Healthcare Literacy and Pharmacy Labelling QI Study

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#1: Purpose and Background

Purpose: To study and improve the interaction between healthcare literacy and prescription label understanding in an active duty Coast Guard population.

Background: Pharmacy personnel report that a number of patients do not appear to understand basic facts about their prescription medications such as indication, number of refills, expiration date, and how to request a refill, despite labelling on their prescription containers.

Lack of understanding and interpretation of current prescription labelling could increase the risk of non-compliance, misuse, and adverse drug effects. Many studies have documented that healthcare literacy is not strongly correlated with either patient age or education level. As a result, patients may misinterpret their prescription labels.

#2: Benchmarks & Goals

Benchmarks:
A study published in the Journal of General Internal Medicine demonstrated that Patient understanding of prescription label instructions ranged from 53% for the least understood to 89% for the most commonly understood label. Setting a goal of 85% correct answers will demonstrate that our patient’s label understanding is within the upper 5% based on this study.

GOAL: 85% goal for patients correctly answering 8 label specific questions based on a standardized prescription label.

#3: Data Collection Plan, Severity, Possible Sources of Problem

To characterize if labelling-specific issues were preventing patients from correctly understanding their prescription labels, patients were presented a written survey based upon USCG Base Alameda’s standard prescription label and asked 8 questions to assess understanding of medication purpose, how and when to take their medications, and how and when to request refills. We also sought to determine if a subset of the USCG Base Alameda active duty population is at risk of limited healthcare literacy utilizing the 6-question Newest Vital Sign tool. Patients were also provided free-form suggestion fields.

Surveys were distributed to all active duty members at the USCG Base Alameda pharmacy.

#4: Evidence of Data Collection

From March 01 to April 29, 2019, 45 surveys were voluntarily completed by active duty patrons of the USCG Base Alameda pharmacy.

In addition to demographic data, the following questions were used:

1. What is this medication treating?
2. How many refills are left?
3. If you want a refill what number do you call?
4. Do you need an appointment with a provider to get more of this medication?
5. When does this prescription (not medication) expire?
6. What major side effects should you be aware of?
7. How frequently (in hours) should you take this medication?
8. How many capsules do you take each time you are taking this medication?

#5: Data Analysis

Survey results and free-form participant responses were used to create a patient centered label: adding indication, using proper sentence structure (capitalizations and punctuation), streamlining refills (“X refills by XX/XX/XXXX”), aligning important areas with pre-printed label colors for emphasis, and defining specific timeframes to take medications which correspond with the SIG frequency as follows:

- **Goal was met on 7 of 8 label-specific questions.**

#6: Initial Performance vs. Goal

In addition to a small percentage (6%) of active duty patients having the possibility of limited healthcare literacy, results from 5 of the label specific questions did not meet the performance goal of 85%; thus, indicating a need to improve prescription labeling to enhance patient understanding.

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- **goal was met on 7 of 8 label-specific questions.**

#7: Corrective Action

Survey results and free-form participant responses were used to create a patient centered label: adding indication, using proper sentence structure (capitalizations and punctuation), streamlining refills (“X refills by XX/XX/XXXX”), aligning important areas with pre-printed label colors for emphasis, and defining specific timeframes to take medications which correspond with the SIG frequency as follows:

- **goal was met on 7 of 8 label-specific questions.**

#8: Re-measurement

The newly designed label was used with the 8 original label-specific questions until 45 new surveys were completed with the following results:

**Goal was met on 7 of 8 label-specific questions.**

#9: Additional Corrective Action

The newly designed label was used with the 8 original label-specific questions until 45 new surveys were completed with the following results:

**Goal was met on 7 of 8 label-specific questions.**

#10: Communication of Findings

The study was discussed at quarterly Quality Improvement Focus Group meetings and minutes were posted on the Coast Guard Portal for review by higher level authority. The Regional Pharmacy Executive communicated the results of this study with the Coast Guard pharmacy community nationwide.

The results of this study demonstrated a significant improvement in patient understanding and satisfaction with their prescription labels.

References: