

## Commentary: Practical use of rubric for assessment of eye bank professionals for eye retrieval

*“What gets measured gets improved”*

Eye banking in India has grown steadily in the past few decades. According to the Eye Bank Association of India (EBAI) statistics of 2018–19, there are 238 registered eye banks and the annual cornea collection was 56,497 with 27,049 transplantation surgeries. In a global survey on eye banking and corneal transplantation, India was cited at a stage of “almost sufficient” category.<sup>[1]</sup> With increasing awareness and efforts of the eye banking community, India is likely to be soon heading towards the stage of “self-sufficiency.”

In the early years of inception, eye banking model in India focussed more on cornea collection than on utilization.<sup>[2]</sup> Hence, majority of the harvested corneas did not meet the criteria of corneal transplantation. However, in recent years, there has been a paradigm shift and the emphasis is placed on utilization than merely on harvesting corneas.

The success of keratoplasty depends majorly on the donor tissue quality.<sup>[3]</sup> Without the best practices in donor cornea retrieval, the biological tissue may fail to meet the criteria for transplantation or if transplanted may not deliver the desired surgical outcomes. In this regard, the competency and capabilities of cornea recovery technicians are of paramount importance.

Training of recovery technicians and the assessment of the competency of newly recruited and existing ones is a well-defined and standard operating process of the eye banks. The eye banks have an “*in-situ*” corneoscleral rim excision assessor checklist” that is practiced in auditing the competency of the newly trained recovery technicians (supplement attached).<sup>[4]</sup> In addition, the competency assessment of experienced recovery technicians is also performed annually. This activity should be performed rigorously.

The authors have compared the proficiency of reasonably well-trained technicians in 2 eye banks,<sup>[5]</sup> based on a grading system similar to Ophthalmology Surgical Competency Assessment Rubric (OSCAR) for assessment of trainees as an educational model.<sup>[6]</sup> The analysis revealed that one of the most crucial steps (step 15- AC maintained) in cornea retrieval had “poorest scores” amongst the recovery technicians from both the eye banks. Considering the experience of eye bank technicians of retrieving 150 eyeballs at both the eye banks, it seems that this step needs more understanding and corrective action as “anterior chamber (AC) collapse” would be detrimental to the corneal endothelium. Similar analytical studies on competency and errors during cornea harvesting by recovery technicians can be undertaken in other eye banks and compared with the authors’ findings.

The study highlights the importance of “auditing and critique” as the fundamentals of learning and how professionals can get better and further improve upon what they do. The

strength of this rubric is that all critical steps of cornea retrieval process are measurable with a more elaborate scoring system, thus making it easier in defining the areas that need correction and focussed training.

**Sunita Chaurasia**

Senior Consultant, Cornea and Anterior Segment Services,  
Medical Director, Ramayamma International Eye Bank,  
LV Prasad Eye institute, Kallam Anji Reddy Campus, Banjara Hills,  
Hyderabad, Telangana, India

Correspondence to: Dr. Sunita Chaurasia,  
Senior Consultant, Cornea and Anterior Segment Services, Medical  
Director, Ramayamma International Eye Bank, LV Prasad Eye  
institute, Kallam Anji Reddy Campus, Banjara Hills, Hyderabad,  
Telangana - 500 034, India.  
E-mail: sunita@lvpei.org

### References

1. Gain P, Jillienne R, He Z, Aldossary M, Acquart S, Cognasse F, *et al.* Global survey of corneal transplantation and eye banking. *JAMA Ophthalmol* 2016;134:167-73.
2. Oliva MS, Schottman T, Gulati M. Turning the tide of corneal blindness. *Indian J Ophthalmol* 2012;60:423-7.
3. Prajna VN, Shah M. Good quality pays rich dividends. *Indian J Ophthalmol* 2018;66:357-8.
4. Chaurasia S, Mohamed A, Garg P, Balasubramanian D, Rao GN. Thirty years of eye bank experience at a single Centre in India. *Int Ophthalmol Int Ophthalmol* 2020;40:81-8.
5. Farooqui JH, Acharya M, Schunder I, Hinesley R, Das A. Practical use of rubric for assessment of eye bank professionals for eye retrieval and its role in improving eye retrieval process in eye banks: An Indo-American experience. *Indian J Ophthalmol* 2020;68:1037-9.
6. Farooqui JH, Jaramillo A, Sharma M, Gomaa A. Use of modified international council of ophthalmology- ophthalmology surgical competency assessment rubric (ICO- OSCAR) for phacoemulsification- wet lab training in residency program. *Indian J Ophthalmol* 2017;65:898-9.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Access this article online	
Quick Response Code:	Website: www.ijo.in
	DOI: 10.4103/ijo.IJO_167_20

Cite this article as: Chaurasia S. Commentary: Practical use of rubric for assessment of eye bank professionals for eye retrieval. *Indian J Ophthalmol* 2020;68:1481.

## *In-Situ* Assessor Checklist

Technician's Name: \_\_\_\_\_

Eye Bank/Eye donation Center, Place: \_\_\_\_\_

Assessor's Name: \_\_\_\_\_

(Please print)

Total Points: Aseptic Technique \_\_\_\_\_ Surgical Technique \_\_\_\_\_

Aseptic Points Range:        13–2 Pass                                11 or Less Fail

Surgical Points Range:        21–16 Pass                                15 or Less Fail

### Aseptic technique

1. Appropriate dress (Was the technician wearing a sterile gown, cap, and mask?)

- 1            Acceptable  
 0.            Unacceptable    If no, what was technician wearing? \_\_\_\_\_

2. Pen Light Exam performed

- 1            Acceptable  
 0.            Unacceptable    If unacceptable, describe: \_\_\_\_\_

3. Irrigation of cornea and conjunctiva with sterile saline. (Remove debris, mucus, ointment, etc.)

- 1            Acceptable  
 0.            Unacceptable    If unacceptable, describe: \_\_\_\_\_

4. Decontamination of the cornea and conjunctiva with povidone-iodine solution.

- 1            Acceptable  
 0.            Unacceptable    If unacceptable, describe: \_\_\_\_\_

5. Surgical prep of eye lids and surrounding area

- 1            Acceptable  
 0.            Unacceptable    If unacceptable, describe: \_\_\_\_\_

6. Wrapping of instruments (includes double-wrapped, single-wrapped, and vis-peel bag)

- 1            Acceptable  
 0.            Unacceptable    If unacceptable, describe: \_\_\_\_\_

Page 1

7. *In-situ* kit unwrapped so that the sterility of instruments and sterile field are not compromised.

- 1            Acceptable  
 0.            Unacceptable    If aseptic technique violated, note how: \_\_\_\_\_

8. Placement of non-sterile items and corneal preservation medium around sterile field.

- 1            Acceptable  
 0.            Unacceptable    If unacceptable, describe: \_\_\_\_\_

9. Surgical hand antisepsis (via 3–5 min scrub or EtOH-based surgical hand rub product) per appropriate Standard *and* Eye Bank's SOP.

- 1            Acceptable  
 0.            Unacceptable    If not appropriate, describe: \_\_\_\_\_

10. Gloving technique.

- 1            Acceptable  
 0.            Unacceptable    If unacceptable, describe: \_\_\_\_\_

11. Placement of instruments during procedure, and separate instruments used for conjunctiva resection and incision through sclera:

- 1            Acceptable  
 0.            Unacceptable    If unacceptable, describe: \_\_\_\_\_

12. Transfer of corneoscleral rim to vial or viewing chamber of preservation medium.

- 1            Acceptable  
 0.            Unacceptable    If unacceptable, describe: \_\_\_\_\_

13. Maintained sterility throughout procedure:

- 1            Acceptable  
 0.            Unacceptable    If unacceptable, describe: \_\_\_\_\_

## Surgical technique

1. Conjunctiva removal (360° periotomy) – Per Eye Bank’s SOP.

- 1 Acceptable: Complete removal
- 0. Unacceptable: compromised cornea, incomplete removal or contaminated the tissue.
- 0 Not performed: SOP requires removal however technician did not perform.
- 1. N/A: Eye Bank’s SOP does not require

Page 2

2. Scraping of sclera with a blade from limbus to 5 mm out or greater – Per Eye Bank’s SOP.

- 1 Acceptable
- 0. Unacceptable If unacceptable, describe: \_\_\_\_\_
- 0 N/A: Eye Bank’s SOP does not require.

3. Incision through sclera with a scalpel penetrating only to suprachoroidal space.

- 2 Acceptable
- 0. Unacceptable

4. Scissors technique (insertion and excision)

- 2 Acceptable: even cut, scissors in suprachoroidal space
- 1. Acceptable: slight problems
- 0 Unacceptable: many problems. If many problems, describe: \_\_\_\_\_

5. Manual dexterity during excision.

- 2 Acceptable
- 1. Unacceptable, slight problems
- 0 Unacceptable: many problems. If many problems, describe: \_\_\_\_\_

6. Width of sclera rim, between 2–4 mm from limbus.

- 2 Acceptable
- 0. Unacceptable

7. Leakage of vitreous.

- 2 None
- 1 A small amount of leakage
- 0 Unacceptable amount

8. Anterior Chamber maintained.

- 2 Acceptable
- 0. Unacceptable: anterior chamber collapsed

9. Ciliary body separation from sclera spur.

- 2 Acceptable: grasp of rim throughout with no distortion of the rim by excessive pulling – cornea may be placed down on globe to facilitate the removal
- 0. Unacceptable: peeled rim from choroid or dropped the cornea

Page 3

10. Rim separation technique, choroid removed from rim.

- 2 Acceptable: pushes choroid away from the rim
- 0. Unacceptable: peels rim away from the choroid.

11. Crystalline lens check.

- 1 Acceptable
- 0. Unacceptable

12. Question: Did the technician perform this procedure as described in the Eye Bank policies and procedures manual?

- 1 Yes
- 0. No

13. Question: Did the technician explain deviations, if any, from the procedure as described in the Eye Bank policies and procedures manual?

- 1 Yes (or not applicable)
- 0. No

## Comment section

Page 4