

# Abstract

## Background

Order sets are clinical decision support tools that aim to help providers prescribe appropriate treatments using a pre-defined set of applicable drugs and recommended dosages, based off of evidence-based guidelines. Order sets were divided broadly into two categories, medical or ICU admission, and addendum order sets. Addendum order sets were defined as disease specific order sets meant to be used with the general medical admission order set.

## Objective

The purpose of this project is to improve the utilization of addendum order sets by showing the difference in length of stay when using admission sets compared to addendum order sets.

## Methods

The pneumonia and heart failure addendums were studied to ensure the medications were up to date with the most current guidelines. The following assumptions were made, that the patients received the medications in the order set and that they were not suffering from multiple conditions. The inclusion criteria was defined as: patients >18 years old, whose final coded diagnosis was either pneumonia or heart failure from 2/1/2021 to 7/31/2021. The population was then divided into 2 groups, those that were treated from the general medical admission set or the ICU admission set and those that were treated using addendum sets. The admission and discharge dates were used to calculate the average length of stay.

## Results

There were 1204 pneumonia patients admitted in the 6-month period. Only 91 (7.5%) pneumonia patients were treated using the pneumonia addendum and their average length of stay was 7.1 days. Those who were treated from the medical admission order set without addendum had a longer length of stay averaging 7.5 days. There were 1488 heart failure patients admitted in the same period. Only 113 (7.6%) of heart failure patients were treated using the heart failure addendum and their average length of stay was 5.2 days. Those treated from the medical admission set without addendums had an average length of stay of 5.8 days.

## Conclusion

Use of addendum order sets resulted in a shorter length of stay in both heart failure and pneumonia populations. Both addendums are underutilized despite being up to date and having evidence that the appropriate use of order sets leads to more efficient and effective evidence-based care. Ongoing education is needed to standardize the way order sets are used and to provide feedback.