Department of Reproductive Health and Research, WHO (1999). Care in Normal Birth: a practical guide. Geneva: World Health Organization.

Mckay S, Mahan C. Modifying the stomach contents of labouring women: why, how, with what success, and at what risks? How can aspiration of vomitus in obstetrics be prevented? Birth 1988;15 (4):213-221.

Artificial rupture of the membranes

RHL

Fraser WD, Turcot L, Krauss I, Brisson-Carrol G. Amniotomy for shortening spontaneous labour (Cochrane Review). In: The Cochrane Library, Issue 2, 2001. Oxford: Update Software.

Supine position for birth

Gupta JK, Nikodem VC. Position for women during second stage of labour (Cochrane Review). In: The Cochrane Library, Issue , 2002. Oxford: Update Software.

Department of Reproductive Health and Research, WHO (1999). Care in Normal Birth: a practical guide. Geneva: World Health Organization.

Annex 4.

Systematic reviews in health professional behaviour change.

The Cochrane Effective Practice and Organisation of Care Group (EPOC)[3] produce systematic reviews of interventions to improve professional practice and the delivery of effective health services. This includes various forms of continuing education, quality assurance, informatics, financial, organisational and regulatory interventions that can affect the ability of health care professionals to deliver services more effectively and efficiently. A selection of reviews of interventions that can help change health professional behaviour are listed below. It is commonly recognised that while there are 'no magic bullets' for improving the quality of health care, there are a wide range of interventions available that, if used appropriately, could lead to important improvements in professional practice[4].

Quality assurance

Thomson O'Brien MA, Oxman AD, Davis DA, Haynes RB, Freemantle N, Harvey EL. Audit and feedback: Effects on professional practice and health care outcomes (Cochrane review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

Thomson O'Brien MA, Oxman AD, Davis DA, Haynes RB, Freemantle N, Harvey EL. Audit and feedback versus alternative strategies (Cochrane review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

Continuing education

Thomson O'Brien MA, Freemantle N, Oxman AD, Wolf F, Davis DA, Herrin J. Continuing education meetings and workshops: effects on professional practice and health care outcomes (Cochrane Review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

Thomson O'Brien MA, Oxman AD, Davis DA, Haynes RB, Freemantle N, Harvey EL. Educational outreach visits: effects on professional practice and health care outcomes (Cochrane Review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

Thomson O'Brien MA, Oxman AD, Haynes RB, Davis DA, Freemantle N, Harvey EL. Local opinion leaders: effects on professional practice and health care outcomes (Cochrane Review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

Freemantle N, Harvey EL, Wolf F, Grimshaw JM, Grilli R, Bero LA. Printed educational materials: effects on professional practice and health care outcomes (Cochrane Review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

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[3] For more information about EPOC see: Bero LA, Grilli R, Grimshaw JM, Mowatt G, Oxman AD, Zwarenstein M (eds). Cochrane Effective Practice and Organisation of Care Group. In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

[4] Oxman, A. D., Thomson, M. A., Davis, D. A., Haynes, R. B. No magic bullets: a systematic review of 102 trials of interventions to improve professional practice. Canadian Medical Association Journal 1995;193 (10): 1423-1431.

Financial incentives

Gosden T, Forland F, Kristiansen IS, Sutton M, Leese B, Giuffrida A, Sergison M, Pedersen L. Capitation, salary, fee-for-service and mixed systems of payment: effects on the behaviour of primary care physicians (Cochrane Review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

Giuffrida A, Gosden T, Forland F, Kristiansen IS, Sergison M, Leese B, Pedersen L, Sutton M. Target payments in primary care: effects on professional practice and health care outcomes (Cochrane Review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

Organisational interventions

Zwarenstein M, Bryant W. Interventions to promote collaboration between nurses and doctors (Cochrane Review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

Briggs CJ, Capdegelle P, Garner P. Strategies for integrating primary health services in middle- and low-income countries: effects on performance, costs and patient outcomes (Cochrane Review). In: The Cochrane Library, Issue 1, 2002. Oxford: Update Software.

Annex 5.

Monitoring and evaluation mechanisms

When implementing a change strategy it is important to establish mechanisms to assure quality and monitor progress. Regular audit of maternity register entries or patient notes can help document practice rates over time. A simple standard survey of postnatal women, conducted regularly, can also monitor changes to practice.

Example - audit of maternity register entries/patient notes

Rates of use for specific practices can be estimated using a simple audit of maternity register entries or patient notes. Conducted regularly by labour ward staff for *x* deliveries, the audit can document changes to practices targeted by an implementation strategy.

		Practices to be audited					
Record/ patient number	Mode of delivery	**Was episiotomy performed?**		**Was an enema given?**		**Were antibiotics given with CS?**	
		Yes	No	Yes	No	Yes	No
TOTAL							

Example - survey of postnatal women

A short survey or exit interview with postnatal women can provide an estimate of practice rates for interventions that are difficult to measure using an audit. Companionship, mobility and oral fluids during labour and position for delivery are all practices that are not recorded in maternity registers or patient notes; asking women about their experiences during labour using short closed-ended questions can be useful to estimate rates of use for these practices.

Questions that might be included in an exit interview are:

1. **Companionship:** Were you allowed a friend or family member with you during labour?

1 = Yes
2 = No
3 = Don't know

2. **Mobility:** When you were admitted to labour ward, did you:

1 = Stay in bed
2 = Rest with little movement
3 = Move around
8 = Don't know

3. **Oral fluids:** Was it easy to get a drink during labour?

1 = Yes
2 = No
8 = Don't know

4. **Delivery position:** What position were you in for delivery?

1 = Lying on your back
2 = Sitting upright
3 = Squatting
4 = Standing
5 = Other …….. (please specify)
8 = Don't know

Annex 6.

Contacts and collaborators

The Better Births Initiative is a project that started in Coronation Hospital, Johannesburg, South Africa in the Effective Care Research Unit, and developed in collaboration with the Reproductive Health Research Unit and Liverpool School of Tropical Medicine. It is a component of the Effective Health Care Alliance Programme (EHCAP), supported by the Department for International Development. Funds for South Africa activities come from a variety of sources, including government of South Africa.

BBI website: http://www.liv.ac.uk/evidence/

Contacts

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Paul Garner, Helen Smith, Effective Health care Alliance Programme, Liverpool School of Tropical Medicine, UK (cjdhel@liverpool.ac.uk)