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FOREWORD

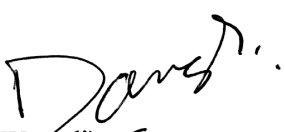
The focus of Quality Assurance & Standardization Division (QASD), Ministry of Health is to coordinate and facilitate for quality, accessible, efficient and effective healthcare service delivery. The National Standard for Ophthalmology Service is firstly designed to strengthen the above-mentioned services, so as to ensure coordinated and integrated healthcare service delivery system.

This National Standard for Ophthalmology Service does not only provide basic information about the services and standards of the Ophthalmology Department, but gives an indication and direction of the service to humanity.

Furthermore, the standards communicate with clear characteristics that relate to quality healthcare services that the department shall observe at all times. This commits the department in rendering a service of high quality to the people.

The formulation and design of the National Standard for Ophthalmology Service is a result of recognition for improving the quality of life by provide comprehensive quality healthcare services and making services accessible to all the people.

The Ministry of Health presents this standard as guiding tools while providing Ophthalmology services to the people. I urge all service providers to use this standard as reference materials in your workplace. It is vital that the benefits of having these important documents can only be realized if they are used appropriately.



(Nima Wangdi)
Secretary
Ministry of Health

Acronyms

BHU	Basic Health Unit
BMHC	Bhutan Medical and Health Council
CBR	Community Based Rehabilitation
CME	Continuing Medical Education
CMO	Chief Medical Officer
CT	Computerised Topography
DHO	District Health Officer
DoPH	Department of Public Health
FFA	Fundus Fluorescence Angiography
HCP	Himalayan Cataract Project
HMIS	Health Management and Information System
IAPB	International Agency for Prevention of Blindness
IEC	Information Education & Communication
INGO	International Non Governmental Organization
JDWNRH	Jigme Dorji Wangchuck National Referral Hospital
MoH	Ministry of Health
MRI	Magnetic Resonance Imaging
NCD	Non Communicable Diseases
OCT	Optical Coherence Tomography
OPD	Out Patient Department
RAAB	Rapid Assessment of Avoidable Blindness
RIHS	Royal Institute of Health Science
QASD	Quality Assurance and Standardization Division
SOP	Standard Operating Procedure
STG	Standard Treatment guidelines
TOT	Training of Trainers
VHW	Village Health Worker
WHO	World Health Organization

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1. INTRODUCTION

Blindness is the major health problem that has received little attention in worldwide efforts to promote health. The vast majority of blind live in developing and under developed countries where infection and malnutrition are prevalent and compounded by lack of eye care services.

A major portion of the blindness encountered in Bhutan can either be cured or prevented by reasonable deployment of skills and resources and this is termed avoidable blindness.

The overall objectives of the eye care services is to prevent and control major avoidable causes of blindness and to make essential eye care services available to all within the frame work of Primary Health Care. Presently this is being achieved through the activities implemented by primary eye care program launched in 1988 with initial INGO support from Andheri Helfi (German Non Governmental Organization) and later on by the Himalayan Cataract Project which is still continuing.

Despite the increase coverage and advancement in eye care services, the recent nationwide RAAB survey (2009) found that the overall prevalence of blindness is 0.34% (Report Annexed) which is mostly contributed by avoidable blindness. Further it was found that the quality of services needs to be strengthened in order to enhance better delivery of services and patients satisfaction.

This service standard describe components of eye care service for which the organization is responsible, in order to maintain the safety and the quality of services to patients, and provide an environment conducive to the safety of staff. The standard provides a benchmark against which the service can be measured, and a framework for an organization to review and improve its service provision.

2. PURPOSE OF THE DOCUMENT

Includes but not limited to establishing standards of practices and delivery of Eye care services for the kingdom of Bhutan.

3. OPHTHALMOLOGY STANDARDS OF PRACTICE

3.1. Vision

Bhutan will emerge as a country where no one is needlessly blind and where those with unavoidable vision loss can achieve their full potential. Further, those who are permanently blind can have proper rehabilitation and lead an independent life. To establish an integrated, equitable, sustainable and comprehensive eye-care system in every national health system, following national ophthalmic service standards.

3.2. Mission

To provide comprehensive eye care services to the people of Bhutan by facilitating, planning, developing and implementing sustainable national eye care programme based on the core strategies of disease control (promotive, preventive, curative and rehabilitative services), human resource, technology and infrastructure development, incorporating the principles of primary health care.

3.3. Goals

1. To promote and strengthen Primary Eye Care program such as:
 - To strengthen School Eye Health Program
 - To provide IEC to create awareness on eye diseases and management.
2. To provide uniform coverage of eye care services throughout the country by upgrading the existing district hospitals and Basic Health Units by opening new ophthalmic centres and posting Ophthalmic Professionals where necessary.
3. Develop SOPs, guidelines, STGs etc. for every procedure.
4. To introduce community health program and strengthen the mobile eye camp and clinic activities to un-reached population.
5. To strengthen human resource development.
6. To introduce new technology for latest art of management.
7. To establish linkage and networks with other international agencies/ teleconferences or consultation.
8. Conduct research and scientific studies to enhance the eye care services.

3.4. Administration

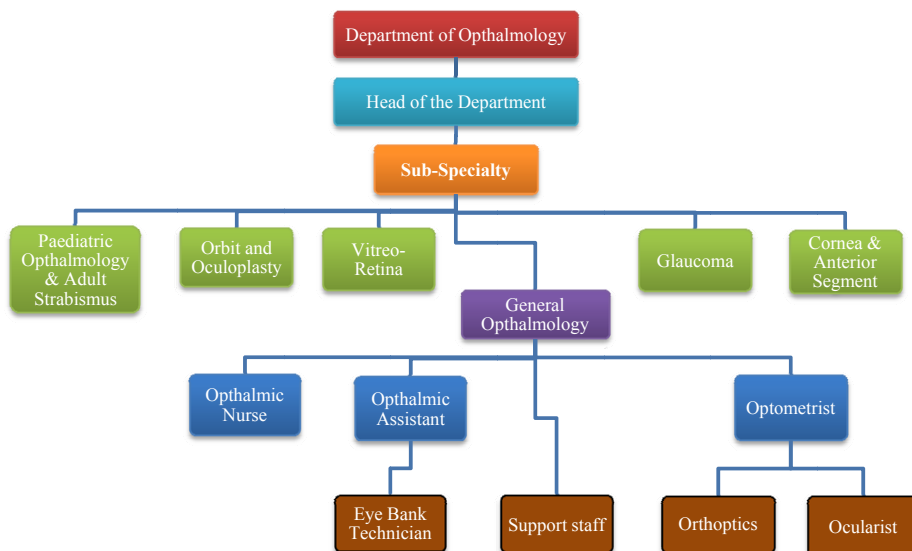
1. The focal person appointed by the Ministry of Health shall be responsible for the direction of the eye care services in the country
2. The focal person shall:
 - Ensure compliance with statutory requirements
 - Ensure compliance with current professional documents, including Standards of Practice of ophthalmology and Code of Ethics.
 - Ensure that services are consistent with the vision, mission and objectives of the National Standard for Ophthalmic Services.

- Review and update policies and procedures and ensure that the services are provided accordingly.
 - Coordinate and facilitate training for eye care professionals to ensure continued competence.
3. Ensure an evaluation of clinical practice and auditing of clinical services periodically.
 4. Ensure that there are written and dated job descriptions for all categories of staff.
 5. Review of national eye care services as and when required.
 6. Conduct regular staff meetings to discuss issues or matters pertaining to the operations of the eye care services.
 7. Ensure documentation and maintenance of all relevant records.

3.5. Organization Chart

An organization chart representing the structure and reporting relationship of the service is reflected below:

3.5.1. Staff Pattern in Department of Ophthalmology



Eye care staffs in the peripheral centres shall be under the administration of the concerned health facility. However, technical and other relevant back stopping shall be provided by the department of ophthalmology.

3.5.2. Staff Pattern in Community Ophthalmology – Primary Eye Care Programme



Remarks: This Program should be under the NCD, DoPH, MoH.

3.6. Physical setting

1. The physical setting is designed to provide a safe and accessible environment that facilitates fulfilment of the vision, mission and objectives of the eye care service.
2. The physical setting is planned, constructed and equipped to provide adequate space and the proper environment to meet the professional, educational and administrative needs of the service with safety and efficiency.

3.7. Equipments

1. The equipment meets all applicable legal requirements for health and safety and accessibility.
2. The equipments are inspected, maintained and calibrated routinely.

3. Where specialized equipment is used, there is documentation that only appropriately qualified staff, approved by the facility, operates such equipment.
4. Provisions for emergency resuscitation in an event of any life threatening situations.
5. Appropriate personnel from biomedical engineering service should be called for installation of sophisticated equipment and to repair whenever there is a breakdown.
6. Equipment should be handled with care by ophthalmic service providers.
7. Quality inspection of equipments and instruments should be performed by focal person from relevant units identified by the Ophthalmology Department.

3.8. Policies and Procedures

1. The eye care service has written policies and procedures that reflect vision, mission and objectives of the service.
2. Written policies and procedures shall reflect current professional knowledge and standard of practice and they shall serve as standard operating procedures for the eye care services.
3. The written policies and procedures:
 - are reviewed regularly and revised when necessary
 - meet the legal requirement
 - apply to, but not limited to:
 - ✓ Care of patients
 - ✓ Clinical education
 - ✓ Clinical research
 - ✓ Collaboration
 - ✓ Competency assessment
 - ✓ Continuing education
 - ✓ Criteria for access to care
 - ✓ Criteria for initiation and continuation of care
 - ✓ Criteria for referral to other appropriate health care providers
 - ✓ Criteria for termination of care

- ✓ Disaster plan
- ✓ Documentation
- ✓ Emergency plans
- ✓ Equipment maintenance, including urgent repair and replacement
- ✓ Fiscal management
- ✓ Improvement of quality of care and performance of services
- ✓ Infection control and waste management
- ✓ Job/position descriptions
- ✓ Patient and environmental safety and health issues
- ✓ HR Projection
- ✓ Rights of patients
- ✓ Risk Management
- ✓ Staff orientation
- ✓ Transfer of patients

3.9. Access of Ophthalmic Services

Patient can access an eye care service provider either by direct access or from an appropriate referral source wherein a referral system is in place.

3.10. Human Resource Development

1. The ophthalmic personnel affiliated with eye care service have demonstrated competence and are sufficient in number to achieve the vision, mission and objectives of the service.
2. The eye care services have staff that:
 - meet all legal requirements regarding licensure, registration and certification of appropriate personnel.
 - ensure that the level of expertise within the service is appropriate to the needs of the patients.
3. Staffs participate in the quality assurance program, and information from quality assurance activities is accessible to all staff.
4. A structured orientation programs to introduce new staff to their services and relevant aspects of the facility, organization or institute and aims to prepare them for their roles and responsibilities.

4. OPHTHALMIC PROFESSIONAL SERVICES CAREER ENHANCEMENT

4.1. Ophthalmologist

Education and training

A candidate with MBBS degree can specialize in ophthalmology which is a three years and above course in (MS/MD) ophthalmology.

4.2. Sub-specialization

The ophthalmologist can go for sub-specialization in different branches for a period of above nine months like:

1. Cornea and Anterior Segment
2. Glaucoma
3. Orbit and Occuloplasty
4. Pediatric Ophthalmology and adult strabismus
5. Vitreo-retinal

The training shall help to develop tertiary eye care services in the country and to reduce the number of referral outside the country.

Job Description for Ophthalmologist:

1. To provide comprehensive eye care services – ‘Promotive, Preventive, Curative and rehabilitative services’.
2. To provide operative mobile eye camps and clinic services.
3. To train health staff and human resource development (in-service and pre-service).
4. To impart training to school health In-charge as part of school eye health programme activities.
5. To supervise, monitor and evaluate the activities of ophthalmic assistants/nurses.
6. To conduct research and studies in relevant fields of ophthalmology.
7. Attend meetings, trainings, seminars, workshops etc. to enhance the eye care services.
8. To review and validate SOPs, guidelines etc.
9. Liaise with other disciplines and provide consultative services.

4.3. Sub-specialization Job Description

4.3.1. Cornea Specialist

Specialist in Cornea and Anterior Segment diseases

Education and training

Ophthalmologist with fellowship training in cornea and anterior segment

Job Description

1. Evaluate all patients with cornea and anterior segment diseases or disorders, diagnose the conditions, plan and provide necessary management after undertaking relevant investigations.
2. Perform visual restoration, therapeutic and preventive cornea and anterior segment surgeries.
3. Assess refractive disorders and undertake surgical and laser refractive surgeries.
4. Initiate contact lens services.
5. Manage eye banking services.
6. Perform corneal transplant surgeries.
7. Train eye bank technicians and supportive staff.
8. Evaluate and assess complex diagnostic test results such as topography, pachymetry etc.
9. Monitoring and supervision.
10. Attend relevant trainings/workshops/seminars etc to enhance services in the sub-specialty.
11. Conduct research studies in the field to improve the services or provide better patient management.
12. Ensure the equipments and instruments are in proper conditions, adequate in quantity, and indent in time.
13. Establish linkage with international centres for exchange of ideas and practices.
14. Work in consultation with other specialties in the department and other disciplines.
15. Engage media in imparting health education to the community on disorders of cornea and anterior segment.
16. Develop and implement SOPs

4.3.2. Glaucoma Specialist

Specialist in management of disorders related to Glaucoma.

Education and training

Ophthalmologist with fellowship training in Glaucoma

Job Description

1. Evaluate all patients having disorders related to glaucoma and undertake relevant investigations for diagnosis and planning appropriate therapy, and provide relevant necessary management.
2. Perform surgeries such as trabeculectomy, shunt implant etc.
3. Perform laser surgeries such as Laser peripheral iridotomy etc.
4. Interpret diagnostic tests such perimetry, OCT etc.
5. Teach subordinate staff.
6. Monitoring and supervision
7. Document the patient records
8. Work with other specialties and other disciplines
9. Develop networks for exchange of ideas
10. Attend trainings/meetings etc to enhance the quality of services
11. Engage media in imparting health education to the community.
12. Conduct research to enhance the services
13. Develop and implement SOPs.

4.3.3. Orbit and Oculoplasty Specialist

Specialist in management of disorders related to orbit and oculoplasty.

Education and training

Ophthalmologist with fellowship training in orbit and oculoplasty.

Job Description

1. Evaluate all patients having disorders related to orbit and oculoplasty, diagnose the conditions, undertake relevant investigations for diagnosis, plan appropriate therapy and provide relevant necessary management.

2. Perform surgeries relevant to the field.
3. Interpret diagnostic tests.
4. Impart trainings and teachings.
5. Monitoring and supervision.
6. Work with ocularist in the provision of prostheses to patients.
7. Document the patient records.
8. Work with other specialties and other disciplines.
9. Develop networks for exchange of ideas.
10. Attend trainings/meetings etc to enhance the quality of services.
11. Engage media in imparting health education to the community on disorders of Orbit and Occuloplasty.
12. Develop and implement SOPs.

4.3.4. Paediatric Ophthalmology and Adult Strabismus

Specialist in management of disorders related to paediatric ophthalmic disorders and adult strabismus.

Education and training

Ophthalmologist with fellowship training in paediatric ophthalmology and adult strabismus

Job Description

1. Evaluate all patients having disorders related to paediatric ophthalmic problems and adult strabismus and undertake relevant investigations for diagnosis and plan appropriate therapy, and provide relevant necessary management.
2. Perform surgeries relevant to the field such as surgeries for congenital cataract, squint correction etc.
3. Interpret diagnostic tests.
4. Impart trainings and teachings.
5. Work with orthoptist and refractionist in provision of complicated refractive errors, management of amblyopia and squint.
6. Manage patients with low visual problems.
7. Document the patient records.
8. Work with other specialties and other disciplines.

9. Develop networks for exchange of ideas.
10. Attend trainings/meetings etc to enhance the quality of services.
11. Engage media in imparting health education to the community.
12. Conduct research to enhance the services.
13. Monitoring and supervision/evaluation.
14. Develop and implement SOPs.

4.3.5. Vitreo-Retinal Specialist

Specialist in management of disorders related to vitreous and retina.

Education and training

Ophthalmologist with fellowship training in vitreo-retinal disorders

Job Description

1. Evaluate all patients having disorders related to vitreous and retinal problems and undertake relevant investigations for diagnosis and plan appropriate therapy, and provide relevant necessary management.
2. Perform surgeries such as vitrectomy, retinal detachment etc.
3. Provide laser treatment for various posterior segment disorders such as severe diabetic retinopathies etc.
4. Interpret diagnostic tests such as Optical Coherence Tomography (OCT), FFA (Fundus Fluorescence Angiography) etc.
5. Teach subordinate staff.
6. Document the patient records.
7. Work with other specialties and other disciplines.
8. Develop networks for exchange of ideas.
9. Attend trainings/meetings etc to enhance the quality of services.
10. Engage media in imparting health education to the community.
11. Conduct research to enhance the services.
12. Develop and implement SOPs.
13. Monitoring and supervision/evaluation.

4.3.6. Community Ophthalmologist

Specialist in the management of community ophthalmic diseases and disorders. Plan and implement community ophthalmic services especially in the areas of promotive, preventive, curative and rehabilitative services.

Education and training

Ophthalmologist with fellowship training in community ophthalmology.

Job Description

1. Evaluate community eye health problems and prioritize the health conditions.
2. Plan and implement community eye health intervention activities.
3. Coordinate with other agencies and authorities for effective community eye health intervention activities implementation.
4. Detect, treat and refer patients.
5. Implement vision 2020 programs.
6. Train health staff and VHWs.
7. Document and submit reports.
8. Liaise with international agencies – WHO, IAPB etc. in implementing up to date community eye care services.
9. Manage outbreaks of ophthalmic diseases and conduct surgical interventions.
10. Conduct research to enhance the services in the community.
11. Develop and implement SOPs.
12. Monitoring and supervision/evaluation.

4.3.7. Optometrist

Optometrists are qualified health professionals in the field of ophthalmology. They are entrusted with a responsibility of providing eye care services such as perform examination, make diagnoses, conduct investigations, provide treatment and refer patients requiring advanced management to the ophthalmologists or allied specialties.

Education and training

Plus 2 Science with Bachelors degree in Optometry.

Job Description

1. Optometrists examine, diagnose, treat, and manage diseases and refer patients.
2. Prescribe medications, low vision rehabilitation, vision therapy, spectacle lenses, and contact lenses.
3. Optometrists counsel their patients regarding surgical and non-surgical options that meet their visual needs related to their occupations, avocations, and lifestyle.
4. Optometrists often provide preoperative and postoperative care to cataract patients, as well as to patients who have had laser vision correction or other eye surgery.
5. Provide pre and in-service training to relevant ophthalmic staff.
6. Liaise with ophthalmologists/other allied specialties in providing holistic eye care services.
7. Develop and implement SOPs
8. Monitoring and supervision.
9. Provide challenging refractive disorders, muscles imbalances and amblyopia management.
10. Provide administration and management services as assigned.
11. Conduct researches.

4.3.8. Ophthalmic Nurses

Education and training

Class XII Science with General Nurse Midwifery course at Royal Institute of Health Science (RIHS) and six to twelve months of training in ophthalmology

Job description of Ophthalmic Nurses

Besides the general nursing care of the patients, the ophthalmic nurses are responsible to:

1. Admit and discharge the patients
2. Assess for all investigations of the patients
3. Prepare patients for all eye surgeries
4. Provide post operative assessment and monitoring
5. Assist the ophthalmologist in various procedures
6. Administer chemotherapy for ocular cancer patients as prescribed

7. Do dressings of the eyes
8. Instillation of the eye drops and ointments
9. Check vision of the patients
10. Take care of the instrument and equipment
11. Provide necessary health education
12. Ambulate patients
13. Alleviate pain and anxiety
14. To assist ophthalmologist during mobile eye camps
15. Know about Tonometry and basic minor procedures during eye examination like slit lamp, indirect ophthalmoscopy, autorefractometry, A & B scanning and accordingly provide required assistance.

4.3.9. Ophthalmic Assistant

Education and training

Plus 2 Science with 2 years certificate course at Royal Institute of Health Science.

The additional posts with additional qualification required in the next five year plan and in future will be as reflected below.

Existing Ophthalmic assistant can undertake basic trainings to become diagnostic assistant, sub-specialty assistant, and also undergo conversion to Diploma/Bachelors Degree courses to shoulder greater responsibilities.

They will be designated as –

1. Diagnostic Assistant
2. Eye Bank Assistant
3. Ocularist
4. Orthoptist
5. Optometry
6. Community Ophthalmology
7. Operation Theatre Technicians
8. Refractionist
9. Low vision
10. Counselling
11. Ophthalmic equipment maintenance technician

4.3.10. Eye Bank Technician

Education and training

Ophthalmic assistant with short course training (one month and above) as eye bank technician.

Primary Purpose:

Responsible for the recovery of human eye tissue for transplant and/or research and collection of necessary medical, behavioural, laboratory, and other data to ensure quality donor screening. Also has primary responsibility for tissue transportation to and from the eye bank lab. In addition, position may provide support for referral coordination and hospital services as needed.

Job Description:

1. Performs efficient and quality surgical recovery of human eye tissue for transplant and/or research.
2. Collects complete and accurate medical charts, behavioural data, laboratory data, blood specimens, and other pertinent data from the recovery site and other appropriate agencies.
3. Travels throughout respective recovery area (via automobile) to collect eye tissue and medical records.
4. Acts professionally and respectfully as a representative of the Eye Bank in hospital, funeral home, and transplant/donation settings.
5. Performs scheduled night, weekend, and holiday donor recovery/coordination duty and must have commitment to work for long and odd hours.
6. Performs timely transportation of eye tissue to and from Eye Bank laboratory as needed.
7. Perform sensitive and thorough medical/social history interviews with donor's next-of-kin or other appropriate persons.
8. Performs other projects and duties as assigned. In all daily activities, strive to support the Vision, Mission, and Values of National Eye Bank.
9. A personal commitment to organ donation required.
10. Coordinates the placement of approved tissue for transplants with surgeons.

11. Evaluates the processed cornea to determine suitability of tissue for human transplant.
12. Coordinates referrals from other agencies and the call centre for potential donors.
13. Determines donor suitability of corneal tissue for transplantation by investigating patient's medical and social background utilizing all available resources.
14. Approaches families regarding the option of donation of corneal tissue for transplantation, research and education purposes.
15. Conducts quality control.
16. Manages and maintains laboratory supplies and reagents.
17. Follow SOPs
18. Any other tasks assigned by the supervisor.

4.3.11. Community Eye Health Program Officer

Education and Training

Plus 2 Science with Bachelors' degree in community eye health or relevant conversion course for the ophthalmic assistants.

Job Description

1. **Creating awareness (promotive):**
 - To strengthen the community awareness and co-operation to promote health within the family unit.
 - Inform and disseminate to as many people in the community as possible within the community which are very effective in creating awareness.
2. **Prevention:**
 - Includes stimulation of individuals and their community to participate in activities in blindness prevention.
 - Social and community development that promotes health through changes in behaviour and environment.
 - Reduction or elimination of factors contributing to ocular disease.

3. Curative activities:

- Coordinate curative eye care Services in the community.

4. Rehabilitation activities:

- Coordinate and facilitate trainings to visually handicapped and blind people in the community.
- Coordinate with the CBR volunteers, as well as all the other volunteer workers.
- Facilitate TOT of health personnel, school teachers and social workers.

5. Implementation of Vision 2020 Programme:

- As per the criteria given by the International Agency of Preventive Blindness & World Health Organization guidelines, the programs shall carry out “Vision 2020, Right to sight” eye care activities.

5. HUMAN RESOURCE STANDARD

Sl. No	Categories	Hospitals with different bed strength					BHU-I	BHU-II
		350	150	60	40	20		
1	Cornea and anterior segment Specialist	2						
2	Glaucoma	2						
3	Oculoplasty and Orbit surgeon	2						
4	Pediatric Ophthalmology and Adult Strabismus specialist	2						
5	Vitreo-Retinal surgeon	2						
6	General Ophthalmologist	7	2	1				
7	Optometrist	5	2	1	1			
8	Orthoptist	4						
9	Eye Bank Manager	1						
10	Ophthalmic Technician/ Assistant (Diploma/Certificate*)	48	5	2	2	2	1	

*includes all general and sub-specialty trained ophthalmic assistant

6. DOCUMENTATION

1. The eye care professionals shall clearly documents all aspects of patient care/ management including the results of the initial examination/assessment and evaluation, diagnosis, prognosis, plan or care/intervention/treatment, response to intervention/treatment, changes in patient status relative to the interventions/ treatment, re-examination, and discharge/discontinuation of intervention and other patient management activities.
2. Eye care professionals shall ensure that the content of documentation:
 - is accurate, complete, legible and finalized in a timely manner
 - is dated and appropriately authenticated by the ophthalmologists
 - records equipment loaned and/or issued to the patient
 - includes, when a patient is discharged prior to achievement of goals and outcomes, the status of the patient and the rationale for discontinuation
 - includes reference to appropriate outcome measures, where possible
3. Eye care professionals shall make sure that documentation is used properly by ensuring it is:
 - stored securely at all times in accordance with legal requirements for privacy and confidentiality of personal health information
 - only released, when appropriate, with patient's permission
 - consistent with reporting requirements of HMIS (health management and information system)

7. EDUCATION/COMMUNICATION

The eye care professionals shall:

- contribute to the education of health professionals.
- participate in the education of students by supervision.
- educate and provide consultation to other health professionals regarding the purposes and benefits of ophthalmology.
- educate and provide consultation to consumers, the general public, community organizations, clubs, and associations, regarding the purposes and benefits of ophthalmology, and the roles of the ophthalmologist and other support personnel.

8. ETHICAL BEHAVIOUR

The Eye care professionals shall practice according to a Code of Ethics that is consistent with BMHC regulations, National Health Policy and policy of the Department of Ophthalmology.

9. LEGAL

The Eye care professionals shall comply with all the laws and legal requirements of the Kingdom of Bhutan and the BMHC Regulations.

10. INFORMED CONSENT

The procedure for informed consent must comply with BMHC regulations

11. PATIENT MANAGEMENT

11.1. Initial Examination/Assessment, Evaluation, Diagnosis, and Prognosis

- i. The eye care professionals shall perform an initial examination/assessment and evaluation to establish a diagnosis and prognosis prior to intervention/ treatment.
- ii. The eye care professionals examination:
 - is documented, dated, and appropriately authenticated by the ophthalmologist who performed it.
 - identifies the ophthalmic needs of the patient.
 - incorporates appropriate tests and measures to facilitate outcome measurement.
 - produces data that are sufficient to allow evaluation, diagnosis, prognosis, and the establishment of a plan of care/interventions/ treatment.
 - may result in recommendations for additional services to meet the needs of the patient.
 - provides written evidence of the reasons why no further management has been given to the patient and, when appropriate, to the family members.

11.2. Plan of Care/Interventions/Treatments

The eye care professionals shall:

- establish a plan of care/interventions/treatments and manages the needs of the patient based on the examination, evaluation, diagnosis, prognosis, goals, and outcomes of the planned interventions/treatments for identified

disabilities (impairments, activity limitations and participation restrictions) and/or for prevention, health promotion, fitness, and wellness.

- collaboratively involve the patient and others as appropriate in the planning, implementation, and assessment of the plan of care/intervention/treatment.
- in consultation with appropriate disciplines shall, plan for discharge of the patient taking into consideration achievement of anticipated goals and expected outcomes, and provide for appropriate follow-up or referral.

11.3. Interventions/Treatment

The intervention/treatment:

- is based on the examination, evaluation, diagnosis, prognosis, plan of care/intervention/treatment and informed by current evidence
- is provided by or under the ongoing direction and supervision of the ophthalmologist
- is provided in such a way that directed and supervised responsibilities are commensurate with the qualifications and the legal limitations of support personnel
- is altered in accordance with changes in response or status
- is provided at a level that is consistent with current ophthalmic practice
- is multidisciplinary when necessary to meet the needs of the patient
- documentation of the intervention is consistent with established guidelines
- is dated and appropriately authenticated by the ophthalmologist

11.4. Re-examination

The eye care professionals shall:

- re-examine the patient as necessary during a treatment session to evaluate progress or change in patient status and modifies the plan accordingly or discontinues ophthalmic services.
- documented, dated, and appropriately authenticated by the ophthalmologist who performs it.
- includes modifications to the plan of care/intervention/treatment if required.

11.5. Discharge/Discontinuation of Intervention/Treatment

The eye care professionals shall

1. discharge the patient from physiotherapy services when the anticipated goals or expected outcomes for the patient have been achieved.
2. discontinue intervention/treatment when the patient is unable to continue to progress toward goals or when the ophthalmologist determines that the patient will no longer benefit from ophthalmic services.
3. recognize that the patient has a right to discontinue treatment/intervention at any time.

11.6. Patient Collaboration

Within the patient management process, the eye care professionals and the patient or family members shall establish and maintain an ongoing collaborative process of decision-making that exists throughout the provision of services.

11.7. Referral

Where the examination, diagnostic process, or any change in status reveals findings outside the scope of knowledge, experience, and/or expertise of the eye care professionals, the patient shall so be informed and referred to the appropriate practitioner/professional.

1. A referral system should be in place to other clinical specialists.
2. A procedure should be in place for the transfer of patients.

12. PERSONAL/PROFESSIONAL DEVELOPMENT

The eye care professionals shall comply with regulatory requirements of Bhutan Medical and Health Council and other relevant agencies.

13. QUALITY ASSURANCE

In order to ensure the delivery of quality eye care services throughout the health care settings in the country, the following parameters should be implemented and monitored.

1. The choice or option of services should target to optimal patient satisfaction,
2. The service providers should make efficient use of time.
3. All level of communication/information should be utilized.
4. Essential to have adequate, qualified and *dedicated* human resources.

5. Ensure strict utilization of SOPs, standards, guidelines and posters in the patient care.
6. Conducive working environment be provided.
7. Strictly follow universal precaution for infection control.
8. Ensure adequate and timely availability of drugs, diagnostic tests and equipments.
9. Ensure to maintain patient's privacy and safety at all levels of service care.

14. RESEARCH

The eye care professionals shall:

1. apply research findings to practice and encourages, participates in and promotes activities that establish the outcomes of patient management provided by the ophthalmologist.
2. advance the science of ophthalmology by conducting and/or supporting research activities or by assisting those engaged in research.
3. ensures that their knowledge of research literature related to practice is current
4. ensures that the rights of research subjects are protected, and the integrity of research is maintained.
5. participate in the research process as appropriate to individual education, experience, and expertise.
6. educate eye care professionals, students, other health professionals, and the general public about the outcomes of ophthalmology research.
7. recognizes research as an integral part in the continuing growth and development of the profession.
8. adheres to research ethics committee for performing research on human subjects.

15. SUPPORT PERSONNEL

1. Support personnel should be at all times under the direction and supervision of the unit in-charges.
2. The eye care professionals shall not delegate any activity that requires the unique skill, knowledge, and judgment for eye care services.

16. OPHTHALMOLOGY STANDARD OF SERVICES

16.1. SERVICE STANDARDS: Ophthalmology Services at Different Levels of Health Facilities (Based on the strength of beds)

16.1.1. Ophthalmology services in the BHU

The peripheral health centres of the districts, being served by Basic Health Units have no eye care personals posted there. However, the primary health care staffs are trained in basic eye care services. They are in position to provide the following services:

1. History taking for patients visiting the health centers.
2. General assessment of the patients.
3. Provide visual acuity assessment.
4. Undertake simple torch light eye examination of the anterior part of the eye.
5. Make diagnose and give a differential diagnosis.
6. Provide necessary treatment including use of chloramphenicol eye ointment.
7. Refer Standard Treatment guidelines (STG) for comprehensive evaluation and management of eye disorders.
8. Provide prompt management of ocular trauma patients especially, chemical injuries.
9. Undertake referral of serious patients without delay to eye care professional.
10. Vitamin A supplementation to less than five children and school children as per school health program activities.
11. Provide basic and essential ocular health promotive and preventive education to the community on regular basis.
12. Liaise with the ophthalmic assistant posted in the District Hospitals on eye care services.
13. Documentation of all the relevant activities carried out and report as per the reporting system.

16.1.2. Ophthalmology services in the BHU grade I and District Hospital

1. Undertake all relevant ophthalmic examination, make diagnose, treat and refer eye ailments.

2. Monitor and supervise Vitamin A administration to infants less than five years.
3. Provide health education on common ocular communicable diseases
4. Carry out timely reporting and managing of outbreaks of ocular diseases.
5. Perform simple diagnostic tests procedures in the OPD using SOP such as simple refraction with writing of glass prescription.
6. Perform minor surgeries like incision and drainage of chalazion and sties; perform lacrimal sac syringing and probing; superficial foreign body removal using sterile techniques; perform irrigation of the injured eyes due to chemicals and provide primary basic eye trauma cares to ocular injuries patients.
7. Maintains the equipment and instruments used in ophthalmology services.
8. Documentation and report submission of eye care services periodically.
9. Carryout primary eye care program activities like school and community eye health check-up and give health education on the eye care.
10. Undertake screening of operable patients such as cataract etc., prepare lists, inform the Department of Ophthalmology.
11. Organize Operative Mobile Eye Camps in the respective jurisdiction.
12. Teach primary eye care to village health workers, patients, their family members and community on eye health promotive and preventive activities.
13. Teach the elements of hygiene to patients, family and village health workers.
14. Describe the correct referral system.

16.1.3. Ophthalmology services in the Regional Referral Hospital

The regional referral hospitals have an ophthalmologist and an Optometrist posted there apart from ophthalmic assistants and where possible few ophthalmic nurses. The eye care services include:

1. Provide comprehensive patient cares in OPD including ophthalmologist's consultation, investigations, proper diagnosis and management.
2. Admit patients in the ward for those requiring intensive treatment, investigations and operations and so on.
3. Undertake referral of patients requiring sub-specialist consultation and management or for higher level of investigations such as CT or MRI.
4. Provide community eye care services through mobile eye clinics and operative camps in order to reach the services to the unreached population on regular basis.

5. Ensure that ophthalmic paramedics implement of the region provide school eye health and other related community eye care services on regular and periodic basis along with submission of the reports.
6. Monitor the eye care services provided in the region by the ophthalmic assistant and provide necessary assistance and support.
7. Liaise with the local health authorities such as DHOs, CMOs etc. to ensure smooth implementation of the eye care services.
8. Submit the reports to the program Manager regularly and seek support and guidance accordingly.
9. Conduct regular meetings, maintain minutes and ensure the activities are conducted as per the recommendations of the meetings.
10. Ensure that the ophthalmic paramedics properly assist the ophthalmologist in accordance to the prescribed procedures and patient cares.
11. Collects required and appropriate patient history and data, administer tests such visual acuity and provide treatment.
12. Perform available diagnostic tests procedures in the OPD to aid in the diagnosis and management of the patients.
13. Perform advanced level refraction in order to manage complicated refractive disorders and write glass prescriptions.
14. Ensure that minor surgeries like incision of chalazion, sties and syringing, using sterile technique are carried out as per the SOPs and documented properly.
15. Maintain inventory of the equipment and instruments used in ophthalmology services and indent as per the prescribed procedures and formalities.
16. Ensure CME sessions are carried out in time in order to enhance the knowledge and skills of the service providers and also to keep abreast of the latest art of patients' management.
17. Involve in the teaching primary eye care to village health workers, patients, their family members and community.
18. Teach the elements of hygiene to patients, family and village health workers.
19. Provide Pre-operative and post-operative cares of all operative cases and their follow-up.
20. Describe the correct referral system.

21. Have administrative skills in day to day management of eye care services.
22. Maintain record/reports and supply system.
23. Participate in regional and international meetings, seminars etc. in order to improve and strengthen the eye care services.
24. Provide training to the ophthalmic assistant students during their field attachment postings.

16.1.4. Ophthalmology services in the National Referral Hospital

The national Referral Hospital (JDWNRH) has ophthalmologists who are sub-specialised in different fields of ophthalmology such as ‘Cornea and Anterior segment’, Paediatric Ophthalmology & Adult Strabismus etc. These apart, Optometrists along with ophthalmic assistants and where possible few ophthalmic nurses are posted there. The ophthalmic paramedics are also trained in different sub-speciality fields.

The eye care services include:

1. Provide comprehensive patient cares in OPD including ophthalmologist’s [inclusive of all sub-specialities] consultation, investigations, proper diagnosis and management.
2. Admit patients in the ward for those requiring intensive treatment, investigations and operations and so on.
3. Regularly conduct sub-speciality clinics for specialities.
4. Undertake referral of patients requiring higher sub-specialist consultation and management to India and third world countries.
5. Provide community eye care services through mobile eye clinics and operative camps in order to reach the services to the unreached population on regular basis.
6. Ensure that ophthalmic paramedics implement of the region provide School Eye Health and other related community eye care services on regular and periodic basis along with submission of the reports.
7. Monitor the eye care services provided in the region by the ophthalmic assistants and provide necessary assistance and support.
8. Liaise with Ministry of Health, other disciplines/faculties/organizations and the local health authorities such as DHOs, CMOs etc. to ensure smooth implementation of the eye care services.

9. Compile and submit the reports to the Program regularly and seek support and guidance accordingly.
10. Conduct regular meetings, maintain minutes and ensure the activities are conducted as per the recommendations of the meetings.
11. Ensure that the ophthalmic paramedics properly assist the ophthalmologists in accordance to the prescribed procedures and patient cares.
12. Collects required and appropriate patient history and data, administer tests such visual acuity and provide treatment.
13. Perform available diagnostic tests procedures in the OPD to aid the diagnosis and management of patients.
14. Perform advanced level refraction in order to manage complicated refractive disorders and write glass prescriptions.
15. Provide low visual aids through low vision clinics.
16. Ensure that minor surgeries like incision of chalazion, sties and syringing using sterile technique are carried out as per the SOPs and documented properly.
17. Maintain inventory of the equipment and instruments used in ophthalmology services and indent as per the prescribed procedures and formalities.
18. Ensure CME sessions are carried out in time in order to enhance the knowledge and skills of the service providers and also to keep abreast of the latest art of patients' management and eye care services.
19. Involve in the teaching primary eye care to village health workers, patients, their family members and community.
20. Teach the elements of hygiene to patients, family and village health workers.
21. Provide Pre-operative and post-operative cares of all operative cases and their follow-up.
22. Describe the correct referral system.
23. Have administrative skills in day to day management of eye care services.
24. Maintain record/reports and supply system.
25. Participate in regional and international meetings, seminars etc. in order to improve and strengthen the eye care services.
26. Provide training to the ophthalmic assistant students.

17. PHYSICAL SETTING STANDARDS (infrastructures)

1.1 Physical Setting for Ophthalmology:

SI/No	Rooms	NRH	RRH	DH	BHU-I	BHU-II
1	Vision room (6 meters)	2	2	1	1	1
2	Refraction	3	2	0	0	0
3	Minor OT	1	1	1	1	0
4	Consultation Rooms			1	1	0
5	Screening room for:					
	General Ophthalmologist	1	1	0	0	0
	Cornea & Anterior segment	1	0	0	0	0
	Pediatric & Adult Strabismus	1	0	0	0	0
	Vitreo-Retina	1	0	0	0	0
	Oculoplasty	1	0	0	0	0
	Glaucoma	1	0	0	0	0
6	Laser Room	2	1	0	0	0
7	Diagnostic room	1	1	0	0	0
8	Low Vision Room	1	0	0	0	0
9	Eye bank	2	0	0	0	0
10	Prosthesis Laboratory	1	0	0	0	0
11	Store room	1	1	0	0	0
12	Meeting room/class room	1	1	0	0	0
	Total	21	10	3	3	1