

Keeping Patients Safe: Developing and implementing a method to monitor patient safety during cataract surgery in an eye hospital in India

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Introduction

Patient safety is 'absence of preventable harm to a patient during the process of healthcare'. WHO estimates that more than 20% of patients are harmed whilst receiving hospital care¹. Surgical procedures, including cataract surgery, are one of the commonest areas of hospital care that lead to harm.

Very little has been written about patient safety during cataract surgery in low income and middle income countries despite several major incidents leading to considerable morbidity².

This study aimed to develop a method to monitor patient safety during cataract surgery in a hospital in India.

Methods

Two methods of monitoring patient safety were used:

Observation of the patient pathway using a framework for patient safety. This established compliance with 4 aspects of care (and 14 domains) that have been found to be important for patient safety based on a review of the evidence.

The lead researcher (RL) undertook observation of the patient pathway using the framework to assess the degree of compliance in each area of the hospital. This involved minute-by-minute note taking of all activities witnessed by the observer in each of four clinical areas. These notes were then analysed for themes based on the framework. For example: the continued absence of a member of staff from the front desk in outpatients would be noted. If the absence was repeated over at least two observation periods then it would develop as a theme. This would then be reflected the Staffing, Supervision and Responsibility categories of the framework. A score based on a traffic light system was developed based on the observations. If there were two observations that recorded concerns in the areas being assessed then an 'amber' traffic light was awarded. More than two received a 'red' traffic light. Areas where concerns were either not repeatedly observed or were not present received a 'green' traffic light. This was an assessment of likelihood of any patient safety incident not related to the severity of the incident.

Observations took place 3 times over 1 year.

A meeting was held where staff were encouraged to select patient safety indicators that could be collected from case notes for every patient undergoing cataract surgery. Indicators were collected prospectively over 1 year and were recorded as present or absent. Indicators selected had to be routinely recorded in the notes and have direct relevance to patient safety (i.e. If the indicator was not recorded then patient safety during the procedure might be compromised).

The results from both exercises, and recommendations for change, were made available to staff.

Reasons for changes in patient safety indicators and the patient pathway were explored in discussion with staff at each follow up visit. Reasons were recorded by the research team.

Chart 1: Assessment of patient safety using the patient safety framework

	The patients			The individual			The team			The work					
	Language and Communication	Complexity	Ability to help	Protocols	Skills and knowledge	Mental health	Physical health	Responsibility	Supervision	Communication	Workload	Staffing		Environment	Equipment
Reception	Green	Green	Green	Red	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Reception
Outpatients	Green	Green	Green	Red	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Outpatients
Ward	Green	Green	Green	Red	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Ward
Theatre	Green	Green	Green	Red	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Theatre

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- References:
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 2. Nine lose eyesight after cataract surgery. Times of India. <http://timesofindia.indiatimes.com/city/hyderabad/Nine-lose-eyesight-after-cataract-surgery/articleshow/13577632.cms>

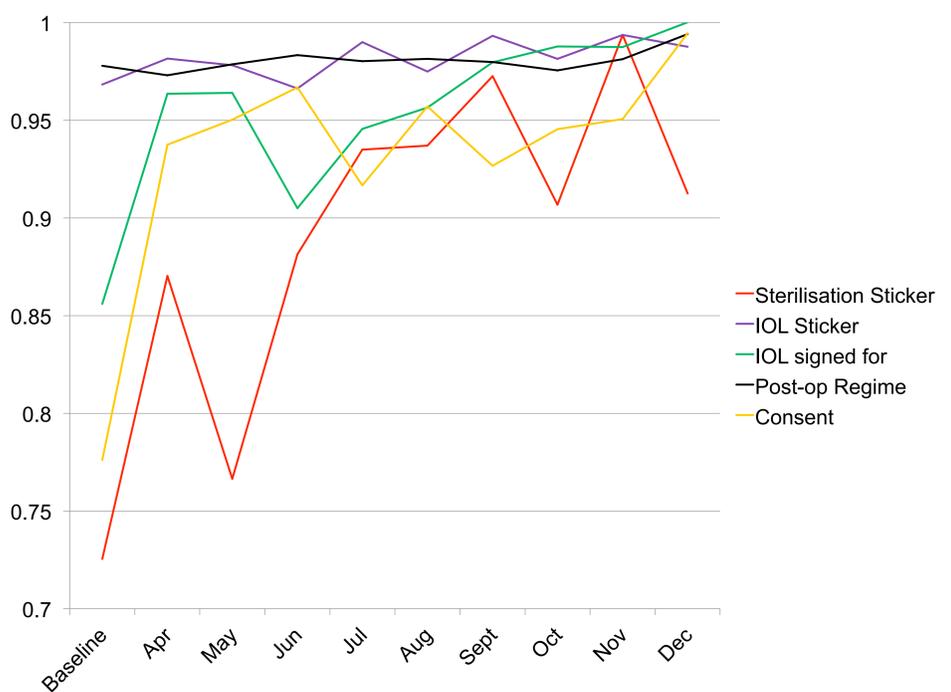
Results

Chart 1 shows the results of the initial framework assessment. Four clinical areas were reviewed; reception, outpatients, the ward and theatre. The overall assessment suggested that the ward area was the most likely to have a patient safety issues. This was due to a combination of difficult environment, limited staffing and patients who had language or other difficulties. The use of traffic lights allows a quick assessment of where these issues are more likely to occur and what aspects of patient care need to be addressed.

Chart 2 shows the results of five clinical indicators taken from the patient notes over a 12 month period. Indicators selected were completed consent, intraocular lens sticker present in notes, intraocular lens selection made by surgeon, post-operative treatment written up and sterilisation sticker present in the notes. Chart 2 shows that there was a significant ($p < 0.000$) increase in every indicator from baseline (3 months pre-intervention data) to December 2011.

Specific changes in the patient pathway were noted at follow up visits; these included new infrastructure (equipment) and changes in communication (signage). There was also increased awareness of the indicators which was manifest by the increase in completeness of the indicators in the patient notes. However certain changes (e.g. staffing levels, protocols, environmental changes) had not been implemented and were thought by staff to be very challenging.

Chart 2: Trends in patient safety indices over 12 months



Conclusions

Patient safety during cataract surgery is rarely considered holistically. This study developed a method to monitor patient safety across the whole cataract surgical service using a combination of simple indicators from the patient notes and more complex observation of the patient pathway.

This method breaks down patient safety into a set of meaningful indices that cover the whole patient pathway however more work is required to standardise the indices so that different hospitals measure the same things to allow comparison between units.

This is the first time that patient safety of cataract surgery has been studied in a hospital in India and the results show that this methodology is effective in capturing the status of patient safety across the patient pathway and making the results meaningful for both clinical and administrative staff.