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Foetal well-being in primigravid patients in a multicultural community

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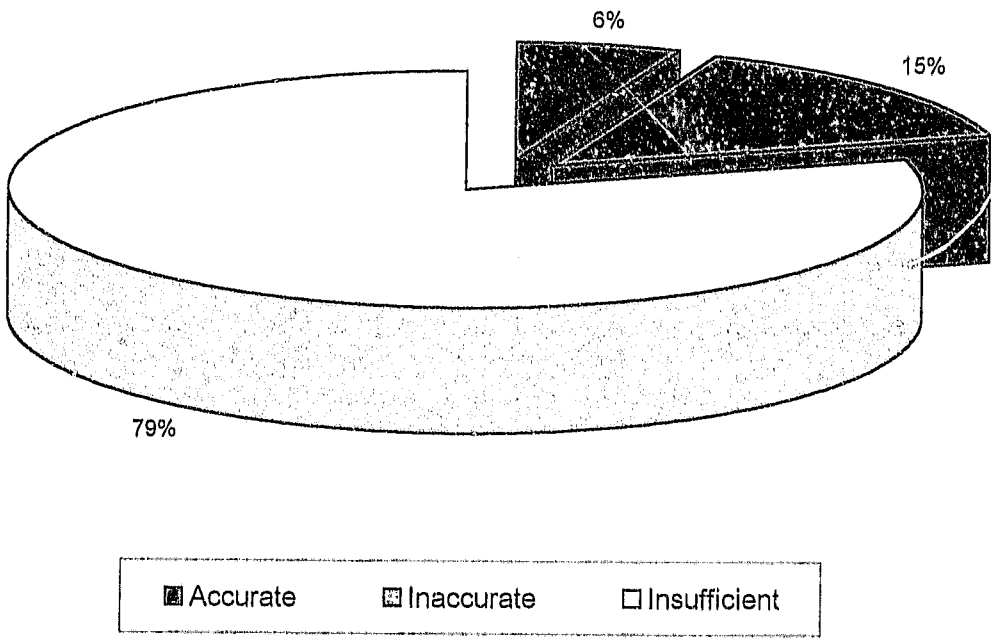
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The information which was given by her fell into the "insufficient" category.

Several patients commented that they had read about movement on posters that were on display in the clinic. There were 11 patients who had been given no information. 9 of these patients were unbooked and the remaining two, were late-bookers.

Fig.5 - Type of Information Given (n = 145)



4.1.3.4. If they were taught to count foetal movement.

The mothers (n=145) who said that they had been taught about foetal movement were then asked if they had been taught to count these movements. 70 (48,92%) women (n=145) stated that they had been taught counting, whilst the remaining 75 (52.08%) noted that they hadn't been taught about counting. The most common method of counting was that the baby should move more than 10 times per day.

4.1.3.5. If counting movement was helpful.

The researcher then probed whether the mothers who had been taught to count, found the education helpful or not. This was a subjective perception. Of the 145 mothers who had been taught about foetal movement, 70 had been taught a method.

When these mothers were asked whether counting had been helpful, 42 mothers (57%) n=70 felt

that it had been, whilst the remaining 28(43%) said that they didn't find it beneficial. (Vide 5.1.4.)

The researcher did not probe this area to establish what the patient's considered helpful. This is an area which warrants further research.

4.1.4.Characteristics of Movement.

4.1.4.1. When the baby moved.

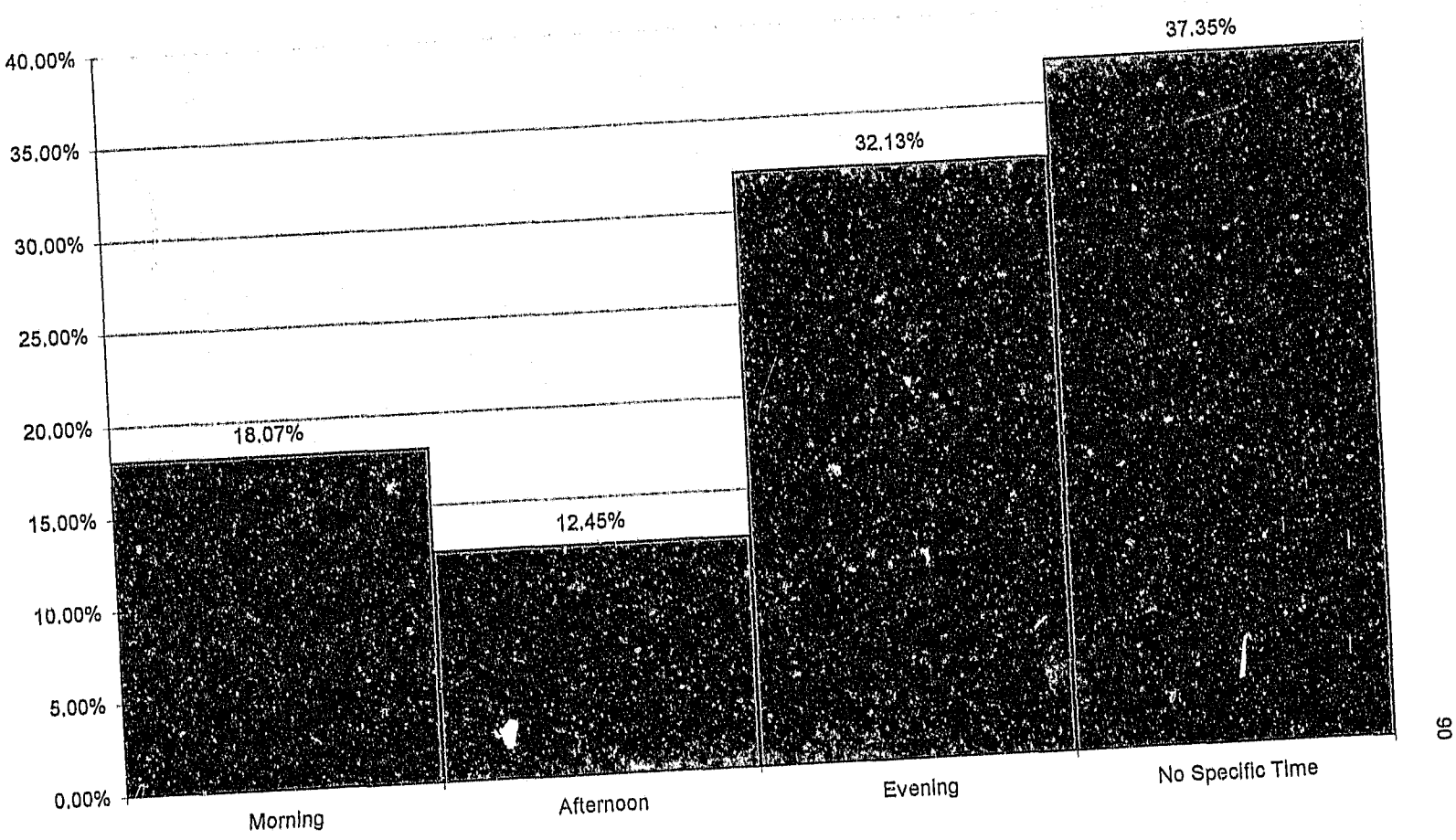
The patients were asked whether their babies moved more in the morning, afternoon, evening or at no specific time.

The most frequently reported time was that of 'no specific time', with 37.35 % (n=220) of the mothers reporting that there wasn't a special time of day, rather that the baby moved 'all the time'. Review of the recent literature could not explain this finding and it would warrant further research. 32.13% (vide Fig.6:90) of the sample said that their babies moved more at

night and this would concur with Sorokin, Le Roy & Dierker's (1984) findings.

They suggest that mothers note more foetal movement at night not only because of increased activity but because the mothers are more relaxed and therefore pay more attention to movement. It would appear that movement is noted after meals (vide Fig.6:90) and this would concur with the findings of Sadovsky et al (1973).

Fig.6 - Time of Day when Most Movements Felt (n = 220)



4.1.4.2. How many times the baby moved.

All the mothers (n=220) were asked if they could remember how many times their babies had moved every day (vide Fig 7:92). Mothers who had not been taught to count were also asked.

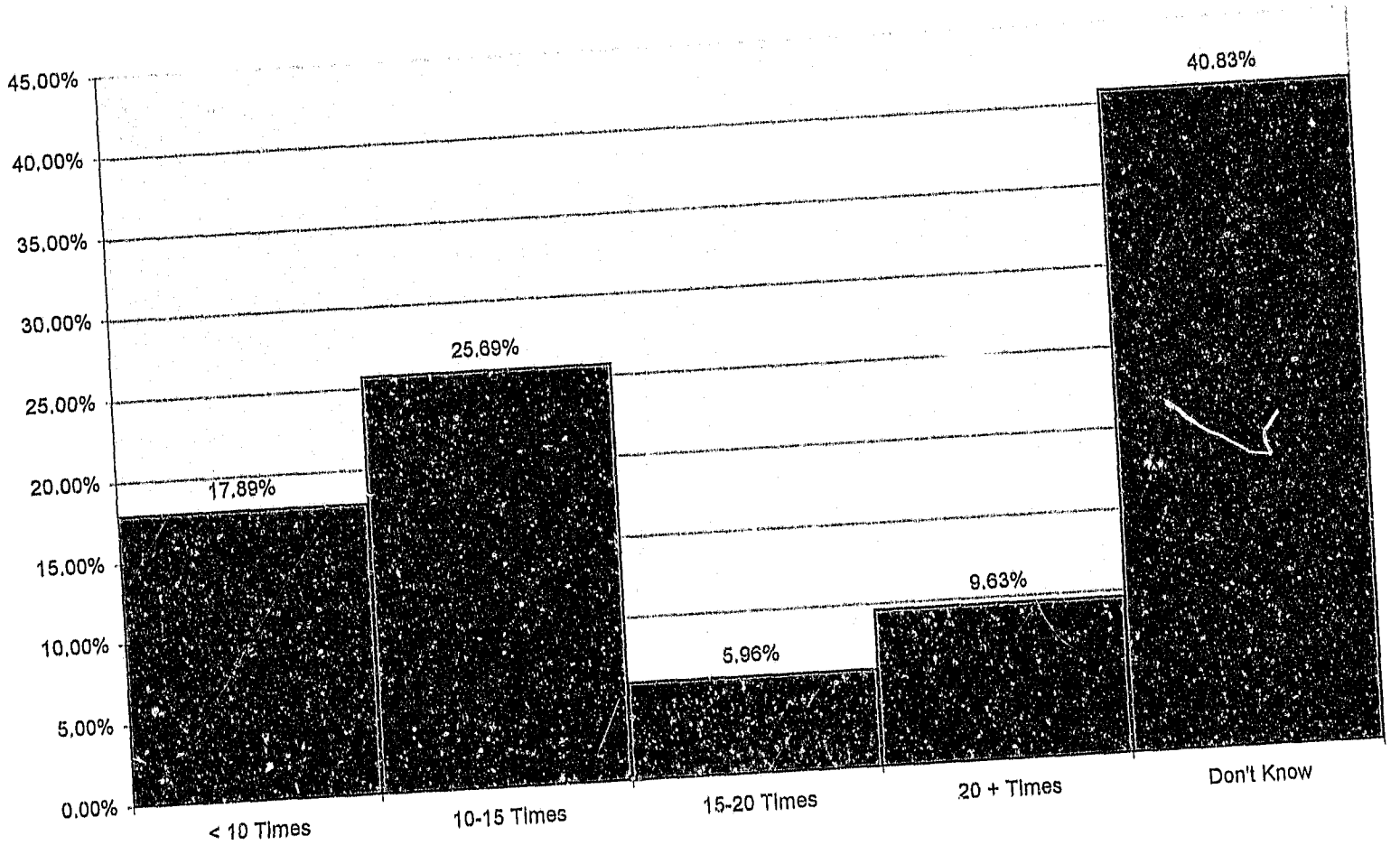
89(40.83%) of these women (n=220) said that they didn't know. This would concur with the Neldham (1980) study which found that most of the women had a general impression of movement. He recommended that women should be given specific instruction with regard to foetal movement.

56(25.69%) said that they thought 10-15 times.

40(17.89%) said that the baby moved less than ten times and this would be an area for concern, as it would fall under the minimum movement accepted as a positive indicator.

Thirty five (15.59%) women stated that the thought that their babies moved more than 15 times per day.

Fig.7 - No. of Movements/Day (n = 220)



4.1.4.3. Understanding of information.

The patients (n=145) were also asked if they had understood all the information which they had been given concerning foetal movement. The mothers who said that they hadn't understood the information were asked if they thought that it was because of language or because too many technical terms were used.

48 mothers (n=145) were found to not have understood the information. 31 of the 48 mothers stated that the language presented her with difficulty and 25 of the 48 mothers found that too many technical terms were used. Thus 6 mothers had experienced difficulties in both language and terminology.

4.1.4.4. How the information was described.

The patients used different terminology to describe movement. Knowledge of this was beneficial when the researcher asked the

patients about movement. Terms such as 'playing' were commonly used as opposed to movement. The mothers also measured movement in terms of 'strong' or 'weak'. 'Playing too much' was not to be taken as having excessive movement, but rather as 'good' movement. This can be explained because many of the patients were describing movement in a language other than their mother tongue. Ambiguities were discussed and clarified with senior colleagues working in the area who shared the same language.

4.1.4.5 Difficulty with remembering to count?

The respondents (70) who were taught a method (n=145) were asked if they had remembered to count. Responses included whether they 'always' remembered, they 'never' remembered or they 'sometimes' remembered. 24(34.28%) of the respondents stated that they had always remembered to count. 42(71.02%) women stated

that they 'sometimes' remembered to count. The researcher didn't probe this area to establish what made them remember or why they only 'sometimes' remembered. 4(5.7%) respondents verbalized that they 'never' remembered to count.

4.1.4.6.Did the staff listen?

Patients who had been taught about movement were asked if they thought that the staff listened to what they had to say about their baby's movement. 91(62.75%) of the patients (n=145) said that they thought that the staff listened to them. 54(25.51%) respondents thought that the staff disregarded what they had to say. Comments made included "the doctor just put his hand on my tummy and didn't say anything" or "I told them the baby wasn't playing nicely.....they told me to come back next week"

4.1.5. The Record Review.

The records of all the patients who were interviewed were reviewed with reference to:-

4.1.5.1 Foetal Outcome

4.1.5.2. Delivery Outcome

4.1.5.3. Evidence of Respiratory Distress

4.1.5.4. Relationship between care and Delivery Outcome.

4.1.5.1 Foetal Outcome.

All the babies were born alive. 14(6.36%) of the babies (n=220) were confirmed premature infants.

4.1.5.2. Delivery Outcome.

The researcher looked for delivery outcome. 63(28.63%) of the mothers (n=220) had caesarean sections. 146(66.36%) of the mothers experienced a normal vaginal delivery, 11 mothers (5.01%) had assisted deliveries, the most commonly cited reason being for prolonged second stage. Two of

the women had had a delivery that was classified as a "BBA" or born before arrival.

4.1.5.3. Evidence of Respiratory Distress.

Evidence of respiratory distress was assessed by examining the records for noted evidence, such as meconium staining of the liquor and any comments in the records regarding changes in the cardiotocograph readings observed during the intrapartum period. The Apgar score of each infant at birth was also noted. It would appear that the apgar scoring was a poor reflection of foetal condition. Infants with poor apgar scores did not receive any active resuscitation, whilst those babies with seemingly good apgars, 9 at one minute and 10 at five minutes, were intubated in some cases and were being nursed in the neonatal transitional unit. This concurs with Jepson Talashek & Tichy (1991) who evaluated the use of the score and recommended

guidelines for future use of Apgar scoring. The apgar score has been criticized because it is a subjective assessment of neonatal condition at birth. Jepson et al (1991) assert that the score is not meant to be used to determine resuscitative methods or management. It merely reflects the neonates condition at 1 minute, 5 minutes and 10 minutes. 58(26.36%) babies (n=220) were recorded as experiencing 'foetal distress' and had no apgar scoring recorded at all. This could be attributed to the fact that emergency management had occurred and that the neonate had been speedily transferred to the neonatal unit.

4.1.5.4. Relationship between care and Respiratory Distress.

No correlation could be established between the mothers who were unbooked /latebookers and poor foetal outcome. 33 mothers fell into this category. 13(39.39%) of these patients (n=33)

experienced caesarean sections. 22(66%) of the patients had documented foetal distress, 10(30.3%) of these babies required admission to the transitional unit and ICU.

It was noted that two of the mothers who said that they had been unaware of foetal movement during pregnancy, were also mothers whose babies had poor delivery outcome and required assistance.

This would concur with Arulkuraman (1989) who found that foetal movement was a positive indicator of those babies who were at risk during labour, or those who would require monitoring during the labour process.

The researcher noted that although mass was not one of the criteria which was required on the record review, there appeared to be a number of babies who appeared to be small for gestational age.

4.1.6 Conclusion.

Results from the 220 primiparas interviewed showed that although 89.55% of the patients sought antenatal care only 69.37% stated that they had been taught about movement. The majority of these patients (n=145) had been given insufficient information to assist them with subjective foetal surveillance. The results indicated that there was no specific time during the day during which the women noted that foetus moved more. Results indicate that the women made a distinction between education and information which had been given to them. Age and the level of schooling did not appear to influence the way in which the women perceived movement. Results from analysis of the data were described and displayed using Pie Charts and Bar Graphs.

CHAPTER 5.

The concluding chapter will address the limitations of the research; implications for education, midwifery practice and further research.

5.1 Limitations of the Research

The main limitations of the research were the changes in the services, the increased demand for services, language and wording on the questionnaire, which was not identified during the pilot study.

5.1.1 The changes in the services.

The political changes in the country resulted in the integration of health services in South Africa. This necessitated changes in service delivery. In particular, the introduction of free mother and child services increased the patient load in maternity services.

Women, who under an apartheid system had previously del vered with a doula/support person or traditional birth attendant in the rural areas, were now free to seek the services of a hospital. There was an influx of people to the city and these women sought care at the academic hospital, which they perceived delivered 'better care' (Strategic Management Team (SMT) Report 1994:) This impacted on the way in which the services were rendered.

5.1.2. The increased demand for services.

An increase in the demand for services at the hospital, resulted in the early discharge of patients post delivery and .nerefore it was impossible to interview every primiparous patient prior to going home. This was particularly problematic during the first two weeks in June. Negotiations with the staff in the postnatal wards did assist with resolving this problem.

Data was collected during the months of June and July 1997 in order to offset any effect from the introduction of the Choice of Termination of Pregnancy Bill which was pending and which was introduced in February of 1997.

5.1.3. Language

Language became problematic and although one could easily find an interpreter in the ward for the major black languages such as Xhosa, Zulu and Sotho, it was difficult at times to communicate with patients who spoke only French, Portuguese and other lesser-known central African languages. Use could have been made of trained field assistants.

5.1.4. The Interview Schedule

Demographic information asked of the research subjects addressed such topics as age and level of education and whether the pregnancy was

planned or not. The researcher was of the opinion that when asked their level of education, the answers given were not always a true reflection of the reality. The answers were taken at face value. Patients who acknowledged having 10 -12 years of schooling in many cases, seemed illiterate which was evidenced by the fact that they appeared unable to read the consent form in spite of the fact that it was in their own language.

Wording on the interview schedule appeared to have cultural implications, with particular reference to the question of whether the pregnancy was planned or not. The researcher had to rephrase this question to elicit a response for example,the patient's were asked whether they had used 'prevention' or not. The researcher was not always sure that the response was an accurate reflection of the reality.

5.1.5 Problems encountered during Data Collection.

Early discharge of primiparous patients impacted on the data collection because prior to June, the primigravid patients were kept for a minimum of 24 hours. The early discharge of these patients meant that the researcher was unable to interview every primigravid patient during the month of June. To ensure a representative sample, the data collection was continued through the month of July as well.

The researcher used two different times of the day to interview patients, first thing in the morning and late afternoon. These were times suggested by the ward staff. The early morning interviews were particularly problematic because the patients were busy with their ablutions. In addition the staff were changing shifts and therefore the records were not freely available.

There were several of the patients who refused to sign consent but were happy to give verbal consent. The researcher was of the opinion that these patients were in the country as "illegals" and therefore did not want to sign anything which they perceived might have legal implications for them. This was borne out by the experiences of the ward staff who found that these mothers refused to fill out a birth notification form because they 'didn't have documents'.

Incorrect charting of parity and gravida by the staff meant that patients were counseled for consent and permission to partake in the study, only to discover that the patient was not by definition, a primigravid patient.

5.2 Implications for;

5.2.1 Midwifery Practice

5.2.2 Midwifery Education

5.2.3 Further Research

5.2.1. Implications for Midwifery Practice.

Many of the mothers were not given any information at all on foetal movement and of the 69.3% (n=145) who said that they had been given education, a small percentage (5%) had been given accurate and complete information. If midwives are to empower women who are pregnant, then it is imperative that the mothers are given what they need to know in order to carry out the task of subjective foetal assessment.

It is also clear that other learning strategies are under-utilized. Several of the mothers said that they had seen information about foetal

movement on posters in the clinic and in magazines. This would be an area that could be expanded upon to include visual aids for many more of the languages that are commonly used in this country.

Labour ward staff also need to be encouraged to pay more attention to the ante-natal history in order to identify those foetuses who are at risk and therefore require continuous monitoring as opposed to intermittent monitoring during the birthing process (Arulkumaran 1995).

Midwives need to be encouraged to follow-up on the maternal perception of a reduction of foetal movement. Regular updating of midwifery skills needs to be implemented to enhance the assessment ability of the staff running the maternity services. Mandatory updating is an issue which is currently under review by the Gauteng Health Services.

It is also imperative that midwives develop a collaborative relationship with other members of the team such as physiotherapists. This will facilitate sharing and updating of practical information on foetal monitoring.

Language is another area of concern and any service delivering maternal care should endeavor to ensure that translators are available in the clinics to assist with mothers who are unable to converse in a language other than the mother tongue. It is imperative that the mothers perceive that they have ownership in the shared responsibility of care and that it is not just seen as a delegated task, without meaning or relevance.

Whilst this study did not highlight illiteracy as a problem for self care, this aspect needs to be considered by midwives when promoting foetal movement as a means of monitoring foetal well-being. Thus midwives

in practice need to develop protocols for addressing this issue in health services.

5.2.2 Implications for midwifery education.

It was the intention of the researcher to develop a protocol of standardized information for teaching nursing students the importance of antenatal foetal surveillance.

Factors that need to be addressed and rationalized are the following;

- Foetal movement is important because it indicates the foetus is well.
- All foetuses have different movement patterns. The mother needs to identify her own foetus's particular pattern. This can vary from one pregnancy to another.
- There are changes which occur in the patterns of foetal movement during pregnancy. The pattern may appear to be reduced in the last trimester of pregnancy, due to the enlarging

foetus. This would be considered normal. Most mothers are aware of gross body foetal movements, but some mothers may be aware of movements such as the foetus "hiccoughing."

- A normal foetal movement pattern may demonstrate a preference for a specific time of day. The mother may also notice periods when the foetus is sleeping. Foetuses sleep for more than 90% of the day and the mother may notice periods of up to two hours when the foetus doesn't appear to move. This is normal.
- The mother may notice that the foetus responds to ingestion of food, especially glucose. This is normal and should the foetus appear to be quiet, it is helpful if the mother eats and within an half hour, the foetus should demonstrate movement.
- A minimum of 10 movements felt in a 12 hour period is considered the minimum norm. The

foetus will move a lot more than that in most instances.

- Excessive movement should also be noted as this may mean that there is foetal compromise. An increase of more than 50% of the normal daily rate is considered significant. This mother should seek assistance.
- If the baby hasn't moved by lunchtime of any day and after ingestion of glucose, the mother should report to the clinic for further assessment.
- Smoking and alcohol can decrease movement for up to 4 hours.

Midwives and nursing students need to be taught communication skills, which will enhance the partnership relationship with the patients.

Gegor et al (1991) suggest that in order to provide equitable, cost effective care, midwives need to be schooled in basic

sonography. In Midwife Obstetric Units (MOU) where midwives are the principal caregivers and in situations where there is no obstetrician present, level 1 ultrasound skills will enable the midwife to identify those foetuses who are at risk and who require referral and the expertise of a hospital environment.

The development of foetal health science requires that midwives in particular are regularly updated theoretically and with clinical skills. According to (Kwast 1992) "midwifery education is not basic education" she goes on to suggest that critical thinking is necessary for successful midwifery practice. According to Kwast (1992) midwifery education is unlike other health service education. Midwives need to be able to think laterally and acquire the ability to problem solve.

5.2.3 Implications for Research.

Cultural issues: the researcher had difficulty in clarifying whether the clients perceived the pregnancy to be planned or not. This would warrant further research, specifically in a third world population. Mothers demonstrated a hesitance at this question and even when the question was rephrased, there appeared to be a reluctance to freely divulge this information. The researcher is unsure of whether this was cultural or whether it was related to language and the use of a translator.

The record review omitted to check the birth mass of the infants and this was an omission that warrants further research, as there was a perception that there was a high incidence of small for gestational age (SGA) babies. There is adequate support in the literature of the relationship between the SGA infant and foetal distress intrapartally and consequent poor foetal outcome.

Further research is warranted to establish the learning needs of a predominantly third world population of mothers with regard to pregnancy and foetal well being. Research is indicated which explores the usage of terms such as 'education' and 'information'. The patients in this study made a clear distinction between the terms and this concurs with Gilkison (1991) who found that mothers found informal sources of information to be more helpful than formal antenatal education.

This clearly has implications for midwifery practice and research. Further research needs to be carried out to establish whether a discrepancy exists between the learning needs of the women who attend antenatal services and the established institutional programs which are provided. Review of recent research could not identify research which had been concluded in a third world country with regard to maternal attachment to the fetus as a result of

subjective foetal surveillance. This would warrant further investigation.

5.3 Conclusion

Foetal movement is an accurate and cost effective means of assessing foetal well being. It is particularly helpful in a primary care setting, in the identification of those foetuses who are at risk and possibly need referral to a hospital.

Subjective foetal surveillance can only be effective if the mothers are seen as partners in the care of their babies. Health-care professionals need to ensure that the mothers are empowered with sufficient information to carry out this very important task.

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ANNEXURE.1.

SUNAR

| Date | | |

SIGNATURE:
PRINT INITIALS
DATE:

GESTATION 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43

GESTATION EST. BY: EDD
Dates
SF
Sonar
Best est.
DATE:
⊙ = SF - measurement
X = weight

KG 30 25 20 15 10 5

45 cm 40 35 30 25 20 15 10 5

KG

PRESENTING PART

HEAD ABOVE PELVIS (fifths)

GESTATION 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43

WEIGHT kg

BLOOD PRESSURE — Syst. / Diast

EDEMA — P / S

URINE P / S

Fetal Movements : (First felt)

Date	PROBLEM LIST.
1	
2	
3	
4	
5	

Date	NOTES (only essential facts)

ANNEXURE. 2

Policy Recommendations for Antenatal Care in Gauteng

There is a need to define a minimum standard package of antenatal care in Gauteng Province. This helps with:

- Facilitation of central and regional budgeting
- Guidance for service providers about the content of antenatal care
- Definition of standards
- Communication to consumers - pregnant women and their families

1. THE NEED FOR ANTENATAL CARE

Antenatal care is so well established worldwide that it requires little motivation. Some obvious benefits of modern antenatal care are:

- Meeting consumer demand for health care during pregnancy
- Screening, e.g. for congenital syphilis or fetal anomalies
- Early detection of pregnancy problems, e.g. hypertension
- Advice for pregnant women including specific delivery plans

2. OBJECTIVES

The general objective of antenatal care is to ensure the best possible pregnancy outcomes for pregnant women and their unborn babies through optimal physical and psychological preparation before delivery. Two specific indices that reflect the status of antenatal care are the incidence of congenital syphilis in a population and the rate of unbooked emergencies presenting at maternity units. Both are easily measurable.

Specific objectives for the province should be, by the year 2002:

- The eradication of congenital syphilis
- The rate of unbooked emergencies dropping below 5 per cent

3. INSTITUTIONS PROVIDING ANTENATAL CARE

Any Gauteng health facility may provide antenatal care - mobile clinics, day clinics, midwife obstetric units (MOUs) and hospitals. In smaller facilities antenatal care may be integrated with other functions to provide comprehensive services.

Many non-provincial bodies offer antenatal care to Gauteng mothers. These bodies include other provinces, local authorities, non-governmental organisations and private caregivers. This is acceptable to the province as long as the minimum standards set out in this document are satisfied.

3.1. Staff

Registered midwives and medical practitioners (doctors) are the only professionals that may provide antenatal care in Gauteng. While less qualified staff may perform some of the support functions, e.g. urine testing, patient assessment must be performed and signed by at least a registered midwife or doctor. Senior medical or nursing students may be allowed to take on these responsibilities if well supervised. Ideally each pregnancy should be assessed on at least one occasion by an advanced midwifery-qualified nurse or a doctor. This may not be possible at all institutions.

3.2. Levels of care

For efficient functioning of the antenatal service, pregnant mothers must be classified according to their categories of risk

Risk category	Problems expected	Antenatal care staff	Antenatal care Institution	Place of delivery
Low risk	None	Midwives	Clinic, MOU	MOU
Intermediate risk, e.g. previous Caesar	Labour problems	Midwives	Clinic, MOU	Hospital
High risk, e.g. hypertension	Pregnancy and labour problems	Doctors	Hospital	Hospital
Special risk, e.g. diabetes	Serious disorders	Specialists	Hospital	Tertiary hospital where possible

Each mother must receive care according to her risk category as shown in the table. Lists of conditions fulfilling these criteria appear in the Appendix. Each referral centre should define its own lists of risk categories, according to local conditions.

Patients are not entitled to higher risk levels of care than their particular category indicates.

3.3. Antenatal care working hours

Working hours should be most convenient to patients, caregivers and support services. The most suitable hours should be negotiated at each institution. Evening and weekend clinics are acceptable, as are traditional weekday hours.

4. RECORD KEEPING

The basic record of each mother's antenatal care is the antenatal card. This gives essential information on personal details, history, examination, special investigations and pregnancy progress. The card must be *retained by the mother throughout her pregnancy* and brought to clinic or hospital for any antenatal attendance and at delivery. Continuity of antenatal care is more easily assured by this practice.

Records that must be kept at the antenatal clinic are patients' names, dates of attendance, results of blood tests and copies of any ultrasound reports. High and special risk groups may require hospital files to be opened.

The Gauteng antenatal card (TPH 261a) is recommended as the standard format. Any record, however, that provides a minimum amount of information, as described in 7. (below), is acceptable. Patients who have started their antenatal care at other institutions frequently present with cards of a different format. As long as these cards give all essential information, notes should be added on them instead of issuing new Gauteng antenatal cards.

The Gauteng antenatal card must be available, free of charge, to any institution, midwife or doctor providing antenatal care in the province. This includes private practitioners.

5. SCHEDULE FOR ROUTINE ANTENATAL VISITS

For low-risk mothers, two schedules apply, depending on parity. Each visit has a particular emphasis as shown in tables I and II. Detailed description of content follows.

Table I: Antenatal visits schedule for a multipara

Visit number	Gestational age (weeks)	Specific objectives
1	2 - 20	Risk assessment, gestational age and blood tests
2	24 - 28	Multiple pregnancy, hypertension and risk for preterm labour
3	32 - 34	Fetal growth and hypertension
4	36 - 38	Fetal growth, lie, presentation, hypertension and anaemia
5	40 - 42	Fetal growth , lie, presentation, hypertension and postdates

Table II: Antenatal visits schedule for a nullipara

Visit number	Gestational age (weeks)	Specific objectives
1	2 - 20	Risk assessment, gestational age and blood tests
2	24 - 28	Multiple pregnancy, hypertension, and risk for preterm labour
3	28 - 30	Hypertension
4	32 - 34	Fetal growth and hypertension
5	34 - 36	Hypertension
6	36 - 38	Fetal growth, lie, presentation, hypertension, and anaemia
7	38 - 40	Hypertension
8	40 - 42	Fetal growth, lie, presentation, hypertension and postdates

6. CLINICAL CONTENT OF ANTENATAL VISITS

The content of each visit should be linked to the objectives shown in the tables in 5. (above). This will include the following:

1. Personal details: age, address, telephone number
2. Past obstetric history: complications and outcomes of all previous pregnancies
3. Medical and family history: conditions affecting or affected by pregnancy, family history of congenital abnormality, diabetes or twins.
4. Clear recording of gestational age and method used to determine it, with an estimated date of delivery
5. General physical examination including weight
6. A problem list: risk factors found or anticipated, with a brief delivery plan, e.g. for hospital or MOU delivery
7. Pregnancy progress at each visit: blood pressure, proteinuria, fetal movements, symphysis-fundal height in centimetres and a note of any problems

7. ROUTINE SPECIAL INVESTIGATIONS

7.1. Urine tests

a. At all visits the urine is tested for protein and glucose.

b. Urine pregnancy test (HI type) for suspected pregnancies when the uterus is not palpable abdominally.

7.2. Blood tests

The following tests are performed on all pregnant women:

a. RPR or equivalent (e.g. VDRL) for syphilis screening, at the first visit, using card tests

b. Rhesus blood grouping (Rh), at the first visit, using a rapid test kit

c. Haemoglobin level (Hb), at the first visit and at 36 weeks, using a portable haemoglobinometer or copper sulphate test

d. HIV testing should be offered at the first visit, using an ELISA test, to be done at the nearest laboratory. Appropriate counselling is mandatory.

RPR, Rh and Hb should be done *on site*, giving results before mothers leave the clinic. Midwifery staff can be trained to perform the tests. Quality control is the responsibility of the MOU or hospital concerned.

7.3. Ultrasound and genetic counselling with amniocentesis

Any mother who is 35 years old or more, and less than 20 weeks pregnant, or who has previously given birth to an abnormal fetus, must be offered these tests and be referred to the nearest facility that can perform them.

7.4. Other tests not offered by the province

Despite wide usage elsewhere, many other tests are either inappropriate or too expensive to offer routinely to pregnant women at provincial facilities. These include:

a. Urine: dipstick for leucocytes, nitrites, ketones and blood; urine culture

b. Blood: FTA-Abs, TPHA, triple screen, Toxoplasma, Rubella, Hepatitis B, Glucose screening

c. Cytology: cervical (Pap) smear

d. Ultrasound: pregnancy scan at any gestation

These tests are to be done only for specific clinical indications, never as routines.

All pregnant mothers should be informed at the first visit that certain tests (mainly ultrasound, rubella and triple screen) are not done routinely in provincial facilities. Patients who request these tests can pay private rates to have them done or be referred to private practitioners of their choice.

8. MEDICATIONS

8.1. Supplementation

All mothers should be given iron (60 mg) and folic acid (0.1 mg) daily for the duration of their pregnancies.

8.2. Tetanus vaccination

All mothers should receive tetanus toxoid to prevent neonatal tetanus, according to standard protocol.

8.3. Treatment of minor ailments

Pregnancy-associated ailments, e.g. heartburn, must be treated by appropriately trained staff at the antenatal clinic. 'Appropriately trained staff' may be midwives, primary health care nurses or doctors, depending on local conditions or specific circumstances. Medicines to treat these disorders should be available.

8.4. Treatment of sexually transmitted diseases

Appropriately trained staff, as defined in 8.3. (above), should be available to diagnose and treat these conditions according to standard protocols.

9. PATIENT INFORMATION

It is essential to maintain friendly and open communication between staff and antenatal clinic attenders. Certain information must be provided to all pregnant women:

- **A delivery plan:** the estimated date and place of delivery
- **Five danger symptoms:** mothers should immediately report to the planned place of delivery any of the following: headache, abdominal pain, reduced fetal movements, passage of liquor from the vagina, or antepartum haemorrhage.
- **Preparation for childbirth and motherhood:** content will depend on local circumstances. Information will include aspects of self-care in pregnancy and advice on childcare. Antenatal classes and exercises may also be provided.
- **Routine tests that are not performed:** this informs mothers that certain expensive tests, e.g. rubella and triple screen, are not done by the province, although they might on occasion indicate serious fetal problems.

Information leaflets that summarise the above should be produced at hospitals and clinics, to suit local conditions and languages, and be handed out to pregnant women. This does not replace the need for effective spoken communication.

10. AUDIT

Antenatal clinics should audit their performance as follows:

a. Numbers of antenatal first attenders

b. Numbers of antenatal repeat visits

c. Numbers of antenatal clinic referrals to and from other levels of care

d. Cases of congenital syphilis at the hospital, taking into account the antenatal care institution.

e. Numbers of unbooked emergencies in the clinic and hospital labour wards

Monthly totals should be examined and discussed by staff at the antenatal clinics, and returns must be sent monthly to the Directorate of Maternal, Child and Women's Health and Nutrition in the Gauteng Health Department.

11. MANAGEMENT GUIDELINES

Clearly written clinical management guidelines ('protocols') should be used at all provincial institutions that offer antenatal care. This helps to ensure a high standard of pregnancy care for all mothers. These are ideally drawn up at referral hospitals in consultation with the clinics. Acceptable primary care obstetric guidelines are available from the Directorate of Maternal, Child and Women's Health and Nutrition in the Gauteng Health Department.

ANNEXURE. 3

N
H
NUMBER:
F.O.D.

MONTH	DATE	DAY	TIME OF TENTH MOVEMENT
		M Tu W Th F S Sun	0700
			0800
			0900
			1000
			1100
			12 NOON
			1300
			1400
			1500
			1600
			1700
			1800

1

MONTH	DATE	DAY	TIME OF – TENTH MOVEMENT
		M Tu W Th F S Sun	Every day mark a cross X against the hour in which you feel the 10th movement
			OR
			if less than ten by 7.00 p.m.(1900hrs), put the total number of movements in the bottom square each evening: or if unsure use these symbols:- U = usual movements. M = more than usual. L = less than usual. O = don't know.
			0700
			0800
			0900
			1000
			1100
			12 NOON
			1300
			1400
			1500
			1600
			1700
			1800

2

M	Tu	W	Th	F	S	Sun

3

M	Tu	W	Th	F	S	Sun

4

RECORDING YOUR BABY'S MOVEMENTS

1. A daily count of movements is a useful way to assess the health of your baby.

2. Each baby has his or her own pattern of movements, and movements tend to get less after 36 weeks' pregnancy.

3. If movements suddenly ge[illegible]ch less, this does not always mean that the baby is unwell. It [illegible] mean that we should do other tests of the baby's health, such [illegible]cording the heart-rate.

4. Please would you use this chart as follows:

   (1) Each day, from 7 a.m. (07h00) start to count your baby's movements.

   (2) Each group of kicks or turning movement should be counted as one movement.

   (3) A single soft kick should not be counted.

   (4) When you feel the 10th movement, write down the time below the date.

   (5) Mark the space on the graph with "X". If you are not sure how to do this, don't worry, just leave the graph blank.

   (6) If you have felt less than 10 movements by 7 p.m. (19h00), fill in the number of movements in the space below.

   (7) If you forget to count, please estimate the movements in the bottom space as: usual amount of movement (u), more than usual (m), less than usual (l) or don't know (D).

   (8) If the 10 movements take 6 or more hours longer than usual, or if you count less than 10 movements by 7 p.m. (19h00) you should come to hospital the next morning.

   (9) If you feel no movements by 1 p.m. (13h00) you should come to hospital immediately.

ANNEXURE 4.

INTERVIEW SCHEDULE

1. What is you age in years? _____

2. Was this a planned baby yes_____no_____?

3. Indicate your highest level of education
   < 7yrs _____
   8-10 yrs_____
   11-12 yrs_____
   post -matric_____

4. Were you aware of your baby's movement yes_____no_____?

5. Were you taught about your baby's movement? yes_____no_____

6. If you answered " yes" above, were you taught to count?
   yes_____no_____

   Did you find counting helpful? yes_____ no_____.

7. If you answered 'yes' to question 5, describe the information which was given to you.

_____
_____
_____
_____
_____
_____

Key: 0= inaccurate- wrong info given
1= insufficient - told to move, may have been taught to count.
2. = accurate - method given, types of movement given, told about sleep & food.

8. Who taught you about movement

midwife
doctor
student nurse
other

9. How many times did the baby move per day?

5-10
10-15
15-20
20 +
don't know

10. When did it move more?

morning
afternoon
evening
no specific time

11. How much of the information given, did you understand?

none
little
most
all

12. If you didn't understand the information, do you think that it was because of language that you didn't understand?

Yes_____ no_____

13. Do you think that too many technical terms were used?

Yes_____no_____

14. Did you find it hard to remember to count?

Sometimes
Always
Never

15. Do you think that the staff listened to what you had to say about your baby's movement?

Yes_____ No_____

_____

_____

_____

_____

ANC booked Y_____ N_____

Place_____

ANNEXURE 5.

RECORD REVIEW OF PATIENTS RECORDS.

TYPE OF DELIVERY. (Tick the appropriate block please.)

Normal vaginal ☐ Normal vaginal with episiotomy : ☐

Assisted delivery ☐ Indication for assistance : ☐

Indications of foetal distress during delivery:

Yes: ☐ No: ☐

Was the baby born alive ?

Yes ☐ No ☐

Apgar scores:

1min. ☐ 5min. ☐ 10min. ☐

Resuscitative Methods employed:

Yes ☐ No: ☐

If yes, please elaborate _____

_____

_____

Any birth related problems; for example, RDS , poor sucking reflex etc.

Yes: ☐ No: ☐

If yes, please elaborate. _____

_____

_____

ANNEXURE.6

INFORMATION SHEET FOR MIDWIVES IN THE EXPERIMENTAL GROUP.

I am an MSc student at the University of the Witwatersrand and I wish to undertake a study to establish a protocol of standardised information regarding foetal movement.The following information must be given to all mothers in your clinic who fit the following criteria:

- **Primigravid patients**
- **Near term patients are to be used, that is, patients who are 36 weeks or more.**

Try to elicit from the mother if she has been able to establish a pattern of movement for her baby.

The following questions may be helpful.

Has your baby moved today
At what time during the day does your baby move most ?
Have you noticed a change in the type of movement ?
Is your baby quiet for periods during the day?
Have you noticed when it is quieter?

Information to be given to mothers in the Experimental Group.

1.Babies move constantly in utero and it is important to notice the movement as that tells us that the baby is well.
2.Babies also sleep for periods and appear 'quiet'. This is normal
3.The baby's movement changes slightly after 36 weeks. You will experience a rolling kind of movement rather than a sharp kick that you have been used to. This is because the baby is growing and the space is reduced and so the baby doesn't have room to kick as freely as it did when it was smaller.
4. We would like you to notice your baby's movement everyday and see if you can establish a pattern.
5. Your baby should have moved by 12h00 each day.
6. Once you have established a pattern it will be easier for you to notice when the baby doesn't move in it's usual pattern and this would alert you.

What to do if the baby's movements are reduced?

Have something to ea
Take a brisk walk
If the baby hasn't moved, it may be sleeping.Wait for 2 hours.
If after this time, the baby hasn't moved, then come to the clinic, to enable the staff to check that the baby is well.

ANNEXURE . 7 .

INFORMED CONSENT FORM

CONSENT TO ACT AS A PARTICIPANT IN A STUDY TO ESTABLISH A PROTOCOL FOR TEACHING HEALTH CARE GIVERS INFORMATION THAT IS APPROPIATE TO MOTHERS IN A DEVELOPING COUNTRY.

I _____ agree to have Mrs .B.Lester, a MSc student at the University of the Witwatersrand, ask me a series of questions in a structured interview on my baby's movement.

I understand that the responses will be kept confidential and every precaution will be taken to safeguard my right to privacy .

I also understand that there will be at no time any risk incurred to myself or my unborn child.

It has been explained to me that my participation is voluntary and that I may withdraw at any time and that it will not negatively affect the care that is reasonably due to me.
I am aware that I may have access to the findings of this study upon request . I may also have access to Mrs.Lester telephonically should I have questions before or after the interview.

I understand that I will not be compensated for my participation'

_____	_____
DATE	SIGNATURE
_____	_____
DATE	RESEARCHER; MRS B LESTER
_____	_____
DATE	WITNESS

BL
1996

1922 1997
UNIVERSITY OF THE WITWATERSRAND, JOHANNESBU
7 York Road, Parktown, 2193 South Africa • Telegrams 'Witsmed' • Telephone(011)647-1111 • Fax:(011)643-4318
Yesterday's Legacy Tomorrow's Promise

146

06 June 1997

Mrs B Lester
5 Lemoendoring Street
Weltevreden Park Ext. 6
Roodepoort 1709

Dear Mrs Lester,

APPLICATION TO MODIFY RESEARCH METHODOLOY - MSc(NURSING)(BY DISSERTATION)

I am pleased to advise you that the Postgraduate Committee has approved your application to modify the methodology of your research.

It is noted that Professor Robertson and Ms McInerney are also aware of the change.

Yours sincerely,

MRS G GABRIEL
FACULTY OFFICER (POSTGRADUATE)
FACULTY OF HEALTH SCIENCES

cc: Professor B Robertson
Ms P McInerney

ANNEXURE . 9

147

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Division of the Deputy Registrar (Research)

COMMITTEE FOR RESEARCH ON HUMAN SUBJECTS (MEDICAL)
Ref: R14/49 Lester

CLEARANCE CERTIFICATE PROTOCOL NUMBER M 961110

PROJECT	Foetal well-being in Primigravida patients in a multiracial community
INVESTIGATORS	Mrs B A Lester
DEPARTMENT	Nursing Education, Johannesburg Hospital
DATE CONSIDERED	961129

DECISION OF THE COMMITTEE

Approved unconditionally

DATE 970220

CHAIRMAN. .....pp(Professor P E Cleaton-Jones)

c c Supervisor: Ms P McInerney
Dept of Nursing Education, Johannesburg Hospital

==========

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and ONE COPY returned to the Secretary at Room 10001, 10th Floor, Senate House, University.

I/we fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee.

DATE 26/2/97 SIGNATURE .....

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

ANNEXURE 10.

Example of Sadovsky Chart.

Instructions:
Count the baby's movement three times per day, each day.
Should be for a 1 hour period

- 1 hour following breakfast
- 1 hour following lunch
- 1 hour following dinner.

Place an 'X' on the time line for each movement that you feel during the hour after a meal. After four movements, you may stop counting.
If you feel less than four movements during this hour, continue for another hour.
If the movements continue to be less than four , then you must come to the clinic.

Date	After breakfast	after lunch	after dinner

APPENDIX: List of high and intermediate risk pregnancy problems

High risk conditions at booking (antenatal care and delivery in hospital):

Age 15 or less
Primigravida aged 35 or more
Previous infertility treatment
Previous myomectomy
Previous cervical or vaginal surgery including cerclage
Previous hysterotomy
Previous perinatal death
Previous baby with major congenital abnormalities
Last pregnancy preterm delivery at 7 months or less
Last pregnancy pre-eclampsia before 7 months
Three or more previous miscarriages
Diabetes mellitus
Chronic hypertension or renal disease
Symptomatic asthma
Epilepsy
Active tuberculosis
Heart disease
Autoimmune disease
History of venous thrombosis
Psychiatric illness, including previous puerperal psychosis
Thyroid disease or thyroidectomy
Serious disease or deformity of the spine, pelvis or hip
Any other serious medical condition

Intermediate risk conditions (antenatal care at MOU and delivery at hospital):

Previous postpartum haemorrhage requiring blood transfusion
Last pregnancy forceps or vacuum delivery
Parity 5 or more
Previous Caesarean section

Problems arising in the pregnancy (requiring referral and further assessment)

Anaemia
Uterus large for dates (over 90th centile SFH); suspected twins or hydramnios
Uterus small for dates (under 10th centile SFH); suspected IUGR
Malpresentation after 34 weeks
Rhesus negative blood group with antibodies
No maternal weight gain in mothers who weighed less than 60kg at booking
Pregnancy reaching 42 weeks
Reduced fetal movements after 28 weeks
Hypertension or pre-eclampsia
Antepartum haemorrhage

Author Lester B A
Name of thesis Foetal Well-Being In Primigravid Patients In A Multicultural Community Lester B A 1998

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