There are numerous advantages for the organization when using system-specific features to optimize their clinical operations and processes.

Physiotherapy Evaluation Process Optimization

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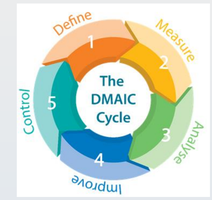

Abstract

In the "Centro de Terapia Fisica y Atletica" physiotherapy company, the potential benefits of the electronic health record system have not been fully used for the evaluation process. The process workflow, the structure, and the content in the electronic method were not adapted to support the process fully. This scenario limits the number of patients examined in an hour and decreases the process's effectiveness. As a result, the business has kept up its manual method in printed form. The process was optimized, and the duration of the patient evaluation was decreased using the DMAIC methodology. A customized template was created in the electronic system for the patient examination to address process gaps and replace the manual approach. The process efficiency increased with the implementation of the new template, reducing the time duration by more than 25%.

Introduction

Physiotherapy is a medical specialty that treats, prevents, heals, and adjusts the body's movement-related limitations. The "Centro de Terapia Física y Atlética Nueva Vida P.S.C." is a 2010-founded physiotherapy company. It provides high-quality treatments to improve people's health.

The process of evaluating patients shows areas that require improvement. The electronic health records system has not yet fully achieved the expected benefits. The electronic system was not adapted to the patient evaluation process workflow and had an average time of 1.25 hours per patient. Nevertheless, evaluating the patient using the manual procedure typically takes an average of 0.75 hours. Therefore, company's decision was to use the manual method with a printed form for these past years. This situation restricts the number of patients examined every hour and decreases process efficiency.

This project aimed to reduce the evaluation time per patient using the electronic system by at least 25% by optimizing activities, customized template development, and eliminating waste to raise service productivity and efficiency. Traditional and electronic methods for patient evaluation were analyzed to simplify and optimize the process. Implementing customized templates in the electronic system to replace the traditional manual method reduced the evaluation time and increased process efficiency.

Background

Despite the growing usage of electronic medical records, some physiotherapists still use traditional methods to keep their patients' clinical information. A pilot study comparing traditional paper-based and electronic physiotherapy records found that implementing an electronic system with a standardized format and uniform data entry could enhance the thoroughness of clinical records [1]. When customizing options in the information stored in the Electronic Health Record (EHR) system, investigators have emphasized the significance of data structure and standardization as a key success factor [1, 2]. Some studies align the technological and human elements critical to long-term care and effective EHR deployments [2, 3]. Software adaptability enables end users and companies to customize electronic records to their specifications [3].

Methodology

Define Problem

The electronic health record system is unsuitable for the patient's physical treatment evaluation. The system's default evaluation does not fully meet the examination/evaluation method requirements. The evaluation format and the data entry were not arranged logically and structured according to the process workflow. These conditions imply that each patient's evaluation takes 1.25 hours using the electronic system, reducing the process efficiency and restricting the number of patients assessed per hour. Consequently, the company has continued using the manual approach throughout the years.

Measure

The following average timings were observed:

- Time using the Electronic System: 1.25 hours
- Time using the handwritten method: 0.75 hours

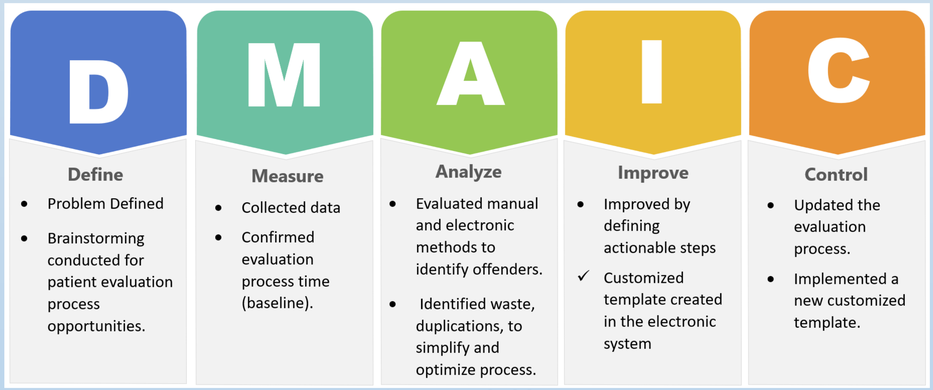

Figure 1 - Methodology

Analyze

Table 1 illustrates opportunities found for manual and electronic methods.

Table 1
Evaluation Process Opportunities

Process Opportunities	Manual Process	Electronic System Evaluation
Content does not fully match the evaluation process / Not customized		X
Format not adapted and structured		X
Data content with information not relevant to the Physical Therapy field		X
Collecting more data than required		X
Menu-driven and data entry not user-friendly		X
Lack of field for information needed		X
Request patient information in various instances		X
Potential for typographical errors	X	
Data retrievable and storage space	X	
Paper waste	X	
Long narrative notes to be documented	X	
Treatment plan not available immediately	X	
Duplicity in the form	X	
Required other administrative tasks (document scanning)	X	

Improve

This stage included the creation of a custom template, as shown in Figure 2.

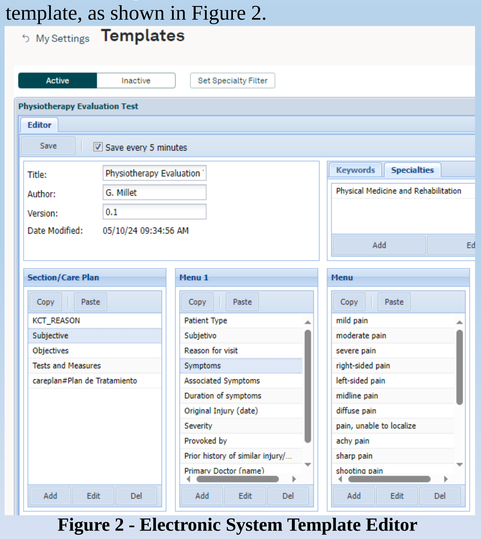

Figure 2 - Electronic System Template Editor

Control

The Tebra Electronic Health Records system will maintain control of the new customized template usage during the physiotherapy evaluation process. Educating the end-user on how to use the new template is one of the essential elements of a successful implementation and control strategy. The training was provided to the end user.

Results and Discussion

Outcomes for the physiotherapy evaluation process optimization:

- It is feasible to substitute the manual approach and associated duties with the new customized template for evaluation in the electronic system.
- The data collection and template structure for patient information are easy to use and eliminate redundant steps for the end user.
- The waste of paper will be significantly reduced after the new template is fully adopted.
- Using the new custom template, the average time spent on patient evaluations was 0.70 hours.

Conclusions

The physiotherapy evaluation process can be optimized using the electronic medical history system, adapted to the clinician's process workflows, and customized system features based on end-user needs. The process efficiency was improved by creating and utilizing customized templates to replace the manual physical therapy patient evaluation method.

Using customized templates organized in a structured manner for patient data collection has a positive impact on reducing the evaluation time duration and increasing process efficiency. The organization has numerous advantages when using system-specific features to optimize its clinical operations and processes.

Future Work

The execution of the template will be monitored through periodic reviews, and any necessary adjustments will be carried out based on post-implementation evaluations.

References

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