ISSUE 1

Livewire

INFECTION CONTROL

NEWS LETTER

FROM THE DESK OF EDITORIAL BOARD

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Dear Colleagues,

We keep on hearing about the news of cluster infection every now and then. We also suffered in the year 2004. Even today, the memories of those days haunt us. The way the media had behaved was horrible. It is very painful for sure. This should not have occurred. Now, we should do everything to ensure that it does not occur again, particularly with the recent advances in science. However, it is also a fact that we keep hearing this kind of news every now and then.

To prevent infections in any operation is the job of science of asepsis and antisepsis. The understanding of this science is rapidly increasing, thus bringing down the rate of infections in eye operations. The main question that arises is: Are we doctors trained enough in infection control measures during medical education? What can be done to make sure that we bring down the rate of post-operative infection in eye surgeries in today's given situation?

Following that, we decided to go after infection control activities in the best possible manner. We studied it as a subject in detail and prepared our own Protocol, Manual and Video demonstrating Operation Theatre activities. We have also conducted several workshops under different organizers and that still continues. A few articles were published in different journals / newsletters. A Journal of Infection Control was started by us. Infection Control Guidelines and Outbreak Policies have been suggested to National Programme for Control of Blindness (NPCB) through the Vision 2020 programme.

Now, we plan to restart the series of articles on infection control activities and Cipla Foresight has gracefully agreed to publish the same. Experts on the subject, across the country, are requested to contribute in the same. We will try to give an overview of understanding the science of infection control and the measures taken by different players and different protocols followed in their respective set-ups, thereby exposing the readers to the present practice across the country.

For the introductory newsletter, at our request, stalwarts in the field have given their time and stated on what they feel about the quality issues in the cataract surgical work in present times. Their views, we are sure, will make the readers aware of what is happening at national level. We sincerely thank all the contributors for their help for the cause. In the present issue we are sharing the views from Dr. Rathore - the NPCB perspective, Dr. Lalit Verma (the then secretary of AIOS in 2010) – the AIOS perspective, Dr. Sara Varughese and Dr. Phanindra Babu Nukella (Present president and CEO respectively) – the Vision 2020 perspective. We believe that this will make a useful reading. Once again, we thank all the contributors from the depth of our hearts.

CLUSTER INFECTION: NPCB PERSPECTIVE

Dr. A. S. Rathore,
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National Programme for Control of Blindness (NPCB),
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India has done very well as far as the number of cataract surgeries performed in a year is concerned. From a meager 500,000 cataract surgeries done in 1981, we have come up to 5.8 million cataract surgeries in 2009, a tremendous 11-fold increase in 30 years. This is thanks to the efforts of all of us involved in eye care across the country. We were the first to launch a National Programe way back in 1976. From then onwards, we have not looked back and today, we are in a position to guide other countries as well.

We have the best of Ophthalmologists, infrastructure and equipment in eye care. We are showing the path to the world, even in newer techniques. However, as we have the best in the world on one hand, we also have the other extreme issues yet to be dealt with.

Having done very well as far as the CSR (cataract surgical rate) of cataract surgeries is concerned, we at NPCB were surprised after the results of a national survey were published. We saw that the complication of cataract surgeries appeared as a cause of blindness in the national survey. Out of all the complications of cataract surgeries, endophthalmitis is the most dreaded and most difficult to treat. In general, the outcome in less favourable, although with newer drugs and technology, the scenario has improved a bit, but still it is the worst complication of cataract surgery.

Cluster infections occur where bulk surgical work is performed and if accidentally some breech in the preventive measures (to prevent the post-surgical infection) occurs, it may lead to cluster infections. Some of the episodes of cluster infections have been reported to us in the last five years as can be seen below. It is also important to note that not all the cluster infections are reported to NPCB

Table 1 State and Year-wise Distribution

Sr. No.	States	No. of Mishaps (Blind/Seriously affected)				Place of Surgery
		2006	2007	2008	2009	
1	Assam	35				Guwahati
2	Manipur		5			Bishnupur
3	Rajasthan			31		Suratgarh, Beawar
4	Uttar Pradesh			12	23	Barabanki, Lucknow
5	Orissa	9				Deogarh
6	Tamil Nadu			29		Tiruchirapalli
Total cases		44	5	72	23	144

The infection percentage varies from 7.7% (35 of 450 in RIO Guwahati, Assam) to 100% (23 of 23) in Lucknow.

Table 2 Distribution of cases of cluster infections according to place, reason and operating team

Sr. No.	Place of surgery	Total no. of surgeries done	No. of persons blind/ seriously affected N (%)	Reasons of mishap	Operating Team (Govt./ NGO)
1	Guwahati, Assam	450	35 (7.8)	Infection	Govt
2	Barabanki, Utttar Paradesh	88	12 (13.6)	Infection	NGO
3	Suratgarh, Sri Ganganagar (Rajasthan)	43	11 (25.6)		Govt.
4	Beawar, Rajasthan	72	20 (27.8)	Infection	NGO
5	Bishnupur, Manipur	16	5 (31.3)	Infection	Govt
6	Tiruchirapalli, Tamil Nadu	66	29 (49.9)	Infection	NGO
7	Deogarh, Orissa	14	9 (64.3)	Infection	Govt.
8	Lucknow, Uttar Pradesh	23	23 (100)	Infection	Govt

The after effects of these cluster infections are more horrifying to the patients, hospitals involved as well as to the NPCB. Following an episode of cluster infection in Tamil Nadu in Sept.'08, the performance of the whole state went down by 25%.

> Cluster infections were reported from several places in Rajasthan during the winter season of 2008, following which the Government of Rajasthan imposed a ban on diagnostic camps for one month, resulting in the decline in the performance by 1/3rd during that particular month as compared to the same month in the previous year.

If such episodes continue to be reported and hamper the work, it may result in a negative impact in achieving the target of eliminating avoidable blindness by the year 2020.

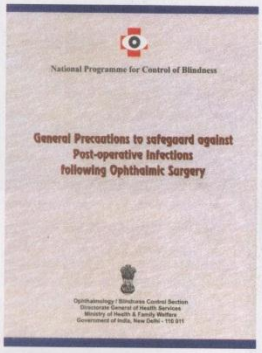
Though a majority of the hospitals don't have a set protocol in place to ensure high quality, hospitals that have a set protocol are not able to come to a consensus to adopt a common protocol. NPCB has formulated the guideline way back in 2001 with the help of Aravind Eye Care system, Madurai. A modified shortened version of the guideline is available on the NPCB website also. A further modification has been proposed and is under review.

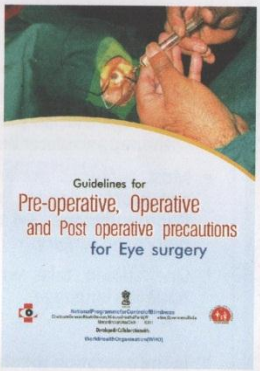
A draft of "Outbreak (an episode of cluster infection) Policy" has been proposed and it is also under review by a panel of experts. We hope to come out with the final version soon.

At the end, we urge all the eye care professionals involved in eye care delivery to ensure a high quality of services without consideration of whether the patient pays or not and thereby, help the NPCB achieve the Vision 2020 objective of eliminating avoidable blindness by 2020.

NPCB is hopeful about the co-operation of all the stakeholders of the programme, including NGOs, INGOs, the public sector, the private sector and the voluntary sector to further improve the quality of eye care.

(This article was written in 2010 - reprinted here with the permission of the author to present as it is.)





QUALITY OF CATARACT SURGICAL SERVICES

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We all want quality!!

We do not want quantity at the expense of quality!!!

Quality is about attention to details!!!!

Targets are important but so is quality!!!!!

India is home to over 15,000 qualified eye surgeons. Of these, 60% are in secured government jobs and 40% are estimated to be in practice (own / group /private hospitals/clinics/NGO supported hospitals etc.).The bulk of ophthalmologists (over 90%) are believed to be anterior segment surgeons or Comprehensive surgeons. Membership of the Vitreo-Retinal society of India (consisting of Posterior Segment Surgeons) stands at around 400 only.

As far as quantity is concerned, we are doing pretty well – the number of cataract surgeries have increased from 44.9 lacs (2001-02) to 58.3 lacs (2008-09) with over 90% receiving IOL. However, for the best possible quality, one needs to pay attention to a lot of factors. Intraocular Surgeries like cataract must be conducted in properly air conditioned, dust free and sterile operation theatres under operating microscopes. No surgeon aims to do poor quality surgery and all patients want a good result with a safe operation with a realistic visual result.

In addition, steps must be taken to reduce or minimize the occurrence of Post-operative Endophthalmitis (POE). In this regard, the All India Ophthalmological Society had organized a workshop in November 2008 to evolve guidelines for its members and suggest measures to reduce the occurrence of POE.

The consensus arrived at & the measures suggested to reduce the incidence of post-operative infection include:

i) Pre-operative:

a. Random Blood Sugar should be <200 mg %; Urine sugar if performed must be NIL; If positive, surgery should be done only after blood sugar results.

b. Blood Pressure should be adequately controlled, preferably around 150/90 mmHg.

c. One should avoid syringing of the lacrimal sac and obviously avoid any intraocular procedure if regurgitation is positive or there is an infection of the lids, adnexa or surrounding structures.

d. Encourage that all patients have a bath or facial wash with soap and water before surgery.

e. Most surgeons prefer the usage of broad spectrum antibiotic drops, generally a 4th generation fluoroquinolone, 3-4 times a day, for at least one day before the surgery.

f. One should take written informed consent in the patient`s language.

ii) In the operation theatre:

a. Avoid crowding and in any case there should not be more than 5 personnel per 180 sq. feet

b. A dedicated Eye OT; layout of the OT with attention to flow of personnel and air is as crucial as the surgery itself.

c. One should follow standard protocols as defined by the Government with regard to sterilization of the operation theatre.

d. The Surgeon, Assistant and Nurse should be washing their hands with Betadine / Chlorhexidine with running tap water – preferably filtered water.

e. The Surgeon should change gloves after each case and should not come out of the OT in an OT gown.

f. Instruments used in each case should be autoclaved or sterilized by ETO. The habit of dipping instruments in Cidex/Acetone and other methods of Chemical Sterilization should be avoided.

g. Avoid contact procedures like (Biometry/ Tonometry) on the day of the surgery and one should not do more than 25 cases/day. It makes sense to document the sequence of surgeries done on a particular day.

h. Irrigating fluids and viscoelastics are often the source of infection and should, therefore, be of the highest quality and standards. Double autoclaving of irrigating fluids is to be discouraged.

i. Prefer One-for-One rule i.e. one bottle of irrigating fluid for one patient. This may help in containment of infection (just in case the bottle is contaminated) and may also pinpoint the accused bottle, should infection develop.

j. OT personnel should inspect the irrigating fluid bottle against light and also note the batch number and desirably keep the infusion bottle for 24 hours or till the patient is seen post-operatively.

k. Phaco Tip and sleeve should be changed for each case and the tubing should be primed. Encourage maximal use of disposable instruments. Wound security is of utmost importance and if in doubt, application of even one suture decreases contamination of the anterior chamber.

l. The eye and the adjoining half of the face should be painted with Povidone Iodine 5% and let it dry for 3 minutes.

m. After applying the Speculum, disposable adhesive drape should be applied in a manner that it isolates the lashes completely.

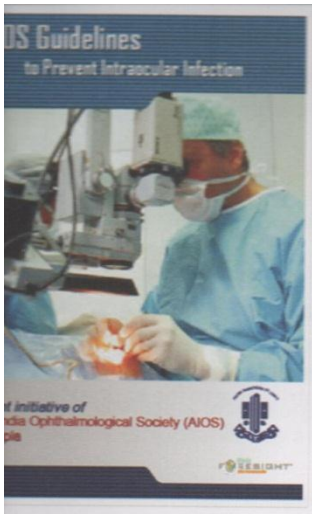
n. The conjunctival sac should then be rinsed with Povidone Iodine 5%. Microscope adds precision to the surgery and its usage should be encouraged over other magnifying devices.

iii) Post-operatively:

a. It is mandatory to follow all operated patients on the 1st, 3rd, 7th, and 28th post-op day with best corrected visual acuity and slit lamp examination. In case of any excessive reaction/ inflammation, talk to the patient and relatives; treat energetically and seek opinion of a retina surgeon or higher authorities. Early appropriate treatment in such cases goes a long way in salvaging these eyes.

Encourage documentation of all findings (Pre-op, Operative and Post-operative).

Other factors of relevance with regard to quality of surgery include: planning each procedure carefully and devoting more time to complex cases (which should be done by more experienced colleagues). Although slow surgery is generally bad for quality but remember, a fast surgery is not necessarily good. All these measures have tremendous implication in the ultimate overall outcome and quality of cataract or any intraocular surgery – a satisfied patient and a satisfied surgeon.



The **All India Ophthalmological Society (AIOS)** is conscious of all these factors which relate to `Quality of surgery` lest it in itself becomes a significant cause of iatrogenic blindness. Apart from creating these guidelines to prevent intraocular infection, guidelines for the management of Infectious Keratitis` have been drafted. Besides this, regular sessions and Instruction Courses on Endophthalmitis and Infection Control shall be held at our Annual conferences. The need of the hour is to make all our colleagues aware of these quality control measures – which go a long way in preventing blindness and improving the quality of life of our patients.

THE VISION 2020 INDIA

Initiative to reduce cluster infections in India

Authors: VISION 2020: The Right to Sight – INDIA

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Dr. Phanindra Babu Nukella is the CEO for VISION 2020:

The Right to Sight-India. As for educational background he has done M.Sc in Statistics and Ph.D. in Population Sciences. He has 14 years' experience of working in not-for-profit Sector.He has strong competencies in program development and management, strategic information and evaluation, partnership with Civil Societies Govt Depts., grants and finance domains, he has strong skills in team management and advocacy.

Dr. Sara Varughese

Dr. Sara Varughese graduated from CMC Vellore, India

and is a fellow of the Royal College of Surgeons, Edinburgh. She has done her Master in Public EYE Health from the London School of Hygiene and Tropical Medicine (LSHTM). She started her career as an ophthalmologist with a focus on public and community health. She has experience of health systems in developed countries (UK), middle income (South Africa) and developing countries (India, Nepal, Bangladesh). Prior to taking charge as National Director at CBM SARO, she has served the World Health Organisation (WHO), South East Asia Regional Office as programme Manager in disability & rehabilitation for the 11 countries of South East Asia. She also served as Medial Advisor for CBM South Asia Regional Office-North dealing with cross disability programs. She has been closely involved with the National Vision 2020 forum and planning for Vision 2020 in India, Nepal and Bangladesh. Currently she is also the President of Vision 2020-The Right to Sight India.

What is VISION 2020?

VISION 2020: The Right to Sight – India is part of the global national initiative of the World Health Organisation (WHO) and International Agency for the Prevention of Blindness (IAPB) for reducing avoidable visual impairment by the year 2020.

What is our mandate?

We aim to eliminate the main causes of avoidable blindness in India by working with our key stakeholders to facilitate the planning, development and implementation of a sustainable national eye care programme and support the national programme for control of blindness.

VISION 2020:

The Right to Sight – India's programs and action plans are aligned with the Government's programme of National Programme for Control of Blindness. VISION 2020 India builds the capacity of eye care institutions and strongly promotes quality, equity and comprehensive eye care service provision towards contributing to the national goal.

Our Vision:

An India free of avoidable blindness, where every citizen enjoys the gift of sight and the visually challenged have enhanced quality of life as a right.

Our Mission:

To work with eye care organization in India for the elimination of avoidable blindness by provision of equitable and affordable services as well as rehabilitation of visually challenged persons through:

Development of appropriate policies:

- Quality standards
- Advocacy
- Training, and
- Promotion of emerging practices with a special emphasis on the poor and marginalized sections of society and underserved areas

85% of blindness in India is because of cataract and uncorrected refractive errors. History has provided us (VISION 2020 INDIA Forum) with a unique privilege and opportunity – to eliminate avoidable blindness to a level that it ceases to be a public health problem for our citizens residing in our 600+ districts in India.

What have we done in the area of "Quality in Eye Care"?

VISION 2020 INDIA is a membership organisation and utilises a consultative, participative approach to programming through its 150 member organizations. Quality in eye care is one of the six key strategic priorities.

VISION 2020 INDIA stresses that eye care organizations, especially members of this forum, must focus on quality in the service delivery. Focus on quality includes delivery of guidelines, Standard Operating Procedures (SOPs), Protocols, Best Practice Manuals, etc.

OUR INITIATIVES

(1) Guidelines

In the recent past, VISION 2020 INDIA has developed the following with support of its member organizations:

1. **The VISION 2020 Handbook on Equipping a Secondary Eye Hospital -**
   It is a manual to help NGOs to set up or expand into a secondary level eye hospital to perform surgeries.

2. **Guidelines for the Comprehensive Management of Diabetic Retinopathy in India –**

This is a guidebook to help organizations to undertake diabetic retinopathy projects in their service area.

3. **Guidelines for the Management of Cataract in India –**
   This guideline is to help organisations to plan for cataract services.

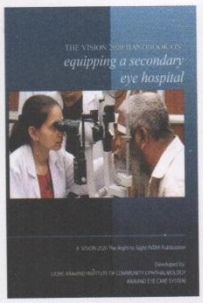
4. **Manual for Planning of Tertiary Eye Care Services –**
   This manual helps organisations to plan tertiary eye care services.

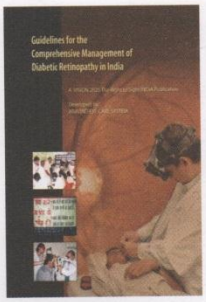
5. **Leadership – Learning from Successful Practices –**
   It was published to understand the various aspects of leadership.

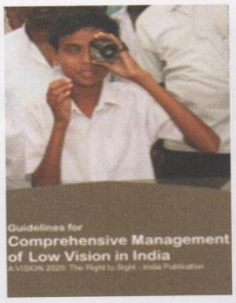
6. **Guidelines for Comprehensive Management of Low Vision in India –**
   This guideline is to help organisations who want to understand the comprehensive low vision services and also could help in establishing a new low vision centre.

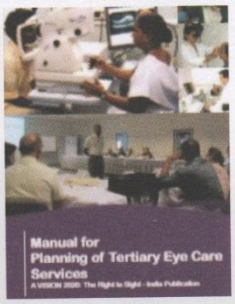
7. **National Manual on Vision Centre –**
   This manual is to help organisations to understand the setup of a vision centre.

8. **Vision Screening in School Children: A comprehensive school screening manual –**
   This manual has been designed for Program Officers and Managers of the Blindness Control Programme and School Health Programme in districts and states and any other person / body interested in taking up the vision school screening activities.









2) Policy Level Interventions

VISION 2020 INDIA works closely with the National Programme for Control of Blindness (NPCB).

In view of some cluster infection incidences in the country in the last few years, VISION 2020 INDIA in partnership with its partner institutions, developed (1) National Guidelines for Infection Control and (2) Outbreak Management Policy.