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THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

COMPARISON OF PREGNANCY OUTCOME RELATED TO PRENATAL CARE BETWEEN PRIVATE AND SERVICE NEGRO PATIENTS IN OKLAHOMA COUNTY

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

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BY

CLAY EDDIE SIMPSON, JR.

Oklahoma City, Oklahoma

1968

COMPARISON OF PREGNANCY OUTCOME RELATED TO PRENATAL

CARE BETWEEN PRIVATE AND SERVICE NEGRO PATIENTS

IN OKLAHOMA COUNTY

APPROVED BY

DISSERTATION COMMITTEE

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COMPARISON OF PREGNANCY OUTCOME RELATED TO PRENATAL CARE BETWEEN PRIVATE AND SERVICE NEGRO PATIENTS IN OKLAHOMA COUNTY

CHAPTER I

INTRODUCTION

> "A little neglect may breed mischief; for want of a nail the shoe was lost; for want of a shoe the horse was lost; and for want of a rider the battle was lost." - Benjamin Franklin

American Indian women, the women who came to America on the Mayflower, and most of the pioneer women rarely saw a doctor during their pregnancies; and a physician was not present at the actual delivery. They "birthed" their offspring beside the trail or in a sod house isolated from civilization. Many of the babies survived, but a great percentage of them died. Thousands of new mothers lost their lives, or were sickly after childbirth. These babies and mothers lost the battle of survival because the "nail", or prenatal care, was not available (1).

The first antenatal clinic was established in 1858 at the Routunda in Dublin (18). In 1873, the American Medical Association organized a section on Obstetrics and Diseases of Women and Children. This was the first time the medical profession singled out and placed emphasis on the care of mother and child.

Public health legislation designed specifically for children

was first enacted in 1879 when the New York State Legislature passed a law requiring New York City to appropriate funds for child health (4). Physicians and nurses were employed to work with families in an effort to prevent severe outbreaks of summer diarrhea among infants and children. This meager beginning was the stimulus for the origin and growth of many welfare societies and organizations.

In 1901, the Instructive Nursing Association of Boston initiated antenatal care in America. It was not until 1902 that difficult labor, premature birth, and asphyxia were suggested as important causative factors in cerebral palsy and mental deficiencies. This realization of the possible role of maternal influences upon the fetus gave greater weight to the value of antenatal and maternal care.

In 1908 the New York Commission for the Improvement of the Poor, in conjunction with the New York Outdoor Clinic, began to provide prenatal care for expectant mothers in the lower income groups.

The objective of prenatal care is to bring to all pregnant women a high quality of care beginning in the first trimester of pregnancy and continuing throughout pregnancy so that optimal health may be reached, complications may be identified in their incipient stage and well managed, and guidance may be provided for the expectant parents.

Since the turn of the century, prenatal care has been recognized as an essential part of the care of the pregnant woman (24). Professional societies and organizations, state and local health departments, welfare agencies and many other groups, working together, are providing the means by which every expectant mother in this country has the opportunity of achieving at least a minimum safe level of care. Today 96-98

percent of all white births and 76 percent of the non-white births occur in hospitals. Major factors accounting for this increase include recognition that the hospital is a safer place for maternity and newborn care than is the home; the increase in the number of hospital beds available for maternity and newborn care, primarily because of the Federal Hospital Survey and Construction Act enacted in 1946; and the increase in prepaid hospital insurance (24).

A major social trend has been the tremendous movement of families from rural areas to urban centers. Many metropolitan areas have had an influx of low-income families requiring increased health and hospital facilities but, for the most part, unable to pay for or support them. Most of the migration has been from the southeastern rural areas to large cities all over the country. The greatest proportion of the Negro population has been in the rural southeast and migration of the Negro from a farm life, requiring little or no skill, to the highly industrialized urban areas automatically places him, in most instances, on the bottom of the socio-economic ladder.

The influx of low socio-economic groups into the metropolitan areas may be noted by changes in the undesirable pregnancy rates as recorded in private and service hospitals. The District of Columbia is an example of the constantly changing racial pattern as a direct result of the emigration of low income Negroes into the area. A number of fairly recent studies have been made of the economic status of inhabitants in the metropolitan area of Washington, D. C. In a study made in 1956 by the Census Bureau for the District of Columbia it was revealed that 11.6 percent of the white and 31 percent of the non-white families in the

District had incomes below $3,000 a year and that 30.8 percent of the white and 66.3 percent of the non-white had incomes below $5,000 a year. It has been estimated that, in 1957, 33 percent of the total population in the District of Columbia could not pay for hospital care; this applied to 17 percent of the whites and 53 percent of the non-whites (2).

Studies of prenatal care as reported on the birth certificates also reveal significant facts. In 1952, 30 percent of the births at the city hospital were without prenatal care. In 1956, for those born at the city hospital in the District, the percentage without prenatal care had increased to 47 percent. An analysis of the births without prenatal care according to place of occurrence was tabulated and it was revealed that 84 percent of all births without prenatal care occurred at the city hospital (70 percent of the white and 85 percent of the non-white) (2).

Among minority and lower socio-economic groups there are differences in the quantity and quality of health services. This is, in part, a consequence of social restrictions. The most common explanation has been that the upper income group can afford, and therefore secure, more and better medical care. Other explanations have focused upon the social and psychological aspects of the greater incompatibility of lower class clients with treatment sources and even public health philosophy. It is argued that preventive and therapeutic medicine, as presently organized and administered, are not congenial to the health beliefs and modes of behavior of low income groups, especially such ethnic minorities as Negroes and Puerto Ricans (3).

Many studies have been made to determine the deterrents to prenatal care. Each community must ask itself what it has done to encourage

or discourage the prenatal patient's coming early and having continuous care. Among the reasons that patients fail to seek obstetrical care are such factors as: location of clinics and transportation problems; excessively strict eligibility requirements; lack of someone to care for younger children at home; the patients ignorance of the importance of care; the requirements for a donation of blood; dissatisfaction with the clinic; late registration; fear of leaving neighborhood; fear of doctor; and different cultural practices within the clinics (5).

Perhaps the following soliloquy of a clinic patient is illustrative of their general attitude and experiences as expressed by William A. Steiger, M. D., Temple University School of Medicine:

A CLINIC PATIENT'S SOLILOQUY

"God, it's cold in this place this morning and dark. I'll light the stove to warm it up. Damn the clinic with its 8:00 o'clock appointments. Doctors never get there till 9:30 anyway.

All right, kids, breakfast is ready. Have to take you to your aunt's till I get back from the hospital. Jimmy, tuck your shirt in__Jack, help him with it. That's enough Jack—help him, I said.

Thanks, Sis, for watching the kids. I'll get back soon as I can. Probably after 12 though.
Twenty-five cents for a trolley ride. I remember when it was ten. Let's see, fifty cents carfare, two dollar clinic fee—hope they don't need tests.

Look at the line to get to the cashier. All those big-bellied women standing there. Glad I'm not one of them.
I still owe you a dollar for that last blood test? But I paid you that. No, I don't have the receipt with me. No, I can't pay it today.
But I'm sick. I don't feel good. Yes, I promise, bring the dollar next time.

Thank heaven for that girl in the medical clinic. She

makes you feel at home. She's fair, she'll see that I'm taken on time.
10 o'clock and no one has seen me yet. People who came in after me are going ahead of me. Should I complain? Will they get angry?

Miss, you haven't forgotten me, have you? My chart is lost? No, I haven't been to any other clinics. Yes, that's my right number. Here it is on my clinic card. Well, finally. Room 91! Gosh, the doctor's young. But they're very good doctors here. Yes they are, very good.

Yes, Sis, it took all that time. They lost my chart. No, I don't know what they think is the matter. I don't think he said. His name? Begins with an S. Yes, I've got a prescription. But they wanted $3.50 to fill it and I didn't have enough money. Can I borrow...?"

In connection with an inquiry into the eligibility of its obstetric patients, the Los Angeles County General Hospital briefly reviewed the prenatal care histories of all women who gave birth there during one week in April 1954. They found that one-third had received no prenatal care. Since prenatal care was offered in 32 health departments in the Los Angeles area for women financially eligible under the standards of Los Angeles County Department of Charities, the State Department of Public Health was interested in knowing why care was not obtained. The results of further study revealed that mothers who did not get prenatal care consisted largely of the less educated, the older age group, the users of public transportation, and women who lacked prenatal care in previous pregnancies (6).

Present knowledge indicates that cause and effect in perinatal problems is a complex of many factors. Many of the factors appear closely related; other factors seem to act independently and in some instances react with each other. The same phenomenon is true in most biological

and sociological problems. The following are some of the factors that are important in determining high-risk mothers and infants:

I. Family History and Background

A. Nutrition

Much evidence has been accumulated on the effect of nutrition on health of the mother and the fetus. There are still many unanswered questions regarding the role of nutrition in perinatal mortality (7) (8). On the other hand, the literature is filled with the results of experimentation in the field of proper and improper diet. Specific deficiency syndromes can be produced from inadequate vitamin intake, such as congenital rickets from avitaminosis D (22).

B. Social Class

Studies in England and Scotland have shown a definite increase in mortality rates with decreasing social class (9).

C. Race

The effect of race on the incidence of disease and death is not clear. There is evidence that various socio-economic factors which are correlated with race may be more important than race per se. In both whites and non-whites, a definite decline in infant mortality rate is reported with rising level of income, however differences still exist between whites and non-whites in the same economic group (10) (16). It is difficult to determine whether the present economic grouping of two different races or the socio-economic grouping ten or twenty years previously is the more important determinant of this

effect.

D. Intelligence and Educational Level

Information obtained from a representative sample of ever-married and ever-pregnant Negro women, 15 to 45 years of age, in metropolitan New Orleans indicates substantial ignorance about reproductive physiology, the ovulatory cycle, and effective means of contraception (24).

E. Family Stability

Beasley has obtained data which suggest strongly that ignorance of family planning techniques and the inaccessibility of family planning services contribute to the absence of the paternal family head (24).

F. Family History

Family history is important in certain conditions which are probably genetic or environmental in nature. Among these are heart disease, hypertension, diabetes, and congenital malformations (11).

II. Medical History of Mother

A. Diseases Indirectly Related to Pregnancy

The following diseases probably result in increased perinatal mortality but are not directly related to pregnancy: acute infections such as rubella, poliomyelitis, and others; chronic diseases such as syphilis; heart disease, hypertension, cardiovascular disease, and diabetes (17).

B. Work Outside the Home During Pregnancy

For many years, work outside the home during the latter part

of pregnancy was thought to result in increased risk of fetal and neonatal deaths. However, the results of two recent studies showed no significant effect of work outside the home on incidence of prematurity (12) (13).

III. Previous Obstetrical History of Mother

A. Preceding Current Pregnancy

It has been recognized for many years that women with a history of previous fetal loss had a higher fetal loss in subsequent pregnancies than those who had no previous fetal loss. Yerushalmy observed a strong association between the outcome of the immediately preceding and the present pregnancy in regard to early fetal, late fetal, neonatal, and late infant deaths (14).

B. Birth Interval

A higher incidence of premature births has been recognized where there is either a very close or a very wide spacing of births (15).

C. Size of Family

Stillbirths and neonatal mortality rates decrease with size of the family, but infant death rates increase with size of the family. These findings suggest a possible environmental effect on infant deaths and a beneficial effect of parity on perinatal deaths (14).

IV. Present Pregnancy

A. Maternal Age

Prematurity and toxemia of pregnancy are largely responsible

for the increased mortality observed among women under 20 years of age (19). Perinatal mortality tends to increase with the age of the mother (20).

B. Multiple Births

Multiple births result in an increased incidence of premature births. The latter infants have a higher mortality rate than do mature infants. In the United States, multiple births, account for about 2 percent of the live births but they are associated with 6 percent of the fetal deaths of 26 weeks gestation. Ten percent of the neonatal deaths are associated with multiple births (21).

C. Illegitimate Pregnancy

Comparing medical complications of married and unmarried pregnant women in a study in New York City, Pakter et al. noted that though the unmarried women in each ethnic group had a slightly higher frequency of complications than the married women, ethnic derivation was more significant than marital status (23).

V. Birth Weight

Birth weight is probably the most crucial factor in perinatal death. Birth weight varies considerably by social class, age of mother, parity, and nutritional status of the mother during pregnancy (14).

While there is no proof, statistical or otherwise, that prenatal care in itself reduces perinatal morbidity and mortality, there is an association between early participation in prenatal care and improved

outcome of pregnancy.

The Negro as a group has a much higher overall rate of unfavorable pregnancy outcome than does the white race. In 1963, the mortality risk in the United States for non-white infants was twice as high as that for the white group (15.4 to 5.5) and was greatest during the postnatal period. The rate of fetal death was 13.7 per 1000 live births for the white as compared with 26.7 per 1000 live births for the non-white. The differences between maternal death rates for white and non-white women have been more or less constant for the past ten years, the death rates being about four times greater in non-white women (96.9 per 100,000) than in white women (24.0 per 100,000) (26).

Within the Negro group the higher rates appear to be influenced by the greater proportion of persons in the low socio-economic subgroups and it seems possible that an intraracial study of different economic levels would support this hypothesis. The general social stratification of the Negro in Oklahoma County is not unlike that found in other similar metropolitan areas around the country. An epidemiological investigation of private and service Negro patients then can be used in this area to determine any differences that may exist in pregnancy outcome as it relates to prenatal care.

CHAPTER II

MATERIALS AND METHODS

This study was designed as an analytical survey to examine the factors which are associated with prenatal care and pregnancy outcome among Negro private and service patients in Oklahoma County, Oklahoma. The data are completely retrospective. The chi square test was used to test hypotheses.

In view of the large number of indigent Negro patients admitted to the obstetrical service at the University of Oklahoma Medical Center, the University Hospital was considered an appropriate place to study the factors relating to the prenatal care of this group. In this study, a service patient is defined as anyone whose financial capabilities will not allow him to accept responsibility for full payment of his medical care or hospitalization.

St. Anthony Hospital was selected as a source of Negro private patients since it serves a majority of this group and utilizes a prenatal form as part of the obstetrical record. In this study, a private patient is defined as anyone who is able to pay for his hospitalization without the aid of an official agency.

An analysis was made of 1,433 births to Negro women at the University of Oklahoma Medical Center Hospital from 12:01 A.M. January 1, 1963 through 12:00 P.M. December 31, 1965. Analysis was also made of

498 births to Negro women at St. Anthony Hospital during the same period.

A special code sheet was designed (Figure 1) to record the data. The code sheet was used to accumulate selected data from labor and delivery records, birth and stillborn certificates, prenatal forms, preliminary examination forms, and case histories in such a fashion that the information could be analyzed readily by counter sorter and/or electric digital computer.

The data were punched directly on IBM punch cards from the code sheet and verification was made. The tabulations were performed on a 1620 electronic computer.

At the outset of this project it was decided to test the effect of prenatal care participation on prematurity and perinatal mortality, comparing private and service patients by marital status, parity, age of mother, previous abortions, and birth weight. The Apgar rating of women at the University of Oklahoma Medical Center was also observed, but this information was not a part of the obstetrical record of women at St. Anthony Hospital. The Apgar Scoring System, devised by Dr. Virginia Apgar, is shown in Figure 2. It consists of five observations made when the baby is 60 seconds old. A value of 0, 1, or 2 is assigned to each observation, 0 indicating absence and 2 indicating normality. The five values are added and the total represents the baby's Apgar score. A dead baby has a score of 0; a healthy baby has a score of 10 (18).

Parity is defined as the number of infants, live or stillborn, of premature or full term weight that a patient has delivered. Miscarriage means the birth of the baby at a time before it has developed

1. _____ HOSPITAL

2-7. _____ CASE NUMBER

8. _____ MARITAL STATUS S M SP D

9. _____ PARITY 1 2 3 4 5 6 7 8 9 10+

10-11. _____ AGE OF MOTHER

12-17. _____ DATE OF L.M.P.
E.D.C.

18-23. _____ DATE OF DELIVERY

24. _____ TIME PRENATAL CARE BEGAN
0 - Unknown or not reported
1 - No prenatal care
2 - Started before 4 months of gestation
3 - Started 4-6 months
4 - Started after 6 months
5 - Erractic prenatal care

25-26. _____ GRAVID

27-28. _____ AB

29. _____ SEX
0 - Unknown or not reported
1 - Male
2 - Female
3 - Undetermined

30-33. _____ BIRTH WEIGHT

34-36. _____ LENGTH OF BABY IN INCHES

37. _____ DEATH OF FETUS
1 - Died before labor
2 - Died during labor
3 - Fetal death - time unknown
4 - Not reported
5 - Under 25 hours after delivery
6 - 25-71 hours after delivery
7 - 72 hours or more after delivery

Figure 1. Code sheet for prenatal care.

SIGN	0	1	2
Heart rate	absent	below 100	over 100
Respiratory effort	absent	weak cry hypoventilation	good strong cry
Muscle tone	limp	some flexion of extremities	well flexed
REFLEX RESPONSE:			
1. Response to catheter in nose (tested after oropharynx is clear)	no response	grimace	cough or sneeze
2. Tangenital foot slap (score either #1 or 2, not both)	no response	grimace	cry or withdrawal of foot
Color	blue or pink	blue extremities body pink	completely pink

Figure 2. Apgar scoring system for rating the condition of newborns 60 seconds old.

enough to live in the outside world. This usually takes place before the sixth month. After the sixth month, birth of the baby before it is due is called premature labor. In this study, miscarriage is referred to as "abortion".

It was hoped that an analysis of such data would demonstrate a specific problem as it relates to public health program effectiveness in the Negro community. In addition, it was hoped that the data collected would be of such a nature that studies of greater depth involving other obstetrical facts could be made and correlated with the results of the present project.

This study has certain features of significance:

1. All of the patients were Negroes living in Oklahoma County.
2. All of the service patients were from the University of Oklahoma Medical Center and were, then, in the same socio-economic class.
3. All of the private patients met the financial criteria for admittance to St. Anthony Hospital and hence they were in a socio-economic class different from that of the service patients.

CHAPTER III

RESULTS

The marital status of the private and service Negro patients is shown in Table 1. Marital status was recorded as single, married, separated, or divorced. There were a few widowed mothers. Information was usually available concerning the date of death of the father. If the estimated date of conception was not compatible, the patient was listed as single. In this study, an extramarital pregnancy is defined as a pregnancy which occurred in a woman who was not legally married to the father of the child at the time she registered for prenatal care. This group included women of divorced, separated, or common-law status and women who married after registering for prenatal care.

There was a statistically significant difference ($\chi^2 = 510$, $P < .05$) in the marital status of private and service Negro patients.

The stage of pregnancy at which prenatal care began for the combined economic groups and for each economic group is presented in Table 2. In the combined economic groups there was approximately the same percentage of married patients receiving care in the first trimester (27.8 percent) and in the third trimester (26.0 percent). However, there was a significant difference ($\chi^2 = 94.6$, $P < .05$) between the married and unmarried women as to the time when they first received prenatal care. For the unmarried group, there was a smaller percentage

TABLE 1

BIRTHS - DISTRIBUTION BY MARITAL STATUS, UNIVERSITY OF OKLAHOMA NEGRO SERVICE PATIENTS AND ST. ANTHONY HOSPITAL NEGRO PRIVATE PATIENTS, OKLAHOMA COUNTY, OKLAHOMA JANUARY 1, 1963 - DECEMBER 31, 1965

	MARRIED		UNMARRIED		TOTAL	
	Number	Percent	Number	Percent	Number	Percent
PRIVATE	454	(91.1)	44	(8.8)	498	(99.9)
SERVICE	767	(53.5)	666	(46.4)	1433	(99.9)
TOTAL	1221	(63.2)	710	(36.7)	1931	(99.9)

TABLE 2

MARITAL STATUS - DISTRIBUTION BY PRENATAL CARE RECEIVED, UNIVERSITY OF OKLAHOMA MEDICAL CENTER NEGRO SERVICE PATIENTS AND ST. ANTHONY NEGRO PRIVATE PATIENTS, OKLAHOMA COUNTY, OKLAHOMA, JANUARY 1, 1963 - DECEMBER 31, 1965

	ALL					
	Married		Unmarried		Total	
	Number	Percent	Number	Percent	Number	Percent
First Trimester	340	(27.8)	72	(10.1)	412	(21.3)
Second Trimester	284	(23.4)	125	(17.6)	409	(21.2)
Third Trimester	328	(26.8)	247	(34.7)	575	(29.8)
Erratic Care	1	(.08)	-	-	1	(.05)
No Prenatal Care	219	(17.9)	243	(34.2)	462	(23.9)
Unknown or not reported	49	(4.0)	23	(3.3)	72	(3.7)
Total	1221	(99.9)	710	(99.9)	1931	(99.9)

- No Cases

TABLE 2 - Continued

	PRIVATE					
	Married		Unmarried		Total	
	Number	Percent	Number	Percent	Number	Percent
First Trimester	242	(53.3)	20	(45.4)	262	(52.6)
Second Trimester	105	(23.1)	13	(29.5)	118	(23.7)
Third Trimester	66	(14.5)	7	(15.9)	73	(14.6)
Erratic Care	1	(.2)	-	-	1	(.2)
No Prenatal Care	9	(2.0)	1	(2.3)	10	(2.0)
Unknown or not reported	31	(6.8)	3	(6.8)	34	(6.8)
Total	454	(99.9)	44	(99.9)	498	(99.9)

- No Cases

TABLE 2 - Continued

	SERVICE					
	Married		Unmarried		Total	
	Number	Percent	Number	Percent	Number	Percent
First Trimester	98	(12.8)	53	(7.8)	150	(10.5)
Second Trimester	179	(23.3)	112	(16.8)	291	(20.3)
Third Trimester	262	(34.2)	240	(36.0)	502	(35.0)
Erratic Care	-	-	-	-	-	-
No Prenatal Care	210	(27.3)	242	(36.3)	452	(31.5)
Unknown or not reported	18	(2.3)	20	(3.0)	38	(2.6)
Total	767	(99.9)	666	(99.9)	1433	(99.9)

- No Cases

of patients receiving care in the first trimester (10.1 percent) than the percentage of those receiving care in the third trimester (34.7 percent). There was a significant difference ($\chi^2 = 67.7$, $P < .05$) between the unmarried group (34.3 percent) and the married group (17.9 percent) who had no prenatal care.

It will be seen that for the married and unmarried private patients, a significant difference ($\chi^2 = 0.32$, $P > .05$) does not exist between the percentage of those seeking prenatal care in the first trimester and those seeking care in the third trimester. Among the married and unmarried service patients, a significant difference ($\chi^2 = 20.2$, $P < .05$) exists between the percentage of those seeking prenatal care in the first trimester and those who had no prenatal care. In the married and unmarried service patients there is also a significant difference ($\chi^2 = 7.9$, $P < .05$) between the percentage of those seeking care in the first trimester and those seeking care in the third trimester.

The classification 0 (prenatal care unknown or not reported) was included on the code sheet. For the most part, these patients came to the hospital in labor after receiving their prenatal care at the Variety Club Health Center. Information concerning their initial visit was obtained from the Variety Club Health Preliminary Examination Record and the beginning of prenatal care was thus established. When records from the Variety Club were missing, the patient was recorded as unknown or not reported.

Parity information is contained in Table 3. In assessing when prenatal care began by parity there were too few cases after para 4 to be statistically valid. Consequently all cases are grouped together as

TABLE 3

PARITY - DISTRIBUTION BY TIME PRENATAL CARE BEGAN, UNIVERSITY OF OKLAHOMA MEDICAL CENTER NEGRO SERVICE PATIENTS AND ST. ANTHONY HOSPITAL NEGRO PRIVATE PATIENTS, OKLAHOMA COUNTY, OKLAHOMA JANUARY 1, 1963 - DECEMBER 31, 1965

ALL						
Parity	0	1	2	3	4	5+
First Trimester	22.4%	24.1%	17.8%	27.1%	16.9%	18.8%
Second Trimester	26.8%	20.2%	20.7%	18.8%	23.6%	15.9%
Third Trimester	25.5%	29.7%	33.6%	26.7%	35.1%	32.2%
Erratic Care	-	-	.3%	-	-	-
No Prenatal Care	21.5%	22.5%	24.0%	24.4%	19.3%	29.2%
Unknown or not reported	3.5%	3.3%	3.3%	2.7%	4.8%	4.6%

PRIVATE						
Parity	0	1	2	3	4	5+
First Trimester	51.9%	58.0%	45.0%	65.4%	47.3%	47.6%
Second Trimester	29.1%	19.6%	25.0%	20.0%	28.9%	19.7%
Third Trimester	10.2%	16.9%	21.2%	9.0%	13.1%	16.2%
Erratic Care	-	-	1.2%	-	-	-
No Prenatal Care	3.1%	2.6%	-	1.8%	-	2.3%
Unknown or not reported	5.5%	2.6%	7.5%	3.6%	10.5%	13.9%

SERVICE						
Parity	0	1	2	3	4	5+
First Trimester	11.5%	8.8%	8.0%	22.5%	7.8%	11.6%
Second Trimester	26.0%	20.5%	19.2%	29.4%	22.0%	15.4%
Third Trimester	31.2%	35.4%	38.1%	51.9%	41.7%	36.2%
Erratic Care	-	-	-	-	-	-
No Prenatal Care	28.3%	31.4%	32.7%	50.9%	25.1%	37.5%
Unknown or not reported	2.8%	3.6%	1.7%	3.9%	3.1%	2.2%

- No Cases

one class and called "para five +". In the combined groups, parity did not seem to affect the time prenatal care began. The highest percentage of private patients, regardless of parity, sought prenatal care in the first trimester. In comparing the time prenatal care began in the private and service patients, there was a lower percentage of private patients with no prenatal care and a higher percentage of service patients receiving care in the third trimester, regardless of parity.

The results of further analyses (Table 4) revealed that, in the combined groups, the number of previous abortions did not influence the time prenatal care began. The designation "3+" includes women with three or more abortions. Among the private patients, the percentage receiving prenatal care in the first trimester increased with the number of previous abortions. Of the service patients with three or more previous abortions, the percentage who received no prenatal care was higher than the percentage who received care in the first trimester.

Due to the small number of deaths recorded, the mortality rates per 1000 births (Table 5) could not be analyzed statistically, however the higher rates in the no prenatal care category is indicative of the expected trend. The causes of death and times of death for the service patients are presented in Table 6 and those for the private patients are shown in Table 7. It will be seen from the results shown in Table 8 that, of the service patient deaths, 55.1 percent of the mothers had no prenatal care (31.5 percent of all service patient mothers received no prenatal care) and 20.0 percent of the private cases failed to register for prenatal care (2 percent of all private mothers received no prenatal care). The majority (60.0 percent) of the private cases with fetal

TABLE 4

PREVIOUS ABORTIONS - DISTRIBUTION BY TIME PRENATAL CARE BEGAN, UNIVERSITY OF OKLAHOMA MEDICAL CENTER NEGRO SERVICE PATIENTS AND ST. ANTHONY HOSPITAL NEGRO PRIVATE PATIENTS, OKLAHOMA COUNTY, OKLAHOMA, JANUARY 1, 1963 - DECEMBER 31, 1965

ALL				
Previous Abortions	0	1	2	3+
First Trimester	20.9%	19.6%	35.8%	25.6%
Second Trimester	20.7%	22.9%	22.3%	23.0%
Third Trimester	30.0%	31.1%	20.8%	23.0%
Erratic Care	.6%	-	-	-
No Prenatal Care	24.0%	23.6%	20.8%	28.2%
Unknown or not reported	4.2%	2.6%	-	-

PRIVATE				
Previous Abortions	0	1	2	3+
First Trimester	50.7%	54.2%	76.4%	85.7%
Second Trimester	22.7%	31.4%	17.6%	14.2%
Third Trimester	15.8%	11.4%	5.8%	-
Erratic Care	.02%	-	-	-
No Prenatal Care	2.2%	1.4%	-	-
Unknown or not reported	.08%	.01%	-	-

SERVICE				
Previous Abortions	0	1	2	3+
First Trimester	10.1%	9.3%	22.0%	12.5%
Second Trimester	19.9%	20.4%	24.0%	25.0%
Third Trimester	35.2%	37.0%	26.0%	28.1%
Erratic Care	-	-	-	-
No Prenatal Care	31.8%	30.2%	28.0%	34.3%
Unknown or not reported	2.7%	2.9%	-	-

- No Cases

TABLE 5

PERINATAL MORTALITY RATE PER 1000 BIRTHS - DISTRIBUTION BY TIME PRENATAL CARE BEGAN, UNIVERSITY OF OKLAHOMA MEDICAL CENTER NEGRO SERVICE PATIENTS AND ST. ANTHONY HOSPITAL NEGRO PRIVATE PATIENTS, OKLAHOMA COUNTY, OKLAHOMA JANUARY 1, 1963 - DECEMBER 31, 1965

	ALL	PRIVATE	SERVICE
First Trimester	7.2	3.7	13.0
Second Trimester	-	-	-
Third Trimester	12.1	*	7.7
Erratic Care	-	-	-
No Prenatal Care	17.3	*	15.4
Unknown or not reported	-	-	-
Total	12.4	14.4	11.7

\- No deaths

* Rates not calculated on less than 100 total births in any category.

TABLE 6

PERINATAL DEATHS - DISTRIBUTION BY CAUSE OF DEATH AND TIME OF DEATH, UNIVERSITY OF OKLAHOMA MEDICAL CENTER NEGRO SERVICE PATIENTS, OKLAHOMA COUNTY, OKLAHOMA JANUARY 1, 1963 - DECEMBER 31, 1965

	TIME OF DEATH - NUMBER OF CASES					
CAUSE OF DEATH:	Died before labor	Fetal death; time unknown	< 25 hours after birth	25-75 hours after birth	72 hours after birth	Total
Anoxia	2	-	-	1	-	3
Congenital Abnormality	1	-	-	-	-	1
Infection: syphilis	2	-	-	-	-	2
Erythroblastosis	-	-	1	-	-	1
Prematurity w/ toxemia	1	2	-	-	2	5
Other Conditions: Bilateral Polycystic Kidney	-	-	1	-	-	1
Total	6	2	2	1	2	13

- No deaths

TABLE 7

PERINATAL DEATHS - DISTRIBUTION BY CAUSE OF DEATH AND TIME OF DEATH, ST. ANTHONY HOSPITAL NEGRO PRIVATE PATIENTS, OKLAHOMA COUNTY, OKLAHOMA, JANUARY 1, 1963 - DECEMBER 31, 1965

	TIME OF DEATH			
	Died before labor	< 25 hours after birth	72 hours after birth	Total
CAUSE OF DEATH:				
Prematurity	-	2	1	3
Anoxia	1	-	-	1
Not Reported	-	1	-	1
Total	1	3	1	5

- No Deaths

TABLE 8

PERINATAL DEATHS - DISTRIBUTION BY CAUSE OF DEATH AND TIME OF DEATH, UNIVERSITY OF OKLAHOMA MEDICAL CENTER NEGRO SERVICE PATIENTS AND ST. ANTHONY HOSPITAL NEGRO PRIVATE PATIENTS, OKLAHOMA COUNTY, OKLAHOMA, JANUARY 1, 1963 - DECEMBER 31, 1965

	First Trimester		Second Trimester		Third Trimester		Erratic Care		No Prenatal Care		Unknown or not Reported		Total Deaths	
	S	P	S	P	S	P	S	P	S	P	S	P	S	P
TOTAL BIRTHS	150	262	291	118	502	73	0	1	452	10	38	34		
Anoxia	1	-	-	-	1	1	-	-	1	-	-	-	3	1
Congenital abnormality	-	-	-	-	-	-	-	-	1	-	-	-	1	0
Infection: Syphilis	-	-	-	-	1	-	-	-	1	-	-	-	2	0
Erythroblastosis	-	-	-	-	1	-	-	-	-	-	-	-	1	0
Prematurity	-	-	-	-	1	2	-	-	1	1	-	-	2	3
Prematurity w/toxemia	1	-	-	-	-	-	-	-	2	-	-	-	3	0
Other Conditions:														
Bilateral Polycystic Kidney	-	-	-	-	-	-	-	-	1	-	-	-	1	0
Not Reported	-	1	-	-	-	-	-	-	-	-	-	-	0	1
Total Deaths	2	1	-	-	4	3	-	-	7	1	-	-	13	5

S - Service P - Private - No Cases

mortality started their prenatal care in the third trimester.

In the combined groups shown in Table 8, six different causes of death are recorded and in one case no cause is reported. Prematurity accounted for 44 percent of the deaths. Of the eight deaths due to prematurity, one of the mothers entered prenatal care in the first trimester, three in the third trimester, and four had no prenatal care.

One maternal death was recorded in the study at St. Anthony Hospital. Death was due to rheumatic heart disease. The child was delivered in good health prior to the death of the mother and prenatal care had begun in the first trimester.

The total premature rate for unmarried private patients (20.4 per 100 births) was higher than that for married (3.9) and unmarried (5.8) service patients (Table 9). A significant difference ($\chi^2 = 7.42$, $P < .05$) in prematurity rates between the unmarried private (20.4), and the unmarried service (5.8) patients was noted. No significant difference ($\chi^2 = .08$, $P > .05$) in prematurity rates between married private and married service patients could be detected. There was, however, a significant difference in prematurity rates between married service and unmarried service patients ($\chi^2 = 12.7$, $P < .05$), as well as a significant difference in prematurity rates between married private and unmarried private patients ($\chi^2 = 7.9$, $P < .05$).

The results presented in Table 10 show that among the service patients under 15 years old, none of them sought prenatal care during the first trimester. The mothers 19 years of age or younger represented 31.1 percent of the total births. Moreover, 30.4 percent of the patients who received no prenatal care were in this age group. The younger service

TABLE 9

PREMATURE RATE PER 100 BIRTHS - DISTRIBUTION BY PRENATAL CARE AND MARITAL STATUS, UNIVERSITY OF OKLAHOMA MEDICAL CENTER NEGRO SERVICE PATIENTS AND ST. ANTHONY HOSPITAL NEGRO PRIVATE PATIENTS, OKLAHOMA COUNTY, OKLAHOMA JANUARY 1, 1963 - DECEMBER 31, 1965

	ALL			PRIVATE			SERVICE		
	Married	Unmarried	Total	Married	Unmarried	Total	Married	Unmarried	Total
First Trimester	3.5	11.1	4.8	2.4	20.0	3.8	6.1	7.6	6.6
Second Trimester	2.8	4.0	3.1	4.7	*	5.0	1.6	3.5	2.4
Third Trimester	3.3	4.0	3.6	3.0	*	5.4	3.4	3.3	3.3
Erratic Care	-	-	-	-	-	-	-	-	-
No Prenatal Care	5.9	9.8	8.0	*	*	*	5.7	9.5	7.7
Unknown or not reported	10.2	4.3	8.3	10.2	4.3	8.3	-	-	-
Total	4.0	6.7	5.0	4.1	20.4	5.6	3.9	5.8	4.8

- No cases

* Rates not calculated on less than 20 births in any category.

TABLE 10

AGE OF MOTHER - DISTRIBUTION BY TIME OF PRENATAL CARE, UNIVERSITY OF OKLAHOMA MEDICAL CENTER NEGRO SERVICE PATIENTS, OKLAHOMA COUNTY, OKLAHOMA, JANUARY 1, 1963 - DECEMBER 31, 1965

	First Trimester		Second Trimester		Third Trimester		Erratic Care		No Prenatal Care		Unknown or not reported		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Under 15 years	-	-	3	(1.0)	5	(1.0)	-	-	11	(2.4)	-	-	19	(1.3)
15 - 19	49	(32.7)	97	(33.2)	148	(29.5)	-	-	127	(28.1)	7	(18.4)	428	(29.9)
20 - 24	44	(29.3)	96	(32.9)	149	(29.7)	-	-	151	(33.4)	16	(42.1)	456	(31.8)
25 - 29	26	(17.3)	45	(15.4)	109	(21.7)	-	-	71	(15.7)	13	(34.2)	263	(18.4)
30 - 34	22	(14.7)	32	(10.9)	48	(9.6)	-	-	53	(11.7)	1	(2.6)	156	(10.9)
35 - 39	7	(4.6)	16	(5.5)	29	(5.8)	-	-	29	(6.4)	1	(2.6)	82	(5.7)
40 and Over	2	(1.3)	3	(1.0)	13	(2.6)	-	-	10	(2.2)	-	-	28	(1.9)
Total	150	(99.9)	292	(99.9)	501	(99.9)	-	-	452	(99.9)	38	(99.9)	1433	(99.9)

- No cases

patients (15-29 years of age), however, had a higher percentage of participation in all levels of prenatal care than did the older (30 years and older) service patients. Among the private patients and the combined groups, the participation in all levels of prenatal care decreased with an increase in age (Tables 11 and 12).

A comparison of the private and service patients by age of mother is presented in Table 13. No significant differences could be detected ($\chi^2 = 15$, $P > .01$) in the ages at which the private and service patients bore their children.

It will be seen in Table 14 that, for private and service cases combined, 50 percent of the birth weights were in the 5-6 lbs. 15 oz. range and 44.8 percent were in the 7-8 lbs. 15 oz. range. In the no prenatal care group there were 13.8 percent more birth weights in the 5-6 lbs. 15 oz. range than in the 7-8 lbs. 15 oz. range. Among the births in the third trimester, there were 15.2 percent more birth weights in the 5-6 lbs. 15 oz. range than in the 7-8 lbs. 15 oz. range. All of the other levels of prenatal care were consistent with the percentage difference in the total births between the two birth groups (5-6 lbs. 15 oz. and 7-8 lbs. 15 oz.). There was only one birth in the erratic prenatal care patients and it was in the 7-8 lbs. 15 oz. range group.

Among the private patients (Table 15) there was not a significantly higher percentage ($\chi^2 = 0.63$, $P > .05$) 7-8 lbs. 15 oz. birth weights than 5-6 lbs. 15 oz. birth weights in the no prenatal care, first trimester, second trimester and third trimester groups. The percentages were similar in the four groups, indicating that, among private patients, prenatal care did not result in an increase in birth weight.

TABLE 11

AGE OF MOTHER - DISTRIBUTION BY TIME OF PRENATAL CARE, ST. ANTHONY HOSPITAL NEGRO PRIVATE PATIENTS, OKLAHOMA COUNTY, OKLAHOMA
JANUARY 1, 1963 - DECEMBER 31, 1965

	First Trimester		Second Trimester		Third Trimester		Erratic Care		No Prenatal Care		Unknown or not reported		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Under 15 years	1	(0.4)	-	-	-	-	-	-	-	-	-	-	1	(0.2)
15 - 19	29	(11.0)	21	(17.8)	16	(21.9)	-	-	4	(40.0)	7	(20.6)	77	(15.5)
20 - 24	90	(34.3)	44	(37.3)	29	(39.7)	-	-	3	(30.0)	12	(35.3)	178	(35.7)
25 - 29	83	(31.7)	29	(24.6)	16	(21.9)	-	-	-	-	5	(14.7)	133	(26.7)
30 - 34	35	(13.3)	14	(11.8)	8	(10.9)	1	(100.0)	1	(10.0)	3	(8.8)	62	(12.4)
35 - 39	22	(8.4)	9	(7.6)	3	(4.1)	-	-	1	(10.0)	6	(17.6)	41	(8.2)
40 years and over	2	(.8)	1	(.8)	1	(1.4)	-	-	1	(10.0)	1	(2.9)	6	(1.2)
Total	262	(99.9)	118	(99.9)	73	(99.9	1	(100.0)	10	(100.0)	34	(99.9)	498	(99.9)

- No cases

TABLE 12

AGE OF MOTHER - DISTRIBUTION BY TIME PRENATAL CARE BEGAN, UNIVERSITY OF OKLAHOMA MEDICAL CENTER NEGRO SERVICE PATIENTS AND ST. ANTHONY HOSPITAL NEGRO PRIVATE PATIENTS, OKLAHOMA COUNTY, OKLAHOMA JANUARY 1, 1963 - DECEMBER 31, 1965

	First Trimester		Second Trimester		Third Trimester		Erratic Care		No Prenatal Care		Unknown or not reported		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Under 15 years	1	(0.2)	3	(0.7)	5	(0.9)	-	-	11	(2.4)	-	-	20	(1.0)
15 - 19	78	(18.9)	118	(28.8)	164	(28.6)	-	-	131	(28.3)	14	(19.4)	505	(26.1)
20 - 24	134	(32.5)	140	(34.1)	178	(31.0)	-	-	154	(33.3)	28	(38.9)	634	(32.8)
25 - 29	109	(26.5)	74	(18.0)	125	(21.8)	-	-	71	(15.4)	18	(25.0)	396	(20.5)
30 - 34	57	(13.8)	46	(11.2)	56	(9.7)	1	(100.0)	54	(11.7)	4	(5.5)	218	(11.3)
35 - 39	29	(7.0)	25	(6.1)	32	(5.5)	-	-	30	(6.5)	7	(9.7)	123	(6.4)
40 years and over	4	(1.0)	4	(1.0)	14	(2.4)	-	-	11	(2.3)	1	(1.4)	34	(1.8)
Total	412	(99.9)	410	(99.9)	574	(99.9)	1	(100.0)	462	(99.9)	72	(99.9)	1931	(99.9)

- No cases

TABLE 13

BIRTHS - DISTRIBUTION BY AGE OF MOTHER, UNIVERSITY OF OKLAHOMA MEDICAL CENTER NEGRO SERVICE PATIENTS AND ST. ANTHONY HOSPITAL NEGRO PRIVATE PATIENTS, OKLAHOMA COUNTY OKLAHOMA, JANUARY 1, 1963 - DECEMBER 31, 1965

	AGE OF MOTHER													
	Under 15 years		15 - 19 years		20 - 24 years		25 - 29 years		30 - 34 years		35 - 39 years		40 years and over		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
PRIVATE	1	(0.2)	77	(15.5)	178	(35.7)	133	(26.7)	62	(12.4)	41	(8.2)	6	(1.2)	498	(99.9)
SERVICE	19	(1.3)	428	(29.9)	456	(31.8)	263	(18.4)	156	(10.9)	82	(5.7)	28	(1.9)	1432	(99.9)
Total	20	(1.1)	505	(26.1)	634	(32.8)	396	(20.5)	218	(11.3)	123	(6.4)	34	(1.7)	1930	(99.9)

TABLE 14

BIRTH WEIGHTS - DISTRIBUTION BY TIME PRENATAL CARE BEGAN, UNIVERSITY OF OKLAHOMA MEDICAL CENTER NEGRO SERVICE PATIENTS AND ST. ANTHONY HOSPITAL NEGRO PRIVATE PATIENTS, OKLAHOMA COUNTY, OKLAHOMA JANUARY 1, 1963 - DECEMBER 31, 1965

	First Trimester		Second Trimester		Third Trimester		Erratic Care		No Prenatal Care		Unknown or not reported		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
5 lbs.	2	(0.5)	1	(0.2)	10	(1.7)	-	-	18	(3.9)	-	-	31	(1.6)
5 - 6 lbs. 15 oz.	186	(45.1)	197	(48.2)	298	(51.8)	-	-	247	(53.4)	38	(52.8)	966	(50.0)
7 - 8 lbs. 15 oz.	206	(50.0)	194	(47.4)	251	(43.6)	1	(100.0)	183	(39.6)	32	(44.4)	867	(44.9)
9 - 10 lbs. 15 oz.	17	(4.1)	17	(4.1)	16	(2.8)	-	-	13	(2.8)	2	(2.7)	65	(3.3)
11 lbs. or greater	1	(.2)	-	-	-	-	-	-	1	(.2)	-	-	2	(0.1)
Total	412	(99.9)	409	(99.9)	575	(99.9	1	(100.0)	462	(99.9)	72	(99.9)	1931	(99.9)

- No cases

TABLE 15

BIRTH WEIGHTS - DISTRIBUTION BY TIME PRENATAL CARE BEGAN, ST. ANTHONY HOSPITAL NEGRO PRIVATE PATIENTS, OKLAHOMA COUNTY, OKLAHOMA
JANUARY 1, 1963 - DECEMBER 31, 1965

	First Trimester		Second Trimester		Third Trimester		Erratic Care		No Prenatal Care		Unknown or not reported		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
5 lbs.	2	(0.8)	-	-	3	(4.1)	-	-	1	(10.0)	-	-	6	(1.2)
5 - 6 lbs. 15 oz.	111	(42.3)	51	(43.2)	32	(43.8)	-	-	4	(40.0)	20	(58.8)	218	(43.7)
7 - 8 lbs. 15 oz.	135	(51.5)	60	(50.8)	33	(45.2)	1	(100.0)	5	(50.0)	14	(41.1)	248	(49.8)
9 - 10 lbs. 15 oz.	13	(4.9)	7	(5.9)	5	(6.8)	-	-	-	-	-	-	25	(5.0)
11 lbs. or greater	1	(0.4)	-	-	-	-	-	-	-	-	-	-	1	(0.2)
Total	262	(99.9)	118	(99.9)	73	(99.9)	1	(100.0)	10	(100.0)	34	(99.9)	498	(99.9)

- No cases

Among service patients, prenatal care may have some influence on the birth weight, as illustrated in Table 16. There was a significant percentage difference (χ^2 = 104.2, P <.05) in the 5-6 lbs. 15 oz. birth weights and in the 7-8 lbs. 15 oz. birth weights in the no prenatal care, first trimester, second trimester and third trimester groups. Birth weights less than 5 lbs. made up 1.0 percent of the total and 3.8 percent of the no prenatal care group were in this category.

A significant difference (χ^2 = 12.02, P <.05) in birth weights 5-6 lbs. 15 oz., 7-8 lbs. 15 oz., and 9-10 lbs. 15 oz. between private and service patients was noted (Table 17).

The Apgar ratings are presented in Table 18. It will be seen that the majority of births scored 9 or better. Prenatal care did not appear to influence the score each birth received, since at all levels of care the majority of births scored 9 or better.

TABLE 16

BIRTH WEIGHTS - DISTRIBUTION BY TIME PRENATAL CARE BEGAN, UNIVERSITY OF OKLAHOMA MEDICAL CENTER NEGRO SERVICE PATIENTS, OKLAHOMA COUNTY, OKLAHOMA, JANUARY 1, 1963 - DECEMBER 31, 1965

	First Trimester		Second Trimester		Third Trimester		Erratic Care		No Prenatal Care		Unknown or not reported		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
5 lbs.	-	-	1	(0.3)	7	(1.3)	-	-	17	(3.8)	-	-	25	(1.8)
5 - 6 lbs. 15 oz.	75	(50.0)	146	(50.2)	266	(53.0)	-	-	243	(53.8)	18	(47.3)	748	(52.2)
7 - 8 lbs. 15 oz.	71	(47.3)	134	(46.0)	218	(43.5)	-	-	178	(39.4)	18	(47.3)	619	(43.2)
9 - 10 lbs. 15 oz.	4	(2.6)	10	(3.4)	11	(2.1)	-	-	13	(2.9)	2	(5.3)	40	(2.7)
11 lbs. or greater	-	-	-	-	-	-	-	-	1	(.02)	-	-	1	(.06)
Total	150	(99.9)	291	(99.9)	502	(99.9)	-	-	452	(99.9)	38	(99.9)	1433	(99.9)

- No cases

TABLE 17

BIRTHS - DISTRIBUTION BY BIRTH WEIGHT, UNIVERSITY OF OKLAHOMA MEDICAL CENTER NEGRO SERVICE PATIENTS AND ST. ANTHONY HOSPITAL NEGRO PRIVATE PATIENTS, OKLAHOMA COUNTY OKLAHOMA, JANUARY 1, 1963 - DECEMBER 31, 1965

	< 5 lbs.		5 - 6 lbs. 15 oz.		7 - 8 lbs. 15 oz.		9 - 10 lbs. 15 oz.		11 lbs.		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
PRIVATE	6	(1.2)	218	(43.8)	248	(49.7)	25	(5.0)	1	(0.2)	498	(99.9)
SERVICE	25	(1.7)	748	(52.2)	619	(43.1)	40	(2.8)	1	(0.06)	1433	(99.9)
TOTAL	31	(1.6)	966	(50.0)	867	(44.9)	65	(3.3)	2	(0.1)	1931	(99.9)

TABLE 18

APGAR RATING - DISTRIBUTION BY TIME PRENATAL CARE BEGAN, UNIVERSITY OF OKLAHOMA MEDICAL CENTER NEGRO SERVICE PATIENTS, OKLAHOMA COUNTY, OKLAHOMA, JANUARY 1, 1963 - DECEMBER 31, 1965

	APGAR SCORE											
	10 - 9		8 - 7		6 - 5		Less than 5		Unknown		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
First Trimester	87	(53.4)	34	(20.8)	4	(2.4)	6	(3.7)	32	(19.6)	163	(99.9)
Second Trimester	184	(60.7)	48	(15.9)	15	(4.9)	13	(4.2)	43	(14.2)	303	(99.9)
Third Trimester	295	(60.3)	121	(24.7)	17	(3.5)	15	(3.0)	41	(8.4)	489	(99.9)
Erratic Care	-	-	-	-	-	-	-	-	-	-	-	-
No Prenatal Care	256	(61.1)	96	(22.8)	17	(4.1)	9	(2.2)	41	(9.7)	419	(99.9)
Unknown or not reported	28	(60.8)	7	(15.2)	1	(2.2)	1	(2.2)	9	(19.5)	46	(99.9)
Total	850	(59.8)	306	(21.5)	54	(4.0)	44	(3.0)	166	(11.6)	1420	(99.9)

- No cases

CHAPTER IV

DISCUSSION

Increased incidence of unfavorable pregnancy outcome has been associated with the in-migration of Negroes to metropolitan areas in the United States. In the present study, an effort was made to determine whether the time that prenatal care was initiated has any effect on perinatal and maternal mortality and complication rates. Marital status, parity, previous abortions, age of mother, birth weight of infant, and Apgar rating were studied in each group of patients in order to evaluate the importance of these factors in influencing mortality and complication rates.

The results of this study gain increasing significance when one considers the fact that all of the patients were from the same ethnic group. Theoretically, private and the service patients had the same type and quality of care available to them through labor and delivery. Ethnic group can thus be eliminated as an important factor in formulating patterns of prenatal care.

Unwed mothers, especially primiparas, usually attempt to conceal their condition and are thus less likely to seek early medical care. The psychological malfunctioning of the multipara is considered to be either a cause or an effect of repeated unwed motherhood. A feeling exists that Negro women who repeatedly bear illegitimate children are an integral

part of the community and that their behavior is fully sanctioned. Unless the behavior is deviant, it is difficult to understand why it would be characteristic of only the less adequate members of the community. In the case of once-wed mothers, the paternal head has frequently left home to seek a less troubled environment. The economic pressure of an undesired increase in the number of offspring, without an increase in family income, may explain the loss of the paternal head. Most public health programs are designed for the somewhat stable family structure. The frequent absence of a paternal family head is a major problem facing the Negro community in America today.

In the present study, the number of deaths was not high enough to allow for statistical analysis, however, the figures seem to reflect participation in prenatal care by the patients. Socio-economic factors may be of primary importance in perinatal mortality. A study of the father's occupation and the mother's education might reveal significant differences in perinatal mortality within the same ethnic group.

The present results suggested that previous abortions did not motivate the service patient to seek early prenatal care. Perhaps fewer signs and symptoms occur among the prenatal clinic patients. It is more likely, however, that clinic patients simply do not interpret the abnormalities as being sufficiently significant to cause them to seek medical care. The data obtained in this study may also reflect the inability of the community to educate the mother on the statistics of abortions. According to Eastman (6), a woman who has never aborted has a 10 percent chance of aborting her next pregnancy. If her last pregnancy ended in abortion, there is a 13 percent chance that she will abort next time.

If her last two pregnancies terminated in abortion, her chances of aborting the next time are 37 percent. After three consecutive abortions, the chances are nearly 84 percent that the next pregnancy will terminate in the same manner. These figures were based on untreated cases; with treatment, the outlook may improve considerably (3).

Repeated pregnancy, far from having an educational effect, usually fosters the opinion that care during the first trimester is not necessary.

In the population as a whole, the prematurity rate is lowest for women in the earliest prenatal care level. Prematurity increases in women who initiate prenatal care late in pregnancy and it is especially high for women who have no prenatal care (24). In this study, mothers with little or no prenatal care had the highest prematurity rates, regardless of economic status. Some of the causes of premature labor were toxemia, syphilis, or inadequate diet. Most cases, however, could not be explained. The service patient who fails to report early for prenatal care forfeits her opportunity to take advantage of available nutritional information and the facilities for the diagnosis of diseases that may precipitate prematurity.

Birth weights among Negro private and service patients may reflect the nutritional habits rather than the degree of economic difference that separates the groups. This assumption is supported by an article appearing in the Medicine section of the July 28, 1967 issue of "Time" magazine. According to the article, it has been discovered that eating laundry starch is commonplace among Negro women, especially pregnant women, in many northern city slums. Most adult Negroes, today, have either eaten laundry starch themselves or have knowledge of someone who

has done so. Overeating of laundry starch may cause a folic acid deficiency. In pregnant women, a deficiency of folic acid may lead to premature births or bleeding during delivery time.

The mean age for childbearing was nearly the same in the private and service patients. The very young mothers, especially the unmarried mothers, failed to report early for prenatal care, probably in an attempt to conceal their condition until the last possible moment. The older mothers, using previous experience, explained away minor symptoms and felt no need to report earlier than the last trimester. Often, they waited until labor began before they sought medical attention.

Based on the present results, it is felt that the Apgar rating may be used as a means of studying infant mortality problems. In this study, the Apgar rating did not support the need for prenatal care in reducing perinatal mortality.

While the results of this study do not provide any profound revelations that would definitely establish that the time prenatal care begins is an important factor in reducing obstetrical problems in all of the areas considered, they do show that more unfavorable statistics were recorded in the groups of patients who had no prenatal care than in any of the groups initiating care in the first trimester. Obstetrical problems were less frequent in the patients who received prenatal care than in those who did not. The amount of prenatal care, however, did not appear to affect the frequency of obstetrical complications.

One obvious difference between the two groups studied was their degree of motivation in taking advantage of available medical care. An explanation must then be offered as to the reason for the difference

between the private and service Negro patient in the participation in prenatal care and/or sensitivity to the public health philosophy. The cost of obstetrical care is not a measure of the overall financial capabilities of the private patient; but the fact that she can, without aid from official agencies, "pay her own way" may provide the motivation lacking in the service patients.

An epidemiological study such as this can ascertain that economics, as it relates to acute social problems, is likely to affect the course and outcome of pregnancy. Such studies are a necessity today in our major population areas, especially in order to interpret services required to insure comprehensive care for all mothers and infants.

CHAPTER V

SUMMARY

Data were obtained from obstetrical records on 1433 Negro service patients and 498 Negro private patients in Oklahoma County, Oklahoma.

A higher percentage of private patients than service patients had prenatal care. Further, a higher percentage of private patients began their prenatal care in the first trimester and, consequently, a lower percentage of them began prenatal care in the third trimester of gestation. Out-of-wedlock births occurred most frequently in the service patients.

Parity and previous abortions had a greater influence on the private patients seeking prenatal care early than it did on the service patients. In both groups, perinatal deaths and prematurity were frequently related to the time prenatal care began.

Younger mothers generally entered prenatal care earlier than older mothers. In both the private and service patients more than 50 percent of the birth weights were between five and six pounds. The percentage distribution of ages at which the private and service patients bore children was not materially different in any of the levels of prenatal care.

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