

An Overview of the History and Development of Triage

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Abstract

Triage is a common mode of practice applied in healthcare facilities. It is well-known in the Emergency Department (ED) setting as the initial step when admission to the ED is necessary. The journey to modern-day triage has come a long way. Its root began as early as the 1700s as a sorting tool for coffee beans in Japan and thinning out wool products in Britain. During the Napoleonic wars, the concept of triage was first applied medically by surgeon, Dr. Dominique Jean Larrey. His work was noted and triage was applied in the medical field. Since its application by Dr. Dominique Jean Larrey, the health care system has come up with different ways to impose triage. One system is START (Simple Triage and Rapid Treatment) which categorizes patients according to injury type, whereas the Triage tag groups patients using color-coding scheme. These are ways in which medical personnel educated in the standard codes of triage be able to effectively group and know more about the current state of the patient. It is important to continue the use of triage as it aids fast-paced ED to maximize patient care without wasting time and resources. As time progresses, there are more advancements being introduced in the healthcare field. This increases need for an even more integrated triage system to keep up with the high demand.

Keywords: Triage; Healthcare; Emergency Department; History; Development

Introduction

The healthcare is a complex field with many departments and specialists. Despite the increased complexity, there is an organized system for the patients. This is partly due to triage. It is a process of organizing critically ill patients and routing them to proper care. Triage can be considered as a port from where the proper routing of patients can take place. Triage is not what it used to be when it was first practiced in the early 1700s. In this time, the practice of triage had nothing to do with healthcare, rather, it was applied as a sorting method for industrial use. It was in the early 1800s when Dr. Dominique Jean Larrey, a surgeon, who began to apply the concept of triage without actually using the word triage we hear so often in hospitals [1].

The word, 'triage', gained its medical definition as time progressed to what is now a common practice in hospitals. In essence, it is a sequence of events done by trained professionals who have the main purpose of sorting patients by a rapid evaluation according to severity [2]. One patient may come in with flu-like symptoms, while another may be actively bleeding. Triage will prioritize the bleeding patient as it is a more critical situation and if it is not treated in a timely manner, it can prove to be fatal. Time is an important factor in healthcare settings, especially the emergency department (ED). Triage allows the efficient use of time by focusing on the high-level trauma or severe cases first, while allowing those with less severe injuries to wait. In this way, triage is designed to optimize how patients are handled, especially in the ED. This paper will discuss the history and origins of triage and development. It will also highlight upon future propositions for the need of an integrated triage system.

Objectives of the Study

This review article is intended to provide a brief history of the origins of triage and how it developed into the medical practice utilized in modern-day hospitals and clinical settings.

History

There are many sources pertaining to the etymology of the medical term “triage”. Some sources have reported it being used in Japan in reference to sorting coffee beans while other sources report the term used in Britain in reference to thinning out inferior wool products in 1727. The etymology of “triage” is French. This French word means “to thin out” in Japanese and in English means “to categorize” [3]. The question arises how such an industrial and nominal word became a medical term used widely in hospitals.

The term triage with respect to medicine originated during the Napoleonic Wars by the works of Dr. Dominique Jean Larrey [1]. He was a surgeon in charge of care for Napoleon’s Imperial Guard in the early 1800s. He first noticed there was not an organized system for transporting wounded men in the battlefield to care fast enough. Inevitably, men died of conditions that could have been prevented had medical care been accessible in a timely manner. Dr. Larrey transformed wagons into mobile hospitals with a medical team who was responsible for going into the battlefield and treating the injured men. This was called ambulance volante or “flying ambulances”. Dr. Larrey sorted the casualties according to how severe the wounds were. Those most critical had first priority to medical care and he did not take rank into consideration. This was drastically different from how injuries were treated before as officers of higher rank were treated first. Operations and amputations were sometimes done on the battlefield and later moved to the hospital. This practice of triage was done under Dr. Larrey which helped the soldiers of war get aid efficiently [1].

As time went on, this sorting of casualties was practiced in Britain, Turkey, and Russia. It is important to note the actual word was never used in any battlefield but the concept was definitely demonstrated. The first line of care was at the regimental level, which consisted of medical units located close to the combat zone that were staffed with physicians. If soldiers could not be returned to battle, there were sent to a regimental hospital where they stayed in hopes of recovery and return to duty. In unforeseen cases where this was not possible, these men were sent to general hospitals for supportive care [1]. It is from these early events in history where ‘triage’ developed into the medical process commonly used in hospital settings today.

Discussion Development

With the rise of an increasing population, there is a greater likelihood of people requiring medical assistance, whether it be emergency, inpatient or outpatient services. Emergencies are a broad group of patients in which triage becomes an important tool for routing patients to the right point of care. It is not as simple as going to a specialist alone as emergencies can involve multiple conditions happening at once. It requires a team working with efficiency and effective communication in identifying the problem and directing to the right specialists to improve the patient’s health.

Triage, in today’s contemporary practice, is a dynamic process done by experienced clinical professionals. They are responsible for making a rapid evaluation to determine the priority of care. There is a sequence of steps needed to be done in order to properly triage. General triage typically begins with a patient entering an emergency department. They first go to a designated registration area to check-in. This is where a brief medical history, the chief complaint and vital signs (heart rate, temperature, and blood pressure) are recorded [4]. If a patient is unconscious, the Emergency Medical Technicians (EMT) or the accompanying family members provide the information at hand. The clinician makes a rapid assessment and depending on the severity of the problem, care is provided [5].

Different systems for triage have been developed for disaster or mass casualty situations. One system is START (Simple Triage and Rapid Treatment) while the other involves color-coding scheme using red, yellow, green, white, and black tags. The color-coding scheme is also known as Triage Tag.

START was first developed in 1983 by Newport Beach Fire and Marine Department and Hoag Hospital in Newport Beach, California [6]. START is implemented by trained professionals upon patient admission in the hospital. The four categories are, the deceased (people who are beyond help), the injured (these need to be helped by rapid transportation), less severe injuries (transport can be delayed) and minor injuries (not requiring urgent care) [4].

The Triage Tag is done by nurses or skilled professionals. Red tags are marked for urgent cases who cannot survive without immediate treatment but they are not beyond help; they have a chance to survive. Yellow tags are for those who require observation. They are stable but require hospital care before being discharged. Green tags are placed for the less severe cases. They require medical care but can wait because other with more critical injuries have to be treated first. White tags are given to those with minor injuries and a doctor's care is not required and black tags are used for deceased or someone who has severe injuries who cannot survive even with care given; these are the non-breathing or pulseless patients [4]. These two triage systems are designed to make the process of providing healthcare more organized and efficient. Hospitals can choose which system to utilize.

Future Projections

Although, triage on its own is a well-adopted process in many hospitals, a more integrated triage is still needed. This is due to increased demand in management, increasing financial pressures, and limitations on staff [7]. A major part of trauma care is adequate prehospital triage. This is widely applied in different countries but there is not enough evidence regarding increased sensitivity or specificity. However, prehospital triage is not applicable for use in the emergency department due to difference in the measurement of clinical parameters. In addition, healthcare is becoming more complex, due to increased demand and high cost which make it pertinent to maintain an integrated triage, prioritization and streaming systems and the use of a common language in the hospital for optimal results. Studies are being done to develop and enhance such an integrated triage system where all factors, whether it may be pre-hospital or hospital, can be used collectively.

Conclusion

Many words have roots that elude to their definition but 'triage' has had a few detours before it became known as the medical process known widely today. It was known as an industrial process as early as the 1700s. Later, it transitioned into a medical process which began with Dr. Larrey during the Napoleonic Wars. Healthcare has improved drastically over the last few decades along with the process of triage. More sophisticated systems of triage have been introduced including the START and Triage tags. These help to achieve the purpose of a steady flow of patients receiving appreciate care. However, it is also important to keep triage less complex and create a single integrated standard process of triage. In addition to being a process, triage is also a language code understood by healthcare professionals. By creating a single integrated triage, this communication gap can be greatly reduced. Nonetheless, the development of triage has made providing healthcare a more efficient process.

Conflict of Interest

The author declares there are no conflicts of interest regarding this manuscript.

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