

Four Wise Monkeys: Write No Evil, Say No Evil, But Definitely See And Hear Evil !

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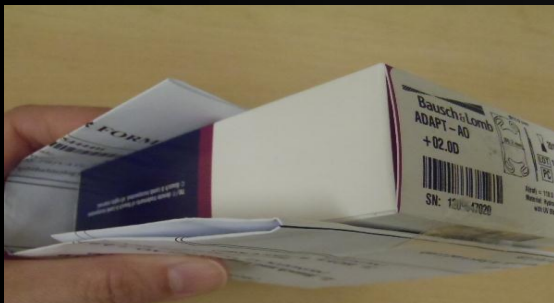
1. Introduction:

Wrong intraocular lens (IOL) implantation related errors are potentially avoidable devastating complications of cataract surgery. Cataract surgery pathway involves many steps in selection and implantation of appropriate IOL (type and power). We strategize our existing procedures of IOL reservation and time out to eliminate these errors.

A. IOL information reference on SNEC intranet

Singapore National Eye Centre SingHealth										
AMO (MONO)										
TYPE	MODEL	"A" IUS	CON ULIB	OPTIC SIZE	DESCRIPTION	MATERIAL	OVERALL LENGTH	DIOPTRER RANGE	Package	Display
Monofocal	AR 40M AR40 E AR40E +1.0	118.4	118.7	6mm	3pc foldable	Acrylic	13mm	M. from (-)100 - 150 E. from 20 - 5.50 S. from 6D to 30D		
Monofocal	AABDO (AMO) +1.0	118.4	118.8	6mm	1 pc	Acrylic	13mm	6D to 30 D		
Monofocal Tactile 1	ZCB00 +1.0	118.8	119.3	6mm	one pc	Acrylic	13mm	5D-34D		

B and C. Faxed sheet with IOL details as selected by surgeon and the IOL model box is shown to the surgeon prior to time out.



2. Modifications in IOL reservation process:

- To address inconsistent IOL model description during reservation process, surgeons were required to standardize IOL description by referring to IOL models information on SNEC intranet which provided information textual and pictorially, aiding in accurate choice of IOL.
- To eliminate problem of transcription errors related to reserved IOLs by the clinic nurse, IOL order sheet completed by the surgeon was photocopied and faxed to the OT team.
- To account for errors related to similar sounding IOL models an additional step was introduced in time out process. This mandated **"showing" IOL box** to the surgeon prior to time out to confirm the model and power of IOL.
- We have incorporated- Written, verbal, auditory and visual checks in time out process to eliminate IOL selection errors.

3. Results:

- We saw major improvement in accuracy of IOL model description increase to 80% over 3 month study period from January to March 2013. This was an EPIC study.
- Near misses related to wrong IOL selection were reduced from 10/ 100 cases to 2/100cases.
- Implementing this process has eliminated transcription errors completely.
- Introducing visual step during time out has averted SREs related to wrong IOL implantation.
- SREs related to wrong IOL selection due to system processes have been reduced and "Human" inattention appears to be the main causative factor.

4. Conclusion:

High volume and rapid turn over of cataract surgery can result in wrong IOL implantation. We successfully addressed misadventures that could result from human errors and system processes by a team approach. We employed additional checks and rechecks in these processes by more than one person. This was adopted so that surgeon would 100% confirm the IOL selected (visual, verbal, written and auditory clues) and eliminated inaccurate IOL implantation.

References:

- Wrong intraocular lens implant; learning from reported patient safety incidents. Kelly SP, Jalli A. Eye 2011 Jun;25(6):730-4.
- Lessons learned: wrong intraocular lens. Schein OD, Banta JT, Chen TC, Pritzker S, Schachat AP. Ophthalmology. 2012 Oct;119(10):2059-64.