Triage: A Method of Assisting the Flow of Patients Through the Emergency Department

by

Arlene Kelsay Stiles, BSN

Clinical Investigation

Presented to

the University of Oregon School of Nursing

and the Graduate Council

of the University of Oregon Health Sciences Center

in Partial Fulfillment

of the Requirements for the Degree of

Master of Nursing

June 11, 1976

APPROVED:

[redacted]

Marie Berger, MS, Assistant Professor — Advisor
Clinical Investigation

[redacted]

Barbara M. Gaines, DEd, Associate Professor
First Reader

[redacted]

May Rawlinson, PhD, Associate Professor
Second Reader

[redacted]

John M. Brookhart, PhD, Chairman Graduate Council

This study was supported in part by a Nurse Traineeship from the United States Public Health Service Grant Number HT5A11 NU 0035 16

Acknowledgments

My appreciation to the following individuals who assisted me with this study:

Joseph B. Vander Veer, MD, who introduced the triage system to me and made it possible to do this study.

Mrs. Belle Slesh, RN, emergency room staff, for cooperation and assistance in collecting data.

Mrs. Marie Berger, MS, Assistant Professor, for her advice and encouragement during this study.

Mrs. Barbara M. Gaines, DEd, Associate Professor, for being my first reader.

Ms. May Rawlinson, PhD, Associate Professor, for her accurate criticism.

Table of Contents

List of Tables

List of Figures

CHAPTER I

Introduction

Emergency departments are finding themselves in a new role. In years past, emergency departments were used for the treatment of accidents, injuries, and as a way station to the operating room or hospital beds. (Slater, 1970). Today the emergency department often functions first as a trauma treatment center with emergency room physicians substituting when a private practitioner or outpatient clinic is not available, and second as a primary family physician to the urban poor. (Torrens & Smith, 1970).

All emergency facilities are experiencing, to a greater or lesser degree, an increasing number of patient visits to the emergency department. Problems resulting from increased patient loads have placed emergency personnel and their existing facilities under severe strain. A new method of processing patients is necessary to render quality care service. One approach designed to meet this problem is the development of a new role for the emergency room nurse, the nurse "triage" system, in which a registered nurse is appointed to promptly sort, classify, and appropriately distribute all patients arriving in the emergency department.

Statistics indicate that all hospitals having emergency facilities are experiencing a rapid increase in patient visits and a disproportionate increase in the number of nonemergency cases. In 1966, the Division of Medical Sciences of the National Academy of Sciences reported that "more than 2/3 of the 40 million emergency room visits in 1966 cannot be classified as an emergency." (Jackson, 1971, pp. 68-69).

Variations in annual increases in emergency department visits range from 7% to 40% per year. (Shortlife, 1958; Lee, 1960; Skudder, 1961). The United States Public Health Service projected an increased use of hospitals for the decade 1960-1970 of 8% in hospital admissions, 18% in outpatient visits, and 79% in emergency department volume. (Hospital Outpatient Services, 1966). However, it has been estimated that:

> Nationally from 1954 to the present, such emergency visits have increased 312%. This is a larger growth than for any other index of hospital utilization. While emergency department visits accounted for less than 1/5 of all outpatient visits in 1954, by 1969 they accounted for more than 1/3. (Gibson, 1971, p. 49).

Review of Literature

A review of literature indicates varied and complex reasons for this rapid growth. In years past, the general practitioner cared for his patients at their homes and in his office. (O'Boyle, 1972). His office was frequently better equipped than the emergency room to handle accidents. In general, patients tended to mistrust and avoid hospitals. With the rapid advancement of medical technology, only hospitals could afford to supply the expensive, complicated equipment necessary for quality care. Gradually, the public gained confidence in the hospital and the responsibility of primary care was transferred to the hospital.

During the Depression and World War II, many who had previously been able to afford private physician fees came to the hospital emergency clinic for less expensive care. (O'Boyle, 1971). Patients soon discovered that with the convenience and availability of 24-hour service and no appointment schedule, care could be received the same

day which did not interfere with working hours. (Costello, 1967).

In recent years, as population patterns changed and larger concentrations of low-income families grouped in inner city areas, additional patient loads were placed on the urban hospital. The number of physicians available for the public is not increasing with the population. (Knowles, 1965). The underprivileged, having even less chance of finding a physician because of the lack of physicians in low income areas, had no choice but to turn to the hospital for their medical care. (Paris, 1968; English, 1969; Mahoney, 1969). For this reason, the emergency department is becoming a community health center rather than a place to go for emergency care. It has been found that physicians themselves have contributed to the emergency room problems by using the emergency department for their own purposes as an "after hours" office. Patients having health insurance plans are referred to the emergency department by physicians, thus placing an increased patient load on the emergency department. In addition, patients come to the emergency department because physicians are not available to make house calls, because doctors' office hours are inconvenient, and because there is a lack of physicians available during weekends, holidays, and night hours. Also, the tendency of schools, the police, industry, and fire departments to refer sick persons to emergency departments has placed an additional burden on the existing facilities.

The increased use of emergency departments has resulted in overcrowding, confusion, and frustration on the part of patients, families, and personnel. (Slater, 1970). All emergency department patients, regardless of the nature of their illness, are admitted and discharged

through the emergency room door. Physicians are required to take a history and do a physical examination on each patient admitted to the department. They must also make a diagnosis and some disposition. This procedure is required even though no treatment is offered. As patient loads increase, the time required to examine all patients contributes to a traffic problem resulting in congestion and long waiting periods. (Slater, 1970).

As one could anticipate, this delay in patient care causes anger and hostility on the part of patients and their families which is then directed toward the staff. The staff in turn responds with a feeling of exhaustion, frustration, and lack of job satisfaction. (Slater, 1970).

In a system of chaos, the emergency room "staff find themselves rushing up and down halls, in and out of rooms, treating patients whose names they are scarcely aware of, and to whom they could give little of their medical expertise." (Slater, 1970, p. 24). Occasionally, a patient is missed altogether until long lengths of time have passed before he receives treatment. Another patient may have two or three doctors treating him at the same time. Nurses are left with little time to relate to patients or to explain the immediate or follow-up care prescribed for the patient. Patients frequently leave with unanswered questions. Many return visits are made because patients do not understand what to expect from medication and treatment. Hospital procedures need to be explained so that the patient's fears, confusion, and frustration are eliminated. It is necessary to provide comprehensive patient education to give the public good health care and to enable the staff to have the feeling of a job well done.

The quality of teaching is dependent not only on the consistent and evenly paced progression of patients but also the number of patients to be treated in the emergency room. (Slater, 1970).

The problem is one of how to handle those patients most effectively. Hospitals respond by expanding their facilities, increasing staff and equipment, attempting to re-educate the public as to the true function of the emergency department, restricting admissions, and developing alternative facilities in the community. (Hospital Outpatient Services, 1964, 1966). Conflicts arise between the hospitals' concept of emergency care and consumer expectations for medical care.

As the public expectation of care changed, health personnel responded with new ideas. As far back as 1963, studies done at Yale indicated an inappropriate use of available emergency facilities. Researchers generally agreed that there was a need to develop a new method of facilitating the flow of patients through the emergency department to attain optimum use of existing facilities and personnel. A new system was developed called medical "triage," a French term adopted by the Army and Disaster Planning workers. The term is defined as "the sorting of mass casualties for priority of treatment." (Weinerman, 1965). Weinerman, (1965), designed the original triage program to:

> Provide each emergency service patient with a medical evaluation, decision regarding priority of care, and assignment to the appropriate service within or outside of the hospital. The objective is to assist patients with nonurgent conditions to make proper use of regularly available community

> resources and to protect the "readiness to serve" capacity of the emergency station. (Weinerman, 1965, pp. 389-390).

Originally, medical, surgical, and pediatric residents were assigned as triage officers, but as time progressed, experienced emergency room nurses were appointed to the position of triage officer. (Baldridge, 1966; Slater, 1970; O'Boyle, 1972; Murphy, 1973).

Orientation was given to each new triage nurse "concerning the difference in concept between screening and case management, the special triage procedures, and the available referral resources." (Weinerman, 1965, p. 390).

The triage system works basically as follows: A triage station is located near the admission desk. In that position, the triage nurse would be the first to welcome and make sympathetic contact with each incoming patient. The triage nurse would act as a public relations person to give personalized care and concern for the patient. (Slater, 1970; O'Boyle, 1972; Murphy, 1973). The triage nurse would then "take a brief but thorough history of each patient's condition to assess its seriousness and confirm an eyeball observation, and decide how urgently each patient needs to be seen and by whom." (O'Boyle, 1972, p. 1392).

Seriously ill patients are taken directly to the appropriate treatment area. The triage nurse is available to "initiate emergency measures, and to maintain a reasonably orderly flow of patients, as well as to appraise and direct new arrivals." (Weinerman, 1965, p. 390). Because of this responsibility it is crucial that she have emergency room experience. She may also screen patients for direct care by the appropriate residents, (medicine, surgery, pediatrics, etc.). If

several patients arrive at about the same time, she can determine whose problem is the most acute and requires the most immediate medical attention. By referring nonemergency patients to numerous specialty clinics during the day, the triage nurse can reduce the total patient load in the emergency department, and the true emergency cases can be treated more efficiently. A triage nurse may see patients who need social services rather than medical care. She would then refer the patient to a social service worker or use her own knowledge concerning available public services to assist the patient, thus freeing the emergency department personnel. The triage nurse can also explain hospital procedures and clarify any questions the patients have regarding their care. She also informs them of the approximate length of time they will have to spend in the emergency department. If patients are aware of the time element, they can make arrangements for care of their children and transportation. (Slater, 1970). Other triage decisions may include:

> Assignment of patients for immediate emergency treatment by indicated specialty service, transfer to other hospital services, referral for private medical care, referral to welfare agencies, or direct discharge after reassurance, and, when feasible, simple treatment of minor conditions. (Weinerman, 1965, p. 390).

Thus, it can be seen, the responsibilities of the triage nurse are substantial. She must be aware of services and facilities of both the hospital and the community. She must know where each patient is in the emergency department and be able to keep up with the flow

of patients.

Purpose of the Study

The purpose of the study is to record the development of a triage program at a major teaching hospital.

The second purpose is to assess the initial impact institution of a triage program has on the flow of patients through the emergency department.

The questions to be answered are: Would institution of a triage system result in better utilization of emergency department personnel and facilities? More particularly, would institution of a triage system result in:

1. Patients being seen more quickly by an emergency room physician or nurse?

2. Patients being seen more quickly by a physician?

3. Reduction of total time per patient in emergency room from time first seen by physician until discharge?

4. Reduction of total time per patient in the emergency room from admission to discharge?

5. A different pattern of disposition upon discharge?

CHAPTER II

Development of the Triage Program

The triage procedure at the study hospital was patterned after and compared with Los Angeles Childrens Hospital, King County Hospital, Dallas County Hospital, and Cleveland Metropolitan General Hospital.

How Triage Program was Planned and How Final Program Compared With Other Programs

Need. The study hospital's emergency room service could not efficiently handle the growing demand for its service, including increased patient loads and a rise in nonemergency cases. Patients frequently waited for long periods of time. Complaints were frequent. Similar problems were reported in other hospitals.

Purpose and Objectives. The objective of the triage nurse program was to expedite and improve patient care. This was accomplished principally by maximum utilization of a nurse's skills, work experience and knowledge of other services available for patients such as clinics, social services, and other public agencies. To meet this objective, more specific purposes of the triage program included:

1. Assigning a designated staff person with the responsibility for monitoring the progress of treatment for all patients in the emergency department.

2. Making early evaluation and treatment of emergency room patients.

3. Assessing the acuteness of patients' needs and transferring patients to the appropriate area.

4. Assigning patients to treatment teams.

5. Making early referrals to other sources for those who could be treated elsewhere.

6. Providing better public relations by making early contact with a nurse.

7. Providing the public with information regarding procedures and policies of the hospital and emergency department.

8. Providing a continuity of patient care by orienting each shift of nurses to the number of patients, priority of care, special problems, and individual patient reports.

These purposes are generally consistent with those of other triage programs with two exceptions: The adoption of team nursing, and the assignment to the triage nurse of responsibility for ordering laboratory and X-ray studies.

Triage Procedure Comparisons. Under the triage program at the study hospital, the oncoming triage nurse received a report on individual patients from the team nurse. All patients stopped at the main entrance to register with the admitting clerk, except for the critically ill who were directly admitted. The triage nurse then assigned the patient to a team, ordered laboratory studies and X-rays as time permitted, sent nonemergency patients to other referral sources, treated some patients with minor problems, initiated resuscitation care on critically ill patients, monitored the flow of patients, and attempted to maintain good public relations.

The triage procedures differed somewhat from hospital to hospital. Los Angeles Childrens Hospital, Cleveland Metropolitan General, and King County developed screening clinics where the triage nurse could

refer patients to other emergency room nurses who were prepared to treat patients for minor and chronic problems under a doctor's supervision. Bellevue had a daytime emergency walk-in clinic where nurses assumed the responsibility for teaching patients about treatments and medications, and clarified any physician's orders the patient did not understand.

King County used a team approach system, in which the triage nurse assigned the patient to a team consisting of a nurse and intern who would follow through the care of specific patients from admission to discharge. The nurse conferred with the intern as to the patient's plan of care, re-evaluated priority of care and informed the triage nurse regarding patient's disposition. The team approach was adopted by the study hospital. (See Appendix C for a team leader job description).

Cleveland Metropolitan General and Los Angeles Childrens Hospital, as a result of the triage program, found it necessary to include a specific teaching area in the screening clinic.

Los Angeles Childrens Hospital added a volunteer to assist the triage nurse. The volunteer answered phone calls, wrote messages for the nurse, and directed or escorted patients to various areas as needed. This assistance allowed the triage nurse to concentrate on direct patient care. In certain circumstances, the triage nurse renewed prescriptions.

All hospitals consulted in the study used nurses as their triage officer with the exception of Yale which also used physicians.

Location. At the study hospital the triage station is located near the main entrance. Patients are interviewed by the triage nurse

at the front desk where admitting clerks are also located. An examining room is also available for the triage nurse to examine and treat those patients with minor problems. Los Angeles Childrens Hospital was the only hospital where the triage nurse interviewed all patients before they registered with the admitting clerk.

Qualifications, Preparation, and Duties

Job Qualifications. The study hospital decided that the triage nurse position should be occupied by a nurse with emergency room experience and expertise sufficient to recognize emergency situations. Los Angeles Childrens Hospital also required the triage nurse to have pediatric experience. King County felt that the triage nurse should have specialized skills not only in assessing patient needs but also in making medical decisions. In addition to requiring the triage nurse to have two years experience in the emergency room, Dallas County Hospital also preferred that the nurse take classes in interpersonal relationships, be 24 years of age or older, be mentally stable, be neat, have good hearing and vision, be able to accept criticism, be able to work under stress, speak fluently, possess accurate judgment, relate well with patients, and yet enforce visiting regulations. Some additional special requirements not listed by other triage programs were that the triage nurse participate in inservice education and in research, keep informed of nursing trends, and serve on committees.

The director of the emergency department of the study hospital wanted the triage nurse "to be tactful and to work well with others, to be a good listener, be able to relate to patients of all ages and backgrounds, be able to function under stress, be able to accept and utilize criticism, be fully aware of the policies and procedures of

the department and hospital and be able to interpret these to others, be clinically astute, well-trained and experienced to recognize potentially serious medical conditions, be aware of her own limitations and have the administrative and medical judgment to know when to seek help."

Academic and Professional Preparation. The academic and professional preparation required by the various hospitals for the triage nurse was vague and unclear. Many hospitals responded by saying the triage nurse received some preparation but the information had not been recorded on paper.

In 1970, Dr. Jackson of Case Western Reserve University School of Medicine designed a three-month program for the preparation of "screening nurses" at Cleveland Metropolitan's emergency room. The course included several "weeks of didactic training in physical examination of major body systems, history taking, and approaches to commonly seen nonacute problems." (O'Boyle, 1972, p. 1374). Bellevue developed a similar program to train its screening nurses to the management of routine cases. Neither hospital had a teaching program specifically for the preparation of the triage nurse. Los Angeles Childrens Hospital had a three-month orientation program for a new person in the emergency department during which the nurse learned emergency department procedures and organization, and familiarized herself with the observation unit, the specialty clinics, and their requirements for admission and the referral center's job after which she was ready to learn the triage nurse position. (Slater, 1970). Two pediatricians met twice weekly with nurses to review patients seen and to discuss problems and concerns.

Programs at other hospitals surveyed ranged from no orientation program mentioned at Dallas County Hospital to education of each new triage nurse "concerning the difference in concept between screening and case management, the special triage procedures, and the available referral resources" at Yale, (Weinerman, 1965), and to a six-week course at King County. This latter program provided a course which included the general topic of triage, duties of the triage nurse, team relationship, patient assessment, major trauma, and minor trauma. Many of King County's ideas were incorporated into the six-week course offered at the study hospital. (See page 15 for the outline).

Functions and Duties. At the study hospital the triage nurse's duties included:

1. Interviewing the patient, taking a pertinent history, assessing the patient's condition, identifying the problem, and assigning a priority of care.

2. Determining an appropriate treatment area.

3. Ordering laboratory and X-ray studies as time requires and permits.

4. Initiating emergency care for the critically ill.

5. Handling minor complaints and referring nonurgent patients to other resources.

6. Monitoring flow of patients and attempting to keep the emergency department running smoothly.

7. Educating the public by verbal or written instructions.

8. Maintaining good public relations by keeping patients and families informed and reassured.

Other supervisory functions as determined by the director of the

emergency department included having the triage nurse be responsible for the function of the emergency department, receive reports from the triage and team nurses of the previous shift, and oversee the waiting room. These functions tended to coincide with those of other emergency departments. For example, Dallas County Hospital had the triage nurse responsible to the charge nurse and in effect be the same person. The triage nurse also contacted a physician to respond to a request from an accident scene and prepared the necessary emergency equipment.

Educational Program for Triage Nurse

At the study hospital a pretest was given to all employed emergency room nurses at the beginning of the triage instructional classes. Those nurses selected to be triage nurses took a specific one-hour class each week for a period of six weeks.

The educational program was outlined by the director of emergency services, the researcher, the emergency room head nurse, and the emergency room supervisor. Classes were taught by the emergency room director, the head nurse, a pediatrician, and the researcher.

After these classes, a posttest was given to all the emergency room nurses in order to evaluate the effectiveness of the triage teaching program. (See Appendix D for Pretest/Posttest).

The following is a brief outline of the triage educational classes.

Class I - General Introduction

A. Introduction

1. Concept of triage

2. Goals

3. Implementation

4. Relationship to medical staff

B. Responsibilities and duties of the triage nurse

C. Team approach - Assignment to a team

D. Triage nurse position

E. Public relations

Class II - Patient Assessment

A. Arrival

1. How to get a history

2. Nature of the complaint

B. Primary evaluation

1. Vital signs, fever

2. The importance of pain

3. Nonspecific symptoms

4. Local signs

C. Ordering laboratory studies

D. X-rays

Class III - Some Specific Maladies

A. The following questions were considered for each of the patient maladies discussed in Class III and Class IV.

1. General considerations

2. Decision-making questions to ask

3. Priorities of care

a. Emergency

b. Urgent

c. Nonurgent

4. Laboratory work

5. Initiation of treatment

B. Some specific problems the triage nurse may encounter.

1. Headache

2. Eye

3. Ear

4. Chest pain and dyspnea

5. Bleeding - Gastrointestinal and vaginal

Class IV - Patient Treatment

A. Orthopedic problems

B. Minor wounds

C. Neglected wounds

D. Low back pain

E. Backache

F. Pediatric patient

Class V - Patient Treatment and Leadership

A. Patient treatment

1. Psychiatric patient

2. Overdose and suicide

3. Communication with patients

B. Leadership skills

Class VI - Problem-Oriented Charting

A. Symptomatic

B. Objective

C. Assessment

D. Plan

Class Evaluations. The triage classes in general were considered effective. General recommendation included more consistent assistance

in learning effective interview skills and additional classes in specific areas. While test scores were consistently higher for nurses who took the triage classes, there were some variations among nurses in the test scores because of the differing work experience and academic preparation of some of the nurses. The nurses who did not take the original classes later requested that the classes be repeated for their education.

Reaction of Nurses to the Triage Program

Initially, nurses responded negatively to the concept of triage because they felt it was not necessarily the answer to emergency room problems. As the months passed, however, and the triage concept became an actuality through triage preparation classes, the majority of nurses responded more positively. They were willing to adapt to the changes and to the challenge of an expanded nursing role. Some nurses, however, could not accept this role and preferred to continue to perform the traditional functions. Others were frightened by the responsibility of the job and did not feel capable of making decisions and assigning priorities of care.

Some of the residents were initially negative and resentful of time spent assisting the nurse in assessment and in decision making. However, as they began to see the advantages of triage, they tended to become enthusiastic supporters. The triage nurse expanded the role of the nurse in the traditional hospital setting.

CHAPTER III

Initial Impact of Triage

Setting of the Study

The investigation was conducted in the emergency department of a university hospital affiliated with a medical school and its associated clinic. The hospital is located in a city with a population of approximately 400,000.

This emergency department has experienced much the same problems as other emergency departments across the country. Originally designed to accommodate 15,000 patient visits per year, it now cares for 30,000 patient visits per year, (about 80 per day), and the numbers continue to grow. Like other emergency departments, a large proportion of these patients' medical problems tend to be of a nonemergency nature but still require the services of a physician.

Seriously ill patients are sometimes missed and left to wait their turn in a crowded waiting room. Patients and their families frequently complain about the impersonal way they are greeted, the time they have to wait, and the lack of attention they receive.

The organizational pattern of the emergency department makes it difficult for the nurses and physicians to keep track of the flow of patients. The overcrowding and congestion make it difficult for the nurses and physicians to explain, even minimally, the care being given or the follow-up treatment prescribed.

In 1972, the director of the emergency department decided to investigate the possibility of instituting a triage system, thereby providing the occasion for this study.

Subjects

Two studies were conducted, one before, and one after, institution of the triage system. The pretriage study included all patients admitted to the emergency department for 24-hour periods over 7 consecutive days.

The posttriage study included all patients admitted to the emergency department between the hours of 8:00 a.m. and 10:00 p.m. for 3 consecutive days. Data collection was limited to shorter time periods per day because lack of referral sources required the night shift to take all patients, and because availability of the staff in collecting data for this study was not adequate. In order to maintain consistency between the two studies, only patients in the pretriage study admitted to the emergency room between 8:00 a.m. and 10:00 p.m. were considered, and information on patients admitted between 10:00 p.m. and 8:00 a.m. was ignored.

Development of the Data Collecting Tool

In view of the fact that no available tool could be found which collected the data pertinent to the study, a suitable tool was developed by the researcher. The tool was developed after formulating the purpose and goals of the study, a review of literature, and informal discussions with the director of the emergency department and a nurse graduate student. The categories for disposition of patients were taken from a study done by Weinerman, et al., (1965).

The tool and the collection of information were tested for reliability by having two evaluators independently record data about the same emergency room patients. The evaluators were the researcher and another graduate student. For this reliability study, information was

collected on all patients admitted to the emergency department from 8:00 a.m. to 10:00 p.m. Difficulty was encountered in completing the data with only two evaluators. Also, the evaluators found it difficult not to participate in the care of the patient. The tool itself turned out to be adequate for purposes of this study. The tool was also evaluated and approved by the director of the emergency department. After minor revisions were made, the tool which was finally used was a document containing three sections:

1. Time Study - Elicited information regarding the following time periods:

   A. Patient arrival until placed in an examining room.

   B. Patient being seen by a doctor until discharge.

   C. Patient arrival until specimens were sent to the laboratory.

   D. Patient arrival until X-rays were taken.

   E. Patient arrival until discharge.

2. Dispositions Study - Elicited information regarding the disposition of patient upon discharge. The categories were:

   A. Discharged home without follow-up care.

   B. Appointment to clinic.

   C. Admitted to hospital.

   D. Sent to other resources.

   E. Left against medical advice.

3. Patient Categories - Elicited information regarding priority of care assigned by the staff. The categories were:

   A. Emergency. The patient must be tended to at once.

   B. Urgent. The patient has problems which should be attended but could wait a few minutes.

C. Nonurgent. The patient has long-standing problems. He could be referred to a clinic or wait longer to be attended.

The tool for the posttriage study was modified by eliminating patient categories altogether and by eliminating the laboratory and X-ray time collections from the time study. Patient categories was intended to help determine whether the patients in the emergency department were in similar categories as patients in other emergency departments. That purpose was accomplished in the pretriage study. A further problem in collecting the patient categories data was that frequently physicians overlooked assigning a patient to any category. Patient categories could have been included in the posttriage study to test whether the mix of patients among the three categories was different than in the pretriage study. Because collecting this information had proven to be so time consuming, and had met with such resistance, the researcher decided some portions of the tool should be deleted in the posttriage study. Reliability and thoroughness of information being collected was more important than trying to answer more questions than the study could fairly handle. With the assistance of the emergency service director, it was decided to eliminate patient categories in the posttriage study.

In the time study, too many personnel had been responsible for recording time periods involving laboratory and X-ray data, with the result that often the information was not recorded or was recorded inconsistently by different persons. As this appeared to be the least important aspect of the time study, and as the information gathered in the pretriage study was unreliable, a posttriage study of X-ray and laboratory data would have served no useful purpose and was eliminated.

Data Collection Procedure

Permission was obtained from the director of the emergency department and the hospital administrator to conduct a study in the emergency department. Permission was also obtained from the emergency department head nurse and the clerk supervisor to use their staff as participants in the study.

The following steps were then taken to institute the research study at the selected hospital. The researcher explained the study and the data collection tool to the emergency department staff. The director of the emergency department made a similar explanation to the physicians.

Each patient was assigned a code number as he was admitted to the emergency department, and a copy of the tool was attached to the emergency service record to be completed and returned upon patient discharge.

In the pretriage study the clerks were instructed to indicate on the form the times of patient arrival, discharge, and the time when a patient was sent to X-ray. The nurses were asked to note the times when a patient was placed in a room, when specimens were sent to the laboratory, and when the patient was discharged. The orderlies were asked to keep records of the times when they took specimens to the laboratory and when they took a patient to X-ray. The physicians were asked to record the time when they discharged a patient. The physicians were also asked to categorize each patient as to emergency, urgent, or nonurgent as seen in Appendix A and described on p. 21. The researcher or the clerk recorded the patient dispositions by referring to emergency department records.

The researcher made frequent visits to the emergency department to clarify any questions by the participants. The researcher collected the study sheets each morning. Some confusion occurred on recording data when more than one person was assigned to the task. In the poststudy each area was limited to one participant, when possible, recording the information.

Results and Discussion

Time Study. The results of the study were generally consistent with what was anticipated and hypothesized. The average time in minutes for patients to proceed through the various stages in the emergency department before triage was instituted is shown in Table A. (See Appendix B, p. 47). After triage was instituted, records were also maintained on the time passing until the patient was seen by the triage nurse. The average time in minutes passing through the system after triage may be seen in Table B. (See Appendix B, p. 48).

The results of the pretriage study, (Table A), posttriage study, (Table B), and the follow-up study, (Table C), (See Appendix B, p. 49), are compared in Table 1. Before triage was instituted, the average waiting time for a patient to wait before being seen by any professional person, (in this case as soon as the patient was placed in an examining room), was 30 minutes. However, with triage, that gap was reduced to 13 minutes, (Table B), and has in fact since been reduced to 9 minutes, (Table C).

Table 1

Comparison of Average Times (in Minutes)

Before and After Triage and Follow-Up Study

	Before Triage	After Triage	Follow-Up Study
From arrival until seen by a triage nurse		13	9
From arrival until placed in examining room	30	31	
From arrival until seen by a physician	56	50	
From being seen by physician until discharge	96	95	
From arrival to discharge from emergency room	156	137	

The time from arrival until the patient was placed in an examining room remained the same. (Table 1). However, after triage was instituted, activities were occurring during this time period which expedited patient care. The triage nurse was in fact mentally categorizing patients and assigning a priority of care even though this was not documented statistically on paper in the posttriage study. The triage nurse would interview and admit emergency and urgent patients sooner, thus eliminating the possibility of missing a seriously ill patient who previously was not seen by a professional person for a period of 30 minutes. (Table A). The triage nurse also had those patients who

were in the nonurgent and urgent category wait in the waiting room for X-ray results, laboratory data, or medical charts before placing the patient in an examining room. With triage, laboratory and X-ray could be ordered and conducted prior to rather than only after entering the examining room. Thus, examining rooms were not utilized by patients merely waiting for laboratory and X-ray results.

The average wait between arrival and being seen by a physician was reduced from 56 minutes without triage to 50 minutes with triage. While this reduction of 6 minutes may have been caused by the margin of error in the study, it may have also been caused in part by the fact that the triage nurse eliminated the need for some patients to be seen by a physician at all.

The average length of time from being seen by a physician until discharge did not change substantially between the pretriage and post-triage studies. The time could tend to be less, because instead of the physician examining the patient and then waiting for X-ray and laboratory results, these items had been ordered prior to the physician seeing the patient. However, despite the fact that the laboratory tests, X-rays, and charts were ordered early, there was still some delay waiting for the results. Also, some patients were triaged out by the nurse, leaving the physician free to see patients with more serious problems who would necessarily take more of the physician's time.

The average time from arrival in the emergency room to discharge was reduced from 156 to 137 minutes. This decrease occurred because the triage nurse saw the patients quickly and took care of some in an expeditious manner by referral to clinic or home, or by simple treatment and discharge. As mentioned earlier, another reason for the

reduction in time undoubtedly was that the triage nurse or team leader ordered X-rays and laboratory tests prior to the physician seeing the patient. Several factors may have prevented a greater reduction in time. Some patients had to wait until they could be placed in a nursing home; some had to wait for transportation to a state mental facility; and some had to be kept under observation for several hours or overnight.

Very little has been mentioned in the literature regarding the effect of triage upon the length of time patients are spending in the emergency department. Jackson and Seeno, (1971), in their study, do discuss the effect of a screening nurse program in the reduction of patient time in a screening clinic. There, a triage nurse first decided if the patient was in the acute or nonacute category and then referred nonacute patients to a special area of the emergency department where patients were handled by a specially trained nurse. This study showed that waiting time per patient was reduced by approximately 26 minutes. Slater, (1970), in another study, believed that with triage the patients' average time in an emergency department is shorter, but she had not conducted time studies to document this.

The team nurse concept was initiated in the emergency department at the same time as the triage system. A nurse was assigned to a specific intern for the primary purpose of implementing patient care by preparing the patient for physician examination, following the care of the patient from admission to discharge, conferring with the intern as to plan of care, (electrocardiogram, laboratory, X-ray, etc.), and initiating the proper studies. (See Appendix C, p. 53, for a job description of the team leader and triage nurse). As the team nurse and triage concept were both instituted simultaneously, there was no way

to isolate in this study the effect each of these might have had on the length of time patient spent in the emergency department. To determine the relative effectiveness of the triage nurse and team leader systems, each would have to be studied separately. Also, because of the difficulty introducing a new concept, it may be easier to introduce the new systems separately.

Disposition Study. Theoretically, institution of the triage system should have no effect on the pattern of patient dispositions. This would be an expected result, as patients whose condition warrants admission would necessarily be admitted. The data illustrated in Tables D and E, (See Appendix B, pp. 50-51), and Table 2 support this belief and indicate no appreciable change.

Table 2

Comparison Changes (in Percentages) in Pattern of Disposition Before and After Triage

Category	Percent Before Triage	Percent After Triage
Discharged to home	28%	32%
Referred to clinic	47	45
Admitted to hospital	15	11
Referred to other resources	4	6
Left without completing treatment	6	6

One of the important questions investigated by this study was the percentage of patients who would be "triaged out" by the triage nurse without being seen by a physician. The Weinerman, (1965), study showed that 15.6% of the patients were "triaged out" without seeing a physician. A similar finding of 15% was achieved by the present study as may be seen in Table 3. Another study showed similar results. "Of all the incoming patients seen by the triage nurse, some 15 to 20 per cent go no further than her desk, (ineligible for service or referred to outpatient clinic or outside agencies)." (Slater, 1970, p. 129). This supported the belief that some patients should be using facilities of care other than the emergency department.

It was anticipated, on the basis of findings of the Weinerman study, that of those patients triaged out, more would be discharged to home than to clinic. The Weinerman study also indicated more than two times as many patients were triaged out to home as to clinic. The present study, however, showed an opposite trend. That is, twice as many patients were triaged out to clinic as to home. Some reasons for this unanticipated result might be that the triage nurses involved in this study, being very new at this job, were understandably reluctant either to treat patients without follow-up care or not to treat at all. Thus, more patients were referred to the clinic.

Table 3

Number of Patients (and Percentages)

Triaged Out by the Triage Nurse

Triaged out	Day			Average
	1	2	3	
Patients to home	2	3	3	3
Patients to clinic	6	5	11	7
Total	8 (11%)	8 (16%)	14 (17%)	10 (15%)

Patient Categories. This study assumed that the emergency department and hospital complex were similar to such medical facilities in other metropolitan areas in the United States. The effectiveness of the triage system depends to a substantial extent on the percentages of patients whose conditions are respectively emergency, urgent, or nonurgent. By keeping track of the percentages of patients who are emergency, urgent, or nonurgent, other emergency departments could compare their percentages to the results of this study to help determine whether institution of a triage system in their department would achieve the same results.

During the pretriage study the emergency department patients were separated into three categories:

1. Emergency. Life threatening situation where patient must be treated at once.

2. Urgent. Patient has problems but can wait a few minutes.

3. Nonurgent. Patient could be referred to a clinic or wait a longer period of time in the emergency department.

In the pretriage phase the emergency, urgent, and nonurgent categories can be seen in Table 4 and Figure 1.

Table 4

Pretriage Categories of Patients

Expressed in Percentages

Day	Emergency	Urgent	Nonurgent
1	11%	43%	46%
2	8	29	63
3	6	25	69
4	10	25	65
5	6	24	70
6	12	51	37
7	11	26	63
Average	9%	32%	59%

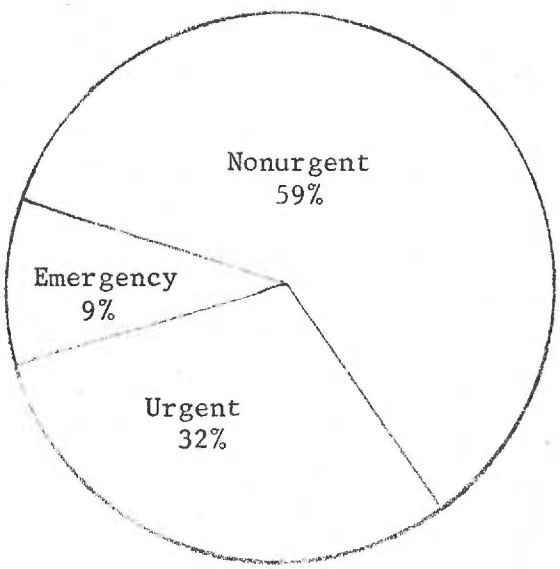

Figure 1. The average percentages of emergency, urgent, and nonurgent patients in the pretriage study.

In the study institution, only 9% of the patients were true emergency patients, and 32% were urgent, (Figure 1), and 59% did not belong in the emergency department at all.

There is some margin of error in Table 4. Some records on patients admitted to the hospital were missing and may have minimally affected the figures reflected in Table 4 by increasing the percentages of patients in the urgent or emergency categories. Also, physicians can differ in opinion as to whether a patient is emergency, urgent, or nonurgent. The problem was further compounded by having several persons determine patient categories. Thus, there may not have been an absolutely clear objective standard or consistency of application.

However, the few other studies conducted on patient categories indicate that the pattern of patient categories in this study is similar to patterns of other city hospitals. A study conducted at Cornell University documented as many as 42% of all emergency department visits

as nonurgent. (Skudder, 1961). In 1966, the Division of Medical Sciences reported that more than 2/3 of the 40 million emergency department visits in 1966 cannot be categorized as an emergency. (American College of Surgeons, 1966). In 1966, three years after the institution of the triage program, Weinerman and others conducted another study to see why a large proportion of nonurgent cases continued to use the emergency department. They categorized patients according to emergency, urgent, and nonurgent as was done in this study. They found that 6% were emergency, 36% were urgent, and 56% were nonurgent. (Weinerman, 1966, p. 1046).

Other hospitals may wish to categorize their patients in order to study trends in their respective emergency departments to help determine whether institution of triage or other systems may be beneficial.

CHAPTER IV

Summary, Conclusions, and Recommendations

Summary

There is a need to make better utilization of emergency room personnel and facilities and to provide a better means of processing patients to render quality care service in emergency rooms. The purpose of this study was to follow and record the development of a triage program and to assess the initial impact the institution of triage had on the flow of patients through the emergency department.

The needs of the hospital emergency room were reviewed. The objectives of the triage program were determined, with the help of studies of triage programs and procedures utilized at other hospitals. A location for the triage program within the hospital was determined. The triage nurse job description, qualifications, academic and professional preparation, and duties were established. Educational development ideas were gathered, and a triage orientation program was given to prospective triage nurses. The education program was well received by the nurses, and, by comparison of precourse and postcourse tests, appeared to be effective.

Prior to the institution of triage, a time study was undertaken to determine if a triage nurse could solve this problem of processing patients more quickly. The study sample consisted of all emergency department patients admitted between the hours of 8:00 a.m. and 10:00 p.m. In order to establish the effect of triage on the emergency department, five questions were posed. Would patients be seen more quickly by a nurse? Would patients be seen more quickly by a physician? Would the total length of time be reduced from the time the patient

saw a physician until he was discharged? Would the total length of time the patient spent in the emergency department from arrival to discharge be reduced? Would the pattern of disposition change after the institution of triage?

The data collecting tool was developed by the researcher and the director of the emergency department, and consisted of three parts: 1) Time Study - elicited information regarding time taken by the patient through various phases of emergency department care; 2) Disposition Study - elicited information regarding the disposition of patients upon discharge; and 3) Patient Categories - elicited information on patient classification according to whether the patient was emergency, urgent, or nonurgent.

In the procedure of this study, data was collected both before and after institution of triage in an emergency department. The basic results were as follows:

1. Before triage was instituted, the average time for a patient before being seen by any professional person was 30 minutes. After the institution of triage, the time was reduced to 13 minutes, and in a subsequent study was reduced to 9 minutes.

2. After the institution of triage, the average waiting time between the patient's arrival in the emergency department and being seen by a physician was not changed substantially.

3. The average time from first being seen by a physician to the time of discharge did not change substantially.

4. The average time from arrival in the emergency department to discharge was reduced.

5. The number of patients discharged home without follow-up

care increased minimally.

6. The number of clinic referrals from the emergency department was essentially unchanged.

7. After triage was instituted, 15% of the patients were treated or referred out by the triage nurse without being seen by a physician.

8. The number of nonurgent patients admitted to the emergency department encompassed 59% of the total number of patients.

Conclusions

Institution of the triage system has expanded the role of the nurse in the traditional hospital setting.

Institution of the triage system appears to be of help in some respects and to make no difference in other respects.

With the triage system, patients are seen more quickly by a physician or nurse than before triage. Thus, the emergency and urgency patients were discovered and treated more quickly. Also, triage would necessarily alleviate some of the complaints and concerns of patients and their relatives over long delays before being seen by anyone.

The triage system helped physicians make better utilization of their time. Fifteen percent of the patients were triaged out without being seen by the physician. This is in contrast to the 40% of patients estimated in previous studies not to need emergency services. Nonetheless, this 15% reduction helps expedite emergency services. The triage or team nurse could order indicated X-rays, laboratory tests, and patient charts prior to the physician seeing the patient. The triage nurse could also free the physician from making the

preliminary decision whether the patient was emergency, urgent, or nonurgent.

Recommendations

As a result of this investigation, it is recommended that the following areas be considered for further study:

1. Data should be collected by only one person who is not part of the emergency department staff so that other duties will not interfere with collecting information.

2. The study could be repeated and data collected over a longer period of time.

3. The study could be conducted in another hospital with a similar population for comparison purposes.

4. Data could be collected to see if patients were satisfied with the treatment or referral they received from the triage nurse.

5. The study should collect data on randomly selected patients at random intervals on random days. This would give more reliable results.

6. An additional study could be conducted to explore how the variables of waiting for laboratory data, X-ray, and medical records affect the length of time patients remain in the emergency department.

7. The study should be conducted on a 24-hour basis to eliminate the variable that the people who come to the emergency department during the nontriage time of day may not have been typical of those who came during the triage period.

8. Additional data should be collected on those persons admitted to the hospital to determine if time study results would be altered by including them.

9. Data could be collected on those persons referred to a clinic to learn how many keep their appointments.

10. One physician could classify all patients as emergency, urgent, or nonurgent to eliminate individual variations in opinions.

11. If national health insurance is enacted, it is possible that many less nonurgent patients may come to the emergency department. If this occurs, perhaps additional studies should be done to see if the triage system could be improved.

12. The interviewing and assessment done by the triage nurse should be reviewed and evaluated on a consistent basis.

13. The triage preparation classes should be continually updated and evaluated.

14. An additional study could be conducted to explore the feasibility of a screening clinic at this hospital.

15. A manual could be developed as a guideline for the triage nurse.

REFERENCES

References

American College of Surgeons Committee on Trauma. Standards for Emergency Department in Hospitals. Bulletin of the American College of Surgeons, 1963, 48, 112-125.

Albert, J. J. The Types of Families that Use an Emergency Clinic. Medical Care. 1969, 40, 59-62.

Baldridge, P. B. The Nurse in Triage. Nursing Outlook, 1966, 14, 46-48.

Barry, J. S. Case Study Predicts Load Variation Pattern. Hospitals, 1968, 34, 34-42.

Belaff, J. S. Adapting the Hospital Emergency Room to Patients' Needs. Hospitals, 1968, 42, 65-69.

Coleman, J. V. Psychiatric Studies of Patients Seen in the Emergency Room. Medical Care, 1967, 5, 255.

Costello, D. Organizing and Staffing the Emergency Room. Nursing Clinics of North America, 1967, 2, 225-235.

English, J. T. The Dimension of Poverty. American Journal of Nursing, 1969, 29, 2424-2428.

Gambel, B. Attendance for a New Complaint at Childrens Hospital. Medical Care, 1967, 3, 223-230.

Gibson, G. Status of Urban Services. Hospitals, 1971, 45, 49-54. No 23 Dec 1, 1971

Hess, G. & Jones, G. Broadening Our Approach to Emergency Nursing. Nursing Clinics of North America, 1967, 2, 237-243.

Hospital Outpatient Services: Facts and Trends, Washington, D.C.: U.S. Department of Health, Education and Welfare. Public Health Service, 1964, No. 930 C 6.

Jackson, E. B., Jr., & Seeno, E. The Screening Nurse. Hospitals, 1971, 45, pp. 66-68-73.

Jacobs, A. R. Emergency Room Vs in an Urban Community. The Journal of the American Medical Association, 1971, 216, 307.

Knowles, J. H. Hospitals, Doctors and Public Interest, Cambridge: Harvard University Press, 1965.

LaVenhar, M. A. Social Class and Medical Care. Medical Care, 1968, 6, 368.

Lee, S. S., Solon, J. & Sheps, C. G. How New Patterns of Medical Care Affect the Emergency Unit. Modern Hospital, 1960, 94, 97-101.

Mahoney, M. E. Momentum for Change. American Journal of Nursing, 1969, 69, 2446-2454.

Murphy, H. T. Nurses in Triage. RN, 1973, 36, 3.

O'Boyle, C. New Era in Emergency Room. American Journal of Nursing, 1972, 72, 1392-1397.

Paris, H. & Callan, D. City Families Need Hospitals that Offer Full Outpatient Care at Night. Modern Hospital, 1968, 110, 88.

Riehl, C. L. Emergency Nursing, Peoria, Illinois: Charles A. Bennett Company, Inc., 1970.

Shortlife, E. et al. The Emergency Room and Changing Pattern of Medical Care. New England Medicine, 1958, 258, 20-25.

Skudder, P. et al. Hospital Emergency Facilities and Services. A Survey. Bulletin of the American College of Surgeons, 1961, 46, 44-50.

Silver, M. H., Manegold, R. F., & Gartland, J. E. The Emergency Department Problem. The Journal of the American Medical Association, 1966, 198, 146-149.

Slater, R. N. Triage Nurse in the Emergency Room. American Journal of Nursing, 1970, 70, 127-129.

Torren, A. R. Emergency Department Utilization in Urban Community. Medical Care, 1970, 8, 60.

Vaughn, H. F. Why Patients Use Hospital Emergency Services. Hospitals, 1966, 40, 59-62.

Weinerman, E. R. et al. Effects of Medical "Triage" in Hospital Emergency Services. Public Health Reports, 1965, 80, 389-398.

Weinerman, E. R. et al. Yale Studies in Ambulatory Medical Care: V. Determinants of Use of Hospital Emergency Services. American Journal of Public Health, 1966, 56, 1037-1056.

APPENDIX A

Data Collecting Tool

Pretriage Study

Name
Date
Unit #

Part A: Time Collection

Absolute Time	Done By
_____ Patient arrival	Clerk
_____ Patient put in room	RN
_____ Doctor first saw patient	MD
_____ Lab work sent	MD/RN/Orderly
_____ X-ray	MD/RN/Orderly

Done in ER ( )
Not done in ER ( )

Part B: Patient Disposition

MD/RN/Clerk

_____ Discharged from ER

Home ( )
Specific Clinic ( )
Admitted ( )
Other ( ) (Specify)
AMA ( ) (Against medical advice)

Part C: Patient Classification

MD

Diagnosis

Urgency of condition E ( )
U ( )
N ( )

E (Emergency) The patient must be seen at once; life threatening situation.

U (Urgent) Patient has problem which should be seen but can wait a few minutes.

N (Nonurgent) Patients who can wait longer or could be seen in a clinic.

Posttriage Study

Name
Date
Unit #

Part A: Time Collection

Absolute Time	Done By
_____ Patient arrival	Clerk
_____ Seen by triage nurse	RN
_____ Patient put in room	RN
_____ Seen by doctor	MD
_____ Discharge	RN/Clerk

Part B: Patient Disposition

RN/Clerk

_____ Home

_____ Specific clinic

_____ Admitted

_____ Other (Specify)

_____ AMA (Against medical advice)

APPENDIX B

Raw Data

Table A

Average Time (in Minutes) of Patients Spent in the Emergency Department Prior to Institution of Triage

Time Periods	Day						
	1	2	3	4	5	6	7
From arrival until seen by a triage nurse	Nonapplicable						
From arrival until placed in examining room	32	35	57	16	22	15	31
From arrival until seen by a physician	64	65	89	36	51	33	56
From being seen by physician until discharge	89	93	129	104	87	78	96
From arrival to discharge from emergency room	156	167	203	143	147	111	164

Table B

Average Time (in Minutes) of Patients Spent in the Emergency Department After Institution of Triage

Time Periods	Day		
	1	2	3
From arrival until seen by a triage nurse	14	8	17
From arrival until placed in examining room	43	17	34
From arrival until seen by a physician	60	32	57
From being seen by physician until discharge	85	80	121
From arrival to discharge from emergency room	136	105	170

Table C

Follow-Up Study on the Average Time (in Minutes) of Patients From Arrival to Being Seen by Triage Nurse

Time Period	Day	Minutes
From arrival until seen by a triage nurse	1	18
	2	17
	3	13
	4	8
	5	5
	6	7
	7	6
	8	4
	9	4
	10	11
	11	8
	12	4
	13	6
	14	7
Average Time		9

Table D

Patient Dispositions (in Percentages) Without Triage

Dispositions	Day						
	1	2	3	4	5	6	7
Discharged to home	27%	21%	20%	39%	22%	45%	24%
Referred to clinic	56	48	53	39	56	35	44
Admitted to hospital	13	20	11	13	18	16	16
Referred to other resources (another hospital, cummunity agency, etc.)	2	6	5	7	2	4	5
Left without completing treatment	2	5	11	2	2	0	11

Table E

Patient Dispositions (in Percentages) With Triage

Dispositions	Day		
	1	2	3
Discharged to home	26%	35%	35%
Referred to clinic	48	45	43
Admitted to hospital	15	12	7
Referred to other resources (another hospital, community agency, etc.)	7	2	8
Left without completing treatment	4	6	7

APPENDIX C

Job Descriptions

Emergency Department Triage Nurse

Purpose

The primary purpose of the triage nurse is to improve patient care by the following means:

1. The early identification of significant medical problems.
2. The early referral of conditions which can be adequately treated elsewhere.
3. The reassurance of patients and their families regarding their illnesses.
4. Interpretation of policies and procedures of the emergency department to patients and their families.

The secondary purpose of the triage nurse is to improve the function of the emergency department in the following ways:

1. She will be the nurse in charge and have an overview of the entire emergency department operation.
2. She will assign patients admitted to the department to treatment teams.
3. She will coordinate activities, clerical, nursing, medical and laboratory services.

Job Requirements

The triage nurse must:

1. Be tactful and work well with others.
2. Be a good listener, able to relate to patients of all ages and backgrounds.
3. Be able to function under stress.
4. Be able to accept and utilize criticism.
5. Be fully aware of the policies and procedures of the department

and hospital and be able to interpret these to others.

6. Be clinically astute, well-trained and experienced to recognize potentially serious medical conditions.

7. Be aware of her own limitations and have the administrative and medical judgment to know when to seek help.

Functions and Duties

A. Patient Care Functions

1. The triage nurse is responsible for prompt recognition of signs and symptoms, identification of clinic problems and establishment of priorities of care.

2. When time permits, she orders initial laboratory and X-ray studies in pertinent cases, to expedite their care.

3. She assigns each patient admitted to the department to a medical team.

4. She initiates resuscitative care in critically ill patients and then turns over the direction of the procedure to the resident and the nurse team leader.

5. She refers selected nonemergency cases to other sources of medical care. In such cases she works closely with the medical and surgical residents in the emergency department, who are available at all times to consult with her.

6. She monitors the flow of patients and identifies time delays and helps to rectify them.

7. She maintains good public relations with patients, their families and community agencies.

B. Supervisory Functions

1. The triage nurse is responsible for the overall function of

the department and for contacting the supervisor in pertinent situations.

2. She receives reports from the charge nurse on the previous shift and from the team leaders on her own shift in turn making report of her shift to her replacement.

3. She receives incoming calls on the HEAR system and is responsible for maintenance of its log.

4. She receives incoming calls concerning campus accidents and dispatches a physician to the scene of the accident.

5. She directly oversees the waiting room and supervises the volunteer working there.

Team Nurse

Purpose

The primary purpose of the team nurse is to implement patient care by:

1. Coordinating efforts of all members of team to provide safe, efficient medical care.

2. Preparing patient for physician examination.

3. Informing triage nurse as to disposition plans of patient assigned to team.

Function & Duties: (Day)

1. Shall be assigned to team by triage nurse.

2. Shall place admitted patient in appropriate room. Prepare patient for physician examination.

3. Shall follow care of patient from admission to discharge from emergency department.

4. Shall confer with intern as to plan of care, (electrocardiogram, laboratory, X-rays); she shall initiate the proper studies.

5. Shall inform intern as to condition of patient re-evaluate priority of care.

6. Shall inform triage nurse as to status of patient's disposition, giving triage nurse clear picture of total operation of emergency department, allowing triage nurse to plan for placement of patient, and shall inform triage nurse regarding problems involving patient and his care, (delayed admission, social service referrals).

7. Shall be responsible for seeing that patients receive all medications ordered, understand instructions, and receive clinic appointments. Shall see that emergency room progress sheet is completed by

intern or resident.

8. Shall assume responsibilities for checking patient's valuables and proper care of clothing. Shall inform triage nurse if she needs assistance of orderly, LPN or volunteers with patient care.

9. Change of shift will include reports to evening charge nurse plus relieving team nurse.

Evening Team Nurse

1. Charge nurse will assume triage position and will be involved with pediatric patients.

2. Charge nurse will work with surgical pediatric and medical resident in planning care of patients.

3. Each team nurse will be assigned with two interns, one orderly and several students with whom she will report and confer as to medical care and disposition of patients. Team nurse will direct orderly as to what patient needs to be transported, admitted or lab work ordered.

4. Charge nurse shall assign aide to best facilitate care of patients and functioning of department, as to wrapping of wounds, cleaning, etc.

5. Team nurse will keep triage nurse informed as to planned admissions and problems with disposition, (social service).

6. Team nurse shall assume responsibility for checking patient's valuables and proper care of clothing. She will inform charge nurse if she needs assistance with patient care.

7. Shall be responsible for seeing that patient receives all medications ordered, understands instructions and receives clinic appointments. Shall see emergency room progress sheet is completed by interns or residents.

8. Change of shift will include report to night charge nurse as to patients and plan of care.

Supervision

Team nurse will be responsible to triage nurse, (head or charge nurse), supervisor of emergency department and to director of emergency services.

She will be supervised by charge or head nurse with help of nursing supervisor.

APPENDIX D

Nurse Triage Pretest/Posttest

Nurse Triage Pretest/Posttest

Nurse #
Problem #1

Problem: A 45 year old Negro man with headache.

Questions

A. Give 5 pertinent questions you would ask in a triage interview situation.

1.

2.

3.

4.

5.

B. What other information would you try to get from examining the patient?

1.

2.

3.

C. What things would help you establish the following priorities for this case?

1. Emergency - see at once with the doctor.
2. Urgent - have patient wait and tell the doctor about problem.
3. Have patient wait in waiting room and possibly triage out.

D. What laboratory work (if any) would you order on this patient?

Nurse Triage Pretest/Posttest

Nurse #
Problem #2

Problem: A 55 year old man with chest pain.

Questions

A. Give 5 pertinent questions you would ask in a triage interview situation.

1.

2.

3.

4.

5.

B. What other information would you try to get from examining the patient?

1.

2.

3.

C. What things would help you establish the following priorities for this case?

1. Emergency - see at once with the doctor.
2. Urgent - have patient wait and tell the doctor about problem.
3. Have patient wait in waiting room and possibly triage out.

D. What laboratory work (if any) would you order on this patient?

Nurse Triage Pretest/Posttest

Nurse #
Problem #3

Problem: A 16 year old boy with a nosebleed.

Questions

A. Give 5 pertinent questions you would ask in a triage interview situation.

1.

2.

3.

4.

5.

B. What other information would you try to get from examining the patient?

1.

2.

3.

C. What things would help you establish the following priorities for this case?

1. Emergency - see at once with the doctor.
2. Urgent - have patient wait and tell the doctor about problem.
3. Have patient wait in waiting room and possibly triage out.

D. What laboratory work (if any) would you order on this patient?

Nurse Triage Pretest/Posttest

Nurse #
Problem #4

Problem: A 40 year old woman with bleeding per rectum.

Questions

A. Give 5 pertinent questions you would ask in a triage interview situation.

1.

2.

3.

4.

5.

B. What other information would you try to get from examining the patient?

1.

2.

3.

C. What things would help you establish the following priorities for this case?

1. Emergency - see at once with the doctor.
2. Urgent - have patient wait and tell the doctor about problem.
3. Have patient wait in waiting room and possibly triage out.

D. What laboratory work (if any) would you order on this patient?

Nurse Triage Pretest/Posttest

Nurse #
Problem #5

Problem: A 25 year old man with burning on urination.

Questions

A. Give 5 pertinent questions you would ask in a triage interview situation.

1.

2.

3.

4.

5.

B. What other information would you try to get from examining the patient?

1.

2.

3.

C. What things would help you establish the following priorities for this case?

1. Emergency - see at once with the doctor.
2. Urgent - have patient wait and tell the doctor about problem.
3. Have patient wait in waiting room and possibly triage out.

D. What laboratory work (if any) would you order on this patient?

ABSTRACT

An Abstract of the Investigative Study of

Arlene Kelsay Stiles

For the degree of Masters in Nursing

Date of receiving this degree:

Title:

Approved: _____
Investigative Study Advisor

Urban emergency departments have become crowded with patients, many of whom do not require emergency care. This has caused delays in needed medical care. The study hospital instituted a triage program in which an experienced nurse promptly interviewed each incoming emergency room patient and determined priority of care and began certain procedures.

The present investigation was undertaken to record the development of a triage program and to assess the initial impact the institution of the triage program had on the flow of patients through the emergency department.

The needs of the emergency room were considered and objectives of the program were determined. Duties and qualifications of the triage nurses were set, and a training program for the triage nurses was designed and conducted.

A study was conducted shortly before institution of triage to learn how long it took patients to go through various emergency room procedures. Several months later a second comparable time study was

conducted. Each study also recorded the ultimate disposition of the patients, such as, admission to the hospital, sent home, or referred to the clinic or to a social agency. The first study also recorded whether each patient's condition was nonurgent, urgent or emergency.

Due to limitations of the study and the use of a nonstandardized questionnaire, it must be recognized that valid generalizations to other emergency departments cannot necessarily be made from the results. Inferences drawn from this study suggest that patient care in the emergency room was expedited. Patients saw their first medical person more quickly. Necessary laboratory and X-ray studies could be ordered more promptly. Emergency room facilities were used by, and physicians could spend more time with, patients who really needed the facilities and attention. Disposition of patients before and after triage did not change. The mix of patients among nonurgent, urgent, and emergency, was consistent with that of several other urban hospitals.

In summary, a new role had been created for the nurse in the emergency room, and triage had helped alleviate the problems the emergency room had been experiencing.