FAMILY COMPOSITION USED IN THE ANALYSIS OF HOME VISITS BY PUBLIC HEALTH NURSES

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THERE are two or more children in many families. For the public health nurse, this means that a home visit may offer an opportunity to extend health supervision services to children of different ages. These are obvious facts. Not so well known, however, is the frequency with which children in different age groups are found in the families or to what extent all the children in a number of families receive services from the public health nurse. It is the purpose of this paper, therefore, to give the results of a study in one community as an illustration of how such information may be used in evaluating some of the public health nursing procedures. In addition to the count of children and count of services they received, a brief analysis is made of the recorded content of the nurses' home visits. The discussion is limited to the services given by Health Department nurses to children in low-income families in the Bellevue-Yorkville district in New York City.

In using this experimental method of analysis, there are some assumptions. One is that the health department nurse writes on her record what she considers important information about the visit for health supervision of children. This may be only partially true.[2] While incompleteness in the record of the services rendered limits the analysis which can be made, it seemed possible, after observation of the nurses at work and after a study of their policies and use of records, to make some reasonably accurate interpretations of the recorded facts.

[1] From the Milbank Memorial Fund.

[2] Record keeping has been called one of the weak points in public health work, a fact which may be attributed in part to the limited use of the record data and to the practice of thinking of record keeping as a separate phase of the nursing activities rather than as an important part of each type of public health work.

It is also assumed that it is advisable and effective to carry out a so-called generalized service, in which the territory covered by the organization is divided into small districts, in each of which the same nurse carries out all the activities in the work undertaken by the nursing service. This assumption is probably acceptable, since current practice indicates that most health departments have given up the specialized type of service in which a nurse concerns herself with only one age group or one type of problem. The idea that the family is the unit for health supervision and that one nurse should be concerned with all problems in the family is common to all communities having a so-called generalized nursing program. But the types of activities included in these programs may vary considerably in different localities. It is not intended, therefore, to suggest ways of standard practice or to point out what should be included in a generalized program. The method of analysis may be of interest, however, as a means of finding out more details of any practice which local authorities have judged suitable for their community.

THE STUDY AREA

The Lower East Side of New York City from East Nineteenth Street to Fifty-Ninth Street, and from Third Avenue to the East River, is a "poor" economic section. In that part of the Bellevue-Yorkville district, according to the 1930 Federal Census, 40 per cent of the population is foreign born and 35 per cent native born of foreign-born parents. Italy and Ireland are the foreign countries most frequently represented. The Federal Census gives further information which may be used as indications that the families living in this area have need for health supervision services. For example, the 1930 Census shows that in the ten sanitary areas in this section along the river, the children represent a slightly higher per cent of the total population, and the median monthly rental of homes is lower than in the rest of the district or in the total Bellevue-

Yorkville district.[3] The birth rates and infant death rates for 1930 are higher in the area studied than in the total district.[4]

HEALTH PROGRAM IN STUDY AREA

The activities of the Bellevue-Yorkville Health Demonstration, sponsored by the Milbank Memorial Fund in cooperation with the official and private agencies in the district, were organized to meet the problems in a district having need for more services than an ordinary community. During the demonstration period, the latter part of which coincides with the time that information for this study was collected, there were public health nurses in the official and private agencies in the ratio of one nurse to 4,500 population.

As a part of the total Health Department program, the nursing activities included the traditional services for communicable diseases (the more serious diseases) and school health work, and, in addition, educational and preventive services, especially for children. Reports compiled in the district office show that during the time represented in this study the nurses gave from 20 to 40 per cent of their total time to clinic services. These included tuberculosis diagnostic clinics, cardiac clinics, child health conferences for infants and young children, and a few other special clinics.[5] For the younger children, the emphasis of the Health Department program was put upon the services offered in the health conferences. A physician examined the babies and young children and advised the mother in the routine care to keep the children well. The nurse assisted the physician with the examination and rendered her own special ser-

[3]

	Study Area	*Remainder of District*	*Total Bellevue-Yorkville District*
Per Cent of Population Under Five Years of Age	5.7	3.6	4.6
Per Cent of Population 5-14 Years of Age	14.0	9.6	11.7
Median Monthly Rental	$31.26	$86.31	$40.44

[4]

Birth Rate (1930)	17.0	10.6	13.8
Infant Death Rate (1930)	90	66	80

From a statistical reference handbook compiled for the Bellevue-Yorkville district for the years 1927-1931 by G. J. Drolet and E. H. Clark.

5 Prenatal clinics were conducted by private agencies and not included in the official agency program of this district.

vices in the form of health teaching. For the children of school age, the examination by the physician was made in the school. The nurse assisted with the examination and later attempted to see the parents to explain the school physician's report and discuss the health needs of the child.[6]

To stimulate attendance at health conferences, to assist the mothers in carrying out clinic or school physician's recommendations, to give any further instructions needed, and to learn of living conditions, the nurses made visits in the homes. The home visit presents an opportunity to extend services to all children in the family. The adults must necessarily be included in considering the health of the family, but the study reported here is confined to the services for children.

THE FAMILIES STUDIED

In connection with a special maternity and infancy survey in this area, two special investigators visited the homes of all newborn infants registered during a twelve-month period, except those in large apartment houses with relatively high rentals. Inquiries were made not only about the baby[7] but included any other children in the family. While in many of these families there were other children, this first group represents more of the families with only a first-born infant or families with very young children, that is, a higher proportion of young families than would be found in a cross-section of all families with children in this district.

For part of the time during which the investigator went to given addresses to follow up birth certificates, she visited one or two other families in each of the tenement houses. From this more representa-

[6] During a part of the time used in this study, an experiment was tried in asking the parents to visit the nurse in the school, substituting these conferences for the nurses' home visits (Prescott, Josephine W., R.N.: School Nursing Consultation Service in the Bellevue-Yorkville District. The Milbank Memorial Fund *Quarterly*, January, 1934, xii, No. 1, pp. 81-84). A few of these school conferences are included as visits in this study.

[7] The survey and sample have been described in considerable detail in a previous paper. Randall, M. G.: Public Health Nursing Service for Infants. The Milbank Memorial Fund *Quarterly*, April, 1935, xiii, No. 2, pp. 185-200.

tive group of low-income families, 128 families with children are used for part of this study and are designated as Group II.

One of the questions asked in the homes concerned income. Only about 2 per cent of all the families visited had as much as $2,000 per year, while 50 per cent had less than $800. In about one-fourth of this latter group of families that are classed as very poor, the father was unemployed, and nearly one-half of the families had six or more members. They lived in four and five-story tenement buildings, in "cold water flats," with poor light and ventilation.

After ascertaining from the mother the number and ages of the children in the family, the health problems, and the health services received, the records were matched with the City Health Department clinic and nurses' records. Data were collected for health services received during the twelve months preceding the investigator's first home visit. While the data collected for any family cover one year, the records for the various families do not coincide exactly in time. However, all twelve-month periods fall within the calendar years 1930-1932.

The ages of the children in these two groups of families are shown in Table 1. When compared with the age groupings reported in the 1930 Federal Census, it will be noted that the child popu-

Table 1. Ages of the children in two samples of families living within selected areas of the Bellevue-Yorkville district of New York City, compared with the ages of all children reported by the Federal Census for the same area.

Age of Children	Group I (561 Families with Newborn Infants)	Group II (Unselected Sample of 128 Families with Children)	Total Study Area U. S. Census 1930
	NUMBER OF CHILDREN OF EACH AGE		
Total Children	1,413	283	14,456
Under 5	1,000	101	4,202
5–14	413	182	10,254
	PER CENT OF CHILDREN OF EACH AGE		
Total Children	100.0	100.0	99.9
Under 5	70.8	35.7	29.0
5–14	29.2	64.3	70.9

Age Groups of Children in the Family	Families Having Each Composition		Children in the Families					
			Infants[1]		Preschool		School	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Total	128	100.0	22	100.0	79	100.0	182	99.9
Infants Only	6	4.7	6	27.3	–	–	–	–
Preschool Only	11	8.6	–	–	14	17.7	–	–
School Only	58	45.3	–	–	–	–	98	53.8
Infants and Preschool	6	4.7	6	27.3	10	12.6	–	–
Infants and School	5	3.9	5	22.7	–	–	7	3.8
Preschool and School	37	28.9	–	–	48	60.8	68	37.4
Infants,Preschool,and School	5	3.9	5	22.7	7	8.9	9	4.9

[1] Children under 2 years of age are called infants to comply with the classification used by the New York City Health Department.

Table 2. Family grouping of children in an unselected sample of low-income families living in the Bellevue-Yorkville district of New York City.

lation of Group I[8] is made up of a much higher percentage of children under five, as expected, and in Group II the percentage of young children is 7 per cent higher than in the total area. Since young children and low income usually increase the need for health supervision, these two samples of families probably represent the type most frequently visited by the Health Department nurses.

AGES OF THE CHILDREN IN A SAMPLE OF FAMILIES

The way in which children of three different age groups are combined in the Group II sample of families is shown in Table 2.[9] It is noted that 27 per cent of the infants did not have older brothers or sisters. When the nurse visited the babies in these families, it was impossible to include visits to other children. For the infants who had siblings, an equal number were in families with preschool or school children, or both older age groups.

In the preschool age group, 18 per cent of the children did not have younger or older siblings. For those who did have brothers

[8] The families with newborn infants for which information was complete for a twelve-month period.

[9] Children under two years of age are called infants, to comply with the classification used by the New York City Health Department.

and sisters, 60 per cent had older siblings and 12 per cent had younger ones. Nine per cent had both older and younger siblings.

Fifty-four per cent of the school children were in families without younger children, and 37 per cent had preschool sibling.

In using ages of children to designate particular kinds of health supervision problems, nearly half of this sample of 128 families may be said to have more than one type of problem.[10]

HOME VISITS TO FAMILIES WITH CHILDREN

As previously stated, the emphasis in the health supervision program for young children in Bellevue-Yorkville was put upon the supervision given in child health conferences. If the homes were visited often, it would probably be unnecessary to include every child in the family in the discussion of health problems at every visit. But for the occasional visits there are, undoubtedly, some points pertaining to the health of each child which could be profitably discussed, especially in low-income families.

Not all the families in this unselected sample had home visits from Health Department nurses in the twelve-month period studied for each family. For those who were visited there was an average of 3.3 visits per family. The way in which family visits were distributed is shown in Table 3. Forty-seven per cent of the families were not visited. The remaining sixty-seven families constitute too small a sample for the different number of visits to have statistical significance, but there is an indication that the families with children of two or more age groups were visited more frequently than the families with children of one age group.

An analysis of the health problems in this total sample of 128 families shows very slight differences in the family needs for health supervision. There were, for example, nineteen of the infants who

[10] This knowledge of how children are combined in families may be used in planning for the number of nurses needed to carry out the home visiting program for health supervision of children. Randall, Marian G.: How Many Public Health Nurses Are Needed? The Milbank Memorial Fund Quarterly, April, 1934, xii, No. 2, pp. 160-170.

Age Groups of Children in the Family	Total Number of Families	Number of Families Visited Each Number of Times[1]				
		Not Visited	One Visit	Two Visits	Three Visits	Four or More Visits
Total	128	61	18	13	12	24
Infants Only	6	5	0	0	0	1
Preschool Only	11	9	2	0	0	0
School Only	58	27	13	7	7	4
Infants and Preschool	5	0	0	0	1	4
Infants and School	5	3	0	1	0	1
Preschool and School	37	15	2	4	4	12
Infants, Preschool, and School	6	2	1	1	0	2

[1] Visits as here used are visits to the household regardless of how many individuals were included in the visit.

Table 3. Home visits by Health Department nurses for health supervision of children, in an unselected sample of families in the Bellevue-Yorkville district of New York City. (A twelve-month period was used for each family.)

did not attend the child health conference; sixteen of these infant families were not visited in the homes and three were visited once. In about an equal number of these families the infant was the only child or there were older children. There were forty-nine families in which the preschool children did not attend child health conferences; and twenty of these families were not visited, eleven were visited once, and eighteen were visited two or more times. A few of the school children with minor defects were in the families visited the greatest number of times, although there were no other children in the families, and some of those with several reported defects were in families not visited. Other school children with defects were in families who received several home visits. This does not mean that the families visited the greatest number of times did not need the health supervision services given them. But from the information available from the families and from Health Department records[11] the combined needs of the children in families were not significantly different in the families not visited, in families visited once, or in the families visited several times.

[11] Special record sheets were given to the staff nurses for every family in this study, asking them to supply additional information about the families if regular records seemed to them to be incomplete. Very little additional information was obtained from this source.

FAMILY COMPOSITION AND VISITS RECORDED FOR CHILDREN OF EACH AGE

If we may assume that all the children in the families visited were in sufficient need of health supervision to be included in each home visit, the household visits to families in which children of specific ages were present may be studied with reference to the recorded case visits (visits to individual children). Table 4 shows the nurses' recorded case visits to children of a specified age and to other children.

For example, in thirty-two visits to homes in which there were infants, twenty-two infant visits were recorded; nine of these were combined with visits to other age children, and thirteen were infant only visits. For ten of these household visits no infant visit was recorded. This last figure means that in 31 per cent of the household visits to homes in which there were infants, no infant visit was recorded. In a like manner, Table 4 shows that for the ninety-seven visits to households in which there were preschool children, 45 per cent gave no record that the preschool child had been visited. For the visits to households in which there were school children, only 15 per cent had no record of visits to school children.

Table 4. Home visits by Health Department nurses to sixty-seven families with children, in which individual case visits were recorded for children of a specified age and for other children in the family, Bellevue-Yorkville district, New York City.

Children in Family	Visits to Household	Record of Number of Nurses' Visits to:			Per Cent of Household Visits Recorded as Visits to:		
		Specified Age Only	Specified Age and Other Children in Family	Other Children Only	Specified Age Only	Specified Age and Other Children in Family	Other Children Only
Infants in Family	32	13	9	10	40.6	28.1	31.3
Preschool Children in Family	97	21	32	44	21.6	33.0	45.4
School Children in Family	158	101	32	25	63.9	20.3	15.8

It is shown also, in Table 4, the per cent of the household visits recorded as visits to children of one age group. Forty per cent of the visits to infant households were recorded as infant visits only. It will be remembered, from Table 2, that 27 per cent of the infants in the sample of families had no older siblings. If this may be interpreted as the per cent of the infant visits which could not be combined with visits to other children, there is considerable difference in the per cent of visits that were recorded for the specified age only and the per cent which needed to be so recorded because of the family composition.

Returning to Table 4, it is noted that 21 per cent of the household visits to families with preschool children were recorded as visits to that age group only. According to the analysis of family composition (Table 2), 18 per cent of the preschool children were in families without children of other age groups. For the families with school children, 64 per cent of the calls were recorded as school visits only, while the family composition table shows that 54 per cent of the school children had no younger siblings.

If the nurse confines her visit to a discussion of one subject with the mother, such as nutrition, it may apply to all children in the family. It might be considered an exaggeration to record this family visit as five case visits because there were five children in the family. On the other hand, if the nurse visits the home but once and only suggests that the mother bring the infant to the child health conference and never mentions the older children, or may not even know how many children there are in the family, it is far from carrying out a generalized program of health supervision. And also, if the nurse inquires about all children in the family, advises the mother regarding the various types of health problems, and then records only that she urged attendance of an infant at the health conference, she is not making a record of a generalized program of health supervision. Both these things are happening. There are, of course, the occasional instances when one child in a large

family receives frequent visits because of a special problem. Obviously these repeated visits would not be expected to include all other children in the family. But such intensive home service is not frequently provided in the city health program, and in this sample of families only one infant and one school child with special problems received frequent visits.

Reports of nurses' home visits are generally tabulated separately by age group or problem. In carrying out the generalized program these case visits are combined in family visits. An occasional study or check upon the way these case or problem visits are being combined is an indication of the extent to which the nurses are utilizing the opportunities provided in the policy of a generalized health supervision program. It would not be difficult to set up classifications on daily reports of these "combined visits" in order to make occasional counts of the generalized home services. This suggests an experiment in recording family visits describing the content in a manner that will show the extent to which family health supervision is considered. A record of visits to families might prove more descriptive of the service in a community than a record of accumulated visits to individuals.

After an analysis of the needs of the families, the services available, and the program undertaken, this study of a small unselected sample of families suggests that in about 50 per cent of the nurses' home visits, health supervision services may be given for more than one age group of children. Further study is needed to determine how typical this group is of all families in this same district and to determine what the frequency of these age combinations is in other types of communities.

CONTENT OF NURSES' HOME VISITS

For the calls made by the Health Department nurses to the total sample of families with children (both Group I and Group II), information was collected from the records concerning the content

of home visits.[12] Of the total 689 families, 458 or 67 per cent were visited, and as usually counted these visits would appear on the Health Department reports as 556 infant visits, 297 preschool visits, and 473 school visits. For this analysis, however, the content of the visits was studied on the basis of the household or family visits. For the illustrations presented, the records of families with two or more children were selected and the recorded details of the visits to these households were listed. These are shown in Table 5. To facilitate discussion, the letters A, B, and C designate the three samples of families used in this table.

The A families are those who have both infants and preschool children. A total of 131 household visits to these families was analyzed, and in 111 of them some service for the infant was recorded. For twenty of the calls in these homes the nurse did not record infant services, and for eighty calls she did not record preschool services. When the calls are tabulated according to the specified services recorded, it is noted that for thirty-nine visits described for the infants as "follow-up of birth slips" only five, or 13 per cent, had preschool services recorded. But for twenty-one, or 53 per cent, of these visits so described for the infant, the preschool child was registered in clinic, indicating that these were not visits to families previously unknown to the Health Department. For the thirteen remaining "birth slip visits," the preschool child in the family was not registered either in clinic or on the nurses' records. As these visits were recorded, they could not be classed as productive in finding the preschool children who probably needed some health supervision.

The C families are those who have both preschool and school children. From a total of sixty-three household visits to these fami-

[12] There is a record form provided called the family folder, which provides for a listing of the family members and which holds together the individual record sheets kept for each member of the family. This family folder was used by the nurses for 18 per cent of the total sample of families studied. All individual record sheets were copied for this study, and whatever the nurse considered important enough to record was listed for analysis.

lies, fifty-one were recorded as including some service for the school children, and in thirty-seven of them some service for the preschool children was recorded. For twelve of the visits in these homes the nurse did not record school services, and for twenty-six she did not record any preschool services. According to the specified services written on the records, the school children were most frequently visited to follow up a physical defect reported from the school medical examination. Table 5 shows that for twenty-five visits with such services recorded for school children, seventeen had no services recorded for the preschool children in the family, and for seven of the seventeen visits the preschool child was not registered in clinic.

The two illustrations, namely, infant visits to follow up a birth registration and school visits to follow up a reported defect, are cited because they are so often the first reason or source of information for the home visit. It is expected that these reports of need for some special service will be used by the nurses as a means of finding other children in the families who need health supervision. This type of analysis, therefore, may prove useful in appraising this phase of the public health nursing activities. Other special listed services can be similarly used in an analysis of health supervision visits to families with children.

It is obvious that the few services listed are inadequate in describing the content of nurses' home visits. They are general terms which mean very little to persons outside the health organization. For example, a visit to an infant which is recorded as "instruction in hygiene" implies that all the routine discussion and teaching which the organization has set up as a standard for this type of visit have been included. The care, bathing, and feeding of the baby are supposed to be discussed and medical supervision advised. There would, naturally, be great variations in different homes and for different nurses. And there is a question of the need for or practicability of a detailed description being written on each record of every subject

Table 5

Analysis of the Recorded Content of Nurses' Home Visits to Families with Two or More Children Showing the Number of These Household Visits with Specified Service for Children of One Age in Which Services for Other Children were Recorded

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A. Families With Both Infants and Preschool Children

Summary:
- Number of household visits analyzed — 131
- Infant services recorded for — 111 visits
- Preschool services recorded for — 51 visits
- Both infant and preschool services recorded for — 31 visits

Infant Services Recorded	Number of Household Visits	Preschool Services Recorded							
		Total Some Service	Advised Return to Clinic	Instruction in Hygiene	Instruction in Care of Communicable Disease	Instruction in Care of Special Problem	No Preschool Service		
							Total	Child Registered in Clinic	Child Not Registered in Clinic
Total	131	51	17	27	4	3	80	38	42
Total—Some Service	111	31	11	18	2	—	80	38	42
Follow-up Birth Slip	39	5	1	3	1	—	34	21	13
Instruction in Hygiene	59	16	3	12	1	—	43	15	28
Advised Clinic Registration	3	2	1	1	—	—	1	1	—
Advised Return to Clinic	10	8	6	2	—	—	2	1	1
Total—No Infant Service	20[1]	20	6	9	2	3			

B. Families With Both Infants and School Children

Summary:
- Number of household visits analyzed — 72
- Infant services recorded for — 55 visits
- School services recorded for — 24 visits
- Both infant and school services recorded for — 7 visits

Infant Services Recorded	Number of Household Visits	School Services Recorded							
		Total Some Service	Follow-up of Defects Reported from School Examination	Instruction in Hygiene	Instruction in Care of Communicable Disease	Instruction in Care of Special Problem	No School Service		
							Total	Defects Reported from School Examination	No Defects Reported from School Examination
Total	72	24	17	6	1	—	48	35	13
Total—Some Service	55	7	4	2	1	—	48	35	13
Follow-up Birth Slip	11	—	—	—	—	—	11	8	3
Instruction in Hygiene	33	6	3	2	1	—	27	20	7
Advised Return to Clinic	11	1	1	—	—	—	10	7	3
Total—No Infant Service	17	17	13	4					
Registered in Clinic	4	4	4	—					
Not Registered in Clinic	13	13	9	4					

C. *Families With Both Preschool and School Children*

Summary:

Number of household visits analyzed	63
School services recorded for	51 visits
Preschool services recorded for	37 visits
Both school and preschool services recorded for	25 visits

School Services Recorded	Number of Household Visits	Preschool Services Recorded							
		Total Some Service	Advised Return to Clinic	Instruction in Hygiene	Instruction in Care of Communicable Disease	Instruction in Care of Special Problem	No Preschool Service		
							Total	Child Registered in Clinic	Child Not Registered in Clinic
Total	63	37	13	15	4	5	26	17	9
Total—Some Service	51	25	12	8	4	1	26	17	9
Follow-up of Defect[2]	25	8	5	3	—	—	17	10	7
Instruction in Hygiene	17	12	7	4	—	1	5	3	2
Instruction in Care of Communicable Disease	9	5	—	1	4	—	4	4	—
Total—No School Service	12	12	1	7	—	4			
Defect Reported[2]	5	5	—	3	—	2			
No Defect Reported[2]	7	7	1	4	—	2			

[1] These infants were not registered in clinic.
[2] Defects reported from school examination.

included in the nurse's discussion with the mother. For a special study of the content of home visits, to reveal the teaching ability of the nurse, or to measure the effectiveness of specific services, exact detail would be needed of all that transpired during the nurse's visit in the home. While the usual information from nurses' records is too limited for such a detailed study, there are some recorded facts which can be used to measure public health nursing activities. The services tabulated for families with two or more children (Table 5) illustrate a method of analyzing these data.

SUMMARY

A study of the composition of an unselected sample of families with children, living in the poorest section of the Bellevue-Yorkville district in New York City, shows that 27 per cent of the infants did not have older brothers or sisters, that 18 per cent of the preschool children did not have younger or older siblings, and that 54 per cent of the school children were in families without younger children. If this is applied to the public health nursing activities, it means that in about half of their home visits there was an opportunity to extend services to children of different ages.

An analysis of the Health Department nurses' home visits to this sample of families revealed that in 31 per cent of the household visits to families in which there was an infant, no infant visit was recorded; that 45 per cent of the visits to families with preschool children gave no record that the preschool child had been visited; and that for the visits to households in which there were school children, 15 per cent had no record of visits to school children.

In the households visited, there was an average of 3.3 visits per family in the twelve-month period studied for each family. From the information available from the families and from Health Department records, the combined health needs of the children in families were not significantly different in the families not visited, in families visited once, or in the families visited several times.

The records of over 1,000 home visits by the Health Department nurses were tabulated according to the recorded content of the visit. As an illustration of the use of such data, the household visits to samples of families with children of two age groups are analyzed by specific services. It suggests further administrative use of such records as birth registration and reports of school health examinations, especially for case-finding of children who need health supervision.

No attempt is made to suggest standards suitable for all types of communities. The method of analysis could be applied to other communities and offers one more measure of appraising public health nursing activities. Further use of the family record is suggested for administration of health supervision services for children.