

Survival of the fittest

Gerrit Ter Haar Arts DTM & H and DPH



Curriculum Vitae

Gerrit Ter Haar graduated as Arts from the University of Utrecht, Holland in 1955. He did a surgical job for one year in The Hague and came to Rietvlei Dutch Reformed Mission Hospital in 1956. Since then he has raised a family there, built up the medical service in the district of Umzimkulu and at Rietvlei Hospital. He spent a year working at McCord Zulu Hospital in 1966 and obtained the DTM & H and the DPH at Wits in 1982 and 1983. He remains an enthusiastic, comprehensive primary care doctor in a rural area.

Rietvlei Hospital,
Umzimkulu,
Transkei.

KEYWORDS: Delivery; Hospitals; Abortion; Foetal Death; Infant Mortality; Death Rate; Child

Summary

Pregnancy and child survival figures for 6 578 pregnancies of 2 743 women presenting at Rietvlei Hospital for delivery between the years 1974 and 1977 are presented here. The figures of Ntlaza hospital are shown for comparison. Babies born at Rietvlei hospital had a 2,8 times better chance of survival than those born at home.

In order to evaluate existing obstetric services, an analysis of infant mortality rates in a well-documented group of patients was made of 6 578 pregnancies occurring in 2 743 women.

The information was obtained by screening the maternity records of those women who delivered in hospital during the period 1974-77.

For years the midwives have been trained to take accurate and detailed information of all pregnancies of patients attending antenatal clinics or delivering at Rietvlei Hospital in the district of Umzimkulu.

TABLE 1: Pregnancy and infant loss recorded from clinic attenders at Rietvlei and Ntlaza hospitals

RATES PER 1 000 PREGNANCIES	RIETVLEI HOSPITAL 6 578 PREGNANCIES	NTLAZA HOSPITAL *	
Abortions	38	31	
Stillbirths	47	17	
	85	48	Pregnancy wastage
0 - 1/12 years	44	52	
2/12 - 12/12 yrs	59	120	
	103	172	'Infant Mortality.'**
13/12 - 5 years	41	56	
Total	229	276	

* The number of pregnancies analysed is mislaid

** Note these figures are per 1 000 pregnancies and not per 1 000 live births

Most of the patients who are included in this study came from the Umzimkulu district but some were from Mount Ayliff.

A similar study was done by Dr Julian Pratt (unpublished data) who used the antenatal cards of the patients attending Ntlaza Hospital antenatal clinic during 1976 as his source of information.

Although both population groups belong to rural areas, the comparison of the results reveals interesting differences but also striking similarities.

RESULTS

1. From a total of 6 578 pregnancies, 4 536 (69%) were delivered in hospital and 2 042 (31%) at home.

Of all babies born alive, 419 (9,2%) of the first group and 534 (26,1%) of the second group died subsequently indicating a 2,8 times greater mortality risk for the home-born babies as against those born in hospital.

2. If we ignore a few ectopics, the degree of pregnancy-wastage can be obtained by adding the figure for the recorded abortions (247) to those of the stillborn babies (308), resulting in 555, which represents a percentage of

8,4 or 84/1 000 for hospital and home deliveries combined.

This figure of stillbirths (308) showing an incidence of 47/1 000 for this total group covering all deliveries of several years compares well with the figure of 45/1 000 which was recorded in 5 024 deliveries which all took place in hospital. This hospital incidence of stillbirths hardly changed over the period 1974-77.

3. The ages and causes of death of the children were recorded by the midwives according to the information given by the mother and grouped into the following three categories:
birth - 1 month; 2 months - 12 months; 13 months - 5 years.

As all pregnancies of patients are involved covering a period of 10-15 years, the rates are only average figures and can therefore only give an impression of the actual mortality rates at present.

Birth - 1/12:

In this group 290 babies died, which give a neonatal mortality rate of 44/1 000 where the mortality rate for

TABLE II: Causes of death for 953 from 6 578 pregnancies recorded at Rietvlei hospital antenatal clinic

AGE IN YEARS	Diarrhoea & Vomiting	Prematurity	Convulsions & Cerebral	Swelling	Other Causes	Unknown	TOTAL
0-1/12	60	61	93	6	60	10	290
2/12-12/12	238	17	15	18	67	35	390
13/12-5	111	16	15	20	79	32	273
TOTAL	409	94	123	44	206	77	953

the same age group in hospital during 1974-77 was 29/1 000

1/12 - 12 months:

In this group 390 babies died which means an infant mortality rate of $290 + 390 = 680/6\ 023$ live births = 113/1 000.

13 months - 5 years

In this group 253 children died, bringing the total loss from birth to 5 years to 933 = 16%

If we combine pregnancy-wastage with child loss it means that from all pregnancies started, 22,9% were lost to the parents before the age of 5.

CONCLUSION AND DISCUSSION

1. The better survival rate of babies born in hospital can only partially be explained by the better obstetric and neonatal care available at the hospital. It was not possible to see from this analysis whether there was preselection causing a bias in the figures obtained. It could, for instance, be possible that a large percentage of those with a previous bad obstetric history and high infant mortality experience decided to deliver at hospital so as to make sure of future live children. Mothers have been heard saying that 'hospital born babies are stronger'.

Despite this reservation the 2,8 times greater risk of mortality of the home-born babies compared with those born in institutions seems to make it reasonable that the present tendency to deliver in hospital or clinic should be encouraged in order to try and reduce the present high mortality in the first month of life. The alternative of supplying a high quality midwifery service to each home delivery seems rather complicated and likely to be unpopular, both to the consumer and supplier of such service.

A common practice in many antenatal clinics is to select those patients who can be regarded as 'at risk' perhaps and urge them to wait for the delivery at or near the hospital or clinic.

2. As many babies are lost due to prematurity and the trauma of birth in the very first week of life, special attention should be given to the cause and prevention of this avoidable loss of life.

As for the prematures, much can be done at present by preventing premature labour, particularly in the at-risk group of multiple pregnancies (38/1 000). As for the trauma of birth, it should become routine for primiparas to deliver in hospital so that the so-called trial of labour does not end in misery for mother or child, or for both.

3. As the outstanding cause of death in all three categories of children is gastroenteritis, and this condition is preventable and curable, it should receive the highest priority in planning child health services.

Although malnourished children are more liable to suffer from gastroenteritis than well-nourished infants, the basic factor does not seem to be the lack of food but the

knowledge and ability of how to use the available resources in the best way.

For this very reason an intensification of the family planning service would not solve this problem. On the other hand, it does seem more than likely that once this problem of high infant mortality can be adequately coped with by the community, the demand for planning families especially by spacing the birth interval with the help of modern means will follow without any special campaigning.

4. As the group of patients who were included in this study were self-selected in that they decided to deliver in hospital and therefore might be more inclined to accept advice and guidance from the clinic sisters, it can be assumed that the real average mortality figure in this area will be considerably higher. The true situation will, however, only be known if a study of non-clinic attenders is done.
5. Having localised the main killers of the newborns in our area, we intend not only to improve the obstetric and neonatal care at hospital and clinic level but to pay particular attention to health education at community level applied to local conditions and problems.

Footnote:

The expression 'the weaker sex' is a misnomer in this area as the percentage of male babies who died reached 54% while only 45% of those who succumbed were female.

Canesten Spray Solution:  Reg. No. E/20.2.2/18
clotrimazole 0,4g, inert solvent to 40ml.

Cut out mycoses



in skin folds and larger body areas with Canesten Spray Solution, a convenient application for treating mycoses in the aged and infirm.

Canesten

Part of the comprehensive Canesten antimycotic range.

Bayer-Miles  Wrench Road, Isando, 1600. (011) 974-2811.

Canesten and Bayer Cross are registered trade marks of Bayer Germany.