

MATERNITY NURSING IN RURAL HOMES

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TWO experiences in providing nursing assistance during deliveries in rural homes in New York State have been under way for two years and one year respectively, the former in St. Lawrence County, the latter in a unit comprising two counties, Fulton and Montgomery. The general purpose was to demonstrate the feasibility of including nursing assistance at deliveries as part of a generalized program, this service to be provided for cases unable to employ private duty nurses. Costs, methods, and standards are being studied.

The St. Lawrence experience may rightly be termed a demonstration. That in the Fulton-Montgomery Health District represents the introduction of a new service at a time when it seemed that the staff could absorb it. In both areas the records and reports are being carefully kept and analyzed, with promise of worth-while data when the services have gone through their first growing-pains. At present, these experiences lend themselves only to description and discussion.

The Director of the Division of Maternity, Infancy and Child Hygiene of the State Health Department is in general direction of these experiences. They are part of the Social Security plan to protect the health of mothers and babies. In keeping with the organization of field work in New York State, the work in any one district no matter what its character is under the immediate direction of a District State Health Officer. This plan for district administration appears to be important for the success of any service project. It provides the first-hand knowledge of local needs and situations, a medium through which to develop plans, and the possibility of the state personnel becoming identified with the locality. These appear

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to be of paramount importance in the development and growth of any service, be it experimental or otherwise.

CHARACTER OF THE COUNTIES

ST. LAWRENCE COUNTY

St. Lawrence County was selected for a demonstration because the infant, stillbirth, and maternal mortality rates in this County had been consistently higher than in the up-state area as a whole. A study of infant welfare in St. Lawrence County,² which was made during 1935, had received the cooperation and interest of the medical profession and of health agencies in that County. The need for better care during the entire maternity cycle was made apparent. The infant survey disclosed the fact that the mortality was 40 per cent higher in the families rated in fair circumstances and twice as high for the families rated in poor economic condition, than for the families in comfortable circumstances. Sixty-seven per cent of the births occurred in the homes, as against 39 per cent in the up-state area.

The County is located in the northwestern corner of the State bordering on Canada, far off the main New York Central line. It covers an area of 2,701 square miles, with a population of 89,549 according to estimates for July 1, 1935. Approximately 57.6 per cent is strictly rural. The average density of persons per square mile is 33, as compared to 120 per square mile for up-state New York. Ogdensburg is the only city, with a population of 15,277. There are four villages, Gouverneur, Canton, Potsdam, and Massena, ranging in population from 2,500 to 10,000. Many acres of wooded land provide rather long stretches of lonely road. The travel in winter is frequently hazardous and slow. The chief occupation is agriculture, 32.7 per cent of the male population being engaged in it, as compared to 12.5 per cent in up-state New York (1930 Census). There

² Sayer, Stanley W.: A Study of Infant Welfare in St. Lawrence County in 1935. *New York State Journal of Medicine*, February 15, 1939, 39, No. 4, pp. 314-327.

are three hospitals in the County exclusive of the State Hospital for Mental Diseases and a private tuberculosis hospital, and eight unincorporated maternity homes. There are no midwives, no central nurses' registry, nor visiting nursing agency.

Resident births, including stillbirths, in 1936 numbered 1,705. Of the total births, 982 were born in homes; 57 in homes in the city of Ogdensburg, 159 in Massena Village, 46 in Gouverneur, 24 in Potsdam, and 15 in Canton. The number of births in surrounding country was 681. This geographical distribution indicates the problem of providing an economical "on call" coverage by nurses in all areas of the County. The economic level of the County is such that comparatively few families can afford care by private nurses.

At the time the delivery service started, there were in the County two county nurses receiving 50 per cent financial support from the State, one city nurse, three village nurses, two of them giving part time to community nursing service, seven WPA nurses, and six state nurses. The latter had been in the County a year and had participated in the infant welfare study. At the beginning of the demonstration, five additional nurses were assigned through Social Security funds, making a unit of eleven public health nurses with seven WPA nurses to give assistance. (The latter service had decreased to three by January, 1939.) The county nurses do not participate in the delivery service. The Potsdam community nurse gives delivery service in the village. The Gouverneur nurse, who was on a part-time basis, was dropped during the year but assisted with deliveries while she was there.

The County Public Health Nursing Committee, a quasi-official committee, appointed by the Board of Supervisors according to Section 44A, of the County Law, was cooperative and assumed sponsorship for the new service. The Committee redistricted the County making six, instead of two, districts. The Medical Society approved the plan and expressed interest in it, as did the district of the New York State Nurses' Association. At a meeting attended by the phy-

sicians in the Gouverneur area where the service was first started, it was learned that they, while cooperative, were not clamoring for nursing assistance at deliveries. They frankly stated that they doubted whether a nurse could accomplish much with the lack of conveniences and the level of understanding in many of the homes. They had to be shown!

FULTON-MONTGOMERY HEALTH DISTRICT

This two-county health unit presents a picture directly opposite to St. Lawrence County. The average number of maternal deaths per ten thousand total births for the five-year period, 1932-1936, exclusive of cities, was 52.7 for Montgomery County and 55.2 for Fulton County, as compared to 55.8 for up-state New York. The infant mortality rate for the same period was 48.2 in Montgomery County and 67.0 for Fulton County as compared to 51.2 for up-state New York. While the infant mortality rate in Fulton County was above the state rate, it did not fall within the group of ten counties with excessively high rates in which St. Lawrence County was listed.

Fulton and Montgomery Counties with a total of 900 square miles, form a rough square about thirty miles in each dimension. The population is 60,910 and 47,242 respectively. The former has one city, Amsterdam, with a population of 35,314 and ten incorporated villages located comparatively close together along the Mohawk River. Fulton County has two cities, Gloversville and Johnstown, with a total population of 34,394. The rural population of both counties covered by the delivery service is 38,544. In Montgomery County, the chief rural industry is dairying. In Fulton County, the chief industry is the manufacture of gloves. A considerable amount of home industry is involved.

In 1936, of the 1,414 births in the two Counties, 551 were born to rural mothers, 345 of which occurred in the homes.

This State Health District had been utilized for two years prior to the inauguration of the delivery service as a rural training center

for public health nurses and therefore was operated as a state unit. In the rural areas outside of the three cities, a specialized tuberculosis nurse and a number of school nurses reduce the work of the generalized program of the state nurses. The unit of nine nurses were well acquainted with their districts and the work had become established before the delivery service was started.

There were no general nurses paid from county funds and therefore no County Committee such as existed in St. Lawrence County. Community nursing committees were functioning in each small town or village and were proving helpful to the nursing service, but they had no administrative responsibility to approve or disapprove an activity. The difference is significant. In St. Lawrence County the delivery service became essentially an extension of an existing county nursing service with general direction by the official County Committee. The District State Health Officer and District State Supervising Nurse are professionally responsible for the direction and supervision. Administratively they report to and receive approval of plans and policies from the County Nursing Committee. In the Fulton-Montgomery Health District, the nursing service is a state service with no local citizen group, even nominally, between the District Office personnel and the field nurses. The physicians, as a society, were not as cooperative with the entire service as was the society in St. Lawrence County, but on the other hand many individual physicians had asked for assistance with deliveries.

It might be said that the fact the physicians in St. Lawrence County were not eager for assistance in the homes during a delivery was a surprise. It had been assumed that physicians everywhere would welcome such assistance without question and that the entire problem related to providing it. Further extension of this service in other counties will prove the point.

PLAN IN ST. LAWRENCE COUNTY

The usual preparation for initiating a new service was done. A

general planning conference was held between the District State Health Officer, the District State Supervising Nurse, the special supervisor for the delivery service, and the Director of Division of Maternity, Infancy and Child Hygiene and the Director of Division of Public Health Nursing of the central office in Albany. Some of the decisions which have guided the service have probably inhibited its growth and have also caused some of the administrative problems. However, at the moment it is believed the inhibitions have been for the most part wise to prove certain points connected with such a service.

The general plan under which the service has operated was as follows:

1. Local support should be secured as it could be obtained. This was defined for immediate purposes to be office space, furniture, janitor service, telephone service, if possible, and supplies or other facilities.

2. The service was to be started in the Gouverneur area. (The District State Office is located there) and gradually extended to other areas as the nurses became established and the locality assumed some support. Ogdensburg City was not to be included, at least not until the rest of the County was covered.

3. The State's contribution of eleven nurses was to remain fixed at that number, if possible; the added nurses as needed to be provided by the County with state aid. Eventually the number of state nurses would be reduced, at least to the point where the County would share the costs on equal basis with the State. St. Lawrence County has been adversely affected by economic depression so the possibility of increased county appropriations was not at all assured. (To date no additional county support has been provided.)

4. The services of private duty nurses were to be utilized on a delivery fee basis to relieve the public health nursing service.

5. Nursing service would be given whether or not the case had been previously registered for antepartum supervision.

6. Since this was a demonstration to study the pattern which would make a nursing service at deliveries possible as part of any generalized service, no equipment was to be carried by the nurses for use of the physicians, except the obstetrical package. This package is commonly

provided all through the State as part of routine preparation for a home delivery.

The County was divided into six areas. When the staff was complete, three nurses were to work as a unit in the largest center, two in each of the three next in size, and one in each of the two smallest. The factors which had to be considered were road conditions, location of physicians, telephone service, and availability of office space, as well as the community needs. The living arrangements which could be secured in some of these small areas, plus the social and professional isolation, have contributed to the problem of securing a qualified and stable staff.

Each nurse answers delivery calls in her own area, but is never actually "on call" unless she knows a delivery is imminent; then she keeps in touch with the physician. Nurses have telephones in their residences and when necessary an extension to their rooms will be provided at state expense. Physicians have the nurses' telephone numbers and their daily schedule of calls if a delivery is pending. They are responsible for reaching the nurse. From checks, it has been determined that few calls are missed. The intimate knowledge of the happenings in a rural area by everyone makes it quite possible to locate as public a character as "The Nurse" without too great trouble. If the physician must call the area nurse on long distance because he resides in another district, he may reverse the charge. If he cannot locate a nurse he may call the Gouverneur office reversing the charge. When this plan was outlined as the only one that seemed expedient at the time, it was thought the physicians would not bother to call the nurse. The answer is that he does. When calls overlap or if relief is needed because of a long labor, the nurse calls another public health nurse if more than one is assigned to the area; or she may call a private duty nurse who has previously been listed for such service. Instructions regarding procedures to be followed, records, reports, etc., must be accepted and followed by any private duty nurse who is placed on the "call" list. If no relief nurse

is available in the area, the Gouverneur office is called at any time of day or night.

It can readily be seen that this situation presents a problem. If the roads are good and the home not too remote from the nearest nurse, and a telephone is available, relief or assistance can always be provided within reasonable time; if the reverse situation is the case, relief is delayed. The result is that on occasions, especially during the winter, nurses work long hours overtime. Different plans have been made to obviate this, but to date no satisfactory solution has been found.

Overtime is made up, but for the most part it accumulates to be taken as a block of time within the succeeding month. Some of the nurses do not object to this, especially if they live at a distant point. However, it is felt that much accumulated fatigue is occurring which is not good for the physical well-being of the individuals concerned.

One of the human elements in dealing with this question of overtime is the attitude of the nurses regarding their patients. They may on occasions grumble to their confreres or supervisors, but when a delivery is pending, they do not wish to turn it over to another nurse; and frequently they do not call for relief when it might be provided. The patient naturally wants "my nurse" and the nurse wants to see "my patient" through. More careful study will be given to this problem. It is recognized as one of the serious administrative problems which will become more acute with the growth of the service. An additional supervisor is being assigned to the District making more help available to study the situation. At the moment the thought is that the immediate answer lies in the recruiting and instruction of more private duty nurses and in a more conscious effort to control the over-willingness of the staff.

During 1937, of the total of 902 home deliveries, 291 occurred in territories not covered by the service. The village of Massena in which 145 of these births occurred, and the six towns along the St.

Lawrence River received no delivery service in 1937. The former was included in 1938 and a partial plan has been made for the latter beginning January, 1939.

RÉSUMÉ OF REPORT OF 1937

- 827 antepartum visits to 233 cases (there were 766 cases in 1938)
- 286 home deliveries attended, 2 sent to a hospital (there were 446 attended in 1938)
 - 203 by state nurses
 - 23 by two village nurses
 - 60 (including 17 in Ogdensburg) by three WPA nurses
- 1,906 postpartum visits made
- 286 infants born
 - 274 living infants
 - 11 stillbirths (6 premature, 5 full term)
 - 1 died at delivery
 - 6 died during the neonatal period (one from an accident in the home)

The month of gestation in which patients who received home delivery service registered with a physician or with the nursing service is shown in Table 1. Twenty-three per cent of the cases were under nursing supervision before the sixth month of gestation.

As shown in Table 2, over half of the patients receiving home delivery service were referred to the nursing service by a physician.

There were no maternal deaths in the group given delivery service. The maternal mortality rates for the entire County have shown an encouraging trend for the past three years.

	<i>St. Lawrence County</i>	<i>State (Exclusive of New York City)</i>
1936	84.6	50.7
1937	63.0	39.3
1938	21.8	35.9

No complete report for 1938 is available as yet for the work in St. Lawrence County. A time study is being analyzed and it is expected a comprehensive report will be available in the near

MONTH OF GESTATION	NUMBER OF CASES		PER CENT OF CASES	
	Physician	Nurse	Physician	Nurse
TOTAL CASES	286	286	100.0 ¹	100.0
1	2	0	1.3	
2	19	9	11.9	3.1
3	11	11	6.9	3.8
4	23	19	14.5	6.6
5	21	27	13.2	9.4
6	12	27	7.5	9.4
7	23	44	14.5	15.4
8	16	44	10.1	15.4
9	32	105 ²	20.1	36.7 ²
Unknown	127			

¹Percentage distribution based on number of cases for which month of gestation was known.

²Includes cases for which no service was given before delivery.

Table 1. Month of gestation in which patients who received home delivery service were registered with a physician and with the nursing service.

future. A recent letter from Dr. Stanley Sayer, the District State Health Officer, to an official in the County will, however, be interesting:

Last year, there were 766 prenatal cases carried, 446 home deliveries attended, and 761 postpartum cases. More than 50 per cent of the entire time of the state nurses is devoted to this program.

As you know, the infant mortality rate has been very high in St. Lawrence County, the County having been the third highest in the State. This rate has been declining during the past three years, and for the first eleven months of 1938, the provisional rate is 46 per 1,000 which is

Table 2. Source of referral of maternity cases registered with nurses.

Source of Referral of Maternity Cases	Distribution of Cases According to Source of Referral to Nurse	
	Number	Per Cent ¹
ANY SOURCE	286	100.0
Physician	163	58.2
Self	43	15.4
Welfare Officers	7	2.5
Nurses	20	7.1
Family Members	17	6.1
Another Patient	6	2.1
Neighbors to Nurse	21	7.5
State Troopers	2	.71
Clinic	1	.36
Unknown	6	

¹Percentage distribution based on known cases.

approximately that of up-state New York. The maternity death rate for the year 1938 will, I believe, be the lowest ever recorded.

PLAN FOR FULTON-MONTGOMERY HEALTH DISTRICT³

Unlike St. Lawrence County, the Fulton and Montgomery District was not selected for a delivery demonstration. The demand came from physicians, particularly those who had had such assistance from WPA nurses. In December, the Montgomery County Medical Society passed a resolution requesting the District State Health Officer to establish a delivery service.

The description of this district at the beginning of this article as compared to the St. Lawrence County area will point out the variations in the problems related to the establishment of similar services in two totally different territories. Only a few of the plans in the Fulton-Montgomery District will be mentioned as they compare with the plans in the north country demonstration.

Prior to January 1, 1938, on which date the delivery service was started, there were nine nurses working from five nursing offices in the district with the total area divided into nine working districts. The staff was not increased. The nursing offices were reduced to three, continuing the nine districts with some reallocation of territory. Three nurses worked out of each office, thus making relief readily accessible at all times. Suitable offices were furnished, clerks were provided to receive day calls and to help with clerical work, and suitable arrangements were made for after office hour calls. A grant of money from the International Health Division of the Rockefeller Foundation provided the funds. In one district the physician's telephone exchange was used, in a second a maternity home where the telephone was always covered, and in a third a telephone was installed by the bedside of a home-bound cripple who was glad to earn some money. It will be noted that in St. Law-

³ A report of the first six months of this service is given in an article, "Home Delivery Service" by James E. Perkins, M.D., and Florence B. Williams, which is to be published in the March, 1939, issue of *Public Health Nursing*.

rence County a new group of nurses were introduced for the service, the nursing offices were increased from two to six and no telephone routine coverage was arranged to receive calls.

The nurses in each of the three offices rotate being "on call" for delivery and respond to any call within the entire area served by that particular office. No nurse is on second call. Each nurse leaves a plan of work for the day and can usually be reached if overlapping calls are received. As in St. Lawrence County, a list of private duty nurses is kept who may be used as necessary. The above plan means that a nurse is "on call" every third twenty-four hour period and every third week-end. Overtime is made up immediately following its occurrence. The Saturday morning following the week-end "on call" is allowed to compensate for the restriction of keeping within reach of a telephone message.

Again attention should be called to the difference in the St. Lawrence County plan where it is not possible to have at least three nurses assigned to each office. The difference in telephone service arrangement is another important factor.

The service was offered to the physicians by means of a carefully prepared bulletin and a letter addressed to each one, personally. Nursing assistance was offered during delivery but not during the entire period of labor. Only patients registered for antepartum care with their physicians by the sixth month of pregnancy and who had been referred to the nursing service were to be given nursing assistance. It was explained that this policy was to encourage early medical care but that no call from a physician would be refused. In St. Lawrence County the service is more nearly a labor service since nurses stay in the home, if necessary, between the first examination by the physician and the actual birth of the baby. The long distances involved in St. Lawrence County makes it impracticable for a nurse to leave a home for some other calls in the neighborhood, and to return at the time the doctor decides he must remain in the home. It is believed that the doctors in the Fulton-Montgomery

District would be more satisfied with a complete labor service and that such a service would in turn be a more adequate one for the patient.

REPORT OF SERVICE

During the year 1938, 535 births occurred in the rural area of which 317 were born in the homes. Of this total, 306, or 57.1 per cent, were carried for antepartum nursing supervision. Of the 317 patients delivered at home 223, or 70.3 per cent, received antepartum supervision as compared to 83, or 38 per cent, of the 218 delivered in hospitals. A total of 1,244 antepartum visits were made, making an average of four visits per case. Assistance was given with 149 deliveries. Postpartum visits numbered 1,092, averaging 7.4 visits per case.

Time Consumed in Delivery Service

	<i>Hours</i>
Actual time spent in home assisting at 149 deliveries	642.15
Average per delivery	4.30
Travel time	96.
Average per delivery	.65
Average time per delivery including travel	4.95

EFFECT OF DELIVERY SERVICE ON ENTIRE PROGRAM

The delivery service in the St. Lawrence County has inhibited the fullest development of other phases of the program. However, a one-month time study completed March first of this year, but not completely analyzed as yet, shows an encouraging diversity of family health service given by the nurses in the delivery unit. Within the next few weeks when the reports and records of the last year will have been tabulated a critical analysis of the accomplishments, personnel status, and service policies will be made. It is already evident that an increase in staff is imperative if the demonstration is to be carried to its logical conclusion: that is to develop an adequate generalized family health service with a complete maternity service as an integral part of the program. Possibly the

next six months will determine whether the delivery load of the past year, approximately 50 per cent of the total home deliveries, is a static average.

The generalized program in the Fulton-Montgomery area has not been seriously affected, although the present delivery load is about all the present staff can carry in addition to the rest of the program. The interference which has occurred has been caused by a short staff due to two resignations and to illness.

SUMMARY

While no definite conclusion can be drawn, a few general comments might be made based on these two experiences as they have progressed to date.

The character, geography, population distribution, and the social and economic situation in counties will simplify or complicate the provision of a delivery service more acutely than do these same situations in relation to other services.

It is reasonable to believe that there may be certain county situations where a delivery service could not be arranged for an entire area with any degree of economy.

The utilization of private duty nurses appears entirely feasible but not as easily secured as might be thought.

The integration of delivery service in a generalized service is practicable if the necessary adjustments can be made and controlled.

The emergent nature of the service requires more staff, or some certain way of assuring sufficient nurse power to keep pace with the growing demands for assistance at delivery.

It appears necessary to arrange for an adequate budget to take care of such overhead as complete telephone coverage, necessary nursing relief, and for more administrative supervision than is necessary in a service which lends itself to routine. From a nursing point of view, this seems the crux of the situation as far as administration and economical use of nursing power is concerned.

The integrity of the generalized service, other than delivery, can only be safeguarded if the above administrative overhead is provided for. The very nature of a delivery service gives it preference in the list of services.

From the data available to date it is reasonable to believe that a delivery service is an important, if not the most productive service, in securing family and medical cooperation in maternal and child care. It appears to influence favorably the possibility for more and earlier antepartum supervision and improvement in infant hygiene following birth of the baby.

There is reason to believe that nursing assistance at deliveries is an important factor in assuring a relatively clean, if not an aseptic delivery in most of the homes.

Nursing care of the mother during the entire labor period is in demand. It seems possible to provide it.

While actual costs are not yet available, it appears the case cost, even though high, is a reasonable public expense when all the factors surrounding the loss of a mother are considered.

For the most part the nurses themselves quickly become interested in the delivery service even though their first reaction may be to object to a service which implies certain restrictions of their usual free time. It is evident that staff morale can be maintained if reasonable compensation is provided. Compensation in extra time appears to be satisfactory. (A cash bonus arrangement has been suggested but cannot easily be worked out in Civil Service.)