

1 Problem

What	Problem(s)	Risk of rejection of "marginal" kidneys
	When	Operations using new techniques performed November 2010 to November 2011
Where	Different, unusual, unique	Procedure allows use of "marginal" kidneys
	Country	United Kingdom
	Facility, site	Leicester General Hospital
	Unit, area, equipment	Transplant kidneys
	Task being performed	Normothermic perfusion

Impact to the Goals

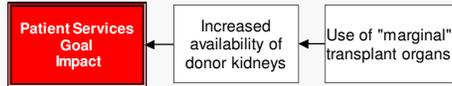
Patient Safety	Reduction of risk of rejection of transplanted organ
Employee Impact	?
Compliance	?
Organization	?
Patient Services	Increased availability of donor kidneys
Property, Equip, Mtls	?
Labor, Time	Reduction of people on waiting list

Frequency: Estimates increase of 500 kidneys/year

2 Analysis

Basic Level Cause Map

Start with simple Why questions.



Basic Cause-and-Effect

Transplanted donor kidneys save lives, but availability does not meet demand. Contributing to the problem is that some people who are willing to be donors have organs that are considered unsuitable for transplant. A new procedure has been successful in making some of these

More Detailed Cause-and-Effect

The procedure involves flushing donated kidneys, which would previously have been rejected as unsuitable for transplant, with oxygenated blood (normothermic perfusion). This can allow use of some damaged kidneys, such as those from the elderly or those with high blood pressure or diabetes. It decreases the risk of a marginal organ being rejected. It is believed that this could increase the availability of organs by about 500 a year in the United Kingdom, reducing the number of people on transplant waiting lists by about 10%. (There are more than 6,400 kidney patients waiting for a transplant in the UK.)

So far, 17 organs that have been through the procedure have been successfully transplanted, between November 2010 and November 2011. They are all functioning well. The success of this procedure can be examined in a Cause Map, or visual root cause analysis. Positive impacts to the goals can be examined in the same way that negative impacts are - by identifying the impacts and asking "why" questions to identify the causes. Due to this procedure, the patient safety goal has been impacted by reducing the risk of rejection of transplanted organs. The patient services and material goal has been impacted by increasing the availability of donor kidneys. And, the "labor" goal has been impacted by reducing the amount of time people wait for donor kidneys.

Beginning with these impacts and asking "why" questions, we can identify that the procedure is allowing the use of previously marginal organs by allowing treatment outside the recipient body and reducing the risk of rejection. This increases the number of organs that can be used, and since there are still more organs needed than available, this reduces the amount of time on the waiting list.

3 Solutions

Although this procedure should increase the number of organs available and reduce time on the waiting list, it still will not provide enough organs for everyone who needs one. Donor outreach to increase donors and family understanding of the life-saving organ donation process is still needed.

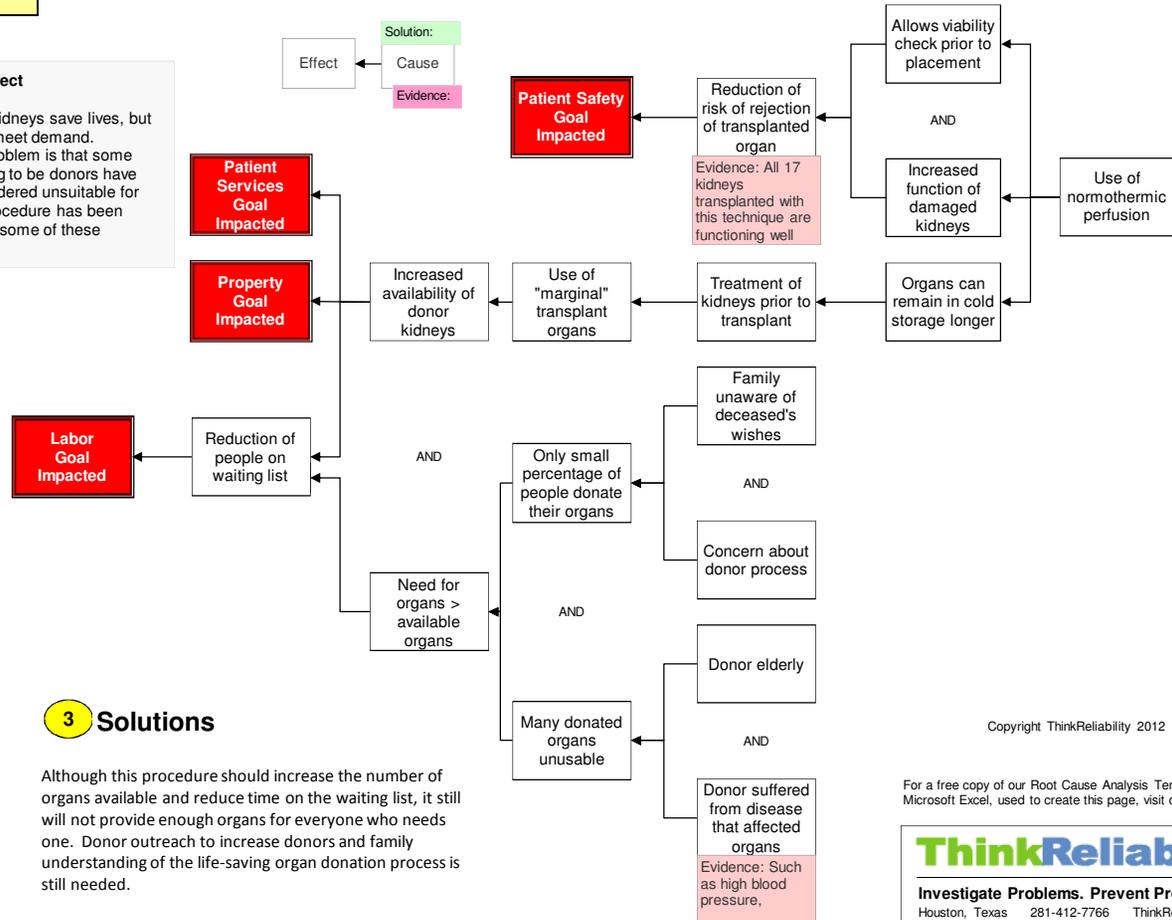
KIDNEY TRANSPLANTS

Increased usability of donor kidneys Cause Map

"Normothermic perfusion allows us to gradually reintroduce blood flow to donor kidneys outside of the body and in a controlled way. This reverses much of the damage caused by cold storage while offering us a unique opportunity to treat the organs with anti-inflammatory agents and other drugs before going on to complete the transplant procedure."

- Professor Mike Nicholson, Leicester General Hospital

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



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



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