NATIONAL PROGRAMME FOR CONTROL OF BLINDNESS

NORMS FOR SERVICE DELIVERY IN EYE CAMPS

(Revised 1995)

Directorate General of Health Services
Ministry of Health & Family Welfare
Government of India
Nirman Bhawan
New Delhi-110011
NORMS FOR SERVICE DELIVERY IN EYE CAMPS

1. OBJECTIVES:

Under the National Programme for Control of blindness, it is desired that the eye camps be so organised as to provide comprehensive eye care to the community in the rural and outreach areas particularly in hard to reach rural and tribal areas. The "eye camps" referred to in this chapter include surgical camps. However, the emphasis should also be on comprehensive eye care camps as much as possible. The aims and objectives of such camps should be to:

1.1 Provide medical and surgical treatment for the prevention and control of eye diseases including Cataract Operations.

1.2 Educate people in methods of prevention of eye diseases and proper care of the eyes in order to ensure better and lasting eye-sight.

2. FUNCTIONS:

The main purpose of conducting such camps is to provide comprehensive eye care services including preventive, promotive and curative aspects. The functions therefore will be as under:

2.1 Out patients' care - to examine all cases with eye disorders and provide treatment as out patients to cases not requiring admission. This will include proper arrangement for treatment of persons with refractive errors and ensuring availability of spectacles.

2.2 Inpatients' care - admission of cases requiring surgery or treatment as indoor patients. This will include arrangement of a suitable operation theatre for safe surgery and adequate postoperative care of cases.

2.3 Health Education - of the community, with special focus on at risk population for cataract for early detection and treatment and on school going children, for observance of simple principles of personal hygiene, clean environment, nutrition and safety of eyes against injuries and diseases.

2.4 Referral of eye cases requiring specialised care to base hospital and institutions for proper treatment/management.

2.5 Organising follow up of operated cases after 4-6 weeks of closing of the camp for examination, suture removal, refraction, distribution of aphakic glasses.
3. GUIDELINES TO ORGANIZE EYE CAMPS:

3.1 The District Blindness Control Society (DBCS) will be set up in all districts as per approved composition (Appendix I). The Society shall plan and coordinate eye care services including eye camps, ensure quality and mobilise resources for all activities. The society shall exercise technical supervision of all eye camps held in the district.

3.2 As far as possible the camp should preferably be held at CHC/PHC so that available O.T. facilities are used. However, if in out reach areas, such centres are not available, then some permanent structure (like school) can be used as camp site.

3.3 Cases needing referral should be sent to hospitals determined by DBCS as referral hospitals. These can be government or nongovernmental hospitals.

3.4 Constant supervision, monitoring and evaluation should be emphasized in all activities to ensure high quality clinical outcome.

3.5 Follow up after 4-6 weeks should be arranged for examination, suture removal, refraction and distribution of aphakic glasses.

3.6 Chief Medical Officer/District Health Officer or his nominee who is also the vice chairman of DBCS shall exercise powers to grant permission for holding eye camp in the district. The District Ophthalmic Surgeon’s opinion may be sought for permission, if required. Permission should be sought by the organisers on prescribed proforma. (Appendix II)

3.7 Assistance for holding eye camps shall be applicable for patients from rural areas including tribal areas as well as urban deprived areas including slums.

3.8 The DBCS shall be the competent organization for administration, technical supervision and monitoring.

3.9 The minimum duration of eye camp shall be 7 days out of which 5 days would be post-operative and one day for pre-operative care.

3.10 An ophthalmic surgeon must not perform more than 50 operations per day.

3.11 There is need to instill local antibiotic drops preferably for at least 24 hours before surgery. It is recommended that dilute betadine solution 1% should also be used before surgery.

3.12 It is recommended that a minimum of 5 corneo-scleral sutures must be applied with 8/0 Virgin Silk or nylon.

3.13 The patients can be mobilized at discretion of the Ophthalmic surgeon. If proper suturing is used, an early mobility should be encouraged.
4. **ORGANIZATION OF CAMPS**:

A "fixed day" approach with an annual plan for camp schedule would facilitate organization of services. Schedules should be prepared following consultation with NGOs and other service providers to avoid service overlap. All camps would be governed by norms already established by the NPCB and will include three sequential activities:

a) an outreach and screening camp to identify patients,

b) a surgical camp to operate on selected patients and

c) a post-operative follow up camp or household visits.

4.1 No camp shall be held without the permission of the competent authority.

4.2 The competent authority shall ensure that the voluntary organisation and the team of Eye Surgeons planning to organise the camp have the requisite experience for conducting such eye camps, and unqualified persons are not permitted to operate in the camps.

4.3 All concerned officers (CMO, Ophthalmic Surgeons & DPM) should supervise proper organisation of eye camps and help to provide such assistance as may be required by the camp organisers, irrespective of whether they apply for financial assistance from the Govt. or other voluntary funding agencies.

4.4 The DBCS shall play an active role for the planning, programming and coordination of services and successful organisation of the camps.

4.5 The DPM, along with local ophthalmic surgeons and doctors should be involved in the management and conduction of camps and ensure post-operative care. This recommendation should be followed by all camps conducted by the Government mobile units or by voluntary organisations.

4.6 Various bottlenecks and constraints in the organisation of eye camps should be critically evaluated by DPM and if necessary, brought to the attention of the DBCS to eliminate them.

4.7 The State Ophthalmic Cell and the Central Programme Division will periodically review various issues brought up with regard to the organisation of eye camps, for critical evaluation and further recommendations.

4.8 Eye camp organising units:

(I) **Government Sector**

- Central Mobile Units
- State/Divisional Mobile Units
- District Mobile Units
(II) Voluntary Organisations/Local bodies
- Lions club
- Rotary Club
- Local Panchayats
- Local NGOs

(III) Private Sector
- Charitable Hospitals
- Nursing Homes
- Others

4.9 Registration of Eye Camp Organising Units

All such eye camp organising units shall apply with full particulars for registration to the DBCS, giving details of their experience, infrastructure, financial status and manpower resources. No organisation shall hold eye camps in the community unless it has been duly registered with the DBCS. The registration can be withdrawn, if the standards are not adhered to by the organisation.

5. PROCEDURES FOR PERMISSION TO HOLD EYE CAMPS:

The organisers shall seek permission for holding eye camp from the Chief Medical Officer of District. Prescribed application format is shown at (Annexure I). The permission to hold an eye camp shall be given by CMO as per annexure II.

6. RESPONSIBILITIES OF THE EYE SURGEON-IN-CHARGE OF THE CAMPS:

6.1 It is the professional responsibility of the Eye surgeon to plan, implement and supervise the technical component of the eye camp organisation. He must ensure that the required inputs are available for conduct of the camp.

6.2 The technique, drugs and instruments routinely used by the surgeons at the base hospital should be used in the camp.

6.3 Informed consent should be obtained for all operations. Illiterate persons should be clearly told about steps and results.

6.4 I.O.L., Keratoplasty and other major surgical procedures should not be performed in eye camps. This should require special permission from the Chief Medical Officer and District Ophthalmic Surgeon of the district.

6.5 The competent authority should be informed about any untoward happening in the camp and remedial measures taken by him. (Appendix IV)
6.6 The surgeon shall not be responsible for unfavourable outcome which were not within his/her control.

6.7 He/she shall receive full protection from the DBCS as well as the government in the event of a mishap due to reasons beyond his/her control.

7. ADMINISTRATION, TECHNICAL SUPERVISION AND CONTROL:

The District Blindness Control Society of the concerned district, as the competent authority, and officers designated by DBCS for this purpose shall:

7.1 exercise administrative and supervisory control of the camp.

7.2 allocate targets and ensure adoption of quality standards by the organisations and Mobile Ophthalmic units.

7.3 monitor services provided in camps held in his district and undertake personal visits as may be considered necessary to ensure proper observance of guidelines.

7.4 make necessary arrangements for referral of all complicated eye cases which can not be treated in the eye camp, to the referral hospitals.

7.5 organise investigation to, pinpoint responsibility and take necessary action, as provided under the law in cases of complaints and mishaps or refer cases to the grievance committee.

7.6 arrange for refresher/orientation training course for ophthalmic manpower and voluntary organisations.

7.7 recommend name for awards and other incentives as may be prescribed by Central/State Governments.

8. MOBILISATION OF COMMUNITY RESOURCES AND SUPPORT FOR EYE CAMPS:

8.1 A local eye camp committee should be formed in which persons interested in the voluntary service and their officials and non officials who can contribute to the success of the camp should be involved. The local committee shall be responsible for the mobilisation of the community resources and support and shall organise:

(i) Fund collection
(ii) Publicity and case mobilisation
(iii) Arrangements for accommodation and food for patients.
(iv) Arrangements for the team of doctors & other personnel.
(v) Volunteers and social workers
(vi) Arrangement for transport of team and if necessary, patients.

8.2 Members of this Committee should take all necessary precautions and provide essential help for the success of camp. It shall coordinate its activities with the voluntary organisation hosting the eye camps.

9. CIVIC AMENITIES TO BE COORDINATED BY DBCS:

9.1 Civic amenities should be provided, proportional to the inpatient strength.

9.2 For 100 patients, 4 safai karamcharis (two male & two female), should be available round the clock.

9.3 If pucca lavatories are not available, arrangements should be made for the trench lavatories.

9.4 Lavatories for male and female patients should be separate.

9.5 Adequate supply of clean water should be made available.

9.6 Electric supply to all wards, lavatories and passages should be provided.

9.7 The place should be properly sprayed for insecticides, to get rid of flies and mosquitoes.

9.8 Necessary furniture and shamianas should be provided, if necessary.

9.9 Special care should be taken for the supply of drinking water and a clean kitchen for the supply of food, or cooking facilities to the relatives and patients.

10. TECHNICAL ASPECTS:

10.1 Criteria for Selection of Improvised Camp Site

Eye camps should be carried out in permanent camp sites (e.g. CHCs) where and when possible. If camps are held on improvised facilities, the following would be required:

The local community (voluntary organisation, social workers etc.) and Government agencies (DPM, BDO, CHC/PHC Medical Officer etc.) would coordinate and assess the situation during the pre-camp visit to determine that:
10.1.1 proper accommodation for the camp with a minimum of 2-3 pucca room, a PHC/School, Dharamshala building is available to house operation theatre.

10.1.2 sufficient ground to pitch temporary tents for providing lodging and other facilities for accommodating patients, in the absence of a pucca building, is available.

10.1.3 the site has clean environment. It should in addition be sprayed with insecticides.

10.1.4 provision of safe and potable water supply and adequate drainage exist.

10.1.5 electric supply is available. It is preferable to have in addition a portable generator for emergency purposes.

10.1.6 adequate arrangements for the stay of mobile camp team are available.

10.2 Staff for Mobile Eye Camp

10.2.1 For an eye operation camp a minimum of one ophthalmic surgeon, one operation theatre assistant and four paramedical personnel are required.

10.2.2 It is advisable to have 2 eye surgeons and 2 operation theatre assistants and depending on the number of surgeries to be performed, a maximum of 4 surgeons and 4 theatre assistants.

10.2.3 Personnel from PHC, CHC, district hospital, DMU, private practitioners, medical colleges and regional institute may be mobilised to provide better care to the patients.

10.2.4 It is not considered practicable to have medical or anaesthesia specialists in the camp situation. Cases needing general anaesthesia and special medical care should be referred to the base hospital.

10.3 Duration of the Camp

Eye camps should be held for at least 7 days to ensure a minimum of five days follow up with one day pre-operative care and at least one day for surgery.

10.4 Number of Operations

An ophthalmic surgeon must not perform more than 50 intraocular operations per day. If number of operations to be performed are more, the surgical period may be phased over for more than one day, if so required. Ideally, the number of operations performed in a camp should not exceed 200 to maintain quality and safety of surgery, sterilisation, and post operative care. However, the competent authority may permit such organisations who have experience
of conducting bigger eye camps and have an adequate infrastructure, to hold camps to carry out more than 200 operations.

10.5 Sterilization in Operation Theatres

10.5.1 The sterilization of instruments, blunt as well as sharp, is very crucial. It is ideal to use autoclaves for this purpose. Oiling of instruments may be carried out for sterilization according to the prescribed norms.

10.5.2 If possible sterilization should be done again by autoclaving, otherwise, by chemical sterilization in Cidex for 10 minutes followed by the instruments being dipped in rectified spirit and finally washed with boiling water in the sterilizer. The spirit and the boiling water should be changed every 10 minutes.

10.5.3 Strict asepsis of hands and instruments must be adhered to. Masks, OT slippers and caps must be worn by all the people permitted inside the OT. Excessive or unnecessary movement of personnel must be avoided in OT. Unauthorised persons should not be permitted in the theatre.

10.5.4 The number of sets of instruments for cataract surgery should be at least three times the number of operating tables.

10.5.5 Sterilization of operation theatre should be carried out as per approved standards. Routinely the operation theatre is sterilised in steps.

   a) Copious washing with water.
   
   b) Fumigation with formalin vapours (30 ml. of 40% formalin dissolved in 90 ml. of clean water for 1000 cubic feet by aerosol spray) and keeping the room closed for 6 hours. Alternatively, Formalin (2000 cc) is poured into a bowl containing 500 gms. Potassium Permagnate (KMNO4) crystals. The O.T. is closed for 24-48 hours. Additional 24 hours required for fumes to clear. Therefore it takes about 72 hours to make O.T. ready for surgery.
   
   c) Carbolisation with 2% carbolic acid.

The disadvantage of this method is that it takes about 24 hours for the pungent smell of formalin and carbolic acid to go off.

Modern methods for rapid O.T. Sterilisation

   a) ALDEKOL (R): (contains 6% formaldehyde +6% glutaraldehyde + 5% Benzalkonium chloride). For an average OT of 20’x 20’x 10’ (4000 cubic feet), 325 ml. of Aldekol dissolved in 150 ml. of water and sprayed by aerosol for 30 minutes and keeping the room closed for 2 hours is enough for making the O.T. Sterile. Switching the fan, air
conditioner and exhaust fan on for 1 hour clears the smell of the solution. O.T. is ready for use after 3 hours. This method is especially useful for O.T. Sterilisation in camps.

b) Sterilisation technique using formalin: 90 cc of formalin + 100 cc water is atomised using ‘OTICARE’ atomiser. O.T. is closed for 6 hours and then the formalin is neutralised using Ammonia Liquid (90 cc) sprayed through the same machine. The O.T. is ready in 10 hours.

Principle of Aerosol disinfection: Disinfectants are most effective in their aerosol form. They have aerodynamic stability, hence they coagulate and falls only after several hours of emission. They permeate cracks and crevices of rooms and dissipate instantly and spread evenly in the atmosphere. Formaldehyde (formalin) is highly lethal to all kinds of microbes and spores (air containing 2 ppm of formalin kills organisms in 180 minutes). It is economical and noninjurious to cloth, fabrics, wood, rubber, paints and metals.

OTICARE: Climate Control Services Ltd. 38, Sarojini Devi Road Secunderabad;
AUTOMIST: Hatchwell Incubators, 5-9-42/A, 1st Floor, Basheer Bagh, Hyderabad

10.6 Emergency Support

10.6.1 Arrangements to meet common emergencies should be available at the camp. For the management of serious emergencies, patients should be transferred to the nearest hospital.

10.6.2 The operation theatre should be equipped with life saving drugs and such equipment as can be provided at the eye camp for common emergencies.

10.6.3 A nursing station cum life saving emergency unit should be established at a prominent place in the camp with provision for the life saving drugs and equipments and an electricity generator.

10.6.4 Fire fighting equipment should be made available at each camp.

10.7 Standards for the In-patient Ward

10.7.1 Separate wards are to be provided for male and female patients.

10.7.2 The beds should be numbered and serially arranged.

10.7.3 Clean sheets should be provided for each bed.
10.7.4 Overcrowding should be avoided. A 50 sq. feet should be allotted per patient.

10.7.5 Each ward should be kept under the charge of one worker or volunteer. Other house keeping staff should help in catering and to provide other comforts to the patients.

10.8 Case Selection for Surgery in Eye Camps

10.8.1 Following prescreening by the ophthalmic assistant, the camp surgeon should be very judicious in selection of cases. The nature of eye surgery done in camps should be safe.

10.8.2 One eyed patients must be given special care and should be operated upon by the senior surgeon only if that patient is unable to go to the district hospital or medical college. It would be advantageous to refer unilateral cases to the District Hospital/Medical College.

10.8.3 Operation on both the eyes at a time should never be done.

10.8.4 The following cases should not be operated at the camp but referred to base hospitals:

(i) Eye with discharge/congestion or other complications  
(ii) Very tense and psychic patients  
(iii) Children, if general anaesthesia is needed for operation  
(iv) Cases of poor surgical risk (severe diabetes, severe hypertension and those with cardiac problem)  
(v) Cases with a definite history of urinary problems.  
(vi) Unilateral cataract cases for ECCE/IOL (VA $\geq 6/24$ in better eye).

10.9 Referral

For those cases who cannot be treated at the camp site and those who develop complications, following surgery, it must be ensured that the base hospital admits them on priority basis.

10.10 Pre-Operative Investigation Care

10.10.1 On admission for surgery, the following investigations should be performed:

(i) Visual Acuity (both eyes)  
(ii) Ophthalmoscopy Examination (both eyes)  
(iii) Blood pressure  
(iv) Urine analysis  
(v) Intraocular pressure
10.10.2 The eye to be operated upon should be marked on the forehead, with mercurochrome.

10.10.3 The eye and surrounding area should be cleansed with betadine solution.

10.10.4 The patient should be given instructions regarding the operation and post-operative care.

10.11 Anaesthesia in Eye Camp

10.11.1 Premedication should be given. The surgeon may choose the premedication of his choice.

10.11.2 Standard methods of anaesthesia are to be used i.e. topical, facial and retrobulbar blocks.

10.12 Standardisation of Operation Techniques

10.12.1 Standard scientific techniques which give best results in the hands of the camp eye surgeon, who should be qualified & have adequate experience, should be adopted.

10.12.2 A minimum of five corneo-scleral sutures must be given using 8-0 virgin silk or nylon.

10.12.3 Sub-conjunctival injection of antibiotics must be given at the end of surgery.

10.12.4 The surgeon/surgeons shall follow the usual procedure and steps followed by them for the cataract operation.

10.13 Post Operative Care

10.13.1 The patients should be kept for atleast 5 days post-operatively.

At least one eye surgeon should stay in the camp till all patients are discharged or should ensure adequate paramedical staff for post-operative care but should return and examine patients before they are discharged.

10.13.2 Post-operative dressing:

(i) The bandaging of only one eye is preferred.

(ii) Use of cartella shield is advocated
The first dressing should be done after 24 hours, and subsequent daily dressings should be done by the ophthalmic surgeon or paramedical ophthalmic assistant/trained staff.

10.13.3 Medication:

(i) Daily instillation of local antibiotic drops and ointments. When signs of iritis or infections are present, the drugs and frequency of application can be adjusted.

(ii) Systemic antibiotics or chemotherapeutic agents are ordinarily not necessary as a routine, but should be given wherever indicated.

(iii) Local corticosteroid should be used routinely but the timing of its use should be left to the judgement of the eye surgeon.

(iv) Cough and constipation should be adequately managed.

(v) Mydriatics should be used in aphakic cases.

(vi) Oral analgesics like paracetamol should be given post-operatively.

(vii) Patients with diabetes, hypertension and asthma should be taken care of and they should continue drugs used earlier.

10.13.4 Mobility:

The patients can be mobilised ordinarily after 24 hours or at the discretion of the ophthalmic surgeon, if proper suturing is performed.

10.14 Discharge from Camp

10.14.1 Topical antibiotic drops/steroid drops and atropine drops/ointments are prescribed depending on the need of the individual patient.

10.14.2 Temporary aphakic glasses of +10 D power may be dispensed at the time of discharge or at the follow up camp.

10.14.3 The follow up date should be indicated at the time of discharge of the patients.

10.14.4 Vision should be taken and recorded either with a +10D correction or a pinhole at discharge.

10.14.5 The discharge sheet should include the follow up date and health education messages in form of do's and don'ts and post-operative instructions in local language.

10.15 Follow-up Eye Camp

One ophthalmic surgeon with the help of ophthalmic assistant must conduct a follow up after 4-6 weeks of the closing of the camp for examination, suture removal, assessing visual acuity, prescription of refraction glasses and further advice.
10.16 Documentation

10.16.1 Essential documentation - name of the patient, age, sex and village should be entered in a register with father’s/husband’s name, full address, diagnosis, treatment given and results.

10.16.2 Serious operative and post operative complications like vitreous loss, expulsive haemorrhage, wound dehiscence, flat anterior chamber should be noted.

10.16.3 Abscission of iris prolapse, resuturing, reformation of AC or any other pre-operation should be recorded.

10.16.4 Post operative plastic iridocyclitis, endophthalmitis and the treatment given should be recorded and signed.

10.16.5 Brief report on each eye camp should be prepared by the Ophthalmic Surgeon-in-charge of the eye camp and submitted to the DBCS for scrutiny and onward transmission. (Annexure IV)

11. MONITORING AND EVALUATION OF EYE CAMPS:

11.1. Each eye camp needs to be evaluated in terms of various activities assigned to such camps and the results obtained. Some guidelines are given in order to ensure that preventive and rehabilitative aspects are not neglected. Check-list of points should be developed for inspection.

11.2. Mini Eye Camps should be held to provide an O.P.D. type service in the rural areas and eye health clinics for school children should be carried out during the non-operative periods eg. monsoon, harvest and festivals.

11.3. Targets should be laid for both type of activities i.e. cataract operations and other activities like O.P.D. examinations, investigations, refraction, health education, school clinics and rehabilitation services.

11.4. The evaluation of various activities should be divided into surgical and non-surgical units.

11.4.1 One surgical unit will be equivalent to performing: One cataract operation/one glaucoma operation/ two optical iridectomies/one squint operation/one dacryocystectomy operation/two entropion operations/five chalazion operations/ and five superficial foreign body removals.

11.4.2 One non-surgical unit will be equivalent to the examination of 25 O.P.D. cases/20 refractions/10 refractions under cycoplegics/examination of 50 school children/ training of one blind person in the art of daily
living and advice regarding vocational training/holding a community talk of one hour for over 20 persons/screening a film show of two hours duration.

11.4.3 Desirable annual targets for sight restoring operations for each Central Mobile Unit should be 3000 surgical and 1500 non-surgical units or a total of 4500 units. Similarly for District Mobile Unit the target should be 1500 surgical and 1500 non-surgical units.

11.4.4 Quality outcomes should be of paramount importance. Caution must be exercised to ensure that quality is not sacrificed for quantity. Patient satisfaction and visual outcome will be the ultimate measure of success.