

I. Basic Care

I.1 Effective Health Care

What is evidence-based health?

• Brief history

Recently EBM has been defined as “The conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients”. The practice of EBH means; integrating individual clinical expertise with the best available external clinical evidence from systematic research ⁽³⁾.

The term was first used at McMaster University Medical School in Canada in the 1980s to describe a clinical leaning strategy developed around a problem-based learning approach ⁽⁴⁾.

The approach involves searching and criticizing information derived from research, which clinicians can use to help them make decisions about the care of individual patients. This wider definition is called EBH. The process tends to close the gap between good research and good practice, both by incorporating research evidence into practice and identifying questions for researches. These benefits are not confined to particular types of clinician; they are relevant to those practicing and training at all levels of seniority ⁽³⁾.

Why Evidence-Based health?

Our main motivation in writing this book is to catalyze primary care stuff and GPs into considering, and hopefully adopting the approach of evidence based health. So we should ensure that we understand what evidence is, what it is not, we need to understand its limitations, and how we can best integrate it into our work and thinking.

Health care is a complex matrix of needs, demands and intervention options. The most appropriate choices may not be applicable.

There is resistance from the professions to adapt the new information. We agree that primary care often is a complex matrix of clinical, social and psychological problems. But, when there is an opportunity to question what we do, or negotiate with other professionals, we should endeavor to have some confidence that what we are saying is valid and remains so in the light of recent discoveries and information ⁽⁴⁾.

The art and science of health care starts with a patient’s problems and how they may best prevented, diagnosed or managed. We are therefore, as clinicians, constantly making decision. Using the information we gain from history taking, clinical examination and tests. We apply this to other information either retained in our memory, sought from the literature or from discussions with others. We then formulate solutions, based on a range of options, in negotiation with the patient.

EBH is a way of enabling us to improve our decision making by providing the information from research that may aid us in our complex tasks.

It does not seek to devalue clinical skills, personal experience, the relationship we have with our patients, or the knowledge we have about individual patient’s circumstances.

It has been asserted that “Good doctors use both individual clinical expertise and the best available external evidence, neither alone is enough” (Sackett et al., 1996).

Basic care

Thus, EBH can inform the clinical skills of obtaining a history, examination, investigation, problem formulation and patient management planning. It can help us make appropriate referrals and improve our communications.

What do we mean by an effective care?

What actually constitutes effective care in pregnancy and childbirth?

Different opinions

What we most want to achieve in dealing with patients?
What we think is most important goal?

- Patients satisfaction?
- Gaining personal experience?
- Minimizing the perinatal morbidity and mortality no matter how this may increase the mother's risk
- Main concerns about cost and limited resources, so efficiency and cost saving are most important

All these goals are important

Different recommendation of care

Widely Different care practices

The best way to achieve



Evidence Based Practice

Sometimes the belief that one form of care is better than another is based on an informal impression gained from:

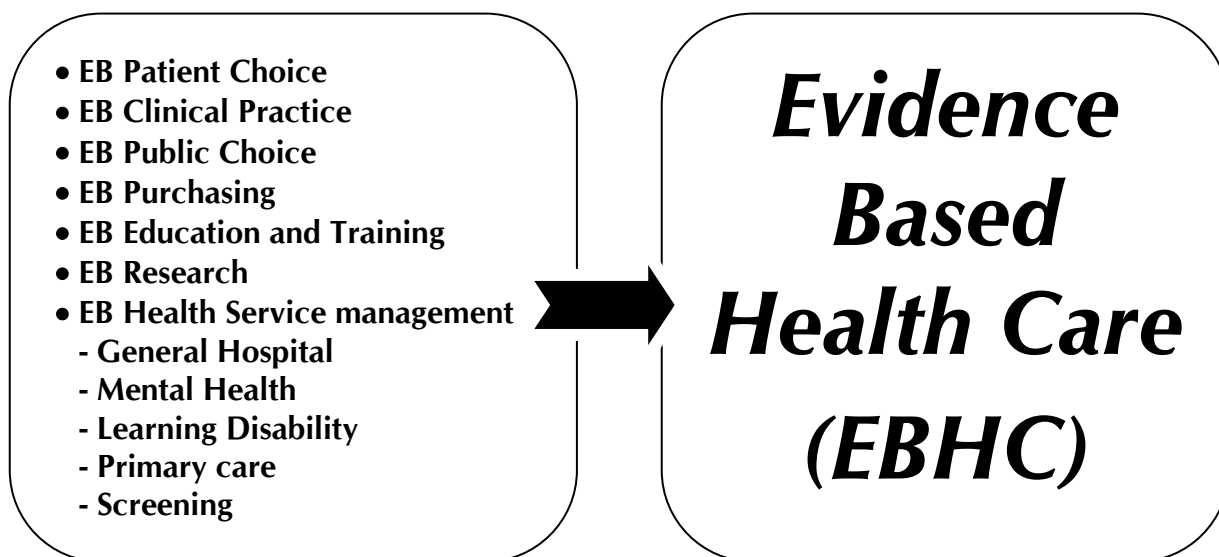
- Personal experience
- Previous teaching
- Events that happen to us personally

Our informal impressions are sometimes

<p>Right</p> <p>e.g.</p> <p>Our informal impression that vacuum extraction causes less injury to the birth tract than with forceps. Originally gained from informal observation then confirmed by results of formal studies.</p>	<p>Wrong</p> <p>e.g.</p> <p>Informal observation that DES* administration could prevent abortion refuted by the results of formal properly controlled studies.</p>
---	---

Traditional medical learning is based on didactic teaching, and experimental work including the art of diagnosis. In such a system, clinical problems are solved by reflecting on your own experience, applying the underlying basic medical sciences, consulting textbooks or asking local experts. Much of the information on which this traditional learning is based is derived from facts and opinions in textbooks. These may not be systematic in their review of the publishing literature, instead reflecting the bias of the authors. So our experience has to be supplemented by the results of formal studies.

Evidence-based health care ⁽¹⁾ means that the policies and practices employed in the prevention and treatment of health problems are based on principles that have been proven through appropriate scientific methods. It must always be remembered, of course, that proving the clinical effectiveness of a procedure is not sufficient. It needs to be complemented by evidence that both health care providers and users are satisfied, and that the procedure is both cost-effective and feasible in different settings.



Bandolier library - Evidence based patient choice (Oct. 1995: 20-7) ⁽²⁾

Diethylstilbesterol "A hormone that was given during pregnancy for some women with history of abortion and cause problems in female * offspring"

1.2. Support for pregnant women ⁽¹⁾

When women have inadequate resources of money, time, and energy, they may not be able to make the choices that promote health. People may behave in a way that seems irrational to an outsider, but which is the best choice for them. Pregnant women may have other priorities beside care, such as finding the time and money to provide for children already in the household.

A pregnant woman doesn't leave her work, community and family responsibilities behind when she steps into the clinic or doctor's office.

Antenatal advice about rest or admission to hospital during pregnancy, for example, often doesn't take into account the woman's circumstances.

The woman must weight the benefits that she may gain from following the advice against its financial and social costs.

Soundly based dietary advice may be ineffective if women are unable to follow it because of cost, or because it fails to take into account the constraints of cultural or family customs about food.

So, those providing care must be sufficiently aware of social, psychological, and physical problems experienced by pregnant women.

Lifestyle in pregnancy

1. Pre pregnancy advice

- Use of folic acid supplementation before pregnancy prevent neural tube defects and possibly limb defects.
- Immunization against rubella
- Pre pregnancy assessment and advice in some problems such as diabetes.
- In family history of genetic predisposition or congenital malformations.
- To screen for conditions that may affect the decision to become pregnant (e.g. HIV infection)
- Sensible advice: about taking unnecessary drugs.
- Practical assistance for quitting smoking.

2. Sexual activity

- On the basis of available evidence, any prohibition of sexual activity in pregnancy is inappropriate.
- The possibility that coitus near term may reduce the incidence of post-dates pregnancy has not been adequately investigated.

3. Smoking

- There is strong evidence of its harmful effects on the fetus, it reduces the birth weight.

4. Work

- Women who have previously given birth to infants weighing less than 2 KG are often advised not to work
- Guidelines on work during pregnancy often neglect any mention of housework and child care as work, whether in regard to exposure to toxic chemicals (e.g. pesticides, household cleaners or lifting heavy weights).

5. Dietary modifications in pregnancy

There is no evidence that dietary restriction of any sort confers any benefit to pregnant women or their offspring.

A. Pre and periconceptional nutrition

All women who might become pregnant should ensure an adequate intake of folic acid, at least around the period of conception, either through supplementation or diet. Women who have had a fetus with neural tube defect, should be offered a folic acid supplement (4 mg/ day), and it should begin before conception and continue through the first three months of pregnancy.

B. High protein dietary supplement

High protein dietary supplement should be avoided. Balanced energy and protein in large enough amounts reduces the incidence of small for gestational age birth and may reduce the prenatal mortality.

C. At present there is no basis for recommending supplementation with any specific nutrients for suspected impaired fetal growth. Antigen-avoidance diets did not show any benefit.

D. Routine hematinic supplementation with iron has a benefit (in our population iron deficiency is a common problem).

E. Calcium supplementation to women at high risk of pre-eclampsia.

F. Vitamin D supplementation at the end of pregnancy.

G. Iodine supplementation in places where there is endemic cretinism.

I.3. Antenatal care

(New WHO model – four visit schedule) ⁽⁶⁾

Introduction

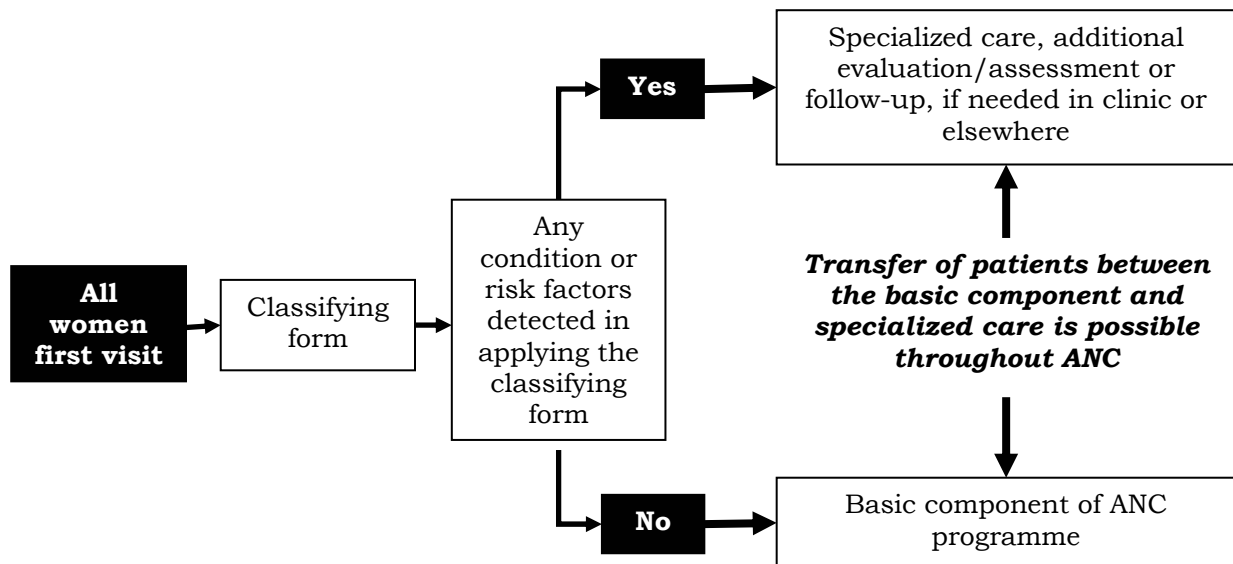
In developing countries, routinely recommended antenatal care programs are often poorly implemented and clinical visits can be irregular, with long-waiting times and poor feed back to the women.

The new WHO model limits the number of visits to only four visits and restricts the tests, clinical procedures and follow-up actions. The results of this trial showed that there were no significant difference between the new and the standard models in terms of severe anemia, pre-eclampsia, urinary tract infections or low birth weight infants. Also there were no significant differences in secondary outcomes for either women or infants, including the rates of eclampsia and maternal and neonatal deaths.

Overview of the new WHO antenatal care model

The new WHO antenatal care model segregates pregnant women into two groups: those eligible to receive routine ANC (called the basic component); and those who need special care based on their specific health conditions or risk factors (Figure-1). Woman can follow this schedule for the first time at any time of her pregnancy regardless her gestational age which they start the programme. The remaining women are given care corresponding to their detected condition or risk factor. The women who need special care will represent, on average, approximately 25% of all pregnant women initiating antenatal care.

Figure-1: The new WHO antenatal care model



The classifying form

The classifying form is used at the first antenatal visit to the clinic to decide which women will follow the basic component and those at risk of complication in pregnancy and childbirth and will require referral for special care.

Figure-2: Classifying form

Criteria for classifying women for the basic component of the new antenatal care model

IDENTIFICATION

- Name of patient: _____ ■ Clinic record number:

--	--	--	--	--

 ■ Address: _____ ■ Telephone: _____

INSTRUCTIONS: Answer all of the following questions by placing a cross mark in the corresponding box.

OBSTETRIC HISTORY	No	Yes
1. Previous stillbirth or neonatal loss?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. History of 3 or more consecutive spontaneous abortions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Birth weight of last baby < 2500g?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Birth weight of last baby > 4500g?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Last pregnancy: hospital admission for hypertension or pre-eclampsia/eclampsia?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Previous surgery on reproductive tract? (Myomectomy, removal of septum, cone biopsy, classical CS, cervical cerclage)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CURRENT PREGNANCY	No	Yes
7. Diagnosed or suspected multiple pregnancy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. Age less than 16 years?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. Age more than 40 years?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Isoimmunization Rh (-) in current or in previous pregnancy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. Vaginal bleeding?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12. Pelvic mass?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13. Diastolic blood pressure 90mm Hg or more at booking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

GENERAL MEDICAL	No	Yes
14. Insulin-dependent diabetes mellitus?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15. Renal disease?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16. Cardiac disease?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17. Known 'substance' abuse (including heavy alcohol drinking)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18. Any other severe medical disease or condition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Please specify _____

A "Yes" to any ONE of the above questions (i.e. ONE shaded box marked with a cross) means that the woman is not eligible for the basic component of the new antenatal care model.

Is the woman eligible? (Circle) **No** **Yes**
If NO, she is referred to _____

Date: _____ Name: _____ Signature: _____
(staff responsible for ANC)

It is possible that a woman who is initially referred to a higher level of care because of a condition identified in the classifying form is subsequently considered suitable to follow the basic component of the new WHO model. In such a situation, the woman would have to undergo all the activities included in the basic component that correspond to her fetus's gestational age. In addition, she would

Basic care

have to undergo all activities that she missed owing to her late entry into the basic component that were not performed during her visit(s) to the higher level of care.

The activities included in the basic component fall within three general areas; *screening* for health and socio-economic conditions likely to increase the possibility of specific adverse outcomes; ***providing*** therapeutic interventions known to be beneficial; **and *educating*** pregnant women about planning for safe birth, emergencies during pregnancy and how to deal with them.

The activities distributed over the four visits are presented in the basic component checklist (Figure 3). This checklist should be used to record tests and interventions performed at each ANC visit and should be incorporated into the medical records for each patient. The items in the list should be checked off as each listed activity is completed. From the checklist any health provider can determine quickly whether the recommended activities have been performed for each visit. Results of tests or treatments recommended should be recorded in the clinic's medical records as is normally done. The checklist is not intended to replace the clinic's medical records. Rather, it is designed to serve as a reminder of the activities that have been and must be performed. Therefore, there is no need to change the existing system for keeping medical records in the clinic. Services considering revising their records could incorporate the checklist within their home-based ANC card as well.

Women with risk factors for complications during delivery only (e.g. previous caesarean section) or those with a history of intrapartum complications, but with otherwise normal pregnancies, should follow the basic component of the new ANC model. However, in such cases the place of delivery should be selected carefully; arrangements should be made in advance to ensure that appropriate facilities for delivery and possible complications will be available and that the woman will be able to reach them in a timely manner.

When necessary, women enrolled in the basic component of the new WHO model can be referred for specialized care, such as nutritional or psychiatric advice, while the woman continues to follow the activities of the basic component.

Basic care

The first visit

Ideally, it should occur in the first trimester

A. Obtain information on:

- Personal history
- Medical history
- Obstetric history

B. Physical examination

Only one vaginal examination during pregnancy is recommended and includes taking a sample for Pap smear for diagnosis and treatment of STDs.

C. Perform the following tests

- Urine for bacteruria and proteinuria
- Blood group (ABO, Rh)
- Hemoglobin
- Syphilis

D. Assess for referral

- If the following conditions are diagnosed, proceed as recommended:

• Diabetes	Refer; must have continued higher level care
• Heart disease	Refer; continue according to severity and specialist's advice
• Renal disease	Refer; continue according to specialist's advice.
• Epilepsy	Give advice on continued medication.
• Drug abuse	Refer for specialized care
• Signs of severe anemia and Hb < 7 gm/dL	Increase iron dose [RHL], or refer if shortness of breath
• HIV positive	Counsel on safe sex practices as well as on risk to the baby and partner(s), and refer for treatment and prevention of mother-to-child transmission of HIV [RHL]
• Family history of genetic disease	Refer
• Primigravida	Give advice on the benefits of institutional delivery
• Previous stillbirth	Refer; continue according to specialist's advice
• Previous growth-retarded fetus (validated IUGR):	Refer to higher level of care and continue according to specialist's advice
• Hospital admission for eclampsia or pre-eclampsia	Refer; continue according to specialist's advice [RHL]
• Previous caesarean section	Stress hospital delivery
• High blood pressure (> 140/90 mmHg)	Refer for evaluation [RHL]
• Body Mass Index (BMI) (weight in kg/height m ²)	Refer for nutritional evaluation if BMI < 18.5 or > 32.3 kg/m ² .

The second visit

A. Review relevant issues of personal, medical, obstetric history, and history of present pregnancy

B. Perform physical examination

C. Perform the following tests

- Urine for:

- bacteruria
- proteinuria for
 - primigravida
 - History of hypertension
 - History of pre-eclampsia or eclampsia

- Hemoglobin if the previous was < 7 gm/dL

D. Assess for referral

- Unexpected symptoms (refer as required)
- Hemoglobin < 7 gm/dL
- Vaginal bleeding or spotting
- Evidence of pre-eclampsia, hypertension and/or proteinuria
- Suspicion of fetal growth retardation
- Fetal heart sounds not detected

The third visit

As usual in the previous two visits but in assessment for referral we have 2 new conditions:

1. Suspicion of twin pregnancy (refer for confirmation and arrange delivery)
2. If hemoglobin > 13 gm/dL, new appointment to check fetal growth, blood pressure, and the possibility of proteinuria (If there is abnormality, refer)

The fourth visit

As usual in the previous visits but in assessment for referral we add:

1. Suspicion of breech presentation (refer to evaluate external cephalic vesriosn, hospital delivery is mandatory).