

Eastern Regional Referral Hospital Annual Report 2023

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Eastern Regional Referral Hospital
National Medical Services
Mongar Dzongkhag

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Eastern Regional Referral Hospital Annual Report 2023

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“Quality! It’s easy to begin any work and even easier if we want to achieve mediocracy. However, if we want to see steady progress and constant improvement, we have to be prepared to shoulder greater responsibility. Healthcare is very important for each and every person, and we cannot fail in our Endeavour to continuously improve the quality of our healthcare services”

(His Majesty’s Address at the 1st KGUMSB Convocation, April 25, 2019)



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ABBREVIATIONS

AFHS	Adolescent Friendly Health Services
ANC	Antenatal Care
ARDC	Agriculture Research & Development Center
BCDST	Bhutan Child Developmental Screening Tools
C4CD	Care for Child Development
CME	Continuing Medical Education
DTP	Diphtheria, Tetanus and Pertussis
EBMSIS	Electronic Bhutan Medical Supplies Inventory System
ED	Emergency Department
EPIS	Electronic Patient Information System
ERRH	Eastern Regional Referral Hospital
GDMO	General Duty Medical Officer
HCAI	Healthcare Associated Infections
HIV	Human Immunodeficiency Virus
HPV	Human Papillomavirus
HVAC	Heating, Ventilation, and Air Conditioning
IMNCI	Integrated Management of Neonatal and Childhood Illness
IPD	Inpatient Department
ISO	International Standardization Organization
LIS	Laboratory Information System
MDA	Mongar Dzongkhag Administration
MDR TB	Multidrug Resistant Tuberculosis
MMR	Measles, Mumps and Rubella
MO	Medical Officer
MOH	Ministry of Health
MWM	Medical Waste Management
NCD	Non Communicable Disease
NMS	National Medical Service
OPD	Outpatient Department
OT	Operation Theatre
PABX	Private Automatic Branch Exchange
PMTCT	Prevention of Mother to Child Transmission
PNC	Postnatal Care
QA	Quality Assurance
CSSD	Central Sterile Supply Department
SOP	Standard Operating Procedure
STI	Sexually Transmitted Infections
SUD	Substance Use Disorder
UPS	Uninterrupted Power Supply
VTI	Vocational Training Institute
WHO	World Health Organization



MESSAGE FROM THE PRESIDENT – NMS

I am immensely proud of the incredible dedication and hard work each and every one of you has demonstrated in providing exceptional care to our patients. This first annual hospital report serves not only as a record of our achievements but also as a testament to our unwavering commitment to quality patient services.

The annual report is more than just a document; it is a representation of our collective efforts to ensure that every patient who walks through our doors receives the highest standard of care possible. It provides transparency into our operations, showcases our accomplishments, and highlights areas where we can continue to improve and innovate.

I want to take this opportunity to express my heartfelt gratitude to each member of ERRH for your tireless dedication and commitment to our patients' well-being. Whether you're on the frontlines delivering direct care, providing support services, or working behind the scenes to keep our operations running smoothly, your contributions are invaluable and deeply appreciated.

As we embark on this journey together, I am confident that we will continue to raise the bar for excellence in patient care. Your passion, expertise, and unwavering commitment are the driving forces behind our success, and I am honored to work alongside such an exceptional team. Thank you once again for your outstanding contributions to our hospital and the communities we serve by publishing this first annual hospital report. Together, we will continue to make a meaningful difference in the lives of our patients.

Tashi Delek!

Dr. Mimi Lhamu Mynak
President
National Medical Service



MESSAGE FROM THE MEDICAL SUPERINTENDENT

It is with great pleasure and a sense of pride that I present to you the annual report of Eastern Regional Referral Hospital. As the head of this institution, I want to extend my heartfelt gratitude and appreciation to all our Kings, successive government and patients for letting us do what we like the most with your unwavering support. Eastern regional referral hospital has come a long way from starting as a dispensary in 1955, serving as 12-bedded Leprosy Mission hospital until 1972 and upgraded to 60 bedded fully equipped hospital with OT facilities in 1975. It was further upgraded to 80-bedded Regional Referral Hospital (RRH) in 2000 and 150-bedded current hospital in 2008 by the Government.

The last few years have undoubtedly been a challenging one, as the world faced an unprecedented health crisis. However, in the face of adversity, our hospital has stood strong, demonstrating resilience, determination, and a commitment to providing exceptional care to our patients.

Despite many obstacles, our dedicated team of healthcare professionals has gone above and beyond to deliver compassionate and patient-centered care. Their expertise and unwavering dedication to the well-being of our patients have been truly inspiring. At the heart of our mission is commitment to provide preventive, promotive, curative and rehabilitative healthcare through evidence-based approaches. We have actively engaged in health promotion and educational initiatives, aiming to raise awareness about preventive measures and healthy lifestyles. We understand the significance of collaboration, and we have actively partnered with local government and ministry of health to ensure comprehensive and holistic healthcare services for all.

Looking ahead, we remain steadfast in our commitment to fulfilling our vision to become a center of excellence in tertiary health care and primary health care, in pursuit of Gross National Happiness. We will continue to invest with the help of government in our human resource, technology, and infrastructure. We are dedicated to implementing evidence-based practices, and embracing emerging healthcare trends to meet the evolving needs of our patients.

In closing, I extend my deepest gratitude to our amazing team, our patients, and all stakeholders. Together, we will continue to make a real and lasting impact on the health and well-being of our community in the service to the Tsa-Wa-Sum.

Tashi Delek!

Dr. Pelden Wangchuk
Medical Superintendent



FROM THE EDITORS

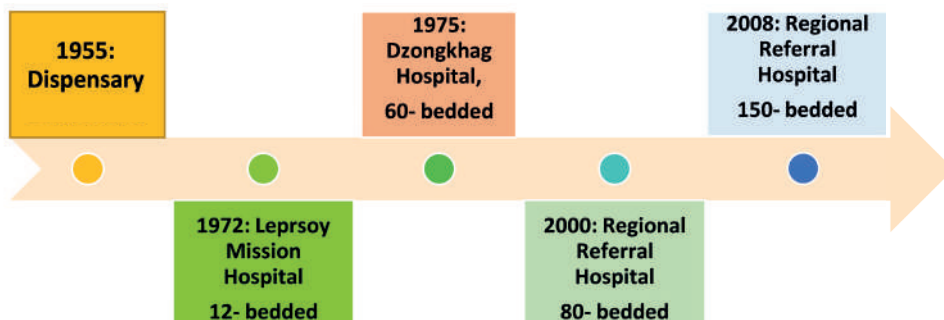
This annual report presents a vivid overview of Eastern Regional Referral Hospital (ERRH) in the year 2023. Highlights on history of the hospital of past years, present organization team, statistical reports, work performances and activities of individual department and units are the main features of this report. Additionally, all departments have provided their valuable inputs and spelled out the challenges and clear plan of future improvement.

We express our deepest gratitude to everyone for their contribution of ideas, knowledge and supplementation without which this report wouldn't have been possible. This document also provides a detailed staff structure, work progress and current shortcomings which could serve as basic data for future plans and activities.

We would like to wish everyone a pleasant reading.

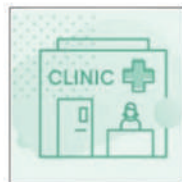


ERRH AT A GLANCE



150 bed
12 specialties
450 staffs

Doctors-32
Nurses-140
Medical Technicians-107
Drungtsho-4



IPD attendance 3,541
OPD attendance 80,434
Referred out 120
Referred in 1,010

Death-99
Most common cause of death-
NCD(40%)
Institutional delivery-499



Bed occupancy-40.2 %



1. ADMINISTRATION

Background

Mongar hospital was started as a small dispensary in 1955 with 3 staff consisting of a Medical Officer, a compounder and a vaccinator. In 1972, the Leprosy Mission, UK took over the dispensary and upgraded it to a 12 bedded leprosy hospital at the present site.

At the same time mission started construction of a new hospital which was completed in 1975. The new 60 bedded hospital with fully equipped operation theater, laboratory and X-ray unit was run by the mission till 1992. In 1993, the hospital was handed over to the Government and became the Dzongkhag hospital for Mongar. The hospital was subsequently designated as the Eastern Regional Referral Hospital in 1996. In 2000 it was upgraded to an 80 bedded hospital. Since then, the hospital has been providing secondary and some tertiary level health care services to the 6 eastern Dzongkhags.

The present 150 bedded hospital was built under the GOI funded project. The present hospital construction started on 17th May 2005. It was inaugurated on 6th June 2008 by HE Sudhir Vyas, the Ambassador of India to Bhutan.

Today, Eastern Regional Referral Hospital (ERRH) is the tertiary multi-specialty healthcare institution and serves as referral hospital for the eastern region and district hospital for Mongar Dzongkhag.

Prior to its upgradation as Regional Referral Hospital, the hospital was headed by medical officer and later as a district hospital by District Medical Officers. Many head of the institution have changed over the past several decades as depicted in the table below.

Table 1.1 Past and present head of the institute

Name	Designation	Year
Dr. Riedel	MO	Unknown
Dr. Burselem	MO	Unknown
Dr. Helen Stock	MO	Unknown
Dr. Ugyen Tshomo	DMO	1991
Dr. Nado Zangpo	DMO	1994
Dr. Ngawang Tenzin	DMO	1998
Dr. Ritulal Sharma	MS	2002
Dr. Tapas Gurung	MS	2008
Dr. Sonam Gyamtsho	MS	2012
Dr. Pelden Wangchuk	MS	2017 till date

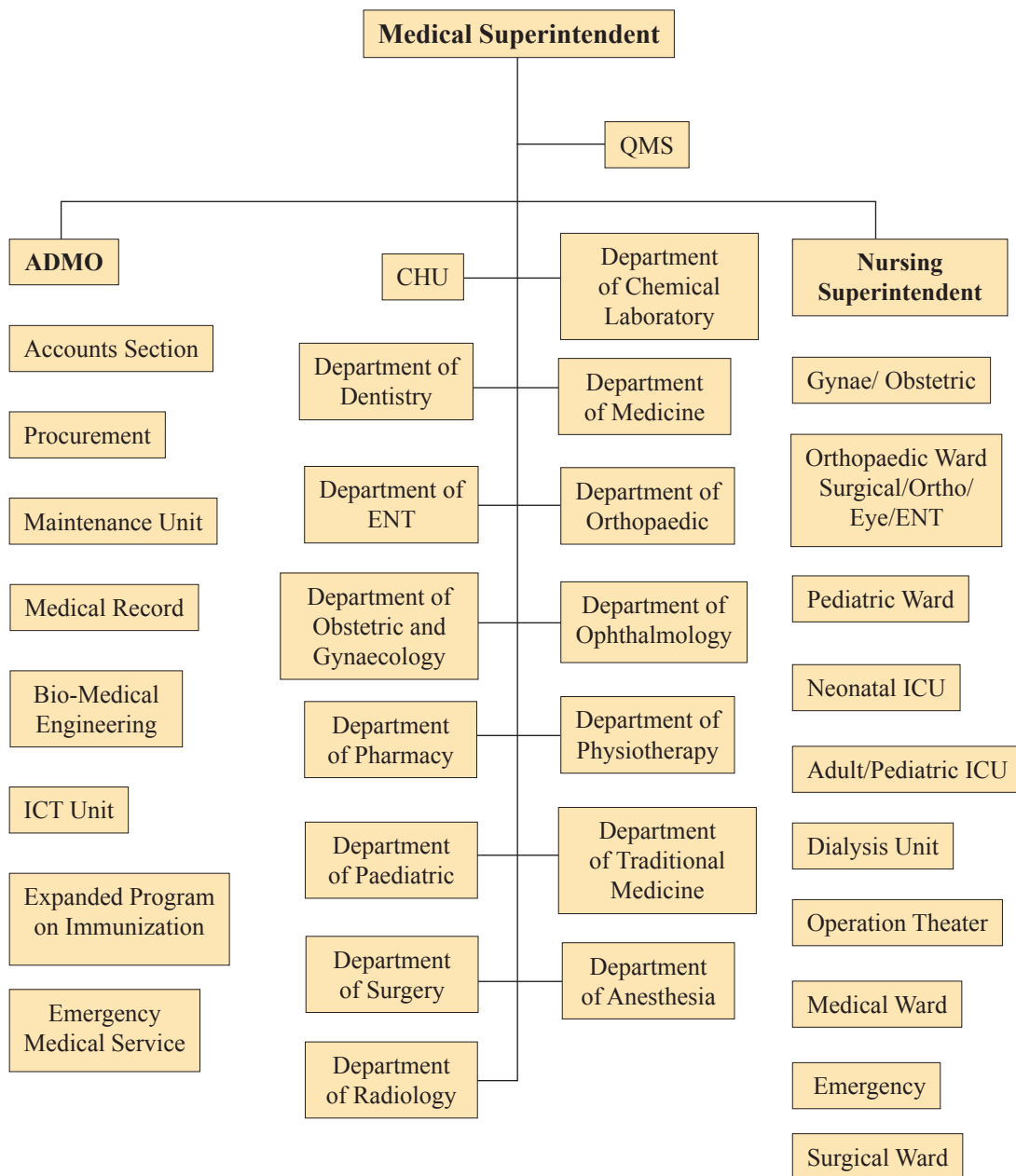


Figure 1.1 Organogram of the hospital



Currently, the hospital is headed by Medical Superintendent (MS) and supported Deputy Chief Administrative Officer (DCAO) and Nursing Superintendent (NS). These 3 core members oversee and manage the day-to-day functioning of the hospital. There are other categories of staff who help in smooth functioning of the hospital. Additionally,

Human Resource Committee (HRC), Hospital Tender Committee, Therapeutic Drug Committee, Quality Management Committee, Antimicrobial Resistance Committee, Mortality Committee and numerous other committees help in the smooth functioning of the hospital.

Table 1.2 Staff in each category

Staff category	Numbers
Doctor	32
Drungtsho	4
Nurse	140
Medical Technician and technologist	107
General Maintenance staff	18
Biomedical Engineer and Technician	9
Driver	8
Support staff	91
Administration	21
Total	430

Human Resource Committee

The committee has 10 members chaired by medical superintendent. The committee is governed by a term of reference approved by Ministry of health. The committee takes the responsibility of solving all HR related issues and quarter allotment.

Tender Committee

ERRH tender committee is a field level tender committee governed by acts, policies and guidelines of Royal Government of Bhutan. All procurement related activities of the hospital are performed by this committee.

Administrative section

Administrative section is headed by Mr. Karma Yeshe, Deputy Chief Administrative Officer (DCAO) and supported by two administrative assistants.

Office of the Nursing Superintendent

Nursing administration is headed by Mr. Phuntsho Norbu, Nursing Superintendent. Besides nursing, he also takes the responsibility of managing cleanliness of the hospital with support from the support staff.

Procurement section

All the work related to procurement is currently performed by store assistant supported by the administrative section. The tendering process for the 2023-24 couldn't be done after the demise of Procurement Officer, late Mr. Sonam Dorji.

Account section

The account section is managed by Mr. Sonam Tshering. Being lone person working in the section it's quite a challenge for him to fulfill all the routine works. However, he makes sure that all the works are done up to date. It's worthwhile to note that there has been no adverse event from the section under his workmanship.

General Store section

The general store section is manned by Mr. Dorji Ngedup and Mr. Passang. They look

after the general store section and kitchen. The store maintains general non-medical items from hardware to stationeries and edibles for the office and patients.

Medical Record section

Medical record section is managed by three record technicians, Mrs. Tshering Cheki, Mrs. Richen Lhamo and Mrs. Tshering Lhamo. As mandated by MOH and the Government, hospital stores record for at least for 10 years in hard copy.

IT section

It houses server for ePIS and other ICT systems. It is managed by ICT focal, Mr. Sangay Phuntsho. The section looks after ePIS, LIS, eBMSS etc. and maintains connectivity at the hospital. The biggest challenge we face currently is the lack of trained and dedicated ICT associate.



Picture 1.1 Administrative team



Achievements

- Construction of Sangay Menlha Phodrang, Royal portraits at various location, flower gardens and prayer flags.
- Biometric attendance.
- Installation of CCTV.
- Network improvement.
- Hoisting of hospital website.
- Creation of space for ever expanding medical services: orthodontist and prosthodontist in Dental Department, ENT Department; Emergency Department; SUD unit, Stroke unit, Psychiatric ward; Regional EPI cold storage.
- Modification of laboratory.
- Major renovation of the hospital.
- Installation of oxygen plant.
- Construction of MDR TB ward, Lam's zimchung, work station for carpentry, water treatment plant, sport facilities like basketball and volleyball court, pre-emergency care unit, guest room for driver and medical escort.
- Regularization of the monthly blood donation campaign and mortality and

morbidity meetings.

- Induction course for new recruits.
- Continue medical education.
- Created separate stand for opportunistic screening of NCD.
- Initiation of patient welfare scheme.

Staff welfare scheme

The MRRH Staff Welfare Scheme (MRRHSWS) was instituted in 2017 wherein all the members contributed a sum of Nu. 300 and Nu. 150 respectively. It was handed over to the employee in the demise of any nominee or to the first nominee in the event of demise of the employee. Further, a system of gifting a sum of Nu. 5000, 6000, 7000 etc. also existed depending upon the staff's number of years' service at MRRH upon transfer, superannuation and resignation respectively. The formal hospital staff welfare scheme was instituted in 2018 with His Majesty the King's soelra, a sum of one million with proper bye-law. Over the past few years, it has benefitted many of staff.

Table 1.3 Staff welfare scheme statistics

Beneficiary	Number	Amount
Semso for death of immediate family member	38	1,900,000
Semso for death of member	03	300,000
Money back on leaving ERRH	122	671,000
Total benefit	NA	2,125,314
Total collection	NA	5,515,105
Standing balance as of Jan 2024	NA	3,389,791



Patient welfare scheme

There are many patients/relatives who are in dire need of financial support as they come from economically disadvantaged background. Patient Welfare Fund (PWF) was instituted at ERRH in 2004 with the support from philanthropists. A total of Nu. 2.2 million has been collected from various donors and approximately 54% remain utilized. On 3rd April, 2018 we have received Soelra of Nu. 1.0 million from His Majesty the 5th King to be used as the seed money for this scheme and thus PWF was formalized. We use the fund for poor patients to:

- Meet travel expenses
- For the disposal of dead body
- Buy clothing and other necessities for poor patients
- Buy necessities for mothers after delivery

Challenges and way forward

Inadequate human resource especially in account, administrative, procurement and IT section is a challenge. We have proposed to NMS and Ministry of Finance for additional recruitment.

The staff quarter renovation couldn't be completed due to failure from the contractor and lack of fund. We have proposed the fund in 13th FYP for a proper and complete renovation.

The internal road network at the hospital is laden with potholes. Although the fund for repair and maintenance was secured in 12th FYP the budget was never released due to fund constraint at the center. We have included the same in 13th FYP proposal for its maintenance.

2. GENERAL OPD

Background

General OPD was started when the hospital was moved to the new location in 2008. It is run by Medical Officers (MO) and General Duty Medical Officers (GDMO). Currently there are five medical officers running the general OPD with specialist doctors assisting during shortages. A reception helps in crowd control and smooth running of the department.

The General OPD is the busiest unit in the hospital with respect to number of patients

seen at given time. The main challenge is with less number of medical officers looking after the OPD. These same medical officers also look after emergency department and at times ward patients.

There are 3 rooms allocated for general OPD with basic diagnostic equipment and examination bed. The OPD usually run from 9 am – 3 pm on weekdays and till 1 pm on Saturdays with 1-2 hours extension depending on number of patients and doctor's availability. General OPD during evenings, nights and holidays are seen at the Emergency Department.



Picture 2.1 Patients waiting at reception for OPD services.



Work Output

General OPD in 2023 has seen about 39,106 patients (exclusive of patients seen during evening, night & public holidays). This constitutes about 48.6% from total OPD patients. More female patients are seen

compared to males (57.7% vs 42.3%). Adult patients (age 14-60 years) make up 71.6% of the general OPD and followed by elderly patients (19.7%). Pediatric and neonate patients (about 8.6%) were also seen in the general OPD.

Table 2.1: Total registered OPD patients with general OPD proportion

	Total OPD patients registered	Total G-OPD patients	% GOPD patients
Total	80434	39106	48.6

Table 2.2 OPD patients gender distribution

	Male		Female		Total
	N	%	N	%	
Total	16576	42.3	22530	57.7	39106

Table 2.3 List of services provided at general OPD and by general Doctor

SI No.	Services
1	Diagnosis and treatment of general patient
2	Diagnosis and treatment of pediatric > 5 years
3	Medical screening and health check up
4	Health and nutritional education
5	Referral to specialist clinics
6	Signing of medical fitness certificate
7	Minor OT services
8	Others Forensic evaluation Outbreak investigation and Screening program Specialist clinic patient during their absence (leave, OT days)



Other than the diagnosis and treatment of the patients, the general OPD doctors also evaluates and refers patients to specialist clinic, does medical screening and health check-up for food handlers, learner drivers and Dessups. They also provide health and nutritional education and counselling, go to screening and outbreak investigations. Services provided at General OPD and general doctors are listed in Table 2.3.

Challenges

Human resource: Currently medical officers looks after the general OPD and they run it effectively despite the shortages. Medical officers are stretched out as there are increasing number of patients and services apart from taking care of emergency and other specialist wards.

There are many of other services (forensic, outbreak investigation, health screening) which require the services of GDMOs which hamper the general OPD services.

Specialist clinic patients are also forwarded to general OPD during their absence, increasing the workload in General OPD. Patients coming for medical certificates for various reason are sent in between the

general patients disrupting the flow and the treatment.

Other than countable key performance indicators, the general OPD is not able to take the opportunity to initiate and implement important indicators. General OPD see the largest volume of patients and has the ability to develop great results. This could be because of human resource shortages and systemic misalignment.

Way forward

Increase in human resource. A specialist trained in General practice/ Family medicine would be appropriate to lead the department. More GDMOs need to be recruited to meet the demand of increasing patient and service and also to separate from the emergency department.

A separate day or specific after-hours session could be started to issue medical and other certificate and an opportunity to incentivize the providers.

Develop KPI for the department that would help us see the data, trends and plan our idea.



2.1 FORENSIC MEDICINE UNIT

Background

The Forensic Medicine Unit was first established in the year 2011 by Mr. Thinley Penjore, staff nurse after attending short attachment course from the Forensic Medicine Department, JDWNRH, Thimphu. Since then all forensic records are maintained with the unit. The unit has no forensic specialist and dedicated staff. Currently two forensic focal nurses provide services along with Emergency Physician, GDMOs and other relevant specialist beside their primary roles and responsibilities. The unit has a dedicated room near the ED and is equipped with desktop with internet connection and a digital camera.

Services

The unit provides clinical forensic medicine and forensic pathology services. In clinical

forensic medicine, the unit provides medico-legal services to victims of interpersonal violence, sexual violence, and domestic violence as well as work related and road traffic accidents and expert opinions to court of law.

In Forensic pathology, the unit is mandated to investigate unnatural deaths. This is done in collaboration with Royal Bhutan Police. The unit also serves as focal center for eastern Dzongkhags in medico-legal related issues and offer investigation assistance and issuing of medico-legal reports. Total of 63 cases were seen with ages 14-60 years made up most of the cases. There were more female evaluated than the men by the forensic unit. Inter personal violence topped the case type followed by the road traffic accidents and domestic violence.

Table 2.4 Details of forensic cases seen and evaluated at ED

	Gender			Age specific						Case type			
	Male	Female	Missing data	Infants	Child (5-13)	Adults (14-60)	Elders (>60)	Missing date	MVA	SA	IPV	DV	Total no
Jan	3	1	0	0	0	3	1	0	3	0	1	0	4
Feb	1	1	0	0	0	2	0	0	2	0	0	0	2
Mar	1	2	0	0	1	2	0	0	1	2	0	0	3
Apr	3	3	0	0	1	5	0	0	2	0	3	1	6
May	2	2	0	0	1	3	0	0	2	0	1	1	4
June	2	5	0	0	1	6	0	0	2	2	1	2	7
July	1	1	0	0	0	2	0	0	1	0	0	1	2
Aug	2	1	0	0	0	3	0	0	0	0	3	0	3
Sept	6	6	0	0	1	11	0	0	0	1	7	4	12

	Gender			Age specific						Case type			
	Male	Female	Missing data	Infants	Child (5-13)	Adults (14-60)	Elders (>60)	Missing data	MVA	SA	IPV	DV	Total no
Oct	2	6	0	0	1	7	0	0	1	0	6	1	8
Nov	1	2	0	0	0	3	0	0	0	1	1	1	3
Dec	4	5	0	0	0	9	0	0	1	3	3	2	9
	28	35	0	0	6	56	1	0	15	9	26	13	63
MVA: motor vehicle accident; SA: Sexual Assault; IPV: interpersonal violence; DV: Domestic Violence													



Picture 2.2 Motor vehicle accident case evaluation



Picture 2.3. Alleged assault case under evaluation

Challenges

- Lack of expertise: The doctors (GDMOs) and nurses do not have formal training other than the attachment and short term training.
- Lack of training: Other than short training few years back, staff has not received any recent training to upgrade or update their skills and knowledge.
- Lack of equipment: forensic evaluation needs certain equipment for investigation, data recording and maintenance.
- Staff has to work in harsh conditions and difficult condition; walking distances, climbing slopes and cliffs. There is an urgent need of gadgets which will ease working in these condition.
- All staff are working additional duty other than their primary roles due to lack of personals. There are no remittance or allowance for the extra works done.
- Lack of embalming services.
- Lack of forensic laboratory services.



Way forward

There is a need for forensic specialist in the hospital to lead, evaluate and form a forensic department.

Staff require training at least once a year to upgrade the skills and knowledge to be updated on recent changes and advancement. There are need for equipment to improve investigation and evaluation of cases, equipment to improve working condition and better embalming and forensic services.

2.2 DRESSING AND ECG UNIT

Background

The unit manages dressing and performs 12 lead ECG for the OPD patients. It is currently run by Mrs. Lhadon, a senior nurse. It is located in OPD block within the community health unit. All the services are provided daily at the routine OPD timing.

The above unit provide following services;

- Dressing
- Removal of sutures
- K-wire removals
- Catheter removals
- ECG

Challenges and way forward

The unit has 2 small rooms for dressing and ECG separately and being managed by single staff. It is difficult to manage patients coming together in same point in time for 2 activities. The solution could be a single big



Picture 2.4 Mrs. Lhadon doing wound dressing

room for both the activities and providing 2 separate staff for each unit which will make it more convenient for the staff and beneficial for the patients.

Table 2.5 Number of patients availing OPD dressing and ECG services in 2023

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Dressing	242	204	134	439	203	182	171	193	177	181	81	129	2336
ECG	111	78	92	107	111	99	124	94	87	114	62	95	1174

2.3 OPD INJECTION UNIT

Background

Until 2020 the OPD injections were administered by pharmacy technicians and in April 2020 Tshering Penjor, Assistant Nurse

took over from the pharmacy department as permanent staff.



Picture 2.5 Mr. Tshering Penjor and OPD injection unit.

Services

As a lone staff working for the unit multi-tasking in terms of injection, OPD patients'

nebulization, spirometry and collection of blood samples for pediatrics and neonates are done. During his absence, the services are provided by mobilizing nurses from IPD.

Table 2.6 Number of patients availing services in OPD injection unit

MONTHS	INJECTION	NEBULIZATION	BLOOD SAMPLE
January	107	33	10
February	68	21	07
March	111	40	05
April	110	25	06
May	173	34	07
June	143	69	10
July	126	39	09



MONTHS	INJECTION	NEBULIZATION	BLOOD SAMPLE
August	156	32	10
September	28 (Started ePIS)	12 (started ePIS)	06
October	24	06	18
November	16	03	08
December	33	09	09
TOTAL	1095	316	105

Challenges and way forward

When the permanent staff goes on leave or training the mobilized staff from the ward are not familiar with some injections and

routes. For an uninterrupted and smooth service CME could be conducted on how to provide injection and different routes and sites. An attachment to the unit will also help staff familiarize about the functioning of the unit.



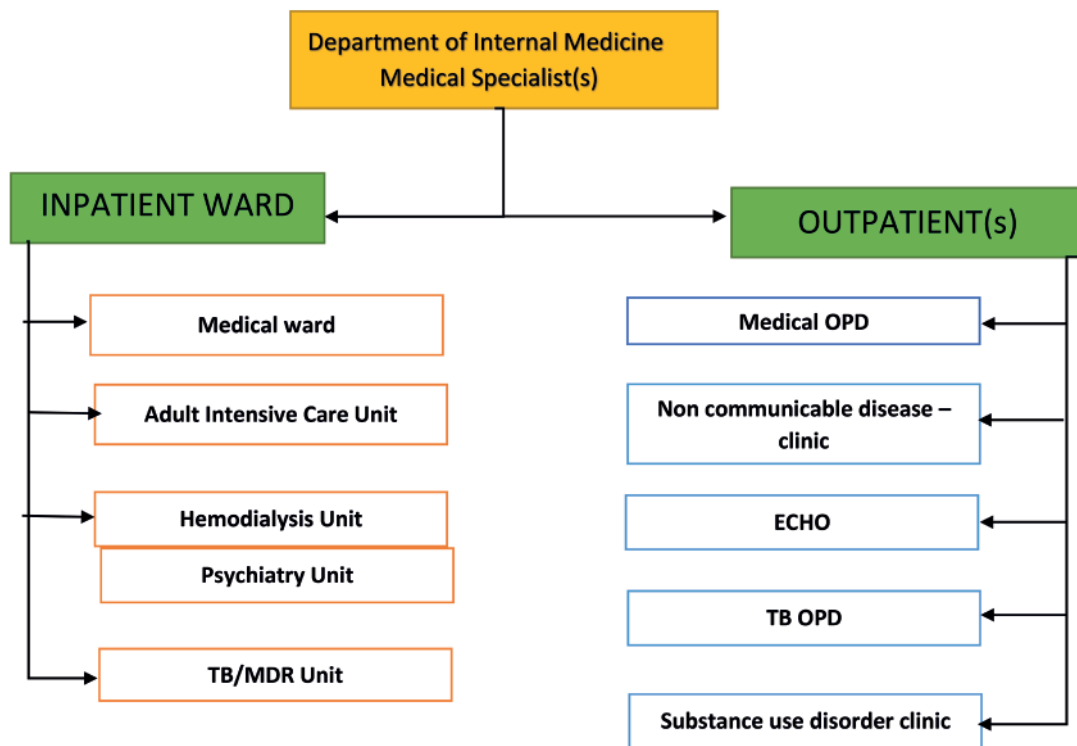
3. DEPARTMENT OF INTERNAL MEDICINE

Introduction

Since the establishment of Mongar Hospital as Eastern Regional Referral Hospital (ERRH) in 1996 and upon completion of construction of new hospital in 2007, the Department of Internal Medicine has provided exclusive medical services to the 6 eastern Districts.

Earlier, the Department of Internal Medicine was manned by only 1 medical specialist. However, since August 2023, the 2 Medical specialists oversee both inpatient and outpatient medical services provided in the ERRH. The medical specialists also oversee the psychiatry and dermatology cases.

ORGANOGRAM



Current Medical Services Status

Table 3.1 Number of OPD patients availing medical services

Year	Medical OPD	NCD	SUD clinic	MDR/ TB clinic	Leprosy	ECHO unit
2023	2662	4025	114	64	5	1429

Medical Ward

The current 33 bedded full-fledged medical ward on the 3rd floor was separated from the Pediatric ward and merged with Medical Extension ward in 2022.

Of the 33 beds, 4 beds are designated as Stroke unit, 12 beds for medical patients, 8 beds for psychiatric patients and 9 beds for TB patients.



Photo 3.1 Stroke Cubicle

ERRH was designated as one of the Stroke Centers in the country and is the only stroke care center for the 7 eastern districts. The “Stroke cubicle” was inaugurated in 2022.



Photo 3.2 Medical Ward

The medical ward also provide care to psychiatric, TB and also dermatology patients apart from medical cases. There is a separate unit formed as similar to stroke cubicle – i.e. Psychiatric unit and TB unit.

Human Resource

Table 3. 2 Human resource in Department of Internal Medicine

SL No	Staff	Numbers
1	Medical Specialist	2
2	Nurse In charge	1
3	Clinical/Staff Nurse	11
4	Supporting Staff	7



Inpatient Admission

Table 3.3 In-patient admission in Department of Internal Medicine

2021	482	31	17	123
2022	436	31	20	102
2023	374	36	32	115

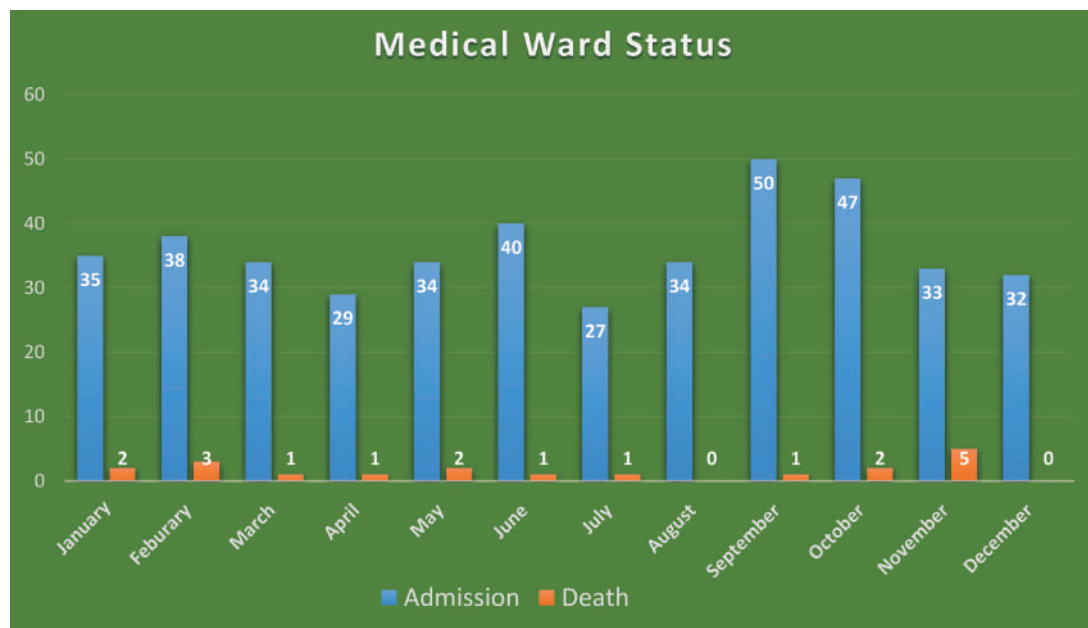


Figure 3.1 Admission to Medical Ward in 2023

Referral In and Out- 2023

About 168 patients were referred in from other district hospitals and 23 cases were

referred out to JDWNRH in 2023 for further management.

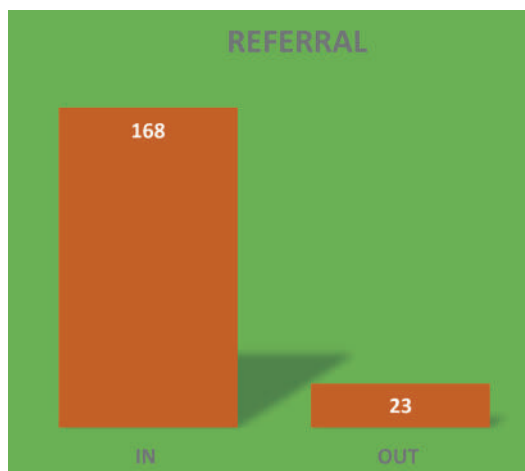


Figure 3.2 Patient referrals in 2023

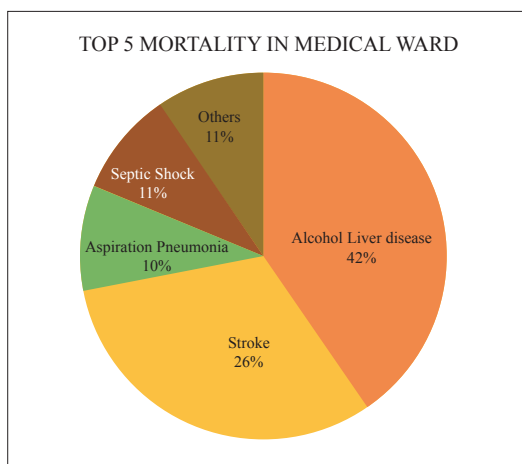


Figure 3.3 Top 5 causes of mortality in 2023

Activities

Apart from usual medical services, the following activities are done in the ward;

1. Coordination Meeting – Quarterly

Among the nurses, nurse In-Charge, supporting staff and Medical specialists for the improvement of services in the ward along with effective communication and coordination among ourselves.

2. Monthly 5-S (sort, set, shine, standardize, sustain) activity



Picture 3.3 Monthly 5-S CQI activity

3. Monthly cleaning campaign





Picture 3.4 Nurses of medical ward nursing a flower garden

4. Yearly POCQI Project

Project on Quality Improvement initiative to reduce the percentage of peripheral intravenous cannula site complications over 2 months duration in medical ward, ERRH, Mongar. The result showed decrease in cannula site infection from 36% (baseline) to 25% in the fourth PDSA cycle. The results and recommendations has been endorsed and disseminated to the staff of medical ward. The POCQI was presented in the Patient safety workshop in Mongar.



Picture 3.5 Medical ward In-Charge presenting POCQI project

5. Monthly CME (Continuing Medical education)

6. Mentoring of nursing students

Medical ward serve as one of the clinical postings for students of ARURA Academy of Health Sciences. They undergo training and are taught, guided and mentored during the clinical postings. They are also involved in CME and health education programs.



Picture 3.6 Nursing students of ARURA academy undergoing practical examination

7. Affiliation with Khesar Gyalpo University of Medical Science of Bhutan (KGUMSB)

Interns of KGUMSB are posted in medical ward for various period for their clinical rotations and undergo training and gain learning experience in the referral hospital.

8. Health education

Health educations are given to all admitted patients by the doctors, nurses and also trainees. In fact, nurses provide specially

arranged health education on various topics of importance to patients and attendants every month on rotation basis.



Picture 3.7 A nurse on duty giving health education

Way Forward

- In need of dedicated Psychiatrist.
- Starting of Lal Path laboratory facility

3.1 NCD UNIT

Background

Non-communicable diseases (NCDs) clinic in ERRH was set up and commenced in the year 2009 as diabetic clinic which then was run by single staff. The service was catered once in a week until 2015, when number of patients rose significantly needing daily service. Most common non-communicable diseases seen in ERRH are hypertension and diabetes. However, few cases of cardiovascular diseases, cancers and chronic respiratory diseases are also prevalent.

Mongar Dzongkhag have close to 2500 registered NCDs cases currently.

Statistics

The clinic is managed by single staff. ERRH serves to around 250 registered patients excluding clients screening that accounts to 4025 attendees in 2023. Cardiovascular disease risk assessment was done in 492 patients in collaboration with inpatient departments.

Table 3.1.1 NCD line listing

Disease	Total
Diabetes mellitus	11
Hypertension	122
Hypertension and DM	146
CKD	67

Activities

ERRH serves as a monitoring and guiding center for all 28 health centers within the district and hospitals in the eastern region. Implementation of PEN HEARTS have immensely benefited the people in the rural communities of Mongar. The NCDs team of ERRH served as trainer for the health care workers in Mongar besides the routine services provided from the clinic.



Picture 3.1.1 Advocacy program for monks



Picture 3.1.2 Sensitization of business community on NCDs

Challenges and Way forward

Since, controlling NCDs requires multi-sectorial and multi-pronged effort, it remains challenging to garner collaborative effort among the different stakeholders. Improving

the collaboration among diverse stakeholders will ease the successful implementation of the interventions to prevent and control NCDs burden in our community.



3.2 Echocardiography Unit

Background

Although ERRH had an echocardiogram machine since 2008, the usage was limited to occasional use by few expatriates in absence of dedicated professional to provide Echocardiography services. The Echocardiography unit was established on 13th March 2019 and is manned by a lone cardiac sonographer. He continues to remain the only sonographer in the unit. The unit provides echocardiography services to outpatient cases, bedside inpatient cases and emergency cases to the people of six eastern Dzongkhags.

The echocardiography services provided by the unit are:

- 2 Dimensional echocardiography with color Doppler imaging for OPD patients
- Portable echocardiogram for Adult ICU, NICU and bedside inpatient patients.
- ECG Holter monitoring

Work Output

In 2023 the Echocardiography unit provided echocardiogram services to 1449 patients which included both routine and emergency cases. This was an increase of 20.75% as compared to 2022.

Table 3.2.1 Distribution of Echocardiography services

	2022	2023
Routine	1182	1429
Emergency	18	20
Total	1200	1449



3.3 DIET AND NUTRITION UNIT

Background

Nutrition stands as a pivotal component in the realms of both curative and preventive healthcare management. The hospital's Diet and Nutrition Unit is committed to elevating the overall well-being and recovery of patients through a multifaceted approach. This encompasses comprehensive diet assessments, personalized meal plans, malnutrition prevention, nutritional care and support for Inpatient Department (IPD), enteral nutrition, nutrition education, collaboration with other healthcare teams, and counseling. Recognizing the indispensable role of a well-balanced diet in the treatment and recovery process, our dietary services are dedicated to delivering well-prepared, nutritious, and appetizing meals. Furthermore, we extend both initial and ongoing dietary education to patients and their attendants, ensuring that meals are tailored to meet their specific requirement.

The unit is currently staffed by two nutritionists. We have five cooks and two storekeepers.

The diet services encompass:

- Medical nutrition therapy
- Food service management
- Nutrition education and counseling

Work Output

In 2023, we attended to 3,488 patients, excluding those with NCDs seen in the NCD clinic. This figure specifically pertains to patients undergoing diet therapy in both the IPD and the Dietitian's chamber. It is important to note that our services extend beyond these numbers, as we also provide health education to NCD patients.

Table 3.3.1 Number of patients seen in 2023

	OPD	IPD
Total	910	2578

Events/Activities

- Introduced enteral nutrition formulation with the aim of improving the nutritional status of patients unable to eat orally.
- Initiated therapeutic diets for conditions such as hypertension, diabetes, renal issues, high protein diets, and others.
- Procuring vegetable for high quality diet
- Adherence to Standard Operating Procedures (SOPs), which now include SOPs for nutritional care services, therapeutic diets, enteral nutrition formulation, diet therapy for overweight and obesity, and dietary intervention for hypertension and diabetes.
- Completion of a Quality Improvement (QI) project aimed to enhance dietary intervention for patients with hypertension in the general OPD.
- Collaboration with teams, including



general practitioners, the NCD focal person, and other OPD and IPD department.

Challenges

- We face several challenges in delivering our services including:
- Malnutrition Screening and Identification due to low level of awareness.
- Individualizing patient needs to meet the unique and varied nutritional requirements of each patient.
- Coordination with multidisciplinary teams.
- Resource constraints to deliver optimal nutritional care.
- Patient's non-compliance and adherence to prescribed dietary plans and nutritional recommendations.
- Limited staff training and development on updated nutritional care.
- Difficulty in technology integration to enhance the efficiency of our nutritional

services.

- Developing strategies to prevent NCDs through targeted nutritional interventions.
- Adapting to New Research and Guidelines and staying abreast with latest research findings and nutritional guidelines.

Way Forward

- Invest in Ongoing Training and Professional Development.
- Strengthen Collaboration with Healthcare Professionals.
- Develop and Implement Community-Based Initiatives.
- Create Comprehensive Educational Materials.
- Foster a Culture of Research.
- Implement Preventive Measures.
- Prioritize Patient-Centered Care.
- Collaborate with Local Community Entities.

3.4 MENTAL HEALTH UNIT

Background

Under the guidance of Her Majesty the Gyaltsuen, the Pema Secretariat was established in 2022 to promote the wellbeing of all Bhutanese by supporting mental health policies and programs, collaborating multi-sectorial partnerships and enabling proactive service delivery. In line with Her Majesty's vision, the SUD (Substance Use Disorder) clinic was established in early 2023 with financial support from the Pema Secretariat.

In general, mental health services in Bhutan have come a long way with the first expatriate psychiatrist in 1996 to the first Bhutanese psychiatrist in 1999 at JDWNRH. Over time, the psychiatric services were expanded to Mongar with appointment of expatriate psychiatrists on contract basis. Since 2012, patients with psychiatric conditions have been mostly seen by general doctors and medical specialists and consultation with a psychiatrist at JDWNRH whenever necessary.

Following the establishment of the Medical

Extension ward in 2017, a psychiatric unit was designated with 8 beds. Together, the lone psychiatric nurse has started providing counseling services to both IPD and OPD patients and case consultation with the psychiatrists as necessitated. The service was further enhanced by the joining of a clinical counselor from 2020 until his resignation in early 2023.



Picture 3.4.1 Inauguration of SUD clinic

The current SUD team comprises of two peer counselors, medical specialist, psychiatric nurse, emergency nurse, pharmacy technician, AFHS focal, and sMenpa.

Table 3.4.1 Summary of cases and services

Year/Cases	2021	2022	2023
In-patient admission	31	31	36
OPD counseling services availed	NA	NA	78
SUD intake & screening (new cases)	NA	NA	114
Clients inducted for OPD SUD	NA	NA	56
Clients admitted for detoxification	NA	NA	9
Clients who have completed pry phase treatment	NA	NA	26

Services offered

In-patient Department services

- Admission and pharmacotherapy for psychiatric conditions
- Detoxification for alcohol and other substances
- Individual, group and family counseling
- Referral to higher centers and rehabilitation facilities

Outpatient Department services

- Clinical counseling services
- Case consultation with psychiatrist and referral Collaboration with RBP and other relevant stakeholders

Substance Use Disorder clinic

- Individual counseling
- Group counseling/therapy
- Family counseling/sessions
- Admission to ward for treatment
- Referral to higher centers and

rehabilitation facilities Awareness/sensitization programs

- Collaboration with RBP and other relevant stakeholder.



Picture 3.4.2 Group therapy session

Way forward

- In need of a psychiatrist as Mongar serves as one of the regional hospitals in Bhutan.
- There is also a need for a clinical counselor to enhance the current services.

3.5 TUBERCULOSIS (TB) AND LEPROSY UNIT

Background

Tuberculosis (TB) is one of Bhutan's major public health concern. However, most TB patients can be completely cured with the standard treatment regimen taken on time. Our focus of care is to reduce the TB burden through effective treatment, prevent complication, follow up after early diagnosis and contact tracing. The TB and leprosy unit is isolated above the main hospital building and is run by one single health professional which caters to OPD needs of the TB patients. Smear positive TB cases are admitted in the TB ward which is located behind the main hospital building. It also has a separate six-bedded cubicle for MDR-TB.



Picture 3.5.1 TB focal Mr. Sangay Choezang in TB and

Leprosy Unit

In 2023, 64 new tuberculosis cases were diagnosed of which 32 were pulmonary and the rest extra-pulmonary TB as shown in table 3.5.1. About 59.3% diagnosis was made through bacteriological confirmation while the remaining 40.7% was clinically diagnosed.

Table 3.5.1 Number of TB cases diagnosed in 2023

PTB (bacteriologically confirmed)	26
PTB Clinically diagnosed	8
EPTB (bacteriologically confirmed)	12
EPTB (clinically diagnosed)	18
MDR -TB	06

The TB and leprosy unit of ERRH also serves as a center for MDR-TB registration for eastern districts. In 2023, six MDR-TB cases were diagnosed from 6 eastern districts of which one was from Mongar Dzongkhag as shown in table 3.5.2

Table 3.5.2 Number of patients admitted in TB ward in 2023

DS TB	Referred out	Death	EPTB	Referred out	Death	MDR-TB	Referred out	Death
26	0	0	38	0	0	1	1	0

Leprosy is a re-emerging disease in our community. In 2023, 3 leprosy cases were diagnosed.

**Table 3.5.3 Number of leprosy cases in 2022 and 2023**

Leprosy Categories	2022	2023
MB	5	3
PB	1	0
Total	6	3

Challenges

- The TB and Leprosy unit is run by a single staff.
- Need for a proper infrastructure.

Way Forward

- Need an additional staff.
- Dedicated staff (nurses and support staff) for MDR TB ward.

4. DEPARTMENT OF SURGERY

Background

The Department of surgery at Eastern Regional Referral Hospital, Mongar was established as a cluster unit with 36 bed capacity at 2nd floor of Main Hospital Building. In the beginning, it was clubbed as Unit-2 with clubbing of different departments (Surgery, Orthopedic, ENT, EYE, & Dental) under one In-chargeship. Later in 2020, it was separated as Surgical/ ENT unit and Orthopedic/Eye unit. An ENT department was further separated from surgical unit in 2022. The unit currently has 18 beds providing admission services to six eastern Dzongkhags. The Department of Surgery had grown and spread from a mere one surgeon to three surgeons in 2022 and expanded the service provision from OPD and IPD patients to providing endoscopic services. The department also serves as the referral centers for six eastern Dzongkhags.

Human Resources

The Department of Surgery currently has three General surgeons, twelve surgical IPD nurses along with support staff. Two nurses work in endoscopic unit under the guidance of the surgeons.



Picture 4.1: Surgeons and nurses on Nurses day (12th May, 2023)

Services

The department provides the OPD services, inpatient care, major and minor surgery and endoscopy services. The department also provides the 24 hours emergency on call duty which is attended by an on-call surgeon. Surgical ward cares and manages pre-operative and post-operative patients. Services provided by the department and number of patient that availed the service are described in table 4.1 and table 4.2.

Table 4.1 List of services provided by department of surgery

Sl. No	Services	Description
1	OPD service	General surgical patients and follow up
2	OT services	Bowel and abdomen surgery, vascular surgery, basic neurosurgical and urological services, pediatric and trauma services
3	Minor OT services	Cyst and mass removal, foreign body exploration, abscess drainage, biopsy
4	Endoscopic services	Routine, emergency and endoscopy camps
5	Consultation	Consultation from other department, district hospital and PHCs



Sl. No	Services	Description
6	Emergency services	On call surgeon responds to emergency and urgent consultation and emergency surgery.

Table 4.2 Number of patients who availed the services

Sl. No	Services	Total Number
1	Outpatient department	2228
2	Surgery	434
3	Indoor patients	657
4	Endoscopy services	825
5	Minor procedures	166

OPD Services

Routine OPD services are seen at surgical OPD chamber. Other than OT days, OPD services are provided from 9 am – 3 pm by one or more surgeons. In the OPD, the surgeon sees all the walk in patients as well as those referred from other hospital and PHCs on OPD basis. The surgeon carry out the minor OT services during the OPD

days. The OPD surgeon is also responsible for admission of patients from OPD and provide appointments for planned surgery. In 2023, 2228 patients were seen in the OPD, an average of 188 patients per month. September month saw the most patients (n: 304) as depicted in figure 4.1.

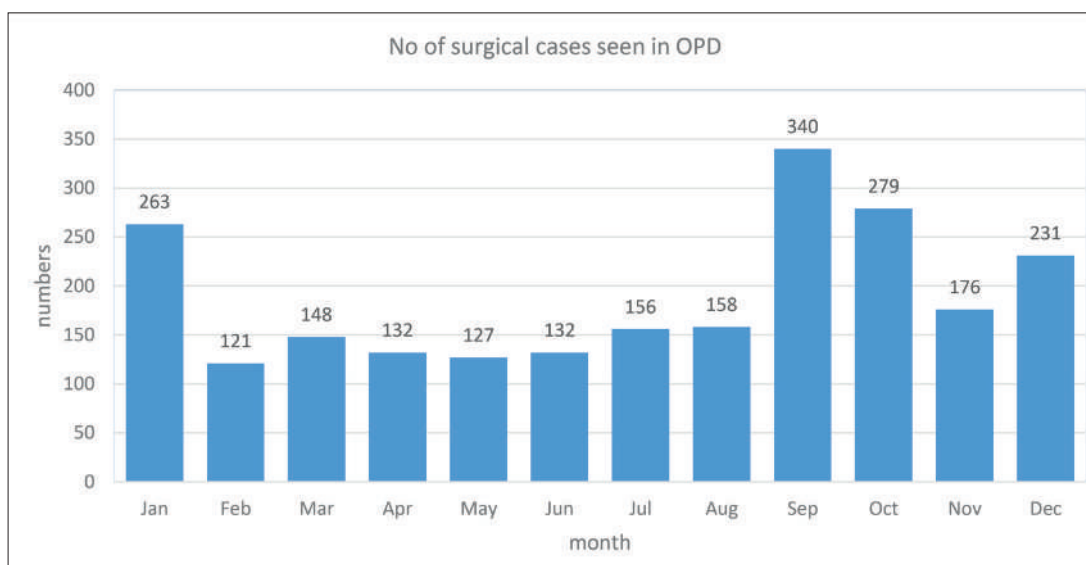


Figure 4.1 Bar graph showing number of patients seen in surgical OPD

Inpatient Services

Surgical ward is manned by 12 General Nurses who are competent and skilled in taking care of admitted surgical patients. Consultant does the daily morning round along with the duty nurse and also attends emergencies round the clock. Besides the usual rounds, the general surgeon does bedside procedure and also teaches residents, interns and student nurses. Nurses are also responsible for providing pre-operative and post-operative care for the admitted patients besides daily routine care. They also provide health education to patients and attendants on cleanliness, NCDs, importance of medications and follow up. Surgical ward in 2023 had 657 admissions of which 95% were discharged after treatment, 1.7% deaths and 3.3% being referred to higher centers. Total bed occupancy in 2023 was 62.3%

with maximum admission in July and least in November. The ward also had 11 mortality which is depicted in figure 4.2 and table 4.3.

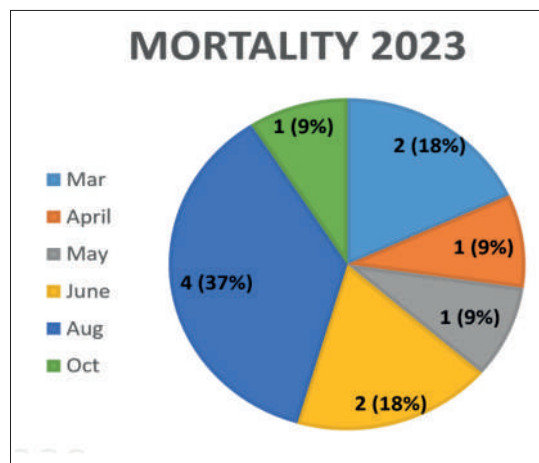


Figure 4.2 Pie chart showing mortality in surgical ward

Table 4.3 Key statistics of indoor surgical patient in 2023

Statistic	Number	Percent
Total Admission	657	100
Total Discharge	624	95
Total Mortality	11	1.7
Referred out	22	3.3
Total bed occupancy rate	62.3%	--



Picture 4.1 Nurses giving health education in ward to patient and attendants. (A) About 5 steps of hand washing, (B) NCD risk screening.



Endoscopic Services

Endoscopic services is one of the other services provided by the Surgical Department. The endoscopy is done at endoscopy unit (chamber 14) on non OT days for routine cases, urgent basis for emergency cases and during organized camps for community people. Table 4.4 shows the number of cases done at the endoscopy unit. Endoscopy team from ERRH completed flagship program for gastric carcinoma screening for whole eastern Dzongkhags in late 2022-2023.

Table 4.4 List of endoscopy services provided by surgical department

Sl. No	Endoscopy services	Numbers
1	Upper GI endoscopy	825*
2	Esophageal varices banding	40
3	Colonoscopy	26
4	Urea breath test	605*
	*Includes endoscopy camps	

Surgery and OT service

Total of 434 surgeries were performed in 2023 in the department (no data for Jan 2023) with average of about 40 surgery per month of which 8.5% (n=37) was emergency surgeries performed. Surgery under GA was done in 52.5 % followed by spinal anesthesia (30.2%). Maximum number of surgery was done in month of July (n=56) and August (n=57). Laparoscopic surgery topped the surgery type followed by urological surgery. The details are listed in table 4.5 and table 4.6.

Table 4.5. Details of number of surgery and anesthesia given during surgery

Sl. No.	Type of surgery	n (%)
	Total surgery	434
1	Routine	397 (91.5)
2	Emergency	37 (8.5%)
	Type of Anesthesia	
1	General Anesthesia	228 (52.5)
2	Spinal anesthesia	131 (30.2)
3	Other regional anesthesia	36 (8.3)
4	Local Anesthesia	31 (7.1)
5	No data	8 (1.9)

Table 4.6 Details of surgery performed in 2023

Sl. No	Surgery	N
1	Laparoscopic cholecystectomy	59
2	Cystoscopy + other urological surgery *	52
3	Incision and drainage	52
4	Anorectal surgery **	46
5	Wound debridement and dressing	42
6	Varicose vein surgery	41
7	Herniotomy/ Hernioplasty	41
8	Appendectomy	23
9	Hydrocele surgery	21
10	Laparotomy	17
11	Arteriovenous fistula creation	11
12	feeding tube	6
13	Neurosurgery	3
14	Others ^	20
	Total	434
* Include Ureterolithotomy, Percutaneous nephrostomy and stent insertion		
** fistulectomy, hemorrhoidectomy, and EUA		
^ includes excisional biopsy, surgery for fibroadenoma,		



Other Activities

The department successfully completed one POCQI project in year 2023 about improving the compliance of dressing technique in the ward along with Orthopedic Department. At the end of the project, both the technique and the compliance for dressing showed a marked improvement.

The department conducts monthly coordination meetings for discussing issues and creating platform for discussion and bring improvement in patient care.

Surgical audits was done for the efficient patient management and for evidenced based care and management of the patients.

The department initiated Unit CME for upgradation of knowledge, CME credits and for improvement in patient care. The department also developed infection control and prevention protocol according to 5SCQI to reduce the burden of hospital acquired infections.

Challenges

- We are still having shortages of subspecialists and most of the cases who need sub specialist care are being referred to JDWNRH.
- The number of OTs are also limited which needs to be increased to accommodate the number of surgeries which are increasing.
- Nurses & Doctors getting transferred and exiting the system which leads to acute shortage of staff.

Way forward

- Need to develop staff retention policies to avoid staff shortages.
- Need to train more doctors in subspecialties to provide services within the country which will significantly reduce the number of referrals.

4.1 ENDOSCOPY UNIT

Background

Endoscopy services were first introduced in the ERRH, Mongar by the former Prime Minister Dr. Lotey Tshering, assisted by Mrs. Namgay Lhamo, AN and other OT staff in the year 2004. As there was no separate endoscopy unit, it was managed by OT staff and services were provided every Friday.

A separate Endoscopy unit was established in 2019. The unit has two staff and two general surgeons provide various endoscopy services such as upper gastrointestinal endoscopy (UGIE), variceal banding, colonoscopy, endoscopic retrograde cholangio-pancreatography (ERCP) and urea breath test.

Table 4.1.1 Endoscopy services in 2022 and 2023

	2022	2023
UGIE	825	1008
Colonoscopy	30	30
Variceal banding	40	35
Urea Breath Test	605	500
Total	1500	1573

Events/ Activities

We received new Endoscopy machine and other equipment in March, 2021 for the flagship program on early gastric cancer screening and management. The endoscopy unit conducted endoscopy camps in all Gewogs of Mongar and Lhuntse Dzongkhag under the flagship program.



Picture 4.1.1 Consecration of Endoscopy machine



Picture 4.1.2 Endoscopy team at endoscopy camp

Challenges

- There is increased burden to the existing staff due to increasing patient number who requires endoscopy services. This is contributed by improved service seeking attitude because of nationwide sensitization of the public on gastric cancer.
- There are no trainings or CMEs for the staff to update on the novel practices.

Way Forward

- Deployment of additional staff to manage the increasing workload.
- Need to initiate short term trainings, CME or attachments to update staff with best practices.

5. DEPARTMENT OF OBSTETRICS & GYNAECOLOGY

Background

The year 2023 witnessed, yet another successful year in the service of mothers and child healthcare. Devoted contribution and concerted efforts from the staff of the department led to improvement in patient care and satisfaction.

Just after the repercussion from COVID pandemic, the routine services in maternal and child care resumed as normal. The obstetric population in the area received much greater attention than in the COVID period. Individualized preconception counseling was initiated in the reproductive health unit (CHU) and all high risk pregnancies were thoroughly screened and follow up closely. After the start of CT and pathology services, more diagnostic and referral increased in gynecological cancers and diseases.

Inpatient ward

Seventeen general beds and two delivery beds are allocated for inpatient management. Women undergoing labour and delivery received better care, more midwives and nurses were sensitized on new labour care guide and new WHO recommendations for intrapartum care.

Doctor and Staff strength:

Since 2018, the department is running under single gynaecologist care with the support from GDMOs, CHU and maternity staff. Currently, the department has 15 staff to look after inpatient and intrapartum care. Intern doctors and student nurses come for clinical posting once a year.



Picture 5.1 Gynaecologist and nurses

Inpatient statistics

The ward admission rate saw a decreasing trend by about 19%, where the deliveries reduced by about 26% in 2023. Similarly, the preterm birth, teenage pregnancy and still birth saw a fall in numbers. The caesarean rate in 2022 and 2023 were 22% and 19% respectively. Cervical cancer diagnosed and referred increased to 13 due to ongoing flagship screening program. One maternal death occurred in 2023, where diagnosis was not certain and could probably be due to amniotic fluid embolism.

Table 5.1 Inpatient statistics of maternity ward in 2022-23

	2022	2023
Total Admission	924	747
Total Deliveries	662	490
Vaginal	514	397
Caesarean	148	93
>Elective	86	50
>Emergency	62	43
Preterm delivery	34	27
Teenage pregnancy	37	30
Miscarriage (<20 wks)	56	43
Still birth	08	06
Cervical cancer	8	13
Patient referred-in	139	135
Patient referred-out	19	21
Maternal death	0	1

Surgical care statistics:

Overall, the total number of surgeries declined by about 2% in 2023. Although caesarean rate decreased, the hysterectomy and LEEP surgeries saw an increase due to the cervical

cancer screening program. Laparoscopy surgeries were extended to hysterectomy, ovarian cystectomy and ectopic pregnancy apart from tubal ligation and pathology. All surgeries undergo Enhanced recovery after surgery (ERAS) protocol for early discharge and optimal recovery. Surgical site infection remained same in both the year at acceptable level.

Table 5.2 Categories of surgeries in 2022-23

	2022	2023
Total surgeries	351	342
Caesarean	148	93
Hysterectomy	09	20
Laparotomies	23	10
Laparoscopies	45	36
LEEP	19	76
D&C + others	104+	86+
Surgical site infection	02	02

Indications of Caesarean sections

Previous Caesarean scars contributed highest to caesarean deliveries in the consecutive years. Other indications have remained at stable level.

Table 5.3 Indication for caesarean deliveries

	2022	2023
Past Caesarean	78 (53%)	42 (45%)
Breech/Transverse lie	13 (9%)	10 (11%)
Failed induction	18 (12%)	10 (11%)
Labour dystocia	15 (10%)	09 (10%)
Fetal distress	13 (9%)	09 (10%)
Others	11 (7%)	13 (13%)

Training and quality improvement initiative

There was various workshop conducted for staff in maternal and neonatal care. Training of students and development of clinical protocols were actively done by the staff.

Some in-house and outside trainings and workshops included

- Early Essential Neonatal Care and Neonatal Resuscitation
- Low Dose High Frequency workshop on PPH management
- Point of Care (POCQ)
- Stillbirth training in New Delhi
- Midwifery review training in Bangladesh
- National MPDSR meeting

- Palliative care
- Lactation management
- NALS/ NBLS course
- MCH tracking and ICD coding

Challenges and future prospects

- Shortage and increase workload to single gynecologist
- Staff shortages to provide optimum care
- Lack of training in research activities

In the future, with the completion of Mother and Child Hospital, the department aims to provide quality care and subspecialty services and become a teaching unit in Eastern Bhutan for doctors and nurses with special focus in research activities after addressing the shortages of human resources.



Picture 5.2 Training session in NBLS



Picture 5.3 Workshop on EENC



6. DEPARTMENT OF PAEDIATRICS

Background

Initial pediatric services were provided by expatriate doctors, notably from Cuba and Burma, as per senior staff's accounts. In 2001, a pivotal transition occurred with the arrival of the first Bhutanese pediatrician, Dr. Tandin Dorji, at Mongar Hospital. This marked the initiation of Bhutanese pediatricians taking exclusive charge of pediatric services (Table 6.1). Since then, our homegrown medical professionals have been instrumental in advancing and managing pediatric care, contributing significantly to the development and sustainability of pediatric services within our healthcare system.

Table 6.1. Pediatricians posted at the Eastern Regional Referral Hospital

Before 2001	Expatriate doctors
2001 -2003	Dr. Tandi Dorji
2004 – 2008	Dr. Mimi Lhamu Mynak
2008 – 2012	Dr. Purushotam Bhandari
2013 – 2019	Dr. Tulsi Ram Sharma
2020 – till date	Dr. Tashi Tshering
2023 – till date	Dr. Kinzang Dechen

Currently, the pediatric department is staffed by an accomplished team of two pediatricians and twenty inpatient nurses, demonstrating significant strides in developing local medical expertise. The department is notably well-appointed, featuring a range of specialized units designed to meet various pediatric needs. These include a 6-bed Neonatal Intensive

Care Unit (NICU), a 6-bed Phototherapy Unit, a 3-bed Kangaroo Mother Care ward, a 2-bed Pediatric Intensive Care Unit (PICU), and an 8-bed Pediatric Ward. The establishment of these specialized facilities underlines Mongar Hospital's commitment to providing comprehensive and advanced pediatric care to the community it serves, marking a significant transformation from its initial stages of development. Table 6.2 displays staff totals and NICU/PICU-trained personnel numbers over a 5-year period.

Table 6.2 Number of staff trained in NICU and PICU from 2019 – 2022

2019	15	2	5	1
2020	14	2	5	2
2021	13	4	5	1
2022	12	4	5	1
2023	11	3	5	0
PICU staff also attend to adult ICU patients				

Department Work Output

Pediatric Unit

There is a fluctuation in the number of admissions (both Ward and PICU) over the years. Notably, there was a significant increase in Ward admissions in 2016 (n=512), whereas PICU admissions peaked in 2018 (n=60). Table 6.3 gives the detailed number of admission and mortality over the years

Table 6.3 The number of admissions and mortality at the Pediatric Unit, 2013-2023

Year	Ward Admissions	PICU admission	Total admission	Pediatric deaths	
	n	n	n	n	%
2013	399	38	409	13	3.2
2014	261	42	273	15	5.5
2015	415	40	428	14	3.3
2016	512	41	530	21	4.0
2017	423	27	436	14	3.2
2018	434	60	452	19	4.2
2019	423	51	427	5	1.2
2020	245	33	250	5	2
2021	278	28	281	3	1
2022	214	31	216	3	1.4
2023	251	21	256	5	2

Mortality Rates: The percentage of mortality varies annually, with the highest recorded in 2014 at 5.5% and the lowest in several years at 1%, showing a considerable variance year over year.

Yearly Trends: A year-to-year comparison reveal important information about the efficiency of healthcare interventions or the impact of external factors on pediatric health. In 2019, there was a notable decrease in the number of pediatric deaths (n=5) despite a relatively high number of total admissions (n=427), resulting in the lowest mortality percentage (1.2%) within this period.

The years 2020 to 2023 show a general decrease in both total admissions and pediatric deaths, with mortality rates ranging from 1% to 2%. This could indicate improvements in pediatric care, changes in admission policies, or other external factors affecting these numbers.

Impact of PICU Admissions: The data suggests that higher PICU admissions do not always correlate with higher mortality

rates. For instance, despite higher PICU admissions in 2018 (n=60), the mortality rate was 4.2%, which is lower than in 2014, which had a higher mortality rate of 5.5% with fewer PICU admissions (n=42). The number of admissions to the PICU is considerably lower than the general ward admissions each year, which is expected since PICU caters to more severe cases.

Overall Trends: Over the eleven-year span, there seems to be a general trend of improvement in terms of lower mortality rates, especially noticeable from 2019 onwards. This could suggest improvements in preventive healthcare, early intervention strategies, or overall child health in the catchment area.

The indications for admission: Regarding the primary reasons for pediatric admissions, were Bronchiolitis, Wheeze associated respiratory infections (WARI), pneumonia and skin diseases. This highlights the significant impact of respiratory and dermatological conditions on pediatric healthcare demands.



Cause of Death: Observations reveal that no singular predominant cause of mortality was identified among pediatric patients. The observed causes exhibited diversity, encompassing infectious etiologies like meningoencephalitis, sepsis accompanied by disseminated intravascular coagulation, tuberculous meningitis, as well as cerebral palsy with associated complications and congestive heart failure. This diverse spectrum emphasizes the intricate nature of pediatric healthcare, underscoring the necessity for comprehensive healthcare strategies to effectively manage the extensive array of potential health complexities encountered in children.

Neonatal Unit

Trend in Admissions

There are noticeable fluctuations in the number of admissions to both the neonatal ward and the NICU across the years. For instance, a significant increase in Neonatal Ward admissions is observed in 2017 and again in 2020, with corresponding changes in NICU admissions. This could be indicative of various factors, such as Changes in Birth Rates, or Socioeconomic Factors.

Table 6.4. The number of admissions and mortality at the pediatric and neonatal ward

Year	Neonatal Ward* admissions	NICU admission	#Total admission	Neonatal deaths	
				n	%
2014	56	173	255	14	6.1
2015	79	110	183	15	7.9
2016	77	124	197	14	6.9
2017	255	108	351	12	3.3
2018	270	139	373	12	2.9
2019	238	182	365	3	2.9
2020	339	113	433	14	10.2
2021	164	71	196	6	2.5
2022	347	75	340	6	4.4
2023	249	42	242	10	3.4

*Neonatal ward encompasses postnatal, KMC, phototherapy, and Step-down units.
 #Calculated after excluding the trans out patients to avoid duplications

Neonatal Deaths: The number of neonatal deaths varies each year, with the highest percentage of neonatal deaths occurring in 2020 at 10.2%. That year also had the highest total admissions, which might correlate with the increased percentage of deaths. In recent years, prematurity and associated conditions

have remained the primary contributors to neonatal mortality, highlighting the persistent challenge in managing and preventing premature births and their complications in the healthcare landscape. The following are the major causes of neonatal deaths in 2023: prematurity related complication,

congenital heart disease, Sepsis, Necrotizing enterocolitis, and Birth asphyxia.

Mortality Rate Fluctuation: The annual variation in neonatal mortality rates is notable, with a significant reduction observed in 2018 and 2019, where the rate dropped to 2.9%. This decline can be attributed to enhancements in the management of preterm infants, facilitated by advancements in Neonatal Intensive Care Unit (NICU) technologies such as mechanical ventilation, Continuous Positive Airway Pressure (CPAP) systems, and High Flow oxygen therapy devices. Additionally, the adoption of Kangaroo Mother Care has played a pivotal role in decreasing the incidence of mortality associated with prematurity and its complications.

Outpatient Attendance

The pediatric outpatient fluctuates across the years. In 2013, the count starts at 14,616 and drops to 10,656 in 2014. It then rises consistently, reaching a peak in 2016 with 18,110 visits. A slight decrease is seen in 2017 with 14,211 visits, followed by an increase in 2018 to 17,877 and a small decline in 2019 to 17,409. There is a sharp drop in 2020 with only 9,795 visits. Numbers start to rise again in the following years, with 11,884 in 2021 and 12,174 in 2022.



Picture 6.1 Staff attending the Kangaroo Mother Care session

Table 6.5 OPD cases from 2013-2022

Year	Pediatric Outpatient
2013	14616
2014	10656
2015	17648
2016	18110
2017	14211
2018	17877
2019	17409
2020	9795
2021	11884
2022	12174

Major Events & Achievements

Implementation of a kangaroo mother care (KMC) center of excellence

The designated Pediatrician and KMC focal person, appointed by MOH, underwent a comprehensive two-week training in Bagota on the implementation of a Kangaroo Mother Care (KMC) Center of Excellence. Subsequently, a follow-up session for the adequate implementation of a KMC program was conducted on September 14th in the pediatric department by Dr. Charpak, a distinguished pediatrician specializing in KMC. Dr. Charpak, the Director of the Kangaroo Foundation, leads KMC research and implementation initiatives.



Picture 6.2. Expertise from Bogota demonstrates KMC

Trainings and Workshops

Throughout the year, diverse nursing staff participated in numerous relevant training sessions. The department facilitates rotational opportunities for unit staff, under the vigilant supervision of the Unit In charge. The year 2023 saw attendance at various training and workshops, contributing to the ongoing professional development of the nursing team.

- Kangaroo Mother Care
- Healthcare Associated Infections (HCAIs)
- NEWARS
- NeoQuIP (neonatal quality improvement Project-Online course) conducted by AIIMS
- Severe Acute Respiratory Infections (SARI) surveillance
- NALS/PALS
- Microbiology and blood culture techniques

Successful progress of a preterm infant

In the records of our department's storied history, we have provided critical care to numerous preterm infants. In the diverse cases handled by our department, the one that stands out is a neonate, presented to us in 2015, at 26 weeks of gestation and with a birth weight of a mere 750 grams. As of this moment, she is an 8-year-old, actively engaged in her second-grade curriculum. Furthermore, the year 2022 saw a preterm infant, born at 28 weeks with an equally low weight of 855g, who is 15 months old and flourishing with current weight of 9.2kg. Our

department also takes pride in the successful care and discharge of very preterm triplets at 31 weeks. These cases underscore the exceptional outcomes achievable through the dedicated efforts of our nursing staff, bolstered by family engagement. These stories are a testament to the potential for favorable outcomes in neonatal care, serving as a cornerstone of hope and a source of profound encouragement for our NICU team.

Case Report

The article "Peritoneal Dialysis via a Central Venous Catheter in a Neonate with AKI," featured in the Asian Journal of Pediatric Nephrology in June 2022, elucidates the implementation of peritoneal dialysis using a central venous catheter for neonates with AKI unresponsive to conservative measures, particularly in settings lacking appropriately sized peritoneal dialysis catheters.



Image 6.3. Preterm babies in NICU

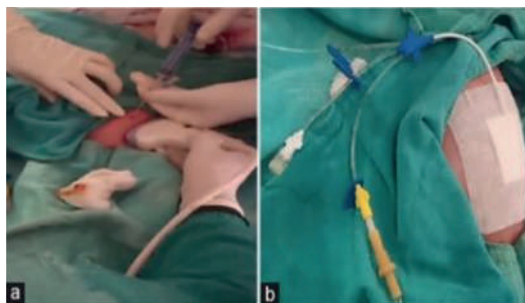


Image 6.4. Neonatal peritoneal dialysis with central catheter

Universal Hearing Screening

Since April 2022, our collaborative effort with the ENT department and Audiologist has instituted universal hearing screening for newborns at ERRH. This initiative prioritizes comprehensive care for infants, conducting standard screenings before hospital discharge, irrespective of weight or gestational age. Follow-up visits are arranged for those needing further evaluation due to inconclusive results, test failures, or high-risk factors.

Pocqi Project

Three departments collaborated on a Point of Care Quality Improvement (POCQI) project. NICU staff focused on enhancing hand hygiene compliance among health staff using the five recommended movements. Post natal staff initiated a three-month Quality Improvement Initiative targeting the reduction of formula feeding in the neonatal ward at MRRH. PICU staff undertook a Quality Improvement Project to enhance compliance with the Ventilator-Associated Pneumonia (VAP) bundle in AICU/PICU.

Standard Operating Procedures

Our staff recognized the significance of standard operating protocols (SOPs) and diligently crafted them for each unit. The nursing staff meticulously developed the following SOPs for routine utilization within the Department, ensuring streamlined processes and consistent standards of practice.

- Care of baby in incubator
- Care of baby in ventilator
- Care of baby on CPAP
- Heel lance procedure
- Anthropometric measurement
- Care of baby on UVC catheter
- IV Cannulation

Teaching and Trainings

Serving as adjunct faculties with the Faculty of Postgraduate Medicine at Khesar Gyalpo University of Medical Sciences in Bhutan, our department has been dedicated to instructing and training resident and intern doctors for numerous years. Additionally, our active involvement extends to the education of nursing staff and students at ARURA Academy of Health Sciences. The nurse in-charge consistently conducts classes, and our staff nurses actively guide and train students in skill development, fostering a comprehensive approach to medical education.

Challenges

In our pursuit of delivering optimal patient care, our department grapples with significant challenges, including insufficient staffing levels, frequent staff transfers, and a shortage of specialized personnel in



the Neonatal Intensive Care Unit (NICU), Pediatric Intensive Care Unit (PICU) and pediatric ward. These obstacles pose substantial barriers to achieving the desired standard of care. Addressing these challenges is paramount to enhancing the overall quality of care provided in these critical units. Strategies to mitigate these issues, such as staff retention initiatives and specialized training programs, are essential for fostering an environment that promotes excellence in healthcare delivery.

Future Plan

Future plans include segregating Pediatric Units from ENT, Dental, and Ophthalmology

units, contingent upon sufficient nursing staff. Introducing a High-Risk Clinic aims to monitor small infants at risk of long-term health issues. Establishing a Cardiac Clinic will facilitate follow-up for patients with congenital heart diseases. Additionally, a Lactation Clinic is proposed to provide support for breastfeeding mothers. Furthermore, plans involve instituting an Ambulatory Kangaroo Mother Care (KMC) program, emphasizing holistic care and enhanced support for neonates and their families. These initiatives align with our commitment to advancing specialized care and addressing the unique needs of our pediatric patients.

7. DEPARTMENT OF RADIO-DIAGNOSIS AND IMAGING

Background

The Department of Radio-diagnosis and Imaging of Eastern Regional Referral Hospital, Mongar, was officially first established on 6th June, 2008. However, long before this, it all started out as an X-ray unit in 1990s offering routine X-ray services to the people of Mongar. This was followed by introduction of ultrasound unit few years later. Then in 2018, computed tomography (CT) was installed offering CT services to whole eastern region of Bhutan which includes six districts. The latest radiology services to be introduced is the mammography which was started in December, 2022. Therefore, currently there four units under the Department of Radio-diagnosis and Imaging; CT unit, Mammography unit, Ultrasound unit and X-ray unit.

The department provides X-ray services 24x7 round the clock while other routine diagnostic imaging services consisting of CT, mammography and ultrasound are offered from 9 am to 3 pm on weekdays and 9 am to 1 pm on Saturday. However, irrespective of any days, the emergency diagnostic imaging services are available 24x7 round the clock on on-call basis.



Picture 7.1 Hitachi Supria 16 slice CT machine

Human Resource

Currently, the department is equipped with eleven health professionals which includes a radiologist, two radio-technologists, two CT technicians, a CT nurse, two x-ray technicians, two ultra-sonographers and a mammography technician. Dr. Kinley Sangay Dorji is the current HoD who runs department with support from staff working round the clock.

COMPUTED TOMOGRAPHY (CT) UNIT

The CT machine in ERRH, Mongar is a Hitachi Supria 16 slice machine. The CT unit provides both routine and emergency scan services which can either be contrast and non-contrast studies. In 2023, a total volume of 1375 CT scans was performed of which 22.8% were emergencies while 77.2% were routine scans.

Table 7.1 Number of CT examinations performed in 2023

Month	No.of Patients	Routine scans	Emergency scans	Contrast-enhanced CT scan	Non-contrast CT scan	Total scans
Jan	94	79	30	60	49	109
Feb	90	77	22	60	39	99
Mar	116	95	35	81	49	130
Apr	71	53	32	46	39	85
May	112	84	39	72	51	123
Jun	100	92	22	69	45	114
Jul	111	114	24	92	46	138
Aug	116	128	20	90	58	148
Sept	69	65	21	58	28	86
Oct	119	116	31	110	37	147
Nov	74	66	20	50	36	86
Dec	93	92	18	66	44	110
Total	1165	1061	314	854	521	1375

Mammography Unit



Picture 7.2 Mammography technician performing mammography scan

The Mammography unit was established in December 2022 with installation of Selenia Dimensions Mammography System by Hologic. A mammogram is an X-ray examination of the breast which is used to detect and diagnose breast disease in women who either have breast problems, such as a lump, pain, or nipple discharge, as well as for women who have no breast complaints for early detection of breast cancer (screening). The mammography machine is operated by a lone female mammography technician.

Table 7.2 Number of mammography examinations performed in 2023

Month	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total
Number of patients	40	27	13	0	3	1	10	9	6	5	0	7	121

Ultrasound Unit



Picture 7.3 Ultra-sonographer technician performing obstetric scan

Ultrasound unit consists three 2D and a portable ultrasound machine manned by two senior ultra-sonographers. In addition to providing routine ultrasound services such as hepatobiliary (HBS), kidney-ureter-bladder (KUB), pelvic, obstetric scans and so on, the ultrasound unit provides Doppler services such venous doppler, renal artery doppler, carotid doppler to name a few. The unit also aids physicians with image-guided intervention.

In 2023, a total of 11319 ultrasound scans were performed of which the most commonly performed study was abdomen/HBS, around 53.8%, while doppler scan comprises of 5.4%.

Table 7.3 Number of ultrasound examinations performed in 2023

Month	Abdomen	Gynaecology / Obstetric	Doppler	Others*	Total
Jan	706	236	53	206	1201
Feb	612	211	45	189	1057
March	650	220	61	216	1147
April	657	251	41	208	1157
May	691	221	58	157	1127
June	569	192	69	172	1002
July	654	302	37	221	1214
Aug	661	257	58	213	1189
Sep	233	168	55	97	553
Oct	239	258	46	90	633
Nov	206	165	43	78	492
Dec	218	235	49	45	547
Total	6096	2716	615	1892	11319

X-Ray Unit

The X-ray the unit offers contrast radiography services such as HSG, barium swallow, meal, follow through, enema, fistulography, MCUG, ascending urethrography, loopography, etc. in addition to the normal plain x-ray examinations.

In 2023, 7164 X-ray examination was performed excluding 69 contrast radiograph during the same period.

Since February 2023, the unit started immigration medical examination (IME) services for Australia visa application thereby greatly reducing the workload of the JDWNRH, Thimphu.



Picture 7.4 X-ray technician assisting the patient for chest X-ray examination.

Table 7.4 Number of X-ray examinations for the year 2023.

Month	Number of patients	Emergency X-rays	Total examination	Films consumed	Contrast X-rays
Jan	504	106	547	526	2
Feb	423	101	472	438	4
Mar	502	105	561	516	11
Apr	544	109	637	625	2
May	548	108	679	630	7
Jun	606	102	837	791	12
Jul	520	96	618	579	5
Aug	534	105	660	522	6
Sept	519	95	610	589	4
Oct	430	91	623	476	8
Nov	402	101	425	420	3
Dec	471	79	495	489	5
Total	6269	1198	7164	6501	69

Key Achievements

Revised standard operating procedure (SOP) guidelines for CT unit, ultrasound unit and X-ray unit.

Successfully completed a quality improvement project to reduce X-ray films wastage in the X-ray unit, ERRH, Mongar. Started immigration medical examination (IME) for Australia visa application.

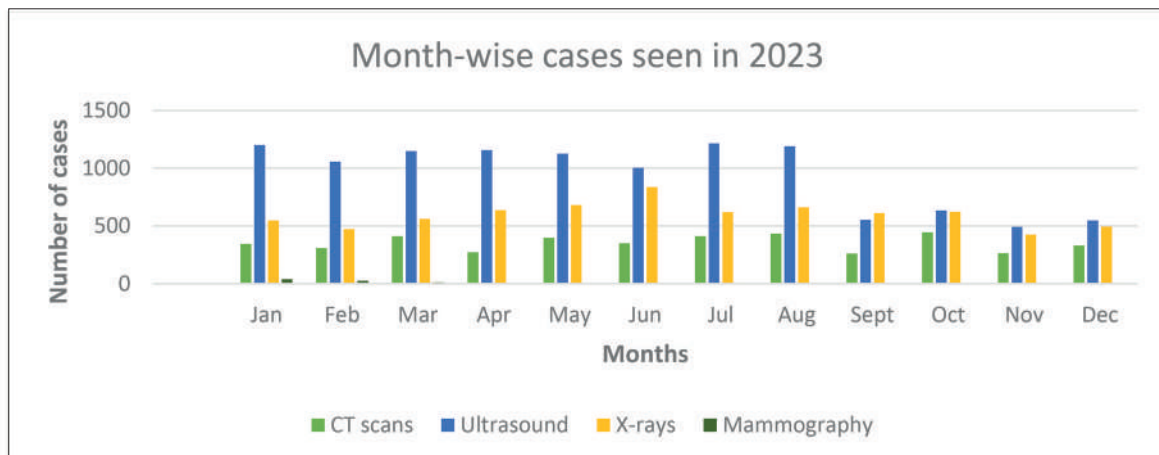


Figure 7.1 Summary of the Department output in 2023

Challenges

Limited human resources: There are not enough X-ray technicians to maintain shift system to provide 24x7 services without the support from CT technicians. The mammography services are not available 6 days a week as she has to help out the X-ray unit. The senior sonographer who specialized in doppler cannot provide quality scan and report due to increase case load.

Limited resources; the image viewing monitor of the radiologist work station is not

DICOM compatible and therefore reduces the quality of the report.

Limited training opportunities to upgrade the knowledge.

Way Forward

- Adequate allocation of human resources
- Regular training and CME to upgrade the knowledge
- Focus on 100% digitalization of imaging system.
- Conduct research and quality improvement projects.

8. DEPARTMENT OF ANAESTHESIA AND OT COMPLEX

Background

The OT complex has 4 operation theatres which is functioned by twenty nine staff who strives to provide timely, evidenced based surgical and anesthetic services. We work closely in a multidisciplinary team to attend all the emergency and elective surgeries for six different surgical departments. The department has one Anesthesiologist, three Nurse Anesthetists, Seven Anesthesia OT Technicians, thirteen Scrub Nurses, one Post-Operative Care (PACU) nurse and four support staff. Amongst the thirteen scrub nurses, only two are specialized scrub nurses who were trained as peri-operative nurses.

Table 8.1 Staff strength

Anesthesiologist	2	1
Nurse Anesthetist	4	3
OT technicians (Anesthesia)	7	7
Scrub Nurse	17	13
PACU nurse	1	1
Pre-op nurse	0	0
Support staff	4	4
Total	35	29

Operation THEATRE: Work



Picture 8.1 OT staff

Output

In the year 2023, the operation theatre catered to 1898 surgeries including routine and emergency surgeries across all departments. The total surgeries in 2023 were almost similar to the year 2022 which saw 1874 surgeries. Amongst 6 different surgical departments, the department of orthopaedic surgery topped the Operation Theatre usage with 30% of all surgeries attributed to orthopaedic surgeries.

As ERRH served as only health center with orthopedic surgeon in the six eastern Dzongkhags until recent times, orthopedic surgery shared the highest burden of total surgeries.

Table 8.2 Distribution of OT usage by different departments

Surgical Specialty	Year	
	2022	2023
Dental surgery	10	29
ENT	163	191
General surgery	667	552
Obstetrics & Gynecology	351	341
Ophthalmology	124	212
Orthopaedic surgery	559	573
Total	1874	1898

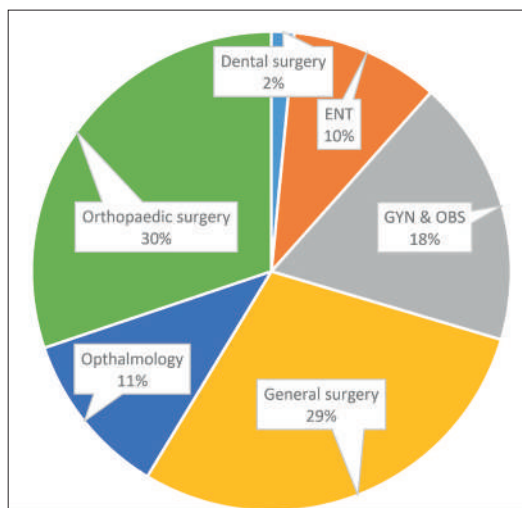


Figure 8.1 OT usage by departments in 2023



Picture 8.2: Orthopaedic surgery in process

Anesthesiology Department: Work Output

The Anesthesiology department provided anesthesia services and care to 1664 surgeries in 2023. This was an increase of 3.67% as compared to 2022. Emergency surgeries accounted to close to one third (32%) of anesthesia provided. More than half of anesthesia services were provided to female patients (55.7%) and 82.7% (1376) of anesthesia care were attributed to adult patients.



Table 8.3 Distribution of Anesthesia Services Provided by Urgency

Year	2022	2023
Elective	1087	1133
Emergency	518	531
Total	1605	1664

Table 8.4 Distribution of Anesthesia services provided by Gender

	Year	
	2022	2023
Male	756	737
Female	849	927
Total	1605	1664

Table 8.5 Distribution of Anesthesia services provided by Gender

	Year	
	2022	2023
<6months	4	8
6 months -6 years	95	108
7 years- 12 years	93	117
13 years- 17 years	65	55
>18 years	1348	1376 (82.7%)

Although general anesthesia remains the leading anesthetic technique, the lesser invasive technique with better analgesia such as regional blocks are increasingly

performed. In 2023, as compared to previous year there was 81% increase in regional blocks performed in patients as sole anesthetic technique or in combination of other anesthetic technique for analgesia.

Table 8.6 Distribution of Anesthesia services provided by the Types of anesthetic technique

General anesthesia	681	762
TIVA*	131	162
Spinal Anesthesia	573	500
Regional Block	70	127
Combined Technique/Block	150	113

*TIVA: Total Intravenous Anesthesia

World Anesthesia Day

World Anesthesia Day was observed in the Operation Theatre on 16th October, 2023 on the theme “Anesthesia and Cancer Care” underscoring the indispensable role of Anesthesia in cancer treatment.

We were joined by Dy. Chief ADMO of the hospital. He expressed gratitude and appreciation to all anesthesia providers for making surgeries safe and pain free. He also assured support from the hospital in observing similar events in the future.



Picture 8.3 Anesthesiology team were gifted with token of appreciation by scrub nurses on World Anesthesia Day

Continuing Medical Education

The anesthesia providers attended the Annual Anesthesia conference at Bumthang in October, 2023 after a hiatus of three years. The conference covered wide range of topics from anesthesia service delivery, patient safety and newer developments in practice of Anesthesia.

Post-Graduate Residency Attachment

As an adjunct Teaching Hospital of Khesar Gyalpo University of Medical Sciences of Bhutan, Anesthesiology department guided two third year Anesthesiology Residents during their one month district attachment in December.

Challenges

- Human resource constraint: Of the thirteen scrub nurses only two are specialized scrub nurses
- Staff training and development. There are no planned CME activities or short

term trainings for scrub nurses.

- Resource Constraints: We have been facing challenges in mobilizing accessories for anesthesia machine and monitors
- No separate pre-operative room in OT complex: This has hampered the pre-operative care of patient such as registration, administration of drugs and others.

Way Forward

- Strengthen Human resource in Operation theatre with deployment of trained Peri-operative nurses
- Plan CME activities for scrub nurses and short term attachments at National Referral Hospital in specialized fields
- Streamline the procurement of accessories for anesthesia equipment
- Training and capacity building of anesthetists in usage of ultrasound for regional blocks and POCUS.
- Restructuring of OT complex to accommodate dedicated pre-operative room and post-operative care room.



9. DEPARTMENT OF OPHTHALMOLOGY

ward help to take care of in ward patient.

Background

Ophthalmology services in ERRH were available from 1995. However, the first ophthalmologist to join ERRH was Dr. Ngawang Tenzin in 1996. Since then it started providing primary eye care services for Mongar district and started functioning as a referral center for the health centers in the eastern region of Bhutan. Blindness and visual impairment remain public health challenges globally. Avoidable blindness can be prevented by simple and inexpensive surgery for cataracts and a pair of spectacles for refractive errors.

Human Resource

There are currently three ophthalmologists, two optometrists and four ophthalmic assistants. Nurses and support staff in the

Hospital Based Ophthalmic Services

Hospital based ophthalmic services include OPD services, OT services, IPD services and diagnostic services. Table 2 describes the available services provided by the department.

There are six beds available for the inpatient section in the ward and the nursing staff are shared with the pediatric, ENT and dental ward patients. Some cases that require further management by sub-specialists are referred to the tertiary center at Gyalum Kesang Choden Wangchuck National Eye Centre, JDWNRH, Thimphu. The number of people availing hospital-based services are shown in the table 9.1

Table 9.1 Details of ophthalmic services available at ERRH

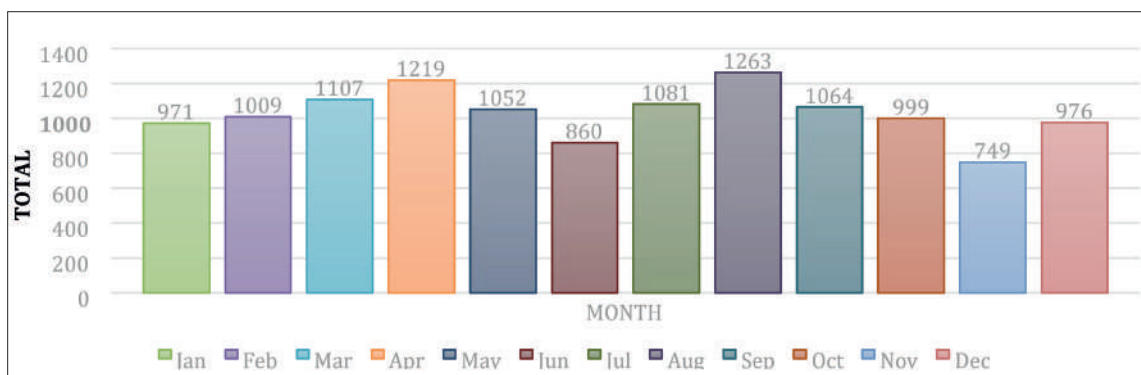
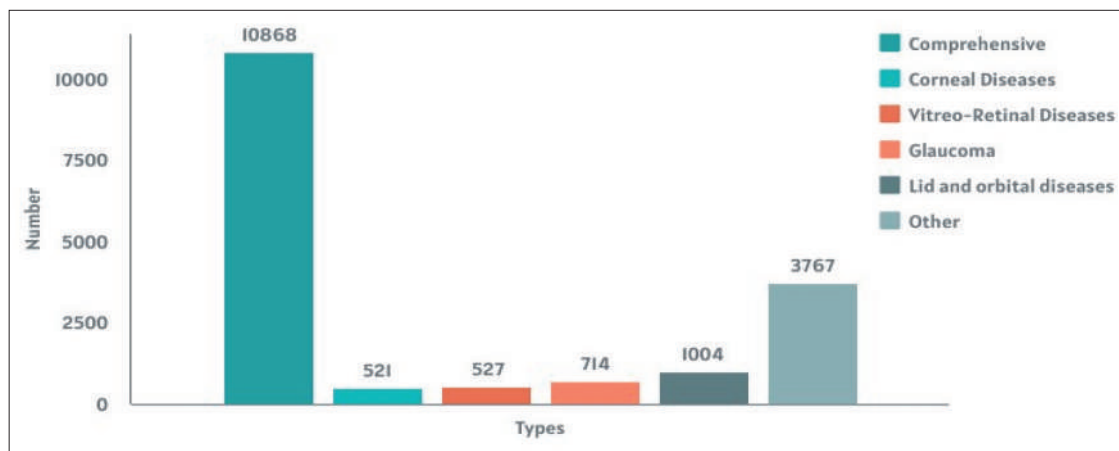
	Services	Description
1	Vision and Refraction	Visual acuity assessment and refraction both objective and subjective including prescription of glasses
2	Major OT services	Cataract surgery, Pterygium surgery, PI for glaucoma, other major ocular surgery
3	Minor OT services	Dressing, suturing, minor procedures like chalazion removal and sac syringing
4	Diagnostic services	OCT, Fundus photo, HVFA, A-B scan, CCT, Keratometry, IOP and ROP screening
5	Orthoptic services	Basic orthoptic test like CT, PBCT, WFDT, Stereopsis test and color vision
6	Contact Lens (CL) services	Prescription of CL and counseling on CL wear and care regimen
7	Consultation:	Patients are seen by an ophthalmologist
PI: peripheral iridotomy; OCT: Optical coherence tomography; HVFA: Humphrey field analyzer; CCT: Central corneal thickness; IOP: Intraocular pressure; ROP: Retinopathy of Prematurity; CT: Cover test; PBCT: prism bar cover test; WFDT: Worth for dot test; CL: contact lens		

**Table 9.2 Number of patients availing hospital based ophthalmic services**

Sl. No.	Services	Total Number
1	Outpatient department	12350
2	Surgery	
	Routine	200
	Emergency	12
3	Indoor patients	212
4	Diagnostic procedures	504
5	Minor procedures/Dressing	50
6	Off hour services/e-Medicals	1790
7	Free glasses issued	3700
8	Emergency attended	58

Outpatient Services

In 2023, 12350 patients were seen in OPD which averages about 1029 patients per month. Highest number were seen during the month of April and September (>1200 per month). Lowest were seen during the month of December. Patient coming for comprehensive eye screening composited the highest number of OPD visit (n=10868, 88%) followed by orbital and lid disease (n=1004, 8.1%).

**Figure 9.1 Monthly OPD patient attendance****Figure 9.2 Details of OPD Cases by Number, 2023 (other includes eye examination for medical screening, for immigration visa examination, screening for hypertensive and diabetic retinopathy)**



Picture 9.1 OPD services; (A) Vision and refraction services, (B) Consultation services and (C) Diagnostic Services

Eye Operation Services

Total of 689 surgeries was performed in 2023 with cataract surgery (n=392, 56.8%) being the most. Other surgery included surgery for pterygium, glaucoma, enucleation and traumatic repairs. Emergency OT was performed on 12 individual (1.7%). Most surgery were in month of March (n=32) and least in October (n=2). Both gender contributed equally to total surgeries.

Table 9.3 Details of surgeries with gender distribution

Cataract	50	44	94
Cataract (Outreach)	136	162	298
Others *	53	53	106
Others *(Outreach)	95	84	179
Emergency OT	11	1	12
Total	345	344	689

*Others includes pterygium surgery, for glaucoma, traumatic repairs, enucleation, chalazion removal

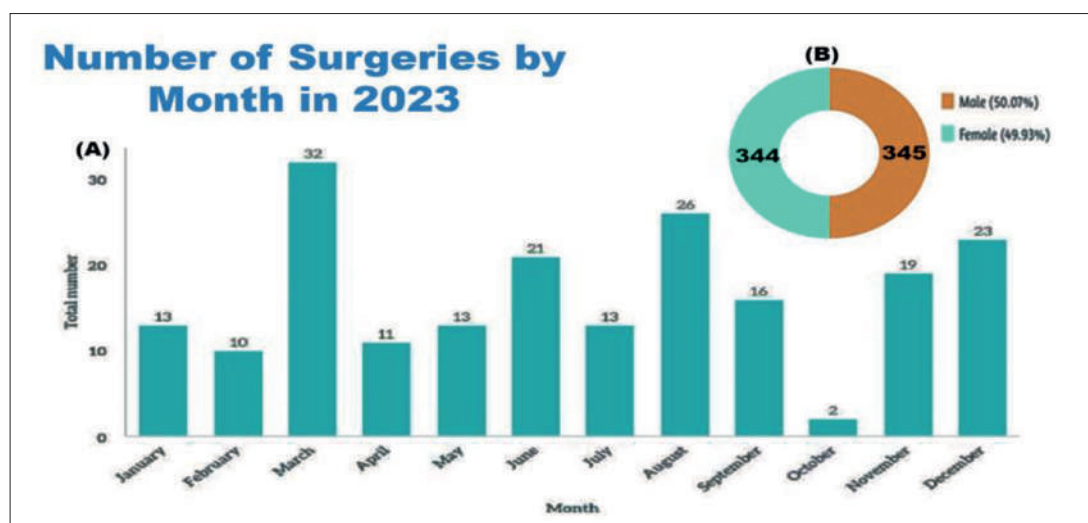
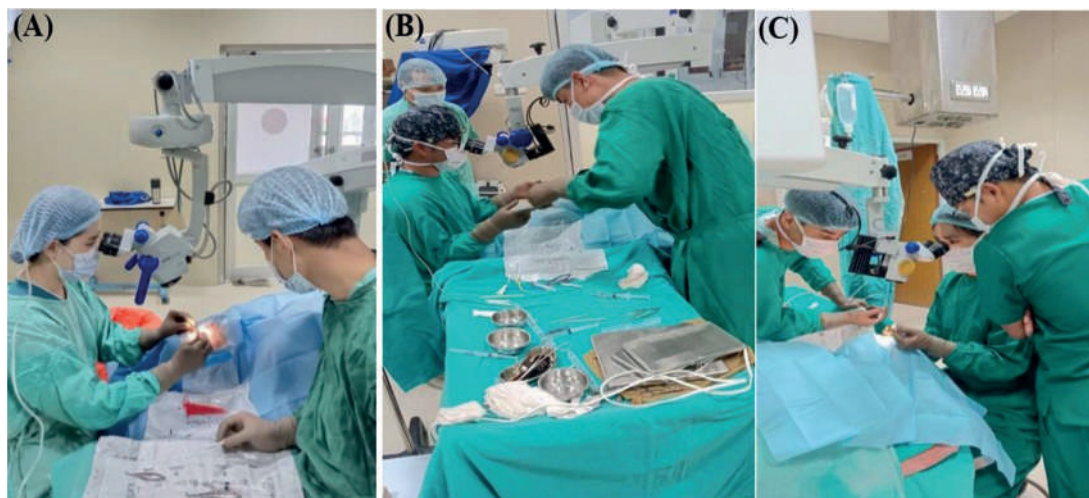


Figure 9.3 (A) Number of surgeries performed monthly. (B): Pie diagram with gender distribution of surgery patients



Picture 9.2 OT services (A) & (B) Ophthalmologist and ophthalmic assistant during their surgery (C) senior surgeon guiding junior surgeon during surgery

Outreach Community Services

In addition to the hospital based services, the department also provides outreach community services like mobile eye camps

in the health centers under the catchment area with the funding support from Himalayan Cataract Project. As detailed in table 12.3, 477 surgeries were performed during the outreach clinic in 2023.



Picture 9.3: Outreach camps. (A) Pema Gatshel Hospital Eye camp and (B) Riserboo hospital eye camp

Academic And Trainings



Picture 9.4 Continuous Medical Education (CME) for Nurses. (A) and (B) Dr. Tshering Jamtsho taking a class for nurse and ophthalmic assistant in the ward.

Challenges

Limited resource - Medical equipment like a neodymium YAG laser

Preventive education- lack of awareness regarding preventive measures for eye

diseases, importance of eye health and preventive care

Access to Eye care services- difficult geographical area, lack of transportation and insufficient awareness about eye health are main reasons



10. DEPARTMENT OF EMERGENCY MEDICINE AND EMERGENCY MEDICAL SERVICES (EMS)

Background

The emergency department is a core clinical unit of a hospital and the experience of patients attending the department significantly influences patient satisfaction and the public image of the hospital. Its function is to receive, triage, stabilize and provide emergency management to patients who presents with a wide variety of critical, urgent and semi urgent conditions.

The emergency department of ERRH was formally established in 2008. It was

initially run by Medical officers and nurses with consultation with the respective on-call specialists. The first trained emergency physician joined the department from June 2022. The department consists of a team of Emergency Physician (EP), five General Duty Medical Officers (GDMO), Clinical Nurses, Staff nurses, Emergency Medical Responders (EMR) and supporting staff. This team is available twenty-four hours a day, seven days a week, to treat any patient seeking emergency medical care.

Table 10.1 Services provided at ED

1	Acute Adult medical care and resuscitation
2	Acute Pediatric care and resuscitation
3	Trauma care and resuscitation
4	Toxins and drug overdose management
5	Emergency imaging and labs (with respective departments)
6	Emergency procedure room
7	EMS and Rapid response team
8	Others Minor OT services Evening and Night OPDs PEN Hearts NCD screening Forensic evaluation and reporting Routine Blood transfusion



Picture 10.1 Entrance to Emergency Department

Currently the department has 06 Observation beds for adults, two for pediatric patients; 2 resuscitation bed, one each for an adult and child/neonate. The department also has added three extra beds/trolleys in the hallway to accommodate extra patients. A procedure room with monitoring equipment is dedicated for major and minor procedures. Due to shortages of space and human resources, this room also functions as minor OT room for surgical and other general patients. Due to similar reasons, there is no dedicated triage area and all patient are either triaged at the bed, at the nurse's station or at resuscitation area (when empty).

Work Output

In 2023, the department has catered to about 8806 patients with nearly 65% (n=5676) of the patient seen as OPD patient. 3130 (35%) patients were admitted to emergency department for observation and management. From these cohort, about 13.8 % (n=432) constituted trauma and injured patients. 45.3 % (n=1419) of these observed patients were further admitted to respective specialist for further care. Though poisoning and toxic bites constituted 1% of ED admission, it becomes crucial to know the case distribution and management. 27% are cases referred from other district and PHCs. The details are highlighted in further in table 10.2.


Table 10.2: Patients seen in ED, 2023

	Total ED patients	ED observation & admission, n (%) ^	OPD cases at ED, n (%) ^	Admission to respective ward, n (%)*	Trauma cases admitted to ED*	Poisoning and toxic bites, n (%) **	Referred in from district & PHC*	Mortality *
Total	8806	3130 (35.5)	5676 (64.5)	1419 (45.3)	432 (13.8)	33 (1) *	846 (27)	25 (0.8)
^ Percentage (%) calculated from Total ED patients								
* Percentage (%) calculated from Total ED Observation and admission patients								
** Cases: Mushroom Poison (12), Snake Bite (7), Aconite (6), Bee/wasp Sting(6), Other insects (2)								

Regarding demographic details, there were roughly equal number of male (47.8%) and females (46.2%) visiting the Department with 6% (n=524) with incomplete data. Adult patient aged between 14-60 years (56.1%) made up the most who visited the department followed by elders (22%). Though children

(12.4%) and neonates (3.5%) numbers were less compared to adults, it becomes important for ED doctors and nurses to be trained in managing population of all age groups. Table 10.3 illustrates this distribution.

Table 10.3 Demographic details of patients visiting ED

		Total Number		OPD cases		ER admission	
		n	%	n	%	n	%
A	Gender						
	Male	4215	47.8	2949	33.4	1266	14.4
	Female	4067	46.2	2790	31.6	1277	14.5
	Missing data	524	6	-----6%-----			
	Total	8806	100	5739	65.2	2543	28.2
B	Age distribution						
	Neonate/infant (<1 year)	302	3.5	203	2.3	99	1.1
	Children (1-13)	1094	12.4	815	9.2	279	3.2
	Adults (14-60)	4848	56.1	3412	38.7	1536	17.5
	Elders(>60)	1938	22	1071	12.1	867	9.9
	Missing data	524	6	-----6%-----			
	Total	8806	100	5501	62.4	2781	31.6

Table 10.4 illustrates emergency and routine procedures done in the emergency department.

Major procedures includes but not limited to endotracheal intubation and ventilation, central and hemodialysis line, chest tube insertion and procedure sedations. Many routine and diagnostic procedures (*) can be diverted to procedure room or minor OT, reducing the burden on ED resources. Procedure like surgical excision of lumps and cyst, removal of ingrowing toe nails, changing and insertion of urinary catheter and many more should be done in the separate minor OT. But due to lack of space and human resources, all these procedures are currently done in ED procedure room.

With high number of procedure sedation done in ED, a protocol has been developed for safe and effective procedure. Some of the procedure includes reduction of fracture and dislocation, chest tube insertion, abscess drainage and even for CT scan for agitated patients. There were no major life threatening complications identified during the procedure.

ED also saw 312 units of blood and blood products transfused in 2023. Packed red cell

(PRC) transfusion (60.6%) was significantly higher than the plasma (30.8%) and platelet transfusion (8.4%). Blood transfusion therapy in ED is done both for emergency and routine cases. Routine transfusion was advised in 55% (n=173 units) of the transfused patients. Statistically, one routine transfusion usually takes from 5-7 hours including time for preparation. More often than not, these patient are sent home and called when the bed becomes free for transfusion. This also highlights the need for separate BT unit in the future for routine transfusion and not relying on the already limited ED bed for transfusion.



Picture 10.2: Bear Maul case intubated and trying to ligate the artery to control hemorrhage before shifting to OT


Table 10.4 Number of procedures and blood transfusion in ED

A	Major and Minor procedure done in ED												
	CPR	Intubation	Central/HD line	Chest tube insertion	Ascites tap*	Pleural tap*	Lumber Puncture	Procedure sedation	Dressing*	Suture	Excision*	Cast appli- cation *	Total
Total	21	36	69	19	90	48	5	82	284	185	166	63	1068
B	Number (unit) of Blood transfusion done in ED (routine and emergency)												
	PRC			FFP		Platelet		TOTAL		Routine ^		Urgent^^	
Total	189 (60.6)			96 (30.8)		27 (8.4)		312		173(55%)		139 (45 %)	
PRC: packed red cells; FFP: fresh frozen plasma 1 unit equal to either 1 packet of PRC, FFP or platelet Urgent: Transfusion is a part of resuscitation and management Routine: Blood transfusion only with no immediate need; normal vitals													

Pre-hospital and Emergency Medical services (EMS) are part of emergency department which plays a crucial role in providing emergency service to the community, responding to emergency incidents and safe transport of the patients. Table 5 shows emergency cases attended by the Emergency medical responders.

Sixty three (63) cases were seen in a year under forensic unit for evaluation and reporting. Details of forensic cases are illustrated under forensic unit chapter. Forensic focal, who also works as ED nurse and a medical officer is deployed from the department when need for evaluation arises.

Table 10.5 Details of cases responded by EMS

Gender			Age specific					Case type			
Male	Female	Missing data	Infants	Child (5-13)	Adults (14-60)	Elders (>60)	Missing date	Trauma	Non- Trauma	Gyn/Obs	Total no
127	148	3	10	21	165	78	4	57	178	43	278

Key Indicators

Key indicators are quantifiable measurement that is used to measure department performance against set of objectives

aligning with department and hospital's goal. The indicators helps us to plan, prepare, rate and improve our performances. Table 13.6 shows department key indicators against the intended target. Few are indicators based



on hospital and QASD but most are target that we have set as a department to see our progress. The department is conducting

surveys and quality projects to assess and improve upon our indicators.

Table 10.6 Key indicators monitored in ED with target values and our result

	Indicator	Description	Target	Our Result	Remarks
1	Physician Response time	Average time taken by ER doctor to see urgent and emergent case admitted in ED	<10 Min	4 Minutes	*Need to segregate further into red and yellow cases
2	Boarding time for admitted patient	Average holding time for patients in ED	< 8 hrs	10 hrs 6 min	
3	Ward response time	Average time taken by Ward to admit after disposition is finalized	< 1 hr	1hr 16 min	
4	EMS response time	Average time taken to dispatch EMS after receiving call	<10 min	6 min	
5	EMS turnover time	Average time taken to round trip a patient (receiving call to transporting patient to ED)		3:15 hr	Plan in future for assigning and allocating ambulance based on location and duration.
6	Emergency trolley check list	Percentage of daily checking of emergency trolley	>85%	61.40 %	
7	Critical procedure entry list	Percentage of entry of emergency procedures in registry for reference and auditing	>85%	80.2 %	
8	Return of emergency patients	Percentage of patient returning to ED within 72 hours with same complains	<10 %	No data	This is BHSAQ KPI and plan to implement from 2024
9	Patient satisfaction score	Average Percentage of patient satisfaction score in ED. (Patient score/total score)	>95 %	88.75 %	This score is based on initial satisfaction survey conducted in Nov 2023. The questionnaires showed internal consistency with Cronbach's alpha of 0.8
10	Complete drug chart record	Percentage of complete drug charts in ED	>90%	73%	This is department's second QI project and plan to achieve the target by next 4-6 weeks.
11	Infection control and 5SCQI	Percentage of infection and 5SCQI implementation	>90	92.43%	This is the assessment of hospital QASD

	Indicator	Description	Target	Our Result	Remarks
12	Stroke response time	Average time taken from admitting stroke patient to CT scan and first treatment plan by a doctor. [+initiate thrombolysis]	< 45 min	65 min	This is according to acute stroke protocol in identifying stroke for thrombolysis. We tried doing for every stroke whether they meet the criteria to familiarize with the procedure.
13	Forensic report time	Dispatch forensic evaluation and reporting by 3 days (total days/ no of patients)	3 days	2.2 days	
14	Lab Response time	Average time to release lab report labelled as urgent from time of sample collection	<45 min	44.8 min	* This was stopped after a month since EPIS and LIS was introduced, negating the response time.

Projects

- Established separate adult, pediatric and neonate resuscitation area with protocols and equipment.
- Developed SOPs for resuscitation, emergency procedure, acute stroke, forensic evaluation, triaging and acute management protocols.
- Successfully completed QI project on vital signs assessment with project presented at Bumthang and QI conference in Paro by team member.
- Successfully developed SOP for acute stroke management, conducted classes and created emergency stroke registry
- Trauma focal person from ED is responsible for Bhutan Trauma registry and updates all the trauma cases seen in the ED.



Picture 10.3 Monthly CME conducted in the department

- Developed and enhanced learning culture in the department. Pre hospital room is upgraded with monitor with table and chair to function as CME and meeting room. Conducts CME at least once a month to review protocols, update and improve our knowledge, guides and teach residents, interns, MOS and nursing students.
- Improved and improvised on data recording and maintaining with digital form, sheets and charts for future reference, clinical auditing, see progression and report writing.
- Received simulation equipment and manikins for resuscitation training and conducted training for ECLS, Neonate resuscitation and BLS trainings.
- Conduct quarterly co-ordination meeting and 5SCQI meeting to discuss issues, implement change, clean the department and celebrate small successes.



Picture 10.4 5SCQI activity, infection control measures and Saturday social work

Challenges

- There are shortages of doctors and nurses to work in the emergency department. Medical officers in ERRH has to cover both general OPD and emergency ward in shift rotation, at times even taking the role of specialist during their absence.
- Lack of space and infrastructure makes it difficult to function smoothly as an emergency department. The rooms are compact and small, the nurse's station is away from treatment area and there are limited space for expansion. The patients visiting the department has been increasing and becoming more pressing.
- The use of department for routine non-emergency cases are always more than the critical ones diverting and delaying the emergency services. This includes (as in workload above) but not limited to, general OPD cases, routine labs and transfusion and minor OT cases. These are partly also due to shortages of human resource and infrastructure.
- The equipment and tools are more often than not, not available in the department and are of sub optimal condition. This also includes critical instrument like laryngoscope, ABG cartridges, chest



- tubes and resuscitation medications.
- Other than few in house CME, there is very less opportunity for training and up gradation of knowledge and skill of staff.

WAY FORWARD

- Recruit and increase the number of dedicated doctors and nurses working in Emergency. This would also help to separate OPD and Emergency. Increase the coverage by emergency residents and emergency physicians.
- Expand/ allocate more space and room so to increase the beds and restructure the department to meet the demands of increasing number of patients and services
- Start triage services to sort and prioritize patients visiting the ED.
- Establishing a strong ED protocol to filter emergency and routine cases, introducing evening and night OPD chambers to take care of general stable patients, initiate routine blood unit for transfusion and separate minor OT for surgical and general patients.
- Make critical equipment and medication readily available to prevent delay in patient care and management
- Create opportunity for doctor and nurses to upgrade knowledge and skills by giving them opportunity for training and attending seminar.
- Establish simulation lab in ERRH for training and conducting workshops.

11. DEPARTMENT OF ENT, HEAD AND NECK SURGERY

Background

The ENT specialist service in the country was limited to JDWNRH, Thimphu until 2004. It was expanded to regional referral hospitals with the help of expatriate doctors. The first ENT services at Eastern Regional Referral Hospital (ERRH) was started in 2004. Currently there are two national ENT surgeons at ERRH to cater ENT services to six eastern Dzongkhags.

With the joining of Bhutanese ENT surgeon

in February 2022 a lot of service expansion has occurred. Previously two-roomed ENT chamber was relocated by creating addition registration room and a chamber. We received new operating Microscope in April 2022 and portable endoscope in August 2022. This has enabled us to perform majority of the ENT surgeries performed by General ENT Surgeons. This was further enhanced with the arrival of second ENT surgeon in August 2023. Currently there are three ENT technicians and one Audiologist at ERRH.

Table 11.1 List of ENT Staff posted at ERRH

ENT Surgeons	ENT Technicians
Dr. Su Hlaing (Myanmar, 2004-2005)	Mr. Ugyen Wangdee (2005- Present)
Dr. Mu Mu (Myanmar, 2005-2006)	Mrs. Yeshe Choden (2008-2015)
Dr. Mya Than Zin (Myanmar, 2007-2009)	Mrs. Tshering Choki (2016-2022)
Dr. Kyaw Htet Win (Myanmar, 2011-2013)	Mrs. Chimi Choden (2016-Present)
Dr. Vladimir Thomas Perez Baez (Cuba, 2013-2015)	Mrs. Sonam Dema (2023- Present)
Dr. Pushpalal Katel (2022- Present)	Audiologist
Dr. Tshewang Lhamo (2023-Present)	Mr. Jigme Dorji (2019-present)

OPD Services

ENT OPD

In 2023, the department saw 4544 patients at OPD. The ENT OPD is manned by two ENT surgeons, three ENT technicians and an audiologist. On an average we screen and treat approximately 30 to 40 patients daily. We provide comprehensive ENT OPD Services every day from 9am to 3pm on Monday, Tuesday, Thursday and Saturday. However, the on-call ENT Surgeon and Technician are available 24x7 for any ENT emergency cases. They also look after in-

ward patients during holidays.



Picture 11.1 Otoscopic examination

Audiology Service

The first audiologist was placed at ERRH in 2019. The audiological assessment at ERRH started with Pure-tone Audiometry, tympanometry, speech and language assessment and interventions. From April 2022 onwards Universal Newborn Hearing Screening was started. With this all newborns

were screened for hearing impairment at birth. Following year on March 16, 2023 we received an audiology equipment for recording Auditory Brainstem Response (ABR). Thus ERRH is equipped to assess most of the auditory disorders, with similar standards to that of JDWNRH, Thimphu.

Table 11.2 Audiological Services 2023

Months	Audiological services 2023									Total
	PTA	Immit-tance	OAE	ABR	UNHS	HAT	Hearing aid fitting	Hearing aid troubleshooting	Speech and language assessment	
January	69	31	10	0	73	7	0	0	4	194
February	52	20	3	0	66	8	2	3	2	156
March	88	60	15	2	62	11	1	2	11	252
April	52	33	0	0	29	3	7	0	6	130
May	43	33	0	4	34	6	8	0	1	129
June	28	20	0	3	21	3	1	2	3	81
July	124	88	23	4	42	4	3	3	2	293
August	72	56	5	2	54	10	8	1	2	210
September	65	44	8	1	41	5	3	0	2	169
October	55	45	12	0	40	7	6	0	3	168
November	34	27	0	1	35	3	4	1	0	105
December	85	69	5	2	47	8	3	1	3	223
Grand total										2110



Picture 11.2 Audiologist performing Audiometry

IPD Services

The ENT ward is combined with pediatric ward with a total of nine dedicated ENT beds divided into two cubicles. The ENT ward admission data is as shown in table 1.

**Table 11.3 ENT ward admission data**

	Jan23	Feb23	Mar23	Apr23	May23	Jun23	July23	Aug23	sept23	Oct23	Nov23	Dec23	TOTAL
STAFF STRENGTH	12	12	12	12	12	12	12	12	12	12	12	12	144
BED STRENGTH	9	9	9	9	9	9	9	9	9	9	9	9	108
REFERRED IN	0	0	0	1	1	1	0	0	0	0	0	0	3
REFERRED OUT	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL ADMITED	17	24	20	11	3	18	6	12	15	16	13	6	161
TOTAL INPATIENT DAYS	58	84	104	58	9	67	21	37	67	66	57	47	675
AVERAGE IN-PATIENT DAY	1.8	3	3.35	1.9	0.2	2.2	0.6	1.1	2.2	2.1	1.9	1.5	1.8
BED OCCUPANCY RATES%	20.78%	33.33%	37.27%	21.48%	3.22%	24.81%	7.52%	13.26%	24.80%	23.60%	21.10%	16.80%	20.54%
DEATH	0	0	0	0	0	0	0	0	0	0	0	0	0

ENT Surgery

In 2023, a total of 193 ENT surgeries were performed, 84 cases were general/Head surgery followed by 78 cases of ear surgery, while nasal surgery comprised 31 cases.

Tympanoplasty is the commonest surgery performed by our team. It is a surgical repair of

ruptured Ear drum and restoration of hearing mechanism. We performed a total of 42 cases of tympanoplasty in 2022 and 39 cases in 2023. The availability of rigid endoscopes and microdebrider has revolutionized the nasal surgery. An endoscope and a powered instrument is used to precisely perform the nasal surgery especially the nasal polyp cases.

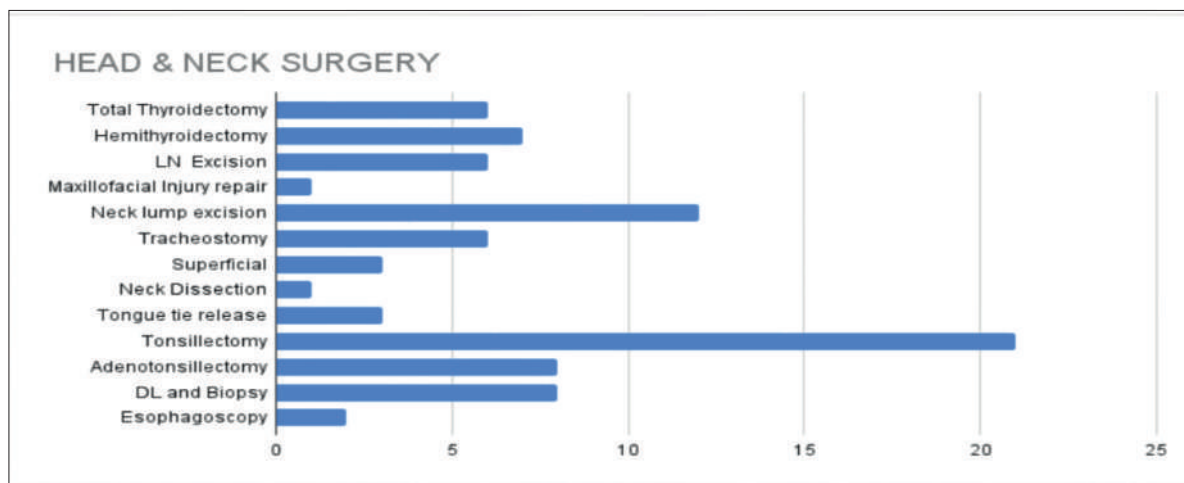


Figure 11.1 General ENT/Head and Neck Surgery done in 2023

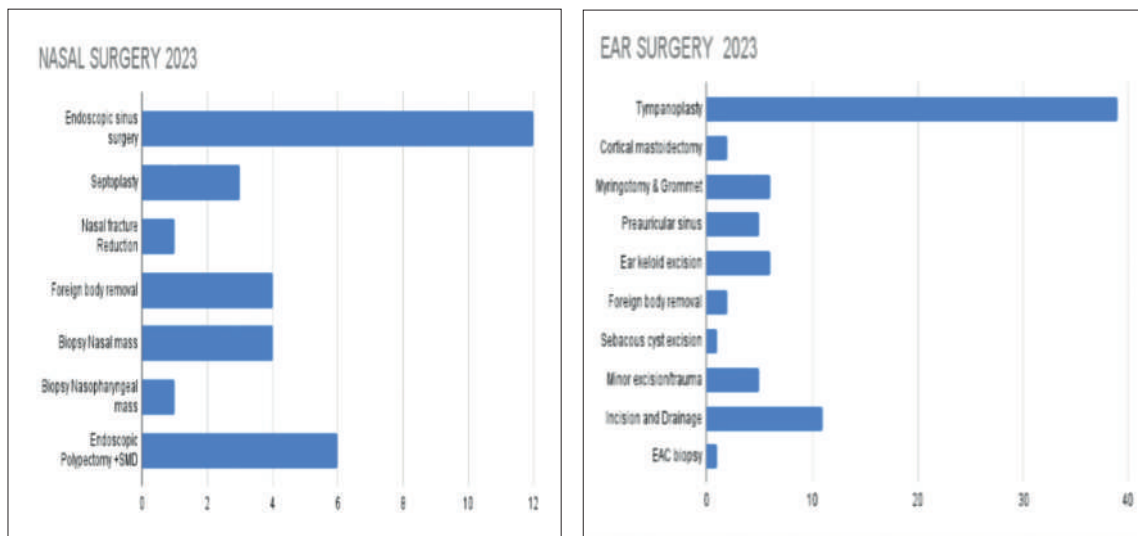


Figure 11.2 Nasal and Ear surgeries performed in 2023



Picture 11.3 Endoscopic sinus surgery



ENT Surgery Camp

ERRH is the only hospital in the east providing ENT services to 6 eastern districts. To bring the ENT services nearer to the people, the Department of ENT, ERRH in

collaboration with JDWNNRH conducted two National ENT Surgery Camps in 2023 at Dewathang Hospital (5th-11th April 2023) and Tashigang Hospital (3rd -9th May 2023).

Table 11.4 Services provided during the ENT Camps

Hospital	OPD cases Seen	Type and Number of ENT Surgery Done		Total Surgery Done	Hearing Assessment Done	
Deowathang Hospital (5th-11th April 2023)	410	Tympanoplasty	11	25	PTA	72
		Tonsillectomy	1		HA Prescription	7
		Septoplasty	1		HA Troubleshooting	1
		Endoscopic sinus Surgery	2			
		Myringotomy and Grommet insertion	2			
		Minor Excisions	7			
		Major Excisions	1			
Trashigang Hospital(3rd -9th May 2023)	813	Tympanoplasty	35	54	PTA	190
		Tonsillectomy	3		HA Prescription	8
		Septoplasty	1		HA Troubleshooting	8
		Endoscopic Sinus Surgery	5			
		Myringotomy and Grommet Insertion	3			
		Thyroidectomy	1			
		Minor Excisions	5			
		Major Excisions	1			

Challenges

The main challenges faced by our ENT surgeon is the lack of equipment and expertise in some cases. We are unable to perform Modified/Radical Mastoidectomy for Cholesteatoma cases due to limited

surgical skill/exposure and also endoscopic sinus surgery due to unavailability of required scopes and micro-debridement instrument.



12. DEPARTMENT OF ORTHOPEDICS

Background

The Department of Orthopedics of Eastern Regional Referral Hospital is one of the oldest regional orthopedic referral center in Bhutan, and caters to six eastern districts. The orthopedic department was established in late nineties which was manned by foreign surgeons then. The hospital had its first Bhutanese surgeon in 2008.

Currently, the hospital has two orthopedic surgeons, two orthopedic technicians and eleven nurses. The Department has two outpatient service rooms and 18 bedded inpatient ward. The department works closely with the Department of Physiotherapy for patient rehabilitation, and also with other departments for multidisciplinary consultation.

Human Resource

The department is manned by two surgeons, two senior technicians supported by ward nurses and supporting staff.

Hospital-based Orthopedic Services

Hospital based orthopedic services includes OPD, OT, IPD and diagnostic services. The number of people availing hospital-based services is presented below.

Outpatient Department (Opd) Services

There are two orthopedic OPD clinics run by two surgeons and technicians. Total of 3184 patients were seen at orthopedic outpatient clinic as shown in figure 12.1. The types of cases seen at outpatient department are depicted below as shown in figure 12.2. Orthopedic OPD provided Platelet Rich Plasma (PRP) injections to about 1730 patients for various musculoskeletal conditions for the year 2023, figure 12.3. PRP injection services in ERRH was started in 2022.

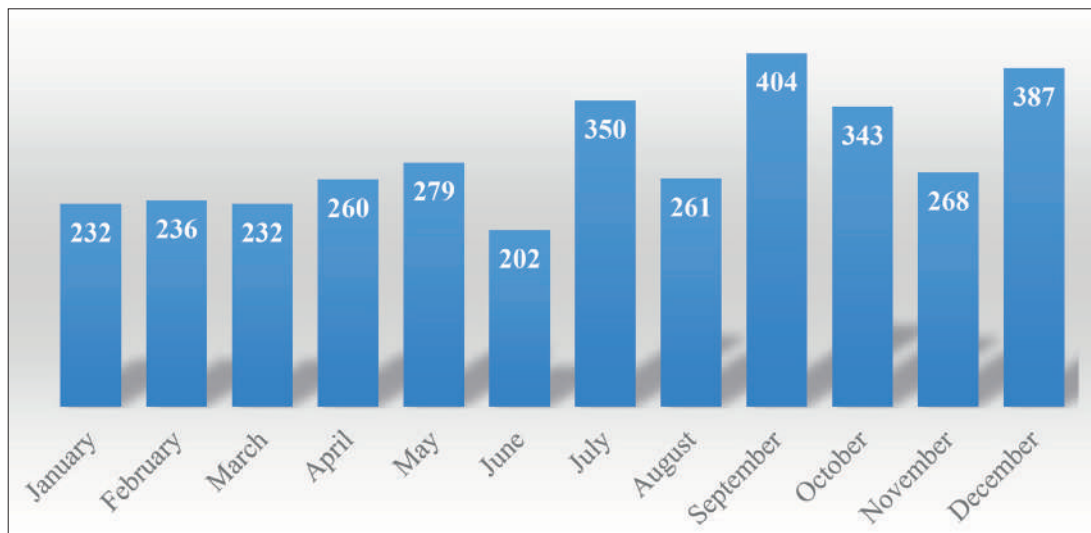


Figure 12.1 Number of patient seen at orthopedic outpatient department

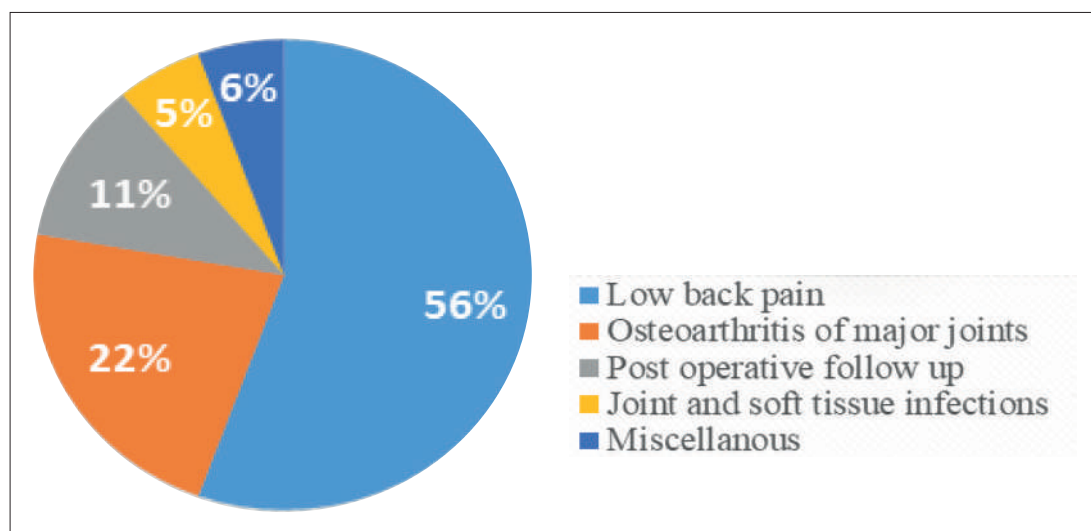


Figure 12.2 Distribution of cases attended to, for the year 2023.

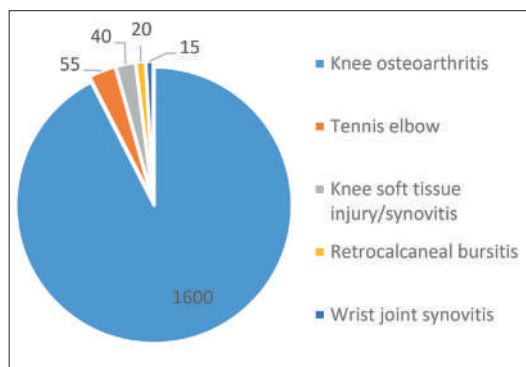


Figure 12.3 Number of PRP injection with indications (2023)

Inpatient Department (Ipd) Services

Orthopedic ward has 18 beds with 11 nursing staff. We have an acute, chronic and a septic cubicle. A total of 487 cases were admitted at orthopedic ward for year 2023 (Figure 12.4). There were zero mortality. The inward service have facilities for negative pressure wound therapy (NPWT), electrical stimulation for wound healing and continuous passive motion(CPM) machine facilities.



Picture 12.4 Orthopedic surgeons with technician, physiotherapist and nurses in the ward

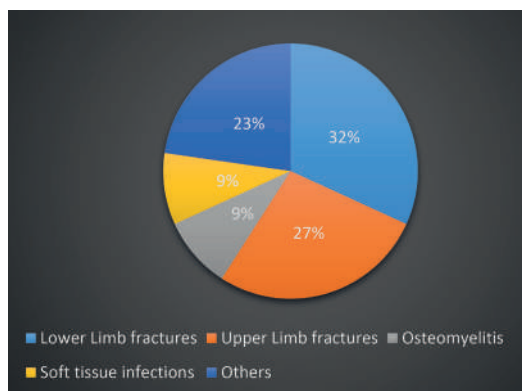


Figure 12.4 Pie chart showing distribution of inpatient orthopedic cases

Operation Theatre (OT) Services

OT services include both emergency and elective surgeries. We provide 24x7 emergency surgical services, 3 days of elective surgical days weekly on Monday, Wednesday and Friday. Total of 586 cases were operated in the year 2023 with highest done in month of March. Table 12.1 shows types of surgery done in 2023

Table 12.1 Types of orthopedic surgeries in 2023

Knee Arthotomy	14
Achilles tendon repair	25
Hip Hemiarthoplasty	5
CRIF with PFNA	7
CRIF with DHS	10
CRIF with DCS	7
CRIF with SIGN nail (Femur)	10
CRIF with SIGN Nail (Tibia)	35
CRPP with K wire	70
ORIF with plates and screws	105

Total Surgical Cases (2023)	Numbers
Soft tissue Flap tissue reconstruction	50
MIPO with plates	30
Coracoclavicular stabilization	5
Elbow Contracture release	13
Hip arthotomy (anterior approach)	3
BKA	5
Pelvic external fixation	2

Total Surgical Cases (2023)	Numbers
Wound debridement	40
CRIF with rush rod	25
Re-implantation surgery	5
Open hand and foot tendon repair	55
Deformity correction surgery	30
Miscellaneous	35



Picture 12.2 The first case of Hip Hemiarthoplasty was done at ERRH with Austin Moore implant by Dr. Kinzang Dorji in 2022



Picture 12.3 Few examples of complex soft tissue reconstruction at ERRH



Picture 12.4 Voluntary service, orthopedic surgeon with patients



Highlights for the year 2023

- First hospital from the country to become member of “Global Network of Capture the Fracture”.
- Successfully completed 1st “Quality improvement project” titled Improvement in compliance with proper dressing technique for the department in 2023 and reduced SSI rate to 11.5% from 15%.
- Published 3 research papers of orthopedic cases of ERRH at international journal.
- Surgeon from ERRH attended the Annual Australian Orthopedic meeting at Melbourne, Australia and presented a complex trauma case of ERRH to all worldwide renowned surgeons. Orthopedic department of ERRH represented Bhutan at international arena and was highly applauded for the surgical skills and patient care at ERRH

Challenges

- Lacks modern equipment for nailing long bone fractures and locking plate system.
- Shortage of implants in between the year.
- Delayed presentation with complication of cases by local healer in the community.
- Lack of budget for the specialist clinic services and initiating new programs to other districts.

Way Forward

- Enhance public advocacy on the risks of treatment of fractures and dislocations by local bone setters.
- Enhance the access of orthopedic services to remotest of the region.
- Improve the knowledge and awareness of osteoporosis and its prevention in the community

13. DEPARTMENT OF PATHOLOGY AND LABORATORY MEDICINE

Background

The Department of Pathology and Laboratory medicine (DPLM) plays a crucial role in the healthcare ecosystem, contributing significantly to patient care, disease diagnosis, treatment planning and medical research. The DPLM of ERRH is in line with the Quality Assurance of the laboratory as per the ISO 15189:2012 and offers the following diagnostic services to its clients. There are 29 staff including a pathologist.

Services Provided

1. Haematology

The haematology unit serves as a referral centre for all other haematology laboratories in the eastern districts for confirmation of various haematological disorders. It is an advance and high quality laboratory which provides a 24-hour service with accurate and precise laboratory investigations.

The tests carried out include; CBC, ESR, PT/INR, Bone marrow study, and Malaria parasite preparation.



Picture 13.1 Staff conducting hematology test

2. Biochemistry

Biochemistry unit carries out a large number of blood test including all kinds of the body fluids and is automated to accommodate the high workload. Tests performed are closely monitored and quality controlled on daily basis which assures quality report for the patients.

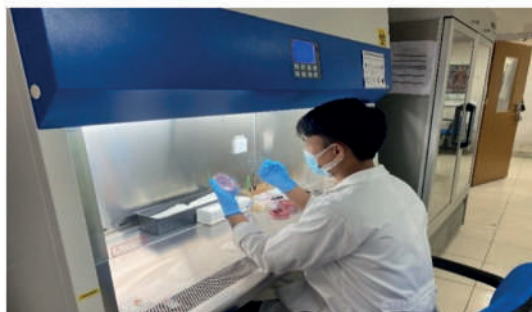


Picture 13.2 staff in biochemistry lab

3. Blood Bank

Blood Bank section which is categorized under Drugs Regulatory Authority (DRA) plays a crucial role in healthcare by collecting, testing, storing, and issuing blood and blood products. The service provided by blood bank includes; blood grouping, cross matching, donor screening, phlebotomy, and management of donor transfusion reaction, preparation of various blood products, issue of blood and blood products and conduct monthly mobile blood donation campaign.

4. Microbiology and clinical pathology



Picture 13.3 (A) and (B) Staff conducting microbiology tests

The Microbiology section plays a pivotal role in the laboratory department of ERRH. The unit is entrusted with wide range of both routine and culture tests, thus receiving various type of samples from wards, OPD and even from the other districts of eastern region. The section is further sub divided into 3 different units for smooth functioning and quality service delivery

5. STI and Immunology

The STI and Immunology unit carries out a large array of routine and special immunology tests performed on all kinds of hormones. The laboratory is automated to accommodate the high workload. Tests performed are closely monitored and quality controlled.

6. Cytology

Cytology unit deals mostly with gynecological specimens (Pap smear screening) and non-gynecological specimen (body fluids, sputum, Urine and fine needle aspiration for the lumps suspected for malignancy). The section is well equipped with automated staining machine and Rapid Capture System for HPV high risk tests.

7. Histopathology

The histopathology unit at Mongar Regional Referral hospital provides basic histopathological services which includes grossing, sectioning, staining (routine H&E and some of the special stains which are Fite, Ziehl Neelsen, giemsa and PAS). At the moment a pathologist, two laboratory technicians and a laboratory officer oversee the unit.



Picture 13.4 (A) and (B) Staff in histopathology unit

8. Sample collection

Sample collection is a crucial step in laboratory processes across various scientific disciplines. ERRH lab has two well experienced phlebotomists who run the unit and has a workload of 100-150 patients per day.



Picture 13.5 Phlebotomist taking blood sample for various tests

9. RT-PCR

RT-PCR Laboratory was established on March 2020 and played a crucial role during COVID-19 pandemic. The lab served as a reference lab for Eastern districts.

There are 5 trained laboratory personnel for RT-PCR and these personal carries out ILI and Covid-19 testing on weekly basis and report to RCDC.

Work Output In 2023

Table 13.1. Number of test performed in each unit for a year

	Hematology	Bio-chemistry	Blood bank	Microbiology	Clinical pathology	Serology	Cytology	Histo-pathology	Total
Jan	3492	11468	1025	508	1483	1879	2334	698	22887
Feb	2483	6890	695	488	1205	1820	1885	383	15849
Mar	3727	11653	1016	617	2169	2249	1635	442	23508
April	3525	11010	929	634	2186	2009	1770	267	22330
May	3281	10665	1103	681	2202	2236	581	1068	21817
June	3961	12983	757	545	2662	2051	104	662	23725
July	4649	15086	1002	596	2538	2416	238	594	27119
Aug	3013	7307	975	645	1264	1906	229	511	15850
Sept	3955	219	761	796	2440	2713	369	925	12178
Oct	4296	13394	864	590	2120	1956	310	469	23999
Nov	2930	10232	561	480	1569	1390	307	526	17995
Dec	4999	10895	1014	516	1761	1637	326	454	21602
Total	44311	132685	10703	7098	23598	24262	10058	6999	259714

**Table 13.2: Number of blood transfusion and blood bank related services in 2023**

Test	Months												
	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Total
Serum Grouping	258	165	280	224	296	182	257	216	180	228	130	278	2694
Cell Grouping	369	258	353	361	370	297	360	349	308	223	241	317	3806
Cross matching	164	104	215	154	126	104	157	116	98	168	83	140	1629
Voluntary Donor	62	61	20	19	84	35	57	57	31	106	36	28	596
Replacement Donor	0	0	0	0	5	0	0	0	0	0	0	8	13
Mobile Donor	32	0	45	51	81	43	43	64	42	0	0	102	503
Whole Blood Transfusion	1	1	0	2	0	0	0	0	0	2	3	0	9
PRC Transfusion	79	64	82	63	82	54	69	70	51	51	49	80	794
FFP Transfusion	31	14	9	39	21	15	29	60	33	42	7	51	351
Platelet Transfusion	23	26	6	8	30	23	24	40	14	42	11	9	256
Coombs Test	4	2	6	4	8	4	5	3	4	1	1	1	43
Du Test	1	1	0	3	0	0	0	0	0	0	0	0	5
Antibody Screening	0	0	0	0	0	0	0	0	0	0	0	0	0
Blood Transfusion reaction	1	0	0	1	0	0	1	0	0	1	0	0	4
	1025	696	1016	929	1103	757	1002	975	761	864	561	1014	10703

Challenges

- Human Resources- Shortages of qualified laboratory professionals.
- Reagent shortages
- Delayed turnaround time

Way Forward

- Expanding the test services like fungal culture, immunohistochemistry, and frozen section.
- Reduce turnaround time for laboratory reports.



14. DEPARTMENT OF DENTISTRY

Background

Established in the early 1990s, then the Dental Unit at Mongar Hospital offered only basic dental services like extractions and fillings. The upgradation of the hospital to the Regional Referral hospital in the year 2008 introduced advanced care and specialized dental services especially in the field of oral maxillofacial surgery. In the recent two years, prosthodontics and orthodontic

services have been introduced too.

The Department of Dentistry at ERRH, Mongar, is currently manned by a team of 15 experienced dental professionals consisting of two specialists (oral maxillofacial surgeon and an orthodontist), two general dental surgeons, five dental hygienists and six dental technicians.

Table 14.1 List of dental surgeons posted in ERRH, 1992-2024

Year	Dental Surgeons	Year	Dental Surgeons
1992-1993	Dr. Samdrup R Wangchuk	2014-2015	(No doctor posted)
1993-1995	Dr. Pratap Tamang	2016-2017	Dr. Pranesh Nepal
1996-2002	Dr. Vagwat Bandari	2018- till date	Dr. Kinley Rinzin
2003-2004	Dr. Suchita	2018- till date	Dr. Chandra Rai (Oral Maxillofacial surgeon)
2004-2005	Dr. Kapil Sharma	2019-2023	Dr. Prakriti Rai (Prosthodontist)
2010-2012	Dr. Kuenga Penjor	2020- till date	Dr. Thinley Wangmo
2012-2013	Dr. Manjunath & Dr Sumita	2022 till date	Dr. Ugyen Phuntsho (Orthodontist)



Services



Picture 14.1 Services of Department of Dentistry

Work Output

In 2023, we received a total of 11,043 cases of which a maximum number were normal

tooth extractions followed by patients availing permanent tooth filling services (see Table 14.2).

**Table 14.2 Number of dental surgery cases and services provided in 2023**

Sl. No	Condition	Cases	Percentage (%)
1	Oral prophylaxis	228	2.06
2	Permanent Filling	2521	22.82
3	Temporary Filling	358	3.28
4	Root canal treatment	153	1.40
5	Extraction	3027	27
6	Surgical Extraction	50	0.45
7	Maxillo-Facial Fracture	5	0.06
8	Oral Precancerous	20	0.18
9	Oral Cancer	3	0.03
10	Surgical Cases	61	0.60
11	Oral Medical Cases	2401	21.74
12	X-Ray Intraoral Periapical	285	2.58
13	Visible Light Cure Composite	85	0.76
14	Scaling	122	1.54
15	Provisional Crown	32	0.28
16	Removable Partial Denture	340	3.07
17	Full Denture(Upper/Lower)	40	0.36
18	Complete Denture	38	0.34
19	Repairing/Relining	72	0.65
20	Others/Consultation	1202	10.80
	Total Cases	11043	100

Key Achievements

- Successfully established prosthodontic chamber with crown and bridge laboratories to provide prosthodontic services
- Facilitated training and attachment of dental technicians at JDWNRH, focusing on orthodontic and prosthodontic laboratory work
- Successfully completed a POCQI project aimed at reducing patient waiting time at the dental OPD which resulted in decreasing the waiting time from 34 minutes to 26 minutes.

Challenges

Outdated equipment and technology

- Currently, we rely on traditional hand instrument and files for root canal treatment, along with manual X-ray techniques, despite the global advancements in rotary endodontic tools and digital radiographs

Discontinuation of Community and school health programs

- Budget constraints have led to the discontinuation of community and school health program

**Lack of awareness in the local community**

- A significant challenge is the limited awareness among the local community regarding dental health and its importance

Limited capacity building and career advancement opportunities

- Annually, only few slots are announced for MD and fellowship courses.

Prosthodontist personal changes

- The prosthodontist initially placed in ERRH has been reassigned to JDWNRH

Delay in commencement of orthodontic services

- Due to the absence of a dental chair and digital OPG machine.

Way Forward

- To initiate orthodontic services, there is a need of an independent chamber for an orthodontist equipped with high end dental chair and OPG machine.
- The vacuum left by the Prosthodontist should be filled at the earliest.
- More career advancement and capacity building opportunities for dental professionals.

15. རྒྱུན་ལྔ་བཅོས་སྒྲེ་ཚན། / TRADITIONAL MEDICINE DEPARTMENT

Background

Traditional Medicine, or Sowa Rigpa, is an ancient healing system with a rich history spanning thousands of years, deeply rooted in Buddhist philosophy. The term ‘Sowa’ denotes the act of rectifying imbalances, while ‘Rigpa’ signifies the knowledge and science associated with a specific subject. This holistic approach reflects a profound understanding of the interconnectedness of health and spirituality within the framework of traditional practices.

The Traditional Medicine Department at Mongar Regional Referral Hospital was set-up on March 11, 1993 by Drungtsho Tshewang Dorji and Menpa Namgay. It operates from the dedicated Traditional Medicine building, situated in front of the hospital parking lot. Despite its separate location, the department actively collaborates with allopathic health professionals and unit, aligning its efforts with national health policies to deliver quality services and promote healthcare.

Human Resources

Serving as a referral center for Traditional Medicine Units in neighboring eastern Dzongkhags, the department is led by a Head of Department (In-Charge) and is supported by a team of specialists, Drungtshos, Menpas & therapy aides. This collaborative ensemble brings diverse expertise to the table, enriching the healthcare landscape with a comprehensive array of traditional healing modalities.

Dispensary Unit

A diverse range of over 100 medicines in various forms, including capsules, pills, tablets, ointments, syrups, and powders is offered to address different diseases.

In 2022, a total number of 2049 patients sought medical care, and this figure increased to 2439 patients in 2023, all opting for Traditional Medicine. This indicates a notable 19.01% increase in preference for Traditional Medicine over the two years. The number of new patients opting for traditional medicine experienced a surge of 38.13%. This upward trend indicates a notable rise in the popularity of Traditional Medicine in the region.



Picture 15.1 Drug store

Table 15.1 Number of patients opting for Traditional Medicines

YEAR	2022		Total	2023		Total	TOTAL
CASES	New	Old		New	Old		
Total:	763	1286	2049	1054	1385	2439	4488

THERAPY SERVICES

Table 15.2 Number of patients availing Therapy Services

Therapy Services:	2022		Total	2023		Total
	Male	Female		Male	Female	
Gold Needle	223	416	639	438	461	899
Silver Needle	3	8	11	1	0	1
Oil-Compression	272	786	1058	207	891	1098
Massage	94	263	357	291	579	870
Nasal-Cleansing	38	99	137	46	131	177
Hot-Compression	108	278	386	200	439	639
Dry Cupping	145	279	424	96	139	235
Wet Cupping	13	67	80	30	142	172
Blood-Letting	14	35	49	24	54	78
Herbal-Steaming	520	1111	1631	508	1191	1699
Steam-Bath	174	513	687	358	875	1233
Herbal-Bath	0	0	0	188	382	570
Moxibustion	0	4	4	15	9	24
Mild-Enema	1	25	26	24	53	77
Strong-Eneme	0	8	8	14	23	37
Others**others: Ra-Jib, Shing-Tshug, Ruta Nye-thang.	4	27	31	18	33	51
Total:	1609	3919	5528	2458	5402	7860

The Traditional Medicine Department provides around 18 specialized therapy services, tailored to address various diseases, guided by expertise. The number of patients receiving therapy services witnessed a notable increase of


Picture 15.2 Specialized services

Other Services

Urine analysis:

Using urine analysis as a diagnostic tool is crucial for identifying complex diseases in

patients. So, as a part of routine practice, physicians consistently perform urinalysis to enhance diagnostic precision.

Table 15.3: Urine analysis in 2022 and 2023

URINE ANALYSIS	2022			2023		
	Male	Female	TOTAL	Male	Female	TOTAL
	10	16	26	5	11	16

Sorig Zhiney and Lue-jong

Mindfulness and Physical Exercises are incorporated both as preventive measures and integral component of the treatment regimen. Mindfulness or meditation is the medium that can solve all your mental problems and engaging in physical exercises can improve and sustain physical fitness, contributing to overall health and well-being. Apart from providing the service in the hospital, the Zhiney & Luejong team also extended the program to interested participants at large, providing to two large groups.

In addition, basic counselling service is also provided to needy patients to help them

manage and address their issues effectively by certified professionals.



Picture 15.3: Sorig zhiney and lue-jong

Table 15.4: Patients availing sorig zhiney & luejong, and counselling in 2023

Sorig Zhiney & Luejong, and Counselling	2022			2023		
	Male	Female	TOTAL	Male	Female	TOTAL
	80	144	224	73	117	190

Achievement

The department has initiated numerous therapy services over the past two years.

The number of patients availing Traditional Medicine Services has shown a 35.9% increase over the past two years, indicating a successful outcome.



Challenges

- Lack of experience and expertise in the field hampering effective service delivery. There is also lack of public awareness regarding traditional medicine service, and inadequate equipment and essentials.

Way Forward

- Initiate CME programs for department staff to enhance their skills and expertise, contributing to capacity building.
- Launch educational initiatives to increase public awareness about the benefits and practices of Traditional Medicine.
- Promote an integrative approach to healthcare by fostering collaboration between traditional medicine and modern medical practices.

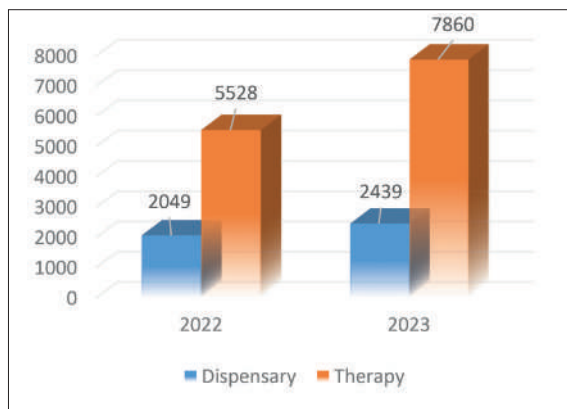


Figure 15.1: Patient load in 2022 and 2023



16. DEPARTMENT OF NURSING

Background

The Department of Nursing experienced acute shortage of nurses in the beginning of year 2023 due to mass exodus of staff on transfer. The Department went through yet another testing time in mid-year with large number of staff taking EOL and many terminating their services by voluntary resignation. Notwithstanding the challenges we sailed through the year without compromising quality nursing care services.

Nursing Services

Department of Nursing comprises of 12 specialties which cater services ranging from general nursing to specialized nursing services. Nurses also provide OPD nursing services in 13 OPD based units.

Staff Strength

Nurses remain the backbone of health care services. Appropriate staffing of nurses strengthens the health care system, improves patient outcomes and satisfaction for both patients and nurses.

Currently there are 140 young, energetic and dedicated nurses which constitutes 30% of the total staff working in our hospital. Of the total strength of 140 nurses, 129 nurses works in IPD including dialysis unit, operation theatre. 11 nurses, which comprises of 2 CNs, 6 SNs and 3 Assistant Nurses work in different OPD based units including nursing administration.

Table 16.1. Staffing pattern of nurses

Sl. No	Category of nurses	Number	Percentage	Remarks
1	Staff nurse	106	76%	Majority
2	Assistant nurse	14	10%	Least
3	Clinical nurses	20	14 %	2nd highest
4	Total	140	100%	

Specialized units and nurses specialized in specific field

The majority of the nurses who work in the specialized units are not formally trained

in those specialized fields. There are only 21 nurses who are trained in subspecialties against the total requirement of 87 nurses accounting to shortage of 66 specialized nurses in five different units.

**Table 16.2. Distribution of specialized nurses**

Units	Bed strength	Number of trained nurses	Number of untrained nurses	Requirement	Gaps (trained nurse)
AICU	5	5	4	20	15
PICU	2	5	0	9	4
NICU	6	3	7	24	21
Dialysis	4	6	1	9	3
OT	4 tables	2	11	25	23

Nurse Attrition

ERRH witnessed significant increase in nurses' attrition rate over a period of three years from 2021 to 2023. Attrition was attributed to either voluntary resignation or EOL. Year 2023 witnessed the highest attrition rate with 14%.

Table 16.3: Nurses' attrition in ERRH

2021	3	2.2%
2022	6	4.5%
2023	19	14%
2024	11	8%

Enhancement of IPD Services

Most of the wards and Units were combined wards/units for period since the time of inception of services in new hospital (present hospital). We streamlined and enhanced services by separating and regrouping of wards and units.

Table 16.4: Changes in IPD unit/ward

Sl. No.	Combined wards/units	New Unit	Remarks
1	AICU, PICU and NICU combined	NICU was separated in March 2014	NICU is an independent unit with 6 beds
2	(UNIT I) Medical and Pediatric ward combined	Medical ward was separated and shifted to 3rd floor in July 2017	Under medical with 33 beds, we now have psychiatric and drug susceptible TB
3	(UNIT II) Surgical, Orthopedic, ENT, EYE and Dental	Combined Surgical and ENT as one ward in June 2022 & Combined Orthopedic and EYE as one ward in June 2020	Surgical and ENT combined with 18 beds Ortho and EYE combined with 18 beds
4	Surgical and ENT combined	Later in Feb 2022 ENT was separated and shifted to pediatrics ward	Surgical ward became an independent ward with 18 beds in Feb 2022

Sl. No.	Combined wards/units	New Unit	Remarks
5	Orthopedic and EYE combined	Later in Feb 2022 EYE was separated and shifted to Pediatric ward	Orthopedic ward became an independent ward with 18 beds in Feb 2022

Medical Escort Services:

Patient Referral Duty The Purpose Of The Medical Escort Is To Reach The Referred Patients Safely To Higher Centers. Medical Escorts Are Assigned From Indoor Staff Since We Do Not Have A Separate Pool Of Staff Reserved For The Purpose.

Medical Escorts Are Guided By Medical Escort Guideline. 110 medical escorts were deployed which translated to 440 medical escort days (officially 4 escort days per referral movement). On an average 1.26 nurses were always on move as medical escort throughout the year in 2023.

Table 16.5: Resource allocation for medical Escort Services

Total patients referred to higher centers	Total ambulance movements	Total medical escorts deployed	Total escort days	Remarks
125	110	110	440	Majority referred to JDWNRH (86.4%)



Picture 16.1: Medical escort team

Nurses as Emergency Medical Responder

Nurse is an integral part of any medical team. Nurses are activated as Emergency medical response team member along with

doctors and emergency medical responder when there are mass casualties in RTA and other mishaps.

Nurses were involved 9 times as Emergency medical responders, which involved 11 nurses in the evacuation of patients from various sites to ERRH

OPD Screening Services

We started our OPD screening service in 2019 to ease patient queuing the OPD consultation chambers and make Blood pressure assessment easily accessible to general public. Two nurses from IPD/OPD are deployed on daily basis to provide this service. 36,211 patients/clients were screened in 2023.



Picture 16.2: OPD screening

Participation in NCD screening and public health advocacy program

In collaboration with NCD Clinic, nurses are actively involved in NCD screening and public health advocacy program during important events in the Dzongkhag.

5 Nurses participated in NCD screening program during 5 day Dzongkhag Annual Moenlam Chhenmo from 9th to 13th October 2023 and screened 600 people for BP, BMI and RBS. 6 Nurses were involved during the Health Walk on 13th December (which was one of the buildup program for 116th National Day Celebration) and screened 93 people for BP. 8 Nurses attended NCD screening program on 17th December 2023, the 116th National Day Celebration and screened 88 people for BP, RBS and BMI

On two separate occasions in September 2023, 2 nurse participated in NCD screening in Kidheykhar Shedra and Dzongkhag Dratshang. They screened more than 120 monks.

Challenges

We encountered many challenges and few important challenges are mentioned below:

High nurse attrition rate (14% in 2023) and many nurses opting to go on transfer with fewer replacement in ERRH on transfer from other health facility. 10 nurses transfer from ERRH and only 2 nurses transfer to ERRH in 2024.

Acute shortage of trained nurses in specialized units. This leads to lower quality patient care services in specialized units

Long referral route- Mongar to Thimphu is aggravated by bad and risky road condition during rainy season and snowfall in winter, posing risk to the lives of both patients and the medical escort team.

Way Forward

- **Cabin services:** cabin services aren't functional yet due to shortage of human resources. We intend to make at least few cabins (4-5) functional if adequate staff are deployed.
- **Separate staff for EYE/ENT and PED/NEONATE with separate In-charge:** All these specialties are housed under one in-charge and same staff due to HR shortage, structure limitation. This may be resolved after MCH unit is moved to new Mother and Child Hospital in Nadangzor.
- **Permanent staff in OPD screening:** Deploy 2 permanent staff to provide the screening services and make the unit more convenient and resourceful.
- **One stop services:** Outpatient injection, dressing, ECG, minor OT in one station with 2 permanent staff.



17. DEPARTMENT OF PHYSIOTHERAPY

Background

The Physiotherapy Department in ERRH was established in the early nineties with one Physiotherapy Technician; where services such as therapeutic exercises, electrotherapy, manual therapy assistive and devices were provided. The services provided by the Physiotherapy Department expanded with the deployment of new physiotherapists and physiotherapy technicians in various specialties after the establishment of new hospital in 2008

Physiotherapy Department provides acute and non-acute inpatient and outpatient services including

- Musculoskeletal Physiotherapy
- Neurological Physiotherapy
- Pediatric Physiotherapy
- Assistive devices
- Women's health Physiotherapy
- Hand Therapy

Orthotic and prosthetic services

- Cardiopulmonary Physiotherapy
- Sports physiotherapy
- Therapy for special people

The occupational therapy is provided by one occupational therapist in collaboration with the physiotherapy department.

Human Resources

Currently, the department has three physiotherapists, eight physiotherapy technicians and one occupational therapist. The table 1 depicts the current human resources available for different physiotherapy services inclusive of the staff on LTT and EOL. (1 physiotherapist on EOL, 1 physiotherapist on LTT and 1 physiotherapy technician in LTT)

Table 17.1: Specialty and services

Existing Services	Physiotherapist Specialist	General Physiotherapist	Physiotherapy Technician
Out-patient department			
MSK Outpatient	0	1	2
Neuro Rehab	0	‘	‘
Electrotherapy	0	‘	‘
Hand Therapy	0	0	1
Occupational Therapy	0	1	0
Paediatric Therapy	0	0	1
AT and Wheelchair services	0	general	general
Women's Health	0	0	1
In-patient department			

Existing Services	Physiotherapist Specialist	General Physiotherapist	Physiotherapy Technician
Orthopaedics	0	1	1
Medicine	0	0	1
Surgery	0	0	1
AICU	0	1	0
Other Wards	0	General	General



Picture 17.1 Electrotherapy



Picture 17.2 Hand Therapy



Picture 17.3 Neuro-rehabilitation



Picture 17.4 Obstetric physiotherapy



Picture 17.5 Rapid Neuro-developmental Assessment



Clinical Summary Report

In 2023, the department provided services 4,771 times in total consisting of 1,826 cases. Below table consists of data in comparison to previous year (2022).

Table 17.2 Distribution of services provided in 2022 and 2023

	2022	2023
OPD	1239	1679
IPD	1743	1638
Hand therapy	654	167
Pediatric	251	436
Women's health	429	289
Occupational Therapy	233	625
Total	4549	4834

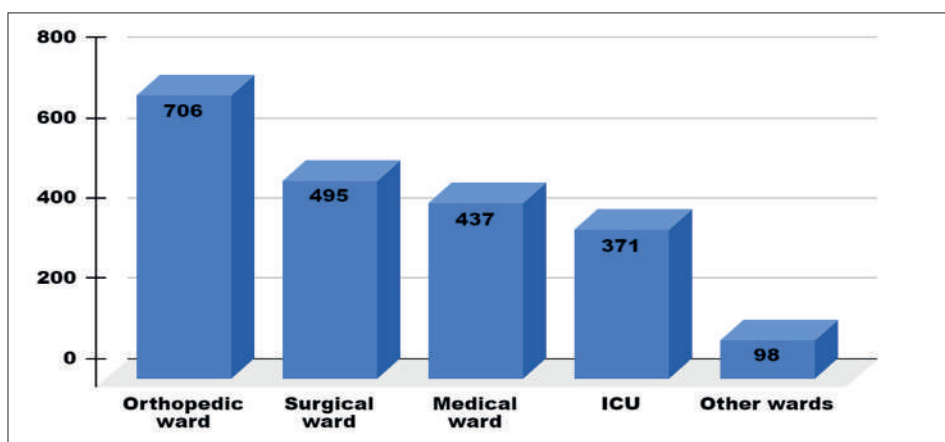


Figure 17.1 Inpatient physiotherapy case load in 2023

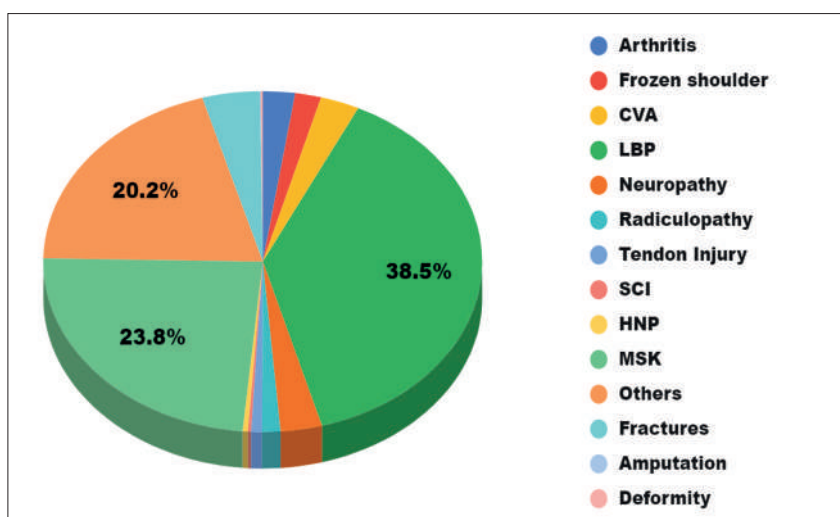


Figure 17.2 Case load in physiotherapy OPD

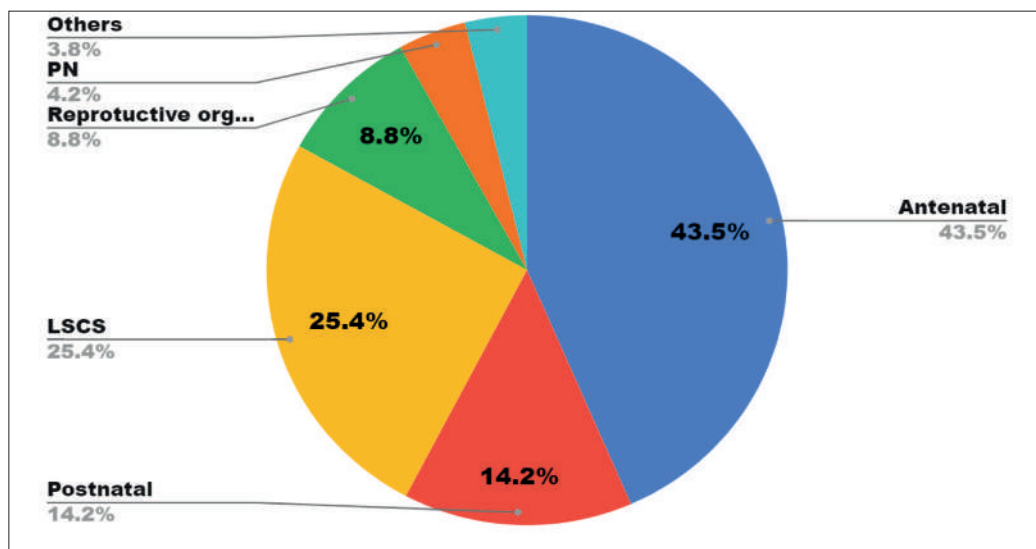


Figure 17.3 Women's health physiotherapy

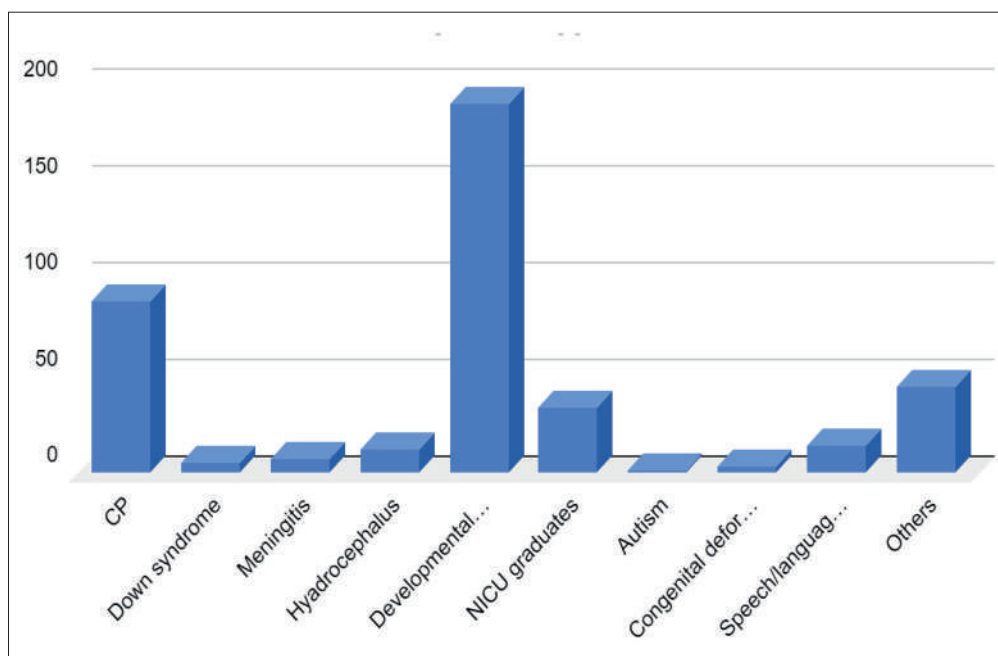


Figure 17.4 Pediatric physiotherapy

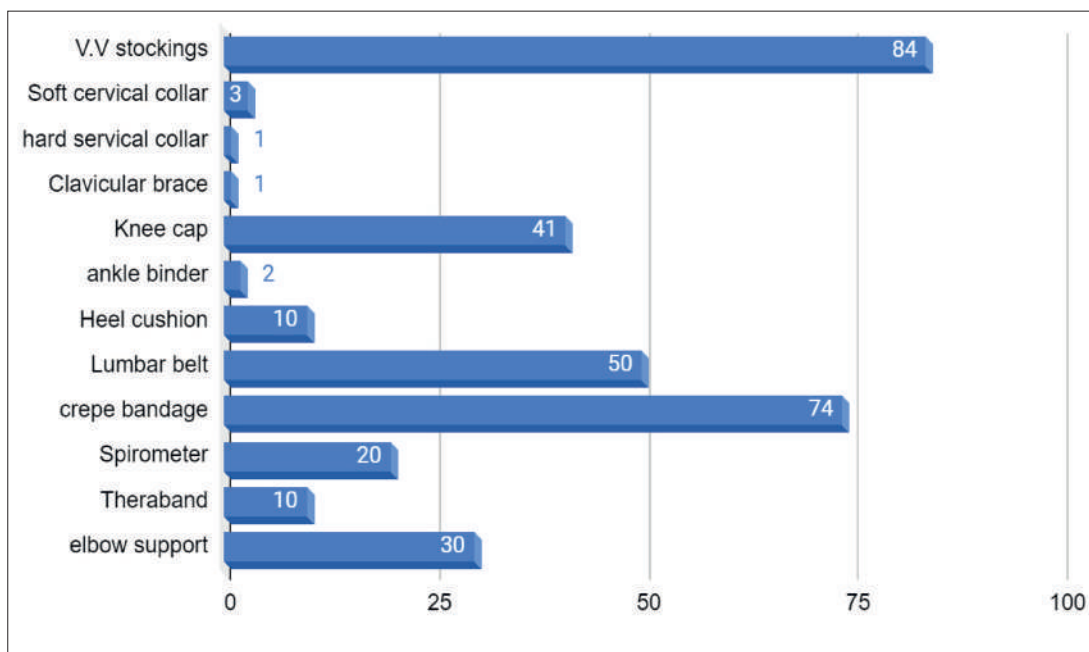


Figure 17.5 Consumable item issued in 2023

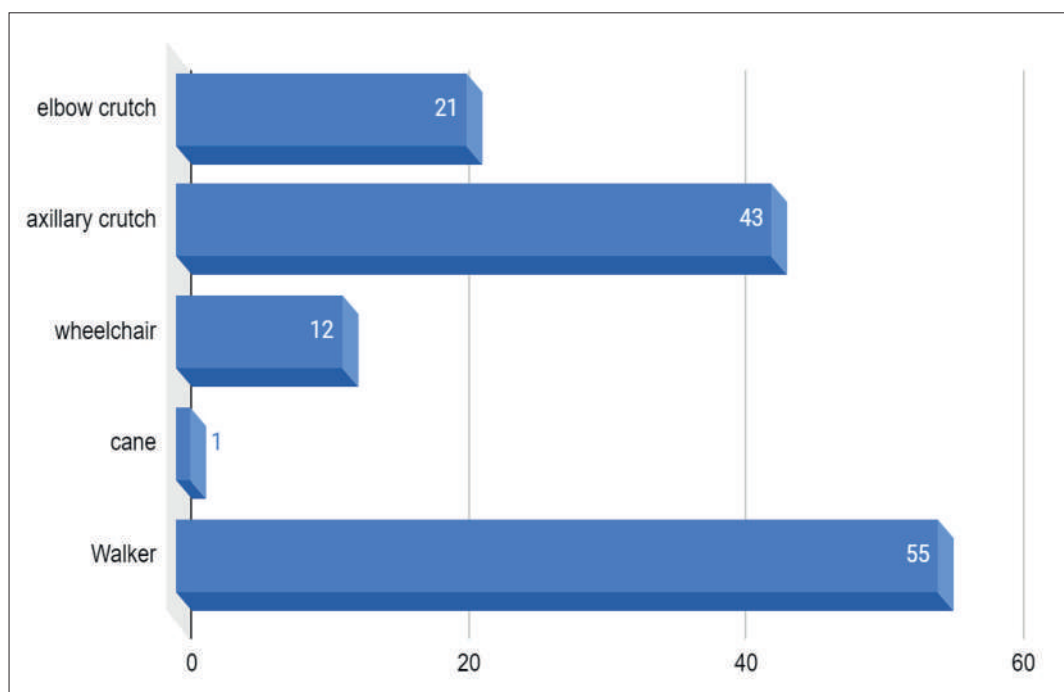


Figure 17.6 Assistive devices issued in 2023

**Table 17.3 Total number of patients' consultation in 2023**

	OPD	Hand and Splinting	Women health	IPD	Pediatrics	ICU	Wound care	Occupational Therapy	Total
Total	1679	167	289	1638	436	373	189	625	5396

Key Activities

On 8th September 2023, The World Physiotherapy Day was celebrated with recitation of Zhabten and cake cutting ceremony. It was attended by the medical superintendent and other in charges of the hospital. The theme for the day was 'Arthritis' to highlight the important role of physiotherapy in improving the health and functional wellbeing of persons living with arthritis.

Physiotherapy department participated in World Stroke Day on October 29th by sensitizing the general public on stroke rehabilitation. Physiotherapist and the Occupational Therapist presented on the relevant topics to various health professionals and general public.

Challenges

Inadequate infrastructures

- Currently both outpatient and inpatient units are together in one place consisting of the registration counter, two small staff rooms, an electrotherapy room and the rehabilitation room. It faces congestion from patients of both OPD and IPD. As occupational therapy unit is temporarily stationed in the hand therapy and splinting clinic, the equipment for occupational therapy aren't installed yet

The department faces major challenge with inadequate human resources, in terms of both numbers and specialty.

- Lack of short-term training affecting staff motivation and competency
- Lack of opportunities for long-term specialization for physiotherapists has impeded the provision of specialized physiotherapy services to complicated cases

Way Forward

There is immediate requirement for separate and well-equipped in-patient physiotherapy unit and occupational therapy unit to provide superior physiotherapy and occupational therapy services.

The capacity building in the department with short-term training or long term training for physiotherapy professionals and occupational therapists to upgrade their knowledge and skills. The specialization of physiotherapists and occupational therapists are essential to provide high quality and specialized services to the patients.

The Department intends to improve the clinical services by adoption of the evidence-based practices while keeping abreast with clinical practice guidelines and researches. It encourages individual effort for knowledge enhancement.

18. DEPARTMENT OF PHARMACY

Background

The Department of Pharmacy comprises of Outpatient (OPD) Pharmacy, Inpatient (IPD) Pharmacy and Medical Store. The department is responsible for providing optimal pharmaceutical care to patients availing services, both outpatients and inpatients, ensuring that the medicines dispensed are safe and effective. The Medical Store on the other hand is involved in ensuring timely supply, proper storage, mobilization and proper inventory of drugs, non-drugs items and medical gases.

Currently we have 3 pharmacists and 14 pharmacy technicians who manage the diverse works of the department.

Outpatient (OPD) Pharmacy

OPD Pharmacy is considered to be one of the busiest unit in the entire hospital providing OPD services from 9 am and stretching well beyond 4 pm with an average patient load of 300 per day. This is managed by eight pharmacy technicians and one pharmacist who are placed at OPD pharmacy unit. The emergency pharmacy service is provided by one pharmacy technician during evening shift (3 pm to 8 pm).

In 2023, OPD pharmacy has dispensed to 53077 patients during routine OPD time (9 am to 3 pm) and 1326 emergency patient during evening shift as shown in the table 18.1.



Picture 18.1 OPD Pharmacy and dispensing counter.

Services available at OPD-Pharmacy

- Form 3 drugs
- Form 2 drugs
- Extemporaneous preparations
- Anti-Retroviral Therapy (ART drugs)

After the implementation of PEN HEART

program in 2021, Form 3 drugs were made increasingly available at other primary health care centers which reduced patient load in our hospital.

Form 2 medicines are also available on special order prescribed by specialist on minimum order basis.

Extemporaneous preparation such as syrups, ointments and paste are prepared



using standard formula and preparation. Preparations such as syrups are prepared on the day of the prescription itself at compounding room.

The department also facilitates access to ART medicines to all six Eastern Dzonkhags.

Table 18.1 Pharmacy services provided for the year 2023

Months	OPD Patient	IPD Patient	Emergency Patient	Total
January	3901	259	60	4220
February	3462	197	93	3752
March	4458	298	60	4816
April	5747	258	70	6075
May	4560	201	42	4803
June	4600	219	90	4909
July	5960	237	90	6287
August	4504	282	81	4867
September	4504	283	122	4909
October	4563	242	219	5024
November	3253	222	275	3750
December	3565	223	124	3912
Total	53077	2921	1326	57324

2. Inpatient (IPD) pharmacy

To cater and smoothen the pharmacy services for indoor unit, inpatient (IPD)/ indoor pharmacy was started in 2022. One pharmacist and three pharmacy technicians manage the indoor pharmacy.

In 2023, the indoor pharmacy served 2921 patients admitted in the ward as shown in Services available at Indoor Pharmacy

- Topping up of medicines
- Bedside Medication Reconciliation
- Preparation of dialysis solution Part B
- Refill of medicines at nine indoor units and monitoring of drug chart are done by three pharmacy technicians. Expired medicines are removed and collected from ward at the end of every month.

Dispensing of medicines to discharged patients is provided from indoor pharmacy.

- Bedside medication reconciliation of medicines is done by indoor pharmacy team for patient with comorbidities taking huge number of medicines (polypharmacy). Medication reconciliation is indented to identity and resolve drug discrepancies, address issues such as duplication, omissions, interaction and the need to continue current medications.
- For the chronic patient on dialysis Sodium Bicarbonate solution part B is prepared on daily basis including Sundays by one pharmacy technician or pharmacist.



Picture 18.2 IPD dispensing counter and IPD medicine room

Medical Store

Medical store is managed by three pharmacy technicians who play a vital role in storage, maintenance and distribution of drugs and non-drugs items to other departments in the hospital.

Regular monitoring of stock level, ordering new supplies, monitoring of expired drugs,

mobilization of drugs and non-drugs and indenting of drugs and non-drugs based on minimum reorder level (MRL) are done using the online eBMSIS and indents are prepared annually.

Medical store of ERRH also serves as a backup store house for other PHCs under Mongar Dzongkhag.



Photo 18.3 Medicine storage and drug issuing room

Other services

Pharmaceutical Care intervention (PCI) is mainly done to optimize reduction and prevention of drug –related problems.

Adverse Drug reaction (ADR) reports from physicians, nurses and pharmacy staff are being collected and reported to Bhutan Food and Drug Administration (BFDA) through Uppsala Monitoring Center (UMC).



Suspicious defective medicines are reported to higher relevant center for further intervention while informing physicians at the same time.

Key Achievement

Developed new SOPs for inpatient/indoor pharmacy such as Medication Reconciliation and drug chart review.

Revised other SOPs such as good dispensing practice and good compounding practice.

Develop new SOPs for Dialysis solution part B preparation and chemotherapy drug mixing and preparation

Conducted 3 Point Prevalence Survey (PPS)

under the Anti-Microbial Stewardship (AMS) program within our hospital and in other bigger hospital twice a year.

Trained one staff for substance use disorder (SUD) who will initiate SUD pharmacy services.

Challenges

The current space for OPD dispensary is crowded to store medicines and for staff to work effectively.

No clinical pharmacist.

Plan for 2024

1. Start chemotherapy services.

19. COMMUNITY HEALTH UNIT

Background

The community Health Unit was established more than 30 years ago. The Family planning Services known as Reproductive Health Unit in the 1980s focused on Family planning and child spacing. The Maternal and child care unit/clinic as it was known in the 1990s and the early 2000s, provided prenatal care, encouraged institutional deliveries and complete child immunization. The unit is now called the Community Health Unit (CHU). The unit also advocates on clean drinking water and sanitation as a part of community health and well-being. HPV immunization has been a major activity during school visits. The CHU of the hospital has four outreach clinics and five schools within its catchment area. Currently, the unit is managed by eight health professionals which includes four male Health Assistant four female Health Assistant

We provide the following services:

- Antenatal Care
- Postnatal Care
- Voluntary Counselling and Testing Unit/ PMTCT
- Sprinkle (NMP), INMCI
- Family Planning
- Child Growth Monitoring and Immunization unit
- Child Eye screening
- BCDST, C4CD
- Counselling Service
- Elderly care
- School Health Services
- Colposcopy, Pap Smear/HPV testing unit



Picture 19.1 CHU staff

Services

Antenatal Care

One of the primary responsibilities of the unit is to provide antenatal care (ANC). The world Health Organization advocates the first ANC contact before 12 weeks of gestations of age. During the initial booking, the mother's information including demographic profile, emergency contact and health information are recorded. The expecting mothers are supposed to visit at least eight times for ANC: once in the First Trimester, twice in the second Trimester and six times in the third trimester.

During each visit; we record weeks of gestation, check urine albumin, sugar, Hemoglobin status, weight, blood pressure, edema, fundal height, fetal heart rate, presentation and lie.

Expecting mothers are provided iron tablets, Ascorbic Acid supplements and calcium lactate. Before 12 weeks Folic Acid tablet is provided.



We also educate pregnant mothers on the dos and the don'ts, danger signs, dental care and birth preparedness plans. There were 110

new ANC mothers registered in 2023 and 129 in 2022.

Table 19.1 Details of women attending the ANC clinic in 2022 and 2023

ANC		2022	2023
1st trimester	CHU	96	74
	Other areas	0	2
2nd trimester	CHU	141	198
	Other areas	98	51
3rd trimester	CHU	311	449
	Other areas	666	382
4th visit	CHU	57	114
	Other areas	54	36
8th visit	CHU	33	46
	Other areas	147	99

Table 19.2 Details of Postnatal care visits in 2022 and 2023

PNC MOTHER		2022		2023	
			Total		Total
PNC 1st visit	CHU	114	185	73	138
	OA	71		65	
PNC 2nd visit	CHU	118	191	88	154
	OA	81		66	
PNC 3rd visit	CHU	121	162	94	131
	OA	41		37	
PNC 4th visit	CHU	76	102	68	90
	OA	26		22	

Table 19.3 pregnant women vaccinated with TD vaccine

Year	2022	2023
TD 1st	35	32
TD 2nd	38	45
TD 3rd	47	43
TD 4th	45	39
TD 5th	24	24
TD 6th	2	2
Total	191	185



Postnatal Care

During postnatal care (PNC), we check the mother's temperature, Blood pressure, weight in every visit. Moreover, we do breast examination, color of discharge, perineum examination and wound assessment for caesarean section.

For the babies we assess neonatal jaundice, weight, head circumference, umbilicus status as well as feeding assessment. For

early detection of vision problem in child we have started eye screening four times: - 1st screening at (birth to 6 weeks), 2nd screening at (10 to 14 weeks), 3rd screening at (9months) and 4th screening at (1 and half years to 2 years). We mainly focus on anterior segment examination, blink reflex red reflex and others. Ophthalmology referral is made in case of any abnormalities detected.

Table 19.4 Postnatal care visit

			2022	2023	
PNC 1st visit (Child) 3days	CHU	114	185	73	138
	OA	71		65	
PNC 2nd visit	CHU	118	191	88	154
	OA	81		66	
PNC 3rd visit	CHU	121	162	94	131
	OA	41		37	
PNC 4th visit	CHU	76	102	68	90
	OA	26		22	

Family Planning

The unit provides family planning services such as intrauterine device (IUD), Depot-medroxyprogesterone acetate (DMPA) injection, oral contraceptive pills and condoms

Table 19.5 Family planning services provided in in 2022 -2023

Intrauterine device (IUD)	149	81
DMPA injection	401	890
Oral contraceptive pills(cycles)	53	128
Condoms	27,936	23,017

PMTCT and HIV Testing Counselling

It is mandatory for all the pregnant mother to undergo HIV testing twice – in the first and third trimesters. This is aimed at timely interventions to reduce the risk of mother to child transmission. Before the mother is sent for testing counselling session is conducted and reassured.

**Table 19.6 PMTCT counselling in CHU**

Mothers who received PMTCT		1st trimester	3rd trimester	Total	Total (CHU and other areas)
2022	CHU	124	94	218	663
	Other Area	175	170	345	
2023	CHU	105	147	252	523
	Other Area	155	116	271	

The center offers confidential and free HIV testing services to the high-risk population. We provide pre and post-test counselling to help individuals understand their test results and guide them towards appropriate care and support services. We have separate focal person for HIV who solely looks upon the well-being and necessary guidance to the patients.

Table 19.7 HIV, hepatitis B and syphilis tests in 2022 and 2023

2022	1408	3	4	18
2023	431	2	9	20

Pap smear and colposcopy services

The unit provides Pap smear services every day to test Human papillomavirus (HPV). Those who tests positive for HPV undergoes Colposcopy. Out of 321 Pap smear, 51 tested positive for HPV from the catchment area.

632 women underwent colposcopy, of which 51 were from the catchment area and the rest were from primary Health care (PHCs) and other Dzongkhags. Colposcopy services are provided on Wednesday.

Table 19.8 Distribution of Pap smear and HPV tests in 2022 - 2023

1	HPV	1007	324
2	Colposcopy	158	632
3	CA New case	3	3
4	CIN -I	13	70
5	CIN -II	1	6
6	CIN -III	11	38
7	Thermo coagulation	111	103

Vaccination and IMNCI

The unit provides regular vaccination regimen to all the Children as per the protocol. Every Thursday MMR 1st, MMR 2nd and DTP are provided. In addition, two dose of the HPV vaccines are provided to both male and female students of class VI. The second dose of HPV vaccine is provided after six months of first dose. Tetanus Diphtheria injections are also provided to the expectant mothers as per the schedule. Hepatitis B Vaccines are provided as per physician's advice and staff are also provided with complete dose of Hepatitis B vaccinations prophylaxis.

Table 19.9 Number of infants and children

vaccinated in 2022 and 2023

Vaccine		2022		2023	
			Total		Total
BCG	CHU	127	630	96	436
	Other area	503		340	
OPV 0	CHU	127	630	96	436
	Other area	503		340	
Hep B	CHU	127	630	96	436
	Other area	503		340	
OPV/Penta-I	CHU	120	142	102	128
	Other area	22		26	
OPV/Pent -II	CHU	100	125	107	116
	Other area	25		9	
OPV/Pent-III	CHU	69	87	94	111
	Other area	18		17	
PCV-I	CHU	120	142	102	128
	Other area	22		26	
PCV-II	CHU	100	125	107	116
	Other area	25		9	
PCV-III	CHU	57	67	132	150
	Other area	10		18	
IPV-I	CHU	69	87	136	145
	Other area	18		9	
IPV-II	CHU			1	7
	Other area			6	
MMR I	CHU	57	67	132	139
	Other area	10		7	
MMR II/DTP	CHU	69	82	115	115
	Other area	14		-	



Picture 22.2: Vaccinating babies in CHU

Table 19.10 HPV and TD vaccination in 2022 and 2023

Vaccine	2022		2023		Total
	Male	Female	Male	Female	
HPV 1st Dose	69	86	76	86	317
HPV 2nd Dose	53	74	71	82	280
TD at 5 years	134	173	307		
TD at 12 years	0	245	245		

IMNCI

IMNCI targets sick children up to 5 years. It divided into two groups: - infant age up to 2 months and child aged 2 months to 5 years.

We assess the problems of the child, look for danger signs, check for temperature, cough or difficulty of breathing, Diarrhea, ear problem, anemia, malnutrition, tuberculosis and check for immunization status. If any of the danger sign is present, the child is referred to doctor for further management. We counsel the mothers before we refer to the doctors. They are educated on home care and when to revisit clinic.

Growth monitoring in Children, C4CD plus, BCDST, Sprinkles

Weight and height of children are measured to monitor their growth. There were 10 children who were underweight and 5 were severely underweight. There were 14 stunted and 5 severely stunted in the year 2023.

Table 19.11 Growth monitoring in 2022 and 2023

		2022	2023
Normal Children Wt/ Ht	CHU	2320	2894
	Other area	796	495



		2022	2023
Stunted children	CHU	13	13
	Other area	5	1
Severely Stunted Children	CHU	6	4
	Other area	3	1
Normal children Wt/ Ht	CHU	2330	2899
	Other area	796	495
Underweight children	CHU	6	9
	Other area	5	1
Severely Underweight Children	CHU	7	4
	Other area	3	1

As per the Schedule children are provided with vitamin A supplements, Vitamin and mineral sprinkles and de-worming tablets. C4CD Plus was initiated from January 2023 and are provided with twelve sessions in a year to the caregiver during outreach clinics. It focuses on care of the child from birth till five years of age. The caregivers are emphasized on the equal role of a child. Parents are taught that they are the best play mates for their child and they needn't need expensive toys. BCDST sessions are provided from 10 weeks till the age of 5 year.

Table 19.12 Supplements provided in 2023

Year 2023		Numbers	Total
Vitamin A (6-11)	CHU	62	127
	Other Area	55	
Vitamin A (12-59)	CHU	280	985
	Other Area	705	
Deworming (12-59)	CHU	600	1127
	Other Area	527	
Vitamin Postpartum Mothers	CHU	96	436
	Other Area	340	

Elderly Screening and Adolescent Friendly Health Services

We do yearly elderly screening and provide them the necessary help and treatment after consultation with doctors. We organized elderly screening with collaboration with other units like NCDs during Moenlam Chenmo and on 17th December 2023. 447 person who had multiple age-related health conditions and social issues were screened.

The Adolescent Friendly Health services (AFHS) was started in Mongar in 2014 in ERRH. The unit caters to the clients aged between 10-24 years. The clients were mostly walk-in and referred case from various departments of the hospital. We have three dedicated focal persons comprising of one Health Assistant and two female nurses.

Table 19.13 Age distribution of clients who availed AFHS in 2022 and 2023

Age Group	2022	2023
10-13 years	11	11
14-16 years	63	23
17-19 Years	129	44
20-24 years	76	44
Total	279	122

The unit focuses on information, Education and counselling (IEC), advocacy and management within the capacity and licensure of the focal persons on sexual and reproductive health, adolescent pregnancy, sexual abuse and violence, nutrition and mental health of an adolescent.

In 2023 69 clients availed AFHS. 9 Sessions were conducted and delivered services package on the themes, Sexual and reproductive health, substances abuse, mental health and violence.

**Table 19.14 Core packages provided at AFHS clinic 2022 - 2023**

Adolescent Friendly health Service packages	2022	2023
Adolescent pregnancy package	75	20
Information package on sexual reproductive health	02	13
Sexual abuse and violence package	-	-
STI/HIV package	40	26
Nutrition Package	-	6
Mental health and substance abuse package	45	4
Total Visits	162	69

20. SPIRITUAL HEALING AND RELIGIOUS ACTIVITIES

Background

A contemporary orientation of the hospital experience model must encompass the clients' religious-spiritual dimension. Religious-spiritual wellbeing is related to better health. Patients demand a religious-spiritual outlook from the institution. A person's confrontation with serious illness or injury and the looming possibility of death raises primary spiritual questions. The inpatient is more vulnerable, since he/she is away from his/her pillars of faith, such as

community resources and daily rituals. We aim to provide religious/spiritual resources in order to promote the most effective coping strategy to our patients, considering either recovery or possible death.

Religious-Spiritual Hr

On the auspicious 10th day of the 12th month of Iron Male Mouse Year, 23rd January 2021, appointed by Dratshang Lhentshog, hospital Lam joined ERRH.



Picture Khadar ceremony of Lam Kelzang Tshering

Services

The spiritual needs of the patients/clients in the healing process is an indispensable part of our healthcare system.

IPD Services

The following services are provided on daily basis as shown in the table 20.1.

Table 20.1 Religious services for IPD

For patients	Kago/Zhenga/Jabthri/Rimdo/Tshedrup/Barche Lamsel etc
Death in ward	Thoeddrol/Phowa/Moenlam
In the Mortuary	Ngowa/ Moenlam etc

Outcome of the IPD services:

- Decreased IPD home leave to perform rituals at home
- Awakening of the thinking that spiritual-religious healing and modern treatment should go hand in hand



Picture 20.2 Hospital Lam providing IPD services to patients

OPD services

OPD services are provided on the scheduled days. IPD patients also avail these services.

Table 20.2 Religious service for OPD patients

Days	Services
Monday/Friday/Saturday	Kago
Tuesday/Wednesday/Thursday	Jabthri

OPD workload

More than 80 patients come to avail services on daily basis. People come from far and nearby places. Most patients availing these services are those who have not felt much benefit from allopathic medicines.



Picture 20.3 Hospital Lam with OPD patients



21. ENGINEERING AND MAINTENANCE UNIT

Background

The maintenance team has been meticulously managing various infrastructure initiatives and ensuring the efficient functioning and upkeep of essential systems like plumbing, masonry, electrical, HVAC (heating, ventilation, and air conditioning), firefighting, elevators, boilers, generators, UPS (uninterruptible power supply), and carpentry facilities within the hospital. The Maintenance/Engineering Unit is staffed with a diverse team, including a civil engineer, alongside 17 Sr. technicians.

The Maintenance/Engineering Unit is crucial to the hospital, offering essential 24/7 services such as water, electricity, and air conditioning, creating a supportive environment for staff to deliver top-notch services to visitors and patients. The main tasks of this unit are divided into two broad categories:

- A. Operation and Maintenance Services
- B. Infrastructure Development Activities

A. Operation and Maintenance Services

In this area, the maintenance unit ensures the smooth and uninterrupted functioning of the hospital's daily operations. The unit provides the following services:

Plumbing System: The plumbing team is dedicated to ensuring a continuous 24/7 water supply to both the hospital and staff quarters. Their responsibilities include maintaining the water source, water tanks, water pumps, and handling both internal and external plumbing tasks.

Electrical Systems: The electrician performs routine checks, periodic maintenance, and promptly address electrical faults to minimize downtime and guarantee the seamless operation of medical equipment and vital services. They are responsible for generator operation and servicing to maintain an uninterrupted power supply. Additionally, the electrical team also maintains EPABX, elevator, UPS, and electrical panel.

HVAC System: The unit managed the operation and maintenance of the Heating Ventilation and Air conditioning (HVAC) system including boiler to provide optimal temperature and ventilation in various hospital areas, contributing to patient comfort and recovery.

Fire Fighting System: The unit monitor the fire alarm and firefighting system to ensure a functional and efficient response to potential fire outbreaks.

Carpentry work: The hospital's carpenter is responsible for conducting essential repairs of the building's infrastructure and furniture, as well as preparing for various celebrations. Additionally, they craft the necessary furniture to facilitate the seamless delivery of hospital services.

Masonry work: The hospital's mason performs essential masonry tasks for the hospital building and constructs additional structures to enhance the delivery of hospital services.

Annual Maintenance Contract: The team, overseen by hospital administration, executes an annual maintenance contract for

essential systems (Fire alarm, UPS, HVAC, boiler, laundry, elevators) by assigning the work to a principal company. This measure is primarily implemented to prevent machinery and equipment breakdowns, ensuring uninterrupted service delivery.

B. Infrastructure Development Activities

Infrastructure development work is guided by the hospital administration, the Maintenance/Engineering unit has been actively involved in a range of infrastructure development initiatives, focusing on major maintenance of the hospital structure. These projects, in compliance with necessary

procurement policies and regulations, were awarded to contractors. The completed works have significantly benefitted both staff and patients:

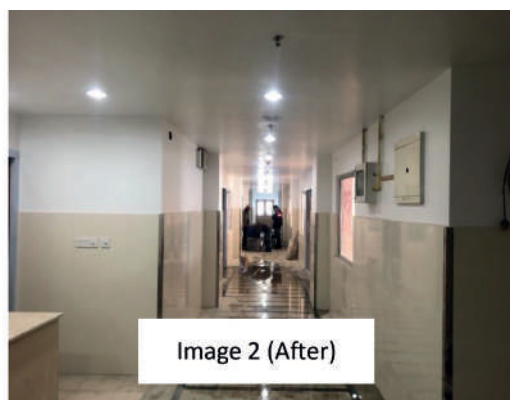
Major Maintenance of Hospital Building:

This included addressing severe seepage from toilets, tile buckling, wall dampness, replacing rotten toilet doors, and installing new sanitary and plumbing fittings, thereby improving living conditions for staff and patients

Microbiology Lab Modification: The existing microbiology laboratory was redesigned to enhance the working environment.



Picture 21.1 Renovation of ward



Picture 21.2 Remodification of Microbiology lab



Construction of a 6-Bedded MDR-TB ward

Situated around 50 meters from the main building, this ward was built to isolate TB patients from others, previously treated on the same floor as medical patients. This also freed up space for additional medical patients.



Picture 21.3 Construction of MDR-TB ward

Construction of Deep Burial Pit: Replacing an overfilled and improperly covered previous pit, the new burial pit eliminated the foul odor and discomfort to nearby occupants



Picture 21.4 Construction of deep burial pit

Roofing over Open Terrace: This project addressed leakage issues that were damaging the building and affecting the OT, ICU, and Gynae ward located directly below.



Image 1 (During Construction)



Image 2 (After Completion)

Picture 21.5 Construction of roof over the terrace

Construction of Sangay Menlha: A spiritual healing space with statues of Guru and Sangay Menlha was built, funded through charity and donations from staff and devotees.



Image 1 (During Construction)



Image 2 (After Completion)

Picture 21.6 Construction Sangay Menlha

Construction of Royal Portrait: There are 4 royal portraits within the hospital premises. 2 of which are constructed by maintenance team and 2 by the contractor. The portraits not only serve as the seat for worship but also helps in beautification of the place.



Picture 21.7 Construction of Royal portrait



Picture 21.8 Construction of Mawongpa Water tank

Construction of Mawongpa Steel Tank: A 100,000-liter steel water tank was erected to increase the hospital's water storage capacity.

Pre-Casualty Unit and Walk-In Cooler Storage: To manage COVID-19, a pre-casualty unit for patient examination was constructed beside the emergency unit, along with a walk-in cooler for vaccine storage.



Image 1: Pre-casualty (Before)

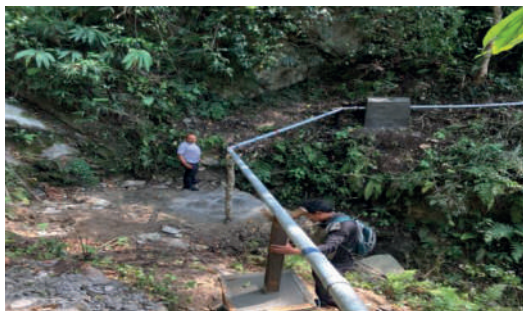
Picture 21.9 Construction of pre-casualty unit



Image 2: Pre-casualty (After)

Water Pipeline Realignment: This project ensured a consistent 24/7 water supply,

addressing previous issues of inadequate water and frequent pipeline breakdowns.



Picture 21.10 Realignment of Chompa pipeline



Construction of Dental Unit Extension: An extension was built for prosthodontic and orthodontic services, also resolving leakage issues affecting the mortuary below.



Image 1. During Construction



Image 2. After Completion

Picture 21.11 Construction of dental dept. extension

Construction of Lam's Zimchung: A facility for spiritual care and religious ceremonies was constructed, providing 24/7 access to religious leader services.



Image 1. During Construction



Image 2. After Completion

Picture 21.12 Construction of Lam's Zimchung

Staff Quarter Maintenance: Repairs were made to address seepage issues from sewage and plumbing lines in staff quarters.



Picture 21.13 Staff quarter renovation

Construction of Water Treatment Plant: A RCC sedimentation and filtration plant was built to serve as a reservoir and ensure water supply during pump breakdowns.



Image 1. During Construction



Image 2. After Completion

Picture 21.14 Construction of water treatment plant

Construction of Oxygen Plant Shed: An oxygen plant was installed in a remodeled shed, reducing dependence on imported oxygen cylinders alongside a new carpentry shed was also constructed.



Image 1. Before



Image 2. After

Picture 21.15 Construction of oxygen plant

VRF and AC Installation in Wards: To compensate for the lack of heating and cooling in the wards from the HVAC system, AC and VRF systems were installed to ensure a comfortable temperature for patients.

Challenges and way forward

The staff are trained at VTI which only provides basic training for electrical, plumbing and masonry. However, at the hospital we have complicated non-medical

equipment like HVAC system, UPS system, DG, Firefighting system and water pumps which require minor maintenance routinely. Currently, hospital depends on principal companies from across the border even for a minor maintenance. The short-term training for these staff will not only uplift their morale but provide them with right skills for management of these equipment thereby helping to provide uninterrupted services to our patients and in long run save government fund.



Picture 21.16 Team maintenance



22. BIOMEDICAL ENGINEERING SERVICES UNIT

Background

The Biomedical Engineering unit has been led by its first Biomedical Engineer, Ms. Dawa Dema from 2019-2023. The unit's present team comprises one Junior Engineer, four Biomedical Technicians, and three Medical Gas Technicians.

Moving forward, Ms. Kinley Bidha, our recently welcomed Biomedical Engineer, will also take charge of the unit. The unit is responsible for providing technical support to healthcare facilities across the six eastern districts, namely Trashiyangtse, Trashigang, Lhuentse, Samdrup Jongkhar, Pema Gatsel, and Mongar.

Its comprehensive services encompass equipment repairs, routine maintenance, safety and performance testing, installation, quality inspection and commissioning, electrical safety testing, end-user training as well as offering advice on acquisition and replacement, and infrastructure guidance. The Biomedical Engineering unit plays a vital role in the provision of healthcare services, ensuring operational and safe medical equipment at all times.

Major activities of the year 2023

The annual preventive maintenance for the 1000LPH RO plant at the dialysis unit

is conducted from February 15-20, 2023, ensuring the smooth delivery of hemodialysis services.

In June 2023, maintenance and repair operations for the medical air equipment, encompassing the air compressor and related accessories, were executed with the assistance of outsourced expertise.

The installation and commissioning of a 52 Nm³/hr capacity PSA-type oxygen plant, funded by WHO, was completed on August 5, 2023, and the plant was operated at full capacity.

Quality inspection and commissioning procedures are executed for the entire array of prosthodontic equipment, encompassing the dental chair and other laboratory apparatus, resulting in the successful launch of prosthodontic services.

Phase-I rehabilitation of the medical gas pipeline system, comprising leak testing, repair of all medical gas pipelines, oxygen and air manifolds, copper pigtailed, and replacement of bedhead panels, is accomplished in August- September 2023. This initiative is funded by UNICEF



23. QUALITY ASSURANCE UNIT

Background

In ERRH, Mongar the quality assurance unit was established in 2010 which was then known as Hospital Administration and Management Transformation (HAMT). The unit was responsible to carry out quality assurance activities in the east with two nurses appointed by the Ministry of Health through continued guidance from the Quality Assurance and Standardization Division (QASD). The name HAMT was officially replaced as Quality Assurance Unit with the mandate to facilitate quality improvement activities and implementation of Bhutan Health Care Standards for Quality Assurance (BHSQA) in the Hospital.

The unit has been working towards ensuring continuous quality improvement of the healthcare services provided in ERRH by promoting quality standards, facilitating Quality Improvement Projects, managing incident reports, coordinating periodic committee meetings, conducting waiting time and patient satisfaction surveys.

Furthermore, the unit is involved in

developing Standard Operating Procedure (SOP), conducting clinical auditing, monitoring and reviewing of hospital policies. All these activities aim to improve and deliver services where both patients as well as the staff are benefitted. Currently, the unit is managed by a single nurse who is also responsible for managing IPC activities in the hospital.

Achievement

The unit has successfully implemented 87% of standards in the hospital. The unit also streamlined the KPIs reporting system through Google sheet and trained all staff on the reporting process. The unit also facilitated developing standard operating procedures (SOP) for various units and departments. In the year 2023, the hospital successfully trained and developed 17 QI projects with the technical support from POCQI Secretariat, KGUMSB and QASD, JDWNRH.

The hospital has planned to train more staff on POCQI to improve the quality of service provided to the patients.

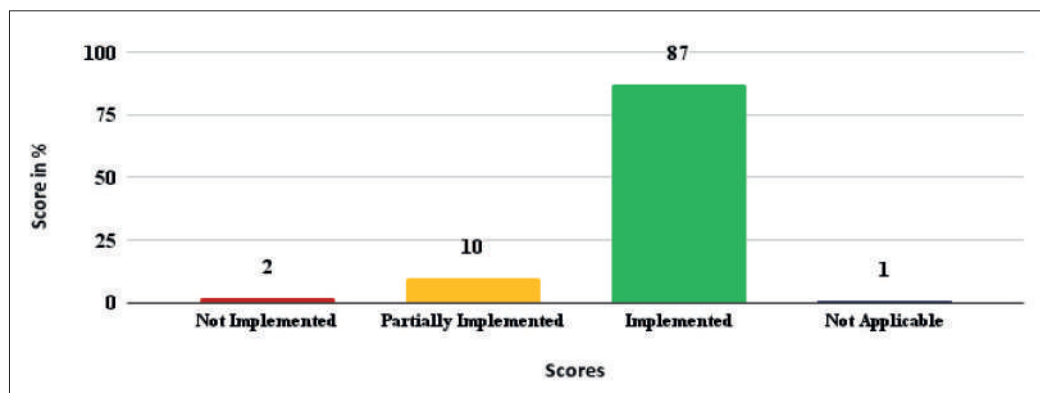


Figure 23.1 BHSQA implementation status 2023



Picture 23.2 POCQI certificate recipients

Challenges

The unit has only one staff member to carry out the quality activities in the hospital. With inclusion of Primary Health centers in hospital management, the unit is overburdened to carry out quality activities. Further, without a dedicated budget for QA activities the program has difficulty in sustaining its mandate. Lack of knowledge in analyzing and interpreting data is a major challenge faced by the unit.

Conclusion

The unit has been working towards ensuring continuous quality improvement of the healthcare services in ERRH by promoting quality standards through assessment and analysis of data generated. The QA unit will continue to assess and improve its programs and activities to ensure that ERRH remains at the forefront of quality improvement initiatives in the east.



24. INFECTION CONTROL & WASTE MANAGEMENT UNIT

Background

Infection control measures are those practices, protocols and procedures that help prevent and control infection transmission in health care settings. Healthcare-associated infection (HCAI) is one of the most common complications of health care management that is preventable through implementation of appropriate measures. Healthcare associated infections place a high burden of cost upon health services by prolonging hospitalization, increasing the use of antimicrobial agents, and increasing the number of surgical and medical interventions per patient. According to the World Health Organization (WHO), HCAIs are a major global health problem, affecting millions of patients each year with approximately 1 in 10 patients admitted to hospital in developed countries acquiring an HCAI. To reduce the burden from HCAI, it is of paramount importance to have a strong policy on prevention and control of these infections.

The hospital has an Infection Prevention and Control focal person to carry out the activities related to infection control and medical waste management. The IPC focal is responsible for ensuring the implementation of evidence-based infection prevention and control practices and for monitoring and reporting on HCAIs.

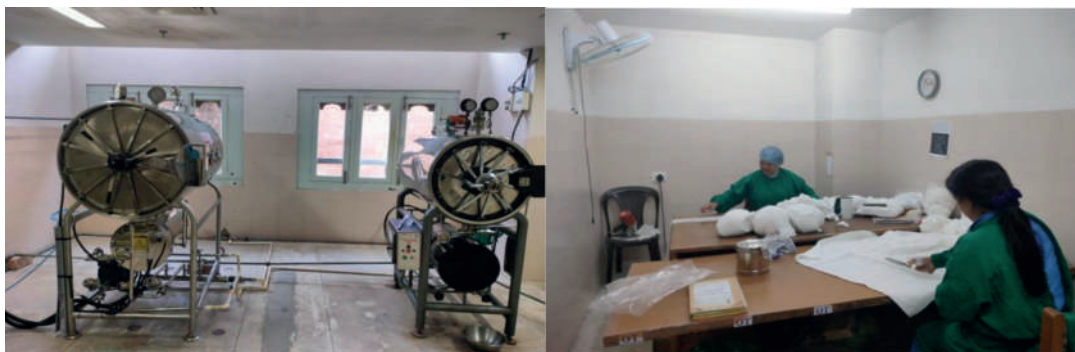
Key activities

• Training and Education

The IPC focal in coordination with the Nursing Administration provided training sessions on infection prevention and control and medical waste management to the nurses and support staff. The training was conducted in five batches from 18th to 28th July 2022 with the support from Fleming Fund. The training for support staff was conducted in 2 batches. The training focused on various aspects of IC and MWM with major focus on surveillance of HCAI. These sessions cover topics such as hand hygiene, use of personal protective equipment, sterilization, and disinfection of equipment, and contact precautions. The focal also provides ongoing education and feedback to healthcare workers to ensure that they have the knowledge and skills to prevent and control infections. Although the training is an annual event, the hospital could not conduct similar training in 2023 due to budget constraints.

• Equipment Sterilization and Disinfection/CSSD

The IPC focal is working with the CSSD to ensure that all equipment is properly sterilized and disinfected for patient use. The IPC focal also monitors the use of sterilization and disinfection procedures and provides feedback. The CSSD also housed a gauzes making room with full time dedicated staff responsible to prepare gauzes to meet the daily demand.



Picture 24.1 Autoclave and Gauze making unit

- **Medical Waste Management**

The IPC focal works with all the departments/units and waste treatment facilities to ensure that all medical waste is properly handled, stored, and disposed of in accordance with national guidelines. This includes the segregation of hazardous medical waste, such as sharps, body fluids, and cultures, and the proper disposal of these materials to minimize the risk of exposure to patients, healthcare workers and the general public. The waste management unit

is managed by lone support staff who are responsible for collection, transportation, segregation, autoclaving and disposal of all waste generated from the hospital. In 2023, ERRH generated approximately 38278 kg of waste comprising 48.3% of infectious waste, 34.1% of general waste and 15.6% of food waste. Other types of waste are minimal. The IPC unit also provides training to healthcare workers on the proper handling and disposal of medical waste.



Picture 27.2: Disposal of sharps



Picture 24.3 Waste segregation

IC and MWM Assessment

Infection prevention and medical waste management practices were assessed biannually in all the inpatient wards and outpatient departments. In 2023, the rate of compliance to IPC and waste management guidelines was 88%. The hospital observes Zero Waste Hour on every 2nd day of the month.

Laundry services

The IPC focal is working with the laundry unit to ensure that all linens are properly washed for patient use. The IPC focal also monitors the use of washing machines,

collection and transportation of linens from wards to laundry.

Surveillance of HCAI

After the training conducted by the program with the support from the Fleming Funds, an online recording and reporting system for HCAI was instituted in 2022. Since then all HCAs are reported online to the IPC unit at JDWNRH. The most common HCAI at ERRH is surgical site Infections (SSI) followed by CAUTI, VAP and CLABSI. In 2023, the incidence of HCAs per 1000 patient days was 2.6 for CAUTI, 2.3 for VAP, 0.6 for CLABSI. The SSI accounted for 1.8%. Other Infection control activities include Hand Hygiene compliance survey, Needle stick injury and Body fluid exposure.



Picture 24.4 laundry services

Housekeeping services

ERRH, Mongar strives to provide a clean and safe environment to patients, visitors and staff working within the hospital. In 2023, the hospital received cleaning equipment through the UNDP and ADB project. The equipment will immensely reduce the burden on our cleaners as they can use modern equipment reducing time and effort.

Conclusion

The IPC focal person in coordination with all clinical staff at ERRH, Mongar is committed to preventing and controlling HCAs, blood and body fluid exposure, needle stick injury, and ensuring safe medical waste management. Through on-going monitoring, training, and education, the hospital works to maintain high standards of infection prevention and control. The IPC unit will continue to assess and improve its programs and activities to ensure that ERRH remains at the forefront of infection prevention and control and medical waste management in the east.



Picture 24.5 Housekeeping services

25. SUPPORT STAFF AND SERVICES

Background

Support Services in hospitals are integral part of functions of hospitals. There are different categories of support staff and every staff plays a unique role in fulfilling a greater mission and is truly valued for their contribution to efficient functioning of hospital services and the health of the population we serve. Each of the staff makes a difference in the work they do.

Ward Boys/Girls

One of the most important support staff working in hospitals are the ward boys/girls. We have a dedicated and hardworking team of 45 ward boys/girls. They play a very critical role in maintaining the cleanliness of the patient's room by doing damp dusting, high dusting, and waste segregation. Apart from that some of the other responsibilities involves transporting patients to diagnostic units such as X-RAY ROOM, USG, ECHO, ENDOSCOPY, CT, and OT using wheelchairs, stretchers, or moveable beds. They clean and sanitize patient rooms, bathrooms, examination rooms, or other patient areas. They clean equipment, such as wheelchairs, hospital beds, or portable medical equipment, collect and transport infectious or hazardous waste in closed containers for sterilization or disposal as per IPC protocol and guidelines. They work in shifts system like other clinical staff like nurses

Sweepers/Cleaners

They are another very important category of support staff who play a vital role in infection

control, ensuring that hospitals are safe and hygienic for all patients and staff. They use products and perform cleaning procedures to set infection control standards to ensure all areas of the hospital are clean. They work alongside ward boys/girls and compliment their work. We have a dedicated team of 25 sweepers and they also work in shift system.



Picture 25.1 Ward boys and ward girls

Laundry And Ccssd Services

Laundry and CSSD are integrated places in hospitals. Their services play a very important role in maintaining and safeguarding the health and hygiene of both the inpatient and medical staff. The quality and standards of these services determine in a large measure, the quality of any healthcare system but our staff working in these units are not formally trained. Along with CSSD and laundry services, we have created a small unit called GAUZE MAKING unit.

Laundry staff are deployed through recruitment by the agency as laundry men

and women whereas it is the ward boys/girls and cleaners who work in CSSD and gauze making units. We have one senior staff nurse who works in CSSD to oversee the functioning of laundry and CSSD services



Picture 25.2 Laundry staff

Linens and Laundry

Human Resource: There are four staff working in Laundry services: 1 washerman and 3 washerwomen.

Laundry services They take care of all hospital linens and laundry services (collection, sorting, disinfection, washing, drying, ironing and distribution of clean linens to the wards and units for providing uninterrupted patient service)

CSSD

It's an important facility of the hospital that supplies sterile instruments and materials for Operations, dressing and procedures carried out in wards and other OPD units.

Human Resources: This unit is manned by

ward boys/girls who have no formal training. There are two senior staff working in this unit: 1 ward boy and 1 ward girl. Their Job and Services include the following:

- Reprocess reusable medical equipment
- Operate sterilization machine
- Linens management/supply (mainly OT linens: gowns, drapes and scrub dress)
- Supply of sterile Gauze



Picture 25.3 CSSD staff

Hospital Gardeners

We have two dedicated female gardeners whose services are very important in uplifting and maintaining the aesthetics and tidiness of the hospital environment. Aesthetic hospital environment provides inner tranquility to both the patients and the staff. They underwent a week long field attachment in ADRC, Wengkhair, Mongar to learn about Green House and ABCs of pruning, trimming and shaping of plants and flowers. Pest control and disease prevention of plants and flowers are very important part of professional Garden work.



Picture 25.4 Gardeners

Security Services

Security personnel play a vital role in maintaining a safe healthcare environment. Hospital has undergone a major shift in its security system from being a CARETAKER system to a Security Guard system with transformation both in manpower and technology.

Currently we have ten security guards providing 24 hours services, safeguarding hospitals and staff round the clock in three shifts.

Their work has become more efficient with the introduction of the Close Circuit Television system (CCTV) but most of the surveillance and monitoring work still is being done manually.

The services provided by our security team are as follows:

- Assisting with visitor management
- Check prohibited substances mainly alcohol, tobacco products and sharp objects that have safety risk
- Control the attendants number and movement
- Patrolling around building, grounds, parking lots and surrounding

- Inspection of areas for any security of safety hazards
- Checking entrance gates, doors, and windows to determine safety
- Checking exterior lighting and access route to emergency entrances



Picture 25.5 Security personnel

PABX Services

The hospital's PABX system is operational 24x7. It uses an inter-com telephone system. The 5 dedicated staff in this unit work in 3 shifts in order to provide uninterrupted services.

Services provided by the unit

- Connect calls between various units/ chambers and wards
- Manage inquiries and requests from callers
- Maintain updated list of hospital staff
- Keep record of important information



Picture 25.6 PABX staff

26. COVID-19 RESPONSE AT ERRH

The COVID-19 outbreak, caused by the SARS-CoV-2 virus, was officially declared as a pandemic by the World Health Organization on March 11, 2020, after originally originating in Wuhan, China on December 31, 2019. In Bhutan, national surveillance measures began on January 15, 2020, with screening at the Paro International Airport and the formation of high-level committees to establish preparedness and response plans.



Picture 26.1 Royal Guest House converted to Covid-19 Isolation Center

As the pandemic evolved, various variants emerged, with the Omicron variant becoming the most dominant. This included its sub variant, JN1, which the WHO has recently labeled as a variant of interest. Globally, over 774 million cases and over 7 million deaths have been reported. The impact of the pandemic prompted a significant focus on the healthcare system and hospitals, leading to a redistribution of responsibilities among stakeholders.

In preparation for the pandemic, the Dzongkhag Incident Command System was activated to prevent infections, detect cases, stop local transmission, and manage patients effectively. The Medical Superintendent's

office served as the Incident Command Center for the medical desk, playing a crucial role in directing teams, ensuring communication, and coordinating responsibilities.



Picture 26.2 Infection control staff disinfecting an ambulance

The hospital established a COVID-19 Task Force and multiple subgroups focusing on various aspects of outbreak management. Upon Royal Command during the visit to hospital, Royal Guest House at Nadangzor, Mongar was set up as an isolation center, featuring ICU beds, a general ward, and other necessary facilities. Additionally, a flu clinic was established to screen staff and patients, and a fully functional laboratory provided testing facilities.



Picture 26.3 Training of staff on donning and doffing of PPEs



Quarantine facilities and waste management protocols were carefully implemented, while rigorous training in infection prevention and control measures effectively prevented internal transmission. The hospital also continued to provide basic healthcare services, conduct surgeries, and offer counseling services for patients.



Picture 26.4 Nurse at covid-19 center handling medical wastes

The dedicated efforts and preparations enabled the hospital to effectively manage and treat COVID-19 cases, including those referred from other districts. While we gained valuable experience, we acknowledge the visionary leadership of His Majesty as instrumental in the successful management of the pandemic.

In total, the hospital managed 224 COVID-19 cases, and while two lives were lost due to comorbidities, the majority of patients recovered and were discharged. The experience gained from managing the pandemic highlighted the importance of teamwork and the leadership's guidance in overcoming challenges during this trying period.

*Contributed by: Dr. Pelden Wangchuk, MS
Mr. Pema Wangchuk, CN*

27. PICTORIAL HIGHLIGHTS 2023



Picture 27.1 Visit by Mr. Rinzin Jamtsho, Officiating Director, DoPH on 10 January, 2023



Picture 29.2 Orientation workshop on the Hospital-based SUD Treatment and Care conducted by The Pema from January 14-19, 2023 at Druk Zhongar Hotel, Mongar



Picture 29.3 Launch of Hospital-based Substances Use Disorder (SUD) Treatment and Care service on 21 February, 2023 coinciding with the 43rd birth anniversary of His Majesty the King



Picture 29. 4 Inauguration and Handing Taking of Regional Center for Simulation Based Training (CSBT) and ICT Equipment from Hiroyuki Noda, 27th April, 2023



Picture 29.5 International Nurses Day celebration, 12 May, 2023



Picture 29.6 Celebration of the 33rd birthday anniversary of Her Majesty Gyaltsuen at the SUD treatment center, 4th June, 2023



Picture 29.7 World Blood Donor Day celebration, 14 June, 2023



Picture 29.8 Induction course for new recruits, 15 June, 2023



Picture 29.9 Award of promotion certificates to 21 staff from various departments, 26 July, 2023



Picture 29.10 Inauguration of Choesham in TMU, 29 July, 2023



Picture 29.11 Inauguration of the medical oxygen generator plants, 09 August, 2023



Picture 29.12 General staff meeting, 23 September, 2023



Picture 29.13 Participants from eastern district hospitals for patient safety meeting, 05 October, 2023



Picture 29.14 observation of World Stroke Day, 29 October, 2023



Picture 29.15 CME on Identification of the ill child by Dr. Nobu, Pediatric Emergency Physician, JICA, 07 November, 2023



Picture 29.16 Celebration of International Day of Radiology, 08 November, 2023



Picture 29.17 Celebration of 68th birth anniversary of His Majesty the fourth Druk Gyalpo Jigme Singye Wangchuck, 11 November, 2023



Picture 29.18 Visit by Dr. Kuenzang Wangdi, Director, DCS, 13 November, 2023



Picture 29.19 observation of World Prematurity Day, 17 November, 2023



Picture 29.20 Health walk jointly organized by ERRH and MDA on December 13, 2023 as part of buildup program for celebrating the 116th National Day



Picture 29. 21 Mass cleaning campaign conducted on December 14, 2023 as part of buildup program celebrating 116th National Day



Picture 29.22 Celebrating 116th National Day, 17 December, 2023

28. OBITUARY

In Memory of Mr. Sonam Dorji (1993-2023)



With heavy hearts, Eastern Regional Referral Hospital mourned the untimely passing away of Mr. Sonam Dorji, who departed from us on March 12th 2023 at Gidakom Hospital. He was an integral part of our hospital family, and his absence left a void that cannot be filled. Sonam Dorji joined our team on 1st January 2020, bringing with him a contagious enthusiasm, dedication, and unwavering commitment to excellence. He embodied the true spirit of teamwork, always willing to lend a helping hand and uplift those around him. His contribution to the hospital at the capacity of a procurement officer brought immense improvement in the procurement process where he played a critical role in the establishment of electronic government procurement system (e-GP), an online system for better procurement processes in the hospital. Beyond his professional accomplishments, Sonam was cherished for his kindness, warmth, and genuine concern for others. He had a way of brightening our days with his infectious smile and positive outlook, leaving a lasting impact on everyone fortunate enough to know him.

In memory, ERRH honor Sonam by embracing the values he held dear—integrity, compassion, and a relentless pursuit of excellence. His legacy will continue to inspire us in our endeavors and remind us of the profound difference one person can make in the lives of many.

Our thoughts and prayers are with Sonam's family. May they find solace in the cherished memories and the enduring legacy he left behind. Rest in peace, dear Sonam Dorji. You are deeply missed and forever remembered.



In Memory of Mrs. Sangay Zangmo (1992-2023)



In the bustling corridors of healing, amidst the whispers of hope and the silent prayers of patients, there existed a figure whose presence transcended the ordinary. With every step, she carried the light of empathy in her eyes, illuminating the path for those in need. The Eastern Regional Referral Hospital mourned the untimely passing away of a compassionate being on 26th August 2023.

In the tapestry of healthcare, she wove threads of kindness and expertise, crafting a legacy that resonates with warmth and sincerity. Her hands, gentle yet powerful, held not just medicine but also solace for the weary souls under her care. Through the darkest nights and the brightest days, she stood as a steadfast guardian, a symbol of unwavering dedication to the well-being of others. In the corridors of uncertainty, she was a steady anchor, guiding patients and colleagues alike with her wisdom and grace. Her words, soft yet profound, carried the wisdom of experience, offering comfort to those grappling with fear and uncertainty. With each smile, each touch, she imparted a sense of reassurance, transforming hospital rooms into sanctuaries of healing and hope. In her presence, patients found not just a caregiver but also a friend, who shared in their joys and sorrows, their triumphs and tribulations. With boundless compassion, she embraced the role of a healer, touching lives and hearts in ways that transcend the boundaries of medicine.

To our dear nurse, colleague, and friend—may your journey onward be as gentle as the touch of your caring hands, as radiant as the light of your compassionate soul. Though you have left the world, your presence will forever linger in the corridors of our hearts. Thank you for your service, your kindness, and your unwavering dedication to the noblest of callings. Our thoughts and prayers are with Sangay's family.

May they find solace in the cherished memories and the enduring legacy she left behind.

Rest easy, dear Sangay, knowing that your legacy of compassion will continue to inspire generations to come. You are deeply missed and forever remembered. With deepest gratitude and fondest memories,

ERRH Family

