WRONG KIDNEY REMOVED

"Wrong site surgery events occur basically because none of the processes that we use in taking care of patients is perfect... Best estimates are that 40 wrong site surgeries occur in the United States every week, and it's the most common sentinel event reported to The Joint Commission."
- Mark R. Chassin, M.D.
President, The Joint Commission

"Modern medical practices and standards of care prevent these sort of things from happening - but when they do, they're horrific medical mistakes."
- Attorney representing the victim's family

Cause Mapping is a Root Cause Analysis method that captures basic cause-and-effect relationships supported with evidence.

CAUSE MAPPING
Problem Solving • Incident Investigation • Root Cause Analysis

Step 1	Problem	What's the Problem?
Step 2	Analysis	Why did it happen?
Step 3	Solutions	What will be done?

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

1 Problem

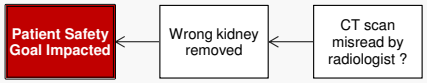
What	Problem(s)	Wrong kidney removed
When	Date	January 17, 2013 (diagnosis)
	Time	?
	Different, unusual, unique	CT scan misread
Where	Facility, site	Fort Worth, Texas hospital
	Unit, area, equipment	?
	Task being performed	Removing cancer-stricken kidney

Impact to the Goals

Patient Safety	Severe patient safety impact	
Employee Safety	?	
Environmental	?	
Compliance	"Never event"	
Patient Services	Wrong kidney removed from patient	
Schedule/ Operations	Lawsuit against radiologist, urologist	>$1 M
Property/ Equipment	?	
Labor/ Time	?	
		This incident >$1M
Frequency	Wrong-site surgeries estimated at 40 per week	
		Annualized Cost >$2B

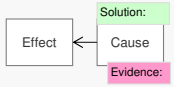
2 Analysis

Basic Level Cause Map - Start with simple Why questions.

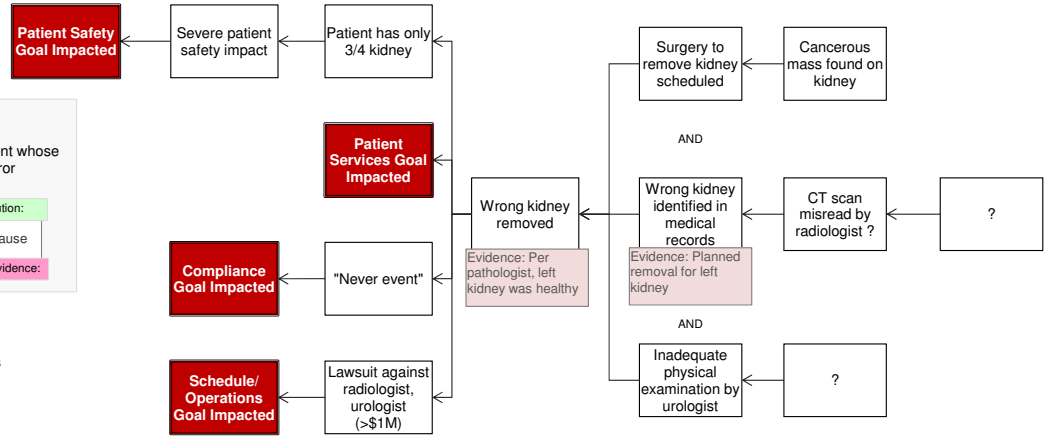


Basic Cause-and-Effect

According to an over $1M lawsuit filed by a patient whose healthy kidney was accidentally removed, the error stemmed from a misreading of a CT scan.

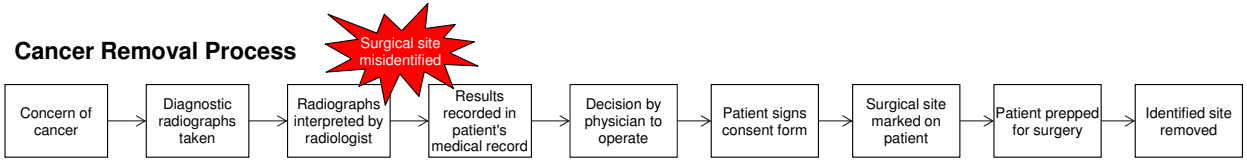


More Detailed Cause Map - Add detail as information becomes available.



To better understand the steps that led to the surgery, they can be diagrammed in a Process Map. A Process Map lays out a process in much the same way that a Cause Map visually lays out cause-and-effect relationships. What's important to note is that an incorrect reading of a CT scan or other diagnostic tool propagates through the process. With no second opinions or double checks built in, the diagnosis of cancer in the left kidney was the only information the urologist had to determine the operating site.

Cancer Removal Process



3 Solutions

Although both processes and people's performance can be improved, it will never reach perfection. For this reason, adding double checks and second opinions into processes is essentially to reduce the risk of one mistake resulting in a devastating patient safety impact. In this case, having a second opinion on the CT scan, or having the physician re-identify the area with a physical exam prior to surgery (if possible) may have identified the error prior to removal of a healthy kidney.

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