AUDIT OF PHYSICIAN REFERRALS TO THE ARMY HEALTH NURSE FOR SERVICE TO PREMATURES

by

Mary Ruth Pullig
Lt. Colonel, Army Nurse Corp

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Approved by:

Virginia Nelson
Adviser

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CHAPTER I

DEVELOPMENT OF THE STUDY

Army Health Nursing

Since 1949, programs of Army health nursing have been incorporated in many installations throughout the world. As of May, 1967, there were 56 programs staffed by approximately 100 Army Health Nurses. (2)* This title is the designation given by the Army Surgeon General to qualified public health nurses (4:120).

The Army Health Nurse, hereafter referred to as AHN, is a registered professional nurse with additional preparation in public health nursing. She works collaboratively with the preventive medicine officer, as a member of the preventing medicine team, under the direction of the Post Surgeon. The scope of Army health nursing service will vary depending upon four primary conditions. These are the job descriptions of the AHN in the mind of the preventive medicine officer and the post surgeon, the health needs of the military personnel and their dependents, the services available for solving health and social problems, and the different types and amounts of educational preparation and experience of the health nurse.

Close relationship with the hospital care center is

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*The first number in parenthesis refers to the corresponding reference in the bibliography; the number following the colon refers to the page in the reference.

maintained by the AHN. The objectives of the program are prevention and control of illness and injury as well as rehabilitation and physical care of the military family. The Army health nursing program is a community service designed to meet needs of the military member and his family. The nurse's effort centers on the family; from there it extends to activities in the school, the home and the community. The main purpose is to try to raise all phases of community health to the highest possible level.

In providing health counseling and teaching the AHN uses methods such as interviews, conferences, classes and demonstrations. These services are provided to individuals and groups in office, hospital, school, clinic and home. In performing these services it is an objective of the AHN that families will gain understanding of their health and social problems. And through guidance of the AHN they can develop their potential abilities to cope with their problems. (29:11)

Problem of Study

Stimulus

Army Medical Service is multifaceted, and the AHN has a particular responsibility and a unique opportunity for contributing to the medical service. The efforts of the AHN are coordinated with members of the health team as well as members of the supportive services, such as the Chaplin, representatives of the American Red Cross, and Unit Commanders. In addition, she is familiar and works closely with available agencies in the civilian community. Since all of these personnel are concerned

with all problems of the military family, gaps and duplications of service should be avoided whenever possible. In the military setting, as is true in the civilian setting, the demands for service are ever increasing.

The Army hospital is the center for providing medical care, free of charge, to the military family. It contains hospital, doctors' offices, pharmacy, laboratory, clinic service, rehabilitation center and public health service combined. These services are received from a number of medical and para-medical personnel rather than the single family physician characteristic of the civilian family.

Such a multidisciplinary team approach is seen as an excellent means of providing comprehensive health services through coordinated efforts of the total spectrum of available services. However, time would not permit the study of this vast a system. So this study will consider only one segment of this system, namely, the referral system. This segment, however small it may seem, is one of vital importance. It is believed that a conscious effort directed toward the referral system would indeed minimize duplication of efforts.

"In order to effect comprehensive care, when more than one organized group of medical workers is involved, a system of written communication must be developed. This process is known as referring a patient and the form used is a referral form. Through cooperative efforts of the participating agencies some communities have evolved tools that regularize and improve the

communication of physician, social worker or a nurse in one agency with their colleagues or counterparts in another agency." (27:336)

The referral form then is a means of communication. The information on the referral form contributes to the facts the AHN needs to determine priorities and plan intelligently for continuity of care of her referred patient.

Questions concerning information on referral forms have occurred to the investigator. Does the physician, who is professionally responsible for the patient, provide complete enough information to the nurse for effective continuity of care? Which items of information about the referred patient does the public health nurse perceive as being of major importance? Which items of information are advocated in the current literature as most important? How would a more complete referral form improve planning and execution of a home visit to the patient? Is there in fact a lack of required and pertinent information on AHN referral forms?

Statement of the Problem

The writer's concern with the referral forms comes from a recognition that poor communication often delays effective accomplishment of activities, and referrals are a commonly used form of written communication, frequently in this writer's experience so briefly and hurriedly done as to be of little value.

The problem then seems to take on two logical facets. One is to design a tool for the systematic appraisal of information

on referral forms to AHN's for the purpose of determining the completeness of information basic to planning nursing service. The other is to demonstrate ways in which the referral form could be improved; an improved form would serve as a guide for the initiator in providing the AHN with necessary information. This then could richly enhance the continuity of service, minimize duplication of effort, and improve coordination.

The study proposes to assess information given by physicians on referral forms to the AHN for degree of completeness by conducting a record audit with a nursing audit committee. "By nursing audit is meant a systematic . . . appraisal, by nurses, of the quality of the content and process for nursing service from case records for discharged patients." (23:42) The record audit process of examination has not been extensively used up to the present time by nurses. However, there are indications that this is a useful tool to help in assessing and evaluating records. (10:279) When one considers the acceptance of the medical audit and its demonstrated value in improving the quality of medical service to patients, as well as helping to maintain better records, the somewhat slow development of the audit by nurses is difficult to understand. Knowledge gained from the medical audit has shown that an accounting of professional service best served its purpose when the procedure was simple. (18:543)

The aim of this study was to emphasize the value of a constructive appraisal of the recorded information on the referral forms, not to criticize the referring physician. Another aim was to seek ways to improve the recorded information. The

record audit is the tool of choice to accomplish these aims.

This assessment is focused on one type of patient, namely the premature baby, at one location, the Womack Army Hospital. Improved programs for the management and care of the premature baby which have emerged in recent years is one of the important areas into which public health is moving, the success of which has been demonstrated by a decrease in premature baby death rates. The expanding demands for service have swept ahead of the capacity to provide this service. As the referral forms to the AHN for service increase, the added demands on the physician's time is evidenced by the abbreviated information on the forms. This reliance on the nurse's ability to seek needed information for herself makes her tasks more time consuming.

According to the American Public Health Association, a child may be considered to be handicapped if he is born prematurely. The initial disability may be very mild or hardly noticeable, but potentially handicapping with serious involvement of several areas of function and the probability of lifelong impairment. (7:12) The definition of a premature baby, according to the literature, varies with the definer. He usually includes items now used in official vital statistics, as a liveborn baby with a birth weight of five and one-half pounds or less, and a period of gestation of less than 37 weeks. It is expressed that the most valid determination of a premature is a combination of these two measurements. However, the pediatricians, whose orders were accepted for this study, selected birth weight only as their criteria.

CHAPTER II

COLLECTION OF DATA

Source of Data

The value of a record audit can be demonstrated in a variety of settings. However, a military installation was selected as the setting in which to conduct the audit so that the methods and findings would be more apt to apply to the investigator's work setting that of a military community. (16:110,262)

The commander of Womack Army Hospital, Fort Bragg, North Carolina, granted permission to obtain the necessary referral forms for a constructive appraisal of completeness of information for planning AHN home visits. Because of the nature of the study and its limited size, any generalization of the findings would be limited to the study sample.

The study sample consisted of the last 50 referral forms on premature babies born at Womack Army Hospital and referred to the AHN. These were removed from the active files in the office of the AHN. Each of the forms was duplicated, alphabetized and numbered for ease in handling during the auditing process. The originals were then replaced in the files.

Tool for Record Audit

The choice of a tool for this study is a process of

assessment which is termed a record audit. The step-by-step method of assessment of records has been described by Miss Maria C. Phaneuf, Director of Home Care, Associated Hospital Service of New York. A basic concept in developing the record audit is that it must be recorded and available on forms. (23:44) In developing the tool for determining the completeness of record information, certain principles were observed that are applicable to this study. The instructions were prepared with sufficient precision and detail to make them relatively immune to varying interpretations by different individuals and to provide a systematic examination of the records. The categories were specific for each item to be evaluated, and all items within each category were significant and closely related and therefore considered as a unit. The items selected for the audit were those believed to be essential to the ultimate aim of the referral form. Judgment values were developed for determining completeness of information. (25:51)

Development of the Items

One of the problems in establishing a procedure for a record audit is to single out and concentrate on features that are essential to the achievement of the desired outcome. (1:476) For example, as a guide in formulating certain individual items to be audited on the referral forms, 16 experienced public health nurses were consulted. These graduate public health nursing students at the School of Public Health, University of North Carolina, were asked to list items they thought were

necessary to a public health nurse on a referral form for an initial home visit to a premature infant.

Items pertaining to location and identification of the patient, categorized as specific information, were requested in the structure of the referral form and included all such items listed by the nurses. Thirteen items fell into this category. The remaining 13 items selected from those suggested by the nurses as being important information were categorized as information about the premature baby (8 items) or information about the mother (5 items).

The items related to the premature infant and the frequency with which they were listed are given below.

Items	Frequency
Birth weight	15
Present weight	11
General progress	11
Condition at birth	10
Special orders	7
Gestation	6
Expected date of discharge	6
Sex	4

The items related to the mother of the premature and the frequency with which they were listed are given below.

Items	Frequency
Reaction and response to premature	12

Items	Frequency
Pregnancy history	11
Gravida	8
Age	7
Para	6

There were other items listed for consideration that were not included in this audit. The author felt they were idealistic rather than realistic and not likely to be found on a referral. These items are listed below.

How many people in the family

Age of family members

Are they family planning participants

Known to health services

Frequent users of clinic services

Socioeconomic status

Educational background

Scope of the Audit Tool

A total of 26 items were selected from the students' suggestions and review of the literature as being the information needed to plan effectively for an initial home visit to a premature infant. The 50 referrals were evaluated on the basis of their inclusion or exclusion of information on these items.

The following four factors affected the choice of items selected for audit listing. First is the form used for premature infant referrals. It is the standard referral form for

AHN's, Case Referral Record DA Form 8-264, (Appendix A), which has 13 specific items to be completed for each referral; instruction for its use can be found in Appendix B. Another is a standing order for care. (Appendix C) The Chief of Pediatric Service at Womack Army has provided standing orders for public health nurses and Army health nurses to use when no specific instructions are given on the referral form. These instructions include observation of parental attitudes, health of family, and physical environment. They, also, include type of formula and vitamins and the schedule for these, as well as directions for well baby clinic supervision and scheduling of specific blood examinations. A third factor is the written postpartum instructions the mother receives on her discharge from the hospital. She, also, receives instructions directed toward the care of her baby. Lastly, individual instructions for care of the premature baby are given to the parents when the baby is discharged from the hospital to home care.

In developing the audit tool, items to be audited were organized into three major categories, as already mentioned - specific information, premature information, and mother information. The specific information items are listed below.

To (name and location)

From (name and location)

Patient's name

Patient's address (specific directions)

Date of birth

Home phone

Dependent of (name)

Grade

Office phone

Organization

Reason for referral

Date

Signature of initiator

The suggestions submitted by the public health nursing students determined the items for the two remaining categories, premature and mother. Items for the premature baby are listed below.

Sex

Birth weight

Gestation

Condition at birth

General progress

Present weight

Special medication and treatment

Expected date of discharge

Items for the mother of the premature baby are listed below.

Age

Para

Gravida

History of pregnancy

Reaction and response to premature

Judging the Level of Completeness

The record audit was designed to determine the completeness of information for each individual item. The degree of completeness of each item was judged by assigning one of the following three values.

When the information was completely lacking the item was assigned a value of "0", meaning it was absent. When some evidence of information was present, it was judged as partial and assigned a value of "1". When the information for a particular item was complete, that item was assigned a value of "2".

Any nurses notes that appear on the referrals were disregarded for the purpose of this audit.

The audit committee consisted of three persons. Two hold academic appointments in the Department of Public Health Nursing in the School of Public Health, University of North Carolina with experience in various positions in public health nursing service. The author was fortunate in having as the other judge a retired AHN, who is presently enrolled in a program of study in the same institution in preparation for teaching public health nursing. Her wealth of experience and knowledge of both the referral form and Army terminology was expected to increase the reliability of the judging. This reliability was measured by determining the level of agreement among the three judges.

A three-member audit committee provided a means of avoiding loss of items due to a split decision of the judges, possible

with an even number of judges. In case of disagreement among the judges, the decision of the majority, that is two of the three, was accepted as the true measurement for each item.

An attempt was made to orient the judges to the auditing process so that all would be working within the same frame of reference. But still it can be expected that variation in interpretation will occur when two or more individuals are asked to make a decision about numerous items of information, such as occur in this audit. It was hoped that by requiring a two-thirds vote in favor of a particular decision greater accuracy would be achieved.

> "Measurement always takes place in a more or less complex situation in which innumerable factors may affect both the characteristic being measured and the process of measurement itself. One attempts to control or keep constant the more important of these variables and hopes that the variation of uncontrolled factors will operate so as to cancel out one another's effects." (26:149)

The degree to which the information on referral forms met the criteria of completeness, and therefore would be of maximum use to the AHN in locating and providing assistance to the patient, was the judgment entry made by the audit committee members. Written instructions (Appendix D) designate the form to be used, and the number of forms to be audited. The audit assessment tool (Appendix E) describes the categories (specific, premature, and mother information) and the items (1 through 26) to be considered. The instruction sheet also directed that any nursing notes were to be disregarded.

A meeting with each audit committee member was held to

review the instructions and several referral forms in order to develop a common philosophy within which judgments were to be made. The judges, then, in a setting of their own choosing, independently assigned value judgments in the following manner. The referral forms were reviewed for completeness of information on the 26 items, and numbers were assigned to indicate the judge's reactions. A value judgment was assigned to each item listed on the assessment form.

The following combinations of values were possible. The agreement of all three judges, the agreement of two judges with one judge in disagreement, and total disagreement among the three judges. No conflict would exist in the first two situations as the agreement of two judges constituted a majority and was accepted as agreement. Conflict would exist when there was disagreement among the three judges. A meeting was held with one or more judges for discussion and reinterpretation of the item in question and to seek ways in which to resolve differences.

Resolution of Disagreements

A three-member audit committee reviewed the 50 referral forms of premature infants. The 26 items were judged for degree of completeness. This made a total of 1,300 decisions for each judge. Judges agreed on 947 (72.8 per cent) of the items. Of these items, 567 (42.6 per cent) were judged to have complete information, 11 (0.8 per cent) were judged to have partially completed information, and 369 (28.4 per cent) were judged to have no information. Disagreements by one of the three judges

numbered 345 (26.5 per cent); the remaining 8 (6.2 per cent), were in total disagreement. Each of these eight was reviewed again by at least one of the judges which resulted in agreement by at least two of the judges. This gave a total of 353 with a majority of agreement. During the review it became apparent that different interpretations of the instructions had been made. The judges were allowed to rejudge items related to the misinterpretation of instructions. This gave a total of 307 with a majority agreement. The changes resulted in usable data in all 1,300 instances. The distribution in the three categories by item and the number of disagreements is shown is Table 1.

TABLE 1

NUMBER OF TIMES ONE JUDGE DISAGREED BY ITEM AND CATEGORY

Item	Number of times one judge disagreed
Specific information	
1. To (name and location)	12
2. From (name and location)	22
3. Patient's name	50
4. Patient's address	4
5. Date of birth	0
6. Home phone	12
7. Dependent of (name)	1
8. Grade	22
9. Office phone	17
10. Organization	11
11. Reason for referral	42
12. Date	6
13. Signature of initiator	5
Premature information	
14. Sex	2
15. Birth weight	2
16. Gestation	5
17. Condition at birth	50
18. General progress (in hospital)	14

TABLE 1--Continued

Item	Number of times one judge disagreed
19. Present weight	5
20. Special medication or treatment	6
21. Expected date of discharge	0
Mother information	
22. Age	0
23. Para	4
24. Gravida	4
25. History of pregnancy	7
26. Reaction and response to premature	4
Total	307

The judges were in complete agreement as to level of completeness assigned to items in 993 (76.4 per cent) of the cases; and one of the judges disagreed with the other two in 307 (23.6 per cent) of the cases. Of the 650 possibilities for the specific information category the judges were in disagreement in 205 (31.3 per cent) of the cases; of the 400 possibilities for the premature information category 84 (21.0 per cent) were in disagreement; of the 250 possibilities for the mother information category 19 (7.6 per cent) were in disagreement.

The number of disagreements on individual items ranged from none of the referrals to all 50 of the referrals. The number of times an individual judge disagreed with the other two on any one item ranged from none to 46. Judge A disagreed 61 times, (4.7 per cent); Judge B disagreed 83 times, (6.4 per cent); Judge C disagreed 163 times, (12.5 per cent). The diversified backgrounds and experience of the judges was believed to

contribute to the amount of disagreement. Possible reasons for the disagreement on selected items with a high number of disagreements are discussed below.

Item 2, "From (name and location)", was judged by two auditors to be partially complete when the nursery number appeared without indication of hospital; one auditor judged it complete when either was indicated.

Item 3, "Patient's name", was judged to be partially complete by two auditors who felt an infant in the hospital for a period of at least 72 hours should have a first name and this should be included on the referral. The name gives personal identity to the baby. The identification of child by sex with its mother's last name and identical hospital number in the delivery room was felt by the other auditor to be effective in avoiding mistaken identity, and she rated the item complete without his given name.

Item 11, "Reason for referral", was judged complete by two judges who apparently considered that any information given which indicated prematurity (birth weight, length of gestation, small baby) of the infant was sufficient reason for referral; the other judge considered such information, without further explanation of baby's condition, as only partially complete.

It was made clear on discussion and review that the mere mentioning of prematurity, birth weight, or comments, as small baby, was not a sufficient description of item 17, "Condition at birth". However, one judge was lenient in her interpretation, and if any indication was given of prematurity, she gave this

item a rating of partial information while the other two judges gave this a rating of absent information.

CHAPTER III

ANALYSIS OF THE AUDIT

Specific Information

Table 2 on the next page shows the completeness of information on the 50 referral forms in respect to the 13 items of specific information described earlier in this study. Of the 650 (13 items on 50 referrals) possibilities 502 (77.2 per cent) were judged to be complete, 102 (15.7 per cent) were judged to be partially complete and 46 (7.1 per cent) were judged to be absent of information.

Of the 50 referral forms, 43 (86.0 per cent) were judged to be complete for item 1, "to" (whom the referral was sent), the remaining 7 (14.0 per cent) were judged as partially complete. For item 2, "from" (whom the referral came), 45 (90.0 per cent) were judged to be complete; the remaining 5 (10.0 per cent) were judged as partially complete. In item 3, "patient's name", only 5 (10.0 per cent) were judged to be complete; while the remaining 45 (90.0 per cent) were judged partially complete. Item 4 was the "patient's address" (specific directions) and 48 (96.0 per cent) were judged to be complete and only 2 (4.0 per cent) as partially complete. For item 5, "date of birth", information was judged complete for all 50 referrals. For item 6, "home phone", there were 42 (84.0 per cent) judged to be complete,

TABLE II

DEGREE OF COMPLETENESS OF THE ITEMS IN THE CATEGORY, SPECIFIC INFORMATION

Item	Degree of completeness							
	Complete		Partial		Absent		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
1	43	86.0	7	14.0	0	0.0	50	100.0
2	45	90.0	5	10.0	0	0.0	50	100.0
3	5	10.0	45	90.0	0	0.0	50	100.0
4	48	96.0	2	4.0	0	0.0	50	100.0
5	50	100.0	0	0.0	0	0.0	50	100.0
6	42	84.0	3	6.0	5	10.0	50	100.0
7	50	100.0	0	0.0	0	0.0	50	100.0
8	41	82.0	9	18.0	0	0.0	50	100.0
9	9	18.0	13	36.0	28	56.0	50	100.0
10	47	94.0	0	0.0	3	6.0	50	100.0
11	34	68.0	16	32.0	0	0.0	50	100.0
12	44	88.0	1	2.0	5	10.0	50	100.0
13	44	88.0	1	2.0	5	10.0	50	100.0
Total	502	77.2	102	15.7	46	7.1	650	100.0

3 (6.0 per cent) as partially complete, and the remaining 5 (10.0 per cent) as absent. Item 7 "dependent of (name)", was judged complete on all 50 referrals. With respect to the "grade" of the military member, item 8, 41 (82.0 per cent) were judged complete; the remaining 9 (18.0 per cent) were judged as partially complete. Nine (18.0 per cent) were judged complete, 13 (36.0 per cent) were judged as partially complete; the remaining 28 (56.0 per cent) were judged to be absent in item 9, "office phone for the father". Item 10, "organization" (of the sponsor), had 47 (94.0 per cent) judged to be complete; the remaining 3 (6.0 per cent) were judged as absent. "Reason for referral", item 11 had 34 (68.0 per cent) judged to be complete; the remaining 16 (32.0 per cent) were judged as partially complete. Items 12 and 13, the "date" and the "signature", respectively, of the initiator, received the same distribution of judgments - 44 (88.0 per cent) complete, 1 (2.0 per cent) partially complete, and 5 (10.0 per cent) absent.

Premature Information

Data on completeness of information by item in the category of premature information is presented in Table III on the next page. The 8 items in this category were judged to be complete in 132 (33.0 per cent) instances, partially complete in 5 (1.3 per cent) and absent in the remaining 263 (65.7 per cent).

Of the referral forms, all 50 were judged to be complete for both items 14 and 15, "sex" and "birth weight", respectively. For item 16, "designation of gestation", 13 (36.0 per cent) were

TABLE III

DEGREE OF COMPLETENESS OF THE ITEMS IN THE CATEGORY, PREMATURE INFORMATION

Item	Degree of completeness							
	Complete		Partial		Absent		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
14	50	100.0	0	0.0	0	0.0	50	100.0
15	50	100.0	0	0.0	0	0.0	50	100.0
16	13	26.0	1	2.0	36	72.0	50	100.0
17	4	8.0	1	2.0	45	90.0	50	100.0
18	1	2.0	3	6.0	46	92.0	50	100.0
19	11	22.0	0	0.0	39	78.0	50	100.0
20	3	6.0	0	0.0	47	94.0	50	100.0
21	0	0.0	0	0.0	50	100.0	50	100.0
Total	132	33.0	5	1.2	263	65.7	400	100.0

judged complete, while 1 (2.0 per cent) was judged partially complete, and 36 (78.0 per cent) were judged to be absent. Four (8.0 per cent) for "condition at birth", item 17, were judged complete; 1 (2.0 per cent) was judged partially complete, and 45 (90.0 per cent) were judged absent. "Present weight", item 18, recorded 1 (2.0 per cent) complete, 3 (6.0 per cent) partially complete and 46 (92.0 per cent) were judged as absent. Item 19, "present weight", found 11 (22.0 per cent) judged to be complete; the remaining 39 (78.0 per cent) were judged as absent. "Special medication and treatment", item 20, of the audit, found 3 (6.0 per cent) to be judged as complete; the remaining 47 (94.0 per cent) were judged as absent. The rating for item 21, "expected date of discharge", was an item in which there was complete lack of information on all 50 of the referrals.

Mother Information

In Table IV on the next page the completeness of the items, in the category of information on the mother found 57 (22.8 per cent) to be complete, 9 (3.6 per cent) to be partially complete, and 184 (73.6 per cent) to be absent.

Of the 50 referral forms 3 (6.0 per cent) were judged to be complete for "age" of mother, item 22; the remaining 47 (94.0 per cent) were judged as absent. Item 23, for "parity", found 28 (56.0 per cent) judged complete; the remaining 22 (44.0 per cent) were judged as absent. For "gravida", item 24, the judgments for complete were 25 (50.0 per cent) and the remaining 25 (50.0 per cent) were judged as absent. In "history of pregnancy",

TABLE IV

DEGREE OF COMPLETENESS OF THE ITEMS IN THE CATEGORY, MOTHER INFORMATION

Item	Degree of completeness							
	Complete		Partial		Absent		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
22	3	6.0	0	0.0	47	94.0	50	100.0
23	28	56.0	0	0.0	22	44.0	50	100.0
24	25	50.0	0	0.0	25	50.0	50	100.0
25	0	0.0	8	16.0	42	84.0	50	100.0
26	1	2.0	1	2.0	48	96.0	50	100.0
Total	57	22.8	9	3.6	184	73.6	250	100.0

item 25, none was complete, 8 (16.0 per cent) were partial; the remaining 42 (84.0 per cent) were judged as absent. Item 26, for "reaction and response to premature", found 1 (2.0 per cent) to be judged complete 1 (2.0 per cent) partially complete, and 48 (96.0 per cent) absent.

CHAPTER IV

CONCLUSION

Further Findings

As the tabulation of data progressed evidence of a general trend developed. This trend manifested a marked decrease in the amount of information found on the referral forms. This ranged from a high percentage of completeness of information in the first 13 items (specific information category) to a low percentage of completeness of information in the last 13 items, i.e., premature and mother information categories.

The comparison in Table V on the next page of the completeness of information in each of the three categories shows that items of specific information were much more likely to be complete, 502 out of possible 650 (77.2 per cent), than were items of information about the premature, 132 out of 400 (33.0 per cent), and on items of information about the mother 57 out of 250 (22.8 per cent). Likewise complete absence was much more frequent among items of information about the mother, 184 out of 250 (73.6 per cent) and items of information about the premature, 263 out of 400 (65.7 per cent), than among items of specific information, 46 out of 650 (7.1 per cent).

The comparatively high degree of completeness of items in the specific information category was undoubtedly due to the

format of the referral form, itself, which specifically requests those items of information. Since the referral form is not structured primarily for use as a premature baby referral, information given about the mother and baby is a matter of whatever occurs to the initiator of the referral.

Of the items in the specific information category only item 9 with 56 per cent absence was not at least partially complete 90.0 per cent of the time. The exclusion of item 9, office phone, may be partially explained in that often the father's assignment is outside the continental limits of the United States, which would result in no phone. One may argue that "Ret.", indication of retirement, would be a clue to the AHN that there was no point in looking in the military phone book. The moving of a unit or a family would also be reason for not giving a phone number. Also, when just the designation of a unit is indicated, this may be a unit temporarily located at a post and not have a phone listing.

In contrast to this, 6 of 8 items of information about the premature were completely absent on more than 70.0 per cent of the referrals. Only items 14 and 15, baby's "sex" and "birth weight", were consistently included on the referrals. Information on item 21, "expected date of discharge", was completely lacking on all 50 referrals. Reason for the absence was learned by the writer from the AHN at Fort Bragg; the date of discharge is removed from the disposition sheet which comes to her office daily. If, on the other hand, the information was not placed on the

TABLE V

DEGREE OF COMPLETENESS BY CATEGORIES

Category	Category completeness							
	Complete		Partial		Absent		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Specific information	502	77.2	102	15.7	46	7.1	650	100.0
Premature information	132	33.0	5	1.3	263	65.7	400	100.0
Mother information	57	22.8	9	3.6	184	73.6	250	100.0
Total	691	53.2	116	8.9	493	37.9	1300	100.0

referral to be sent to a public health nurse in a local health department it would be difficult for her to plan a timely visit. Information about the mother was the most neglected of all with information absent on one-half or more of the referral forms.

If it is true, as our original consultants on the subject seemed to believe, that information about the premature and his mother is essential to good planning for nursing service and that information specifically requested on the referral form is likely to be included in the referral, then one might suggest the value of referral forms for premature visits which do request specific facts about this premature and its mother. This could be done either by special printed forms for use in premature referrals, or since this would add one more form to the already existent multitude of forms, a rubber stamp or over print of the desired items about the mother and her infant could be applied to the body of each referral prior to its being completed by the physician as a guide to him in filling it out.

Conclusion

After examining the problem of incomplete information from the point of view of "items" it seems that an audit by nurses could be an effective method of evaluating nursing service records. Results of such an evaluation would in addition to encouraging better written communications, also, stimulate the provision of more complete and accurate information about the patient to the Army Health Nurse from the referring individual. This would result in improvement in continuity of care and

coordination of efforts. Although the number of referrals included in the study was small, the conclusions tend to indicate that a lot is expected of the AHN in getting information she needs, since so much necessary information was not on the referral forms.

The study accomplished its purpose of assessing the completeness of information given by physicians on referral forms. The study, also, indicates that a check list or fill-in information system would provide more complete information.

A P P E N D I X

ARMY HEALTH NURSING PROGRAM - CASE REFERRAL

(AR 40-409)

1. TO: *(Name and location)*	2. FROM: *(Name and location)*
3. PATIENT'S LAST NAME - FIRST NAME - MIDDLE INITIAL	4. PATIENT'S ADDRESS *(Give specific directions)*
5. DATE OF BIRTH / 6. HOME PHONE	
7. DEPENDENT OF *(Last name - first name - middle initial)*	8. GRADE / 9. OFFICE PHONE
10. ORGANIZATION	
11. REASON FOR REFERRAL; OTHER SIGNIFICANT DATA *(Physician's orders; diagnoses with dates of onset; patient's and family's knowledge of condition; pertinent family history; etc)*	
12. DATE	13. SIGNATURE OF INITIATOR
CHECK APPROPRIATE BOX(ES) ◇	☐ MEDICAL RECORDS ARE IN FILES OF THIS INSTALLATION ☐ MEDICAL RECORDS ARE NOT IN FILES OF THIS INSTALLATION ☐ SCHOOL HEALTH RECORDS INCLOSED ☐ FAMILY RECORD INCLOSED

DA FORM 1 DEC 59 8-264

COPIED FROM AR 40-409
MEDICAL SERVICE
ARMY HEALTH NURSING RECORDS

Section III. CASE REFERRAL RECORD (DA Form 8-264)

9. PURPOSE: This form will provide a means by which both medical and nonmedical personnel at a military installation may refer health and social problems concerning individuals or families to the Army Health Nurse. The health nurse may also use the record to refer patients to health and social agencies on the military installation or to local and distant civilian health or welfare agencies, or to Army Health Nurses at other installations. Using this form helps to provide continuity of service, minimizes duplication of effort, and furnishes accurate data.

10. PREPARATION: A. DA Form 8-264 should be initiated by medical and nonmedical personnel on all patients who need followup service in reference to health or social problems, or both. It may also be used when a military sponsor is being transferred to another military installation or separated from the service and health information pertaining to him or his dependents will be useful to the individuals or organizations which will be giving them service.

B. This form will be prepared in triplicate by the service, agency, or individual initiating the referral. Two copies will be forwarded if the referral is to a civilian agency and one will be retained in the health nurse's files. After acting upon the request, the recipient should record any findings or recommendations on the reverse of the form. One copy should be returned to the sender who will record any necessary information and then forward it to the registrar who will include it with the patient's other outpatient medical records. If the health nurse renders the service for which the referral is requested, one of the three copies may be destroyed. In all instances, one copy will be retained in the Army Health Nurses' active files for 1 year and in the inactive file for 1 year and then destroyed. The Army Health Nurse will provide the attending Army physician with any pertinent information received from civilian health agencies.

C. On occasion, it may be appropriate and convenient to attach an extract of medical records or a copy of such records to DA Form 8-264 as an expeditious and economical means of providing information on history, examination, diagnosis, and treatment. In such instances, the registrar will secure and record the necessary consent of the patient, and will provide assistance in preparing extracts or copies requested by the Army Health Nurse.

DEPARTMENT OF THE ARMY
HEADQUARTERS, WOMACK ARMY HOSPITAL
Fort Bragg, North Carolina 28307

AJBWH-PM May 1967

PEDIATRIC STANDING ORDERS

I. Prematures

A. Definition:
Those babies weighing less than five and one-half pounds at birth.

B. Home Visits:

1. Normally prematures will not be discharged from the nursery until the home conditions have been cleared by the Army Health Nurse. If, for some reason, it is not possible to make a visit before the baby is discharged, a visit will be made within a few of the baby's arrival home.

2. Health Nurses will be notified of home visit requirements as soon as it is comparatively certain that the child will survive, in order that any discrepancies in the home environment may be corrected before the baby is due for discharge.

3. Referrals may be made directly from the nursery to the local health department or to the Army Health Nurse. If referral is directly to the health department, the Army Health Nurse will receive a copy of the referral

4. Home visits will include the following observati ns:

a. Parental attitudes.
   (1) Towards other children.
   (2) Towards the new baby.
   (3) Need of mother for additional visits.

b. Health of the family.
   (1) Emotional stability.
   (2) Presence of acute or chronic infections.
   (3) Immunization status.

c. Physical environment.
   (1) Heat, ventilation and water supply.
   (2) General cleanliness.
   (3) Adequate supplies for the baby.

AJBWH-PM May 1967

SUBJECT: Pediatric Standing Orders

C. Requirements for medical supervision and follow-up:

1. Time Factor:

a. The developmental age of prematures is estimated from date of hospital discharge rather than from date of birth. That is, an infant born on 1 February but discharged from the hospital on 15 March is two weeks old on 1 April.

b. Routines for feeding, immunizations, laboratory and eye examinations are based on developmental rather than chronological age.

2. Formula:

a. All prematures are discharged on an iron containing formula. It is recommended that prematures continue on the iron containing formula for at least six (6) months, or until further instructed by the physician.

b. Schedule:
(1) Feed every three hours until six weeks check up.
(2) "Demand" feeding may be started when warranted by the baby's growth. (Weight gain is the real criteria.) If the baby is gaining well and and weighs at least 5½ pounds the mother may go on demand schedule.

3. Vitamins:

Prematures will get 0.3cc Tri-Vi-Sol until they are taking a can of formula with vitamins or eating from the table.

4. Well Baby Clinic:

a. Visits will be made at 2 weeks, 6 weeks, 4 months and 9 months from date of hospital discharge.

b. Examination will be given in Well Baby Clinic by Pediatrician.

AJBWH-PM May 1967

SUBJECT: Pediatric Standing Orders

5. Hemoglobin and hematocrit evaluation:

a. Lab slips to be given to the mother when baby is discharged.

b. If slips given in Well Baby Clinic and returned to Well Baby Clinic, child to have recheck if hgb is below 10 and hct is below 30.

c. Repeat findings of hgb below 10 and hct below 30 are to be referred to Chief of Pediatrics by appointment.

Michel L Barringer

MICHEL L BARRINGER
CPT MC
Chief, Pediatric Service

APPENDIX D

INSTRUCTIONS FOR AUDITING REFERRALS

I. Review the 50 referrals and assign a value judgment of your choice to each of the 26 items which are organized into three categories.

A. Department of the Army (DA) form 8-264, the referral form, is initiated by the physician and routed to the Army Health Nurse (AHN) for initial visit for care of the premature and mother at home.

B. The categories and the number of items to be evaluated are:

Specific Information

1. To: (name and location)
2. From: (name and location)
3. Patient's name
4. Patient's address (specific directions)
5. Date of birth
6. Home phone
7. Dependent of (name)
8. Grade
9. Office phone
10. Organization
11. Reason for referral: other significant data
12. Date (of referral)
13. Signature of initiator

Premature Information

14. Sex
15. Birth weight
16. Gestation
17. Condition at birth
18. General progress (in hospital)
19. Present weight (at time of referral)
20. Special orders (medication or treatment)
21. Expected date of discharge

Mother Information

22. Age
23. Para
24. Gravida
25. Pregnancy history
26. Reaction and response to premature

II. Place a value of choice in block coordinate of referral number and item evaluated.

Value judgments are:

0 = Absent (Absence of information)
1 = Partial (Indicates some evidence of information)
2 = Complete (Connotes adequate evidence of information)

III. Nursing notes, appearing on any referral, are not to be considered in this audit.

IV. Attached information is included for further guidance.

A. Extracted portions of Army Regulations (40-409) pertinent in preparing referral DA form 8-264.

B. Pediatric Standing Orders of Womack Army Hospital, Fort Bragg, North Carolina.

APPENDIX E

AUDIT FORM: PREMATURE REFERRALS

KEY 0 = Absent 1 = Partial 2 = Complete	Specific information												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Items / Referral form numbers	To (name and location)	From (name and location)	Patient's name	Patient's address (specific directions)	Date of birth	Home phone	Dependent of (name)	Grade	Office phone	Organization	Reason for referral	Date	Signature of initiator
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													
Total 0													
Total 1													
Total 2													

AUDIT FORM: PREMATURE REFERRALS

KEY 0 = Absent 1 = Partial 2 = Complete	Premature information								Mother information				
Items / Referral form number	14 Sex	15 Birth weight	16 Gestation	17 Condition at birth	18 General progress	19 Present weight	20 Special medications or treatments	21 Expected date of discharge	22 Age	23 Para	24 Gravida	25 History of pregnancy	26 Reaction and response to premature
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													
37													
38													
39													
40													
41													
42													
43													
44													
45													
46													
47													
48													
49													
50													
Total 0													
Total 1													
Total 2													

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