

AN EVALUATION OF LATE ATTENDERS IN LABOUR IN ALEXANDRIA

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ABSTRACT

To study why women present in late labour we interviewed 70 parturients in our labour room for a period of 8 days in March 1990.

When presenting 19% were 8-10 cm dilated and 81% were 0-7cm dilated. The group was stratified into those in early labour (0-7cm of cervical dilatation) and in late labour (8cm or more) and compared for all variables studied. Only a few differences were statistically significant. Early comers were less likely to have strong uterine contractions and more likely to have intact membranes at presentation. Late comers were more likely to report a number of delaying factors or to have financial worries. Twenty nine percent of Alexandria residents and only 6% of outsiders reported difficulty in finding transport to labour room after the onset of labour. Almost half of Alexandria residents did not have access to public transport, ambulance or own transport.

The relative risk for late coming was: 9 for women reporting a number of delaying factors outside their control; 6 for those with financial worries or with ruptured membranes; 4 for unbooked cases or with current addresses in Alexandria; 3 for women with a normal past obstetric history or with a previous delivery outside the AHC; 2 for those worried with hospital referrals, with a previous rural address, for less than 1 year in Alexandria or with a normal current ANC. Women who came late in labour were more likely to need hospital referral or to have come to the labour unit walking.

INTRODUCTION

The Alexandria Health Centre and University Clinic (AHC) offers primary health care (PHC) with midwifery services to the women of Alexandria. There are 10-14 deliveries in 24 hours: 26% of all cases require referral to hospital, 7% are unbooked and 15% are born before arrival (BBA). Of the unbooked patients 59% are referred to hospital and 53% are BBA. Of the BBA 50% are unbooked and 28% are referred to Hospital (unpublished data).

Midwifery care has been evaluated in community (Rees et al 1989; Coetzee et al 1990) and AHC based surveys (Rander & Buch 1987; Phakathi 1989; Austin, Patel & James 1989). Such surveys show a good uptake of services with late booking for antenatal clinic (ANC).

POPULATION AND METHODS

All women who came to Alexandria labour unit in a period of 8 days in March 1990 were studied. After a pilot study patients were interviewed and further data were obtained from patient records. Four women were referred to hospital before we could interview them.

Data were analyzed using SAS computer programmes (Sas Manual Version 6). The method used to calculate relative risks is described in an appendix.

RESULTS

Seventy women were interviewed in the labour unit soon after delivery. The response rate was 100%.

Pertinent demographic factors are shown in Table 1.

Seventy four percent (52) had Alexandria addresses and all the others had addresses outside Alexandria. No one had a current rural address. When asked about their addresses before the current one 10% mentioned other townships, 14% gave Alexandria as their permanent address, even in the past, 31% reported urban or peri-urban 'white areas' and 54% mentioned a rural address. Sixty percent of current Alexandria residents and 39% of

Table 1. Age, education & marital status of respondents (n=70).

Mean age	27.0 ± 5.6 years
Age mode	23 years
<20 years	7% (5)
>35 years	10% (8)
Language preference	Sotho 43% (30)
	Zulu 29% (20)
	Xhosa 21% (15)
	Tsonga 4% (3)
Some school attendance	100%
Median level education	Std.7
<6 years schooling	17% (12)
Single and unattached	40% (28)
Married	30% (21)
'Steady boyfriend', not co-habiting	26% (18)
Co-habiting, unmarried	4% (3)

those residing outside Alexandria gave their previous address as rural ($p=0,0080$).

Of the 52 who gave a current Alexandria address, 54% had been in Alexandria for less than 1 year, 29% for less than 6 months and 17% for less than 1 month.

The median parity of the group was 1. The mode was not unique. Of 55 para 1 or more, 20% had an abnormal past obstetric history. Eighteen percent had their previous delivery at the AHC; only 4% had delivered in the referral hospital of Tembisa; a very high proportion (20%, $n=11$) delivered at home; 44% delivered in other hospitals and 15% delivered in other clinics.

Ninety three percent (65) had booked at the AHC for the current pregnancy and 7% (5) were unbooked. Most (62%) booked late in the third trimester, 37% in the second trimester and 1 in the first trimester. Of the 5 unbooked women, 2 had booked elsewhere.

During the current pregnancy 3 of the 65 booked women had major obstetric complications during the ANC course, 23 (35%) had record of minor problems and 39 (60%) had none. Most women (91%) had a negative RPR serology for syphilis (titre of 0-1/2), and 9% (6) had titre of 1/8 or more (data missing for 1).

Seventy seven percent (n=54) stated that they never received health education at the ANC. Six women remembered being taught how to recognize the onset of labour and 4 were told how to behave or what to expect in the labour unit.

Parturients decided to come to the labour unit when experiencing either strong labour pains (71%, n=50) or ruptured membranes (39%, n=27). Ten percent (7) came with both strong pains and ruptured membranes. At presentation the median cervix dilatation was 5cm, and the mode was 4cm. Nineteen percent (12) were 8-10cm dilated and 81% (53) were 0-7cm dilated (data missing for 5 cases). Forty-two women had membranes intact and 23 had ruptured membranes (data missing for 5 cases). Of the 62 women with available data, 40% had strong uterine contractions, 36% had mild contractions, 23% had moderate contractions and 2% had no contractions.

The data were stratified into early labour (0-7cm of cervical dilatation) and late labour (8-10cm) and compared for all the variables studied. Only a few differences were statistically significant. Parturients coming early were less likely to have strong uterine contractions (chi-square, p=0,0014) than those coming late and more likely to have intact membranes at presentation (Fisher exact test 2-tail, p=0,0026). Those who came late were more likely to report delays out of their control (Fisher exact test, 2 tail, p=0,0001) and more likely to be financially worried (Fisher exact test, 2 tail, p=0,0317). Twenty nine percent of Alexandra residents and 6% of outsiders (Fisher exact test p=0,0530) reported difficulty in finding transport after the onset of labour. Almost half of Alexandra residents did not have access to public transport, ambulance or their own transport and had to walk to the AHC.

The relative risk for late coming was 9 for women reporting a number of delaying factors outside their control; 6 for the financially worried or for those with ruptured membranes; 4 for the unbooked or for current addresses in Alexandra; 3 for women with a normal past obstetric history or with a previous delivery outside the AHC; 2 for those worried with hospital referrals, with a previous rural address, for less than 1 year in Alexandra, or with a normal current ANC profile. Although most of these factors are not statistically significant this is probably due to small sample sizes and some have obvious clinical relevance.

Late comers were more likely to need hospital referral (Table 2) and to have come to the labour unit walking (early comers were more likely to have come by ambulance or public transport). One third in both groups reported use of their own private transport (Table 3).

Data were stratified further according to residence in Alexandra for less or more than 1 year and although not statistically significant

TABLE 2 HOSPITAL REFERRALS

REFERRAL	CERVICAL DILATATION		TOTAL
	0-7 CM	8-10 CM	
YES	5 (63%)	3 (37%)	8 (100%)
NO	48 (84%)	9 (16%)	57 (16%)
NO DATA ON 5 CASES			

the relative risks point to some factors of clinical significance for community health practice. Residents of Alexandra for less than 1 year were twice as likely to report Xhosa as their home language, accounted for all the patients with financial worries, were 3 times more likely to report transport problems and twice as likely to come to the AHC by ambulance. Those in the township for more than 1 year were 3 times more likely to speak Zulu or to have RPR titres greater than 1/8, twice as likely to book before the third trimester and 4 times more likely to have an abnormal past obstetric history.

DISCUSSION

The population studied had few women at the extremes of age.

About a quarter had less than 6 years of schooling.

Only a minority of the study population was married and this seemed an irrelevant predictor of late coming.

Nine percent had positive serology for syphilis. Although this is low compared with past(Kark 1949) and current (Gonin, 1985; Ferrinho, 1988; Venter et al, 1989) reports in South Africa, it is extremely high in comparison to rates from more developed communities (Hamilton, Perlman & de Sousa, 1985). Residents in Alexandra for more than 1 year are more likely to have a positive syphilis serology and the reasons for this are not clear.

About a quarter gave addresses outside Alexandra. Surprisingly these patients were more likely to attend early which probably reflects a situation where women gave attention to access and transport, for the place of delivery.

Of those with Alexandra addresses, a significant proportion had been living in Alexandra for less than 5 years. Over half of the sample gave a rural area as their previous residence. These factors together with the perception of rapid population expansion, accounting for the large squatter component in the community, reflect population mobility, rather than high fertility, as the major cause of urban growth. The importance for planning of health services is that new migrants seem to have an information gap on when, where and how to get health care in their new area of settlement. Therefore they are less likely to attend early in labour or to have their children immunized (Rees et al, 1989; Coetzee et al, 1990).

In agreement with the above, most women reported that their last pregnancy had been cared for elsewhere, and about 1/5 of the sample had home deliveries in the past.

The rate of unbooked patients is low in comparison with reports from other South African centres. Nevertheless over 50 - 70% present late in labour (unpublished data) identifying this as a group of very high risk parturients (Venter et al, 1989; Hamilton, Perlman & de Sousa, 1985; Loening & Broughton, 1985; Pattison & Rossouw, 1985).

In 1989 women booking late for ANC were also less likely to have been in Alexandra for the whole of the duration of pregnancy, more likely to have been in the urban areas for a shorter period of time and to report more financial problems. Although none of these factors were statistically significant, the trends are comparable to those found in this report.

A last interesting observation is that women in Alexandra for more than 1 year are more likely to have a past abnormal obstetric history which may indicate that a more mobile

TABLE 3 TRANSPORT USED TO COME TO LABOUR ROOM AFTER THE ONSET OF LABOUR.

TRANSPORT	ALEXANDRA RESIDENTS	OUTSIDERS	TOTAL
TAXI(PUBLIC TRANSPORT)	7 (14%)	3 (17%)	10 (14%)
OWN	15 (29%)	7 (39%)	22 (31%)
AMBULANCE	6 (12%)	5 (28%)	11 (16%)
OTHER*	24 (46%)	3 (17%)	27 (39%)
TOTAL	52 (100%)	18 (100%)	70(100%)
* MOSTLY ON FOOT			

segment of the Alexandra population is healthier than the more settled group.

In conclusion the study confirms that a significant proportion of women present in late labour. Most of the possible determinants studied were not statistically significant, probably because of the small sample size; the significant factors seem to be the reporting of a number of uncontrollable delaying factors, financial worries and no ANC booking in women residing in Alexandra.

We are not aware of any other studies that have compared women coming early in labour with those coming late. The importance of this relates to the higher rate of hospital referrals in women coming late. It is important therefore to develop strategies to promote early attendance in the labour unit.

A social marketing approach (Hellitzer - Allen, 1990; Thesen 1992) is appropriate to create awareness, particularly amongst informal shack dwellers, of when/where and how to get care. This could take the form of posters (in more than one language) in areas of informal residential growth informing people about the cost and availability of ANC in Alexandra.

A more interactive educational approach should be promoted during ANC visits to promote an understanding of pregnancy and labour, to allay fears related to finances, complications and hospital referrals, and to ensure that women plan what should happen when labour starts. Since this study was done, educational ANC sessions have been started. The booking visit is associated with a visit to the labour room and with an explanation of what happens during confinement.

All the available data on maternity care in Alexandra show a good uptake of the available services. Still there is a core of late attenders or non-attenders who should be targeted specifically. Nevertheless we must remember that this group could represent a more mobile population, less integrated in the Alexandra social system and healthier than the rest of the population.

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APPENDIX

HOW TO CALCULATE RELATIVE RISKS

Let us assume that data collected on the association of a certain outcome (presentation in early labour) with a certain possible determinant (ownership of a private automobile) is summarised in a 2 x 2 table such as:

	early presentation		late presentation	
owns car	a	b	a+b	
does not own car	c	d	c+d	
	a+c	d+b	a+b+c+d	

Amongst those with a car (a+b) the risk of early presentation is $r_1 = a/(a+b)$. Amongst those without a car (c+d) the risk of early presentation is $r_2 = c/(c+d)$. The relative risk (or risk ratio) is a measure of the strength of association between owning a car and presenting early in labour, and it is represented by the ratio r_1/r_2 .

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