A program of infant home visiting was established in Denmark as a result of concern about the rate of infant mortality. The objectives, problems, and promise of the infant Home Visiting Program are summarized and evaluated in terms of their implications for the United States. Although the results of the program have been overwhelmingly favorable (Denmark now has one of the lowest infant mortality rates in the world), there has been some difficulty in integrating what has been a separate service into other existing health service programs. Also reported are the recommendations of a top level National Health Service committee which includes plans for a combined school nursing, home nursing, and infant health visiting program; compulsory infant visiting in all townships; selective visiting to high risk infants; and the establishment of a strong working relationship between the infant health nurse and the local family doctor's office. (CS)
HEALTH VISITING IN THE INFANT'S HOME

IN DENMARK

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In 1928 Denmark, concerned with the fact that their infant mortality was higher than that of Sweden and Norway, started a small experimental program with the aid of an American Foundation. Four nurses, one in Copenhagen, one in a suburb of Copenhagen and two in rural areas, began visiting infants in their nursing districts in the infant's own home. The visits were free of charge and all infants were seen regardless of family income.

After six years of this experiment a report was made to the National Health Service of Denmark and to the legislature. It was concluded that the program was a success and an important aid in combating infant mortality. As a result the legislature in 1937 passed the Act titled: "Combating of Morbidity and Mortality among Children during their First Year of Life." This act authorized Townships to establish Infant Home Visiting. The establishment of this new program was optional but the Townships with such a program would receive 50% subsidy from the national government. Copenhagen, in 1938, was the first Township to start the new program. Since that time the service has grown steadily until, at present, 259 of the 277 Townships in Denmark have infant home visitors.

In Denmark the National Health Service, a branch of the Ministry of the Interior, is in charge of all public health and preventive medical services as well as hospital services. The "Sick Chest", a branch of the Ministry of Social Affairs, on the other hand, pays for all curative medical and dental services outside the hospitals. It is the National Health Service which is responsible for supervising the Townships which have Infant Health Visiting. The National Health Service sends out regulations to supplant the basic Health Visitor law.
It should be noted that the National Health Service sends consultants frequently to the Ministry of Social Affairs to coordinate all of the above services.

Program

When every child is born in Denmark, the midwife who has been responsible for the pregnancy must, by law, complete an extensive form which gives details of the pregnancy, the delivery, the medical history of the mother and the social history of the family. This form is sent to the Infant Health Visitor for that district. If the midwife should fail to send this form, she can be heavily fined and this reporting system is 100%.

The Infant Health Visitor then makes a visit to the new infant's home. The Visitor will make an average of 12 home visits during the year and, if needed, may make up to 20 visits.

During the visit the nurse weighs and measures the infant, tests the infant for phenylketonuria, and gives advice to the mother regarding feeding, sleeping, bathing, and growth and development. The nurse gives the mother a card to keep on which is recorded all weights, lengths, developmental assessment and problems. The nurse may give advice regarding minor illnesses such as colds or skin problems but refers the infant to the family doctor for more serious medical problems.
One of the nurses primary responsibilities is to see that the infant has adequate total health care. Since 1945 regular health checkups by the family doctor have been offered for free of charge by the State, including 3 visits the first year and 1 visit per year from age one to seven. The infant's mother takes the card with the information from the health visitor when she goes to the family doctor for these checkups. Here the baby gets all routine immunizations together with the doctor's checkup. The results are recorded on the same card and in this way the parents, the family doctor and the health visitor all share the same health information on the infant. The health visitor makes certain these checkups by the doctor are made and will assist the mother in any way necessary to insure the baby is taken for them. Equally importantly, the health visitor is on call 24 hours a day if the mother has a problem with the baby. If the baby becomes ill, the mother may likely call the health visitor first to discuss the illness. If the health visitor feels the baby should be seen by a doctor, she will advise this and then follow-up the next day to be sure the baby has been seen and that the mother is correctly following the doctor's treatment.

In addition to referring the infant to the family doctor, the health visitor may also refer the family to other needed services. When the program first began the emphasis was on the physical health of the child. Now emphasis is also given to mental health and development and social problems. Consequently infant health visitors are an important source of referral to Family Help and other such services. If an infant is in a creche (day care center), the health visitor will make routine visits to the creche where she will examine the child and discuss the child with the staff. The health visitor will also make home visits in the evening so she may give advice to the parents. In this way the health visitor is part of the whole network of care services for children and works actively with many different types of child care workers.

In the past 10 years there has been an important new
trend in the way infant health visiting is conducted. Because of the shortage of adequate numbers of trained health visitors, new methods of health visiting were tried. In one rural county in Denmark a series of experiments showed that health visiting was most valuable for families with a first child and families at risk—that is—in families in which "the children are either not quite well or are living under conditions which may influence their physical and/or mental development." These experiments showed that approximately 15% of the families with infants were at risk. By visiting all infants one time, the health visitor could identify the first born or at risk infants. She would then not visit low risk infants any further and could then have the time to visit the high risk children many times and continue the visiting until school age. This experiment was so successful that other Townships began to adopt the new scheme. It is now the official written policy of the National Health Service and it is estimated that approximately half of the health visitors are practicing in this manner.

Another new trend, related to the first, is just beginning in health visiting in Denmark. This is a closer cooperation between the health visitor and the family doctor. This scheme has also been tried experimentally with success. The idea is already officially adopted policy but it is recognized that it will be a gradual change. The goal is to have the nurse work out of the family doctor's office as his right arm in a manner similar to that found in England.

Personnel

The original Health Visitor Act of 1937 also established schools to train graduate nurses for work as infant health visitors. While at the beginning it was necessary to recruit some nurses for this work who had not completed the special one year post-graduate course designed for this purpose, gradually it was possible for all new nurses coming to this work to be fully trained. The number of qualified public health nurse infant health visitors has grown from the original 4 to 718 at the present time.
All women who wish to do this work must first be fully qualified registered nurses with a minimum of 2 years nursing experience. The one year post-graduate course includes coursework in growth and development, nutrition, family work, community organization and administration, psychology, sociology and health education. In addition there is a wide variety of continuing inservice education; the Schools of Nursing offer 2 week refresher courses; Departments of Pediatrics in hospitals invite health visitors to seminars and tend, in general, to work closely with these nurses; some local health officers organize regular evening meetings where health visitors present cases together with local social workers, family helpers, and, occasionally, family physicians.

Originally the health visitors worked out of their own homes (many still do) and were quite independent in their work. Although the original act of 1937 established the possibility for supervisors for the health visitors, the number of supervisors grew very slowly and it was not until 1963 that supervisors were expressly authorized. Now at least half of the Townships with health visitors have health visitor supervisors.

Results of the Program

The number of infants covered by health visiting has steadily increased until now 88% of all infants in Denmark receive home visiting. The remaining 12% live in Townships which have not, as yet, established this still optional service. Of the 88% who are covered, 99.1% have received all of the required health visitor home visits. Less than 2% of the families have ever refused this service.

What are some of the results of this program? The level of immunization of children entering school in Denmark is as follows: small pox, 98.4% immunized; diphtheria, 95% have had all 4 immunizations; polio, 93.2% have had all 4 immunizations. These are, of course, extraordinarily high levels. With regard to the well child checkups by the family physician (3 first year, 1 a year to school age), 74% of children have had
the full complement of visits. Infant mortality is, of course, a reflection of the level of health care of infants. In Denmark the infant mortality is 15.8 per 1000 live births, a level very close to the best in the world, and considerably better than the U.S.

Problems and Promise

The first problem with the program is one familiar to Americans: a shortage of trained public health nurses. There are not enough qualified nurses at present to fill all the posts available.

Related to this problem is the issue of how best to utilize the existing public health nurses. To understand this issue it is necessary to be acquainted with the evolution of public health nursing in Denmark. Before 1937 there were no public health nurses in Denmark. The public health nurse infant home visitors were the first public health nurses in Denmark. In 1946 a new School Health Act was passed stipulating that the health visitors could also serve as school nurses. Gradually the health visitors were drawn into school nursing until by 1968 nearly half of them were serving as school nurses as well as health visitors. This meant that over a third of all school nurses in Denmark were also health visitors. The issue was further complicated by the start of experimental schemes in the 1950's which combined home nursing services (for adults and older children) with infant health visiting and school nursing. This, of course, produced the so-called generalized public health nurse. So at the present time there are public health nurses in Denmark who may: only do infant health visiting; do infant health visiting plus school nursing; do infant health visiting plus school nursing plus home nursing. At the same time there are registered nurses who have no post-graduate training in Public Health who do home nursing or school nursing. It is not clear at present what the proper services of the qualified public health nurse should include.

A final problem with the public health nurses in Denmark
is also one not limited, unfortunately, to Denmark: resistance to change. From what has been written it is clear that public health nursing is going through an evolution in Denmark requiring individual public health nurses to change considerably their functions. Many health visitors believe they should continue to see all infants at regular intervals the first year of life and do not wish to practice selective, high risk visiting. Similarly many health visitors, having worked completely independently for many years, resist working together with family doctors. It must be added here that many family doctors, having also worked independently for many years, likewise resist working together with health visitors. These physicians feel that the nurses bring them more work rather than lightening their load. The leaders of these programs are optimistic because they feel that this resistance is mainly limited to older health visitors and family doctors while the younger nurses and doctors are, in the main, enthusiastic with the new ideas.

A second main problem with the infant health visitor program is the lack of coverage of the total population. The Act of 1937 stated that the townships may employ health visitors; the revision of 1963 stated that townships ought to employ the necessary number of health visitors. The program leaders are confident that an upcoming revision of the law will state that the townships must employ infant health visitors. The 12% of the population presently not covered by infant health visitors live in the more conservative, small, rural townships where infant health visitor services are most likely not to be established until the law is compulsory.

Another major difficulty in infant health visiting in Denmark is the separation of this service from other health and social services. This separation is the result of the historically dichotomous development of health services in Denmark: preventive health services versus curative health services. The separation starts at the top with one piece in the Ministry of Social Affairs and the other piece in the Ministry of the Interior. Even within preventive health services there is considerable separation among the various programs.
This is illustrated by the situation with regard to record keeping. By the time a child is 7 years old in Denmark he may have 5 separate health records: the midwife has a record of his birth; the infant health visitor has her own record of her visits to his home (kept in her own file for five years and, after reporting the number of visits to the Division of Statistics in the National Health Service, then destroyed); the family physician has his own record of treatment; the school has a health record; and if the child has been hospitalized there is a record at the hospital. These 5 records represent 5 separate health programs serving the one child (As Americans, we realize we are the pot calling the kettle black). There is, of course, communication between these programs, some routine, some as needed, some mandatory, some voluntary. The midwife always sends a report to the infant health visitor; the hospital always sends a report to the family doctor when a child is discharged; the mother hopefully uses the card on which the infant health visitor and family doctor recorded their observations and treatments when she is filling out a report for the school health services. All such reports, however, are attempts to bridge the separation of these different services.

The Danes are well aware of all of the problems outlined above. As we have already indicated, they have been experimenting with various ways of changing the infant health visiting services. Then in 1967 the National Health Service appointed a top level committee to review all of these experiments and problems and recommend changes in the system. The committee included a family doctor, a district health officer, nurses in charge of infant health visiting service, a director of a School of Public Health Nursing, a practing infant health visitor, an economist and lawyers. The committee met many times and in addition to intensively reviewing the situation in Denmark, they also visited England to examine their system and reviewed the health visiting services in the rest of Scandinavia. In 1970 they completed their recommendations. Some of the recommendations have already become official policy in the National Health Service, others are soon to be incorporated.
There were five basic recommendations of this committee: infant health visiting should, in all cases, be combined with school nursing and home nursing; infant health visiting should be a compulsory service for all townships; all infant health visitors should use the method of selective visiting to high risk infants and preschool children; the infant health visitor should work out of a family doctor's office and serve his clientele rather than her own geographic district; larger townships should have a supervisor of health visitors. We thus see a new overall scheme for the health visitor. She will work with a family doctor and will carry heavy responsibility for delivering preventive health services to his patients in their homes. She will visit the homes of high risk infants and preschool children, she will visit the schools and supervise the preventive health services there, and she will provide home nursing services to older children and adults served by this doctor.

Implications for the United States

The following principles emerge, we believe, from the Danish experience with infant health visiting which are germane to child health care in America:

1) Reaching out to the home is one important method in increasing the amount of health services delivered to infants and preschool children. While the striking contrast between Denmark and the U.S. with regard to the levels of immunization and completed routine well baby checkups of young children cannot be explained solely on the basis of health visiting, the importance of this device is hard to overestimate. Health visiting is highly accepted by the Danish family—in fact it is expected. When converting to the newer, selective visiting system, the Danes have met resistance from families with normal older children who do not wish to be selected out of this service they have come to value and enjoy. On the basis of our own visits with health visitors, we feel this acceptability
is a function not only of the service's convenience but also of its character: a warm woman who is intimately familiar with the neighborhood chair; informally in the home with the mother. The potential for similar consumer acceptability in the U.S. is possible. A white American public health nurse friend of ours told us of feeling completely safe, protected and accepted when working in the roughest black ghetto in Los Angeles—a neighborhood where other public servants justifiably feared for their lives.

2) The validity of the concept of selective health visiting to first born and high risk infants has been well documented in Denmark. Here is a case where the U.S. could benefit from Danish past experience. If from the start a health visiting program in the U.S. practiced selective visiting, the painful conversion such as is now taking place in Denmark could be avoided.

3) The technique of 100% reporting of detailed data on all newborns to the health visiting program together with the system of seeing all infants in their homes at least once shortly following birth is an extraordinarily valuable health screening principle and is the cornerstone of the program.

4) The special training of public health nurses to do infant health visiting is essential. As indicated, Denmark has special schools just for this purpose. There is a close analogy in the U.S. with the recent training and proliferation of the pediatric nurse practitioners. This latter professional appears nearly ideally suited for this type of work.

5) Denmark is trying hard at present to integrate what has been a separate service, health visiting to infants, into other health service programs. One would hope that the U.S. would not establish infant health visiting as yet another separate health program (similar to the already existing, entirely separate, well baby clinics). The child health system, as it is presently constituted in the U.S., is quite suited for an integration of infant health visiting services. Already some private pediatricians and general practitioners as well as some
government sponsored health programs (including neighborhood health centers, Maternal and Infant Health Projects and Child and Youth Health Projects) in the U.S. are hiring pediatric nurse practitioners. In one very recent study, in fact, the value of this new professional in delivering well baby care to infants in the first year of life was demonstrated. In the U.S., as in Denmark, the main problem is not consumer acceptability of this nursing service but provider acceptability.

A private pediatrician in the U.S. wrote a letter to a leading pediatric journal in 1972 calling well child care by a pediatric nurse practitioner "ghost pediatrics" and another practicing pediatrician, in the same journal said: "pediatrics provided by allied health workers is being rejected ..... as second class medicine --which it is." If such resistances can be overcome, it is not hard to conceive of superimposing the infant health visiting method on the present child health delivery system in the U.S. Such systematic reaching out could go far in improving the health of our oft-neglected infants.