Errors in Translated Medication Instructions

Step 1. Outline
Define the Problem

What	Problem(s)	Taking medications incorrectly
When	Date, time	Proactive
	Different, unusual, unique	Patient does not speak English
Where	State, city	Proactive
	Task being performed	Distribution of prescription medicines

Impact to the Goals

Patient Safety	Potential for injury
Employee Impact	Extra work for pharmacists, translators
Labor, Time	
Compliance	
Organization	Patients do not understand instructions
Patient Services	

This incident	?
Frequency	~half of labels generated by computer contain "serious mistakes"
Annualized Cost	?

A recent study published in the American Academy of Pediatrics Journal found an overall error rate of the prescription instructions that had been translated into Spanish by computer of 50%. (86% of the pharmacies surveyed translated their prescriptions with a computer program.) It is likely that patients with the incorrectly translated prescription instructions took the medicine incorrectly, resulting in the potential for serious harm, or even death. This is an impact to the patient safety goal.
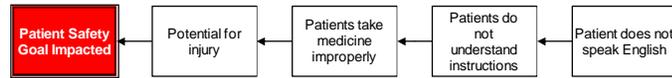
Step 2. Cause Map
High Level

| Patient Safety Goal Impacted	←	Potential for injury	←	Patients take medicine improperly	←	Patients do not understand instructions	←	Patient does not speak English

The rate of errors made by the computer means more work for pharmacists and translators due to the corrections that must be (or should be) made. (Obviously this is not always happening.) Patients receiving instructions they do not understand can be considered an impact to the patient services, compliance, and organizational goals. (The study was performed in the Bronx, New York. It is a law in New York City for pharmacy chains to provide translated labels for the top seven foreign languages in the area.)
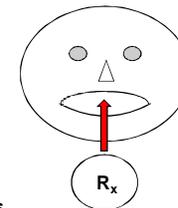
Step 2. Cause Map
Detail Level
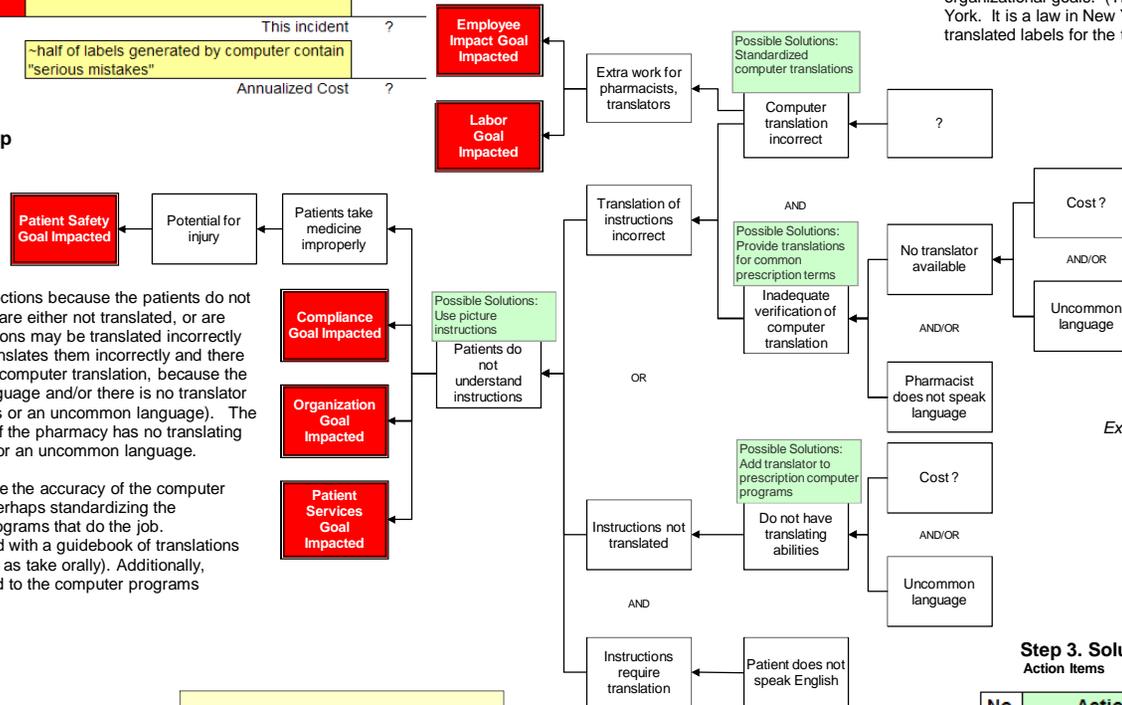
Patients do not understand the directions because the patients do not speak English and the instructions are either not translated, or are translated incorrectly. The instructions may be translated incorrectly because the computer program translates them incorrectly and there is an inadequate verification of the computer translation, because the pharmacist does not speak the language and/or there is no translator available (likely due to lack of funds or an uncommon language). The instructions may not be translated if the pharmacy has no translating capabilities, also likely due to cost or an uncommon language.

An obvious suggestion is to improve the accuracy of the computer programs that do the translating, perhaps standardizing the translations among the different programs that do the job. Pharmacists could also be provided with a guidebook of translations for standard pharmacy terms (such as take orally). Additionally, translation software could be added to the computer programs currently used by pharmacists.

I have a simple suggestion that I borrowed from the aviation industry. I noticed the last time I flew that instead of having translations of the safety instructions in a dozen different languages, there were practically no words at all. Instead, the airline used picture instructions. I suggest doing something similar with medications.

Example picture instruction for "Take orally"

Possible Solutions: Standardized computer translations

Possible Solutions: Provide translations for common prescription terms

Possible Solutions: Use picture instructions

Possible Solutions: Add translator to prescription computer programs

Step 3. Solutions
Action Items

No.	Action Item	Cause
1	Standardized computer translations	Computer translation incorrect
2	Provide translations for common prescription terms	Inadequate verification of computer translation
3	Use picture instructions	Patients do not understand instructions
4	Add translator to prescription computer	Do not have translating abilities

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Why?

Effect	←	Cause

NOTE: Read the Cause Map from left to right with the phrase "Was Caused By" in place of each arrow.