# Pre-pregnancy counseling in Lagos: a report on the first 1,000 cases

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**Summary**

*Objective:* To assess the activity of a pre-pregnancy counseling clinic in terms of investigations, counseling, treatment, and subsequent pregnancy outcome. *Materials and Methods:* Prenatal diagnosis and therapy were given in a tertiary university hospital in Lagos offering referral services for fetal medicine. *Design:* Review of the first 1,000 couples who referred to the centre from various centres attended from 1992 to 2007. Main outcome measures were assessed through types of referrals, value of diagnostic tests, and subsequent pregnancy outcomes. *Results:* The main types of referral were previous miscarriage (48.2%), previous fetal abnormality (10.8%), chronic maternal illness (25.1%), and others (15.9%). Routine investigation showed high serological toxoplasmosis, rubella, cytomegalovirus, herpes simplex I, herpes simplex II (TORCH) positive antibodies carrier rate. Subsequent pregnancy outcome did improve in the chronic maternal diseases and previous miscarriage group. *Conclusions:* This study illustrates the importance of making an accurate assessment of previous problem and current health as a means of determining both maternal and fetal risks in a subsequent pregnancy.

*Key words:* Pre-pregnancy; Counseling; Clinic; Activity; Report.

## Introduction

The mission of a pre-pregnancy counseling clinic or service is to provide education and facilitate healthcare of individual who believe they are at risk for (or known to have) a genetic disease. These individuals might also believe (or known to have) an increased risk to pass on a genetic disease to their offspring. To provide this service properly the counseling team must address: education related to specific disorders including natural history and treatment options, availability of genetic testing when appropriate, genetic risk assessment, reproductive options, and psychosocial implications of information provided [1-3]. This was one of the several considerations behind the establishment in Lagos in 1992 of which was probably the first pre-pregnancy clinic in Nigeria and West African Region. The authors report their experience from 1992 to 2007 at this clinic in the first 1,000 cases reviewed, which convinced them of its value in assessing factors that can contribute to the better management of pregnancy during the different disease states.

## Materials and Methods

The clinic is staffed by one consultant obstetrician gynecologist, one staff nurse/midwife, and one laboratory scientist. The obstetrician personally examined all patients. Structured questionnaires were given to the patients to answer and all were interviewed. The questionnaires were well-compiled and were returned immediately. Aside from this, patients were asked to discuss after lecture given and films were shown on medical disease, infertility, pregancy, breast and endometriosis problems, and voluntary serological screening for all toxoplasma, rubella, cytomegalovirus, herpes simplex I, herpes simplex II (TORCH) were offered. Venous blood samples were taken, centrifuged, separated, and stored at -20°C until batch assayed using TORCH-IgG kits. Over the years, the proportion of the authors' own patients attending the clinic has gradually increased. After 1993 it fluctuated between 81% to 93% on an annual basis.

## Results

An attempt was made in Table 1 to analyze the main types of referrals. Commonly, there was more than one problem but an assessment was made regarding which was the most important that led the woman to seek consultation. Four hundred eighty-two (48.2%) patients sought consultation due to previous miscarriage and 108 (10.8%) patients due to chronic illness. Table 2 shows the frequency of previous miscarriage. History of two-times abortion was the highest. Table 3 shows the results of the pregnancy outcome in those with chronic maternal disease and previous miscarriage in whom the authors have data on. The take-home baby rate data was 62.6% (n = 92 out of n = 147) patients who had a follow-up of two to three years after antenatal management. Table 4 shows the types of maternal illnesses. Genotype problem was the most important, 56.6% (142 of 251) cases.

Table 5 shows the positivity rate to different pathogens IgG: toxoplasmosis IgG (68.3%), rubella IgG (83.6%), cytomegalovirus IgG (80.0%), hepatitis BsAg (17.8%), herpes simplex type 2 (75.7%), mumps IgG (51.5%), varicella zoster IgG (56.5%), chlamydia trachomatis IgG (82.1%), and syphilis IgG (13.3%).

## Discussion

The results of the present study show a large number of women collected over the years with a new form of management, but certain points seem to be very important. The authors run aside from the clinic, a separate lecture and question and answer session, and a Wednesday weekly class. Patients are allowed to go for voluntary blood group, rhesus type, serotype, viral, and fasting glucose screening,

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Table 1. — *Other previous labour problems (n = 159).*

| Types of problems | No. | Percentage % |
|---|---|---|
| Previous cesarian | 88 | 55.3 |
| Previous vacuum | 3 | 1.9 |
| Previous forceps | 7 | 4.4 |
| Maternal trauma at delivery | 3 | 1.9 |
| Anaesthesia difficulties | – | – |
| General anaesthesia | 14 | 8.8 |
| Epidural anaesthesia | 3 | 1.9 |
| Episiotomy | 27 | 16.98 |
| Bleeding problem | 4 | 2.5 |

Table 2. — *Types of problems.*

| Types of problems | No. | Pregnancy (%) |
|---|---|---|
| Sex selection | 2 | 1.26 |
| Lamaze Reid technique | 2 | 1.26 |
| Program planned delivery | 3 | 1.9 |
| Multiple delivery | 3 | 1.9 |

Table 3. — *Pregnancy outcome in chronic maternal disease and previous miscarriage group (n = 147) at two to three years follow-up.*

| Group | No. of patients | Pregnancies | Delivered | Dead |
|---|---|---|---|---|
| Chronic maternal disease | 62 | 45 | 38 | 7 |
| Previous miscarriage | 85 | 58 | 54 | 4 |

Table 4. — *Chronic maternal illness (n = 251).*

| Maternal illness | No. | Percentage % |
|---|---|---|
| Genotype SS/SC/AS/AC | 142 | 56 |
| Chronic hypertension | 51 | 20.3 |
| Renal disease | 17 | 6.8 |
| GDM/IDDM | 41 | 16.3 |

GDM: gestational diabetes mellitus; IDDM: insulin-dependent diabetes mellitus.

Table 5. — *Seropositivity 1gG rate (Elisa Method).*

| Types of pathogen | No. of patients | 1gG Positive | Rate % |
|---|---|---|---|
| Toxoplasmosis | 558 | 381 | 68.3 |
| Rubella | 752 | 629 | 83.6 |
| Cytomegalovirus | 809 | 648 | 80.0 |
| Hepatitis BsAg | 897 | 160 | 17.8 |
| Herpes simplex Type 1 or Type 2 | 828 | 627 | 75.7 |
| Mumps | 446 | 230 | 51.5 |
| Varicella zoster | 421 | 238 | 56.5 |
| Chlamydia trachomatis | 749 | 615 | 82.1 |
| Syphilis | 827 | 110 | 13.3 |

after initial medical obstetrics and gynaecological history are taken. Hormonal studies are also undertaken. If necessary, patients are referred to medical specialist which is another outstanding feature that originates from the analysis, and this is the large number of patients who are concerned about previous premature labor or late spontaneous abortion since low birth weight is the most common associated factor of perinatal mortality; this anxiety deserves attention [4, 5] and supports the findings of other authors [6, 7]. In this group, second time abortion topped the list which did not change management. The second largest group is that with chronic maternal illnesses who are concerned about their chronic disease state. Patients with problems of hemoglobinopathy formed the largest group in an environment where about 30%-35% are carriers of either AS or AC genotype and about 1%-20% SS or SC or CC genotype [8, 9]. The anxiety deserves attention because of the high perinatal and maternal mortality rate in the group [10].

Patients who seek genetic counseling are operating under one or two premises. Firstly, a family member or fetus was diagnosed with a disorder for which they believe they are at increased risk or secondly, their age, rate, gender, or ethnicity places them at increase risk for disease [3]. In this case, according to the present results, a total of n = 108 patients were afraid of their past history of having fetal abnormality and some were afraid of their past history of having fetal abnormality and screening. Voluntary routine serological screening showed high serological TORCH IgG positive antibodies carrier rates, confirming the recommendation that such testing should be included in such preconception counseling and screening programs [5]. Recent report showed that more than 50% of pregnancies in the United States are unplanned and are often unintended [11, 12]. The rapidly growing embryo is thereby subjected to potentially injurious stimuli during its most vulnerable developmental phase [13]. Optimal prenatal care, therefore, can be achieved only through preconception care and education of the mother regarding the preventive measures and the potential risk of infection to the fetus.

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