

Excerpts about public health nursing from "Welfare work in mill villages" by Harriet Herring, 1929.

PUBLIC AND SEMI-PUBLIC HEALTH WORK

In North Carolina public interest in health has been a recent development. While county doctors date from 1879, their chief duties were long confined to prisoners and paupers. Somewhat later, vaccinations by county doctors became common. The war, with the accompanying influenza epidemic and the appeal of the Red Cross for general health as a national duty and city doctors found the possibilities for work broadening, and conversely counties and cities began to seek doctors willing and able to inaugurate programs that would reach more needs. Red Cross nurses, eager to put their work on a permanent basis, sought opportunities for service and funds for support. The influenza epidemic afforded an opportunity for cooperation with many mills, and some plants had their first touch with public health work at that time. With some it had no permanent effects. For instance, four executives who said that they had a nurse and a temporary hospital during the epidemic had had no definite health work before, nor have they had since. But there were, as will be noted later, more mills which employed a nurse for that emergency and continued her for some years, perhaps up to the present.

In six cases mill executives who were interviewed mentioned that their villagers have the services of city nurses for visiting only; apparently health classes and group work have never been undertaken. In thirteen plants county health officers---nurses and doctors---seem to be fairly active. In six mills their work is largely limited to vaccination for smallpox, inoculation for typhoid, and visiting special cases of tuberculosis. One very large village belonging to two plants had classes in nursing and first aid supported by the county as part of a state program three or four years ago. The mill encouraged women and girls to attend, which they did--"good sized classes." They have not been repeated, however. Two other plants had the services of a county nurse for three years, and this officer "did a good deal of work here. She had some classes in hygiene and baby care and diet for babies, and did a lot of good." The county discontinued the nurse in 1925. Two other mills have furnished, for some ten years, a house for volunteer welfare work undertaken by ladies from the adjoining town, who included a class in home nursing in their program; when the county employed a nurse four or five years ago she took over and continued the nursing class. In the same county the manager of another mill said that the county nurse's work is limited in their village to visiting and to a yearly tuberculosis clinic.

Work by county agents has been received with various sentiments. Some mill managers have taken it as a matter of course; two or three referred with some pride to the cooperation that has been set up; in three localities citizens commended the county work and lamented the fact that the wide duties of nurse and doctor do not allow for more time and work in the mill villages; three executives explained that they get service only on the most pressing matters because they are located in a corner of the county away from the county seat where the officers seem to concentrate their efforts. As one expressed it rather feelingly, "We are the stepchildren of the county down here, for the workers [health and other officers] like to stay up at the county seat." On the other hand, one city Red Cross worker said that she was not allowed to carry on any work in the adjoining mill village---that she was politely but firmly told that they "took care of their people."

In addition to the villages served by county and city nurses there were, among the mills included in this study, eleven cases of cooperation with the Red Cross. In five of them it appears to be more or less perfunctory---the giving of money by the mill, and in return, and in special cases, some little visiting by the Red Cross nurse. In four villages belonging to a group of mills the relation seems to have been close and friendly since February, 1923. The nurses who have successively held this job have been tactful and able; they have been welcomed by the villagers and have worked in excellent cooperation with the superintendents. A separate mill in the neighborhood, not of the Red Cross nurse that serves the four villages mentioned above. The manager there explained that "she visits in this community when necessary" and that she had held classes in baby care and home nursing in the town, but none of the women from their village ever attended. Apparently few from the four villages where she did more work attended these town classes either, for if many had done so the manager would surely have known about them. In another case, cooperation has gone on since 1921 and has been more extended. The mill in this case contributes largely to the salary of the nurse, who serves the town and even to some extent the county. She does the necessary visiting in the village, holds baby clinics, and has had a series of classes in care of the sick. One nurse on this particular job also had classes in cooking and housekeeping from the point of view of health. One such class was so successful that it was described in the *Red Cross Magazine*, and the nurse took the girls and women to Raleigh for a demonstration. This class was held during working hours and on company time for girls and women who worked in the mill.

There are many plants in counties that have county nurses and also some plants in towns that have town nurses, where the managers did not mention any work by these officers in the villages; so that if they did any there it was without the knowledge and interest of the mill managements. Whenever a mill has asked the nurse or doctor to come to its aid the executive interviewed would likely to know of it; when the health agents have asked to do certain work in the mill village he should know of that, too. It is probable that they have done very little when he knows of nothing; certainly it is very unlikely that they have ever done any group teaching---perhaps merely some visiting. Side lights from interviews with managers and conversations with nurses indicate many reasons for this scanty work in the villages. Sometimes it is because the nurse's efforts have to be spread so thinly over an entire city or county that she has little time for any one part of her territory. Sometimes it is because she has felt that other people need her services more, since the mill management could be relied upon to "take care of the employees." Sometimes, no doubt, it is because she has not been made to feel welcome by the mill management---for the mill village of course is private property. And some mills quite plainly prefer to carry on such things themselves, though many others appreciate and encourage the cooperation of the public and semi-public nurses; and still others resent what they consider a tendency on the part of the nurse to neglect the mill village, "for after all, we pay taxes just as every else does."

COOPERATIVE HEALTH PROGRAMS

Besides these comparatively few plants which described aid in health work from public officers and sources, there are others which support health work on a group basis. Simplest in its administration is the nursing service secured with Metropolitan group insurance. Ten plants having this insurance are large enough, or are near enough to other mills or to towns, to enable the Metropolitan Life Insurance Company to put a full-time nurse in the field. So far as could be discovered, this work has been limited to visiting service. In several towns instances were found of group support of a nurse by mills alone or by industrial plants and private subscription. The service was often furnished too many plants not included in this study---mills and other sorts of industrial concerns. Four mills included in this study reported such cooperative support by other plants of the same town. It was also limited to visiting nursing. A large knitting mill has such a visiting nurse supported by various local industries, individuals, and one of the men's service clubs. This nurse, a particularly energetic person, apparently does a good deal of ease work and much adjusting of family and economic difficulties, in addition to visiting the sick. In Lincoln the Rotary Club, an especially some of its mill members, led a movement about 1922 to engage a visiting nurse for the county and town as a demonstration, in the hope that the county would take up the work and make it permanent. The mills of the town paid half her salary, the remainder being raised by private subscription. The plan was discontinued after three years because the county did not see fit to keep it up, and the people who had been paying for it thought the demonstration had gone on long enough. One probable reason the county did not continue it was that one of the three nurses successively on the job had antagonized people, and many thoughtlessly considered the project a failure owing solely to her unfortunate manner.

In the cooperative program of individuals, industries, and associated charities for maintaining a welfare worker in Lenoir, the first worker employed emphasized religious activities; the present one, who has been there since about 1918 has emphasized health and sanitation. Several mills near Gastonia cooperated in 1923 for about a year in employing a visiting nurse. "That was when times were better; cannot afford it now [August 1926]." The men who told of the project thought it was a good thing. One of the most interesting contributing plans for nursing service is carried on by the mills of Concord, five of which are included in this study. One or two of the large mills of the town employed company nurses about 1917, but without success. As a mill worker, a woman of unusual balance and common sense, explained, "the nurses just thought because they had the authority of the mill behind them they could make the people do anything they said. Instead of trying to teach the women better care of babies and of the sick they would order them to do this way and that. They made everybody so mad and got so unpopular that many people would slam doors in their faces and refuse to let them come in the house." In 1921 the county engaged a nurse. She served the industrial sections as much as possible, but, having to spread her efforts over the whole county she could of course, give none too much attention to any one group. In 1923 the Metropolitan Life Insurance Company and the mills of the town employed an industrial nurse for the town alone. The Metropolitan pays \$840, and the mills contribute on a spindle, or an equivalent, basis to make up the balance, which amounts to \$1,200. The nurse devotes her time to visiting and instruction in Concord, and thus relieved the county nurse of industrial work there; so that the latter has more time for the other mill villages of the county. But even so there is still too much industrial work for the county nurse to do properly if she is to serve the rural districts and other parts of towns as well. The county doctor at the time of the interview was glad to report that an arrangement between the mills and the insurance company was to be made for Kannapolis as well as for Concord. In addition to these officers the Red Cross of the county maintains a special tuberculosis nurse who serves the entire county. For the last two years the nurses have conducted classes for women in the general care of the sick in Kannapolis, Concord, and at one of the suburban mills. The county physician, Dr. Buchanan, did not know how many were in the classes but said the nurses considered them successful. In an effort to make them as practical as possible, the nurses took for their subjects of instruction problems suggested by questions propounded to the county health office by the people of the very communities in which the classes were held.

The remarkable thing about this particular nursing program is that it is centralized under the county health department. Thus there is less overlapping; there is cooperation and unified direction. The county health department has adopted what is called the general nursing plan, rather than the special nursing plan according to which each nurse advises or aids only in cases for which she is specially trained. The latter is a waste of money and effort, the doctor explained, because you may very easily have two or three nurses in the same part of the county on a single day. It is even more wasteful of good will because of the psychology of the situation; if the tuberculosis nurse who is visiting a family is asked about some other health problem in the family and she explains that that is not her business but that she will send another---and a strange---nurse to deal with it, the confidence of that family is gone and the contact endangered, especially as she is dealing largely with ignorant people. However, if the new problem involves continuous visits she can often tactfully prepare the way for the proper nurse. Dr. Buchanan considers that one of the main elements of success in public health nursing is the maintaining of friendly contacts, and he tries to work out his program of visiting and service to promote and to preserve them. In 1925 the nurses made 2,500 visits to families. Usually the family calls up the county health office; the mills may call, and do so, but rather rarely.

The writer, gathering from other interviews that this centralizing scheme was considered something of a triumph, inquired in some detail about the causes and consequences of such an unusual centralization, under public officials, of nurses supported by so many different agencies. Dr. Buchanan said of course it was to avoid duplication of effort, but also to "prevent feeling" among the industrial people, that the mills were doing it. In fact the mill Metropolitan nurse had been on duty for about a year before the people in general knew that the mills had any part in her support. His explanation of their thus hiding their light under a bushel verified and amplified the story of the mill operative about the earlier mill nurses: "They ran away with themselves---tried to push things too much. Sort of felt that because they had the mill behind them the mill would stand for discipline---that they could say now 'you've got to do this or that.' The experiment was more than any ordinary failure---got so that some of them just could not go to some of the houses, for the people would not let them in." For this reason the county scheme has had to move very slowly and be managed with velvet gloves, and one of the greatest cares has been to employ nurses who could approach people tactfully. Naturally Dr. Buchanan thinks it is much better to carry on such work through the public agencies: it can be better centralized; that the people will use the service more; that they will not resent it as a substitute for higher wages; and after all that it is really public work and should

be done through the public agencies. This was certainly a rather formidable group of reasons. There seems to be one disadvantage: "You know how it is when you begin to have a sufficient staff to do the work properly. The people begin to talk about the expense--- that it is making taxes high," so that he is not going as fast as the work and the contacts really warrant. The irony of the situation is the county is not paying for all this, but since each nurse is sent out from the county health office and is called a county nurse the county gets the credit for her work and the handicap noted above that goes along with it!

HEALTH WORK OF GENERAL COMMUNITY WORKERS

As has already been mentioned in the discussion of general community work and workers, the "welfare worker" includes in her program some health measure: visiting the sick, giving aid and advice in their care, and even conducting health classes. Probably much more of this is done than the manager is aware of. Personal experience of the writer and that of acquaintances in welfare work show that the new community worker can best get an entrée into homes and into the confidence of the villagers through the sick room. Sickness in the family offers an obvious opportunity for visiting and service and for the later enlisting of the family in a community program. In most mills employing a general welfare worker, the man interviewed, though usually knowing not a great deal about the work that the worker was carrying on, always included visiting the sick and list of her duties. In a few plants, however, the health work was prominent, and the executive was sufficiently interested in it to encourage these activities, or at least to inform himself of them in some detail.

One of the earliest examples of a general worker who emphasized health was at the Asheville Cotton Mills twenty years ago. Another mill employed in 1916, and retained for four years, a worker whose chief duties were to teach home care of the sick and cooking, and by continuous encouragement, advice, and pressure to raise the standard of sanitation and care of houses and premises. The manager said that good effects of this teaching could still be seen. It was discontinued because "we did not think it paid," though it must be confessed that one hardly understands what they would consider "paying" if work good enough to leave its trace some years after did not qualify. The community worker at the Victory Mills in Fayetteville has put much emphasis on a health program since starting her work in 1917. The county Red Cross has cooperated by holding two classes in health and education.

At the Caraleigh Mill at Raleigh the acting executive has for many years personally carried on something of a health education and sanitation campaign. It proceeded more vigorously when, in 1919, the mill employed a general community worker who promoted this along with her other work. The village, with its efficient rubbish and garbage removal system, its orderly yards and clean streets, is evidence of the success of the program. This village has had since 1925 the services of a Metropolitan nurse as well. One good-sized mill employed a woman for general community work with some emphasis on care of the sick. The executive interviewed thought "she was a trained nurse. She gave individual instruction in nursing and did good work. She got a lot of families to improve their way of living. When she left we just did not employ a successor---did not consider it worth enough. She did a great work, and there are still evidence of it in the village." As in the similar case cited above, one is tempted to ask what standards of worth are applied, when work effective enough to have left evidences after some eight years is not continued. Ten other plants referred to the health education and nursing aid and instruction given by their welfare workers, thus making fourteen in this group.

The above eight-two different plants, are, as we have seen, greatly dissimilar in the extent and nature of their health or nursing service. They are alike in three particulars: the work is recent in origin; it is on more or less impermanent foundations, being based on the premise and the profits of "flush times" or on a shifting spirit of cooperation, so that it is not surprising to find many experiments abandoned; it is rather casual and slight in nature---a visiting nurse employed or a series of classes begun more or less as the spirit moves someone, or as an epidemic impresses the community with the need.

SPECIAL HEALTH PROGRAMS---COMPANY DOCTORS

Somewhat more stable, of longer duration, and certainly more intensive are the health programs undertaken by individual mills or by a single company among its group of mills. Included in this study are ninety-one plants which may be said to have or to have had a special program. In twenty-one cases it has been abandoned.

The oldest and rarest form of special health scheme consisted of a company doctor's services. Thirty years ago the Wenonah Mills at Lexington employed a company doctor, this being one of the earliest examples found. The plan was discontinued after about a year. "We found that many of our people preferred to have their own doctor, even though they could have the services of ours at half price, and he was an excellent young doctor. He also grew tired of the arrangement as his practice drew in volume. Generally speaking, I doubt the wisdom of such an arrangement. It might be all right in a large mill district where they could afford to pay a doctor for practically of his time." This mill has for six or seven years paid one-fourth of the salary of a township nurse who serves the employees of the company along with those of other industries in the town, so that at present this plant belongs in the group of eighty-two already referred to, though not included in the discussion of them above.

Another early example of medical service was at the Sterling Cotton Mills in Franklinton. Ever since the mills started in 1895 the pay-roll office has taken out six cents per week for each member of the family of each worker, with which medical service has been provided. Each family can choose its own doctor. This fund is sufficient for the purpose, the mill never having had to subsidize the scheme, though of course it gets the doctors' services somewhat more cheaply since they are thus sure of their pay. This

scheme has never been accompanied by abuse, such as the calling of doctors for the most trivial complaints. The experience of the mills at Roanoke Rapids along a similar line started in 1899 and has continued to the present, but as it has developed into an elaborate hospital scheme, it will be discussed in some detail later. Washington Mill at Mayodan, founded in 1895, has had a company doctor from the beginning. The doctor is paid a straight salary and he takes care of all sickness without charge except for maternity cases and operations. The employees give three cents a week for each member of the family. This does not pay the total salary of the doctor, which the mill completes as a subsidy to health work. They have changed doctors many times since the plan started because they have had a policy of taking young men fresh from their training. This has been very satisfactory---good doctors and no complaints from the people. The superintendent mentioned several doctors with a company has also employed a nurse since "a while before the war." She does home visiting and helps with the sick and teaches the people in the care of the sick. She also holds monthly meetings of the women of the town for the discussion of health and related topics, this work being carried on through the Ladies' Aid Society. She initiates and arranges meetings for the county home demonstration agent, who gives instruction in canning, cooking, and other subjects. She is the liaison officer between the mill and the county welfare officer and gets excellent cooperation from all the county agents. Naturally much of her work is in cooperation with the doctor.

The Royal Mills at Wake Forest started a system twenty years ago under which every employee who agrees, has ten cents a week for each member of his family deducted from his wages; this is paid to a local doctor by way of salary for attending those families. Three-fourths of the operatives on the pay-roll, including practically all employees of long service, belong to this plan. It has always been very satisfactory, the families feeling that they get the service more cheaply than they would for the customary doctors' fees. After a family has lived there some time it is pretty sure to join. There is nothing compulsory about the plan, but the people come in after seeing how it operates with their acquaintances and neighbors. The manager believes that the success of such a plan depends very largely on the doctor, and that the mill has been very fortunate in having had for many years a man who took a deep personal interest in the group, and in whom the people had confidence. This doctor had served them from the beginning until his death about two years ago, and the manager thinks that the present one will be as good.

The only really simple company doctor plan was found in a medium-sized hosiery mill. The scheme seems to be a family affair, the doctor serving is son's employees and "seldom making any charge; and I don't believe anybody pays him when he does make a charge!" added the superintendent.

NURSES AND NURSING SERVICE

Nurses, of course, are far more numerous. Twenty-six groups of mills representing sixty-seven plants have nurses and have had them for periods varying from ten years to a few months. As these groups include most of the large employers of the state, they include a majority of the worker considered in this study. Some of these plants deserve special mention. The Highland Park Mills and Chadwick-Hoskins Mills at Charlotte each pays the salary of a nurse and has the work directed by the Charlotte Nursing Association, which secures the nurses as well. This plan was started ten years ago by a civic club of the city, consisting of some 150 or 200 men, who secured subscriptions for it and organized a nursing service for the entire city. The mills consider this the most satisfactory way to get the work done efficiently with little trouble to themselves. The health work at Spray started twenty years ago when typhoid fever was so common as to make a general campaign against it necessary. The Civic Association described in Chapter VI progressed in its health program from general propaganda to a nursing service in 1910, when inoculation, improved toilets, the creation of other sanitary conditions, and health education were the chief methods employed. They used to have fifty or sixty cases of typhoid a year; last year they had one. The nursing service and inoculation were well accepted from the beginning, with no suspicion of dislike for the nurses. There are now two in Spray, one in Leaksville, and two in Draper. Those in Spray are maintained by the Civic Association made up of several companies; the others are maintained by the Carolina Cotton and Woolen Mills Company.

Proximity Manufacturing Company at Greensboro had used visiting nurses since 1913; before that time considerable attention to health, visiting the sick, and educational work had been going on since the beginning of welfare work in 1903. At Revolution Mills, which have always combined in their home nursing and baby care ever since the village nurse began her work in 1917. The village had tonsil and baby clinics before the city of Greensboro did. Three years ago there were thirty tonsil and adenoid operations in one day. The city doctor was assisted by an eye, ear, nose and throat specialist and other doctors from one of the town hospitals; the village nurses were assisted by nurses brought by the doctor and to take as their fee whatever sum they and the welfare superintendent should decide upon. The latter examined the pay-roll of the families concerned and determined what each should pay, the amounts varying from nothing to \$15. The patients were taken care of in a temporary hospital at the expense of the mill. At these mills the company makes sure that a good doctor lives in the village by furnishing one with a home and an office. He takes care of accidents from the mill and any charity cases in the village, and for these the mill makes good his fees. The doctors say that collections among the mill people are better than among the non-mill part of their practice in the locality. The schools maintain a health program, the nurses going every week to the schools for talks, examinations, and other health education work. Each year there is a big health meeting of the whole community, with speeches on health, propaganda against mosquitoes and flies, and a distribution of pamphlets on health subjects.

The P.H. Hanes Knitting Company's mill near Winston-Salem has had a trained nurse since 1918. This is the only case encountered in which the nurse is employed on a basis case encountered in which the nurse is employed on a basis of cooperative pay, here twenty-five cents per family per week. Visiting, home training in care of the sick, and assistance when needed are her chief duties, and "being right much of a doctor she is able to save the families many doctor's bills for minor ailments." At a well-equipped first-aid room in the drug store building she attends first-aid cases from the mill and at regular hours each afternoon receives villagers able to come to the office, this being in addition to her home visiting. She also holds group meetings of mothers for instruction in baby care. Four years ago the mill inaugurated its first tonsil clinic, which was repeated the following year. The mill

employed a surgeon from Winston-Salem for \$100 a day and brought in three nurses to aid the regular village nurse. Cots were borrowed from the county and a two-day clinic held in the school building. The first year they removed the tonsils of forty-one children at a nominal charge of \$1 per child. After two years there were no longer so many in the village who needed this attention, and the mill therefore arranged that one of the hospitals in Winston-Salem should take the children--some ten or eleven cases. Each year when the school children are measured and weighed, all who are found to be undernourished are given a quart of milk a day. This has been done for four years. The mill and individuals contribute the money for this milk, which is bought since the mill does not run a dairy. For the last few years the superintendent has been planting about ten acres of turnips, mustard, kale, and the like so that the people can have the greens in the spring. They are not allowed to use the turnips. When the greens begin to grow in late winter and early spring he allows the villagers to cut them at intervals, allowing time for them to grow. "We let them on for two weeks and off for two weeks, and it is surprising how quickly they clean it up, too!" He does this because he considers that few of the families get as many greens in the spring as they need for health; especially is he interested in the plan as a health measure for the children. This bit of health work costs about \$150 a year.

Three mills have had rather interesting experiences with "practical nurses." The Chipman-Burrows Hosiery Mill at East Flat Rock has for the entire seventeen years of its existence had a practical nurse in the employ of the company. She works at a rather skilled job in the mill when she is not needed by one of the families, but when she is needed the superintendent sends her out, continuing her regular full-time pay. The manager considers this arrangement a success as she is a good nurse, works well with the doctors, and has the confidence of everybody in the small village. A mill in Salisbury has had as full-time village nurse, for the past ten years, a woman who used to be employed in the mill. She is a practical nurse with a liking and gift for the work and her considerable experience has made her very capable. The president said that doctors who practice in the village tell him that they would rather work with her than with a trained nurse, for she knows the people and is not averse to helping in any way necessary in the home when there is sickness, a point of considerable importance when dealing with the families of wage to provide aid for women in confinement cases, but she has proved valuable and popular in all sorts of sickness. Many of the operatives carry Metropolitan insurance, and as the insurance company employs a nurse in Salisbury, her assistance is available as well.

Not so happy was the experience of the third of these, the Sapons Mills at Cedar Falls. The chief executive of the company said that he had long been impressed with the need for someone to aid in sickness, especially in cases of confinement, for the village is rather isolated and there are not even any Negro women who can be secured for general household assistance. Accordingly, in 1992 the mill employed a practical nurse, paying her a regular salary and allowing the employees to have her services at a dollar a day. But some of them wanted her without pay, and others wanted her to cook for them when they did not need her for sickness; and after six or eight months the mill discontinued the experiment.

So far we have mentioned but one nurse who serves the plant as much as or more than the village--the one employed at the cotton mill branch of the P.H. Hanes Knitting Company at Winston-Salem, a large employer of women and girls from all over the city, has no village system but it has maintained a nurse and first-aid room in the plant for twelve or fifteen years. The accidents are few in number and minor in nature, so that the nurse's duties permit her having charge of the adjoining rest room as well. Another plant nurse at the Kendall Mills at Paw Creek, whose services date from early in 1926, has a first-aid room, an operating room, and a quiet room as quarters for her work in the plant. As the plant is small she has considerable time to do outside work. She cares for village cases needing aid, gives advice and treatment at the plant first-aid room, does home visiting, has given anti-typhoid injections to nearly everybody in the village, conducts a club of mothers studying health matters, and holds a tonsil clinic with a nominal charge of \$7.50 for the operation. Another mill under Northern management, the Beacon Manufacturing Company, although only started in 1925 has already set up a small hospital. It is a sort of dormitory with six beds and an operation room which local doctors may use for their work. The doctors collect their own fees from the patients. A nurse in the community is available for such intermittent services are required, and the mill pays for the time she works, collecting from the employees the actual cost of the service and of medical supplies. At the time of the interview for this study the manager was planning to employ this nurse on a full-time basis, arranging that she conduct a first-aid room to be fitted up in the mill, and in addition do home visiting and give instruction in sanitary methods and nursing.

HEALTH PROGRAM AT ROANOKE RAPIDS

One of the most widely known and most complete health programs is that of the Roanoke Mills and Rosemary Manufacturing Company, large damask manufactures at Roanoke Rapids. The system started very simply with a company doctor in 1899, almost as soon as the mill opened. With the growth of the mills and the communities, doctors and nurses have been added until now these two related companies employ four doctors and two nurses; and a separate company in the same town--not included in this study--employees a doctor and a nurse. The mills pay them salaries and consider them fulltime workers, though the doctors are free to serve other patients if they have the time. The president said that the doctors have always worked harmoniously with each other and that there has never been any complaint from them that the people abuse the system by calling them unnecessarily. The people that is inclined to do this they deal with the matter themselves. Nor has there ever been any complaint from the employees of lack of attention from the doctors or nurses. The nurses give their full time to employees and their families, not being allowed to do any outside work. They give vaccines, look after health conditions under the doctors' orders, visit and give instruction in the care of the sick and of babies, and also do bedside nursing whenever a doctor asks that a case of his be attended by a nurse. In addition to these nurses for the village and employees, the Red Cross employs for the schools a fulltime nurse who examines children for bad tonsils, adenoids, and undernourishment, and performs the other usual duties of a school nurse. She reports her findings to the doctors so that they can give treatment to those needing it and take up necessary matters with parents.

Capping this system of medical and nursing care at Roanoke Rapids is the hospital. The forerunner of the present hospital was started in 1911 by a local physician, Dr. Long, the brother of an official in the company, who opened a small private hospital in

what had been a residence. As he worked there in a little institution totally inadequate to the need of the community, he gradually evolved the idea of a mill hospital for all the employees. His plan as accepted and put in operation in 1916 was as follows: the mill companies of the town built and equipped the hospital, the expense being pro-rated among them according to the number of employees. They then deeded the entire property to a corporation which was formed to operate the hospital as a non-profit, eleemosynary institution. The hospital therefore really belongs to itself. It is administered by a board of trustees made up of the physicians of the town and the managers of the mill and electric power corporations, the mayor of the town, and the chairman of the board of county commissioners. So far there have been no physicians in the town except those in the employ of the companies, since these three always have time to serve the small non-mill population as well as employees. If any other doctor should settle there he would not, perhaps, be on the board.

Each employee pays---or has deducted from his pay envelope---fifteen cents a week, which entitles him and all his dependents to care in the hospital upon the order of one of the regular doctors. The amount used to be ten cents, from which it has been increased to fifteen cents. This money plus the charges to non-operative patients forms the income of the hospital. Persons not employed by the companies may be received when all accommodations are not needed for employed patients, and they are taken at regular hospital prices. As there is no other hospital nearer than Rocky Mount, this one serves all the country around for a radius of fifty miles. The service to outside patients would form a source of considerably more income if there were not so much charity work to be done; but even as things are and with the low weekly contribution of the employees the hospital has always made its way financially. If it should not, the deficit would be pro-rated among the mills on the basis of number of employees. It is an up-to-date institution in an excellent modern, brick, fire-proof building, with seventy-five beds. It is a busy place, averaging three or four major operations a day.

Finally must be mentioned the true pioneer work of the mills at Roanoke Rapids in malaria eradication. The whole area used to be infested with malaria-bearing mosquitoes, and the president said that 50 per cent of the people had malaria. He was probably too conservative by nearly a half! There was, of course, excessive absenteeism in the mill. "You knew you would not have John Jones tomorrow because that was his chill day, and so you had to have somebody who did not have one on that day to take his place." The village contained many more potential workers than were needed to man the machinery, in order to have enough to muster a full force at any one. In 1912 Dr. Long, who had recently started his private hospital in Roanoke Rapids, secured for the mills the services of the officials of the United States Public Health Service who had cleaned up the Panama Zone and were then returning to Washington. They directed the draining of swampy places, the cleaning of ditches, and the proper placing of dripping cans filled with oil so as to keep a film of oil over the surface of all the little slow-moving streams and ditches. The campaign proved successful beyond their greatest hopes. The mills have made this work part of the regular business of running the plants: each spring the outside departments clear the ditches, clean the cans, refill them, and tend them. Less than one-tenth of one per cent of the people now have malaria. Typhoid, formerly very common, was eradicated by putting in state-approved septic tanks and drilling deep wells for water. The latter are taken for granted in the villages of the Piedmont, but in the mills of the lower part of the state it is often a temptation to use the simple, cheap little pitcher pumps. In fact, in this and several other villages one sees occasionally such a pump on the porch and concludes that the tenant must drive it for himself rather than go to the pump that serves several houses. But at Roanoke Rapids the people evidently use the deep wells for drinking, since they no longer have typhoid.

OTHER SPECIAL CAMPAIGNS

The system we have just described, with its thirty years of development and expansion, is by far the most complete that was encountered in the work for this study; it is certainly the most complete to be found in the state if not in the South. But there are others, as we have seen, which resemble it and which have developed in proportion to the size of the plants where we find them. In many interviews with managers and superintendents it was apparent that sanitation, health, or care of the sick is somewhat a hobby of the head executive. This is sometimes observed in villages where no nurse or worker is employed and where the head of the mill sees to many such things personally.

An excellent example of this is the story of mosquito eradication of Great Falls Mill, Rockingham, Mr. Claude Gore, the president, said that previously there had been so much malaria every year that the mill had almost to be closed for lack of workers. About 1912, soon after the state health work began under Dr. Rankin, Mr. Gore invited him to come to a meeting which was to inaugurate an anti-mosquito campaign. The mill called a big community meeting with refreshments for everybody, at which Dr. Rankin spoke on malaria prevention, and a prize of \$50 was offered for the largest number of tin cans turned in by one person, with other cash prizes for smaller numbers of cans. But this did not stop malaria; and with other smaller prizes for cleaning up the premises of the cottages. Then the mill, as a part of the campaign, put in running water to see if that would help matters. Still, malaria and the mosquitoes persisted. Then they tried oiling the puddles. At nearly every house there was a little puddle at the spigot near the back door. They set a man to making the season of this showed no improvement. Mr. Gore called in the man and "jacked him up proper"---told him that he was not doing job thoroughly, but he insisted that he was. Finally Mr. Gore decided to go out on a trip of inspection himself, to look in everything on the premises capable of holding water. He found at one house a wash pot swarming with mosquitoes. The woman insisted that she had boiled clothes in that pot before. Soon he found a kraut barrel set under a house with some water in it to keep it from falling to pieces till next kraut-making time. His trip around the village nettled eleven such barrels. After this they had no more malaria. At the invitation of a local doctor, Dr. Von Esdorf, malaria expert of the United States Health Department visited the village soon after the final clean-up and complimented the management upon its successful fight. He could not find an anopheles in the village or near it. Now, instead of thirty or forty hands off duty at once with chills there is seldom at case. But the fight cost \$5,000 and several years of effort.

Another company that has had an interesting and illuminating experience with malaria is the Mansfield Mill at Luberton. About fifteen years ago the management started a campaign against this disease, which was proving a veritable plague. They

cleaned up the village by propaganda and by offering to supply the screens at cost; they interested the people in screening the house, Dr. McPhaul, now of Charlotte, led the fight and the educational campaign. In two years, according to the figures of the county health officer, they had reduced malaria from 40 per cent to 2 per cent--whatever those figures mean. Fourteen years ago the company distributed free to its employees, through the company store, \$600 worth of quinine a year. In 1925 they gave out only 500 capsules. The country here is flat and rather swampy, so that this probably one of the most remarkable examples of what can be accomplished merely by cleaning up the village itself.

Another scheme now in process of development is that of the Leward Cotton Mills at Worthville. The mill is an old one remodeled and the houses, though very substantial, did not suit the new secretary-treasurer who took charge in 1919. He set about renovating the insides--removing the forty years' accumulation of paper and wall covering down to the original ceiled walls, which he painted. He went about this gradually, a room at a time. It was highly popular, and everybody was begging for his own house to be done next. With this as an organization, the object of which was to hold village meetings with talks by visiting specialists on health subjects. He made an effort to develop a forum with questions and discussion as he was eager to have the villagers acquire the habit of pressing themselves. For various reasons the plan did not work out as he had hoped, so that the mill is now awaiting the erection of a community building that will provide headquarters for meetings and for a health worker. Every house in the village is now fumigated before a new tenant goes into it.

NURSING AND HEALTH WORK DISCONTINUED

Although we shall devote a section to the consideration of failures of various kinds in welfare projects, it will perhaps not be out of order here to summarize briefly the experiences of mills which have discontinued health programs. In a few mills that we have already mentioned in other connections, the health program has been abandoned entirely; in others it has been only partially abandoned. Twenty-one plants remain to be considered. One employed a nurse in 1917 following many years of interest and activity in health matters on the part of the owner's wife. "But the people did not take to it," and the work was discontinued after two years. Another mill had a very similar experience beginning in 1916 and lasting for three years. A third tried out a nurse after having had two general welfare workers but considered a welfare worker more popular and went back to that plan. In a fourth mill a nurse employed for the influenza epidemic in 1918 and continued for visit for and health educational work was discontinued upon a change in management. A fifth employed a nurse in 1918 and continued for general welfare work with emphasis on health, "and we just never got anybody else when she married in 1920 but discontinued her after two years "because she got lazy on the job, and would not go on her rounds if it was too hot or too cold or rainy!" A very large mill with a fairly elaborate welfare program engaged a nurse in 1918 but let her go after four years "because the people imposed on her--expected her to do all the obstetrical work in the village." Three others make up a group which have had an experience extending over some ten years with a nurse "sent down by some charitable association up North." The mills furnished her a house and contributed \$35 a month to her salary, and she carried on the duties of a regular visiting nurse, aided, and she carried on the duties of a regular visiting nurse, aided, in epidemics or on special occasions, by additional nurses employed by the mill. She left in 1926, presumably because the association discontinued her support. The mill management did not continue her or the work as they had grown lukewarm over such activities: other welfare workers they had been employing had grown careless and showed lack of interest, and so they gave up all workers together. Also of this group are two mills under one management which had as their visiting nurse for twelve years a nurse who was caring for a crippled doctor. She drove him about with her on her calls, and when a case was too complicated for her would report the symptoms to the doctor in the pony cart or automobile at the door for his diagnosis. She was a part-time nurse for the village, and the doctor did his part merely as an avocation, so that these villages were fairly well served by a nurse and doctor at comparatively little expense. The invalid died and the nurse left town at a time when a long depression had left the mills in a poor financial condition, and hence her place has not been filled.

Finally, a group of seven mills under one management, but located in three different towns, employed a number of nurses, some of them as early as 1912. In one town where the plant was small the nurse served the mill and the families of workers as well, but the service was not very well received and was discontinued after a year. In another town where there was several larger plants the first nurse was used chiefly for duty in the plant but added home visiting. In 1916, with the beginning of a more elaborate welfare scheme, another white nurse was employed and a colored nurse for duty in the plant employing Negroes and among their families. The whole welfare program, including the nursing, was abandoned in 1921 due to a depression and a new policy following some changes in the executive offices.

There were 136 plants, or well over a third of those included in this study, which reported no health work. Thirty-six of them are hosiery mills, and five are specialty textile plants. Most of these plants are small, and nearly all are situated in the midst of towns; their workers are scattered over the whole community; they rarely employ whole families; they seldom have any village or housing projects; and there is little or no tradition of welfare work. Of the ninety-five cotton mills which reported no health work or nurse, a number have the services of a county or city nurse for visiting; but if her work in the is so slight and the cooperation of the mill so small that the executive interviewed did not know of it or remember to speak of it, the chances are that very little work is done, perhaps only among a few tuberculosis or other special cases. On the other hand, several executives complained that they do not get the attention which they consider the villagers are entitled to as citizens, or that the mill is entitled to as a large taxpayer. There were even a few cases where an executive in a town reported cooperative arrangements among the industries to support a visiting nurse although men interviewed earlier had not mentioned it. While they all probably contribute something and perhaps get some little service, again there is doubt whether the service amounts to much if it is not remembered and mentioned when the subject is brought up. Again, several stated that they contribute to the local Red Cross but get no return, some speaking of this by way of complaint, others as a situation to be expected, and still others as a possible resource they do not rely upon or need, since it would apply mainly to relief, "and we look after our people in that line."

THE OUTLOOK FOR THE FUTURE

Enough comments have been made on the various groups and kinds of health work to render any additional observations unnecessary. Suffice it to say that activities of the mills which are connected with sanitation, health, and care of the sick are more common than any other save aid to churches and schools. They are, if we consider informal personal interest and work of the owners and managers and their families, among the oldest activities; and except for the few company doctors they are, as if we consider the visiting nurse and health education, the newest. Health work is apparently very well received by the employees, there being only a few cases where it is not popular and appreciated, and just as few cases of dissatisfaction with it on the part of the management. And usually both types of exceptions are traceable to the individual nurse on the job rather than to the work itself. Even in these cases the writer does not recall a single executive who did not think it was a good thing for a mill to do health work as a business proposition, as a philanthropic work, and as a humanitarian duty. There have been about as many cases of mills discontinuing it as we have found discontinuing other activities, but, cases were described, this has been done as a matter of financial expediency.

And yet, of course, looked at in the large, programs that include nurses are merely in their beginnings and touch a minority of the workers. Only one plant employing fewer than 200 workers has, or has had, a nurse, and that case she is a practical nurse who works in the mill between her professional duties. There were only ten nurses who served groups of fewer than 500 workers, considering groups of mills served by a single nurse as a single unit. And yet, as we have seen, the small mill, and even the single mill, is still most common in North Carolina. The chief hope for the future is the trend toward use of the newly inaugurated county and city health agencies. It is the only hope of the small mill, and, as we have shown, is of great use to the larger plant. Information gathered in this study seems to indicate that the mills are using these public health nurses as rapidly as they are being made available.