Near Misses in Living Donor Liver Transplantation: Proactive Safety Debriefings

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BACKGROUND

❖ Transplantation and, in particular, living donor liver transplantation (LDLT), involves complex processes and systems of care that are particularly susceptible to medical errors and preventable complications.[1]

❖ In order to capture safety issues and events after each LDLT procedure, a proactive, web-based patient *safety debriefing tool* was developed.

❖ The tool was developed by an interdisciplinary team of patient safety experts, transplant surgeons, nurses, ancillary clinicians and staff.

❖ Division leadership actively supported the study and encouraged participation.

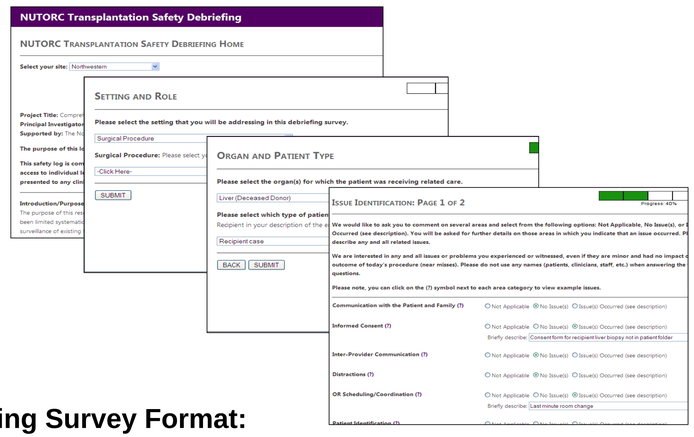
❖ While several high profile transplantation patient safety events have been reported, there has still been limited systematic research to describe the range of specific patient safety issues and events that occur in the context of transplantation.[2-4]

❖ Proactive, timely debriefings of clinicians about safety related issues and events during clinical care has been shown to be an effective way of gathering information about risks in healthcare processes and systems.[5-6]

METHODS

Timeframe: May 2009-May 2010

Clinician Responders: All members of the healthcare team who participated in the LDLT procedure at Northwestern Memorial Hospital, including, but not limited to Surgeons, Anesthesiologists, Nurses, Technicians, Residents, Fellows, and Observers.



Debriefing Survey Format:

❖ Each member of the clinical team receives a reminder email containing a link to the secure, web-based tool.

❖ The tool includes a consent form, which assures participant confidentiality, and describes how the debriefings will be used to improve the transplantation process.

❖ The *safety debriefing tool* solicits comments on all errors, adverse events, near misses, and safety related system or process issues encountered during the procedure.

❖ Both open-ended questions and specific prompts are used.

RESULTS & CONCLUSIONS

Table 1: Frequently Reported Safety Risks

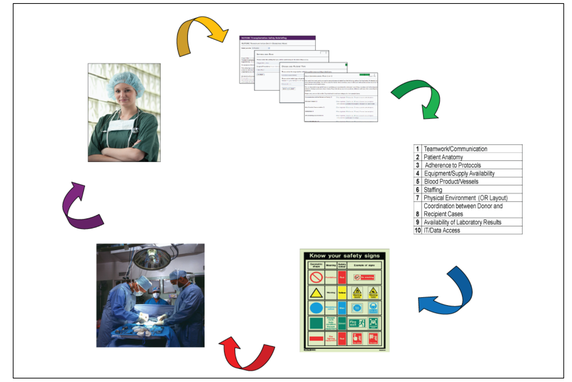
High Risk Area	Example	% of LDLT Procedures	# of LDLT Debriefings
Teamwork/ Communication	Anesthesia unaware of revised procedure start time	74%	43
Protocols Suboptimal or Not Followed	Sterile IV line procedures not followed	61%	22
Staffing	Fellow not available	48%	17
Coordination between Donor and Recipient Cases	Delay in removing donor liver as recipient was not ready	43%	17
Obtaining Blood Product/Vessels	Native vessels unavailable	39%	12
Equipment Availability and Functioning	Power supply for anesthesia machine short circuited	35%	24
IT/Data Access	Cardiology workup not in electronic medical record	30%	7
Availability of Laboratory Results	Key intra-operative lab values missing	30%	9
Supply Availability	Inadequate amount of preservation solution in the OR	22%	10

❖ 131 individual web-based *safety debriefings* were submitted.

❖ Debriefings were in response to 20 LDLT procedures.

❖ Clinicians were willing to describe safety problems using a proactive, electronic surveillance system.

❖ *Safety debriefings,* conducted for each transplantation procedure, can provide rate-based estimates of errors, adverse events, and near miss events.



❖ LDLT clinicians complete online *safety debriefings* after each procedure

❖ A group of experts in transplantation and patient safety conducts an analysis

❖ Results are used to identify key areas of risk

❖ These areas are then targeted or safety interventions and system and process improvement projects

A number of frequently reported safety risks (Table 1) have been identified. Next steps include an in-depth analysis to determine the high criticality safety risks. In combination with other risk assessments, these findings will be used to develop solutions to improve LDLT patient safety. Improvements will lead to superior care and increased safety for patients and a better work environment for clinicians. As clinicians continuously provide feedback through the *safety debriefings*, a cycle of risk-informed system and process improvements will begin.

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