The Dalhousie Prenatal Clinic

CLINICAL AND SOCIAL DEDUCTIONS

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PREGNANCY is a normal physiological process, and in the average healthy woman there is no need for alteration in its procedure. The pregnant state, however, makes extra demands on body tissues and organs, and through prenatal care and training these demands can be met with a minimum of harm to the body.

The possiblities of pathological conditions intruding themselves insidiously is so great that the pregnant woman can safeguard her pregnancy only by placing herself in the hands of an obstetrician almost immediately after her pregnant state is suspected. As a result of prenatal care the pregnancy is more comfortable for the mother, the labor is easier, fewer mothers and babies die, and more healthy babies are born.

In order to show that this is true of the Dalhousie antenatal clinic the technique employed there must be briefly explained.

The histories taken at the prenatal clinic pay special attention to such prenatal conditions as, pernicious vomiting, previous abnormalities in labor or menstruation, et cetera, and attempts are made to prevent or alleviate these during future pregnancies.

A questionnaire is given covering:

1. Date of last normal period.
2. Nausea and vomiting experienced.
3. Regularity of bowels.
4. Urinary symptoms.
5. Varicose veins.
6. Signs of toxaemia, as—a. Oedema.
   b. headache
   c. pain
   d. disturbances of vision
7. Time of quickening.
8. Confinement plans.

The time of confinement is then estimated and a thorough physical examination is carried out with special attention to the following:

1. Teeth
2. Heart
3. Lungs
4. Breasts
5. General Condition
6. Liver
7. Skeleton

Measurements of the pelvis are taken and the external examination is completed by noting the condition of the abdominal wall, by determining the position of the foetus and by ausculation of the foetal heart.

A sterile vaginal examination is then made and the following conditions noted:

1. Condition of the perineum.
2. Condition of the cervix.
3. Discharge.
4. Diagonal conjugate measurement.
5. Estimation of the true conjugate.

Blood is always taken for a Kahn test, and if there is any vaginal discharge, smears are taken. The blood pressure is also recorded.

At the completion of these examinations the patient is asked to return to the clinic at a certain time, when a subsequent examination is made, consisting of:

1. Blood pressure.
2. Presentation.
3. Determining if the presenting part is engaged or not.
4. Size of child.
5. Disproportion.
6. Height of fundus.
7. Auscultation of foetal heart.
8. Urine examination.

What is done regarding the results of these examinations? Nausea, vomiting, and toxaemia are treated by the obstetrician; surgical, medical, or dental conditions are treated by a specialist to whose clinic the patient is referred. In addition, the patients are instructed how to conduct themselves during their pregnancy. An experienced dietician arranges special diets for those in need of dietary treatment, and plans menus to suit the patient's purse. It is explained to the woman that her health and the health of the child are influenced definitely by the type of food which she eats. She needs protective foods which are high in vitamins and minerals. Additional calcium, iron, and iodine may be necessary, whereas the other minerals are provided in a well selected diet. The foods which protect both mother and baby are milk, dairy products, eggs, cereal grains, green vegetables and fruits. Meat, fish and fowl may be taken moderately. Alcoholic drinks are to be avoided. As a result of the above treatment and advice the patients are prepared for confinement so that delivery may be as easy as possible, their subsequent recovery short and uneventful, and their babies living and healthy.

In order to show by some tangible means that the clinic is of some value to the women who attend it and to the community, statistics must be referred to. These have been compiled from the records of 300 women attending the prenatal clinic for 508 pregnancies, dating from 1925. Approximately 1500 pregnancies have been supervised at the clinic since that time, and the above 508 is a representative sample of this group. Of the 300,

189 women attended the prenatal clinic for 1 pregnancy
58 " " " " " " 2 pregnancies
26 " " " " " " 3 "
27 " " " " " " 4-7 "

This proves that the women themselves believe that the clinic is of some value to them, because 111 women returned for their second pregnancy; 53 for their third; 27 for four or more, of which two patients attended the clinic for seven pregnancies.

It might be argued that these women attended the prenatal clinic only so that they might have the clinic doctor deliver them free of charge, since the Public Health Centre requires that in order for a patient to be delivered by a clinic doctor, she must attend the prenatal clinic. The following table shows, however, that the majority of patients made more than one visit to the clinic.

For	83	pregnancies	1	visit	was made
"	79	"	2	visits	were made
"	95	"	3	"	" "
"	92	"	4	"	" "
"	63	"	5	"	" "
"	34	"	6	"	" "
"	23	"	7	"	" "
"	17	"	8	"	" "
"	11	"	9	"	" "
"	5	"	10	"	" "
"	2	"	11	"	" "
"	4	"	12	"	" "

In all, 1925 visits were made for 508 pregnancies, which makes an average of four visits by each woman for each pregnancy. Since for 31% of the pregnancies only two visits were made to the Clinic, it is granted that some women who attend it do so only to obtain the services of the clinic doctor for the delivery. However, some of these patients were probably primipara, and ignorant of the fact that they should have had an examination early in pregnancy, and subsequent examinations to determine their progress. It can be seen, however, that the multipara realize more than the primipara the value of early and subsequent examinations, since multipara attended the clinic during the first six months of gestation for 51% of their pregnancies, and primipara for 43%. And primipara went to the clinic for the first time during the eighth and ninth foetal months for 35% of pregnancies, whereas multipara attended the clinic for the first time during the last two months of fetal life for only 27% of pregnancies. Although there is no great difference between the figures, they show that the trend is for the multipara to have their first examination earlier in pregnancy than the woman who is having her first baby. If the clinic staff is teaching these mothers to go for an examination in the first months of pregnancy, it is fulfilling the first principle of antenatal care.

Of 480 pregnancies 155 multipara and 62 primipara were delivered in hospital; 252 multipara and 11 primipara in the home. If a multipara has had a previous difficult labor she is sent to hospital. A large percentage of multipara are delivered in the home, because their previous pregnancies were normal. Only a small number of primipara are delivered in the home, and if it were possible every primipara would be sent to the hospital.

The number of patients delivered in the home by a private doctor, and by the clinic staff is shown in the following table:

Patients delivered by:

	Multipara	Primipara	Total
Clinic staff	216	2	218
Private doctor	27	5	32
Not stated	9	4	13
Total	252	11	263

This table shows that a small number attended the prenatal clinic during the months of pregnancy for antenatal care, but at the time of their labor called upon a private physician to deliver them.

The results of 480 pregnancies are shown below:

	Multipara	Primipara	Total
Full term (living)	348	60	408
Premature (living)	31	4	35
Stillborn	6	2	8
Miscarriage or abortion	7	1	8
Not stated	15	6	21
Total	407	73	480

It is shown that out of 459 pregnancies, 16 resulted in stillbirth, miscarriage or abortion, and 443 in living babies.

Toxaemia occured as follows in the 508 cases referred to:

	Primipara	Multipara	Total
Signs of toxaemia	4	26	30
No sign of toxaemia	60	387	447
Not recorded	15	16	30
Total	79	429	508

In 477 pregnancies 30 cases exhibited signs of toxaemia. A critical analysis of these cases might prove that most of them did not have adequate prenatal care.

The following types of pelves were found:

Normal	275
Generally contracted	1
Funnel shaped	1
No record	23
Total	300

Out of 277 pregnancies two patients could not be allowed to go into labor because of their abnormal pelves. These were discovered as a result of prenatal examinations and at the time of delivery the attending physician knew exactly what he was dealing with. We have here another demonstration of the importance of prenatal care. We can discover before-

hand the dimensions of the pelvis and the size of the child. If a natural birth seems impossible the doctor can induce labor while the child is very small, or wait until term and do a Cesarean section.

Other than criminal abortion, syphilis is one of the greatest causes of foetal death. The Kahn test for syphilis is routine and the patients with this disease are treated before their babies are born to prevent transmission of the disease and to provide for living and healthy babies. The statistics of the antenatal clinic show that in pregnant women with syphilis 17.3% of foetal deaths resulted whereas in women without syphilis the foetal deaths were 9.1% or about half. The cases of syphilis are found through the routine blood examination, and the results are appalling. Of 234 women, 43 were found to be syphilitic, or on a percent basis, 18.4 in 100. Of course one would expect to find syphilis more prevalent in the women attending the clinic, because for the most part they are from the lower classes, but if one considers that out of every 100 pregnant women 18 have syphilis, how many miscarriages, abortions, stillbirths, and unhealthy children will result from the pregnancies if the syphilis goes untreated?

Results from one large clinic based on 1467 cases are given, the outcome of the pregnancies being shown in percent.

	Pregnancies before treatment	Pregnancies during or after treatment
Child born alive and healthy.....	16.9	65.2
Child born alive and syphilitic.....	11.1	14.8
Child died in infancy.....	18.4	....
Miscarriage, abortion, stillbirth.....	53.4	20.0

In cases of syphilitic mothers who received no treatment, of 100 living births there were 82 children with syphilis. This shows the value of anti-syphilitic treatment in pregnant women, and the earlier in the pregnancy that the treatment is instituted, the more pleasing will be the results.

To prove that antenatal care is of value in reducing foetal death can be shown only by comparing a group of pregnant women who have had prenatal care with a group who have not had it. This has been done by recording the number of live births and foetal deaths of 356 pregnancies with prenatal supervision, and the number of live births and foetal deaths in the same group of women for 675 pregnancies without prenatal care.

	Live births.	Foetal deaths*	Total
Prenatal care at clinic.....	342	14	356
No prenatal care	601	74	675
Total	953	88	1031

* Includes stillbirths, miscarriages, and abortions.

Changed to figures which are easier to compare:

1. Of patients who have prenatal care, there are four foetal deaths for 100 pregnacies.
2. Of women who have not had prenatal care there are 11 foetal deaths for 100 pregnancies.

These figures therefore show that the Dalhousie Prenatal Clinic is saving seven foetal lives in every 100 pregnant women who attend the clinic.

The maternal mortality rate for the women attending the Dalhousie Public Health Clinic is 2.7 per 1000 live births, compared with the general rate for Nova Scotia, which is five per 1000 live births. This shows that the maternal mortality rate at the Clinic is about half of that for the Province. There may be a discrepancy in this calculation, as the Dalhousie Public Health Clinic rate is based upon 1500 live births, whereas the provincial rate is based upon 11,000. However, taking this into consideration the Clinic rate is much lower than the provincial rate. Without a doubt this low rate at the Cliniic is partly due to the results of the prenatal, intranatal, and postnatal technique carried out there.

The Social Viewpoint.

With the beginning of medical science, the ideal of the profession has been to save life, and with the advancement of medical knowledge incorporated with this ideal has grown the desire to prevent disease, and with this desire the special branch of medicine, "Preventive Hygiene", came into being. As more medical men became interested in this branch of medicine they realized its possiblities, and also the great field which was open to them. In order to ascertain the results it was necessary to keep statistics which could be closely compared. From these statistics of morbidity and mortality they learned which diseases were most prevalent and caused the greatest number of deaths. After finding this out, attention was given to these diseases and means of prevention were sought.

Thus we have progressed until today one problem uppermost in the minds of many medical men is, "How to reduce the infant and maternal mortality rates?" Due to the great amount of work which has been done to protect the mother during her puerperium and the child during its first year of life, infant and maternal mortality rates have been greatly reduced. In order to reduce them still further, stress has been laid on antenatal care, and the results obtained by clinics definitely show many lives can be saved.

The Prenatal Clinic of the Dalhousie Public Health Centre has been carrying on this work in the City of Halifax. The purpose of this clinic is to give to the poor women of Halifax the proper antenatal care that they could not otherwise afford and consequently save the lives of many mothers and bring into the world more live and healthy babies.

Benefits to the Patient.

1. The women attending the prenatal clinic receive without cost the services of an obstetrician that people in better financial circumstances could not easily afford.

2. During the routine examination many diseases such as syphilis, blood diseases, et cetera, are found which were unknown to the patient. Correct and expert treatment is administered for all such conditions.

3. Through the antenatal clinic the patient learns of the facilities of the Dalhousie Public Health Clinic which provides for her postnatal care, and treatment for any abnormalities or diseases of her child.

4. The care that the women receive at the antenatal clinic during one pregnancy will be of value to them in succeeding pregnancies.

Benefits to the Doctor.

Previous to the establishment of the antenatal clinic it was necessary for the Halifax doctors to attend many pregnant women who were unable to pay for their services. Now, due to this clinic, the general practitioners are relieved of this burden on their time and services, and of contributing more than their share to the welfare of the community. Although the general practitioner has been relieved of these patients, the Health Centre Doctors are obliged to look after them. But matters have been greatly simplified by the arrangement of regular hours for the clinics and by the assistance of medical students.

Benefits to Medical Students.

If it were not for this clinic the students would not be adequately prepared for practical work in obstetrics. The actual experience that the student obtains through contact with the patients is much more valuable to him than classroom and textbook explanations and diagrams.

Benefits to the Community.

In the routine examination carried out at the antenatal clinic it has been found that 18.4% of the pregnant women have syphilis. These women are immediately given treatment and must attend the genito-urinary clinic until considered cured. By this prompt action the clinic is doing its best to stamp out the spread of syphilis in the community. If it were not for the antenatal clinic these syphilitic women would not be found, and without the disease in check untold harm is done by its disease being spread to others. Private physicians are reluctant to do Kahn tests on their patients for fear of insulting them, and consequently many cases of syphilis are missed, whereas at the antenatal clinic a blood test is done on every woman. Smears are taken from every woman attending the clinic who has a discharge. If these smears are positive for gonorrhoea the women are referred to the genito-urinary clinic, where they are given treatment.

Venereal disease is one of the most harmful factors to the social life of a community. It is known for a certainty that under treatment the spread of venereal diseases can be controlled, but before treatment can be instituted it is necessary to discover those who have it. Thus it may be seen that the antenatal clinic is playing an important part in curtailing the spread of the disease in the community. Another outcome from treating these syphilitic women is the prevention of the disease in their children. In one large clinic based on 2,346 pregnant women with syphilis,

it has been shown that in mothers who received no anti-syphilitic treatment, 82.5% of their children were born with syphilis. Of mothers who received fair or good treatment only 18.1% of their children were born syphilitic. The natural conclusion would be that since the women at the Dalhousie antenatal clinic are receiving the same treatment, the results should be very nearly the same as in the above mentioned case.

As a result of treating these women for syphilis early in their pregnancies, there are fewer children being born with congenital syphilis. Thus the Children's Hospital, the School for the Blind, Insane Asylum, et cetera, are relieved of providing for children deformed and crippled by this disease.

It has been shown that the antenatal clinic is of great value to the patients, the doctors, medical students, and the community. It must be born in mind, however, that there are certain to be detrimental factors in any system such as this. It is known that many patients utilize the services provided by the antenatal clinic who could well afford the services of a general practitioner. Thus the antenatal clinic is depriving practitioners of patients who would be paying them for their professional attention. This is true of any system created to assist the poor and needy, as there are always a few who by underhand means try to appropriate services not intended for them.

Since the detrimental factors are greatly overbalanced by the benefits derived from the work done in the Dalhousie Medical Health Centre, it has been adequately shown how great a part this clinical service plays in the welfare of the community.

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DO IT NOW

Lose this day loitering—'twill be the story
Tomorrow, and the next more dilatory;
Then indecision brings its own delays,
And days are lost lamenting o'er lost days.
Are you in earnest—seize this very minute.
What you can do, or dream you can, begin it.
Courage has genius, power and magic in it.
Only engage and then the mind grows heated;
Begin it, and the work will be completed.

—Goethe.

He who has killed a thousand men is half a doctor.

—Tamil Proverb.