# **CAPE COAST TEACHING HOSPITAL**



## 2022 ANNUAL PERFORMANCE REPORT

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### LIST OF ACRONYMS

1. A & E Accident & Emergency 2. **AIDS** Acquired Immune Deficiency Syndrome 3. ANC **Antenatal Clinic** 4. ADR Adverse Drug Reporting 5. **ARIC** Audit Response Implementation Committee 6. **ARV** Anti-Retroviral 7. ART Anti-Retroviral Treatment 8. BCG **Bacillus Calmette Guerine** 9. BID Brought in Dead **Budget Management Center** 10. **BMC** 11. CCMH Cape Coast Metropolitan Hospital CCTH Cape Coast Teaching Hospital 12. 13. Chief Executive Officer CEO 14. CPD Continuous Professional Development 15. CSSD Central Sterilization Supply Department CT Computed Tomography 16. 17. CVA Cerebrovascular Accident **CWC** Child Welfare Clinic 18. 19. CYP Couple Year Protection 20. **Deputy Director Nursing Services** DDNS District Health Information Management System 21. DHIMS 22. DOTS **Directly Observed Treatment Short Course** 23. DTC **Drug & Therapeutic Community** 24. Electronic Health System E-Health 25. **EmOC Emergency Obstetric Care** 26. **EmONC Emergency Obstetric and Neonatal Care** \_ 27. **ENBC Essential Neonatal Basic Care** 28. **ENT** Ear Nose and Throat 29. EPI **Expanded Programme Immunisation** 30. ETAT **Emergency Triage Assessment & Treatment** Fresh Still Birth 31. **FBS** FΡ 32. Family Planning Ghana College of Nurses and Midwives 33. **GCNM** 34. **GCPS** Ghana College of Physicians and Surgeons 35. G. CPham Ghana College of Pharmacist 36. GH¢ Ghana Cedi 37. Ghana Health Service **GHS** 38. GOG Government of Ghana Health Information Management System 39. HAMs 40. HDU High Dependency Unit

**Health Information Management** 

41.

HIM

42.	HIV	-	Human Immunodeficiency Virus
43.	HMS	-	Hyperactive Malarial Splenomegaly
44.	НО	-	Health Objective
45.	HOs	-	House Officers
46.	HOU	-	Head of Unit
47.	HOD	-	Head of Department
48.	HR	-	Human Resource
49.	HRHD	-	Human Resources for Health Development
50.	ICT	-	Information Communication and Technology
51.	ICU	-	Intensive Care Unit
52.	IGF	-	Internally Generated Fund
53.	IPC	-	Infection Prevention and Control
54.	LB	-	Live Birth
55.	LFT	-	Liver Functioning Test
56.	KFT	-	Kidney Functioning Test
<b></b>	N 4 0 F		Manitaria a and Evaluation

57. M & E - Monitoring and Evaluation
58. MAF - Millennium Acceleration Framework

59. MCH - Maternal and Child Health

60. MDGs - Millennium Development Goals

61. MO - Medical Officer
62. MOH - Ministry of Health

63. MMR - Maternal Mortality Rate

64. MRI - Magnetic Resonance Imaging

65. MSB - Macerated Still Birth

66. MTEF - Medium Term Expenditure Framework

67. NABCO - Nation Builders Corps

68. NACP - National AIDS Control Programme

69. NAS - National Ambulance Service
 70. NCD - Non-Communicable Disease
 71. NGO - Non-Governmental Organizations

72. NHIA - National Health Insurance Authority

73. NHIS - National Health Insurance Scheme

74. NICU - Neonatal Intensive Care Unit
 75. OBS & Gynae - Obstetrics and Gynaecology
 76. OHS - Occupational Health and Safety

77. OPD - Out-patient Department

78. PIH - Pregnancy Induced Hypertension

79. PMTCT - Prevention of Mother to Child Transmission

80. PNC - Postnatal Clinic

81. PPM - Planned Preventive Maintenance / Measure

82. PPB - Policy Planning and Budget

83. RME - Research, Monitoring and Evaluation

84. PPP - Public Private Partnership

85. QA - Quality Assurance

86. RCH - Reproductive and Child Health

87.	RTI	-	Respiration Tract Infection
88.	RUM	-	Rational Use of Medicine

89. RVI - Retroviral Infection

90. SATS - South African Triage Scale

91. SB - Still Birth

92. SBS - Sector Budget Support
93. SCBU - Special Care Baby Unit
94. SIL - Service Improvement Levy
95. SMS - School of Medical Science

96. SMO - Senior Medical Officer

97. SOP - Standard Operative Procedures
98. STI - Sexually Transmitted Infections
99. SVD - Spontaneous Vagina Delivery

100. TB - Tuberculosis

101. U5MR - Under-Five Mortality Rate
102. UCC - University of Cape Coast
103. UTI - Urinary Tract Infection
104. WHO - World Health Organization

105. WINS - Work Load Indicator for Staffing Norm

### **ACKNOWLEDGEMENT**

The performance review and publication of the hospital's 2022 Annual Performance Report was made possible with the support of the team put together by Management and with the assistance of all Sub-BMCs/Unit management teams. Profound gratitude goes to the hospital Board for their support and hospital Management for their varied contributions towards the assessment of the institution's performance. Appreciation also goes to the Heads of Units and Sub-BMC management teams as well as the general Hospital Staff for their varied contributions towards the hospital's 2022 performance and achievements.

Further, CCTH wishes to express heartfelt appreciation to the Ministry of Health and the following key stakeholders for their contributions to the hospital's 2022 achievements;

- Regional Coordinating Council, Central Region
- Health Donors & Partners (Local and International)
- Regional Health Directorate, GHS, Central Region
- The University of Cape Coast School of Medical Science
- All other institutions/partners/stakeholders
- Clients/Patients
- Press

Special appreciation also goes to the 2022 Annual Performance Review Technical Committee for a successful performance review conference and the development of this report.

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### MESSAGE FROM THE CHIEF EXECUTIVE



CEO - DR. ERIC KOFI NGYEDU

The Cape Coast Teaching Hospital is currently in the 3rd year of implementation of its second 5-year Medium-Term Strategic Plan (2021 - 2025). This document was developed by a team put together by the Board and Management and with the support of the Ministry of Health and the National Development Planning Commission. It delights me to say that with the continuous referencing of this document in our planning and with the guidance of the Board, there have been consistency in improvement with respect to the type of services we provide.

We have seen expansion in the areas of collaboration, infrastructure, equipment base, services portfolio and human resource numbers and mix. However, there are still gaps to fill to ensure that CCTH operate fully as a teaching hospital. We will continue to work assiduously to bridge these gaps to achieve our vision. The theme for the 2022 performance review conference: "Enhancing Efficiency and Resilience of the System for Effective Service Delivery", therefore reflects on these achievements and the way forward.

I must say majority of the hospital's achievements in the area of infrastructure were made possible through our collaborative activities with benevolent organizations, institutions and the Ministry of Health. We will continue to build strong partnership, improve inter-sectoral collaboration and resource mobilization towards achieving a higher quality service delivery.

This institution was established as the Regional Hospital for the Central Region and commissioned in August 1998. In 2014, the hospital was upgraded to the status of a Teaching Hospital as a result of the establishment of the School of Medical Sciences at the University of Cape Coast.

The hospital is 25 years this year since it was commissioned as the Central Regional Hospital. It will also be nine (9) years as a Teaching Hospital and have so far produced over 564 doctors. We continue to collaborate with the Ghana College of Physicians and Surgeons and other Professional Colleges for postgraduate training of Medical Doctors, Nurses and Pharmacists in various specialty areas. The hospital also serves

as a teaching and practical site for the training of various categories of nurses from Nursing Colleges and training of other health professionals.

In 2022, the hospital recorded a slight increase in the number of various cadres of human resource following the receipt of financial clearance from the Government. Also, we are gradually bridging the gaps in the number of specialists in the hospital through training. During the year under review, 7 Doctors passed out from Ghana College of Physicians and Surgeons and 10 Nurses also successfully completed their training in various disciplines from the Ghana College of Nursing and Midwifery.

Comparing with year 2021, the total outpatient visits in 2022 increased from 152,364 to 170,441 with a daily average of 467. Total admissions decreased from 12,930 to 12,622. The leading cause of admission was Pregnancy Related Complications, and this represented 9.3% of total admissions. Improvement was made in the area of mortality in general where death rate reduced from 11% To 8.5%.

The hospital also recorded 39 maternal and 185 neonatal mortalities. I wish the case was different after putting in a number of interventions directed at reducing these numbers. However, we continue to engage our key partners in this cause.

CCTH will continue to mainstream Quality of Care, Infection Prevention and Occupational Health and Safety into all its activities as enshrined in the National Quality Strategy. Focal Persons and Coordinators will continue to monitor quality of care at the various Units and Sub-BMC's and benchmark them with the national quality strategies indicators.

In the area of creating access to specialists care in support of the government's Universal Health Coverage Strategy, management continue to aggressively pursue enabling environment for the poor and needy. Over the years, we have used our collaborative partnerships as a vehicle in delivering these services. Our partnership drive with the following Local and International Non-Government Organizations has first of all brought joy, and a sense of belongingness to our people, through the delivery of quality healthcare delivery, most free of charge. Our key Partners/Collaborators during the period under review included the following;

- 1. Himalayan Cataract Project A USA non-governmental organization engaged in restoring the sights of people plagued with cataract partnered with the hospital since 2019 and has so far supported the hospital in screening more than 75,960 persons for cataract and other eye conditions from all over the country. Those identified with various eye conditions are transported to the hospital free of charge for free surgical operations to restore sights. To date, 7,174 Sights have been restored. This collaboration has improved equipment base for eye care and an Ultramodern Eye Surgical Training Centre costing approximately US\$1Million is currently under construction for the hospital.
- 2. MEDEVAC a Cheche Republic based medical mission partnered with us since 2020 in the area of orthopedic and plastics services and have so far performed free complex surgeries and treatment for about 106 people who had various born related conditions and could not afford the operations and treatment
- 3. Operation Smile Ghana A Ghanaian non-governmental organization continue to support the hospital in the area of Cleft Lip & Palate Repairs for free and supply of medical equipment and devices.
- 4. University of UTAH is still supporting the hospital to perform surgical operations for people with complicated Ear, Nose & Throat cases identified

- within the poor rural communities who under normal circumstances would not be able to afford for free.
- 5. African Diaspora Development Institute (ADDI) collaborated with us and donated assorted medical equipment and devices for improved service delivery.
- 6. Ghana Gas Ltd is supporting the hospital with the construction of patients' relatives' hostel.
- 7. COVID-19 Trust Fund is supporting the hospital with the rehabilitation of the hospital's COVID-19 Treatment Centre
- 8. Ministry of Health support for the expansion of Accident and Emergency Centre

I would like to thank all our benefactors and partners for believing in our vision and working with us to help humanity.

We would also wish to use this opportunity to express our gratitude to the government for the tremendous support in improving infrastructure and equipment base of the hospital. Key among these support during the year under review, include the Government's World Bank Support Project for the construction of an Infectious Disease Centre, which is near completion, the supply and installation of a new CT Scan Machine, Ultrasound machines and other assorted equipment.

Amidst our investments and achievements during the year under review, we are confronted with a number of challenges. Key among them are:

- i. High Institutional Maternal Mortality and Neonatal Deaths
- ii. Absence of Neonatal Intensive Care Unit
- iii. Expansion of infrastructure (Accident and Emergency Centre, Oncology Centre, Renal Centre, etc.).
- iv. Encroachment of the hospital land.
- v. Inadequate accommodation for staff
- vi. Inadequate and ageing equipment, eg, Power Generators, Laundry and CSSD equipment, etc
- vii. Absence of a Relative Hostel
- viii. Overcrowding and congestion at OPD, and the Accident & Emergency Unit due to inadequate space
- ix. Inadequate and absence of critical equipment eg; Magnetic Resonance Imaging, anaesthesia equipment, Endoscopy equipment, etc.
- x. Inadequate fleet

The Hospital Board and the Management is poised to go to all lengths to address these challenges.

We will also continue to pursue the government for the construction of a new Accident and Emergency Center to help the hospital to fully discharge its functions as the first point of call for all accident victims on Accra Abidjan corridor road, the Radiation Oncology Centre to provide a comprehensive treatment to people suffering from cancer, and the Neonatal Intensive Care Unit to provide comprehensive neonatal services to our wide range of clients in fulfilment of the hospital's vision.

I would like to once again thank the Government, the Ministry of Health, our Partners, the Board, Directors, HoDs, and indeed all hardworking staff for their various supports without which the hospital would not have been where it is now.

We will however appeal to all to continue to support the hospital in its forward match towards achieving its objectives. We are committed to making appreciable progress towards our vision and we will continue to rely on all well-meaning persons and organizations to achieve that.

Thank you.

DR. ERIC KOFI NGYEDU

**CHIEF EXECUTIVE OFFICER** 

### **PREFACE**

The 2022 Annual Performance Review of the Cape Coast Teaching Hospital was held on Thursday 9th March 2023 at the Ghana Registered Nursing and Midwifery (GRNM) Hotel under the theme 'Enhancing Efficiency & Resilience of the System for Effective Service Delivery'. The performance review brought together key stakeholders including representatives from the Ministry of Health, sister Teaching Hospitals, Ghana Health Service, Traditional Rulers, academia, etc.

The performance review meeting aimed to take stock of the hospital's performance in 2022, discuss the key issues that influenced the performance and the way forward. The performance review of the hospital was part of the strategies used to assess the hospital's Medium-Term (2020-2025) Strategic Objectives. The presentations at the review meeting were aligned with the nine (9) key priorities of the hospital. These are;

- 1. Scale up existing Sub-Specialist Services
- 2. Intensify Clinical Care and Nursing Services
- 3. Expand Drug & Non-Drug Consumable and Commodity base
- 4. Deepen Institutional Public Health Interventions
- 5. Sustain gains in Governance, Finance, Management, and Leadership Systems
- 6. Boost Human Resource Base for service improvement
- 7. Expand Research, Training and other learning portfolios
- 8. Scale-up Support to Lower Levels of care
- 9. Broaden Technology, Equipment, Infrastructure and Residential Base for service delivery

The report is organised in four main sections with eighteen chapters, as follows;

- Section 1: It comprises of, Chapter One and provides an Introduction and Background to the report. It also gives a summary of the overall performance under the institution's six broad Medium-Term Strategic Objectives.
- Section 2: This section covers Chapter Two to Chapter Six. It discusses the Human Resource issues, Summary of Clinical Services performance, Technical and General Services, Finance as well as Key Collaborations and Support.
- Section 3: This section covers Chapter Seven to Chapter Seventeen. It contains the performance of the Clinical sub-BMCs and Units, including Public Health and Pharmaceutical Services.
- Section 4: This comprises Chapter Eighteen that includes the key Challenges and Mitigating Strategies and Conclusion.

## **SECTION 1**

### **CHAPTER ONE**

### INTRODUCTION

#### 1.0 BACKGROUND

The Cape Coast Teaching Hospital in 2020 developed its second Medium-Term (2020 to 2025) Strategic Plan and 2022 was its third year of implementation. The annual review of the hospital's performance is essential as it helps to assess the outputs and outcomes under each strategic objective and the key issues in order to improve on performance and sustain the gains. This report presents a summary of the performance achieved by the hospital in 2022 in comparison with previous years. Also contained in the report are the challenges faced by the hospital in the year under review and the mitigating strategies implemented. The report is to guide Management's decision making and effective planning process whiles also serving as referencing document for health research among others.

#### 1.1 PROFILE OF CCTH

The Cape Coast Teaching Hospital, formerly known as the Central Regional Hospital was established in August, 1998. It gained the status of a Teaching Hospital on March 21<sup>st</sup> 2014 when the School of Medical Science was established at the University of Cape Coast. In an attempt to fulfil and implement the mandates of teaching hospitals as enshrined in the Ghana Health Service and Teaching Hospital ACT 525, CCTH provides advanced medical services, train medical as well as postgraduate students whiles also undertaking researches geared towards providing evidence to that will support decision making and enhance quality of lives.

The hospital has received numerous accreditations from the Ghana College of Physicians and Surgeons, the Medical and Dental Council, for the training of health professionals in areas such as surgery, Obstetrics and Gynaecology, Urology, Orthopaedics, etc. Additionally, CCTH act as a training facility for undergraduate and graduate students from the Ghana College of Nursing and Midwifery, School of Nursing and Midwifery, School of Health and Allied Sciences, as well as final-year students in the PHARM D program at KNUST.

The hospital has a bed capacity of four hundred (400), CCTH and serves the people of Central Region, Western Region and beyond. Geographically, the hospital is situated in the northern section of Cape Coast, the capital of the Central Region of Ghana. It is bordered on the north by Abura Township, on the south by Pedu Estate and 4th Ridge, on the east by Nkanfoa, and on the west by Abura / Pedu Estate.

#### **1.1.1 VISION**

A World-Class Leader in Tertiary Health Care, Medical Education and Research

#### **1.1.2 MISSION**

CCTH exists as a public tertiary healthcare organization providing quality services to people in Ghana and beyond; employing the services of well-trained, skilled, committed and motivated workforce using evidence-based technology.

#### 1.1.3 CORE VALUES

- Customer Focus & Community Relationship
- Excellence
- Creativity
- Ethical Behaviour
- Teamwork & Altruism
- Honesty

11. Asthma

12. Renal

### 1.2 MEDIUM-TERM STRATEGIC OBJECTIVES (2020 -2025)

- 1. Increase access to specialist service delivery
- 2. Improve quality of health care delivery.
- 3. Improve infrastructure and equipment base for the delivery of quality service
- 4. Strengthen governance system
- 5. Improve health research, teaching and excellence in learning
- 6. Intensify support to the lower level of care and service delivery points

#### 1.3 SERVICES PROVIDED AT CCTH

The Cape Coast Teaching Hospital along with the provision of rehabilitative and diagnostic services also offers in-patient and out-patient services in both general and specialized fields. Details on the clinical services offered at the hospital are provided in Table 1.3.1 below.

CLINICAL SERVICES
GENERAL CLINICAL CARE SERVICES

**Table 1.3. 1: Current Health Care Services** 

GENERAL CEINICAL CARL SERVICES					
1.	General / Family Medical				
2.	Accident & Emergency Care				
3.	Wound Care Clinics				
4.	General Paediatric Clinic				
SPECIALISED CLINICAL CARE SERVICES					
	A. Internal Medical Clinics	B. Surgical Services	C. Anaesthesia &		
		_	Critical Care Services		
1.	Intensive Care Services	1. General surgery clinic	<ol> <li>Anaesthesia</li> </ol>		
2.	Diabetic & Hypertension	- Thyroid & Breast	services		
3.	Sickle Cell Clinic	(cancer &	Intensive care service		
4.	Endocrine Clinic	chemotherapy)			
5.	Gastro Intestinal Clinic	2. Uro-Surgical Clinics			
6.	Dermatology Clinic	3. Neuro-Surgical Clinic			
7.	Hepatitis Clinic	4. Burns & Plastic Surgical			
8.	Cardiology Clinics	Clinic			
9.	Haemodialysis services	5. Orthopaedic Surgical			
10	. Oncology Clinic	clinic			

6. Paediatric surgical clinic

7. Colorectal clinic

CLINICAL SERVICES					
C. Child Health Services	C. DEENT Services  D. Public Health Services				
<ol> <li>General Paediatric</li> <li>Neonatal Care</li> <li>Paediatric Asthma</li> <li>Paediatric Neurology</li> <li>Paediatric Endocrine</li> <li>Paediatric Renal</li> <li>Paediatric Cardiology</li> <li>Paediatric Sickle Cell</li> <li>Paediatric Oncology</li> <li>Paediatric Endocrine</li> <li>Paediatric Endocrine</li> <li>Osteogenesis Imperfecta Multi-Disciplinary Service</li> </ol>	<ol> <li>Dental &amp; Maxillofacial Clinic</li> <li>Eye Care</li> <li>Ear, Nose and Throat clinic</li> <li>Orthodontist services</li> <li>Child Welfare Clinic</li> <li>Family Planning</li> <li>HIV Counselling</li> <li>TB Dot Centre</li> <li>Adolescent Clinics</li> </ol>				
E. Rehabilitation Services	F. Obstetric & Gynaecological Services				
<ol> <li>Physiotherapy</li> <li>Diet Therapy</li> <li>Clinical Psychology</li> <li>Speech Therapy</li> <li>Community Psychiatry</li> </ol>	<ol> <li>Obstetric &amp; Gynaecologic Emergencies</li> <li>Antenatal clinic</li> <li>Post-natal clinic</li> <li>Gynaecology clinic</li> <li>Reproductive Endocrinology and Fertility Services</li> <li>Gynae Oncology Clinic</li> <li>Feto-Maternal Medicine Services</li> <li>Urogynaecology services</li> </ol>				
CLINICAL INVESTIGATION SERVICES					
G. Imaging  1. MRI 2. CT Scan 3. Fluoroscopy 4. Mammography	H. Laboratory Services  1. Haematology 2. Serology and Immunology 3. Pathology 4. Biochemistry 5. Microbiology 6. ELISA test 7. Infectious markers 8. Tumour/oncogenic markers 9. Fertility markers 10. Thyroid and cardiac profile				

### 1.4 PRIORITIES FOR 2022

- 1. Improve access to specialist and sub-specialty services
- 2. Intensify Clinical Care and Nursing Services
- 3. Expand Drug & Non-Drug Consumable and Commodity base
- 4. Deepen Institutional Public Health Interventions
- 5. Sustain gains in Governance, Finance, Management and Leadership Systems
- 6. Boost Human Resource Base for service improvement
- 7. Expand Research, Training and other learning portfolio
- 8. Scale up Support to Lower Levels of care
- 9. Broaden Technology, Equipment, Infrastructure and Residential Base for service delivery

# 1.5 SUMMARY OF 2022 CCTH PERFORMANCE UNDER THE STRATEGIC OBJECTIVES

The hospital's overall performance in terms of key outputs and outcomes is summarized in Table 1.5.1 below in line with the six medium-term strategic objectives of the hospital. The table also provides a breakdown

Table 1.5. 1: Summary of 2022 Performance under the Strategic Objectives

2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE									
CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY									
			IOSPITALWI						
			tual Perform						
Access	2017	2018	2019	2020	2021	2022	_2022	Remark	
	Annual	Annual	Annual	Annual	Annual	Annual	Target	S	
i. Total OPD	117,854	158,164	168,056	125,772	152,364	170,441	CCTH =	11.86%	
Attendance	4 4000		4.4000		4.0=0		15% incr	incr	
ii. OPD cases seen per doctor	1:1030	1:1163	1:1098	1:749	1:952	1:1033	THs= 1:1080	incr	
iii. Total Specialist OPD attendance	83,217	75,130	90,336	69,603	80,114	82,494	CCTH = 15% incr	2.97% incr	
iv. OPD Cases seen per specialist	1:1849	1:1418	1:1255	1:1024	1:1483	1:1085	THs= 1:1255	decr	
v. Total Referrals-	4,386	4,292	6778	3609	3,566	3,777	-	6.0% incr	
vi. Total Patients admission	14,444	10,865	11,088	10,578	12,930	12,622	CCTH = 5% Incr	2.38% decr	
vii. Percentage of patients admitted due to external referrals	35%	25.8%	40.4%	21.6%	18.81%	19.27%	-	incr	
viii. Percentage of neonatal admissions due to external referrals	28%	26.1%	27.2%	25.5%	15%	13.80%	THs = 30%	decr	
ix. Percentage of maternal admissions due to external referrals decreased	49%	41.4%	27.2%	21.2%	23%	26.71%	THs = 60%	incr	
x. Nurse and Midwife admission ratio	1:20	1:20	1:16	1:13	1:13	1:13	THs =1:25		
xi. Percentage bed occupancy	53%	51%	55%	55.5%	52.20%	54.0%	THs = 75%	incr	
xii. Total surgical operations	3,853	3,728	4,815	3,883	5,961	5,357	CCTH = 5% Incr	10.13% decr	
xiii. Surgery to Surgeon ratio	154:1	133:1	127:1	108:1	199:1	179:1	THs = 250:1	decr	
xiv. Total deliveries	3,055	3,160	3,027	2,883	3055	3,269	CCTH = 5% incr	7.0% incr	
xv. Delivery to midwife ratio (all midwives at the institution)	29:1	30:1	20:1	18:1	15:1	14:1	THs = 20:1	Decr	

2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE										
xvi.	Couple year protection	1507	1,521.6	1,562.5	1,891.2	2,233	2,626	CCTH` = 5% incr TH = 2,500		
xvii.	Caesarean section rate	35.9%	46.8%	41.2%	53.3%	51.4%	50.4%	TH = 40%	decr	
xviii.	% Tracer Drug Availability	96.1%	96.1%	88.5%	84.62%	95%	86.2%	CCTH = 100% TH = 90%	decr	
xix.	Prescription to pharmacy ratio	13,511:1	16,097:1	8,288:1	9425:1	6,422:1	6495:1	TH = 12000:1	incr	
xx.	Percentage antibiotic prescribed	15.2%	18.4%	16.18%	17.1%	11.6%	8.5%	TH = 35%	decr	
xxi.	Percentage Injectable	1.8%	6.3%	5.8%	24.2%	1.6%	7.23%	TH = 10%	Incr	
xxii.	Utilization of Pharmaceutical Care interventions	79.2%	97.3%	99%	11.5%	21.2%	97%	TH = 30%	incr	
xxiii.	Utilisation of laboratory services	-	78%	62.5%	260.3%	221.3%	524%	TH = 60%	incr	
xxiv.	Total laboratory Investigation	266,635	275,329	291,677	241,858	180,415	558,298	CCTH = 10% Incr	209% incr	
XXV.	Utilisation of radiological services	-	79.4%	86.9%	530.7%	87%	123.3%	TH = 60%	incr	
xxvi.	Radiology investigation	17,342	20,766	20,285	23,697	20,587	20,787	CCTH = 10% Incr	0.97% incr	

# **HOSPITALWIDE LEVEL OUTPUTS**

Total OPD Specialist Clinic Attendance increased by 2.97% in 2022

Total of 41 Specialist Outpatient Services are currently available

Strengthened Appointment System for Specialist Clinics at the OPD level

Introduced the following new services in 2022;

- Feto-Maternal Medicine Services (912 Cases Seen)
- Osteogenesis Imperfecta Multi-Disciplinary Service (8 Patients Seen).
- Paediatric Endocrine Services (17 Cases Seen)
- Introduced ten (10) new laboratory tests (Ca, Mg, P, D-dimer, Insulin, Ferritin, hsCRP, CA-19.9, CA-72.4, Myoglobin)

Collaborated with Himalayan Cataract Project to screen 18,103 people with 2,415 surgeries conducted

Collaborated with Operation-Smile Ghana to provide free Cleft lip and palate - (7 surgeries done)

Collaborated with Czech Medevac mission-

- 27 Plastic surgeries done
- 43 Orthopaedic surgeries done

Completed and operationalized the PCR Lab.

# DEPARTMENTAL LEVEL OUTPUTS

**OUT-PATIENTS SUB-BMC** 

Total number of mental health patients seen was 225

■ 70.7% increment in access to MHS

Two outreach services held in collaboration with other Sub-BMCs to commemorate World Hypertension and Diabetes Days

OPD operated from 8am to 5pm in spite of the inadequate number of doctors

# **ACCIDENT AND EMERGENCY SUB-BMC**

Utilization of emergency services for intended purpose:

56% of cases seen in 2022 were yellow and above as compared to 45% in 2021

#### **DIAGNOSTICS SERVICES SUB-BMC**

#### Laboratory Unit

Introduced ten (10) new laboratory tests (Ca, Mg, P, D-dimer, Insulin, Ferritin, hsCRP, CA-19.9, CA-72.4, Myoglobin)

Increased the number of tests conducted by 209% from 180,415 in 2021 to 558,298 in 2022

Completed and operationalized the PCR Lab.

#### Pathology Unit

Performed a total of 250 autopsies

#### **Transfusion Medicine Unit**

#### **IMAGING SUB-BMC**

Increased the number of radiology tests conducted by 0.97% from 20,587 in 2021 to 20,787 in 2022

Introduced dental x-ray services (362 cases seen)

#### MATERNAL HEALTH SUB-BMC

Introduced Feto-Maternal Medicine Services (912 Cases Seen)

Increased OPD attendance at the Maternal Health department by 21.1% from 15,468 in 2021 to 18,726 in 2022

#### **CHILD HEALTH SUB-BMC**

Introduced the following services:

- Osteogenesis Imperfecta Multi-Disciplinary Service (8 Patients Seen).
- Paediatric Endocrine Services (17 Cases Seen)

Neonatal specialist clinic attendance increased by 7.64% from 890 in 2021 to 958 in 2022

Paediatric sub-Specialty clinic attendance increased by 11.67% from 1,783 in 2021 to 1,991 in 2022

#### **INTERNAL MEDICINE SUB-BMC**

Range of medical services maintained through continued work of oncologists, Cardiologist, Gastroenterologist and Dermatologist services whilst adolescent health and endocrinology were merged

Improved in-patient's services

CPAP services available for patients and additional respiratory support services available for patients

Four (4) clients prepared for kidney transplantation

Two (2) clients received kidney transplant

Fistula surgeries were performed for 7 renal patients

#### **SURGICAL SUB-BMC**

Emergency drugs were acquired by the Sub-BMC to stock two trays at the Male and Female Surgical Ward's Emergency trays

Surgical services were streamlined through implementation of the surgical pack system.

Two HDU's have been created on both Male and Female Surgical wards but not fully furnished

Collaborated with Czech Medevac mission-

- 27 Plastic surgeries done
- 43 Orthopaedic surgeries done

#### ANAESTHESIA & CRITICAL CARE SUB-BMC

Consultation was held with O&G team to work on a proposal for the establishment of HDU

Three (3) CCNS and six (6) CRA's completed their trainings and joined the Sub-BMC

Two (2) doctors and four (4) nurses gained admission for training in Anaesthesiology and Critical Care respectively

#### DENTAL, EYE, EAR, NOSE & THROAT (DEENT) SUB-BMC

Triaged 21,150 patients and process for various specialist consultation

Collaborated with Himalayan Cataract Project to screen 18,103 people with 2415

Collaborated with Operation-Smile Ghana to provide free Cleft lip and palate - (7 surgeries done)

22 ENT collaborative surgical campaigns /surgeries performed with the Utah team

Provided a total of 4,759 DEENT surgical services

## **PUBLIC HEALTH SUB-BMC**

Conducted public education on cervical cancer screening

Created social media platforms such as Facebook, Twitter, to enhance public health education

#### PHARMACEUTICAL SERVICES

Received and addressed 17 queries at the Drug Information Centre

Conducted 164 Clinical Ward rounds in all Sub-BMCs

Received and submitted 40 ADR reports to FDA through Pharmacovigilance monitoring (15)

Produced 14,900L liquid soap, 3,375L strong antiseptic, 10,060L distilled water and 61.70L of Syrup

#### **REHABILITATION SERVICES**

# Physiotherapy Unit

Club Foot Management - 922 cases out of the 11,498 total cases managed in the department.

OPD attendance at the Physiotherapy Unit increased by 127.5% incr from 5,055 in 2021 to 11,498 in 2022

#### Clinical Psychology Unit

Provided psychological services to a total of 428 in-patients

#### Diet & Nutrition Department

Appointed dietitians to the diabetic and renal clinic

Trained a cook to provide blenderised food service

# CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.

# HOSPITALWIDE LEVEL

Actual Performance Trend										
Impact	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	2022 Annual	Target	Remark s % Diff.		
i. Total Institutional Death	1,148	1,120	1,307	1,379	1,306	1,072	CCTH = 5% Decr	17.9% decr		
ii. Institutional death rate	8.8%	9.0%	10.3%	12.3%	11%	8.5%	THs = 5%	decr		
iii. Theatre Death Rate	0.4%	0.3%	0.6%	0.1%	0.4%	0.1%	THs = 0.5%	decr		
iv. Low birth rate	13%	13.5%	16.1%	16.8%	19.4%	20.5%	THs = 12%	Incr		
v. Stillbirth rate (/1000LB)	35	37	42	31	42	35	THs = 15	decr		
vi. Total Fresh Still birth	53	29	39	38	43	55	-	27.9% incr		
vii. Total Macerated Still Birth	54	89	87	52	85	63	-	25.9% decr		
viii. Institutional Maternal mortality ratio (/100,000LB)	1335	860	925	903	1,050	1,186	THs = 300	Incr		
ix. Number of institutional maternal deaths	41	27	28	26	32	39	CCTH = 50% Decr	21.9% incr		
x. Institutional infant mortality rate (/1000LB)	65	69	91	89	88	77	THs = 15	decr		
xi. Number of Infant deaths	201	216	272	284	267	252	-	5.62% decr		
xii. Institutional neonatal mortality rate (/1000)	59	63	80	81	78	67	TH = 25	decr		
xiii. Number of institutional neonatal deaths	180	197	239	233	239	219	CCTH = 5% Decr	8.4% decr		
xiv. Under-five mortality rate (/1000LB)	71	77	101	106	95	80	-	decr		
xv. Institutional under-five mortality	219	242	301	307	290	264	-	9.0% decr		
xvi. Average length of stay (Proxy- C/S, Appendectomy, severe malaria in children)	4.8	5.1	5.6	5.9	5.6	5.5	-	decr		
xvii. Partograph use rate	-	40.8%	46.12%	48.7%	48.5%	47.6%	THs = 60%	Decr		

2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE										
Impact	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	2022 Annual	Target	Remark s % Diff.		
xviii. Surgical site infection rate	-	-	0.27	12.61%	-	-	THs = 5%			
xix. Average length of stay at the Emergency ward	2.8	4.2%	3.0	2.0	2.9	1.0	THs = 2.0	decr		
xx. Availability and access to appropriate hand hygiene institution	0.18	0.8	0.15	0.21	0.18	0.23	-	Incr		
xxi. Number of hands washing basins	240	240	240	368	368	433	-			
xxii. Availability and appropriate disposal of waste	0.3	0.6	0.6	-	-	-	TH = 4			
xxiii. Number of waste disposal bins	270	270	270	270	270	-	-			
xxiv. Availability of toilet institution	0.23	0.23	0.23	0.43	0.42	0.41	THs = 0.25	Decr		
xxv. Total number of functioning toilets at the institution	92	92	92	173	169	165	2.3% decr	17.7% decr		
xxvi. Percentage of clients satisfied with overall services at the institution	96.8%	87.3%	97%	93.4%	84.3%	-	THs = 95%	-		
xxvii. Adverse Events Recorded	-	99	153	159	46	19	THs = 40	58.7% decr		

2022 ANNUAL OUTCOME AND OUTDUT DEDECOMANCE

#### **HOSPITALWIDE LEVEL OUTPUTS**

Institutional mortality rate improved from 11% in 2021 to 8.5% in 2022

General OPD attendance went up by 11.86% (from 152,364 in 2021 to 170,441 in 2022)

Continued to conduct key mortality audits and implement the recommendations

Organized in-service training for staff on customer care, quality assurance, Basic Life Support and IPC.

Provided digitalized identification cards to patients and retired staff of the ministry of health

Process Commenced in March 2022.

Integrated Clinical Pharmacy practice into general ward rounds

164 General ward rounds done together with medical teams in the various Sub BMC's.

Revised and expanded Tracer medicines list for CCTH

Tracer medicine expanded from 52 to 160 by DTC and approved by management

Reinsured all medicines with Insurance Company

Approval given, evaluation done and All Pharmacy stores insured

Expanded tracer medicines list from 52 to 160

# DEPARTMENTAL LEVEL OUTPUTS OUT-PATIENTS SUB-BMC

Organized 1 workshop on medico-legal issues

Organized 2 refresher trainings on customer care for all OPD staff

One LHIMS refresher training was organized for selected staff in the Sub-BMC

#### **ACCIDENT AND EMERGENCY SUB-BMC**

Mortality rate at the Accident & Emergency department reduced from 8.9 in 2021 to 2.4 in 2022

Audited 92% of mortalities (target 80%).

Average length of stay at the Accident & Emergency department reduced from 2.9 days in 2021 to 1.0 days in 2022

Organized customer care and infection prevention training for staff

Conducted 5 LHIMS training sessions for staff

#### **DIAGNOSTICS SERVICES SUB-BMC**

#### Laboratory Unit

Conducted medical screening for Lab. Staff

Pathology Unit

#### Transfusion Medicine Unit

#### **IMAGING SUB-BMC**

Organized one (1) refresher training on the usage of the CT-Scan machine was.

One (1) Continuous Professional Development (CPD) workshop was organized for radiographers.

#### MATERNAL HEALTH SUB-BMC

17 health promotion and education activities undertaken in 5 Communities and referral facilities visited

Audited all maternal mortality

Nurses and Midwives mortality audit in addition to team based and Sub-BMC wide audits conducted on all the 39 maternal mortalities

Organised one (1) customer care training for staff of the Sub-BMC in collaboration with the QA Team on how to handle patients

2 staff trained in critical care nursing

Trained 60 staff on BLS, ACLS, ETAT and Emergency readiness

Organised training for 30 staff on cervical cancer screening

90% of Perinatal mortalities audited

#### CHILD HEALTH SUB-BMC

Conducted the following In-service trainings for staff;

- 2 ETAT and neonatal resuscitation training
- Clinical teachings sessions held on the ward averagely twice a week
- 1 customer service training
- 1 IPC training organised

#### **INTERNAL MEDICINE SUB-BMC**

Organised training for staff on infection prevention control

Ensured adequate supply of PPEs provided on the ward and in clinics

Celebrated world Kidney Day

Public screened for kidney disease and awareness creation of kidney disease

Celebrated world Hepatitis Day

Public screened for kidney disease and awareness creation of kidney disease

#### **SURGICAL SUB-BMC**

A training was organised for staff on customer care

Three PROs were appointed for the wards and theatre

Ensured 100% compliance with Surgical safety checklist used before, during and after every surgical procedure

#### **ANAESTHESIA & CRITICAL CARE SUB-BMC**

A Training in customer care were organised

A mortality and morbidity audit team were formed with 50% audits done

All emergency drug trollies in the ICU, D/S Recovery and Theatre Recovery have been fully stocked

ICU beds labelled and directional signs pasted

Emergency point identified and labelled

#### DENTAL, EYE, EAR, NOSE & THROAT (DEENT) SUB-BMC

Developed six (6) protocols

- Care of Ophthalmic instrument
- Customer Care,
- New management of sinuses,
- Voice Disorder,
- Principles of Fluid and Electrolyte Balance &
- Antibiotic regimen for Odontogenic Infections

Celebrated Diabetic and Autism Days and screened 100 beneficiaries

Reminders sent to clients to remind them of their appointment days (1000) reminders through phone calls and text messages)

3 Units received sensitization programmes: (Eye-432 new staff were screened, Speech:(Paedics- 2 & Delivery Suite-1)

Provided Educational Talks (300 at the General OPD: ENT-3 times a week, Eye-Daily and STL-8

Provided 9 Sensitization programs (Churches- 5 - Anomabo Methodist Church, Abura Mosque, Pedu SDA, Fountain Gate Chapel and Kotokuraba Mosques -299 beneficiaries) and 4 Health Facilities (Essikado, Effiakuma, CCTH and Takoradi Hospital) with 542 beneficiaries

Developed 2 educational materials videos on Autism and What Speech and Language Therapy is"

Provided 8 Radio/TV Talk Shows on Ocean TV, ATL FM, Ahomka FM and Sky FM

#### **PUBLIC HEALTH SUB-BMC**

Conducted one training for public health staff on data analysis, interpretation and report writing

Held weekly and monthly analysis and interpretation of surveillance data

Prepared and distributed monthly epidemiologic bulletin

Organised training for staff on customer care

Ensured the wearing of name tags for staff

Engaged stakeholders (Diabetes Mellitus clinic, internal medicine clinics) on non-communicable disease (NCD) policy

Advocated through the Medical Director for a committee to work on the non-communicable policy

Celebrated the following national and international health days

- World Tuberculosis (TB) Day A total of 113 persons were screened for TB out of which 3 were suspected to have but were all confirmed negative upon further investigations
- World Malaria Day Educational talks were done on radio stations
- Exclusive Breastfeeding Day Educational talks were done on radio
- Rabies day educational talks were done on radio
- Breast Cancer Day A total of 1091 women were screened out of which 133 suspected cases were referred to the Maternal Health Sub-BMC for further investigations
- Hypertension Day 715 people were screened from which 232 were referred
- Hepatitis B -
- HIV –

#### PHARMACEUTICAL SERVICES

Produced 14,900L liquid soap, 3,375L strong antiseptic, 10,060L distilled water and 61.70L of Syrup

58 emergency drug monitoring done to manage emergency medicine stocks

1,007 discharge counselling done at the wards

Tracer medicines list expanded from 52 to 160 by DTC and approved by management

86.2% Availability of tracer medicines

#### REHABILITATION SERVICES DEPARTMENT

#### Physiotherapy Department

#### Clinical Psychology Department

Provided psycho-education for 428 out-patients

#### Diet & Nutrition Department

Develop blenderised feeding protocol

Introduced afternoon clinic for renal patients

Increased awareness of nutrition at the sub-BMC;

Presentation to establish the role of nutrition in the management of cases on the ward done at the Surgical,
 O&G and Paediatric wards

Increased awareness of infant and young child feeding practices

Educated 2113 clients on breastfeeding and complementary feeding

Developed a perioperative nutrition protocol at the ICU

Organized eight (8) TV and radio programs on healthy eating habits

# CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE

#### HOSPITALWIDE LEVEL ACTIVITY OUTPUTS

	Actual Performance Trend									
Output	2017	2018	2019	2020	20201	2022	Target	Remark		
	Annual	Annual	Annual	Annual	Annual	Annual		S		
i. Equipment Down time (proxy: CT SCAN)	7.69%	1.92%	0%	0%	82.5%	100%	THs = 5%	Incr		
ii. PPM (Planned Preventive Maintenance) Output achieved	60%	62%	80%	75%	61.7%	50%	THs = 80%	Decr		

2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE									
iii. Equipment Utilisation (Proxy: CT SCAN)	34.8%	74.2%	83.1%	98.72%	21.4%	0%	THs = 90%	Decr	

#### **HOSPITALWIDE LEVEL OUTPUTS**

Installed and operationalised a 32 Slides CT- Scan

Created an Ultrasound Scan Suite and all scan services now provided, including trans-vaginal ultrasound

Installed eight (8) Ultrasound Scans at the Accident & Emergency department, O&G department, OPD, and other critical care areas

Construction of an Infectious Disease Centre

• 95% completion of the building

A&E expansion project commenced (10% completed).

• Foundation completed and columns erected

Construction of Patient Relative Hostel

Building at 30% by close of year

Commenced the construction of the Eye Centre

• Sod Cutting for the Construction done. Work commenced and as at Dec, 2022 at the foundation level

# DEPARTMENTAL LEVEL OUTPUTS

#### **OUT-PATIENTS SUB-BMC**

Renovated Four consulting rooms

All Paediatric OPD consulting rooms, waiting area as well as the treatment rooms were painted

Procured new set of chairs for doctors, nurses and patients in Surgical OPD consulting rooms and General Medical consulting rooms

Manufactured one ECG trolley to house the ECG Machine at the Diabetic clinic

#### **ACCIDENT AND EMERGENCY SUB-BMC**

Received 9 equipment from Management:

- 1 defibrillator
- 1 ventilator
- 1 cardiac monitor
- 2-wheel chairs
- 3 oxygen flowmeters
- 1 ultrasound machine

#### DIAGNOSTICS SERVICES SUB-BMC

#### Laboratory Unit

Acquired the following equipment;

- A high-capacity biochemistry auto analyser
- ADDI equipment
  - o 1 centrifuge
  - o 1 water bath
  - o 1 hot air oven
  - o 1 incubator
  - o 1 mini fridge
  - o 1 incubator

#### Pathology Unit

Repaired the condenser motor and the motor compressor cold-room one

Two (2) external and two (2) internal trolleys were refurbished.

Renovated the mortuary attendant restroom (new fan, mattress, painting etc.)

#### Transfusion Medicine Unit

#### **IMAGING SUB-BMC**

Six (6) ultrasound machines were procured for the sub-BMC.

Five (5) ultrasound printers were procured for the sub-BMC

One (1) 32 slides ultra-modern CT-Scan machine was procured for the sub-BMC

Five (5) office printers were purchased for the sub-BMC

Procured a 50 inches TCL TV and two air conditioning machines

Ultrasound suite room was created to accommodate two ultrasound machines

#### MATERNAL HEALTH SUB-BMC

Partitioned one consulting room (consulting room 44)

Received one (1) colposcope machine through donation

Purchased the following from PRA and SIL

- 5 Air Conditioners
- 5 table top fridges
- 5 Televisions
- 5 notice boards
- 4 microwaves

Tiled Delivery Suite Theatre 2

Renovated side ward 1

Repaired most faults and damages through imprest and SIL

#### **CHILD HEALTH SUB-BMC**

Acquired the following set of medical equipment;

- 2 CPAP machines
- 1 ECG machine
- 1 Infusion pump
- 1 Incubator
- 1 Radiant warmer
- 14 pulse oximeters
- 2 Firefly phototherapy machines
- 2 Nebulizer machines

Purchased two (2) telephones

Upgraded one (1) side ward to a VIP ward

Installed 4 donated air conditioners (ACs)

Installed one poly-tank

#### **INTERNAL MEDICINE SUB-BMC**

Painted the High Dependency Unit and the Female Medical ward

Installed four (4) new air conditioners,

- 2 at side wards and
- 2 at Executive suite wards

Repainted the dialysis Unit and the Executive suite

Painted the High Dependency Unit and Female Medical ward

Received the following donations from philanthropists

- A polytank
- Office desk for the Executive suite ward Doctors' consulting room

# SURGICAL SUB-BMC

Renovated the treatment room at the Female Surgical Ward

Spot painting of the Male and Female Wards

Installed an AC at the Doctors Office, Treatment Room and General Office.

Patient mattresses were covered and faulty toilet seats were replaced

Some equipment were purchased/ acquired;

- 2 suction machines
- 4 air conditioners
- 3 rollers for lifting patients
- 3 diathermy pads
- 1 industrial washing machine for theatre

Purchased of 4screens, 80 led bulbs, BP cuffs, 10 vomitus bowls, rechargeable batteries, 5 sinks and 5 toilet bowls for the various units

Renovated the rotten hand wash basin in surgical suite

Renovated the stand for processing of used instruments for sterilization at the Surgical Suite

Carried out tiling works in theatres one and two as wel as a portion of the sluice end

#### **ANAESTHESIA & CRITICAL CARE SUB-BMC**

One (1) mobile x-ray accessible to the ICU, one (1) invasive monitor, ten (10) laryngoscopes, eight (8) infusion pumps and four (4) perfusors were purchased

Tiled the theatre Recovery room

Acquired two (2) filing cabinets for Anaesthesia office in Surgical Suite and one (1) filing cabinet, curtains and two(2) water heaters, renovation of the ICU

# DENTAL, EYE, EAR, NOSE & THROAT (DEENT) SUB-BMC

97% work completed on signage post for Speech and Language Therapy (STL) Unit

Procured the following equipment and tools:

• Three (3) Swivel chairs

• 1 printer

Received following medical equipment as donated items from HCP:

- 1 B-scan,
- 2 Ophthalmoscopy
- 2 cutleries
- 2 Oculoplastic
- 2 Eye Care Tonometer and
- 3 Cataract Set

#### **PUBLIC HEALTH SUB-BMC**

The Public Health Unit was allocated a conducive space for TB care

#### **PHARMACEUTICAL SERVICES**

constructed an operationalised a model pharmacy

Installed thermometers and thermo-hygrometer

Installed shelves in the cold with support from Roche

Funding, approval, and site allocated to setup a Renal Pharmacy

#### **REHABILITATION SERVICES**

#### Physiotherapy Department

#### Clinical Psychology Department

Procured One (1) Office Desktop and two (2) A Lenovo Tablet

#### Diet & Nutrition Department

Procured one (1) body composition analyser

#### **CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM**

#### 4.1: Governance Related Performance

#### **HOSPITALWIDE LEVEL ACTIVITY OUTPUTS**

			Actual P	erformance	Trend			
Output	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	2022 Annual	Target	Remark s
<ul> <li>i. Number of Board meetings held</li> </ul>	1	6	4	4	1	4	-	incr
ii. Number of additional accreditations secured	-	-	• Group Accredit ation for Family Medicine (Cluster of Hospital s) and Accreditati on in Radiology & Paedics	• 0	0	3 • Urology • Orthopae dics • Re-accredita tion for General Surgery	-	incr
iii. Proportion of senior managers trained on	N/A	N/A	N/A	-	59	-	-	
leadership and management								

#### **HOSPITALWIDE LEVEL OUTPUTS**

# Ensured Procurement Act compliance

• Bid opened in 2nd February 2022

The key meetings mandated were held

Developed the 2nd Medium -term strategic plan (2020 – 2025) of the hospital

Updated the hospital's asset register and marked of assets.

• This helped with asset management and provision of a fairly accurate data on assets to external auditors and FACU committee.

#### Institutional Policies & Agreements/MOUs

Institutional Policies developed, approved & being implemented Approved:

Policy on performance related allowance (PRA) & Service Improvement Levy (SIL)

- Guidelines on Petty Cash and other Minor funds Request
- Transfusion medicine policy
- Covid-19 guidelines and strategy
- Sick Staff Policy
- Promotion
- Internal audit charter
- Donation Policy
- Internal Management Policy on sub-BMC and units
- Staff Accommodation Policy
- Correspondence Management
- Feeding Incentive Policy
- Dress code policy
- OPD triaging Policy

#### The following Institutional Policies Drafted;

- Institutional Research Policy
- Policy on quality assurance
- VVIP Services Policy
- Transport Policy
- Institutional Policy Guideline on Asset Management
- Institutional ICT Policy
- Data Backup Policy was 80%
- Institutional Monitoring and Evaluation Policy
- Risk Management Policy and Charter
- Policy on job planning for doctors adopted

#### MOU signed with School of Peri-operative and Critical Care Nursing

#### Institutional Collaborations

Collaborated with the following institutions/organizations;

- i. Himalayan Cataract Project/ National Cataract Outreach Programme to screen 18,103 people and also conduct 2,415 Surgeries.
- ii. Operation-Smile Ghana to provide free Cleft lip and palate (7 surgeries done)
- iii. Czech Medevac mission to perform 27 Plastic surgeries done and 43 Orthopaedic surgeries
- iv. University of UTAH to perform 22 free ENT surgeries
- v. UCC-SMS
- vi. Continued to collaborate with private and internal security to improve security of hospital staff, clients and properties

#### Institutional Donations

The hospital received a 32 Slides CT- Scan machine from the Ministry of Health

#### Performance Monitoring and Evaluation

Organised the hospital's 2021 annual performance review conference in February 2022

Conducted quarterly monitoring of the implementation status of the hospital's annual programme of work and report and reported appropriately to key stakeholders to guide decision and future plans

Coordinated the training on the Teaching Hospitals Performance Assessment and Reporting Tool in collaboration with other Teaching Hospitals and Ministry of Health

The hospital continues to lead in coordinating the development of the Teaching Hospitals Joint Performance Report and presents it on behalf of the THs at the MOH inter-agency review conferences annually and half-yearly.

The hospital represented the THs by serving on the following:

- Ghana Health Sector Holistic Assessment Technical Working Group to conduct the 2020 and 2021 Holistic Assessment of the Health Sector in 2021 and 2022
- Ghana Health Summit Planning Committee 2021 and 2022.

Carried out training on Performance Monitoring, Evaluating and Reporting to Senior Managers, and Heads of Units and Sub-BMC Management Members in the hospital

# DEPARTMENTAL LEVEL OUTPUTS OUT-PATIENTS SUB-BMC

Two staff Durbars were conducted

Conducted 4 management meetings

Held 2 extended management meetings

#### **ACCIDENT AND EMERGENCY SUB-BMC**

Organised one (1) Triage and one (1) START Triage workshops on the 22nd & 23rd June 2022 respectively.

1 Cardiopulmonary resuscitation workshop was held on 5th & 6th October, 2022.

Held four (4) Sub-BMC Management meetings

Organized.44 departmental morning meetings (target 30)

1 staff durbar held on 7th December, 2022

#### **DIAGNOSTICS SERVICES SUB-BMC**

#### Laboratory Unit

Held four (4) quarterly laboratory meetings.

Organised twelve (12) monthly scientific presentations.

#### Pathology Unit

Four meetings were organized at the department.

#### Transfusion Medicine Unit

Organised two (2) management meetings

Held one (1) staff durbar

#### **IMAGING SUB-BMC**

Three (3) sub-BMC management meetings were organized

Two (2) sub-BMC durbars were organized.

#### **MATERNAL HEALTH SUB-BMC**

8 Leadership training organized on the following topics:

- the art of leadership (part 1)
- the art of leadership (part 2)
- the role of a leader in data management and Emotional Intelligence
- disciplinary procedures and code of conduct, and
- 3 trainings on Labour Act.

Orientation conducted for all new staff posted to the Sub-BMC

Held 5 Sub-BMC meetings

Conducted 1 Sub-BMC Peer Reviews

#### **CHILD HEALTH SUB-BMC**

Organized 4 sub-BMC meetings

Organized2 staff durbars

#### **INTERNAL MEDICINE SUB-BMC**

#### 8 Sub BMC Meetings held

• More effective governance & update of financial reports

80% of staff attending each clinical meeting

• Improved knowledge and competence of staff

#### SURGICAL SUB-BMC

Five management meetings were organised

3 General meetings were organised

Units' meetings were held at least once a week

#### **ANAESTHESIA & CRITICAL CARE SUB-BMC**

Eight (8) management meetings were conducted

Five (5) expanded management meetings were conducted

One (1) staff durbar was organised

#### DENTAL, EYE, EAR, NOSE & THROAT (DEENT) SUB-BMC

Organized **1 t**raining on communication disorders in children for UCC Nursery/Primary School Teachers with 40 teachers were trained

Organized three (3) major management meetings

Sub-BMC management trained on 2023 POW & Budget and Monitoring and Evaluation

Organised 8 Clinical meetings conducted

Orientation was done to new staff nurses posted to the SUB BMC

#### **PUBLIC HEALTH SUB-BMC**

Conducted 2 quarterly leadership training for unit heads and focal persons

Set specific objectives/task for each staff for the year

#### **PHARMACEUTICAL SERVICES**

Medicine requirement compiled and submitted to ETC through Procurement unit

Held five (5) management meetings done

Facilitated for 3 Staff to do a 3month online training in leadership in health by the University of Washington

# 2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE REHABILITATION SERVICES Physiotherapy Unit Clinical Psychology Diet and Nutrition unit

# 4.2: Human Resource Related Performance

# HOSPITALWIDE LEVEL

Actual Performance Trend										
Indicator	2017	2018	2019	2020	2021	2022	Target	Remark		
	Annual	Annual	Annual	Annual	Annual	Annual		s % Diff.		
i. Total number staff	1,320	1,325	1,627	1792	2,051	1,915	-	6.6% decr		
ii. % change in total number of staff	10.1% incr	0.4% incr	22.8% incr	10.1% incr	14.5% incr	6.6% decr	-	decr		
iii. Number of staff sponsored for	1,320	1,325	1,627	1792	2,051	1,915	-	6.6% decr		
training iv. Proportion of Staff appraised	60%	37.7%	39%	45.13%	30.9%	45.21%	TH = 100%			
v. % of staff retained after study leave			100%	100%	-		-			
vi. Workplace related injury resulting in death or incapacitation	0%	0%	0%	0%	0%	0%	THs = 1%			
vii. Total staff injury recorded	13	8	20	146	298 (24-injury & 274 - COVID- 19 infected)	115 (20-injury & 95 - COVID- 19 infected)	-			
viii. Health workers who benefited from occupational health and safety interventions	100%	100%	100%	100%	100%	100%				
ix. Total number of Covid-19 Infection among CCTH Staff	1	•	1	131	274	95	-	188.4% decr		
x. Percentage of staff satisfied at the institution	55.9%	36.5%	62.5%	46.5%	-	-	THs = 70%			
xi. Percentage of health staff with accidental needle injury	0.6%	0.4%	0.1%	0.67%	1.1%	0.78%	THs = 1%	decr		
xii. Consultant to resident doctor ratio	1:12	1:7	1:4	1:5	1:1.4	1:1.9	THs = 1:3	incr		
xiii. Doctor to Nurse and midwife ratio	1:5	1:4	1:5	1:5	1:7	1:4	-	decr		
xiv. Delivery to midwife ratio	29:1	30:1	20:1	18:1	15:1	14:1	-	decr		

2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE									
(i.e., all midwives at the institution)									
xv. Delivery to midwife ratio (i.e., productivity of the midwives at only the delivery suite)	62:1	77:1	75:1	70:1	46:1	50:1	-	incr	
xvi. Doctor to pharmacist ratio	12.6:1	15.1:1	8.5:1	9:1	6.4:1	7.5:1	THs =10:1	incr	
xvii. Prescription to pharmacy ratio	13,511:1	16,097:1	8,288:1	9,425:1	6,422:1	6,495:1	THs = 12000:1	incr	
xviii. Number of welfare packages available for staff	1	1	1	1	1		-		
xix. Surgeon to surgery ratio	154:1	133:1	127:1	108:1	199:1	179:1	THs = 250:1	decr	
xx. Nurse and midwives to admission ratio	1:20	1:20	1:16	1:13	1:13	1:13	-		

#### **HOSPITALWIDE LEVEL OUTPUTS**

Successfully recruited 55 staff to reduce the staff gap

- Medical Officers 5
- Midwifery officers 2
- Nursing officers -12
- Staff nurses 20
- Staff midwives- 15
- Pharmacist 1

#### Appraised 45.21% of staff

The HR unit conducted a headcount at the last quarter of the year which saw 30 ghost names removed from our payroll. Introduced and rolled out validation of monthly attendance

All new entrants' salaries were paid within 3 months after processing their documents.

Two change of grade interviews were successfully conducted where 382 staff were promoted, upgraded and converted Improved the archiving system of keeping and tracking of folders of transferred out and wasted staff.

Improved filling system.

# **DEPARTMENTAL LEVEL OUTPUTS**

# **OUT-PATIENTS SUB-BMC**

2 new Medical Officers were posted to the Sub-BMC

New business manager posted to the Sub-BMC

#### **ACCIDENT AND EMERGENCY SUB-BMC**

Seven (7) staff sponsored for further training (target 3)

- 3 doctors and
- 4 nurses

Seven (7) medical officers were posted to the Sub-BMC.

5 nurses were posted to the Sub-BMC

#### **DIAGNOSTICS SERVICES SUB-BMC**

Laboratory Unit

Pathology Unit

## Transfusion Medicine Unit

The following cadre of staff were posted to the unit;

- Six (6) Laboratory scientists
- One (1) haematologist
- One (1) blood donor organiser

#### **IMAGING SUB-BMC**

Received the following cadre of staff at the Sub-BMC;

- One (1) radiologist
- Two (2) sonographers
- Two (2) administrative managers
- One (1) receptionist

#### **MATERNAL HEALTH SUB-BMC**

53 staff had a change of grade through promotion and upgrade activities

#### **CHILD HEALTH SUB-BMC**

One (1) medical officer sent for specialist training

One (1) 1 specialist sent for subspecialty/fellowship training

#### 4 nurses in training

- 1 haematology
- 1 neonatal membership
- 1 paediatric membership
- 1 critical care)

#### 6 nurses returned from training

- 2 paediatric members
- 2 neonatal members
- 2 paediatric oncology nurses

#### **INTERNAL MEDICINE SUB-BMC**

#### SURGICAL SUB-BMC

Organised In-service training on BLS for all staff

More than 90% of staff appraised

6 nurses gained admission to pursue various specialized courses

3 doctors gained admission to pursue further studies

#### **ANAESTHESIA & CRITICAL CARE SUB-BMC**

Three (3) trainings were organized on the following topics:

- Basic Life support
- Pre-Operative Preparations of patients
- Customer care satisfaction

100% nurses and staff appraised

Two (2) CRA's were appointed as in-charges for Anaesthetists

## DENTAL, EYE, EAR, NOSE & THROAT (DEENT) SUB-BMC

Orientation was done to new staff nurses posted to the SUB BMC

Appraised 32 staff

Six (6) Nurses completed specialized nursing in May 2022;

- 3 SSN
- 2 Ophthalmic and
- 1 ENT

#### **PUBLIC HEALTH SUB-BMC**

Appraised all staff

# PHARMACEUTICAL SERVICES

100% Staff were appraised

6 Pharmacists enrolled in Ghana College of Pharmacists residency programme

1 new Staff (Pharmacist) recruited to the pharmacy department

#### **REHABILITATION SERVICES**

### Physiotherapy Department

3 staff have been upgraded t to Physiotherapist

- 1 upgrading to a Rehabilitation Officer and working in the department whiles
- 2 others are also in their various stages of upgrade in the University.

# Clinical Psychology Department

#### Diet & Nutrition Department

Appointed three (3) line managers such as assistant unit heads

#### 4.3: Finance related performance

	2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE HOSPITALWIDE OUTCOME/IMPACT										
A 04:	al Darformana	Trand	HOSPIT	ALWIDE OL	JTCOME/IME	PACT					
indic	al Performance T ator	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	2022 Annual	Target	Remark s % Diff.		
Reve	enue Proxy										
i.	Total Revenue GH¢	-	56,781,792	69,606,36 2	92,745,56 2.00	103,822 ,986.92	131,305 ,508.02	CCTH =	25.8% incr		
ii.	% change in the hospital's revenue	-	-	22.6% (incr)	33.2% (incr)	119% incr	26.5% incr	-			
indic	ator	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	2022 Annual	Target	Remark s % Diff.		
iii.	Proportion of total revenue generated from partners/donors	-	-	0.65%	0.78%	0.9%	11.08%	-	incr		
iv.	Proportion of total revenue from IGF	-	33.2%	31%	24%	23.1%	88.92	-	incr		
V.	IGF Revenue	17,089,4 70.00	18,944,945 .89	21,579,68 0.33	22,268,69 3.6	24,217, 381.36	32,100, 188.39	ССТН			
vi.	% change in IGF revenue	+20.7%	+10.9%	+ 13.9%	+ 3.2%	+73.9%	+32.6	-	Incr		
vii.	Total service income	12,497,8 93	12,982,266 .79	15,832,18 5	15,089,52 3.72	15,816, 701.56	22,786, 950.76	-	44.1% incr		
viii.	Proportion of IGF revenue generated from services	73.1%	68.5%	73.4%	67.8%	67%	70.99%	-	incr		
ix.	Total Drug Income GH¢	4,591,57 6	5,962,679. 10	5,747,495	7,179,169 .88	8,400,6 79.80	9,313,2 37	-	10.9% incr		
X.	Proportion of IGF revenue generated from pharmaceutical services	26.9%	31.5%	26.6%	32.2%	33%	29.01%	-	Decr		
xi.	Ratio of cash revenue to NHIA reimbursement	-	0.66:1	1.32:1	0.85:1	1.1:1	1.61:1	-	incr		
xii.	% IGF Revenue from NHIS	61.8%	50.8%	54.8%	51%	50.8%	48.15%	-	decr		
	% Revenue from out-of- pocket	43.8%	48.7%	43.8%	48.3%	48.5%	50.99%	-	incr		
	Proportion of revenue generated from specialist services	-	-	-	-	-	-	-	-		
	enditure Proxy										
i.	Total Expenditure GH¢	14,027,7 84	19,935,983 .92	20,761,12 6.11	24,832,64 1.11	24,665, 476.40	30,816, 999	-			
ii.	Budget execution rate	76.79%	96.6%	92.4%	85.9%	91.7%	110.0%	-	Incr		
iii.	Proportion of funds spent on services	80.6%	77.5%	76.3%	70.8%	74.9%	69.61%	-	decr		

2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE											
iv.	Proportion of funds spent on pharmaceutical services	19.4%	22.5%	18.2%	32.59%	25.1%	26.33%	-	incr		
V.	Proportion of IGF spent on PPM	4.13%	3.52%	3.51%	3.8%	5.4%	3.53%	THs = 5%	decr		
vi.	Percentage IGF paid as compensation	11.47%	9.68%	9.55%	10.82%	9.4%	8.93%	THs = 10%	decr		
Othe	er Indicators										
i.	Percentage of submitted claims paid	58.68%	20.88%	21.89%	11.2%	53.1%	65.97%	THs = 75%	incr		
ii.	Debtors' days	283.22	346.29	393	215	194	126.78	THs = 90	decr		
iii.	Creditor's days	184.73	100.82	175	182	224.8	233.77	THs = 120	incr		
iv.	Ratio of cash revenue to NHIA reimbursemen t	-	0.66:1	1.32:1	0.85:1	1.1:1	1.61:1	-	incr		
V.	Percentage of NHIA Claims Submitted on time	100%	100%	100%	100%	100%	100%	-	-		
vi.	Percentage of rejection on claims submitted to NHIS	0%	0%	0%	0%	0%	0%	-	-		
vii.	Proportion audit recommendati ons implemented	100%	100%	100%	100%	100%	100%	THs = 100%			
viii.	Number of Audit Committee meetings	-	4	5	4	4	2	-	decr		

#### **HOSPITALWIDE LEVEL OUTPUTS**

Hospital residential accommodation register was updated and was used to actively recover rent arrears

Training on Fixed Assets Data Compilation was organized for members of the FACU Committee in September 2022.

• The training was facilitated by officers from Ministry of Health and Ministry of Finance.

# DEPARTMENTAL LEVEL OUTPUTS OUT-PATIENTS SUB-BMC

#### **ACCIDENT AND EMERGENCY SUB-BMC**

Total revenue generated from non-insured clients amounted to GH¢421,396.00 as compared to GH383,346.00 in 2021 constituting a 9.9% increase in revenue with a Total calculable expenditure of GH¢312,526.99 in 2022 which includes

 receipts from stores and petty cash as compared to GH¢244,682.14 in 2021 constituting 27.7% increase in expenditure

#### **DIAGNOSTICS SERVICES SUB-BMC**

# Laboratory Unit

## Pathology Unit

Total revenue generation amounted to  $GH\phi285,582.00$  as compared to  $GH\phi320,325.00$  in 2021 constituting 11.00% decrease in revenue with a Total expenditure of  $GH\phi61,048.20$  in 2022 as compared to 83,010.00 in 2021 constituting 26. % decrease in expenditure.

#### Transfusion Medicine Unit

#### **IMAGING SUB-BMC**

- Total Revenue Generation amounted to GH¢1,588,317.00 in 2022 as compared to GH¢1,171,139.00 in 2021 constituting 35.63% Increase in revenue.
- Total expenditure amounted to GH¢379,939.78 in 2022 as compared to GH¢511,953.60 in 2021 constituting 34.75% decrease in expenditure

#### **MATERNAL HEALTH SUB-BMC**

Started billing for Ultrasound services

#### **CHILD HEALTH SUB-BMC**

Established a needy fund to support the children on the ward

#### **INTERNAL MEDICINE SUB-BMC**

Authentication system of billing before payment

Periodic financial report made available to HOD and Sub-BMC Staff

Notice posted designated at vantage points insisting patients to demand receipt upon payment.

Refresher training on billing procedure organised for Sub-BMC's Billing Clerks

**SURGICAL SUB-BMC** 

#### **ANAESTHESIA & CRITICAL CARE SUB-BMC**

# DENTAL, EYE, EAR, NOSE & THROAT (DEENT) SUB-BMC

#### **PUBLIC HEALTH SUB-BMC**

# PHARMACEUTICAL SERVICES

#### **REHABILITATION SERVICES**

**Physiotherapy Department** 

Clinical Psychology Department

Diet & Nutrition Department

# CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING

5.1 Improve on Research:

	HOSPITALWIDE LEVEL										
Indicator	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	2022 Annual	Target	Remark s % Diff.			
i. Operational research conducted	2	3	6	2	14	9	TH = 4	decr			
Indicator	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	2022 Annual	Target	Remark s % Diff.			
ii. Total number of researches conducted	2	14	13	50	60		-				
iii. Number of researches published	-	11	10	15	12	17	TH = 20	incr			
iv. No. of Research Applications received at the Facility	-	-	92	112	135	200	-	Incr			
v. No. of Researches Approved	-	-	80	110	121	187	-	incr			
vi. % of research applications	-	-	87%	98.2%	89.6%	93.5%	-	incr			

20	022 ANNUAL OUTCOME AND OUTPU	T PERFORMANCE	
approved by the			
facility/ERC			
Bassarah Candustad hu Staf	HOSPITALWIDE LEVEL OU	TPUTS	
Research Conducted by Staf Authors(S)	Research Topic	Publication link	Donortmont
Nana Ama Amankwa,	Situs inversus totalis in a 34-year-old	https://www.ncbi.nlm.nih.go	Department Accident
Eugene Kojo Adomako,	diabetic woman. A case report	v/pmc/articles/PMC976412	&Emergency
Edwina Okaikai Obodai,		5/	
Sanaa Poku Afriyie-Ansah,			
Abdul Raman Asemah, and			
Frank Quarshie,	A		
Kwadwo Apeadu Danso, Rosemary Sefakor Akuaku,	A case report of a teenager with hepatitis B surface antigen-positive	https://www.ncbi.nlm.nih.go v/pmc/articles/PMC893512	
Rebekah Ruth Taylor,	multifocal hepatocellular carcinoma	4/	
Emmanuella Amoako, Kofi	in a noncirrhotic liver.	<del>"</del>	
Ulzen-Appiah, Bashiru			
Babatunde Jimah, Lily Gloria			
Tagoe			<u> </u>
Kofi Ulzen-Appiah	Embryonal tumor with multilayered	https://doi.org/10.4322/acr.	
Kafui Patrick Akakpo Emmanuella Amoako	rosettes in a teenager  A Report of Rosai-Dorfman Disease	2021.373 https://pubmed.ncbi.nlm.nih	Pathology
Kwadwo Apeadu Danso	in an Adolescent	.gov/35664545/#:~:text=Ro	
Rosemary Sefakor Akuaku	in an Adolescent	sai%2DDorfman%20diseas	
Kofi Ulzen-Appiah		e%20(RDD),nodes%20and	
		%2For%20extranodal%20ti	
		ssues.	-
Kofi Ulzen-Appiah	Pilomatricoma in the neck of an adult	https://www.ncbi.nlm.nih.go	
	male	v/pmc/articles/PMC908379 8/	
Dr. Patrick Armah	A Cross-Sectional Study On	<u>  3/</u>	Internal
Dr. Yvonne Ayerki Nartey	Antihypertensive Regimens for		Medicine
Dr. Eugene Baafi Ampofo	Newly Diagnosed Hypertensives In		
211 Zagerie Zaari 7 iinpere	Ghana		
Dr. Yvonne Ayerki Nartey	The Ghana Hepatopancreatobiliary		Internal
Prof. Lewis R. Roberts	Cancers Outcomes (Gheco) Study; A		Medicine
	Biorepository and Registry of Patients with Or at Risk of		
	Hepatopancreatobiliary Cancers in		
	Ghana.		
Dr. Patrick Maison.	An Analysis Of Prostate Biopsy		Surgery
Dr Patrick Akakpo	Results At The Cape Coast Teaching		Pathology
	Hospital, Ghana		
Wemochigah Grace	A Retrospective Study on Factors		Laboratory
Dr. Edward Morkporkpor	Accounting for Donor Blood Discard		
Adela	at the Cape Coast Teaching Hospital		
Daniel Edem Azumah			
Francis Britwum			
Storp R. Peniel			
Evans Duah			
D.M. d. T.M.			0
Dr Martin T Morna	Covidsurg-3: Outcomes of Surgery in		Surgery
	Covid-19 Infection		
Dr P K Akakpo	Assessing The Utility of a Proposed		Pathology
2.1 Termonyo	System for Routine Assessment Of		. aniology
	Tumour Budding In Core Biopsies Of		

20	022 ANNUAL OUTCOME AND OUTPU	T PERFORMANCE	
	Breast Cancer, A Robust Adjunct To Conventional Grading To Improve Prediction Of Lymph Node Metastasis, Stage And Prognosis		
Authors(S)	Research Topic	Publication link	Department
Prof. Dorcas Obiri-Yeboah Dr. Matt Asare Dr. Gloria Francisca Nuer- Allornuvor Dr Patrick Kafui Akakpo Dr Sebastian Ken-Amoah	Intervention To Increase Self-Collected Samples for Cervical Cancer Screening Behaviour Among Women Living with HIV (WLWH)		Maternal Health Pathology
Dr. Bashiru Babatunde Jimah Dr. Benjamin Dabo Sarkodie	A Multicentre Clinical Audit of Imaging Records at Five Specialist Facilities in Southern Ghana.		Imaging
Emmanuel Amankwa Frempong Patrick Kafui Akakpo Emmanuel Gustav Imbeah	Significance Of Viruses in Sporadic Breast Cancer in Sub-Saharan- Africa; A Study of Human Papillomavirus (HPV), Epstein-Bar Virus (EBV) And Cytomegalovirus (CMV).		Pathology
Dr. Patrick Maison. Dr. Oluwayemisi Ekor	Surgical Outcome in Children Undergoing Hypospadias Repair Under Caudal Epidural Versus Penile Block at The Cape Coast Teaching Hospital.		Surgery Anaesthesia
Eric Komla Anku Dr. Lamptey Samad George Akafity Sara Ama Amoo, Rn	Nutrition Support Practices in The Intensive Care Unit of Cape Coast Teaching Hospital		Dietherapy  Anaesthesia And Critical Care
Dr. Nana Ama Frimpomaa Agyapong Dr. Joyce Ashong Dr. Jessica Ayensu Dr. Enerst Teye Dr. Moses Klevor Dr. Christiana Nsiah- Asamoah	Feasibility Of Establishing and Acceptability of Breastmilk Banks in Ghana: An Interrogative Study Involving Various Stakeholders		Child Health
Dr. Charles Takyi Dr. Promise Sefogah Dr. Evans Agbeno Dr. Joycelyn Ashong	Prevalence And Profile of Infertility in Ghana: A Multi-Centre Mixed- Method Study		Maternal Health
Dr. Vincent Kudoh Dr. Samuel Mensah Prof. Ganiyu Rahman	Comparing The Effectiveness of Iv Morphine with IV Paracetamol Vs Rectal Diclofenac with Oral Paracetamol in Controlling Acute Post-Elective Open Primary Unilateral Inguinal Mesh Herniorrhaphy Pain in Cape Coast Teaching Hospital (CCTH)		Surgery
Ms. Gertrude Abbey Dr. Peter Appiah- Thompson Ms. Rebecca Boison	Knowledge Of Autism Spectrum Disorder Among Health		DEENT

2	022 ANNUAL OUTCOME AND OUTPU	T PERFORMANCE	
	Professionals at The Cape Coast Teaching Hospital, Ghana		
Authors(S)	Research Topic	Publication link	Department
Dr Kwasi Agyen Mensah	African Surgical Outcomes Study in Paediatric Patients (Asos-Paeds)		Surgery
Dr. Ebikela Ivie Baidoo	Enterally Based (Entroresus) Vs Intravenous (Iv) Resuscitation for Burn Injuries in Ghana: A Hybrid Type I Effectiveness-Implementation Cluster Randomized Trial		Anaesthesia And Critical Care
Dr. Emmanuel Owusu Ofori	Hippo Study; A Global Prospective Cohort Study on Inguinal Hernia Surgery		Surgery
Priscilla Araba Etuah	Assessment of Technical Efficiency of Clinical Departments: A Case Study of the Cape Coast Teaching Hospital		Research, Monitoring and Evaluation
	OUT_DATIENTS SUB_B	MC	•

#### **OUT-PATIENTS SUB-BM**

**ACCIDENT AND EMERGENCY SUB-BMC** 

1 research conducted and published in 2022 in a Journal in radiology case reports.

Title: Situs inversus totalis in a 34-year-old diabetic woman. A case report

**Authors:** Nana Ama Amankwa, Eugene Kojo Adomako, Edwina Okaikai Obodai, Sanaa Poku Afriyie-Ansah, Abdul Raman Asemah, and Frank Quarshie

Publication Link: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9764125/

#### **DIAGNOSTICS SERVICES SUB-BMC**

#### Laboratory Unit

Two (2) researches conducted with one published;

1.

Title: A Retrospective Study on Factors Accounting for Donor Blood Discard at the Cape Coast Teaching Hospital.

Authors: Wemochigah Grace, Edward Morkporkpor Adela, Daniel Edem Azumah, Francis Britwum, Storp R. Peniel, Evans Duah

Publication doi: 10.11648/j.frontiers.20220202.14

2. The Perception, Knowledge and Acceptance of Blood Transfusion among PREGNANT WOMEN in the Cape Coast Metropolis.

# Pathology Unit

Published 4 research articles;

1. A case report of a teenager with hepatitis B surface antigen-positive multifocal hepatocellular carcinoma in a noncirrhotic liver.

**Authors:** Kwadwo Apeadu Danso, Rosemary Sefakor Akuaku, Rebekah Ruth Taylor, Emmanuella Amoako, Kofi Ulzen-Appiah, Bashiru Babatunde Jimah, Lily Gloria Tagoe

Publication Link: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8935124/

2. Embryonal tumor with multilayered rosettes in a teenager

Authors: Kofi Ulzen-Appiah & Kafui Patrick Akakpo

Publication Link: https://doi.org/10.4322/acr.2021.373

3. A Report of Rosai-Dorfman Disease in an Adolescent

Authors: Emmanuella Amoako Kwadwo Apeadu Danso, Rosemary Sefakor Akuaku, Kofi Ulzen-Appiah

#### **Publication Link:**

https://pubmed.ncbi.nlm.nih.gov/35664545/#:~:text=Rosai%2DDorfman%20disease%20(RDD),nodes%20and%2For%20extranodal%20tissues

4. Pilomatricoma in the neck of an adult male

Authors: Kofi Ulzen-Appiah

Publication Link: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9083798/

#### Transfusion Medicine Unit

#### **IMAGING SUB-BMC**

#### **MATERNAL HEALTH SUB-BMC**

#### **CHILD HEALTH SUB-BMC**

#### One research on-going;

 A 5-Year Review of Neonatal Mortality in A Tertiary Facility – Trends and Determinants for Survival. A Retrospective Cohort Study.

#### **INTERNAL MEDICINE SUB-BMC**

#### **SURGICAL SUB-BMC**

7 research reports published in health journals

6 Departmental researches were conducted

#### **ANAESTHESIA & CRITICAL CARE SUB-BMC**

#### A research team was formed

Received ethical clearance and collected data on;

- An Investigation on Women's Labour Pain Experiences and Perception of Epidural Analgesia
- Nutrition in Critically ill Patients

#### DENTAL, EYE, EAR, NOSE & THROAT (DEENT) SUB-BMC

#### Clinical research on-going

- Knowledge of Autism among Health workers in CCTH
- Prevalence of Glaucoma cases in CCTH & ENT- Congenital Laryngeal Hemangloma-Case Report of a Rare Presentation

## **PUBLIC HEALTH SUB-BMC**

#### PHARMACEUTICAL SERVICES

15 Pharmacovigilance monitoring done. 40 ADRs recorded and submitted to FDA.

1 survey conducted (RUM). Result ready for dissemination

#### **REHABILITATION SERVICES**

# Physiotherapy Department

#### Clinical Psychology Department

#### Diet & Nutrition Department

Conducted a baseline study to investigate current nutrition support practices and feeding in the ICU. This led to the development of Perioperative nutrition protocol at the ICU

Title: Nutrition Support Practices in The Intensive Care Unit Of Cape Coast Teaching Hospital

**Authors**: Nutrition Support Practices In The Intensive Care Unit Of Cape Coast Teaching Hospital

Engaged with tertiary institutions to conduct collaborative research

# 5.2 Improve on Teaching and Learning:

HOSPITALWIDE LEVEL										
Indicator201720182019202020212022TargetRemark s % Diff.AnnualAnnualAnnualAnnualAnnualAnnualAnnualAnnual										
i. Resident pass	-	90%	100%	-	91%	87.5%	THs= 60%	decr		

	2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE											
ii. Number enrolled in postgraduate colleges	-	53	48	-	38		-					
iii. Consultant to Resident Doctor ratio	1:12	1:7	1:4	1:5	1:1.4		THs = 1:3					
iv. Proportion/numbe r of clinical staff enrolled in postgraduate colleges	-	-	-	23	38	47 25 – Dr. 7 = Pharm. 2 = Midwives 13 Prof. Nurses	-	26.7% incr				

#### **HOSPITALWIDE LEVEL OUTPUTS**

Appointed a Training Coordinator for the Hospital

8 new Specialists and 7 Nurse specialists resumed after completing their postgraduate training.

Received the Accreditation for specialist training in the following areas:

- Urology
- Orthopaedics
- Re-accreditation for General Surgery

Started house officer training in Emergency Medicine and

Initiated the process to secure accreditation for house officer training in Anaesthesia.

100% pass for medical students

MOU signed with school of Peri-operative and Critical Care Nursing

# DEPARTMENTAL LEVEL OUTPUTS OUT-PATIENTS SUB-BMC

#### **ACCIDENT AND EMERGENCY SUB-BMC**

40 Medical students and Physician Assistants passed through the department in 2022 as compared to 28 students in 2021.

Trained the first Emergency Medicine House Officer

3 family medicine residents rotated through the department

# **DIAGNOSTICS SERVICES SUB-BMC**

#### Laboratory Unit

Participated in EQA for TB, COVID-19, Malaria and HIV.

Staff benefitted from training programs and continuous professional education

- Ergonomics,
- QMS
- TB,
- Blood Transfusion
- Endocrinology
- Malaria
- Influenza
- Molecular Diagnosis

Staff facilitated key training programs and also served as Regional OTSS and EQA supervisors in the Region

#### Pathology Unit

417 Medical students rotated through the unit

#### Transfusion Medicine Unit

# **IMAGING SUB-BMC**

More than 212 students (both sonographers and radiographers) and two (3) residents rotated through the sub-BMC.

#### **MATERNAL HEALTH SUB-BMC**

Refurbished and equipped doctors and nurses to create a conducive environment.

5 Midwives received approval for postgraduate training

65 undergraduate medical students passed through the Sub-BMC for training.

#### **CHILD HEALTH SUB-BMC**

Clinical rotations by Physician Assistants, Nursing students as well as medical students

#### **INTERNAL MEDICINE SUB-BMC**

Residency training continued with the start of one new resident

One specialist physician graduated

#### **SURGICAL SUB-BMC**

#### Organised 44 clinical meetings

Nursing students from various Nursing Training Colleges did clinicals at the sub-BMC

11 foreign medical students did their rotation at the Sub-BMC

8 physician assistants from various universities did their clerkship at the Sub-BMC

3 PON students came for internship and clinicals

#### **ANAESTHESIA & CRITICAL CARE SUB-BMC**

Ten (10) departmental meetings were organised

#### DENTAL, EYE, EAR, NOSE & THROAT (DEENT) SUB-BMC

305 students trained and supervised.

- STL-6 ENT students
- Eve- 85
  - o 11 Ophthalmic
  - o 51 Rotation Nurses and
  - o 23 NMTC student
- ENT-102
  - o 11 ENT students
  - o 91 Rotation/NMTC Students
  - 126 Medical Students both Eye and ENT &
  - 2 Optometry Interns

Conducted eight (6) clinical presentations

#### **PUBLIC HEALTH SUB-BMC**

Organised bi-weekly teaching/training sessions

#### **PHARMACEUTICAL SERVICES**

Appointed five (5) preceptors in 2022 to support training of students

Held 27 clinical meetings

Organised 53 case presentations

#### **REHABILITATION SERVICES**

#### Physiotherapy Department

#### Clinical Psychology Department

Supported the training of Nineteen (19) practicum students from UCC

## Diet & Nutrition Department

Supported the training of 154 students that passed through the department;

- 122 undergraduates and postgraduates' students
- 22 nurses and midwifes on rotation
- 10 technical students

#### CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS Indicator 2017 2018 2019 2020 2021 2022 Remark Target Annual Annual Annual Annual Annual s % Diff. Annual Proportion of 100% 150% 50% 0 100% planned specialist outreach support to facilities carried out 2017 2018 2019 2020 2021 2022 Target Indicator Remark Annual Annual Annual s % Diff. Annual **Annual** Annual Number of outreach 100% 100% 100% 100% 100% THs = 16% visits carried out Outreach visits 17 174 164 398 1,063 Incr carried out Total number of 17 174 164 398 1,063 Incr outreaches planned visits carried out 13.873 8,276 20.415 38,896 THs= 87.3% Number of 1.062 Beneficiaries 11,215 incr recorded

#### **HOSPITALWIDE LEVEL OUTPUTS**

Collaborated with International institutions to conduct surgical specialist outreaches:

- Himalayan Cataract Project (International) = 2,415 HCP Cataract Surgeries
  - o 18,103 Screened
- UTAH = 22 ENT Surgeries
- International Health Care Volunteers = 12 Maternal Health related surgeries
- MEDEVAC Team from Czech Republic = 27 Plastic Surgeries and 42 Orthopaedic surgeries

# Outreach support to peripheral institutions

- a. Total outreaches carried out: = 402
  - ✓ Outreaches (communities)
    - Total Community/Church = 398
    - Number of People = 38,247
  - ✓ Outreaches (Schools)
    - Total number of Schools visited = 3
    - Number of beneficiaries/pupils = 277
  - ✓ Surgical Outreaches to facilities
    - Number of centres = 0
    - Total surgeries done = 0
  - ✓ Surgical Outreaches to Communities
    - Number of communities visited = 0
      - Number of beneficiaries = 0

Provided continuous support to lower facilities on phone and visits to site

Some lab Staff served as Regional OTSS and EQA supervisors

#### **DEPARTMENTAL LEVEL OUTPUT**

#### **OUT-PATIENTS SUB-BMC**

Weekly clinical meetings and training of house officers and Medical Officers on the management of Hypertension and Diabetes at University of Cape Coast Hospital

# **ACCIDENT AND EMERGENCY SUB-BMC**

550 referrals were received and managed.

Visited 1 referral site (UCC Hospital)

5 radio talks and 2 TV shows were conducted.

#### **DIAGNOSTICS SERVICES SUB-BMC**

## Laboratory Unit

Partnered with KHRC and NMIMR in undertaking the MVPE program and Influenza surveillance respectively.

#### Pathology Unit

Transfusion Medicine Unit

# **IMAGING SUB-BMC**

Coordinated 107 referral cases from lower level of care

# MATERNAL HEALTH SUB-BMC

Collaborated with Regional Health Directorate and conducted mentorship support for peripheral facilities in Central Region

Conducted 5 Joint Zonal OBGYN Specialists EMONC Training

#### CHILD HEALTH SUB-BMC

Organised a 3-day training in Neonatal Care and Paediatric Emergencies from 18th-20th October at RHD Conference Room

Provided telephone feedback on referred cases.

# **INTERNAL MEDICINE SUB-BMC**

**SURGICAL SUB-BMC** 

#### **ANAESTHESIA & CRITICAL CARE SUB-BMC**

#### DENTAL, EYE, EAR, NOSE & THROAT (DEENT) SUB-BMC

3 churches, 3 School and 1 organization Outreach conducted

Eye unit undertook outreach programs to 6 districts namely Shama, Gomoa East, Agona West, Gomoa Central, Abura Asebu Kwaman and Twifo Hemang Lower Denkyira District to screen clients for cataract surgery

Undertook cleft and other Dental Maxillofacial repair outreach program with 7 cleft repairs done

2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE						
Expand Eye care services to include other surgical and non-surgical interventions under donor funding with 2415 cataract						
surgeries performed						
22 ENT collaborative surgical campaigns /surgeries performed by UTAH						
PUBLIC HEALTH SUB-BMC						
Organized outreach programmes to Senior High Schools (substance abuse, teenage pregnancy)						
Organized outreach programs to selected markets						
PHARMACEUTICAL SERVICES						
•						
REHABILITATION SERVICES						
Physiotherapy Department						
-						
Clinical Psychology Department						
-						
Diet & Nutrition Department						
Reduction of non-communicable disease burden						
<ul> <li>Conducted outreach services to six nearby communities</li> </ul>						

# **SECTION 2**

# **CHAPTER TWO**

# **HUMAN RESOURCE**

#### 2.1: INTRODUCTION

Human resource is considered one of the valuable inputs of the health system especially in hospitals as their role, skills and knowledge contributes immensely to the performance of hospitals and the health system at large. As such, the Management of CCTH strives to put in place innovative strategies and approaches that would lead to improvement of the capacity of staff as evident in the current medium-term (2020 to 2050) strategic plan as well as the yearly human resource needs assessment of the hospital all geared towards the attainment of the objectives of CCTH and the health sector. The chapter provides detailed performance report of the human resource in 2022 in comparison with the previous years.

#### 2.2: STAFF STRENGTH ANALYSIS

The hospital's total number of Staff in 2022 declined by 6.6% (from 2,051 in 2021 to 1,915 in 2022) as shown in figure 2.2.1. The general decline in the total staff also affected the composition of staff in the various directorates as evident in table 2.2.2 below. The Nursing directorate recorded a marginal decline of 1.22% in their staff strength (from 1,062 in 2021 to 1,049 in 2022), whiles the medical directorate recorded the highest drop of 18.1% in its staff strength in 2022 (from 547 in 2021 to 448 in 2022). Further, out of the 1,915 staff at the hospital in 2022, 55% (1,049) were in the Nursing Directorate, 23% (448) were in the Medical Directorate, 17% (324) were in Administration Directorate whiles 3% (49) and 2% (45) of the staff were in the Finance and Pharmacy Directorates respectively. In addition, 98.8% (1,796) of the total staff in 2020 were permanent staff, 2.7% (51) were CCTH staff, 1.46% (28) were UCC SMS staff whiles 1.6% (31) and 0.47% (9) of the staff were NABCO personnel and staff on secondment respectively.

In addition, the total number of doctors at the hospital in 2022 went up by 25.75% (from 299 in 2021 to 376 in 2022). 48% (155) of the doctors were House Officers, 16% (50) were Residents, 15% (49) were specialists, 12% (39) were medical officers, whiles 7% (21) and 2% (6) were senior specialists and consultants respectively. The number of House Officers in 2022 went up by 20.1% (from 139 in 2019 to 155 in 2022), the number of Residents increased by 31.58% (From 38 in 2021 to 50 in 2022 whiles the number of Medical Officers declined by 15.22% (from 46 in 2021 to 39 in 2022). On the other hand, the number of Consultants, Senior Specialists and Specialist remained the same as 2021 in 2022. In spite of the increase in the number of doctors during the year under review, the OPD cases seen per doctor went up (from 1:952 in 2021 to 1:1033 in 2022). However, the OPD cases seen per specialist declined (from 1:1483 in 2021 to 1:1085) in 2022.

Also, the number of professional Nurses decreased by 6% (from 855 in 2021 to 808 in 2022), number of midwives however increased by 16.1% (from 199 in 2019 to 231 in 2022). The nurse and midwife admission ratio dropped in 2022 (from 1:13.2 in 2021 to 1:13). The hospital in 2022 saw a decline in the deliveries to midwife's ratio at the

institutional level (from 15:1 in 2021 to 14:1 in 2022), however, deliveries to midwife's ratio at the delivery suite also went up (from 46:1 in 2021 to 50:1 in 2022). Further, in 2022, the number of Pharmacist reduced by 12% (from 25 in 2021 to 22 in 2022) resulting in an increase in the doctor to pharmacist ratio (from 6.4:1 in 2021 to 7.5:1 in 2022. The prescription to pharmacist ratio however went up in 2022 (from 6,422:1 in 2021 to 6,495:1 in 2022).

Moreover, the hospital recorded a drop of 61.4% (from 298 in 2021 to 115 in 2022) in the total reported among staff but none of them resulted in death. Among the injuries reported, 95 (82.6%) were due to COVID-19, 15 (13.0%) were needle prick whiles 3 (2.6) were blood splash. Figure 2.2. 1 to Figure 2.2.3 and Table 2.2.1 to Table 2.2. 6 provides a trend analysis of the hospital's staff strength.

**Trend Analysis of Total Staff Strength** 2500 2,051 1,915 2000 1,792 1,627 6.6% decr 1,320 1,325 1500 1,199 1000 786 500 0 2015 2016 2017 2018 2019 2020 2021 2022

Table 2.2. 1: Trend Analysis of Total Staff Strength

Table 2.2. 2: Trend of Total Staff Available at CCTH in 2022

DIRECTORATE	PERMANENT	UCC SMS	SECONDMENT	CCTH STAFF	NABCO	TOTAL
Administration	276	-	7	19	22	324
Finance	43	-	-	-	6	49
Medical	396	28	2	20	2	448
Nursing	1,048	-	-	-	1	1049
Pharmacy	33	-	-	12	-	45
Grand Total	1796	28	9	51	31	1915

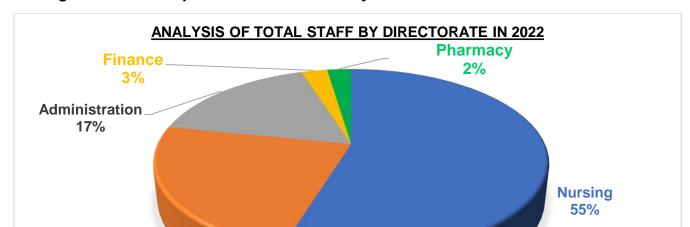


Figure 2.2. 1: Composition of Total Staff by Directorates at CCTH in 2022

Table 2.2. 3: Composition of Total Staff by Directorates at CCTH

DIRECTORATE	2017	2018	2019	2020	2021	2022	REMARKS
Administration	287	243	308	332	336	324	3.57% decr
Finance	25	24	43	51	57	49	14.04% decr
Medical	321	327	392	450	547	448	18.10% decr
Nursing	675	703	845	918	1,062	1,049	1.22% decr
Pharmacy	19	28	39	41	49	45	8.16% decr
<b>Grand Total</b>	1,320	1,325	1,627	1,792	2,051	1,915	6.6% decr

Table 2.2. 4: Trend Analysis of Total Staff Strength

Medical 23%

Cadre	2015	2016	2017	2018	2019	2020	2021	2022	Remarks
Doctors	116	178	186	221	266	291	299	376	25.75% incr
Radiology	3	3	5	8	7	-	-	6	
Technicians									
Radiologist	-	1	2	3	3	3	2	2	
Radiographers	3	3	5	5	5	6	6	5	16.7% decr
Professional &	317	535	554	546	647	713	855	808	5.5% decr
<b>Enrolled Nurses</b>									
Professional	-	433	455	449	562	643	784	737	6.0% decr
Nurses									
Enrolled Nurses	-	102	99	97	85	70	71	71	
Midwives	31	100	106	105	152	164	199	231	16.1% incr
Pharmacist	8	9	9	9	18	18	25	22	12% decr
Pharmacist	6	7	6	6	7	7	7	8	incr
Tech									
Accountants &	14	14	18	24	27	31	47	42	10.6% decr
Finance Officers									

Cadre	2015	2016	2017	2018	2019	2020	2021	2022	Remarks
Laboratory & Lab Tech	15	16	18	20	18	51	46	76	65.2% incr
Health Services Administrators	5	4	8	8	7	9	13	12	7.7% decr.
Optometrist	2	2	2	2	2	2	6	6	
Other GOG Pay Roll Staff	176	221	317	363	314	585	486	236	51.4% decr
CCTH Pay Roll Staff	96	116	91	105	61	76	49	51	4.1% incr
Total Staff	786	1,199	1,320	1,325	1,627	1,792	2,051	1,915	6.6% decr

Figure 2.2.3: Composition of Doctors in 2022

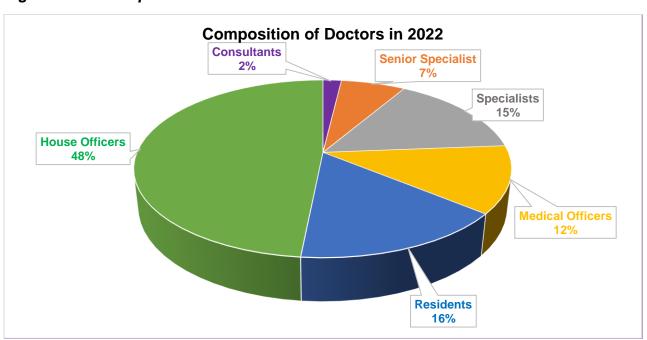


Table 2.2. 5: Trend of Doctors by Category

CATEGORY	2017	2018	2019	2020	2021	2022	REMARKS
Consultants, Senior Specialist and Specialists	45 (*25 SMS)	53 (*31 SMS)	72 (*33 SMS)	68 SMS	76 SMS	76 SMS	-
Consultants	4	4	4	4	6	6	-
Senior Specialist	1	4	8	9	21	21	-
Specialists	40	45	60	55	49	49	-
Medical Officers	69	29	33	38	46	39	15.22% decr
Residents	47	53	48	62	38	50	31.58% incr

CATEGORY	2017	2018	2019	2020	2021	2022	REMARKS
House Officers	108	86	113	123	139	155	20.1% incr
TOTAL	222	221	266	291	299	376	25.75% incr

Table 2.2. 6: Number of Specialists by Category

SPECIALTY	2018	2019	2020	2021	2022
Anaesthesia	1	1	2	1	1
Cardiology	1	1	1	1	
Chemical Pathology	1	1	-	-	
Child Health	3	7	9	4	
Clinical Microbiology	1	1	2	1	
Community Medicine	1	1	-	-	
Emergency Medicine	2	2	2	1	2
Endocrinology	1	1	1	1	1
ENT	2	2	2	1	
Family Medicine	2	2	2	2	4
Haematology	2	2	2	2	3
Internal Medicine	3	6	-	6	
Maxillofacial	2	3	-	2	
Microbiology	1	1	2		
Medical Oncology	-	-	-	1	
Neurosurgery	1	1	1	1	
Oral Pathology	-	-	-	1	
Otorhinolaryngology	-	-	-	1	
O&G	10	13	11	8	
Ophthalmology	3	3	3	3	3
Trauma & Orthopaedics Specialist	2	2	2	4	2
Physician specialist	-	-	7	-	9
Pathology	2	2	3	6	5
Plastic Surgery	1	1	-	1	
Radiology	3	3	3	3	
Surgery	7	13	13	10	
Urology	1	2	2	1	1
Grand Total	53	72	58	62	87

Table 2.2. 7: Trend of Nurses and Midwives by Category

CADRE	2018	2019	2020	2021	2022	REMARKS
Professional	449	562	643	784	737	6.0% decr
Nurses		(25.2% incr)	(14.4%			
		, ,	incr)			
Enrolled nurse	97	85	70	71	71	-
		(12.4% decr)	(17.6%			
			decr)			
Community	9	10	7	7	9	28.6% incr
Health Nurse		(11.1% incr)	(30% decr)			

CADRE	2018	2019	2020	2021	2022	REMARKS
Midwives	105	152 (44.8%	164	199	231	16.1% incr
		incr)	(7.9% incr)			
TOTAL	659	724 (9.9%	807	1,061	1,048	1.23% decr
		incr)	(11.5%)			

Table 2.2. 8: HR Performance under Teaching Hospital's (THs) KPIs

KPIS	2017	2018	2019	2020	2021	2022	Remarks	Target	Measurement
OPD cases seen per doctor	1:1030	1:1163	1:109 8	1:749	1:952	1:1033	incr.		Total no. of client attending OPDs / Total no. of Drs
OPD Cases seen per specialist	1:1849	1:1418	1:125 5	1:102 4	1:148 3	1:1085	decr.	1110 —	Total no. of OPD client attending specialist clinics / Total no. of specialist/Snr. Specialists/Con sultants.
Consultant Resident Doctor ratio	1:12	1:7	1:4	1:5	1:1.4	1:1.9	incr	THs = 1:3	Total number of consultants and snr specialist/ Resident Doctors
Doctor to Nurse/ Midwives Ratio	1:5	1:4	1:5	1:5	1:7	1:4	decr	-	Total number of doctors in the hospital / Total of Nurses
Nurse and Midwife admission ratio	1:20	1:20	1:16	1:13	1:13.2	1:13	Incr		Total no. of clients admitted / total no. of nurses and midwives
Doctor Pharmacis t Ratio	12.6:1	15.1:1	8.5:1	9:1	6.4:1	7.5:1	incr	THs =10:1	Total number of Doctors/Total Pharmacist in the Hospital
Prescriptio n to pharmacy ratio	13,511 :1	16,097 :1	8,288: 1	9,425: 1	6,422: 1	6,495:1	Decr	THs = 12000:	Total no. of prescription served/ total no. of pharmacists

KPIS	2017	2018	2019	2020	2021	2022	Remarks	Target	Measurement
Deliveries to midwives' ratio at the Facility	29:1	30:1	20:1	18:1	15:1	14:1	Decr		Total Number of deliveries / Total No. of midwives
Deliveries to midwives' ratio at the Delivery Suite	62:1	77:1	75:1	70:1	46:1	50:1	incr		

# 2.3 STAFF GAP ANALYSIS AND INTERVENTION IN 2022

Human Resource gap analysis is necessary to help identify the cadre and skills that are relevant to ensure the achievement of organisational goals. Recruitment and training are some of strategies implemented by CCTH to curb the problem of inadequate skilled-mix staff. A total of 55 staff were recruited in 2022 out of which 20 (36.4%) were nursing officers, 15 (27.3%) were midwifery officers whiles 12 (21.8%) and 5 (9.1%) were nursing officers and medical officers respectively.

As at 2022, CCTH had a gap of 214 in the total number of medical doctors required. However, 72 are under various training. Among the doctors under training, 4 are specialising in infectious disease, 3 in radiation oncology, 12 in general surgeon whiles 10 are training in obstetrics and gynaecology. Further, out of the 128 pharmacist required at the hospital, only 33 were available in 2022 whiles 8 were in school. Also, 189 allied health professionals are required at the hospital but 82 were available in 2022. Figure 2.3.1 illustrates the cadre of staff recruited in 2022 whiles table 2.3.1 shows a trend of the various cadre employed at the hospital. Table 2.3.2 to table 2.3.5 provides the HR gap at the hospital in 2022.

Figure 2.3. 1: Categories of Newly Recruited Staff at CCTH in 2022

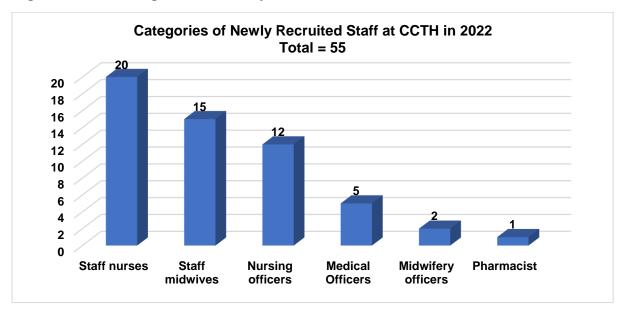


Table 2.3. 1: Trend of Categories of Newly Recruited Staff at CCTH

2020	)	2021		202	2
GRADES	NUMBER	GRADES	NUMBER	GRADES	NUMBER
Specialist	1	Specialists	5	Pharmacists	1
Medical Officers	23	Medical Officers	19	Medical Officers	5
Nursing Officers	47	Nursing Officers	30	Nursing Officers	12
Staff Nurses	70	Staff Nurses	108	Staff Nurses	20
Midwives	19	Midwives	38	Midwifery Officers	2
Technical Officer (lab)	11	Technical Officer (lab)	17	Midwifery officers	15
Health Research Officers	2	Health Research Officers	3		
Administrative Managers	5	Administrative Managers	10		
Supply Officers	3	Supply Officers	1		
Accountant	5	Accountant	10		
I.T Manager	1	Blood Donor Organizers	4		
Mortuary Attendants	3	Labourer/Porters/Security	25		
Procurement Manager	1	Estate/Equipment/Artisan	11		
Finance Officer	1	Finance Officer	3		
Biomedical Scientist	21	Biomedical Scientist	18		

2020	)	2021			22
GRADES	NUMBER	GRADES	NUMBER	GRADES	NUMBER
Physician Assistant	1	Cooks	9		
Catering Officer	1	CCTH Staff	9		
CCTH Staff	19	Technical Assistant (Lab)	13		
TOTAL	234	Technical Assistant (Records)	4		
		Enrolled Nurse	1		
		Clinical Psychologist/Health Educator	4		
		TOTAL	342	TOTAL	55

Table 2.3. 2: Gap Analysis for Doctors

CADRE	NO. REQUI RED	NO. AVAILABL E IN 2020	NO. AVAILABL E IN 2021	NO. AVAILABL E IN 2022	GAP IN 2022	UNDER TRAINING IN 2022
Medical Officers	56	38	28	33	23	17
Maxillofacial surgeon	5	2	2	2	თ	
Specialist Community Oral Health /Dentist	6	0	0	1	5	-
Specialist Orthodontist	2	0	1	1	1	1
Specialist Restorative Dentistry	4	0	0	-	4	-
Cardiologist	4	1	1	1	3	-
Dermatologist	2	1	1	1	1	1
Doctor Anaesthetist	27	2	1	1	26	3
Emergency Medicine Physician	22	2	2	2	20	2
Endocrinologist	2	1	1	1	1	-
Family Physician	7	2	4	4	3	2
Gastroenterolo gist	4	0	1	1	3	-
Infectious Disease Specialist	4	0	0	-	4	1
Nephrologist	3	0	0	0	3	-
Neurosurgeon	2	1	1	1	1	4

CADRE	NO. REQUI	NO. AVAILABL	NO. AVAILABL	NO. AVAILABL	GAP IN	UNDER TRAINING IN
	RED	E IN 2020	E IN 2021	E IN 2022	2022	2022
Obstetrician &	21	11	9	9	12	10
Gynaecologist						
Ophthalmologi	7	3	3	3	5	4
st						
Paediatric	2	0	0	-	2	-
Endocrinologist	0	•			-	
Paediatric	2	0	0	-	2	-
Nephrologist	2	0	0		2	
Paediatric	2	0	0	-	2	-
Neurologist Paediatric	2	0	0	-	2	1
Oncologist	2	U	U	-		'
Paediatrician	16	6	3	2	14	6
(General)	10	Ü		_		ŭ
Pathologist	6	3	5	5	1	-
Physician	32	7	9	5	27	7
Specialist						
(Medicine)						
Respiratory	2	0	0	-	2	1
Physician						
Rheumatologis	2	0	0	-	2	1
t						
Specialist	5	2	3	3	2	
Haematology	_					
Specialist	5	2	2	1	4	-
Microbiology	•	2	2	2	0	4
Trauma &	6	2	2	3	2	1
Orthopaedic Specialist						
Urologist	4	2	1	3	1	1
General	11	13	2	8	3	12
Surgeon		10	_	Ŭ		12
Paediatric	8	0	0	(1)	8	1
Surgeon				( ' '		·
Clinical	8	0	0	-	8	-
Medical						
Physicist						
ENT specialist	5	2	2	3	2	1
Radiologist	7	3	2	2	5	3
Radiation	9	0	1	1	8	3
Oncologist						
Specialist,	-	-	-	1	-	-
Psychiatry	0.4.0	400	<b></b>	20	0.1.1	
TOTAL	312	106	87	88	214	72

Table 2.3. 3: Staff Gap Analysis – Nurses

CADRE	NO. REQUIRED	NO. AVAILABLE IN 2019	NO. AVAILABLE IN 2020	NO. AVAILABLE IN 2021	NO. AVAILABLE IN 2022	GAP IN 2022
Midwives	175	152	164	199	262	+87
Community Health Nurse	14	10	7	7	7	7
Registered (Professional) General Nurses	955	562	643	784	1005	+50
TOTAL	1144	724	814	990	1274	

Table 2.3. 4: Gap Analysis for Pharmacists

CADRE	NO.	NO.	NO.	NO.	NO.	GAP	UNDER
CADILL	REQUIRED	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	IN	TRAINING
		IN 2019	IN 2020	IN 2021	IN 2022	2021	IN 2022
Pharmacists	57	18	15	22	22	35	1
(General)							
Pharmacy	7	0	0	0	0	7	0
Specialist - Drug							
Information							
Pharmacy	6	0	0	0	0	6	1
Specialist-							
Manufacturing							
Pharmacy	5	0	0	0	0	5	0
Specialist –Radio							
Clinical	15	1	3	1	3	12	1
Pharmacist							
Pharmacy	38	7	7	8	8	30	-
Technician							
Pharmacy	6	-	-	-	-	6	1
Specialist -							
Oncology							
Pharmacy	5	-	-	-	-	5	1
Specialist-							
Infectious							
Diseases							
Pharmacy	7	-	-	-	-	7	1
Specialist - Renal	_						4
Pharmacy	5	-	-	-	-	5	1
Specialist –							
Anesthesia/ICU							
Pharmacy	6	-	-	-	-	6	1
Specialist –							
Emergency/Critical							
Care	400	00	05	0.4	00	405	
Total	128	26	25	31	33	125	8

Table 2.3. 5: Gap Analysis for Allied Health Professionals

CADRE	NO. REQUIRED	NO. AVAILABLE IN 2019	NO. AVAILABLE IN 2020	NO. AVAILABLE IN 2021	NO. AVAILABLE IN 2022	GAP IN 2022
Physiotherapist	29	3	3	4	4	25
Physiotherapy Assistant	12	8	8	7	7	5
Radiographers/ X- ray Technician	17	7	6	6	11 (5 IGF)	6
Radiotherapist	6	0	0	0		6
Biomedical Scientist	96	12	34	48	48	48
Biostatistics Officer	11	1	0	2	3	8
Technical Officer (Biostats. /HI)	18	11	9	9	9	9
TOTAL	189	42	60	76	82	107

## 2.4. PROMOTIONS AND STAFF DEVELOPMENT

Job promotion and staff development is considered as instrumental strategies that organisations adopt to improve the performance of staff, motivate as well as to retain staff. These strategies also serve to promote a sense of commitment among staff. As a result, CCTH has over the years implemented promotion interviews twice annually aimed at upgrading, converting, promote or appoint staff.

In 2022, a total of 382 staff from various professional background were interviewed, out of which 84.3% (322) were promoted, 13.1% (50) were upgraded, 2.4% (9) had their grade converted whiles 1 staff was appointed to a managerial position. 46.6% (178) out of the 382 of the staff were interviewed in the first half of 2022 whiles 53.4% (204) were interviewed in the second half of 2022. Figure 2.4.1, table2.4.1 and 2.4.2 provides details of the analysis.

TREND ANALYSIS OF CHANGE OF GRADE **2018 2019 2020 2021 2022 Appointment** Conversion **Promotion** Upgrading **Grand Total** 

Figure 2.4. 1: Trend Analysis of Change of Grades

Table 2.4. 1: Change of Grades in 2022

TYPE OF CHANGE	PHASE 1	PHASE 2	GRAND TOTAL
Appointment to management positions	1	-	1
Conversion	1	8	9
Promotion	161	161	322
Upgrading	15	35	50
Grand Total	178	204	382

Table 2.4. 2: Trend Analysis of Change of Grades

Category	2017	2018	2019	2020	2021	2022	REMARKS
Appointment	0	2	0	10	0	1	Incr
Conversion	5	68	5	16	7	9	28.6% incr
Promotion	108	19	342	194	81	322	297.5% incr
Upgrading	14	3	20	14	50	50	
<b>Grand Total</b>	127	92	367	234	138	382	176.8% incr

Management of CCTH over the years have also shown keen interest in staff development by investing in their training and capacity growth through the process of granting study approval to staff. In 2022, the hospital granted study leave approval to 104 staff representing an increase of 6.1% of from 2021. Out of the total, 57 were granted study leave with pay whiles 47 were allowed to go to school on sandwich basis. Also, 55.7% (58) of the approval was given to nurses, 24.0% (25) was granted to doctors whiles 20.2% (21) was given to other staff. in addition, 15 out of the 25 doctors were given approval to undertake membership programs to specialise whiles 10 were approved to purse fellowship programs. Also, 15 nurses and midwives were approved to undertake membership programs. The hospital in 2022 also granted study leave

approval to 7 to pursue membership programs on a sandwich. Further, 54 staff resumed from their study leave in 2022. Figure 2.4.2 and table 2.4.3 to table 2.4.13 below highlights the analysis.

Figure 2.4. 2: Trend Analysis of Category of Study Leave granted

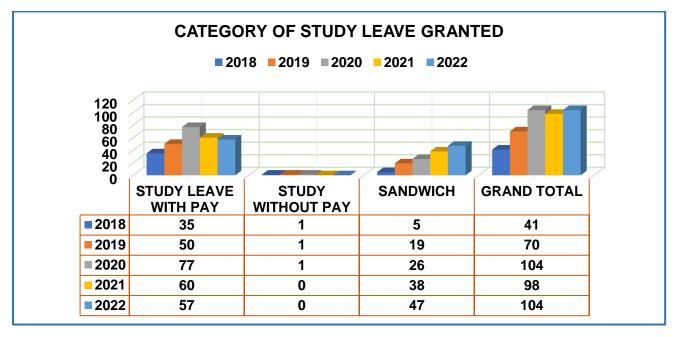


Table 2.4. 3: Analysis of Study Leaves Granted

Year	Cadre	Study Leave with	Study without	Sandwich	Total
		Pay	Pay		Granted
	Nurses	18	0	0	18
2018	Doctors	13	1	0	14
2010	Other Staff	4	0	5	9
	Total	35	1	5	41
	Nurses	28	1	14	43
2019	Doctors	18	0	0	18
2019	Other Staff	4	0	5	9
	TOTAL	50	1	19	70
	Nurses	33	1	9	43
2020	Doctors	34	0	0	34
2020	Other Staff	4	0	11	15
	TOTAL	77	1	26	104
	Nurses	32	0	27	59
2021	Doctors	23	0	0	23
2021	Other Staff	5	0	11	16
	TOTAL	60	0	38	98
	Nurses	31	0	27	58
2022	Doctors	25	0	0	25
2022	Other Staff	1	0	20	21
	TOTAL	57	0	47	104

Table 2.4. 4: Study Leave Granted to Doctors to pursue Membership programs

2020			2021			2022			
Programme	No. Appr oved	No. In School	No. Yet to Report	Programme	No. Approved	No. In School	Programme	No. In School	Instituti on
Ophthalmolog y	3	2	1	Obstetrics & Gynaecolog y	2	2	Obstetrics & Gynaecology	3	CCTH, Korle- Bu
Obstetrics & Gynaecology	1	1	-	Child Health	2	2	Child Health	1	Korle- Bu
Child Health	4	2	2	Internal Medicine	2	2	Surgery	3	ССТН
Internal Medicine	5	4	1	Radiology	2	2	Radiology	1	Korle- Bu
Anaesthesia	2	2	-	General Surgery	4	4	Anaesthesia	1	Korle- Bu
General Surgery	5	5	-	Dental Surgery	1	1	Ent	1	Korle- Bu
Neurosurgery	1	1	-	Laboratory Medicine	1	1	Ophthalmolo gy	1	Korle- Bu
Family Medicine	1	1	-	Maxillofacial Surgery	1	1	Internal Medicine	1	Korle- Bu
				Neuroscienc e	1	1	Emergency Medicine	2	KATH, Korle- Bu
Total	22	18	4	Total	16	16	Public Health Total	1 15	

Table 2.4. 5: Study Leave Granted to Specialists to pursue Fellowship Program

	202	20			2021			2022		
Programme	No. Appr oved	No. in school	No. yet to report	Programm e	No. Approved	No. in school	Progra mme	No. In School	Instituti on	
Fellowship in Child Health	1	1	-	Fellowship Neurosurg ery	1	1	Genera I Surger y	1	Korle- Bu	
Fellowship in Paediatric Endocrinolo gy	1	-	1	Fellowship Paediatric Oncology	1	1	Neuos urgery	1	South Africa	
Fellowship in Paediatric Infectious Disease	1	-	1	Fellowship in Family Medicine	1	1	Paediat ric Surger y	1	Korle- Bu	
Fellowship in Obstetrics & Gynaecolog y	1	1	-	Fellowship in Microbiolo gy	1	1	Obstetr ics & Gynae cology	1	Korle- Bu	
Fellowship in Neurology	1	-	1	Fellowship in Oral & Maxillofaci al Surgery	1	1	Rheum atology	1	Korle- Bu	
Fellowship in Orthopaedic	1	1	-				Dermat ology	1	Korle- Bu	

	2020			2021			2022		
Programme	No. Appr oved	No. in school	No. yet to report	Programm e	No. Approved	No. in school	Progra mme	No. In School	Instituti on
Fellowship in Surgery	1	1	-				Respir atory Medici ne	1	Korle- Bu
Fellowship in Family Medicine	1	-	1				Haema tology	1	Korle- Bu
Fellowship in Dermatology	2	-	2				Consult ation Liason Psychi atry	1	Korle- Bu
Fellowship in Critical Care	2	1	1				Family Plannin g & Reprod uctive	1	Korle- Bu
Total	12	5	7	Total	5	5	Total	10	

Table 2.4. 6: Pharmacists study Leave approval (2022 sandwich)

No.	Programme	No. Approved
1	Membership, Clinical Pharmacy	1
2	Membership, Infectious Diseases	1
3	Membership, Neonatology	1
4	Membership, Psychiatry	1
5	Membership. Ophthalmology	1
6	Membership, Emergency and critical care	1
7	Membership, Clinical Pharmacy (Renal)	1
	Total	7

Table 2.4. 7: Approved Programmes for Nurses and Midwives In 2022 With Study Leave with Pay

No.	Programmes	Institution	Number
1	Membership in Emergency Nursing	GCNM	2
2	Membership in peri-operative Nursing	Korle-Bu	2
3	Membership (Neuroscience)	GCNM	2
4	Membership In Ear, Nose, Throat	GCNM	3
5	Membership Critical Care	GCNM	1

No.	Programmes	Institution	Number
6	Membership Infectious Disease Nursing	GCNM	1
7	Membership in Family Health Nursing	GCNM	1
8	Membership in Reproductive Health	GCNM	1
	Nursing		
9	Membership in Advanced Midwifery	GCNM	2
10	BSc. Critical Care Nursing	Korle -Bu	1
11	BSc. Ophthalmic Nursing	Korle -Bu	1
12	BSc. Public Health Nursing	Korle -Bu	2
13	BSc. Midwifery	Garden City Uni	7
14	BSc. Nursing	KAAF	4
15	BSc. Dietetics	UHAS, HO	1
	Total		31

Table 2.4. 8: Study leaves with Pay – 2022 (Other Categories)

No.	Programme	Name of Institution	No. Approved
1	BSc. Public Health (Nutrition)	UHAS	1

Table 2.4. 9: Study Leave without Pay in 2022

NO.	Programme	Number
1	Masters, Information Technology	1

40 staffs comprising of other cadres, Nurses/Midwives and Pharmacists were given some approval to study on sandwich basis in 2022.

Table 2.4. 10: Nurses/Midwives/ Other Cadres Study Leave approval (2022 sandwich)

No.	Programme	No. Approved
1	Bachelor of Science (Nursing)	16
2	Bachelor of Science (Midwifery)	11
3	Bachelor of Dietetics	1
4	Bachelor of Public Health (Health Information)	6

No.	Programme	No. Approved
5	Bachelor of Public Health (Disease Control)	2
6	MSc. In Public Policy & Management	1
7	BSc. Medical Laboratory Technology	1
8	BSc. Physiotherapy	1
9	MSc Procurement and Supply Chain Management	1
	Total	40

Table 2.4. 11: Doctors who Resumed Duty

2020		2021		2022		
PROGRAMME	NUMBER	PROGRAMME	NUMBER	PROGRAMME	NUMBER	
Anaesthesiology	1	Oral Pathology	1	Membership in	1	
and Intensive				Surgery		
Care						
Child Health	1	Child Health	1	Fellowship in	1	
				Otolaryngology		
Total	2	Family Medicine	2	Obstetrics and	5	
				Gynaecology		
		Laboratory	1	Radiology	1	
		Medicine				
		Public Health	2	Lab Medicine	1	
		Obstetrics &	2	Total	9	
		Gynaecology				
		Otorhinolaryngology	1			
		Psychiatry	1			
		Surgery	2			
		Radiology	1			
		Laboratory	1			
		Dental Surgery	1			
		(Orthodontics)				
		Internal Medicine	3			
		Anatomic Pathology	2			
		Radiation Oncology	1			
		Emergency	1			
		Medicine				
		Feto-maternal	1			
		Medicine				
		(Fellowship)				
		Total	24			

Table 2.4. 12: Nurses Who Resumed Duty from Study Leave

2020		2021		2022		
PROGRAMME	NUMBER	PROGRAMME	NUMBER	PROGRAMME	NUMBER	
BSc. Perioperative	4	BSc Public Health Nursing	2	General Nursing (Diploma)	1	
BSc. Critical Care Nursing	4	BSc Nursing (Critical Care)	4	B.Sc. Nursing (Critical Care)	3	
Membership in Paediatric Nursing	6	BSc Nursing (Perioperative)	2	BSc. Nursing (Perioperative)	3	
Membership in Neonatal Intensive Care	3	BSc Anaesthesia	3	BSc Midwifery	10	
Public Health Nursing	2	Ophthalmic Nursing	1	Ophthalmic Nursing	2	
Oncology Nursing membership	2	General Nursing (Dip)	5	BSc. Public Health Nursing	2	
BSc. Anaesthesia	1	BSc Nursing	1	BSc. Nursing (ENT)	1	
MSc. Speech &Language Therapist	1	Diploma in Nursing	1	BSc Nursing	4	
Emergency Nursing	1	Paediatric Oncology Nursing	2	BSc Anesthesia	3	
BSc. Midwifery	6	Nephrology Nursing	2	MSc. Occupational Health, Safety and Risk Mgt	1	
Post Basic Midwifery	5	Total	23	Associate Pediatric Oncology	2	
Post Basic Nursing	6			Associate, Pediatric Nursing	1	
Total	41			Membership, Pediatric Nursing	2	
				Membership, Neonatal Care	2	
				Associate, Trauma and Orthopedics Nursing	1	
				Oncology Nursing	1	

2020		2021		2022		
PROGRAMME NUMBER		PROGRAMME NUMBER		PROGRAMME	NUMBER	
				Post Basic Midwifery	4	
				Total	43	

Table 2.4. 13: Other Categories of Staff Who Resumed Duty

	2020		2021		2022	
NO.	PROGRAMME	NUMBER	PROGRAMME	NUMBER	PROGRAMME	NUMBER
1.	MPhil Clinical Microbiology	1	MSc Biomedical Engineering	1	Masters in HSA	1
2.	MPhil in Infection &Immunity	1	BSc Dental Maxillofacial	1	Masters, Health Economics	1
3.	MPhil Biomedical Engineering	1	Total	2	Total	2
4.	B.Sc. Health Information	2				
	Total	5				

### 2.4.1 PERFORMANCE APPRAISAL

Human resource (work forces) plays a crucial role in organisations as their performance undoubtedly reflect on the overall performance of organisations. Performance appraisal is one way to know the strengths and weaknesses of staff so as to develop strategies to leverage on their strengths to improve the performance of the organisation as well as to the staff overcome their weaknesses.

CCTH between 2018 to 2021 recorded consistent improvement in the proportion of staff appraised. However, in 2022, the hospital recorded a drop in the proportion of staff appraised from 54.07% in 2021 to 45.21% in 2022. As a result, there is a need to educate staff and supervisors about the relevance of appraisals for staff development and performance. The trend of Staff appraised over the past 5 years is illustrated in figure 2.4.1.1 below.

Trend of Staff Appraised from 2018 to 2022 **→** Number Appraised --- % Appraised 52.07 45.13 45.21 38.99 32.89 

Figure 2.4.1. 1: Trend of Staff Appraised

## 2.5 STAFF TURNOVER

The total number of staff that transferred out of the hospital in 2022 declined by 9.1% (from 44 in 2021 to 40 in 2022). Out of the 40 staff that transferred out of the hospital in 2022, 60% (24) were nurses, 25% (10) were in the medical profession whiles 4 were administrative staff. On the other hand, 12 staff transferred into the hospital during the same period compared to 8 in 2021. Detailed analysis is provided in figure 2.5.1 and tables 2.5.1 to table 2.5.3 below.

Further, a sum of 60,019 days was taken off by staff in 2022 compared to 47,870 days in 2022, representing an increase of 25.4%. out of the days taken, 52,776 days were due to annual leave whiles 6,570 days were due to maternity leave as shown in table 2.5.2 below.

Figure 2.5. 1: Trend in Staff Turnover at CCTH

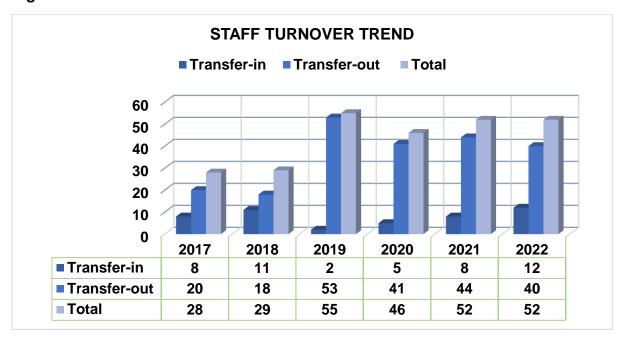


Table 2.5. 1: Staff Turnover

	202°	1		2022			
CATEGORY	ORY TYPE OF TRANSFER		GRAND TOTAL	CATEGORY	CATEGORY TYPE TRANS		GRAND TOTAL
	IN	OUT			IN	OUT	
Medical Officer	0	1	1	Admin	6	4	10
Specialist doctors	0	2	2	Medical	2	10	12
Senior Nursing Officer	0	6	6	Technical Service	3	1	4
Nursing Officer	0	3	3	Pharmacy	1	1	2
Senior Staff Nurse	1	17	18	Nursing	0	24	24
Staff Nurse	0	2	2	Total	12	40	52
Senior Staff Midwife	0	7	7				
Enrolled Nurse	0	1	1				
Dietician	0	1	1				
Senior Administrative Manager	0	1	1				
Administrative Manager	2	0	2				
Accountant	2	0	2				

	202	1		2022			
CATEGORY	TYPE OF TRANSFER		GRAND TOTAL	CATEGORY	TYPE OF TRANSFER		GRAND TOTAL
	IN	OUT			IN	OUT	
Estate Manager	1	0	1				
Technologist (Electrical)	2	0	2				
Physician Assistant	0	1	1				
Head Orderly	0	1	1				
Principal Health Assistant	0	1	1				
<b>Grand Total</b>	8	44	52				

Table 2.5. 2: Analysis of Leave of Absence at CCTH

Type Of	2022			2021		2022	
Leave	Days	Sum Of Days	Days	Sum Of Days	Days	Sum Of Days	
Annual Leave	Days Taken	27,562	Days Taken	43,703	Days Taken	52776	
	Days Wasted	2,475	Days Wasted	38,885	Days Wasted	26424	
Casual Leave	Days Taken	374	Days Taken	80	Days Taken	240	
	Days Wasted	7	Days Wasted	0	Days Wasted	0	
Maternity Leave	Days Taken	8,242	Days Taken	3,600	Days Taken	6570	
	Days Wasted	31	Days Wasted	0	Days Wasted	0	
Others	Days Taken	444	Days Taken	0	Days Taken	0	
	Days Wasted	0	Days Wasted	0	Days Wasted	0	
Paternity Leave	Days Taken	6	Days Taken	20	Days Taken	20	
	Days Wasted	0	Days Wasted	0	Days Wasted	0	
Sick Leave/Excuse Duty	Days Taken	744	Days Taken	467	Days Taken	413	
Sum of Days Taken		37,372	Sum of Days Taken	47,870	Sum of Days Taken	60,019	
Sum of Days Wasted		2,513	Sum of Days Wasted	38,885	Sum of Days Wasted	26,424	

## 2.6: HUMAN RESOURCE WASTAGE

In 2022, the total number of staff who exited the hospital went up from 44 in 2021 to 88 in 2022. 39.8% (35) staff vacated their post, 29.5% (26) went on leave without pay, 13.6% (12) resigned from the hospitals whiles 12 staff went on voluntary retirement. However, 3 staff unfortunately passed on in 2022 among which 2 were nurses. Further, out of the 35 staff who vacated post in 2022, 85.7% (30) were nurses whiles 8.6% (3) were medical staff. The categories of staff wastage in 2021 is provided in tables 2.6.1 and 2.6.2 below.

Table 2.6. 1: Analysis of Human Resource Wastage

TYPE OF WASTAGE	2020	2021	2022	REMARKS
	NUMBER	NUMBER	NUMBER	
Voluntary Retirement	0	1	12	Increased
Compulsory Retirement	7	7	0	Decreased
Death	3	1	3	Increased
Resignation	4	7	12	Increased
Vacation of Post	5	18	35	Increased
Leave without pay	0	10	26	Increased
Grand Total	19	44	88	increased

Table 2.6. 2: Wastage by Staff in various Profession in 2022

TYPE	NUMBER	BREAKDOWN
Retirement (CAGD)	9	<ul> <li>Administration - 3</li> <li>Medical - 4</li> <li>Technical Service -1</li> <li>Nursing -1</li> </ul>
Retirement (IGF)	3	Administration - 3
Death	3	<ul><li>Nursing - 2</li><li>Technical service 1</li></ul>
Resignation	12	<ul> <li>Administration - 1</li> <li>Medical - 4</li> <li>Pharmacy - 2</li> <li>Nursing - 5</li> </ul>
Vacation of Post	35	<ul> <li>Administration -1</li> <li>Medical - 3</li> <li>Pharmacy -1</li> <li>Nursing - 30</li> </ul>
Leave Without Pay	26	<ul> <li>Administration - 2</li> <li>Medical -7</li> <li>Pharmacy - 1</li> <li>Nursing - 18</li> </ul>
Grand Total	136	88

## 2.7 IMPROVING TEACHING AND LEARNING

The mandate of teaching hospitals is to promote teaching and learning. As a result, CCTH tries creates the enabling environment that provide opportunities for staff development. This ensures that, staff are well motivated to provide tertiary health care services. The training opportunities available at the hospital include undergraduate, postgraduate as well as basic and post-basic training.

### 2.7.1 GENERAL TRAINING REPORT IN 2022

- 1. A total of one-hundred and four staff were granted approval to pursue various programs
- 2. A training coordinator was appointed for the Hospital
- 3. The hospital received accreditation for specialist training in the following areas:
  - i. Urology
  - ii. Orthopaedics
  - iii. Re-accreditation for General Surgery
- 4. The hospital started house officer training in Emergency Medicine and initiated the process to secure accreditation for house officer training in Anaesthesia.
- 5. There was a 100% pass rate for medical students
- 6. An MOU signed with school of Peri-operative and Critical Care Nursing
- 7. Staff at the laboratory participated in EQA for TB, Malaria, HIV & SARS-COV-2
- 8. Organized in-service training for nurses and midwives on customer care/quality assurance/professional ethics.

### 2.7.2 POSTGRADUATE TRAINING

- 1. Eight (8) new Specialists and 7 Nurse specialists resumed after completing their postgraduate training
- 2. Seven (7) pharmacists were granted approval to pursue membership in different specialty areas;
  - i. Clinical Pharmacy 1
  - ii. Infectious Diseases -1
  - iii. Neonatology -1
  - iv. Psychiatry -1
  - v. Ophthalmology -1
  - vi. Emergency and critical care -1
  - vii. Clinical Pharmacy (Renal) -1
- 3. A total of fifteen (15) Nurses and Midwives enrolled in various specialty areas;
  - i. Membership in Emergency Nursing 2
  - ii. Membership in peri-operative Nursing 2
  - iii. Membership (Neuroscience) 2
  - iv. Membership In Ear, Nose, Throat 3
  - v. Membership Critical Care -1
  - vi. Membership Infectious Disease Nursing -1
  - vii. Membership in Family Health Nursing 1
  - viii. Membership in Reproductive Health Nursing -1
  - ix. Membership in Advanced Midwifery -2
- 4. Other post graduate programs being pursued by other staff includes;

- Masters, Information Technology 1
- ➤ MSc Procurement and Supply Chain Management 1
- 5. A total of twenty-five (25) doctors went to school to undergo training in various specialty areas in 2022. Table 2.7.2.1 and table 2.7.2.2 shows the trend of doctors undergoing membership and fellowship programs respectively. The assessment of the hospital's residency training under key performance indicators is also detailed in table 2.7.2.3 below.

Table 2.7.2. 1: Doctors under Membership Training by Specialties

	2020				2021			2022	
Programme	No. Approved	No. In School	No. Yet to Report	Programme	No. Approved	No. In School	Programme	No. In School	Institution
Ophthalmolo gy	3	2	1	Obstetrics & Gynaecolog y	2	2	Obstetrics & Gynaecology	3	CCTH, Korle-Bu
Obstetrics & Gynaecology	1	1	-	Child Health	2	2	Child Health	1	Korle-Bu
Child Health	4	2	2	Internal Medicine	2	2	Surgery	3	CCTH
Internal Medicine	5	4	1	Radiology	2	2	Radiology	1	Korle-Bu
Anaesthesia	2	2	-	General Surgery	4	4	Anaesthesia	1	Korle-Bu
General Surgery	5	5	-	Dental Surgery	1	1	Ent	1	Korle-Bu
Neurosurgery	1	1	-	Laboratory Medicine	1	1	Ophthalmolo gy	1	Korle-Bu
Family Medicine	1	1	-	Maxillofacial Surgery	1	1	Internal Medicine	1	Korle-Bu
				Neuroscienc e	1	1	Emergency Medicine	2	KATH, Korle-Bu
							Public Health	1	
Total	22	18	4	Total	16	16	Total	15	

Table 2.7.2. 2: Doctors under Fellowship Training by Specialties

	2020				2021			2022	
Programm e	No. Approved	No. in school	No. yet to report	Program me	No. Approved	No. in school	Progra mme	No. In School	Institut ion
Fellowship in Child Health	1	1	-	Fellowship Neurosurg ery	1	1	Genera I Surger y	1	Korle- Bu
Fellowship in Paediatric Endocrinolo gy	1	-	1	Fellowship Paediatric Oncology	1	1	Neuros urgery	1	South Africa
Fellowship in Paediatric	1	-	1	Fellowship in Family Medicine	1	1	Paediat ric Surger y	1	Korle- Bu

	2020				2021		2022		
Programm e	No. Approved	No. in school	No. yet to report	Program me	No. Approved	No. in school	Progra mme	No. In School	Institut ion
Infectious Disease									
Fellowship in Obstetrics & Gynaecolog	1	1	-	Fellowship in Microbiolo gy	1	1	Obstetr ics & Gynae cology	1	Korle- Bu
Fellowship in Neurology	1	-	1	Fellowship in Oral & Maxillofaci al Surgery	1	1	Rheum atology	1	Korle- Bu
Fellowship in Orthopaedic	1	1	-				Dermat ology	1	Korle- Bu
Fellowship in Surgery	1	1	-				Respir atory Medici ne	1	Korle- Bu
Fellowship in Family Medicine	1	-	1				Haema tology	1	Korle- Bu
Fellowship in Dermatolog y	2	-	2				Consult ation Liason Psychi atry	1	Korle- Bu
Fellowship in Critical Care	2	1	1				Family Plannin g & Reprod uctive	1	Korle- Bu
Total	12	5	7	Total	5	5	Total	10	

Table 2.7.2. 3: Residency Training Under the THs KPIs

INDICATOR	2017	2018	2019	2020	2021	2022	TARGET	REMARKS
Resident pass rate	-	90%	100%	-	91%	87.5%	THs= 60%	decr
Number enrolled in postgraduate colleges	-	53	48	-	38	47 25 – Dr. 7 = Pharm. 2 = Midwives 13 Prof. Nurses		26.7% incr.
Consultant to resident doctor ratio	1:12	1:7	1:4	1:5	1:1.4	1:1.9	THs = 1:3	incr
Proportion/number of clinical staff enrolled in postgraduate colleges	-	-	-	30 (23)	38	47	-	23.7% incr

## 2.7.3 INTERNSHIP AND IN-SERVICE TRAINING

In addition to supporting the training of staff, CCTH also provides opportunities to students who want to have industrial attachment at the hospital to have practical application and experience of the theory they learn in class.

In 2022, the hospital received a total of 169 interns to serve in various capacities. Also, nine (9) in-service training were organised at the hospital in 2022 and 320 staff participated. for staff in 2022. In addition, two (2) trainings were organised at the national level of which some selected staff at the hospital benefited. Tables 2.7.3.1 and table 2.7.3.2 provides details of the analysis.

Table 2.7.3. 1: In-Service Training Held in 2022

S/No	Date	Name of Training	No. of Participants
1.	March	LHIMS Training for DDNS and Ward In-Charges	47
2.	April	Report Writing for DDNS	11
3.	May	Admin. Managers on Administrative Procedures	20
4.	June	Triage Workshop for A&E	43
5.	June	LHIMS Training for House Officers	36
6.	September	Training Workshop for Sub-BMCs POW and	65
		Budgets	
7.	October	A&E CPR Workshop	82
8.	October	Oncology Clinical Breast Examination	N/A
9.	November	Green Public Procurement	16

Table 2.7.3. 2: External Training

S/N o	Date	Name of Participants	Training Institution	Title Of Training
1.	July	1	MOH	Capacity Building for Biomedical Engineers
2.	July	ALL CCTH Deputy Directors	Public Procurement Authority and NIA	E-Procurement Training

# **CHAPTER THREE**

# **CLINICAL CARE SERVICES**

#### 3.0: INTRODUCTION

There are two parts to this chapter. The hospital's Covid-19 response strategy implementation status is summarized in part one, and the performance of the hospital's routine clinical care services is reviewed in part two.

### 3.1 OUTCOME OF THE COVID-19 PANDEMIC RESPONSE AT CCTH

The hospital in 2022 saw tremendous improvement in the management of COVID-19 cases. 277 cases of COVID-19 were recorded at the hospital in 2022 as compared to 1108 cases in 2021, accounting for a decline of 79.5%. The Covid-19 Recovery Rate went up from 94% in 2021 to 99.3% in 2022 whiles the COVID-19 mortality rate also declined in 2022 (from 6% in 2021 to 0.72% in 2022). Although the proportion of total staff who tested positive to COVID-19 increased in 2022 (from 25.5% in 2021 to 34.3% in 2022), the number of COVID-19 infection among staff decreased by 66.6% (from 284 in 2021 to 95 in 2022). The details are presented in figure 3.1.1 and table 3.1.2 below.

Figure 3.1. 1: Outcome of Covid-19 Cases Managed by CCTH from 2020 – 2022

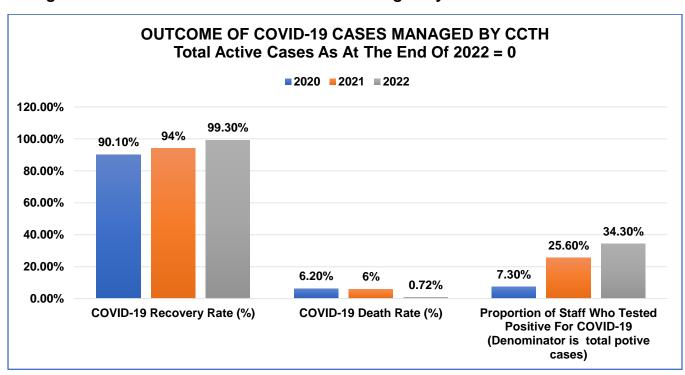


Table 3.1. 1: Outcome of Covid-19 Cases Managed by CCTH

INDICATOR	2020	2021	2022	REMARKS
Total Positive Covid-19 Cases	436	1108	277	79.5% decr.
Managed				
Total Recoveries/ Discharged	393	1042	275	73.6% decr.
Covid-19 Recovery Rate (%) -	90.1%	94%	99.30%	Incr.
Institutional				

INDICATOR	2020	2021	2022	REMARKS
Total Covid-19 Related Deaths	27	67	2	97% decr.
Covid-19 Death Rate (%) - Institutional	6.2%	6%	0.72%	Decr.
Total Number of Covid-19 Infection	131	284	95	66.6% decr.
Among Staff				
Proportion of Total Staff Who Tested	7.3%	25.6%	34.3%	Incr.
Positive for Covid-19				
Total Active Cases at The End of Year	16	0	0	

Table 3.1. 2: Summary of Overall Case Management from April 2020 to 2022

INDICATOR	2020	2021	2022	REMARKS (% diff. b/n 2020 & 2021)
Total number of samples taken	3161	6,217	1502	75.8 % decr
Total number of suspected cases detected at CCTH	2607	2749	1502	45.4% decr
Total COVID-19 cases recorded at CCTH	447	1109	277	75.0% decr
Number of COVID-19 cases confirmed at CCTH	431	1091	277	74.6% decr
Total number of positive cases directly managed by CCTH	436	1108	277	75.0% decr
Total number of positive cases discharged/recovery	393	1041	275	73.6% decr
Total number of mortalities	27	67	2	97.01% decr
Total Active cases at the end of year	16	0	0	

### 3.1.1 COVID 19 LABORATORY INVESTIGATION

As a follow-up to what the President stated during his 7th update on the steps the Government is taking in the fight against the Covid-19 pandemic, the hospital submitted a letter to the Ministry of Health on June 4th, 2020, requesting for assistance in securing a PCR machine to set up a laboratory for testing for Covid-19 cases. CCTH then upgraded its laboratory to perform Covid-19 testing utilizing the Gene Expert apparatus. After the Ministry of Health first delivered 400 test kits and reagents, the testing started in September 2020. Additionally, a PCR machine was later sent to the hospital.

Generally, CCTH in 2022 saw a decline in the COVID-19 laboratory investigations. The overall total samples taken and tested declined by 75% (from 6,217 in 2021 to 1,502 in 2022). Similarly, the total samples tested at CCTH declined by 57.6% (from 3,468 in 2021 to 1,471 in 2022. Also, the test positivity rate decreased from 34.54% in 2021 to 18.83% in 2022 as shown in table 3.1.6.1 below.

Table 3.1.1. 1: COVID 19 Laboratory Investigation

INDICATOR	2020	2021	2022	Remarks	TOTAL
Overall total Covid-19 samples	3,161	6,217	1,502	75.8% decr	10,881
taken and tested					
Overall total number of Covid-	447	1,109	277	300.4% decr	1,833
19 Positives					
Overall total number of Covid-	2,714	5,108	1,225	317% decr	9,047
19 Negatives					
COVID-19 Sa	mple Teste	d Externally	y (outside	ССТН)	
COVID-19 Sample tested at	2,631	2,749	31	Decr	5,411
externally facility					
COVID-19	Samples To	ested In-ho	use (in CC	TH)	
Total number of Cases	530	3,468	1,471	57.6% decr	5,469
Total number of Positives	107	1,198	277	76.9% decr	1,582
Total number of Negatives	423	2,270	1,194	47.4% decr	3,887
Test Positivity Rate (%)	20.189%	34.544%	18.831%	decr	

## 3.1.2 ANALYSIS OF COVID-19 VACCINATION AT CCTH

The 1st dose of Covid-19 vaccination (AstraZeneca) for CCTH staff started on Monday 29th March 2021, whiles the 2nd dose started on Monday 6th September 2021. In 2022, the total number of people who received the COVDI-19 vaccination (first and second dose) at the hospital went up by 6% (from 6,947 in 2021 to 7,361 in 2022). Also, 368 people received booster vaccinations in 2022. Details of the COVID-19 vaccination at the hospital is provided in table 3.1.2.1 below.

Table 3.1.2. 1: Details of The Covid-19 Vaccination Carried Out By CCTH

VACCINES	DOSE TYPE	2021 Total Vaccination	2022 Total Vaccination.	2022 Total Booster Vaccination
AstraZeneca	First	4,250	4,250	202
	Second	2,225	2,225	
Moderna	First	336	336	0
	Second	136	136	0
J&J	Single dose	335	412	158
Pfizer	First	0	0	7
	Second	0	2	
Total		6,947	7,361	368

## 3.2 OUT-PATIENT SERVICES UTILIZATION

The OPD Sub-BMC hosts specialist services offered by the specialist Clinical Sub-BMCs while providing general outpatient care, such as family medicine and rehabilitative services.

Generally, the total number of OPD attendance at the hospital went up by 11.86% (from 152,364 in 2021 to 170,441 in 2022). OPD cases seen per doctor increased in 2022 (From 1:952 in 2021 to 1:1033 in 2022) but did not the THs target of 1:1080. The average daily OPD visits similarly increased in 2022 by 11.99% (from 417 in 2021 to 467 in 2022) whiles the number of new registrants decreased by 5.49% (from 24,266 in 2021 to 22,933 in 2022). As a tertiary hospital, CCTH receives referral cases from peripheral health facilities with Central Region and beyond. The number of cases referred to the hospital kept fluctuating over the years. In 2022, the number of cases referred to the hospital increased by 6% (from 3,566 in 2021 to 3,777 in 2022). Also, apart for the months of March and December that saw a dip in the utilisation of OPD services in 2021, all the other months recorded higher OPD utilisation compared to 2021. Further, whiles the number of insured patients increased by 14.28% in 2022 (from 129,530 in 2021 to 148,031 in 2022), the number of non-insured clients who accessed services at the hospital declined by 1.86% (from 22,834 in 2021 to 22,410 in 2022). The Details of the analysis is illustrated in Figure 3.2.1, Figure 3.2.2 and Table 3.2.1 to Table 3.2.3 below.

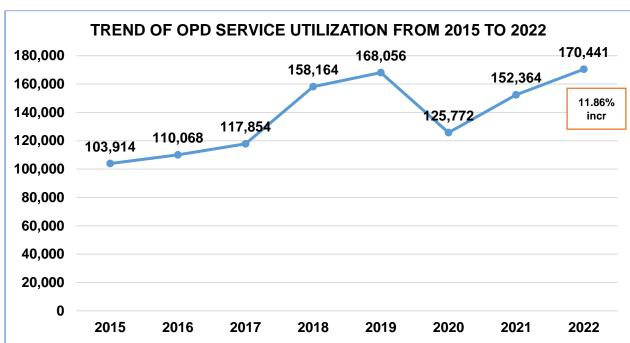


Figure 3.2. 1: Trend Analysis of Total OPD Attendance

Table 3.2. 1: General OPD Clinic Attendance

INDICATORS	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS
OPD	103,914	110,068	117,854	158,164	168,056	125,772	152,364	170,441	11.86%
Attendance									incr
New OPD	-	40,065	39,404	28,361	23,334	22,636	24,266	22,933	5.49% decr
Registrants									
Average Daily	285	302	323	433	461	345	417	467	11.99%
OPD Visit									incr
Insured	95,855	101,957	109,280	130,557	146,227	107,169	129,530	148,031	14.28%
Patients									incr
Non-Insured	8,059	8,111	8,574	27,607	21,779	18,603	22,834	22,410	1.86% decr
Patients									
Referrals In	3,911	3,443	4386	4,292	4,447	4113	3,566	3,777	6.0% incr
Referrals Out	-	-	-	-	146	64	-	-	

Figure 3.2. 2: Monthly Trend of OPD Services Utilization

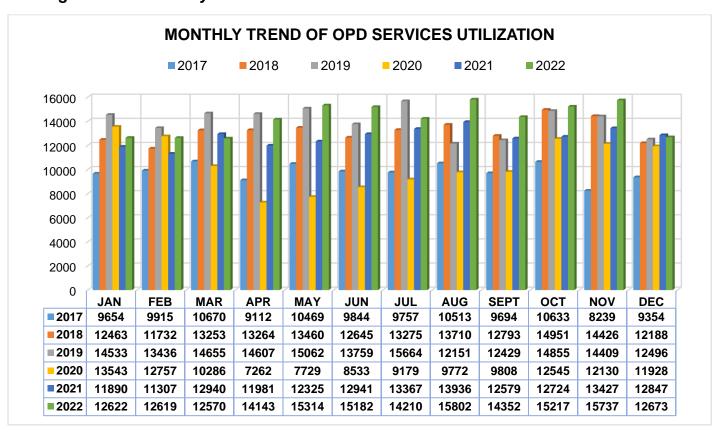


Table 3.2. 2: Monthly Trend of OPD Services Utilization

YEAR	2017	2018	2019	2020	2021	2022	Remarks
January	9,654	12,463	14,533	13,543	11,890	12,622	6.2% incr
February	9,915	11,732	13,436	12,757	11,307	12,619	11.6% incr
March	10,670	13,253	14,655	10,286	12,940	12,570	2.9% decr
April	9,112	13,264	14,607	7,262	11,981	14,143	18% incr
May	10,469	13,460	15,062	7,729	12,325	15,314	24.3% incr
June	9,844	12,645	13,759	8,533	12,941	15,182	17.3% incr
July	9,757	13,275	15,664	9,179	13,367	14,210	6.3% incr

YEAR	2017	2018	2019	2020	2021	2022	Remarks
August	10,513	13,710	12,151	9,772	13,936	15,802	13.4% incr
September	9,694	12,793	12,429	9,808	12,579	14,352	14.1% incr
October	10,633	14,951	14,855	12,545	12,724	15,217	19.6% incr
November	8,239	14,426	14,409	12,130	13,427	15,737	17.2% incr
December	9,354	12,188	12,496	11,928	12,847	12,673	1.4% decr

Table 3.2. 3: OPD Performance under THs KPIs

Indicator	2017	2018	2019	2020	2021	2022	Remarks	Target	Measureme nt
OPD cases seen per doctor	1:1030	1:1163	1:1098	1:749	1:952	1:1033	incr	THs = 1:1080	Total no. of client attending OPDs / Total no. of doctors
Total OPD Attendance	117,854	158,164	168,056	125,772	152,364	170,441	11.86% incr	CCTH = 10% Incr	
Total number of doctors (i.e. consultants, senior specialists, specialists, residents and Medical Officers only)	114	136	153	168	160	165	3.13% incr	-	
OPD Cases seen per specialist	1:1849	1:1418	1:1255	1:1024	1:1483	1:1085	decr	THs = 1:1200	Total no. of client attending specialist OPDs / Total no. of specialist/ Snr. Specialists/ Consultants
Total Specialists OPD Attendant	83,217	75,130	90,336	69,603	80,114	82,494	2.97% incr		
Total number of specialist /Snr. Specialists/Consultants	45	53	72	68	62	76	22.6% incr		

One of the objectives of CCTH is to increase access to specialist services. As a result, the hospital in 2022 introduced three OPD specialised services which were Feto-Maternal Medicine Services, Osteogenesis Imperfecta Multi-Disciplinary Service, and Paediatric Endocrine Services with 912 cases, 8 patients and 17 cases seen respectively. This resulted in a marginal increase of 2.97% in the total specialists OPD attendance (from 80,114 in 2021 to 82,494 in 2022). However, the hospital saw a dip in the OPD cases seen per specialist in 2022 (from 1:1483 in 2021 to 1:1085 in 2022) and also did not meet the 1:1200 target set by Teaching Hospitals.

Internal medicine/family medicine services continue to be the mostly utilized service in the hospital although there was a drop in the proportion of utilization in 2022 (from 35% in 2021 to 33% in 2022). Surgical, Maternal Health and Rehabilitation services recorded an increase in their utilization in 2022 compared to 2021 unlike the utilization of other services in other specialty areas in 2022 as shown in Figure 3.2.4 and Table 3.2.4 below.

Figure 3.2. 3: Trend in utilisation of OPD Specialised Services

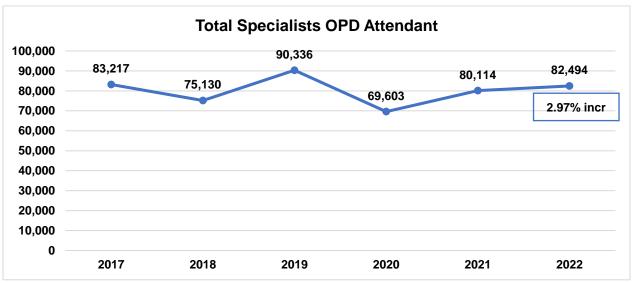
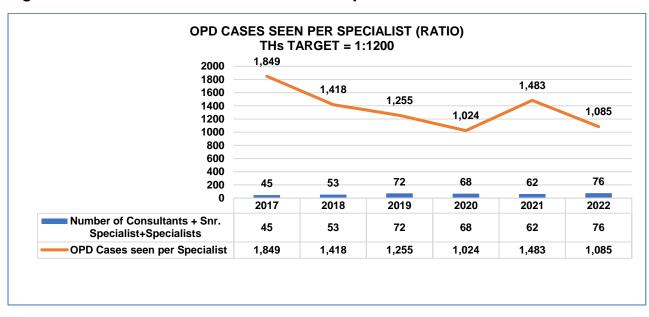


Figure 3.2. 4: Trend in OPD Cases Seen Per Specialist



**OPD SERVICES UTILIZATION BY SPECIALTY IN 2022 REHABILITATION** 13% **INTERNAL MEDICINE/FAMILY MEDICINE** 33% **DEENT** 18% **CHILD HEALTH** 9% **SURGERY** 10% **ANAESTHESIA & MATERNAL HEALTH CRITICAL CARE** 

1%

Figure 3.2. 5: OPD Utilization by Specialties in 2022

Table 3.2. 4: OPD Utilization by specialty from 2018 to 2022

16%

Clinical Specialty	2018	2019	2020	2021	2022	Remarks
Internal Medicine	34.0%	35.0%	41.60%	35.0%	33.0%	Decreased
Surgery	11.0%	11.0%	9.10%	9.0%	10.0%	Increased
Anaesthesia & Critical Care	1.1%	1.0%	0.51%	1.0%	1.0%	No change
Maternal Health	16.0%	14.0%	12.80%	15.0%	16.0%	Increased
Child Health	8.0%	8.0%	7.60%	11.0%	9.0%	Decreased
DEENT	19.0%	21.0%	20.40%	21.0%	18.0%	Decreased
Rehabilitation (incl. SLT&	11.0%	10.0%	8.00%	8.0%	13.0%	Increased
Com. Ps.)						

Further, the hospital in 2022 recorded mixed performance in the utilisation of services in the various clinics. For instance, Dermatology Clinic, TB clinic and Gastroenterology clinic under the Internal Medicine/family medicine specialty saw the highest decline of 59.97%, 31% and 23.44% respectively in their attendance in 2022 compared to Sickle cell clinic, HIV clinic and Oncology clinic that saw an increase in their attendance by 11.9%, 9.9% and 9.3% respectively.

Also, whiles the Orthopaedic, Uro-Surgery and Neuro-Surgery clinics attendance increased by 4.62%, 58.05%, 106.16% respectively, the other clinics under Surgical Services specialty saw a decline in their attendance. Moreover, among the OPD clinics run by the DEENT specialty, only the orthodontist service recorded an increase in attendance from 25 in 2021 to 191 in 2022. In general, the OPD clinics operated under the Maternal Health specialty reported with higher attendance in 2022. The gynaecology oncology services recorded the highest increase in attendance from 11

in 2021 to 77 in 2022. On the other hand, whiles the general paediatric clinic attendance decreased by 8.5% (from 9,244 in 2021 to 8,461 in 2022), the total Paediatric Specialist Clinic Attendance went up by 11.67% (from 1,783 in 2021 to 1,991 in 2022). Compared to the other rehabilitation services, the Clinical Psychology clinic showed a reduction in the number of OPD attendance recorded in 2022. Highlighted in 3.2.5 below are the analysis's specifics. Details of the analysis is highlighted in 3.2.5 below.

Table 3.2. 5: Trend in OPD Services Utilization by Clinic Specialty

CLINICS	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS
		I	NTERNA	L MEDIC	INE SERV	/ICE			
General Medical	16,617	16,232	21,060	17,184	18,142	17,385	19,046	17,068	10.39% decr
Dermatology	357	330	359	315	45	353	462	185	59.97% decr
Asthma	297	511	787	1,036	1,005	819	626	691	10.38% incr
Sickle Cell	235	454	650	567	423	595	269	301	11.90% incr
Gastroenterology	359	560	690	620	749	662	866	663	23.44 decr
Cardiology	516	1,590	2,153	2,104	2,583	2,558	2,718	2,438	10.30% decr
Diabetes	9,201	9,309	9,966	10,636	11,304	8,965	9,356	8,590	8.19% decr
Hepatitis B	794	940	1,059	1179	1,212	850	775	748	3.48% decr
TB CLINIC	35	42	39	131 (42 - CCTH Clients)	361 (31 CCTH Clients)	292	271	187	31.0% decr
HIV CLINIC	5,895	5,377	6,068	-	4,913	5,337	4,057	4,457	9.9% incr
Adolescent Clinic	57	126	218	171	178	126	102	162	58.8% incr
Endocrinology	-	82	125	111	106	97	184	136	26.09% decr
Haematology	-	223	298	431	437	396	427	366	14.29% decr
Renal Clinic	-	389	849	888	1,334	919	1005	1167	16.12% decr
Oncology Clinic	-	-	-	-	-	62	183	200	9.3% incr

CLINICS	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS
			SUR	GICAL SI	RVICES				
General Surgery	3,983	4,376	5,702	4,234	3,433	1,356	2,442	2,085	14.62% decr
Orthopaedic	1,913	2,223	2,347	2,485	2,311	1,337	2,530	2,647	4.62% incr
Uro-Surgery	2,208	2,843	3,275	4,102	6,119	4,880	3,044	4,811	58.05% incr
Neuro-Surgery	200	129	312	351	620	485	487	1,004	106.16% incr
Plastic Surgery	176	564	601	433	461	408	739	654	11.50% decr
Colorectal	-	-	-	-	82	196	300	270	10% decr
	Δ	NAESTH	HESIA AI	ND CRITIC	CAL CAR	E SERVI	CES		
Anaesthesia Clinic	689	943	868	782	894	480	1,042	784	24.7% decr
	DENTA	L, EYE A	ND EAR	NOSE &	THROAT	(DEENT	) SERVI	CE	
ENT	5,907	6,080	6,664	6,230	8,211	6,004	5,588	5,126	8.28% decr
Eye	6,600	8,420	9,348	8,917	12,078	8,451	10,837	10,755	0.76% decr
Dental & Maxillofacial	4,165	4,294	5,112	4,769	5,204	4,667	4,922	4,627	5.99% decr
Orthodontist Services	-	-	-	-	-	-	25	191	incr
		ı	MATERN	AL HEAL	TH SERV	ICE			
ANC	8117	8434	10,141	8,991	9,419	7,717	9,298	10,449	12.38% incr
PNC	2430	2750	3,314	3,495	3,384	1,866	2,520	3,027	20.12% incr
Gynae	4761	4075	4,092	4,078	4,265	2,553	3,368	3,904	15.91% incr
Reproductive Endocrinology and Fertility Services	-	-	-	-	-	-	271	357	31.73% incr
Gynae. Oncology Services	-	-	-	-	-	-	11	77	600% incr
Feto-Maternal services	-	-	-	-	-	-	-	912	Introduced in 2022

CLINICS	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS
			CHILD	HEALTH	SERVIC	E			
General Paediatrics Clinic	7,690	7,810	8,180	7490	8,666	6,003	9,244	8,461	8.5% decr
Paediatric Specialist Clinic									
NICU Follow-Up	-	-	-	155	206	247	890	958	7.64% incr
Paedics Asthma	-	-	-	87	78	57	102	111	8.82% incr
Paedics Neuro	-	-	-	168	137	213	245	294	20% incr
Paedics Renal	-	-	-	99	97	216	115	79	31.30% decr
Paedics Cardio	-	-	-	30	21	60	58	38	34.48% decr
Paediatrics - Sickle Cell clinic	-	-	-	205	331	328	351	463	31.91% incr
Paediatrics Oncology	-	-	-	-	-	48	22	23	4.55% incr
Paediatric Endocrine	-	-	-	-	-	-	-	17	Introduced in 2022
Osteogenesis Imperfecta	-	-	-	-	-	-	-	8	
Total Paediatric Specialist Clinic Attendance =	-	-	-	744	870	1,169	1,783	1,991	11.67% incr
			REHAB	ILITATIO	N SERVIC	CE			
Diet Clinic	1,743	1,417	1,916	1,265	1,224	1,070	1,313	1,568	19.4% incr
Clinical Psychology	150	163	261	301	592	557	798	428	46.4% decr
Physiotherapy	-	-	9,228	9,579	10,090	5,670	5,055	11,498	127.5% incr
Speech Therapy	-	-	-	24	68	208	415	642	54.7% incr
Community Psychiatry	-	-	-	-	-	56	66	225	240.9% incr
			ОТ	HER SER	RVICES				
Polyclinic	-	-	-	-	348	6,674	0	-	

CLINICS	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS
Minor Procedures (Treatment Room)	8,706	9,932	9,218	7464	9280	8,375	10,409	8,624	17.15% decr
Weekend & Holiday Clinic	383	362	362	355	358	-	-	-	

The hospital in 2022 reported an increase of 9.9% in number of cases seen at the HIV clinic from 4,057 in 2021 to 4,457 in 2022 out of which 1.7% (74) were new cases. All the 4,457 cases were screened for TB from which 0.81% (36) tested positive and were put on treatment. Also, the number of HIV Cases who received antiretroviral treatment in 2022 wet up by 16.9% (from 1419 in 2021 to 1659 in 2022). Meanwhile, the total number of deaths due to HIV declined from 3 in 2021 to 1 in 2022 as shown in table 3.2.6 below

Table 3.2. 6: Utilization of HIV/TB Services

INDIC	2017			2018	2019			2020			2021			2022		
ATOR	Adul t	Kid s	Tota I	Adult Kids Total	Adul t	Kid s	Tota I	Adul t	Kid s	Tota I	Adul t	Kid s	Total	Adult	Kids	Total
Total HIV Cases Seen	-	-	6068		-	-	4913	4998	339	5337	3863	194	4057	-	-	4,457
New Cases	223	30	253		20	116	136	8	18	94	71	4	75	-	-	74
Clinica I Follow Ups	5657	411	6068		312	446 5	4777	4998	339	5337	3863	194	4075	-	-	4,524
Total Death	10	1	11		1	6	7	2	0	2	0	3	3	-	-	1
No. Scree ned For TB	1146	91	1238	ailable	74	108	1155	1,10 7	72	1179	1702	173	1875	-	-	4,457
No. Diagn osed TB	18	12	30	ic is not av E-tracker	-	7	7	12	-	12	13	0	13	-	-	36
No. On TB Treat ment	9	11	20	he HIV clin nent of the	-	7	7	12	-	12	13	0	13	-	-	36
No. Of HIV Cases Recei ving ARV	987	66	1053	2018 report from the HIV clinic is not available due to the deployment of the E-tracker	76	122 7	1303	1357	100	1457	1368	51	1419	-	-	1,659

## 3.3 TOP TWENTY OPD MORBIDITIES IN 2021

Hypertension since 2020 remained the leading cause of OPD service utilisation in CCTH. the proportion of hypertensive cases seen at the OPD in 2022 increased (from 11.0% to 22.0%). This was followed by acute urinary tract infection (7.48%) and

rheumatism/other joint pain/arthritis (5.80%). The hospital in 2022 continued to provide free cataract services to the people of central region and beyond in collaboration with the Himalayan cataract project who otherwise could not afford care. This resulted in the increase in the proportion of cataract cases seen OPD from 1% in 2020 to 2.0% and 2.795 in 2021 and 2022 respectively. On the other hand, diabetic mellitus declined from the second position in 2021 (8% of OPD morbidities) to the tenth rank (2.15%) in 2022 whiles the proportion of stroke cases seen at the OPD in 2022 increased to 2.75% from 1% in 2021. Table 3.3.1 below highlights the trend in the top twenty (20) OPD morbidities recorded by the hospital from 2020 to 2022.

Table 3.3. 1: Top Twenty OPD Morbidities in 2022

20	)20	20	)21	202	2
CONDITION	PROPORTION	CONDITION	PROPORTION	CONDITION	PROPORTION
Hypertension	12%	Hypertension	11%	Hypertension	5489 (22.02%)
Diabetes	9%	Diabetes	8%	Acute Urinary	1865 (7.48%)
Mellitus		Mellitus		Tract Infection	
Acute Urinary Tract Infection	7%	Acute Urinary Tract Infection	6%	Rheumatism/Other Joint Pain/Arthritis	1445 (5.80%)
Urethral Discharges	6%	Upper Respiratory Tract Infection	3%	Gynecological Conditions	943 (3.78%)
Diarrhoea Disease	4%	Urethral Discharges	3%	Diarrheoa Diseases	898 (3.60%)
Upper Respiratory Tract Infection	4%	Anaemia	3%	Upper Respiratory Tract Infections	821 (3.29%)
Pneumonia	4%	Typhoid fever	3%	Cataract	696 (2.79%)
Malaria	3%	Kidney related Disease	2%	Stroke	686 (2.75%)
Kidney Related Disease	3%	Pneumonia	2%	Urethral Discharge	680 (2.73%)
Rheumatism & Joint Pains	3%	Rheumatism and Joint Pains	2%	Diabetes Mellitus	537 (2.15%)
Diseases of the Reproductive System	3%	Cataract	2%	Pneumonia	453 (1.82%)
Cancer	2%	Otitis Media	2%	Anemia	445 (1.79%)
Gynaecological Conditions	2%	Skin Disease	2%	Prostate Cancer	437 (1.75%)
Acute Eye Infection	2%	Dialarhoea Disease	1%	Periodontal Diseases	361 (1.45%)
Typhoid Fever	2%	Ulcer	1%	Kidney Related Diseases	358 (1.44%)
Ulcer	1%	Viral Hepatitis	1%	Cerebral Palsy	356 (1.43%)
Anaemia	1%	Stroke	1%	Acute Eye Infection	338 (1.36%)
Cataract			HIV/AIDS Related Conditions	327 (1.31%)	
Pregnancy related complications	1%	HIV/AIDS Related Conditions	1%	Viral Hepatitis	297 (1.19%)
Stroke	1%	Periodontal diseases	1%	Typhoid Fever	275 (1.10%)

### 3.4 IN-PATIENT SERVICE UTILIZATION

Over the years, CCTH has seen fluctuations in the total number of admissions. In 2022, the total admissions declined by 2.4% (from 12,930 in 2021 to 12,622 in 2022). 37% (4,032) of the patients were admitted to the Maternal Health department, 27% (2,974) to the Child Health department whiles 18% (1,931) and 17% (1,926) were admitted to the surgical and internal medicine departments respectively. Further, while admissions to the internal medicine and Anaesthesia & Critical Care departments increased in 2022 by 5.4% and 7.6% respectively, admissions to the Maternal Health, Child Health and Surgical departments dropped in 2022. Also, the Nurse and Midwife Admission ratio declined in 2022 (from 1:113.2 in 2021 to 1:13 in 2022)

Additionally, the percentage of patients admitted due to external referrals increased from 18.81% in 2021 to 19.27% in 2022. The percentage of maternal admissions due to external Referrals increased to 26.71% in 2022 from 23% in 2021 whiles the percentage of neonatal admissions due to external referrals declined to 13.85% from 15% in 2021. The bed occupancy rate in 2022 increased (From 52.2% in 2021 to 54% in 2022) and the average length of stay at the hospital reduced in 2022 (from 5.6 days in 2021 to 5.5 days in 2022). Further trend analysis is provided in figure 3.4.1 to figure 3.4.4 and table 3.4.1 to table 3.4.5 below.

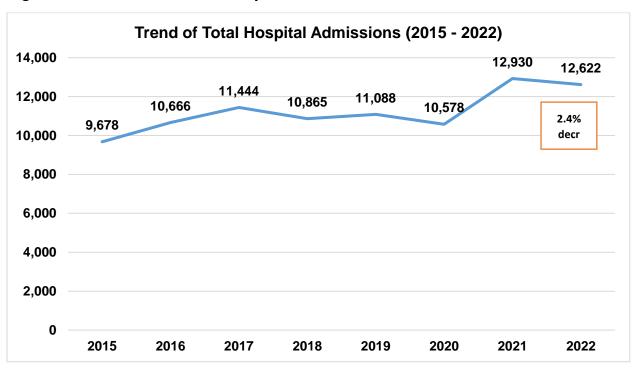


Figure 3.4. 1: Trend on Total Hospital Admissions

Figure 3.4. 2: Proportion of Specialty Admissions in 2022

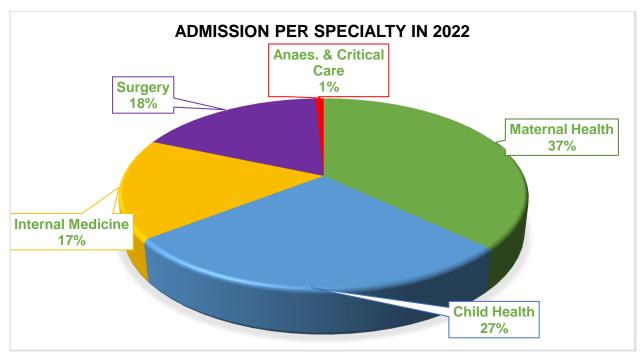


Table 3.4. 1: Trend of Proportion of Specialty Admissions in 2022

Clinical Sub- BMCs	2018	2019	2020	2021	2022	Remark
Maternal Health	41.00%	36.44%	34.55%	39.51%	31.94%	decr
Child Health	24.20%	26.16%	25.61%	29.94%	23.56%	decr
Internal Medicine	19.36%	15.83%	19.28%	13.55%	14.63%	incr
Surgery	17.60%	18.00%	19.60%	16.40%	15.26%	decr
Anaesthesia & Critical Care	1.16%	1.03%	1.05%	0.61%	0.67%	Incr

Figure 3.4. 3: Admission Trend of Clinical Sub-BMCs

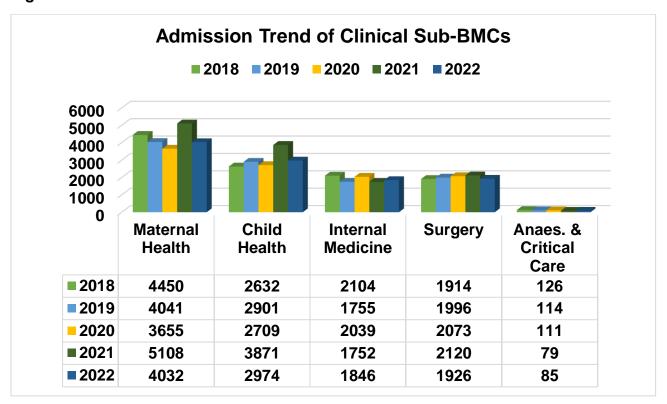


Table 3.4. 2: Admission Trend of Clinical Sub-BMCs

Clinical Sub-BMCs	2018	2019	2020	2021	2022	Remarks
Maternal Health	4450	4041	3655	5108	4032	21.1% decr
Child Health	2632	2901	2709	3871	2974	23.2% decr
Internal Medicine	2104	1755	2039	1752	1846	5.4% incr
Surgery	1914	1996	2073	2120	1926	9.2% decr
Anaesthesia & Critical Care	126	114	111	79	85	7.6% incr

Figure 3.4. 4: Percentage Trend of Referrals and Bed Utilisation

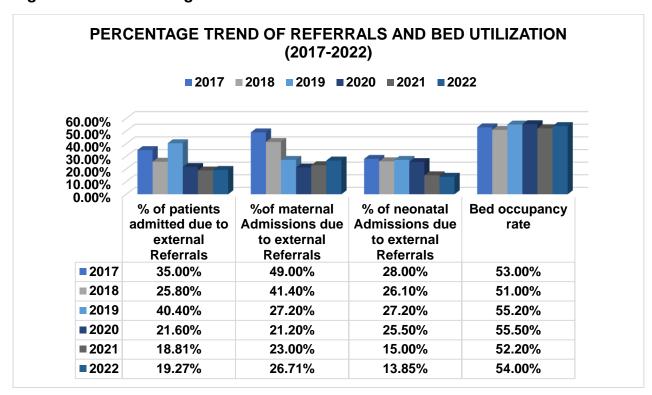


Table 3.4. 3: Percentage Trend of Referrals and Bed Utilisation

INDICATOR	2017	2018	2019	2020	2021	2022	REMARKS	TARGET	MEASUREMENT
Percentage of patients admitted due to external Referrals	35%	25.8%	40.4%	21.6%	18.81%	19.27%	Incr	-	No. of admissions due to referrals / Total admissions*100
Percentage of maternal Admissions due to external Referrals	49%	41.4%	27.2%	21.2%	23%	26.71%	Incr	60%	No. of Maternal admissions due to referrals / Total Maternal admissions*100
Percentage of neonatal Admissions due to external Referrals	28%	26.1%	27.2%	25.5%	15%	13.85%	Decr	30%	No. of Neonatal admissions due to referrals / Total neonatal admissions*100
Bed occupancy rate	53%	51%	55.2%	55.5%	52.2%	54.00%	Incr	75%	No. of client days / No. of beds * No of days in the period

Table 3.4. 4: In-Patient Service Utilization by Wards – Bed State - A

	WARD	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022
			ADMIS	SIONS			DISCH	IARGES		AVER	AGE LE	NGTH O	F STAY
Maternal	Gynaecology	2180	2000	2058	2022	2539	2554	2730	2820	4.4	4.0	4.2	4.3
Health	Delivery Suite	1861	1655	1769	2010	1626	1293	1412	1573	1.5	1.1	1.0	1.7
	ETAT	•	-	1,280	1674	-	-	153	317	-	-	0.8	4.2
Child Health	Paediatric	1833	1708	1968	1898	1791	1679	1940	1969	6.2	6.1	5.9	5.4
	NICU	1068	1001	903	1076	802	702	649		7.2	7.2	7.8	7.3
Surgery	Male Surgical	1273	1339	1316	1203	1241	1320	1331	1206	9.3	7.2	7.4	8.2
	Female Surgical	877	802	804	723	857	775	781	720	8.1	8.0	7.4	8.7
Internal Medicine	Male Medical	885	983	797	911	733	211	626	771	6.5	6.2	6.6	7.1
	Female Medical	912	924	865	960	772	722	709	845	6.5	6.6	6.4	6.4
	Executive Suite	84	55	90	60	83	62	90	70	10.3	8.7	0.9	4.7
Anaesthesia & Critical Care	ICU	114 (Trans- in 66)	111	79	85	6	10	12	15	11.1	6.5	6.3	10.2
	TOTAL =	11,087	10578	11,930	12,622	10,450	9872	10,433	11,057	5.8	5.9	5.6	5.5

Table 3.4. 5: In-Patient Service Utilization – Bed State - B

Clinical	WARD	2019	2020	2021	2022	2019	2020	2021	2022
Sub-BMCs		-	AV. DAI	LY BED	)	% B	ED OC	CUPAN	CY
			OCCUP	ANCY					
Maternal	Gynaecology	30	32.4	32	33.7	67.8	71.8	70.3	71.8
Health	Delivery	7	5.8	8	7.5	34.8	30.3	27.7	30.3
	Suite								
	ETAT	-	-	2	3.8	-	-	62.5	82.6
Child Health	Paediatric	32	30.4	33	30.4	67.2	63.1	69.3	63.1
	NICU	20	19.9	19	18.8	83.3	82.6	80.6	63.0
Surgery	Male	33	29.1	30	28.1	77.4	67.6	70.1	67.6
	Surgical								
	Female	20	19.3	18	18.2	54.4	51.9	48.8	51.9
	Surgical								
Internal	Male Medical	16	17.1	15	17.8	36.3	50.2	34.1	50.2
Medicine	Female	16	17.2	15	16.8	37.9	40.0	35.6	40.0
	Medical								
	Executive	2	1.7	2	0.9	79.8	55.6	70.8	55.6
	Suite								
Anaesthesia	ICU	3	2.9	2	2.2	49.5	58.4	38	
& Critical									58.4
Care									
	Total	180	175.8	172	178.1	55.2	55.5	52.2	55.5

Table 3.4. 6: In-Patient Service Utilization - Bed State - C

Clinical	WARD	2019	2020	2021	2022	2018	2019	2020	2021	2022
Sub-BMCs			DEA	THS			DE	ATH RA	TE	
Maternal	Gynaecology	9	13	16	21	0.4%	0.3%	0.4%	0.5%	0.7%
Health	Delivery	3	1	0	1	0.1%	0.1%	0.1%	0.0%	0.1%
	Suite									
	ETAT	-	-	6	-	-	-	-	-	-
Child Health	Paediatric	119	110	117	101	4.7%	6.2%	6.1%	5.6%	4.9%
	NICU	218	244	201	185	19.7%	20.5%	24.3%	22.2%	19.8%
Surgery	Male	64	84	65		4.0%	4.6%	5.7%	4.4%	4.1%
	Surgical									
	Female	51	61	63		6.4%	5.4%	6.9%	7.0%	5.8%
	Surgical									
Internal	Male	140	211	165	136	15.6%	15.5%	21.0%	20.3%	15.0%
Medicine	Medical									
	Female	144	202	152	112	13.3%	15.4%	21.2%	17.4%	11.7%
	Medical									
	Executive	3	1	4	1	2.8%	3.1%	1.4%	4%	1.4%
	Suite									
Anaesthesia	ICU	92	74	63	65	54.6%	52.3%	45.1%	47.4%	81.3%
& Critical										
Care										
	Total	843	1001	852		6.8%	10.3%	12.3%	11%	

# 3.5 TOP TEN CAUSES OF ADMISSION

Pregnancy related complications remains the leading cause of admission at the hospital since 2017, forming 9.3% (796) of the total admissions in 2022. This was followed by neonatal jaundice and sepsis which formed 6.7% (568) and 5.1% (439) respectively. On the other hand, Preterm (Prematurity), Hypertension and Diabetes ranked 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> position among the top causes of admission in 2022. Table 3.5.1 below provides a trend of the causes of admission at CCTH from 2017 to 2022.

Table 3.5. 1: Top Ten Causes of Admission

2019		2020		2021		2022	
CONDITION	NO. (%)	CONDITION	NO. (%)	CONDITION	NO. (%)	CONDITION	NO. (%)
Pregnancy complications Hernia	556 (4.6%) 349	Pregnancy complications Jaundice	486 (4.6%) 378	Pregnancy complications Sepsis	419(4.1%) 414(3.5%)	Pregnancy Related Complications Jaundice(neonatal)	796 (9.3%) 568(6.7%)
pneumonia	(2.9%) 347 (2.9%)	Sepsis	(3.6%) 353 (3.3%)	Jaundice	340(3.0%)	Sepsis	439(5.1%)
Asphyxia	332 (2.8%)	Pre-Maturity	302 (2.8%)	Asphyxia birth (Neonatal)	273(2.3%)	Pneumonia	344(4.0%)
Cancers	283 (2.4%)	Stroke	297 (2.8%)	Pre-Maturity	254(2.1%)	Malaria	297(3.5%)
Kidney Diseases	281 (2.3%)	Pneumonia	273 (2.6%)	Hernia	240(2.0%)	Anaemia	288(3.4%)
Pre-maturity	277 (2.3%)	Asphyxia birth (Neonatal)	265 (2.5%)	Malignant Neoplasm	220(1.8%)	Asphyxia	287(3.4%)

2019		2020		2021		2022	
CONDITION	NO. (%)	CONDITION	NO. (%)	CONDITION	NO. (%)	CONDITION	NO. (%)
Fractures	262 (2.2%)	Diabetes Mellitus	244 (2.3%)	Fractures	216(1.8%)	Preterm (Prematurity)	245(2.9%)
Jaundice (neonatal)	228 (1.9%)	Hypertension	211 (2.0%)	Pneumonia	170(1.4%)	Hypertension	240(2.8%)
ČVA	225 (1.9%)	Malaria	196 (1.8%)	Cerebrovascular Accident (CVA)	164(1.4%)	Diabetes	239(2.8%)

#### 3.6 INSTITUTIONAL MORTALITY

The hospital institutional mortality remains unacceptably high over the years however, there is a steady decline in 2021 and 2022 due to the strategies implemented to improve on clinical outcomes. In 2022, the hospital saw a significant decline in the institutional mortality rate (from 11.0% in 2021 to 8.5% in 2022) although failed to meet the teaching hospital's mortality target of 5%. Also, apart from the Gynaecology ward, Delivery Suite and the Intensive Care Unit (ICU) that reported an increase in mortality rate in 2022, all the other wards recorded a decline in their mortality rates. The total number of deaths recorded at the hospital in general decreased by 17.92% in 2022 (from 1,306 in 2021 to 1,072 to 2022) thereby exceeding the 2022 institutional mortality target of 5% decrease. However, the number of deaths recorded at theatre went up from 2 in 2021 to 4 in 2022. Similarly, the number of cases brought-in-dead reported at the hospital also increased by 29.5% (from 44 in 2021 to 57 in 2022). Detailed analysis is provided in figure 3.6.1 to figure 3.6.2 and table 3.6.1 to table 3.6.3 below.

Figure 3.6. 1: Trend of Institutional Mortality Rate

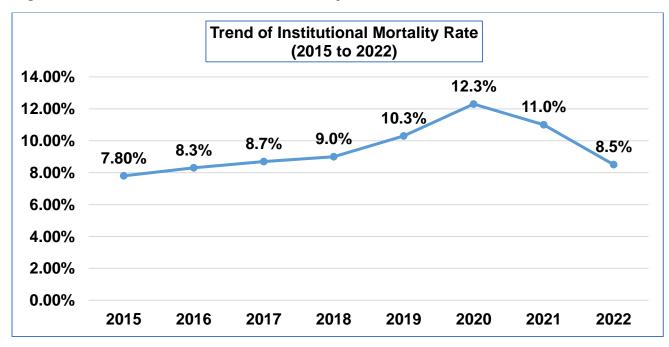


Table 3.6. 1: Trend of Institutional Mortality Rate from 2014-2022

INDICATORS	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS	TARGET
Mortality Rate (%)	7.8%	8.3%	8.7%	9%	10.3%	12.35%	11%	8.5%	Decr	THs = 5%

Table 3.6. 2: Mortality Rate by Ward

Clinical Sub-	WARD	2018	2019	2020	2021	2022	REMARKS
BMCs			DE	ATH RA	TE		
Maternal	Gynaecology	0.4%	0.3%	0.4%	0.5%	0.7%	Increased
Health	Delivery Suite	0.1%	0.1%	0.1%	0.0%	0.1%	Increased
Child Health	Paediatric	4.7%	6.2%	6.1%	5.6%	4.9%	Decreased
	NICU	19.7%	20.5%	24.3%	22.2%	19.8%	Decreased
Surgery	Male Surgical	4.0%	4.6%	5.7%	4.4%	4.1%	Decreased
	Female Surgical	6.4%	5.4%	6.9%	7.0%	5.8%	Decreased
Internal	Male Medical	15.6%	15.5%	21.0%	20.3%	15.0%	Decreased
Medicine	Female Medical	13.3%	15.4%	21.2%	17.4%	11.7%	Decreased
	Executive Suite	2.8%	3.1%	1.4%	4%	1.4%	Decreased
Anaesthesia	ICU	54.6%	52.3%	45.1%	47.4%	81.3%	Increased
& Critical							
Care							

Figure 3.6. 2: Institutional Mortality by Categorization

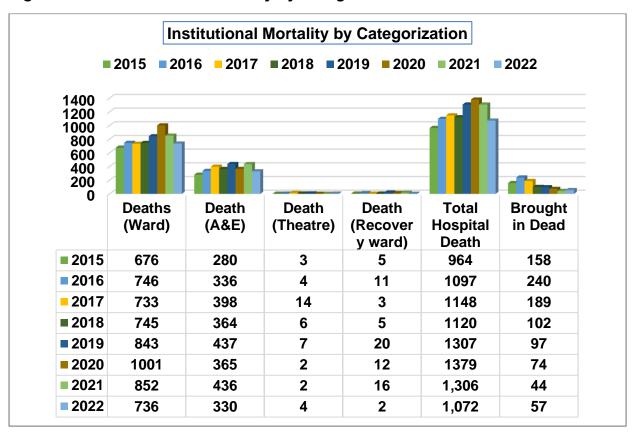


Table 3.6. 3: Institutional Mortality Categorization

INDICATORS	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS	TARGET
Deaths (Ward)	676	746	733	745	843	1,001	852	736	13.6% decr	-
Death (A&E)	280	336	398	364	437	365	436	330	2.4% decr	-
Death (Theatre)	3	4	14	6	7	2	2	4	Incr	-
Death	5	11	3	5	20	12	16	2	87.5% decr	-
(Recovery ward)										
Total Hospital Death	964	1,097	1,148	1,120	1,307	1,379	1,306	1,072	17.92%	CCTH =
									decr	5% Decr
Mortality Rate (%)	7.8%	8.3%	8.7%	9%	10.3%	12.35%	11%	8.5%	Decr	THs =
										5%
Theatre death rate	0.3%	0.4%	0.3%	0.3%	0.6%	0.1%	0.4%	0.1%	Decr	
Brought in Dead	158	240	189	102	97	74	44	57	29.5% incr	-

# 3.6.1 TOP TEN CAUSES OF MORTALITY

In 2022, sepsis was ranked 1<sup>st</sup> among the causes of death at the hospital, accounting for 15.7% (84) of the total deaths. Respiratory Distress Syndrome was the second leading cause of death at the hospital in 2022 although there was a decline of 47.1% in the total deaths (from 121 in 2021 to 64 in 2022). This was followed by asphyxia 8.2% (44), kidney disease 5.4% (29) and pneumonia 5.4% (29). On the other hand, NEC, Tuberculosis and Hepatic Encephalopathy were ranked 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> constituting 2.2%, 2.2% and 1.9% of the total deaths respectively. Table 3.6.1.1 below provides a four-year trend analysis of the causes of institutional mortality

Table 3.6.1. 1: Top Ten Causes of Institutional Mortality

201	19	202	0	20	21	202	22
CONDITION	NUMBER (%)	CONDITION	NUMBER (%)	CONDITION	NUMBER (%)	CONDITION	NUMBER (%)
Sepsis	93 (11.1%)	Pre-maturity	84 (8.4%)	Respiratory Failure	121 14.2%)	Sepsis	84 (15.7%)
Asphyxia	78 (9.3%)	CVA	67 (6.7%)	Birth Asphyxia (Neonatal)	60 (7%)	Respiratory Distress Syndrome	64 (12.0%)
Prematurity	70 (8.3%)	Asphyxia Birth (Neonatal)	55 (5.5%)	Sepsis	41 (4.8%)	Asphyxia	44 (8.2%)
Pneumonia	63 (7.5%)	Chronic Liver Disease	54 (5.4%)	Septic Shock	35 (4.1%)	Kidney Disease	29 (5.4%)
Kidney Disease	50 (5.9%)	Sepsis	49 (4.8%)	CVA	33 (3.8%)	Pneumonia	29 (5.4%)
Congestive Cardiac Failure	44 (5.2%)	Congestive Cardiac Failure	45 (4.5%)	Kidney Disease	27 (3.2%)	CVA	22 (4.1%)
Respiratory Failure	32 (3.8%)	Kidney Disease	34 (3.4%)	Bilirubin- Induced Neurologic Dysfunction (BIND)	22 (2.58%)	Heart Failure	14 (2.6%)
Jaundice	32 (3.8%)	AIDS/HIV	27 (2.7%)	Haemorrha ge	18 (2.1%)	NEC	12 (2.2%)
Intestinal obstruction	32 (3.8%)	Pneumonia	24 (2.4%)	Congestive Cardiac Failure	15 (1.76%)	Tuberculosis	12 (2.2%)

201	19	202	0	20	21	2022		
CONDITION	NUMBER (%)	CONDITION	NUMBER (%)	CONDITION	NUMBER (%)	CONDITION	NUMBER (%)	
Cancer	26 (3.1%)	Respiratory	20	Pneumonia	15 (1.76%)	Hepatic	10 (1.9%)	
Breast	, ,	failure	(2.0%)		, ,	Encephalopat hv	, ,	

#### 3.7 OBSTETRIC SERVICES

The hospital over the years continues to provide supervised deliveries. In 2022, the number of deliveries recorded went up by 7% (from 3,055 in 2021 to 3,269 in 2022). Similarly, the number of babies increased by 7.3% (from 3,176 in 2021 to 3,408 in 2022). The deliveries to midwives' ratio at the facility decreased in 2022 (from 15:1 in 2021 to 14:1 in 2022) whiles the delivery to midwives' ratio at the delivery suite increased in 2022 (from 46:1 in 2021 to 50:1 in 2022). Further, in 2022, the caesarean section rate decreased (from 51.4% in 2021 to 50.35% in 2022). The hospital since 2018 has been recording fluctuations in the partograph use rate. In 2022, the partograph use rate declined from 48.5% in 2021 to 47.6% in 2022. On the other hand, the ANC Registrants and ANC Attendance in 2022 went up by 5.2% and 12.4% respectively. Figure 3.7.1 and table 3.7.1 below provide details of the analysis.

Figure 3.7. 1: Obstetric Service Utilization

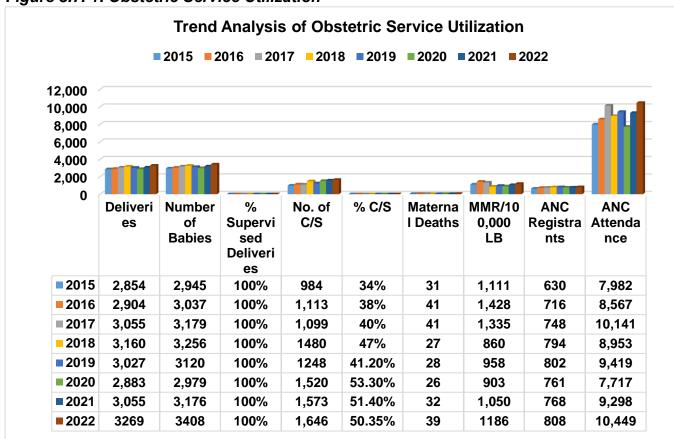


Table 3.7. 1: Obstetric Service Indicators

INDICATORS	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS	TARGET
Deliveries	2,854	2,904	3,055	3,160	3,027	2,883	3,055	3,269	7.0% incr	CCTH = 5% Incr
Number of Babies	2,945	3,037	3,179	3,256	3,120	2,979	3,176	3,408	7.3% incr	-
% Supervised Deliveries	100	100	100	100	100	100	100	100		-
Deliveries To Midwives' Ratio at the Facility	-	29:1	29:1	30:1	20:1	18:1	15:1	14:1	decr	
Delivery To Midwives' Ratio at the D/S	-	-	62:1	77:1	75:1	70:1	46:1	50:1	incr	
Number of Caesarean Section	984	1,113	1,099	1,480	1,248	1,520	1,573	1,646	4.6% incr	-
% Caesarean Section	34%	38%	40%	47%	41.2%	53.3%	51.4%	50.35%	Decr	THs = 40%
Partograph use rate	-	-	1	40.8%	46.12%	48.7%	48.5%	47.6%	Decr	60%
ANC Registrants	630	716	748	794	802	761	768	808	5.2% incr	CCTH = 10% Incr
ANC Attendance	8,117	8,567	10,141	8,953	9,419	7,717	9,298	10,449	12.4% incr	-

## 3.7.1 MATERNAL MORTALITY

The hospital still battles with high maternal mortality although strategies are implemented annually to improve on the survival chances of pregnant women who access care at CCTH. The maternal mortality ratio in 2022 increased from 1,050 in 2021 to 1,186 in 2022. Also, the number of maternal deaths recorded went up by 21.9% (from 32 in 2021 to 39 in 2022). 32 deaths representing 81.2% of the total deaths reported in 2022 were maternal cases referred to the hospital. in addition, whiles 56.4% (22) of the deaths occurred in less than 48 hours of admission, 43.6% (17) occurred in 48 hours and more. Figure 3.7.1. 1 to figure 3.7.1.2 and table 3.7.1.1 to table 3.7.1.1 below provide trend of the analysis.

Figure 3.7.1. 1: Trend of Maternal Mortality Ratio (per 100,000 Live Births)

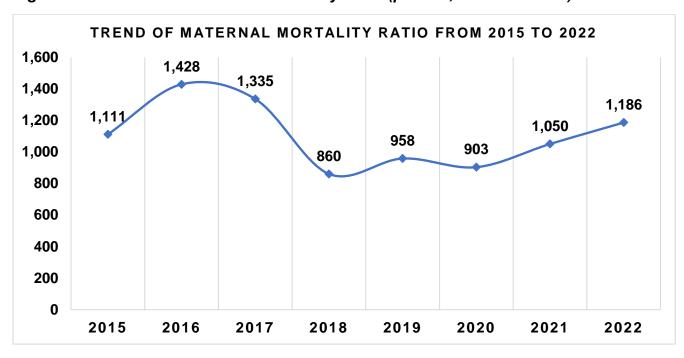


Figure 3.7.1. 2: Trend of Total Maternal Deaths

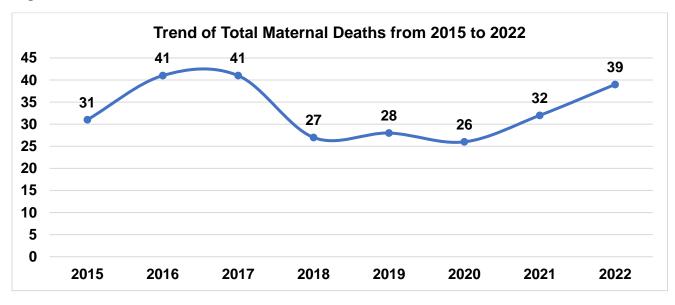


Table 3.7.1. 1: Trend of Maternal Mortality from 2014 to 2022

INDICATORS	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS	TARGET
Maternal Deaths	31	41	41	27	28	26	32	39	21.9% incr	-
Maternal Mortality Ratio Per 100,000 Live Births	1,111	1,428	1,335	860	958	903	1,050	1,186	incr	THs = 300
Maternal death audited	100%	100%	100%	100%	100%	100%	100%	100%		

Table 3.7.1. 2: Duration of Maternal Death

INDICATOR	2019	2020	2021	2022	REMARKS						
Time of death											
Deaths in less than 48 hrs. upon Admission (<48 Hours)	58.6%	57.7%	52%	56.4%	Increased						
Deaths in 48hrs/more upon (≥ 48 Hours)	41.4%	42.3%	48.4%	43.6%	Decreased						
	S	ource of Patie	ents								
Referred cases that died	89.7% (24)	92.3% (24)	75.0% (24)	82.1% (32)	Increased						
Non-referred cases that died	10.3% (4)	3.8% (2)	25.0% (8)	17.9% (7)	Decreased						

#### 3.7.2 CAUSES OF MATERNAL MORTALITY

Sepsis ranked first among the causes of maternal mortality in 2022, forming 30.8% (12) of the total maternal deaths. This was followed by obstetric haemorrhage 28.2% (11) and hypertensive disorders in pregnancy 23.1% (9) whiles Embolism 23.1% (2) and Metastatic Gall Bladder Cancer 2.56% (1) ranked 4<sup>th</sup> and 5<sup>th</sup> respectively among the most reported causes maternal mortality in 2022.

Table 3.7.2. 1: Causes of Maternal Mortality.

2018	3	2019		2020		202		202	1
Condition	%	Condition	%	Condition	%	Condition	%	Condition	%
Pulmonary Embolism	33.3%	Haemorrhage / Severe Anaemia	39.29% (11)	Haemorrhage / Severe Anaemia	11 (46.2%)	Hypertensive diseases in pregnancy (Eclampsia)	13 (40.6%)	Sepsis	12 (30.8%)
Haemorrhage	29.63%	Hypertensive Disorders of Pregnancy	32.14% (9)	Hypertensive Disorders of Pregnancy	9 (26.9%)	Sickle Cell	5 (15.6%)	Obstetric Haemorrhage	11(28.2%)
Hypertensive Disorders of Pregnancy	29.63%	Sepsis	17.86% (5)	Sepsis	5 (11.5%)	Acute Kidney Injury	5 (15.6%)	Hypertensive Disorders in Pregnancy	9(23.1%)
Sudden Cardiac Death (Pm Diagnosis)	7.6%	Pulmonary Embolism	7.14% (2)	Pulmonary Embolism	2 (15.4%)	Anaemia in Pregnancy	2 (6.25%)	Embolism	2 (5.1%)
		Sudden Cardiac Death (PM Diagnosis	3.57% (1)	Sudden Cardiac Death (PM Diagnosis)	1	Pneumonia	2 (6.25%)	Metastatic Gall Bladder Cancer	1 (2.56%)

# 3.7.3: REFERRAL FACILITIES OF MATERNAL DEATHS

The hospital continues to provide mentorship training on safe motherhood and lifesaving service (LSS) in Emergency Obstetric and New-born Care (EmONC) to peripheral facilities in Central region. This is to enable the peripheral facilities to be able to improve on the management of cases before referring them to CCTH for specialised care. In 2022, the hospital saw an increase in the percentage of maternal admissions due to external referrals (from 23% in 2021 to 26.71% in 2022). Further, 82.1% (32) of the maternal deaths reported were cases referred to CCTH compared to 75% (24) in

2021. Majority of the maternal deaths were cases from Abrem Agona Health Center. Table 3.7.3.1 provides detailed analysis of the referral facilities and the number of maternal deaths.

Table 3.7.3. 1: Referral Facilities of Maternal Deaths

2020		2021		2022	
REFERRAL INSTITUTION	NO	REFERRAL INSTITUTION	NO	REFERRAL INSTITUTION	NO
Mercy Womens Centre	4	Saltpond Municipal Hospital	3	Abrem Agona H/C	3
Ankaful Leprosarium Hospital	3	ST. Francis X'avier	3	Twifo Praso	2
St. Luke's Catholic Hospital, Apam	2	Kissi Health Centre	2	Komenda Health Centre	2
Abura Dunkwa Hospital	2	Adisadel Hospital	2	St. Francis Xavier Hospital	2
Saltpond Polyclinic	2	Adisadel Hospital	2	Swedru Government Hospital	2
Twifo Praso	2	Ankaful Psychiatric Hospital	2	TAMDH	2
Elmina Health Centre	1	Gomoa Fetteh	1	Cape Coast Metro Hospital	1
UCC	1	Winneba Trauma	1	Mercy Women's Hospital	1
Kissi Health Centre	1	Mother &Child Clinic	1	Moree District Hospital	1
Efutu Health Centre	1	Moree Hospital	1	UCC Hospital	1
Nyame Tease	1	U.C.C Hospital	1	Akatakyiwa CHPS	1
Jukwa Health Centre	1	Ankaful General Hospital	1	Tarkwa Municipal Government	1
Tarkwa Municipal Hospital	1	Abrem Agona	1	Ankaful Leprosy and General Hospital	1
Others	2	Twifo Praso	1	Bisease Polyclinic	1
CCTH	2	Others	10	Amosima CHPS	1
Total	26	Total	32	Breman Asikuma	1
				Elmina polyclinic	1
				Sanford Clinic	1
				CCTH	7
				Total	39

# 3.8 CHILD HEALTH SERVICES

The hospital in 2022 recorded a decline in the general paediatric clinic attendance by 8.5% (from 9,244 in 2021 to 8,461 in 2022) whiles the total paediatric specialist clinic attendance went up by 11.67% (from 1,783 in 2021 to 1,991 in 2022). Further, the paediatric renal clinic and paediatric cardiology clinic recorded a dip in their attendance in 2022 compared to the other paediatric sub-specialty clinics. Also, two paediatric subspecialties were introduced in 2022 which were Paediatric Endocrine and

Osteogenesis Imperfecta with 17 and 8 cases seen respectively. Detailed trend analysis is provided in figure 3.8.1 and table 3.8.1 to table 3.8.2 below.

Figure 3.8. 1: Trend of General Paediatrics Clinic OPD Attendance

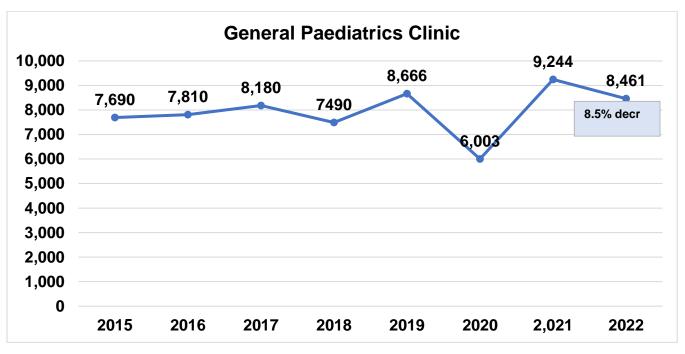


Table 3.8. 1: Child Health OPD Services Utilization

CLINICS	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS
General Paediatrics Clinic	7,690	7,810	8,180	7490	8,666	6,003	9,244	8,461	8.5% decr
Paediatric Specialist Clinic									
NICU Follow- Up	-	-	-	155	206	247	890	958	7.64% incr
Paedics Asthma	-	-	-	87	78	57	102	111	8.82% incr
Paedics Neuro	-	-	-	168	137	213	245	294	20% incr
Paedics Renal	-	-	-	99	97	216	115	79	31.30% decr
Paedics Cardio	-	-	-	30	21	60	58	38	34.48% decr
Paediatrics - Sickle Cell clinic	-	-	-	205	331	328	351	463	31.91% incr

CLINICS	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS
Paediatrics Oncology	-	-	-	-	-	48	22	23	4.55% incr
Paediatric Endocrine	-	1	-	-	1	-	1	17	Introduced in 2022
Osteogenesis Imperfecta	-	1	-	-	-	-	1	8	
Total Paediatric Specialist Clinic Attendance	-	1	-	744	870	1,169	1,783	1,991	11.67% incr

#### 3.8.1 CHILD HEALTH ADMISSION

The hospital since 2016 has seen fluctuations in the number of patients admitted to the paediatric ward and the neonatal intensive care unit. In 2022, whiles the number of paediatric admissions decreased by 3.6% (from 1,968 in 2021 to 1,898 in 2022), the number of NICU admissions increased by 19.2% (from 903 in 2021 to 1,076 in 2022). In addition, out of which 149 cases representing 13.85% were due to external referrals as shown in figure 3.8.1.1 and table 3.8.1.1 below.

Figure 3.8.1. 1: Trend of Paediatric and Neonatal Admissions

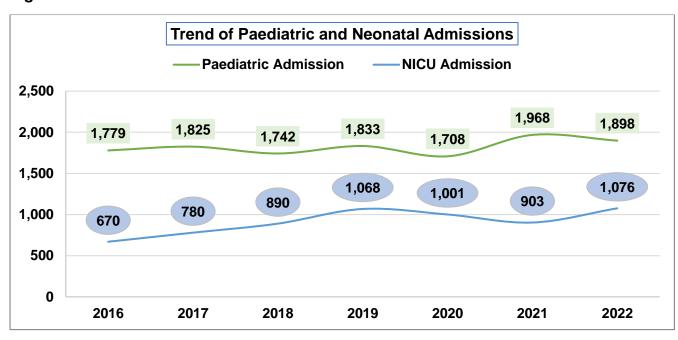


Table 3.8.1. 1: Trend of Paediatric and Neonatal Admissions

Indicator	2016	2017	2018	2019	2020	2021	2022	Remarks
Paediatric	1,779	1,825	1,742	1,833	1,708	1,968	1,898	3.6%
Admission								decr
NICU	670	780	890	1,068	1,001	903	1,076	19.2%
Admission								incr
Percentage	31%	28%	26.1%	27.2%	25.5%	15%	13.85%	Decr
of neonatal								
Admissions								
due to								
external								
Referrals								

## 3.8.1.1 TOP 10 CAUSES OF CHILD HEALTH ADMISSION

Jaundice, Sepsis and Asphyxia continue to be the most reported causes of child admission at CCTH since 2018 accounting for 14.4% (567), 8.9% (348) and 7.7% (304) of the total child admissions in 2022. Also, in 2022, prematurity remained at the fourth position in 2022 forming 6.2% (245) of child admissions. Further, Low birth weight, Gastroenteritis & colitis and Sickle cell anaemia were ranked least among the causes of child health admission in 2022 forming 2.7% (108), 2.3% (90) and 2.2% (88) respectively of the total admissions. Figure 3.8.1.1.1 and table 3.8.1.1.1 provides detailed analysis below.

Figure 3.8.1.1. 1: Top 10 Causes of Child Admission in 2022

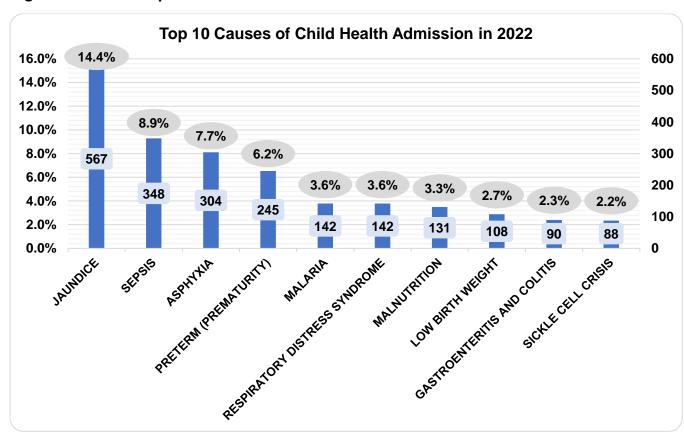


Table 3.8.1.1. 1: Top 10 Causes of Child Admission

2018		2019		2020		2021		2022	
CONDITION	NO.	CONDITION	NO.	CONDITION	NO	CONDITIO N	NO.	CONDITION	NO.
Jaundice	392	Asphyxia	328	Jaundice	378	Sepsis	414	Jaundice	567 (14.4%)
Pre-Maturity	293	Pre-Maturity	277	Sepsis	353	Jaundice	340	Sepsis	348 (8.9%)
Neonatal Sepsis	275	Jaundice	262	Pre-Maturity	302	Asphyxia	273	Asphyxia	304 (7.7%)
Bronchopneu monia	251	Bronchopneu monia	181	Asphyxia	265	Pre- Maturity	254	Prematurity	245 (6.2%)
Neonatal Asphyxia	215	Sepsis	159	Malaria	196	Low Birth Weight	137	Malaria	142 (3.6%)
Malaria	153	Malaria	125	Low birth weight	164	Malaria	137	Respiratory distress syndrome	142 (3.6%)
Anaemia	96	Hernia	62	Pneumonia	122	RDS	119	Malnutrition	131 (3.3%)
Hernia	64	Malnutrition	59	Malnutrition	90	Broncho pneumoni a	67	Low birth weight	108 (2.7%)
Sickle cell crisis	64	Anaemia	50	Fracture	79	Sickle Cell	67	Gastroenteritis & colitis	90 (2.3%)
Tonsillitis	56	Sickle Cell	41	Sickle cell	75	Anaemia	60	Sickle cell anaemia	88 (2.2%)

# 3.8.1.2 TOP CAUSES OF UNDER FIVE ADMISSIONS

In 2022, Jaundice was recorded as the leading cause of under-five admission with 67.3% increase (from 339 in 2021 to 567 in 2022) compared to 2021 and also accounted for 18% of under-five admissions. Sepsis (10.8%) ranked second among the causes of under-five admissions in 2022 compared to being first in 2021. Asphyxia (9.7%) and pre-maturity (7.8%) remained at the 3<sup>rd</sup> and 4<sup>th</sup> position among the causes of under-five admission in 2022. On the other hand, Gastroenteritis & colitis and Broncho pneumonia formed 1.9% and 2.3% respectively of the under-five admissions in 2022. Detailed analysis is shown in table 3.8.1.2.1 below.

Table 3.8.1.2. 1: Top Causes of Under Five Admissions

2021		2022	
CONDITION	NO.	CONDITION	NO.
Sepsis	395 (14%)	Jaundice	567 (18.0%)
Jaundice	339 (12.0%)	Sepsis	341 (10.8%)
Asphyxia	272 (9.6%)	Asphyxia	304 (9.7%)
Pre-Maturity	254 (9.0%)	Prematurity	245 (7.8%)
Low Birth Weight	137 (4.8%)	Respiratory distress syndrome	141 (4.5%)
Respiratory distress syndrome	119 (4.2%)	Low birth weight	108 (3.4%)
Malaria	81 (2.9%)	Malaria	80 (2.5%)
Broncho pneumonia	57 (2.0%)	Malnutrition	78 (2.3%)
Gastroenteritis	45 (1.6%)	Gastroenteritis & colitis	74 (2.3%)
Malnutrition	43 (1.5%)	Broncho pneumonia	59 (1.9%)

# 3.8.1.3 TOP CAUSES OF NEONATAL ADMISSIONS

Jaundice, sepsis, asphyxia and pre-maturity remain the leading cause of neonatal admission in 2022 and formed 25.2% (489), 14.7% (285), 13.8% (268) and 10.6% (206) of neonatal admissions in 2022 whiles haemorrhage and syphilis contributed 0.9% (17) each to the top ten causes of neonatal admissions in 2022 as shown in table 3.8.1.3.1 below

Table 3.8.1.3. 1: Top Causes of Neonatal Admissions

2021		2022	
CONDITION	NO.	CONDITION	NO.
Jaundice	336 (18.9%)	Jaundice	489 (25.2%)
Sepsis	324 (18.2%)	Sepsis	285 (14.7%)
Asphyxia	269 (15.1%)	Asphyxia	268 (13.8%)
Pre-Maturity	246 (13.8%)	Pre-Maturity	206 (10.6%)
Low Birth Weight	137 (7.7%)	Respiratory distress syndrome	122 (6.3%)
Respiratory distress syndrome	117 (6.6%)	Low Birth Weight	85 (4.4%)
Meconium aspiration	25 (1.4%)	Transient tachypnoea	50 (2.6%)
Hypoglycaemia	21 (1.2%)	Meconium aspiration	29 (1.5%)
Heart disease unspecified	16 (0.9%)	Haemorrhage	17 (0.9%)
Hydrocephalous	14 (0.8%)	Syphilis	17 (0.9%)

#### 3.8.2 CHILD HEALTH PERFORMANCE INDICATORS

In the year under review, the total number of babies delivered at the hospital went up by 7.3% (from 3,176 in 2021 to 3,408 in 2022). Similarly, the number of livebirths increased by 7.9% (from 3,048 in 2021 to 3,288 in 2022). The number of still births declined by 7.8% (from 128 in 2021 to 118 in 2022). However, whiles the number of fresh still birth increased by 27.9% (from 43 in 2021 to 55 in 2022), the number of Macerated Still Birth dropped by 25.9% (from 85 in 2021 to 63 in 2022). Also, there was a dip in the number of infants and neonatal deaths in 2022 by 5.6% and 8.4% respectively. Further, the mortality rates at the child health department in 2022 improved although the hospital failed to meet the teaching hospital's target. For instance, the still birth rate decreased from 42/1000LB in 2021 to 36/1000LB in 2022 whiles the institutional infant mortality rate decreased from 88/1000LB in 2021 to 77/1000LB in 2022. In the same light, the neonatal mortality rate declined from 78/1000LB to 67/1000LB. Detailed trend analysis on child health indicators is provided in table 3.8.2.1 and figure 3.8.2.1 to figure 3.8.2.2 below.

Table 3.8.2. 1: Child Health Performance Indicators

INDICATORS	2014	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS	TARGET
Number of	2,730	2,945	3,027	3,179	3,256	3,120	2,979	3,176	3,408	7.3% incr	-
Babies											
Live Births	2,590	2,789	2,870	3,072	3,138	2994	2,793	3,048	3,288	7.9% incr	-
Still Births	140	156	161	107	118	126	90	128	118	7.8% decr	-
Fresh Still	65	96	76	53	29	39	38	43	55	27.9% incr	-
Birth											

INDICATORS	2014	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS	TARGET
Macerated	75	60	85	54	89	87	52	85	63	25.9% decr	-
Still Birth											
Still Birth	51	53	53	34	36	42	31	42	36	decr	THs =
Rate /1000LB											15/1000LB
Infants	1,286	1,172	1,352	1,442	1,697	1660	1,357	1,734	1,975	13.9% incr	-
Admissions-											
Institutional											
Number Of <	254	237	250	219	242	301	307	290	264	9.0% decr	-
5 Deaths											
Under 5	98	85	87	71	77	101	106	95	80	decr	-
Mortality Rate											
(/1000 LB)											
Infant Deaths	221	213	236	201	216	272	284	267	252	5.6% decr	-
Institutional	85	76	82	65	69	91	89	88	77	decr	THs =
Infant											15/1000LB
mortality rate											
(/1000LB)											
Neonatal	189	173	207	180	197	239	233	239	219	8.4% decr	-
Deaths											
Neonatal	73	62	72	59	63	80	81	78	67	decr	THs =
Mortality Rate											25/1000LB
(/1000LB)											

Figure 3.8.2. 1: Trend of Neonatal and Infant Mortality Rates

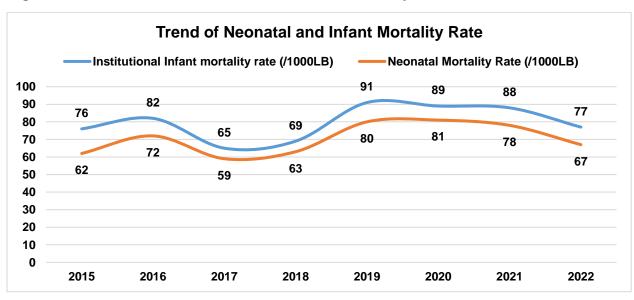


Figure 3.8.2. 2: Trend of Under 5 Year Mortality Rate Rate of Under 5 Mortality / 1000 LB 

# 3.8.3 TOP TEN CAUSES OF CHILD MORTALITY

In 2022, respiratory distress syndrome (22.45%), Asphyxia (15%) and Sepsis (11.5%) ranked as the top three causes of child mortality similar to 2021. In contrast, aspiration pneumonia and pulmonary oedema were the least cause of child mortality forming 1% (3) each among the top ten causes of child mortality. Figure 3.8.3.1 and Table 3.8.3.1 below provides details of the analysis.

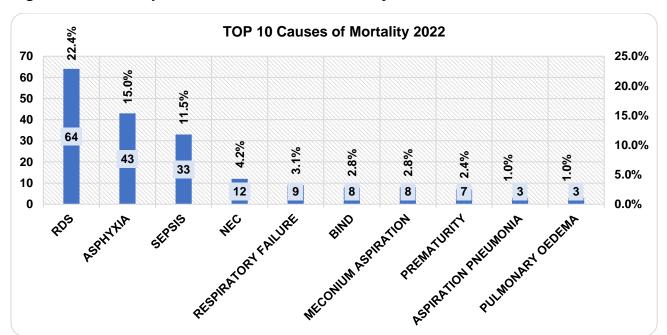


Figure 3.8.3. 1: Top Ten Causes of Child Mortality In 2022

Table 3.8.3. 1: Top Ten Causes of Child Mortality

2021		2022	
CONDITION	NO. (%)	CONDITION	NO. (%)
Respiratory distress syndrome	70 (22.0%)	Respiratory distress syndrome	64 (22.45%)
Asphyxia	60 (18.9%)	Asphyxia	43 (15.0%)
Sepsis	41 (12.9%)	Sepsis	33 (11.5%)
BIND	22 (6.9%)	NEC	12 (4.2%)
Respiratory Failure	17 (5.3%)	Respiratory Failure	9 (3.1%)
Septic shock	14 (4.4%)	BIND	8 (2.8%)
Aspiration pneumonia	7 (2.2%)	Meconium aspiration	8 (2.8%)
Bronchopneumonia	5 (1.6%)	Prematurity	7 (2.4%)
Congenital heart disease	5 (1.6%)	Aspiration pneumonia	3 (1.0%)
Anaemia	4 (1.3%)	Pulmonary oedema	3 (1.0%)

#### 3.8.3.1 TOP TEN CAUSES OF NEONATAL MORTALITY

The neonatal mortality in 2022 decreased by 8.4% (from 239 in 2021 to 219 in 2022). Respiratory distress syndrome ranked as the highest cause of neonatal mortality in 2022 forming 28.8% (63) of the total deaths. This was followed by Asphyxia 19.2% (42), Sepsis 11.4% (25) and NEC 5.5% (12). Cardiogenic shock and jaundice each constituted 1.4% (3) of the neonatal deaths in 2022 and were the least cause among the top ten causes of neonatal mortality during the year under review. details of the analysis is shown in Figure 3.8.3. 1 and table 3.8.3.1 below.

Figure 3.8.3.1. 1: Top Ten Causes of Neonatal Mortality

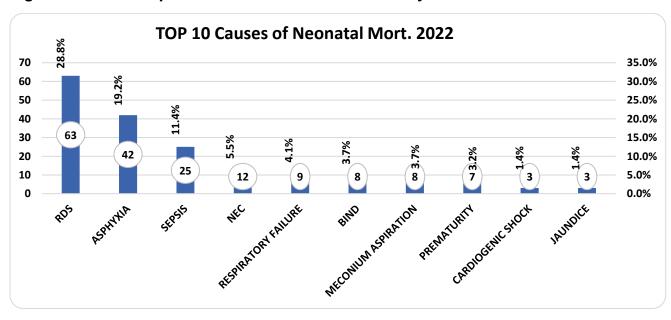


Table 3.8.3.1. 1: Top Ten Causes of Neonatal Mortality

2021		2022		
CONDITION	NO. (%)	CONDITION	NO. (%)	
Respiratory distress syndrome	65 (27.2%)	Respiratory distress syndrome	63 (28.8%)	
Asphyxia	57 (23.8%)	Asphyxia	42 (19.2%)	
Sepsis	34 (14.2%)	Sepsis	25 (11.4%)	
BIND	22 (9.2%)	NEC	12 (5.5%)	
Respiratory Failure	14 (5.9%)	Respiratory Failure	9 (4.1%)	
Aspiration pneumonia	6 (2.5%)	BIND	8 (3.7%)	
Septic shock	6 (2.5%)	Meconium aspiration	8 (3.7%)	
Anaemia	3 (1.3%)	Prematurity	7 (3.2%)	
Necrotizing enterocolitis	3 (1.3%)	Cardiogenic shock	3 (1.4%)	
Congenital heart disease	2 (0.8%)	Jaundice	3 (1.4%)	

# 3.8.3.2 TOP TEN CAUSES OF MORTALITY AMONG CHILDREN UNDER FIVE YEARS

The leading cause of under-five mortality in 2022 was respiratory distress syndrome 23.9% (63), asphyxia 16.3% (43) and sepsis 12.1% (32). Also, respiratory failure and BIND formed 3.4% (9) and BIND 3.0% (8) of the total under-five mortality. On the other hand, aspiration pneumonia formed 0.4% (1) constituting the least cause of under-five mortality in 2022. Figures 3.8.3.2.1 and table 3.8.3.2.1 provides detailed trend analysis below.

Figure 3.8.3.2. 1: Top Ten Causes of Under 5 Mortality in 2022

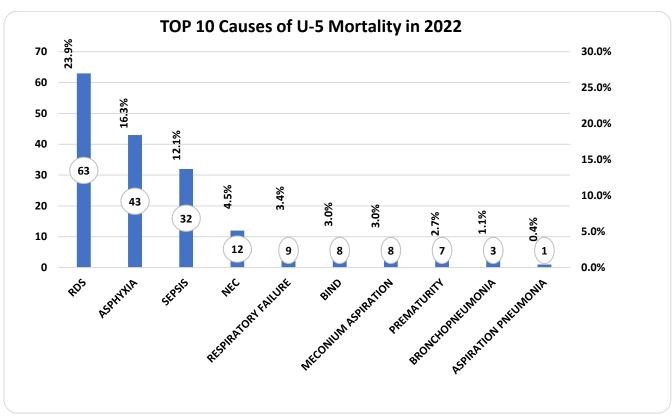


Table 3.8.3.2. 1: The Comparative Analysis of Top Ten Causes of Under 5 Mortality

20	19	202	0	202	21	202	2
CONDITION	NO. (%)	CONDITION	NO. (%)	CONDITION	NO. (%)	CONDITION	NO. (%)
Asphyxia	78 (22.4%)	Pre-maturity	84 (27%)	RDS	70 (24.1%)	Respiratory distress syndrome	63 (23.9%)
Pre-maturity	70 (20.1%)	Asphyxia	55 (18%)	Asphyxia	60 (20.7%)	Asphyxia	43 (16.3%)
Sepsis	32 (9.2%)	Sepsis	49 (16%)	Sepsis	38 (13.1%)	Sepsis	32 (12.1%)
Neonatal Jaundice	30 (8.6%)	HIE	20 (7%)	BIND	22 (7.6%)	NEC	12 (4.5%)
Respiratory Failure	25 (7.2%)	Respiratory Distress	19 (6%)	Respiratory Failure	17 (5.9%)	Respiratory Failure	9 (3.4%)
Bronchopne umonia	23 (6.6%)	Jaundice	15 (5%)	Septic Shock	13 (4.5%)	BIND	8 (3.0%)
Encephalop athy	13 (3.7%)	Congenital Heart Disease	8 (3%)	Aspiration Pneumonia	7 (2.4%)	Meconium aspiration	8 (3.0%)
Respiratory Distress	12 (3.4%)	Kernicterus	8 (3%)	Broncho Pneumonia	5 (1.7%)	Pre-maturity	7 (2.75)
Malnutrition	11 (3.2%)	Aspiration	6 (2%)	Congenital Heart Disease	5 (1.7%)	Broncho Pneumonia	3 (1.1%)
Intestinal Obstruction	11 (3.2%)	Malaria	6 (2%)	Congestive cardiac failure (CCF)	4 (1.4%)	Aspiration Pneumonia	1 (0.4%)

#### 3.9 SURGICAL SERVICES

The hospital offers a range of surgical specialty services, including those in orthopaedics, neurosurgery, uro-surgery, plastic surgery, general surgery, maxillofacial and dental, eye, and ENT services.

#### 3.9.1 THEATRE SERVICES UTILIZATION

Generally, the hospital recorded a 10.13% decrease in the total surgeries performed in 2022 (from 5,961 in 2021 to 5,357 in 2022). Also, the total major surgeries and the total minor surgeries dropped in 2022 by 9.2% and 23.9% respectively. Also, the major general surgeries decreased by 19.3% (from 3,908 in 2021 to 3,152 in 2022) whereas the number of major O&G went up by 14.4% (from 1,676 in 2021 to 1,918 in 2022). Comparatively, the number of minor general surgeries and minor O&G surgeries declined by 23.4% and 29.6% respectively. Further, the surgery - surgeon ratio in 2022 decreased from 199:1 in 2021 to 179:1 in 2022. The theatre in 2022 improved to 0.01% from 0.38% in 2021. Data capture on surgical site infection remain a challenge in the hospital. There is the need to implement strategies that will ensure the effective data capture on surgical site infection. Detailed trend analysis is illustrated in figure 3.9.1.1 to figure 3.9.1.2 and table 3.9.1.1 to table 3.9.1.2 below.

Figure 3.9.1. 1: Trend Analysis of Total Surgeries Performed at the Hospital

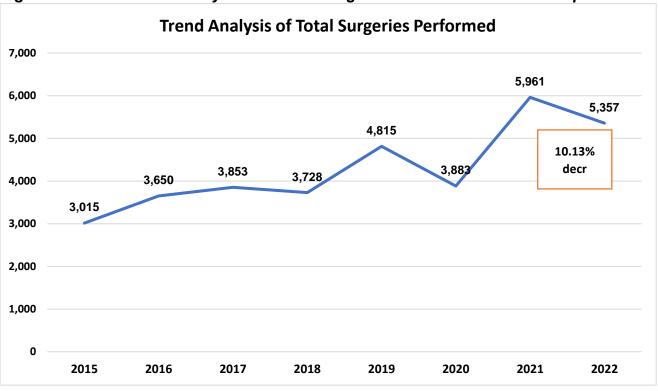


Figure 3.9.1. 2: Trend of Theatre Service Utilization at the Hospital

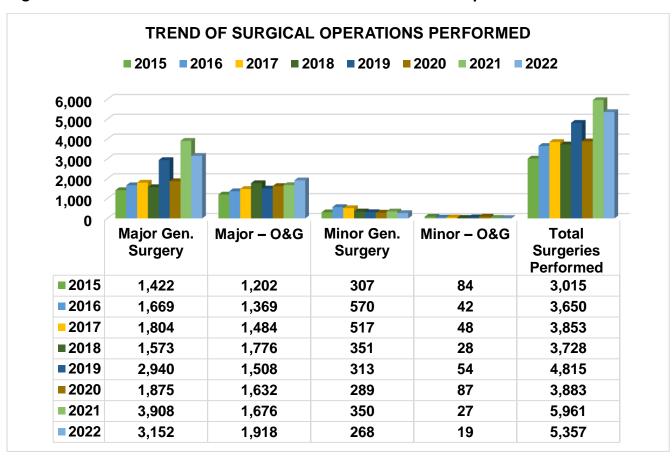


Table 3.9.1. 1: Trend of Theatre Service Utilization at the Hospital

SURGICAL PROCEDURE	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS
Major Gen. Surgery	1,422	1,669	1,804	1,573	2,940	1,875	3,908	3,152	19.3% decr
Major – O&G	1,202	1,369	1,484	1,776	1,508	1,632	1,676	1,918	14.4% incr
Total Major Surgeries	2,624	3,038	3,288	3,349	4,448	3,507	5,584	5,070	9.2% decr
Minor Gen. Surgery	307	570	517	351	313	289	350	268	23.4% decr
Minor – O&G	84	42	48	28	54	87	27	19	29.6% decr
Total Minor Surgeries	391	612	565	379	367	376	377	287	23.9% decr
Total Surgeries	3,015	3,650	3,853	3,728	4,815	3,883	5,961	5,357	10.13%
Performed									decr

Table 3.9.1. 2: Surgical Service Performance under THs KPI (Hospital Level Performance)

KEY INDICATORS	2016	2017	2018	2019	2020	2021	2022	REMARKS	MEASURE MENT	TARGET
Surgical site infection rates	-	-	-	0.27%	12.61% (Falcon)	-	-		Total infected wounds / Total Surgeries * 100	THs = 5%
Surgery - Surgeon Ratio	152:1	154:1	133:1	127:1	108:1	199:1	179:1	decr	Total no. of surgeries performed/ total no. of Surgeons	THs = 250:1
Total surgeries	3,650	3,853	3,728	4,815	3,883	5,961	5,357	10.13% decr	-	CCTH = 10% Incr
Total surgeons	24	25	28	38	36	30	30		-	-
Theatre Deaths Rate	0.4%	0.4%	0.3%	0.6%	0.1%	0.38%	0.01%	decr	-	-

The number of general surgeries performed decreased by 9.1% (from 949 in 2021 to 863 in 2022) whiles the number of orthopaedic surgeries decreased by 3.5% (from 173 in 2021 to 167 in 2022). Comparatively, dental & maxillofacial surgeries and ENT

surgeries performed in 2022 went up significantly by 50.1% and 16.2% respectively as shown in figure 3.9.1.3 and table 3.9.1.3 below.

**Trend of Total Surgeries Performed by Specialty 2016 2017 2018 2019 2020 2021 2022** 3,000 2,500 2,000 1,500 1,000 500 0 General Uro-Orthopa **Plastic** Neuros Paediatr **OBGY ENT** Ophthal Dental mology edics Surgery Surgery Surgery urgery ics & Surgery Maxillof Surgery

4

16

45

85

91

88

89

95

95

98

68

100

85

1,411

1,532

1,804

1,562

1,719

1,703

1,937

160

220

264

222

201

166

206

140

240

232

1,305

534

2,295

2,666

acial Surgery

43

17

18

69

98

1,257

1,887

Figure 3.9.1. 3: Analysis of Surgeries Performed by Specialty

Table 3.9.1. 3: Trend of Surgeries Performed by Specialty

145

175

228

191

219

256

271

153

154

144

186

130

173

167

91

99

44

82

82

102

93

**2016** 

**2017** 

**2018** 

2019

**2020** 

**2021** 

**2022** 

1,066

1,013

626

973

690

949

863

SURGICAL SPECIALTIES	2016	2017	2018	2019	2020	2021	2022	REMARK S
General Surgery	1,066	1,013	626	973	690	949	863	9.1% decr
Uro-Surgery	145	175	228	191	219	256	271	5.9% incr
Orthopaedics Surgery	153	154	144	186	130	173	167	3.5% decr
Plastic Surgery	91	99	44	82	82	102	93	8.8% decr
Neurosurgery	4	16	45	85	91	88	89	1.1% incr
Paediatrics Surgery	95	95	-	98	68	100	85	15% decr
OBGY	1,411	1,532	1,804	1,562	1,719	1,703	1,937	13.7% incr
ENT	160	220	264	222	201	166	206	24.1% incr
Ophthalmology	140	240	232	1,305	534	2,295	2,666	16.2% incr

SURGICAL SPECIALTIES	2016	2017	2018	2019	2020	2021	2022	REMARK S
Dental & Maxillofacial Surgery	43	17	18	69	98	1,257	1,887	50.1% incr

# 3.9.2 TOP TEN SURGICAL OPERATIONS

In 2022, eye surgeries accounted for the leading cause of surgical operations at the hospital, forming 32.2% (1,723) of the total surgeries conducted. This could be associated with the free cataract surgery initiated by the hospital in collaboration with the Himalayan Cataract project. This was followed by Caesarean Section 31.5% (1,691) and Hernia Reducible 3.7% (198). Neurosurgeries, plastics surgeries and removal of tonsils ad adniols ranked 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> among the top ten surgeries performed in 2021, forming 1.6% (86), 1.4% (77), and 1.4% (75) respectively. Details of the analysis is presented in Table 3.9.2.1 below.

Table 3.9.2. 1: Top Ten Surgical Operations Performed

2019		2020		202	1	2022	
Type of Case	No.	Type of Case	No.	Type of Case	No.	Type of Case	No.
Eye Surgeries	1,305	Caesarean	1520	Caesarean	1462	Eye Surgeries	1723
	(27.1%)	Section	(39.1%)	Section	(30.94%)		(32.2%)
Caesarean	1,248	Ophthalmic	428	Eye Surgeries	1120	Caesarean	1691
Section	(25.9%)	Surgery	(11.0%)		(23.70%)	Section	(31.5%)
Hernia	349	Urological	219	Hernia	240	Hernia	198
	(7.2%)	conditions	(5.6%)	(Reducible)	(5.08%)	Reducible	(3.7%)
ENT	181	Hernia	209	Laparotomy	198	Laparotomy For	147
Surgeries	(3.8%)	Reducible	(5.4%)	for Exploratory	(4.19%)	Exploratory	(2.7%)
Laparotomy	145	Laparotomy for	133	Appendicecto	107	ENT Operations	134
for Exploratory	(3.0%)	Exploratory	(3.4%)	my	(2.26%)		(2.5%)
Appendicecto	119	Orthopaedic	130	ENT	107	Operation on	109
my	(2.5%)	surgery	(3.3%)	Operations	(2.26%)	Fractures	(2.0%)
Laparotomy -	88	ENT	109	Plastics	102	Appendectomy	90
Ectopic	(1.8%)		(2.8%)	Surgeries	(2.16%)		(1.7%)
Neurosurgeri	85	Neurosurgeries	91 (2.3%)	Operation on	99	Neurosurgeries	86
es	(1.8%)			Fractures	(2.09%)		(1.6%)
Plastics	82	Intestinal	90 (2.3%)		88	Plastics	77
Surgeries	(1.7%)	Obstruction		Neurosurgerie s	(1.86%)	Surgeries	(1.4%)
Removal of	74	Operation on	90 (2.3%)	Intestinal	75	Removal of	75
superficial	(1.5%)	Fractures		Obstruction	(1.59%)	Tonsils ad	(1.4%)
Tumours						Adniols	,
Others	1139 (23.7%)	Others	864 (22.3%)	Others	1027 (19.2%)	others	1027 (19.2%)
Total Surgery	4815	Total Surgery	3,883	Total Surgery	5,961	Totals Operations	5,357

#### 3.10: DIAGNOSTIC SERVICES UTLIZATION

The hospital in 2022 introduced ten new laboratory investigations which are Ca, Mg, P, D-dimer, Insulin, Ferritin, hsCRP, CA-19.9, CA-72.4, Myoglobin. This resulted in a significant increase in the total number of laboratory investigations conducted by 209% (from 180,422 in 2021 to 558,298 in 2022). Similarly, the number of laboratory clients went up by 16.3% (from 55,871 in 2021 to 64,967 in 2022). On the other hand, whiles the number of radiology investigations increased marginally by 0.97% (from 20,587 in 2021 to 20,787 in 2022), the number of radiology clients decreased by 6.3% (from 17,983 in 2021 to 16,857 in 2022). Also, the utilization of laboratory and radiology services increased in 2022 to 524% and 123.3% respectively. Additionally, the number of autopsies performed at the hospital in 2022 went by 10.1% (from 227 in 2021 to 250 in 2022). Detailed trend analysis is provided in figure 3.10.1 and table 3.10.1 to table 3.10.2 below.

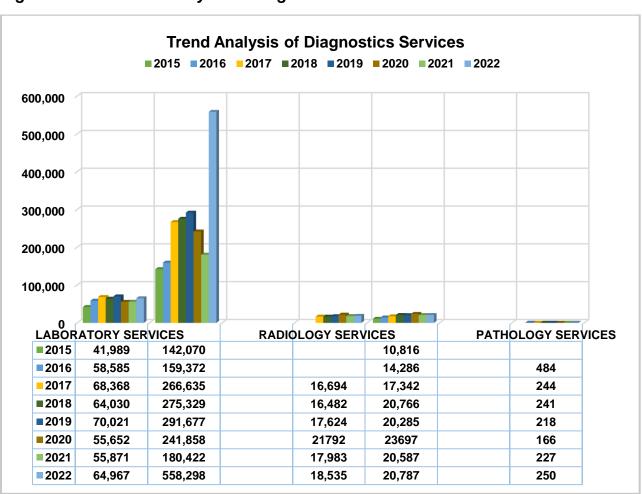


Figure 3.10. 1: Trend Analysis of Diagnostics Services

Table 3.10. 1: Trend Analysis of Diagnostics Services

INDICATOR	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS		
LABORATORY SERVICES											
Number of clients	41,989	58,585	68,368	64,030	70,021	55,652	55,871	64,967	16.3% incr		

INDICATOR	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS			
Number of laboratory tests conducted	142,070	159,372	266,635	275,329	291,677	241,858	180,422	558,298	209% incr			
	RADIOLOGY SERVICES											
Number of radiology clients	-	-	16,694	16,482	17,624	21,792	17,983	16,857	6.3% decr			
Number of tests conducted	10,816	14,286	17,342	20,766	20,285	23,697	20,587	20,787	0.97% incr			
PATHOLOGY SERVICES (AUTOPSY)												
Number of Autopsy	-	484	244	241	218	166	227	250	10.1% incr			

Table 3.10. 2: Performance Under THs KPI

KEY INDICATORS	2018	2019	2020	2021	2022	REMARKS	TARGET	MEASUREMENT
Utilization of Laboratory services	78%	62.5%	260.3%	221.3%	524%	incr	THs = 60%	Total laboratory Investigations / Total Lab request * 100
Total Lab request	59,478	61,900	92,907	73,953	103,638	40.1% incr	-	
Utilization Radiological services	79.4%	86.9%	530.7%	87%	123.3%	incr	THs = 60%	Total Radiological Investigations / Total Radio. request * 100
Total Radio. request	16,482	17,624	4,465	17,962	16,857	6.2% decr	-	

#### 3.11 BLOOD TRANSFUSION AND BLOOD DONATION

Blood and blood product transfusions continue to be a vital life-saving procedure. The total whole blood crossmatched in 2022 increased by 4.1% (from 4,127 in 2021 to 4,296 in 2022). Similarly, the FFP Transfused within the same period went up by 7.6% (from 992 in 2021 to 1,067 in 2022). However, the whole blood transfused decreased by 10.1% (from 3,971 in 2021 to 3,571 in 2022). Additionally, the voluntary blood donors in 2022 increased significantly by 160% (from 674 in 2021 to 1,752 in 2022) while blood donations from mobile sessions went up by 175.2% (from 584 in 2021 to 1,607 in 2022). However, the number of blood replacement/pre-deposit in 2022 decreased by 13.1% (from 2,925 in 2021 to 2,541 in 2022). Further, the hospital recorded significant improvement in the blood donation from ANC in 2022 (from 36 in 2021 to 242 in 2022). Detailed analysis is provided in figure 3.11.1 to figure 3.11.2 and table 3.11.1 to table 3.11.2 below.

Trend Analysis of Blood Transfusion Services

2016 2017 2018 2019 2020 2021 2022

6,000
4,000
3,000
2,000
1,000
Whole Blood Whole Blood FFP Transfused

Transfused

3,924

4,229

5,313

4878

3,905

3,971

3571

570

822

660

858

834

992

1067

Figure 3.11. 1: Trend Analysis of Blood Transfusion Services

Table 3.11. 1: Trend Analysis of Blood Transfusion Services

Crossmatched

4,258

4,901

5,435

5282

4,271

4,127

4296

**2016** 

**2017** 

**2018** 

■2019

**2020** 

**2021** 

**2022** 

INDICATOR	2016	2017	2018	2019	2020	2021	2022	REMARKS
Whole Blood	4,258	4,901	5,435	5,282	4,271	4,127	4,296	4.1% incr
Crossmatched								
Whole Blood	3,924	4,229	5,313	4,878	3,905	3,971	3,571	10.1% decr
Transfused								
FFP Transfused	570	822	660	858	834	992	1,067	7.6% incr

**Trend Analysis of Blood Donation ■2016 ■2017 ■2018 ■2019 ■2020 ■2021 ■2022** 4,500 4,000 3,500 3,000 2,500 2,000 1,500 1,000 500 Unsafe Walk-In **ANC** Voluntary Replacement Mobile Blood / Pre-deposit Blood Session **Donors** /Discarded (Unscreened) **2016** 4,062 192 201 194 3,361 **2017** 1988 3,509 89 1,899 195 435 2018 2197 3,331 95 2,196 129 394 **2019** 107 2001 3422 1894 467 61 **2020** 812 3,449 110 702 78 516 **2021** 674 2,925 130 584 36 242 **2022** 1,752 2,541 88 1,607 242 107

Figure 3.11. 2: Trend Analysis of Blood Donation

Table 3.11. 2: Trend Analysis of Blood Donation

ODOUDO.			QUA	NTITY O	BTAINE	D		REMARKS
GROUPS	2016	2017	2018	2019	2020	2021	2022	
Voluntary Blood Donors	ı	1988	2197	2,001	812	674	1,752	160% incr
Replacement/	4,062	3,509	3,331	3,422	3,449	2,925	2,541	13.1% decr
Pre-deposit								
Walk-In	192	89	95	107	110	130	88	32.3% decr
Mobile Session	3,361	1,899	2,196	1,894	702	584	1,607	175.2% incr
(Unscreened)								
ANC	201	195	129	61	78	36	242	Incr
Unsafe Blood	194	435	394	467	516	242	107	126.2%
/Discarded								decr

#### 3.12 LABORATORY SAMPLES REFERRED-OUT OF CCTH

The hospital works together with other institutions each year to screen for and properly report on a number of suspected surveillance diseases that are of concern for the public health. H1N1, Rubella, HIV, Buruli Ulcer, TB, etc. are a few of these cases, with Covid-19 being the most recent. The hospital in 2022 referred a total of 395 samples of H1N1 for testing compared to 69 in 2021. Also, the number of COVID-19 samples referred for testing decreased by 98.9% (from 2,749 in 2021 to 31 in 2022) as shown in table 3.12.1 below.

Table 3.12. 1: Samples Referred-Out of CCTH

TESTS	2016	2017	2018	2019	2020	2021	2022	REMARKS
TB CULTURE	10	4	13	-	-	-	-	
(DR, DST)								
TB CULTURE	-	-	9	-	-	-	-	
(LPA)								
H1N1	18	256	89	215	18	69	395	Incr
(INFLUENZA)								
RUBELLA	8	7	4	0	-	0	0	
BURULI ULCER	-	3 (1)	0	0	-	0	0	
HIVL	-	-	ı	559	3184	0	0	
EID	-	-	ı	73	489	0	0	
COVID-19	-	-	-	-	2,631	2,749	31	98.9% Decr
SAMPLES								

# 3.13 DIALYSIS SERVICE UTILIZATION

The hospital's Dialysis Center, which is regarded as Ghana's second-largest renal center, offers dialysis to people with acute and chronic kidney illness throughout the Central and Western Region. In August 2013, the Ghanaian and Japanese Tokushukai Medical Group renovated the Center, and it has been in use ever since.

#### 3.13.1 DIALYSIS SERVICE UTILIZATION

The hospital in 2022 recorded an increase of 16.1% in the adult OPD Renal Attendance (from 1,005 in 2021 to 1,167 in 2022). However, Paedics-Renal clinic attendance decreased by 31.3% (from 115 in 2021 to 79 in 2022). Further, the number of patients that accessed dialysis at the hospital dropped by 42.2% (from 185 in 2021 to 107 in 2022). Similarly, the number of dialysis sessions declined from 3,534 in 2021 to 3,229 in 2022, representing a percentage decrease of 8.6%. Detailed trend analysis is provided in figure 3.13.1.1 and table 3.13.1.1 below.

Figure 3.13.1. 1: Trend Analysis of Dialysis Service Utilization

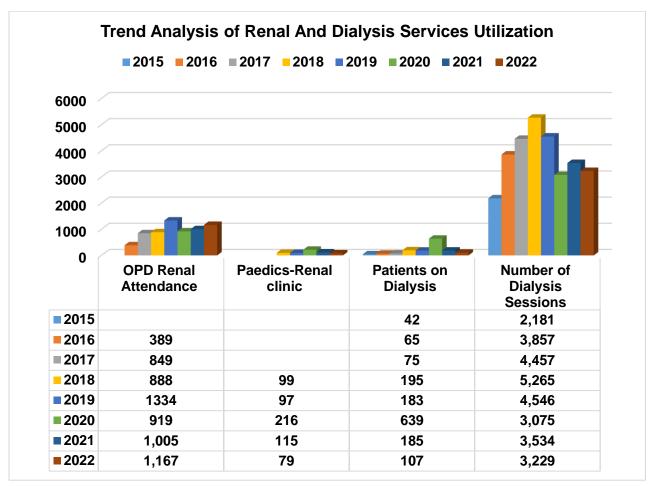


Table 3.13.1. 1: Trend Analysis of Renal and Dialysis Services

INDICATOR	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS
OPD Renal	-	389	849	888	1334	919	1,005	1,167	16.1% incr
Attendance									
Paedics-Renal	-	-	-	99	97	216	115	79	31.3% decr
clinic									
Patients on	42	65	75	195	183	639	185	107	42.2% decr
Dialysis									
Number of	2,18	3,857	4,45	5,265	4,54	3,07	3,534	3,229	8.6% decr
Dialysis	1		7		6	5			
Sessions									

# CHAPTER FOUR

# **TECHNICAL AND GENERAL SERVICES**

#### 4.1 INTRODUCTION

The Cape Coast Teaching Hospital offers technical and general services in addition to clinical care. The Technical Service and Domestic Service Sub-BMCs as well as the General Administration Unit offer these services. In addition to these divisions, the departments of Procurement and Medical Stores are in charge of handling logistics.

The Technical Service Sub-BMC provides support relating to Estate, Equipment and ICT whiles the Domestic Services Sub-BMC provides Laundry, Tailoring, CSSD, Catering, Environmental Health and House Keeping services. The General Administration on the other hand manages Transport, Security, General Secretarial services and Medico Social Welfare.

# **4.2 ESTATE & PHYSICAL INFRASTRUCTURE**

The institution achieved a number of infrastructural activities planned. Such as;

- Renovated CT-Scan room at Diagnostic Centre to house new CT-Scan machine.
- ii. Demolished and cleared hospital's undeveloped land of unauthorized structures constructed by encroachers.
- iii. Improved on illumination on the premises
- iv. Provided directional signage for easy movement and car parking in the hospital premises
- v. Renovated old laboratory at Diagnostic Centre for use as COVID-19 PCR Lab
- vi. Supervised contractors engaged to;
- vii. Renovate Polyclinic which was used as the Treatment Centre for Covid-19 patient's
- viii. Construct A&E extension continued.
- ix. Construct Eye Centre for Excellence started.

#### 4.3 ICT

Various activities were performed in 2021. Such as,

- Organized in-service training on the LHIMS application for about 400 staff which included House officers, rotation nurses, newly recruited nurses, and other cadre of staff.
- ii. Extended the Hospital's network to the new CT Scan Suite.
- iii. Provided technical specifications for the purchase of ICT equipment.
- iv. Liaised with Lightwave e-Health solutions to customize the LHIMS to be suitable for CCTH operations when the need arose.
- v. Liaised with Lightwave e-Health solutions to update and upgrade the LHIMS application at regular intervals.
- vi. Ensured timely submission of NHIA XML file on behalf of Claims office to the NHIA office.

# 4.4 GENERAL AND MEDICAL EQUIPMENT & MEDICAL FURNITURE

- i. Assisted with installation of new CT-Scan machine in the last quarter of the year.
- ii. Installed ten (10) new Ultrasound Machines / scanners.
- iii. installation of two horizontal (2001) and one vertical (1501) CSSD machine.
- iv. Installed autoclaves, ventilators, monitors, and several other key medical equipment donated by the MoH or purchased by the hospital to improve on patient care.
- v. Installed two (2) new ventilators at the ICU.
- vi. Achieved 70% of planned preventive maintenance of hospitals equipment & plants.
- vii. Repaired and replaced various faulty instruments and equipment.
- viii. Repaired and refurbished medical furniture and general furniture, including, among others, patient trolleys, patient couches, patient beds, wheelchairs, steel cabinets, other types of trolleys, etc.
- ix. Repaired and/or replaced faulty diagnostic, life support and life monitoring equipment.
- x. Installed new air-conditions at ICU, Dialysis, Operating Theatres, Consulting Rooms, several other patient care areas and offices in the hospital.

#### 4.5 EQUIPMENT UTILIZATION AND DOWN TIME ANALYSIS

In 2022, the hospital experienced a breakdown of the CT-Scan machine and thus, a 100% equipment downtime. This affected service provision as cases were referred to other competitive facilities. However, the hospital received a donation of 32-slide CT-Scan from the Ministry of Health within the later part of the year. Also, the MRI machine has not been operational for a long time.

Further, the utilization rate for CT-scan in 2022 declined from 21.39% in 2021 to 0% in 2022 (from 21.4% in 2021 to 0% in 2022) as a result of the breakdown of the CT-scan. In addition, the hospital in 2022 recorded a decline in the PPM output (from 641.7% in 2021 to 50% in 2022). Detailed analysis is provided in tables 4.5.1 to table 4.5.3 and figure 4.5.1 below.

Table 4.5. 1: Selected Equipment Downtime Analysis of Imaging Equipment

Equipment		IMAGING EQUIPMENT DOWNTIME												
Type														
	2017	2018	2019	2020	2021	2022	Remarks							
CT-Scan	7.69%	1.92%	0%	0%	82.52%	100%	New 32 Slide CT-Scan machine allocated to the hospital by MoH was installed between November and December 2022. Test run and training continued till end of the year.							

Equipment			IMAGI	ING EQUIF	PMENT D	OWNTI	ME
Туре			Downtin		_		
	2017	2018	2019	2020	2021	2022	Remarks
Ultrasound Machine	N/A	N/A	0%	*30.89%	0%	-	
X-Ray Machine 2 (Fuji)	N/A	N/A	53.00%	*47.00 %	0%	-	
Fluoroscopy Machine	N/A	N/A	N/A	N/A	0%	-	
Magnetic Resonance Imaging (MRI)	100%	100%	100%	100%	100%	100%	

Table 4.5. 2: Equipment Utilization – IMAGING

Finmont	Avg.		ı	MAGING E	QUIPMENT	UTILIZAT	ION	
Equipment Type	Equipment Operating Hours		Equipn	nent Utiliza	tion Rate fo	r Year		
71	3	2017	2018	2019	2020	2021	2022	Remarks
CT-SCAN	8 hrs per working day 2 hours per weekend / public holiday	34.76%	74.18%	83.07%	*98.72%	21.39%	0%	
Ultrasound Machine	9 hrs per working day 2 hours per weekend / public holiday	N/A	*77.56% (Aug Dec. 2018)	*69.52% (Mar. – Dec. 2019)	*69.11%	74.27%	-	
Fluoroscopy Machine	8 hrs per working day 2 hours per weekend / public holiday	N/A	N/A	N/A	N/A	N/A	-	
X-Ray Machine 1	8 hrs per working day 2 hours per weekend / public holiday	N/A	*38.76% (Aug Dec. 2018)	*47.20%	*53.44%	65.03%		
Magnetic Resonance IMAGING (MRI)	N/A	N/A	N/A	N/A	N/A	0%	0%	

Table 4.5. 3: TH KPI - Technical and Logistical Support Services

KPI	2018	2019	2020	2021	2022	REMARKS	TARGETS	MEASUREMENT
Equipment down time Proxy: CT SCAN	1.92%	0%	0%	82.5%	100%	Incr		Average downtime / Total productive hours Total productive hours (12 per day) *100
PPM Output Achieved	62	80%	75%	61.7%	50%	Decr	_	PPM executed/PPM*100
Equipment Utilisation (CT- SCAN)	74.2%	83.1%	98.72%	21.4%	0%	decr	THs = 90%	No. of hours equipment was used / total no. of hours available for usage *100

# **4.6 TRANSPORT SERVICES**

In 2022, there were a total of fourteen (14) vehicles at the hospital. Out of that, five (5) of the cars fall into the "green zone" age range of 1 to 5 years, four (4) fall into the "6 to 9 years" range, and five (5) fall into the "10 years and above" range. Additionally, the CEO uses one (1) of the vehicles (a pickup) for official business, and the hospital directors use another. Table 4.6.1 below provides a detailed study of vehicle inventory broken down by age and colour code.

Table 4.6. 1: Vehicle Inventory by Age Block

AGE BLOCK/ZONE	2018	2019	2020	2021	2022	REMARKS	
1-5 years	6	5	4	3	5	incr	
6-9 years	6	5	3	4	4		
10 and above	2	4	5 (3)	5(2)	5(1)		

# **CHAPTER FIVE**

# **FINANCIAL PERFORMANCE**

#### 5.1 INTRODUCTION

The Financial performance of Cape Coast Teaching Hospital is dependent on various internal and external factors. The institution therefore has an obligation to ensure the efficient and effective use of its funds with realistic budgeting. This chapter provides the summary of financial performance of the hospital over the past years.

# **5.2 SOURCES OF FUNDING**

The Hospital is financed through multiple sources. These include;

- 1. Government of Ghana- GOG funds are provided for salaries of full-time employees and capital investments.
- 2. Internally Generated Fund (IGF)
  - a. Health Insurance -The NHIS has become a major buyer of the hospital's services for both OPD/Inpatient clients through general services and medicines delivery. Currently NHIS has about 95% of the disease conditions. Reimbursement however, constitutes only about 20% of the cost of services (exclude salaries, Capital investment, cost of utilities, equipment cost, training and research costs).
  - b. User Fees- "Out of Pocket" which is direct payment from non-insured clients or services outside NHIS benefit package such as Dialysis, Mortuary etc. This has become the hospital's more reliable source of revenue. It Constitutes about 10-20% of the total IGF of the hospital.
  - c. The IGF is used to finance several activities both recurrent and capital including; Procurement of medicines and non-medicine commodities, Logistics and basic equipment, X-Ray, generator sets, vehicles, repair of morgue, construction of wards etc., Salaries of causal staff which growing, allowances of employees (e.g., honorarium), Training of staff (In-service training, Post Basic, Post Graduate trainings), Maintenance of equipment, infrastructure outsourced service charges, Utilities, electricity, water, telephone, internet broadband etc.
- Donor Fund- this fund comes to the hospital normally to support programs such as; Malaria, HIV/ADIS and TB. Hospitals were allocated donor pooled funds for service deliveries and other operations, but this fund has stopped for the past years.
- 4. Donations- the hospital receives donations such as medicines, beds and other hospital equipment from philanthropy and cooperate organisations.

#### 5.3 FINANCIAL PERFORMANCE HIGHLIGHTS

The hospital in addition to funding its activities with internally generated funds also receives support in terms of funds from Government of Ghana (GOG) for compensation and for service delivery. Thus, the hospital makes projections in line with these sources and monitor its execution.

In 2022, out of the GHC31,500,000 total IGF revenue projected, the percentage of execution was 101.9% (GH¢32,100,188). Furthermore, out of the GH¢ 95,000,000 GOG compensation budgeted in 2022, the execution rate was (GHC99,005,319.63) whilst GHC22,100,000 GOG service projected, the execution rate recorded was 0.9% (GHC200,000). In general, out of the GHC149,600,000 projected (budgeted) in 2022, the hospital's performance was GHC131,305,508.02, representing 87.8% execution rate. In addition to the above, the total revenue generated in 2022 increased by 26.5% (from GHC 103,822,986.92 in 2021 to GHC 131,305,508.02 in 2022), the IGF revenue went up by 24% (from GHC 24,217,381.36 in 2021 to GHC 32,100,188.39 in 2022) whereas the GOG compensation and service increased by 24.7% and 0.9% respectively. Also, out of the total revenue of GHC 131,305,508.02 generated in 2022, GOG compensation constituted 75.4%, whilst IGF revenue and GOG services constituted 24.4% and 0.15% respectively. The total revenue from general services went up by 44.06% (from GHC15,816,701.56 in 2021 to GHC22,786,950.76 in 2022), whilst revenue from pharmaceutical services increased by 10.9% (from GH\$\psi\$8,400,679.80 in 2021 to GH\$\psi\$9,313,237.63 in 2022). The hospital's total expenditure target was GHC31,500,000 in the year under review. The expenditure towards medicines increased by 36.5% (from GH¢6,192,675.02 in 2021 to GH\$\psi\$8,451,653.77 in 2022) whilst the amount spent on general services went up by 21% (GHC18,472801.38 in 2021 to GHC22,344,909.49 in 2022). Tables 5.3.1 to 5.3.3 below shows detailed analysis.

Table 5.3. 1: Revenue Category

REVE NUE CATE	NUE ZOTO		2019				2020			2021			2022		
GORY	BUD GET GH ¢	PER F. GH ¢	% EXE CUT ION	BUD GET GH ¢	PER FOR M GH ¢	% EXE CUT ION	BUD GET GH¢	PER FOR M GH¢	% EXE CUT ION	BUDG ET GH¢	PERF ORM GH¢	% EXE CUT ION	BUD GET GH	PERF ORM GH	% EXE CUT ION
IGF REVE NUE	24, 387 ,59 8	18, 863 ,20 6	14. 40 % (+)	24, 387 ,59 8	21, 579 ,68 0	88. 5%	24,4 26,3 59	22,2 68,6 93.6	91. 31 %	27,98 7,110 .96	24,21 7,381 .36	86. 53 %	31,5 00,0 00	32,10 0,188 .39	101 .9%
GOG COMP ENSA TION	48, 435 ,27 9	37, 898 ,58 6	26. 43 % (- )	48, 435 ,27 9	47, 916 ,68 2	98. 93 %	62,5 30,5 68	70,1 06,6 68	112 .12 %	79,40 7,405 .56	79,40 7,405 .56	100 %	95,0 00,0 00	99,00 5,319 .63	103 .1%
GOG SERVI CE	100 ,00 0	20, 000	-	100 ,00 0	,00 0	110 %	100, 000	370, 200	110 %	198,2 00.00	198,2 00.00	100	22,1 00,0 00	200,0 00	0.9 %
TOTA L RESO URCE ENVE LOPE	72, 922 ,87 7	56, 781 ,79 2	74. 8%	72, 922 ,87 7	69, 606 ,36 2	91. 7%	87,0 56,9 27.0 0	92,7 45,5 62	106 .5%	107,5 92,71 6.53	103,8 22,98 6.92	96. 5% %	149, 600, 000	131,3 05,50 8.02	87. 8%

Table 5.3. 2: Revenue Distribution By Source

of		2018 20		2019	2019		2020		2021			2022		
Funds	Amo unt GH¢	Prop ortio n (%)	Amo unt GH¢	Prop ortio n (%)	% Dif f	Amo unt GH¢	Prop ortio n (%)	% diff	Amou nt GH¢	Prop ortio n (%)	% diff	Amou nt GH	Propo rtion( %)	% dif f
IGF REVEN UE	18,8 63,2 06	33.2 %	21,5 79,6 80	31%	+1 4.4	22,26 8,693 .6	24%	+3. 2%	24,217 ,381.3 6	23.3 %	+8. 75	32,100 ,188.3 9	24.4%	+3 2%
GOG COMP ENSATI ON	37,8 98,5 86	66.7 %	47,9 16,6 82	68.8 %	+2 6.4 %	70,10 6,668	75.6 %	+46 .3%	79,407 ,405.5 6	76.5 %	+13 .27 %	99,005 ,319.6 3	75.4%	+2 4.7 %
GOG SERVI CE	20,0 00	0.04 %	110, 000	0.16 %	+4 50 %	370,2 00	0.4%	+23 6.5 %	198,20 0.00	0.19 %	- 46. 5%	200,00	0.15%	+0. 9%
TOTAL	56,7 81,7 92	100 %	69,6 06,3 62	100 %	+2 2.6 %	92,74 5,562	100 %	+33 .2%	103,82 2,986. 92	100 %	+11 .9%	131,30 5,508. 02	100%	+2 6.5 %

Table 5.3. 3: Trend of Financial Highlights

_											
Finan	Targe	Pe	2022	2021	2020	2019	2018	2017	2016	2015	
cial	t	rf									
Highli		+/-									
		- /									
ghts											
REVENUE GH¢											
SERVIC	22,100,0	44.	22,786,	15,816,	15,089,	15,832,	12,982,	12,49	10,28	7,559,	
ES	00	1%	950.76	701.56	523.72	185	266.79	7,893	7,152	080	
		incr									
MEDICI	9,400,00	10.	9,313,2	8,400,6	7,179,1	5,747,4	5,962,6	4,591,	3,874,	2,518,	
NES	0	9%	37.63	79.80	69.88	95	79.10	576	689	013	
		incr									
	24 #00 0		00.400	04.04=		04.550	10011	4= 00	4440	40.0=	
TOTAL	31,500,0	32. 6%	32,100, 188,39	24,217, 381.36	22,268, 693.6	21,579, 680	18,944, 945.89	17,08 9,470	14,16 1.833	10,07 7,093	
	00	inc	100.39	301.30	093.0	000	945.69	9,470	1,033	7,093	
		r.									
				EXPE	NDITURE	GH¢	1	ı	l	l	
SERVIC	22,198,	21	22,344,	18,472,	17,574,	15,832,	15,450,	11,30	9,829,	6,440,	
ES	346.23	%	909.49	801.38	513.18	184.9	199.35	4,559	251	080	
		incr									
MEDICI	9,301,6	36.	8,451,6	6,192,6	7,258,1	5,747,4	4,485,7	2,723,	2,949,	2,542,	
NES	53.77	5%	53.77	75.02	27.93	95.43	84.57	225	233	074	
		incr									
TOTAL	31,500,	24.	30,706,	24,665,	24,832,	20,761,	19,935,	14,02	12,77	8,982,	
	000	5%	563.26	476.40	641.11	126.11	983.92	7,784	8,483	154	
		inc									
		r.									

#### 5.4 TREND OF IGF BUDGET EXECUTION GHC

Over the years, the hospital's IGF budget execution rate has been fluctuating. In the year under review, the hospital recorded 101.95% IGF budget execution rate, as compared to 86.5% in 2021. However, the revenue execution rate recorded under services declined from 209.9% in 2021 to 103.1% in 2022 whilst the medicine budget execution rate went up significantly from 41.1% in 2021 to 99.08% in 2022.

On the other hand, the total IGF expenditure execution rate in 2022 was 98% as compared to 88.1% in 2021. However, whilst the service expenditure execution rate increased significantly in 2022 (from 69% in 2021 to 101% in 2022), the expenditure execution rate under medicine declined in 2022 (from 99.9% in 2021 to 91% in 2022). Detailed analysis is illustrated in tables 5.4.1, 5.4.2 and figure 5.4.1 below.

Table 5.4. 1: Summary of IGF Budget Execution Rate

Category	2017	2018	2019	2020	2021	2022	REMARKS
Revenue	92.2%	78.9%	88.5%	91.2%	86.53%	101.95%	15.42% incr
expenditure	76.8%	90.6%	92.4%	86.8%	88.1%	98%	9.9% incr

Figure 5.4. 1: Summary of IGF Budget Execution Rate

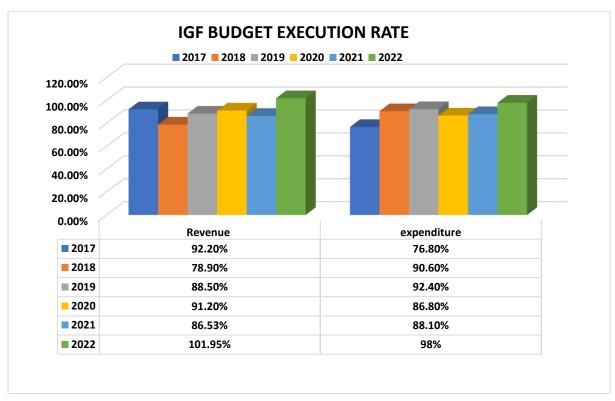


Table 5.4. 2: Details of IGF Budget Execution Rate

Cat	% E	xecut	ion R	ate	20	)22	20	21	20	20	20	19	2018	GH¢	2017	GH¢
eg ory	20 22	20 21	2 0 2 0	2 0 1 9	Bud get	Actu al	Bu dge t	Act ual								
	REVENUE															
Ser vic es	10 3.1 1 %	20 9. 9 %	8 3. 4 %	8 8. 5 %	22,1 00,0 00	22,7 86,9 50.7 6	7,53 5,92 9.19	15,8 16,7 01.5 6	18,0 90,4 29.8 1	15,0 89,5 23.7 2	17,8 87,5 98	15,8 32,1 85	17,6 64,0 70.8 1	12,9 82,2 66.7 9	13, 800 ,00 0	12, 497 ,89 4
Me dici ne	99. 08 %	41 .1 %	1 1 3 %	8 8. 4 %	9,40 0,00 0	9,31 3,23 7.63	20,4 51,1 81.7 7	8,40 0,67 9.8	6,33 5,92 9.19	7,17 9,16 9.88	6,50 0,00 0	5,74 7,49 5	6,33 5,92 9.19	5,96 2,67 9.10	4,7 33, 500	4,5 91, 576
TO TA L	10 1.9 %	86 .5 3 %	9 1. 2 %	8 8. 5 %	31,5 00,0 00	32,1 00,1 88.3 9	27,9 87,1 10.9 6	24,2 1738 1.36	24,4 26,3 59	22,2 68,6 93.6	24,3 87,5 98.9 8	21,5 79,6 80	24,0 00,0 00.0 0	18,9 44,9 45.8 9	18, 533 ,50 0	17, 089 ,47 0
						I.	I.	EXPEN	DITURE		·	·	·	·	I.	
Ser vic es	10 1 %	69 %	7 8. 1 %	8 8. 2 %	22,1 98,3 46.2 3	22,3 44,9 09.4 9	26,7 87,1 10.9 6	18,4 72,8 01.3 8	22,4 96,3 42.0 5	17,5 74,5 13.1 8	19,2 32,7 03.3 3	16,3 85,4 05.9 3	18,0 00,0 00.0 0	15,4 50,1 99.3 5	13, 533 ,50 0	11, 304 ,55 9
Me dici nes	91 %	99 .9 %	1 1 9 %	8 6. 2 %	9,30 1,65 3.77	8,45 1,65 3.77	6,20 0,00 0	6,19 2,67 5.40	6,10 0,00 0	7,25 8,12 7.93	5,07 4,89 5.57	4,37 5,72 0.18	4000 ,000. 00	4,48 5,78 4.57	4,7 33, 500	2,7 23, 225
TO TA L	98 %	88 .1 %	8 6. 8 %	9 2. 4 %	31,5 00,0 00	30,7 96,5 63.2 6	27,9 87,1 10.9 6	24,6 65,4 76.4 0	28,5 96,3 42.0 5	24,8 32,6 41.1 1	24,3 87,5 98.9 8	20,7 61,1 26.1 1	22,0 00,0 00.0 0	19,9 35,9 83.9 2	18, 267 ,00 0	14, 027 ,78 4

## 5.5 IGF PERFORMANCE STRUCTURE GHC

The hospital in 2022 generated an IGF revenue of GH¢32,100,188.39 out of which 48.15% (GH¢ 15,457,167.44) was from NHIA submission whiles 50.99% (GH¢ 16,368,337.65) was from cash and carry payment. On the other hand, GH¢ 274, 683.21 was from cooperate/private insurance representing a percentage of 0.86%

Further, the revenue from cash and carry payment in 2022 increased significantly by 39.4% (from GH¢ 11,745,526.38 in 2021 to GH¢ 16,368,337.65 in 2022) compared to the NHIS revenue which also increased by 25.6% (from 12,304,287.46 in 2021 to 15,457,167 in 2022). Also, the service revenue under cash and carry payment increased significantly by 64.3% in 2022 (from 7,307,543.45 in 2021 to 12,008,874.95 in 2022), whiles the service revenue under NHIS equally went up by 26% (from GH¢ 8,366,343.14 in 2021 to GH¢ 10,537,872.74 in 2022). Again, out of the total IGF of GH¢9,278,757.49 recorded from medicine/ Pharmaceutical services, the NHIS revenue component was GH¢4,919,295.70 which represent 34.9% increase over the previous year, whilst the cash and carry amounted to GH¢4,359,461.79 which is 18% decrease over 2021 performance. Table 5.5.1 to table 5.5.3 and figure 5.5.1 below provides detailed trend analysis.

Table 5.5. 1: IGF Performance Structure GHC

REVENUE STATUS (CASH AND CARRY & NHIS)													
PERFO RMANC	TOTAL REVEN	% DIFF		NH	IS (GH¢	:)		CASH A	ND CARE	RY (GH¢	;)		% DIFF
E	UE		2022	2021	2020	2019	2018	2018	2019	2020	2021	2022	
Service	22,546,7	26%	10,5	8,366,34	8,07	8,95	6,544	6,584,	6,876,	6,89	7,307,	12,008	64.3
	47.69	incr	37,8	3.13	7,70	5,29	,400.	892.91	890.43	4,25	543.45	,874.9	%
			72.7		4.07	4.47	88			0.32		5	incr
			4										
Medicin	9,278,75	24.9	4,91	3,937,94	3,29	2,87	3,085	2,648,	2,871,	3,87	4,437,	4,359,	1.8%
e/Pharm	7.49	%	9,29	4.33	0,43	5,90	,150.	761.86	589.59	1,49	982.93	461.79	decr
aceutica Is		incr	5.70		2.91	5.84	67			0.1		101.75	
TOTAL	31,825,5	25.6	15,4	12,304,2	11,3	11,8	9,629	9,233,	9,748,	10,7	11,745	16,368	39.4
	05.18	%	57,1	87.46	68,1	31,2	,551.	654.77	480.02	65,7	,526.3	,336.7	%
		incr	68.4 4		36.9 8	00.3 1	55			40.4 2	8	4	incr

Figure 5.5. 1: Composition of IGF

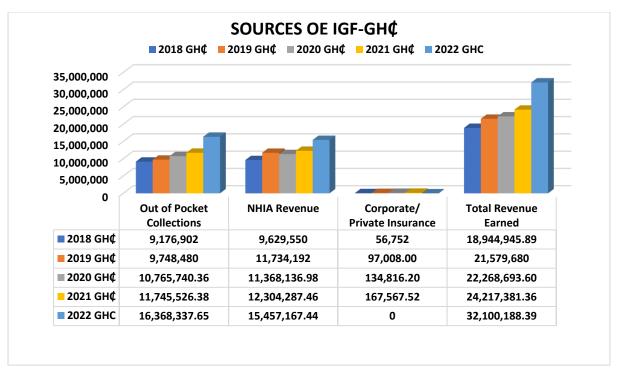


Table 5.5. 2: Composition of IGF

SOURC E OF IGF	2018 GH¢	2019 GH¢	2020 GH¢	2021 GH¢	2022 GH¢	REMARK S
Out of Pocket Collection s	9,176,902	9,748,480	10,765,740. 42	11,745,526. 38	16,368,337. 65	39.4% incr.
NHIA Revenue	9,629,550	11,734,19 2	11,368,136. 98	12,304,287. 46	15,457,167. 44	25.6% incr
Corporate / Private Insurance	56,752	97,008.00	134,816.20	167,567.52	274,683.21.	63.9% incr.
Total Revenue Earned	18,944,945. 89	21,579,68 0	22,268,693. 60	24,217,381. 36	32,100,188. 39	32.6%

Table 5.5. 3: Percentage Composition of IGF Revenue

SOURCE OF IGF	2018	2019	2020	2021	2022	REMARK S
Out of Pocket Revenue	48.4%	45.2%	48.3%	48.5%	50.99%	Incr.
NHIA Revenue	50.8%	54.4%	51%	50.8%	48.15%	Decr.
Corporate/Priv ate Insurance	0.3%	0.4%	0.6%	0.7%	0.86%	Incr.
Total Revenue GH¢	18,944,945. 89	21,579,6 80	22,268,693. 60	24,217,381. 36	32,100,188. 39	Incr.

# 5.6 REVENUE CONTRIBUTION BY DEPARTMENT (GH¢)

Generally, the total revenue from the hospital's departments in 2022 went up significantly by 32.6% (from GHC24,217,381.36 in 2021 to 32,100,188.39 in 2022). Most departments recorded some increment in the revenue generated through the services provided in 2022 compared to 2021. For instance, the medical department's revenue generation went up significantly by 68.6% in 2022 (from 1,857,318.67 in 2021 to 3,131,203.05 in 2022). Also, the Dental and Maternal Health department (Obs. & Gynae) revenues generated in 2022 went up by 58% and 51.1% respectively.

Out of the total revenue generated internally by the hospital, medicine and pharmacy contributed the highest proportion of 29.01% (GH¢9,313,237.63) in 2022 followed by 11.47% (GH¢3,682,093.17) from the Maternal Health department (Obs. & Gynae). On the other hand, ENT, Mortuary and Physiotherapy departments contributed 1.08%, 0.99% and 0.90% respectively of the total IGF. Table 5.6.1 below provides a five-year trend analysis of the revenue contribution from the various departments/Units within the hospital.

Figure 5.6. 1: Proportion of Revenue Contribution by Department in 2022

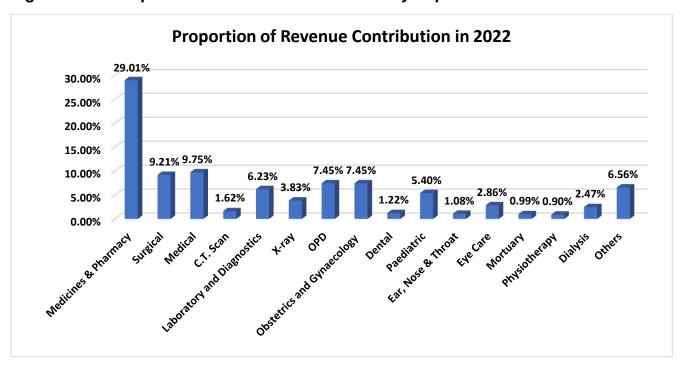


Table 5.6. 1: Proportion of Revenue Contribution by Department

SERVIC ES	% Revenu e Contrib ution in 2022	% Revenu e Contrib ution In 2021	% Revenu e Contrib ution In 2020	% DIFF	202 2 GH ¢	2021 GH¢	2020 GH¢	2019 GH¢	2018 GH¢
Medicin es & Pharma cy	29.01%	33.5%	31.6%	+14. 9%	9,3 13, 237 .63	8,105,7 89.31	7,046,10 8.62	5,747,49 5.43	5,733,91 2.53
Surgical	9.21%	14.6%	14.3%	- 16.6 %	2,9 55, 722 .25	3,544,2 06.00	3,176,47 9.31	3,174,27 6.85	1,853,00 7.15
Medical	9.75%	7.7%	9.2%	+68. 6%	3,1 31, 203 .05	1,857,3 18.67	2,041,27 5.38	2,446,16 9.67	1,747,22 7.41
C.T. Scan	1.62%	1.6%	4.8%	+35. 1%	517 ,98 5.0 0	383,44 1.00	1,066,87 7.00	824,025. 00	573,855. 00
Laborat ory and Diagnos tics	6.23%	4.8%	4.2%	+41. 3%	1,9 98, 352 .56	1,172,9 12.00	943,553. 27	586,245. 60	566,900. 15
X-ray	3.83%	3.7%	4.1%	+38 %	1,2 29, 191 .77	891,27 5.70	911,533. 00	891,719. 00	807,341. 00
OPD	7.45%	7.1%	7.4%	+39. 7%	2,3 90,	1,711,4 65.80	1,647,48 5.01	1,909,43 5.43	2,714,37 9.82

SERVIC ES	% Revenu e Contrib ution in 2022	% Revenu e Contrib ution In 2021	% Revenu e Contrib ution In 2020	% DIFF	202 2 GH ¢	2021 GH¢	2020 GH¢	2019 GH¢	2018 GH¢
					064 .53				
Obstetri cs and Gynaec ology	11.47%	10.1%	10%	+51. 1%	3,6 82, 093 .17	2,436,6 70.14	2,236,26 7.12	2,295,24 5.70	1,661,90 6.95
Dental	1.22%	1%	0.92%	+58. 2%	390 ,67 733	247,02 3.03	206,726. 44	172,010. 04	158,010. 69
Paediatr ic	5.4%	4.9%	4.6%	+45. 3%	1,7 30, 924 .84	1,191,0 82.97	1,028,06 6.03	1,126,81 3.27	645,090. 61
Ear, Nose & Throat	1.08%	0.9%	0.8%	+60. 5%	344 ,37 7.1 1	214,55 9.44	183,974. 37	195,587. 03	159,508. 33
Eye Care	2.86%	2.9%	1.6%	+30. 6%	917 ,87 3.3 0	702,66 6.70	350,939. 81	440,261. 44	252,769. 95
Mortuar y	0.99%	1.4%	1.4%	- 4.2%	316 ,04 7.8 9	329,90 4.20	313,730. 00	262,247. 93	248,811. 00
Physioth erapy	0.90%	1.1%	0.8%	+6.6 %	286 ,14 0.0 8	268,31 7.44	182,476. 84	207,488. 34	183,580. 68
Dialysis	2.47%	3.5%	2.9%	_4.8 %	798 ,41 7.0 0	839,06 1.50	647,214. 07	818,989. 00	1,008,28 1.64
Others	6.56%	1.3%	1.3%	+554 %	2,1 03, 880 .87	321,68 7.46	285,987. 33	481,670. 60	569,953. 81
Total	-	-	-	+32. 6%	32, 100 ,18 8.3 9	24,217, 381.36	22,268,6 93.60	21,579,6 80.33	18,884,5 36.72

The hospital in 2022 recorded a significant increase in its total IGF expenditure by 31.7% as compared to 2021 (from GH¢23,398,840.96 in 2021 to GH¢30,816,996 in 2022). Out of the total expenditure recorded in 2022, compensation, saw 28.4% increase. Goods and Services expenditure went up by 29%, whilst Investment (CAPEX) dropped significantly by 37.6% as compared to 2021. Detailed information is in table 5.6.2 below.

Table 5.6. 2: Financial Performance, Expenditure (GH¢)

	PER F. +/-	2022	2021	2020	2019	2018	2017
Compensati on	+28.	2,866	2,233,434	2,408,362.8	1,836,109.8	3,068,541.8	2,274,213.8
	4%	,897	.25	7	0	1	0
Goods and services	+29	26,62	20,646,54	21,885,359.	20,686,346.	14,310,834.	11,307,226.
	%	6,192	5.71	16	21	61	70
Investment (CAPEX)	- 37.6 %	323,9 07	518,861	639,919.10	-	648,500.01	522,788.62
Total	+31.	30,81	23,398,84	24,933,641.	22,522,456.	18,027,876.	14,104,229.
	7%	6,996	0.96	13	01	43	11

#### **5.7 STATUS OF NHIS CLAIMS FOR 2022**

The hospital in 2022 submitted a total of GH¢15,457,168.44 to NHIA for reimbursement, which is 25.6% rise over the previous year (from GH¢12,304,287.46 in 2021 GH¢15,457,168.44 2022). However, the total Claims paid by NHIA dropped significantly by 5.1% (from GH¢10,748,624.26 in 2021 to GH¢10,197,212.92 in 2022), whilst the outstanding claims recorded as at the close of 2022 was GH¢12,054,979.92. The outstanding number of months for NHIA reimbursement was 9 months as at the close of 2022 as compared to 6 months in 2021. Detailed analysis is shown in table 5.7.1 below.

Table 5.7. 1: Status of NHIS Claims

ITEM	% DIF F	2022	2021	2020	2019	2018	2017	2016
Claims Submitted	25.6 % incr.	15,457,168 .44	12,304,287 .46	11,368,1 36	11,734,191 .92	9,629,551. 55	10,549,1 08	9,679,1 84
Claims Paid	5.1% decr.	10,197,212 .92	10,748,624 .26	12,715,8 88	7,367,571. 40	9,393,716. 11	9,121,87 0	6,289,3 01
Outstandin g as at Close	77.4 % incr.	12,054,979 .92	6,795,023. 88	11,416,1 43	12,643,564 .86	8,276,944. 34	8,041,10 9	7,241,8 22
Adjustment for Unrecovera ble Claims	-	-	6,177,203. 32	-	-	-	-	-
No. of Month Outstandin g	incr	9	6	6	8	8	6	8

# 5.8 ANALYSIS OF ASSETS AND LIABILITIES AND CASH FLOWS

The hospital's total net asset in 2022 declined slightly by 3.3% (from GHC 9,659,165.94 in 2021 to GH¢9,341,137.84). However, the total current liabilities of the hospital went up significantly by 43.2% (from GH¢12,008,866.84 in 2021 to GH¢17,196,078.37 in 2022).

Further, the total cash inflow increased by 27.3% (from GH24,072,184.55 in 2021 to GH30,634,991.1 in 2022) whereas the net cash outflow went up sharply by 612% (From GH292,616.97 in 2021 to GH2,085,220.65 in 2022). Table 5.8.1 and 5.8.3 provides details of the analysis.

Table 5.8. 1: Trend of Assets and Liabilities

	2018	2019	2020	2021	2022	REMARK S
Non-Curren	t Assets:					
Cash & Cash Equivalent	1,257,996.3 7	694,206.58	763,698.88	1,073,813.6 5	2,097,224.1 7	95.3% incr.
Accounts Receivable s	8,726,095.5 2	12,748,013. 24	11,416,143. 98	8,873,138.1 0	12,412,453. 51	39.9% incr.
Staff Receivable s	-	-	-	47,200	29,750.00	37% decr.
Inventories	9,013,519.6 1	6,002,442.4 7	6,445,365.3 9	7,357,920.6 5	7,357,920.6	-
Total Current	18,997,611. 50	19,444,662. 29	18,682,212. 25	17,352,072. 4	21,897,348. 33	26.2% Incr.
Non- Current						
Property, Plant & Equipment	1,838,304.5 9	3,116,319.6 8	3,755,238.7 8	4,315,960.3 8	4,639,868.1	7.5% incr.
Total Assets	20,835,916. 09	22,560,981. 97	22,437,451. 03	21,668,032. 78	26,537,216. 45	22.5% incr
			L	IABILITIES		
Current Lial						
Account Payables	5,606,678.9 5	822,876.75	9,337,117.2 8	11,774,418. 76	15,898,019. 24	35%
Trust Monies	39,044.16	89,687.93	105,353.32	234,448.08	1,298,059.3 7	453% incr.
Total Current Liabilities	5,645,723	8,313,564.6 8	9,442,470.6 0	12,008,866. 84	17,196,078. 61	43.2% incr.
Net Assets		_	1	1	_	1
Total Net Assets	15,190,192. 98	14,247,417. 29	12,996,026. 25	9,659,165.9 4	9,341,137.8 4	3.3% decr.
Financed B						
Accumulat ed Fund B/F	12,379,659. 73	15,190,192. 97	14,247,417. 29	12, 996,026.25	9,659,165. 94	25.7% decr.
Surplus /Deficit Recorded	2,810,533.2 5	942,775.68	- 1,251,391.0 5	1,025,181.8 2	1,407,844. 68	37.3% incr
Accumulat ed Fund Carried Over	15,190,192. 98	14,247,417. 29	12,996,026. 25	9,659,165.9 4	9,341,137.8	3.3% decr

Table 5.8. 2: Cash Flow

	0000	0004	0000	0040	DEMARKO
	2022	2021	2020	2019	REMARKS
Cash Inflow					
Out of Pocket	16,368,336.74	11,745,526.38	10,764,780.42	10,125,338.52	39.4% incr
NHIA Re-	10,197,212.92	10,748,624.26	12,715,888.45	7,367,571.40	5.1% decr
Imbursement					
Other Receipts	4,069,441.44	1,578,033.91	1,025,610.80	577,954.81	157.9% incr
Total Inflows:	30,634,991.1	24,072,184.55	24,506,279.67	18,070,864.73	27.3% incr
Cash Outflows:					
IGF	2,773,865.54	2,173,839.80	2,357,163.82	1,751,383.36	27.7% incr
Compensation					
Goods/Services	24,235,782.43	20,176,117.65	22,048,723.65	16,773,372.91	20.1% incr
Salary Advance	-	45,200	30,900.00	60,300.00	-
		·			
Trust Payments	2,925,141.64				-
GRA-Tax	151,426.55	543,820.51	-	-	72.2% decr
Payment					
Total Outflow	30,086,216.16	23,779,567.58	24,436,787.47	18,585,056.27	26.5% incr
Net Cash	2,085,220.65	292,616.97	69,492.20	514,191.54	612.6% incr
Outflow					

# **CHAPTER SIX**

# **COLLABORATION AND SUPPORT**

# **6.1 INTRODUCTION**

The Cape Coast Teaching hospital periodically partners with and equally receives donations from corporate organisations and individuals that are geared towards improving the quality of health care.

# **6.2 COLLABORATORS**

Table 6.2.1 provides details of the major collaborators and type of support provided to the institution in 2022.

Table 6.2. 1: Collaborator(s) and Supports Received in 2022

NO.	COLLABORATOR(S)	SUPPORT / CONTRIBUTION
1.	Himalayan Cataract Project/ National Cataract Outreach Programme	Free Cataract Surgeries. Screened 17,338 with 2,415 Surgeries
2.	Operation-Smile Ghana	Provided free Cleft lip and palate with 8 Surgeries
3.	The Czech Republic Governmental Medical Program (MEDEVAC)	Free Orthopaedics & Plastic Surgery. Screened 95 with Surgeries 27
4.	Specialist doctors and nurses from University of UTAH, USA	Collaborated to perform surgeries in the of area of Ear, Nose and Throat. Total of 33 clients booked with 23 surgeries performed
5.	Maternal Health Sub BMC	Collaborated with Regional Health Directorate and conducted mentorship support for peripheral facilities in Central Region
6.	Ghana Gas	Construction of Patient Relative Hostel to provide decent and affordable accommodation
7.	USAID, HCP (A USA NGO & its Partners	Construction of a New Eye Centre
8.	CEO of GYAM Engineering construction work LTD Ing. Dr. Gyamera Ankomah Ebenezer (PHD)	Sponsored the construction of a concrete stand and mounting of a poly tank to store water for Paediatric ward and neonatal and intensive care unit (NICU)
9.	KHRC and NMIMR	Undertook the MVPE programme and Influenza Surveillance respectively.
10.	Unknown	Donation of office desk from philanthropist for Executive suite ward Doctors' consulting room
11.	Unknown	Maternal health Sub-BMC received one (1) colposcope machine through donation
12.	Unknown	Child Health received 4 air conditioners (ACs) through donation
13.	Unknown philanthropists	Internal medicine received a polytank through donation

NO.	COLLABORATOR(S)	SUPPORT / CONTRIBUTION
14.	Unknown philanthropists	Internal medicine received Office desk for the Executive suite ward Doctors' consulting room through donation
15.	HCP	Donated following medical equipment:
16.	Specialist doctors and nurses from UTAH, Czech Republic, Himalayan and Korle-Bu (Dr. Etwire)	Collaborated with specialists' doctors and nurses to perform various surgeries.
17.	Dr. Martin Morna	Donated a fridge, two air-conditioners and washing machine
18.	Ghana Prisons Service	Engagement of prisoners to control the weeds at CCTH immediate surroundings
19.	Ghana Police Service	Improved support to keep protecting clients, staff and property.

# **SECTION 3**

# **CHAPTER SEVEN**

# **OUT PATIENT SUB-BMC**

# 7.1 BACKGROUND

The Hospital's Out-Patient Department (OPD) is one of the clinical Sub-BMCs of the hospital. It serves as the first point of contact for patients who come to the hospital. The OPD Sub-BMC in addition to providing general OPD services, host Specialised OPD clinics that are run by other clinical Sub-BMCs by Specialists, Residents, Consultants and Medical Officers. The aim is to promote excellence in Outpatient care by advancing the scope of practice in ensuring effective and efficient delivery of quality healthcare through decentralization. The OPD Sub-BMC is managed by five (5) management team, consisting of a Family Physician who is the head of the Sub-BMC, DDNS, a Business Manager, a Pharmacist and Accountant, with well trained, skilled, motivated and committed workforce using evidence-based practice

# 7.2 OPD SERVICES

Below are the services provided by Clinic.

Table 7.2. 1: Types of OPD Services Provided

NO.	CLINICS/SERVICES	NO.	CLINICS/SERVICES
1.	General Medical	1.	ENT
2.	Dermatology	2.	Eye
3.	Asthma	3.	Dental & Maxillofacial
4.	Endocrinology	4.	Orthodontist services
5.	Haematology	5.	Gynae, ANC & PNC
6.	Retroviral / STI Clinic	6.	Reproductive Endocrinology and Fertility Services
7.	TB Clinic	7.	Gynae. Oncology Services
8.	Sickle Cell	8.	General Paediatrics OPD
9.	Gastroenterology	9.	Paedics Asthma
10.	Cardiology	10.	Paedics Neuro
11.	Diabetes	11.	Paedics Renal
12.	Hepatitis B	12.	Paedics Cardio
13.	Renal & Dialysis Clinic	13.	Paediatrics - Sickle Cell clinic
14.	Adolescence Clinic	14.	NICU Follow-Up
15.	Oncology Clinic	15.	Paediatrics Oncology
16.	General Surgery	16.	Diet Clinic

NO.	CLINICS/SERVICES	NO.	CLINICS/SERVICES
17.	Orthopaedics	17.	Clinical Psychology
18.	Uro-surgery	18.	Physiotherapy
19.	Neuro-surgery	19.	Speech Therapy
20.	Plastic Surgery	20.	Community Psychiatry
21.	Colorectal	21.	Minor Procedures (Treatment Room)
22.	Anaesthesia clinic	22.	
23.	Radiology Investigation	23.	
24.	Laboratory Investigations	24.	

# 7.3 OPD 2022 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES

Table 7.3. 1: Summary of OPD 2022 Annual Performance against CCTH Strategic Objectives

	20	22 ANNU	AL OUTC	OME ANI	O OUTPU	T PERFO	RMANCE								
ССТ	CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY														
	Actual Performance Trend														
	2016   2017   2018   2019   2020   2021   2022   2022   Remainded Health   Company   Company														
Total OPD Attendanc e	110,06 8	117,85 4	158,16 4	168,05 6	125,77 2	152,36 4	170,44 1	CCTH = 15% incr	11.9% incr						
OPD cases seen per doctor	1:1184	1:1030	1:1163	1:1098	1:749	1:560	1:1775	THs= 1:108 0	incr						
Total Specialist OPD attendanc e	73,152	83,217	75,130	90,336	69,603	80,114	105,228	-	31.3% incr						
OPD Cases seen per specialist	1:1829	1:1849	1:1418	1:1255	1:1024	1:148 3	1:1814	THs= 1:125 5	incr						
Total Referrals –In	3,443	4,386	4,292	6778	3609	3,566	3,777	-	5.9% incr						

Total number of mental health patients seen were 225

70.7% increment in access to MHS

Two outreach services held in collaboration with other Sub-BMCs to commemorate World Hypertension and Diabetes Days

OPD operated from 8am to 5pm, however, the Sub-BMC was faced with inadequate doctors

#### 2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

#### CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.

				Actual F	Performan	ce Trend			
	2016 Annua I	2017 Annua I	2018 Annua I	2019 Annua I	2020 Annua I	2021 Annua I	2022 Annual	Targe t	Remar k/ % Diff.
Percentag e of clients satisfied with overall services at the institution	-	96.8%	87.3%	97%	93.4%	84.3%	82.4%	THs = 95%	decr

Organized 1 workshop on medico-legal issues

Organized 2 refresher trainings on customer care for all OPD staff

One LHIMS refresher training was organized for selected staff in the Sub-BMC

# CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE

Renovated Four consulting rooms

All Paediatric OPD consulting rooms, Paediatric OPD waiting area as well as the treatment rooms were painted

Procured new set of chairs for doctors, nurses and patients in Surgical OPD consulting rooms and General Medical consulting rooms

Manufactured one ECG trolley to house the ECG Machine at the Diabetic clinic

# **CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM**

#### 4.1: Governance Related Performance

Two staff Durbars were conducted

Conducted 4 management meetings

Held 2 extended management meetings

# 4.2: Human Resource Related Performance

2 new Medical Officers were posted to the Sub-BMC

New business manager posted to the Sub-BMC

# 4.3: Finance related performance

Improved accountability and transparency with regards to the Sub-BMC finances -

# CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING

# 5.1 Improve on Research:

-

#### 5.2 Improve on Teaching and Learning:

-

# CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS

Weekly clinical meetings and training of house officers and Medical Officers on the management of Hypertension and Diabetes at University of Cape Coast Hospital

# 7.4 SUMMARY OF OPD PERFORMANCE

The Hospital's OPD utilization went up by 11.9% in 2022 (from 152,364 in 2021 to 170,441 in 2022). Generally, most of the OPD performance indicators in 2022 have seen some improvement. For instance, Average Daily OPD Visit went up significantly by 12% in 2022 (from 417 in 2021 to 467 in 2022), whilst the total insured went up significantly by 14.3% (from 129,530 in 2021 to 148,031 in 2022). However, noninsured clients declined marginally in 2022 by 1.9% as compared to 2021. Further, cases referred-in increased by 5.9% in 2022 (from 3,566 in 2021 to 3,777 in 2022). The general increase in attendance, had a corresponding effect on the hospital performance in relation to the Teaching Hospitals' (THs) performance target of 1:1080 and 1:1200 for the OPD cases seen per Doctor and OPD cases seen per specialist respectively. The hospital's performance on the ratio of OPD cases seen per doctor increased from 1:560 in 2021 to 1:1775 in 2022 against the THs' target of 1:1080 (it is a productivity indicator) whereas, the ratio of OPD cases seen per specialist increased from 1:1,483 in 2021 to 1: 1814 in 2022 against THs' target of 1:1200. Again, Paediatric Specialist Clinic Attendance went up significantly by 7.7% in the year under review (from 1,783 2021 to 1,921 in 2022).

In addition, there was some increment in specific clinics attendance in 2022. For instance, the Gynae. Oncology and Reproductive Endocrinology & Fertility Clinics which were introduced in 2021, recorded significant rise in attendance by 600% and 31.7% in 2022 (from 11 in 2021 to 77 in 2022) and (from 271 in 2021 to 357 2022) respectively. Uro-Surgical and Neuro-Surgery clinics attendance went up significantly in 2022 by 58.04% and 106.2% respectively over the previous year. Eye and Dental & Maxillofacial recorded some decreases in 2022 by 8.3% and 0.8% respectively over previous year. whereas the ENT clinic attendance declining by 8.3%. Detailed trend analysis on the OPD services utilization in the hospital is provided in table 7.4.1 to table 7.4.4 and figure 7.4.1 and figure 7.4.2 below.

Figure 7.4. 1: Trend in OPD Service Utilization

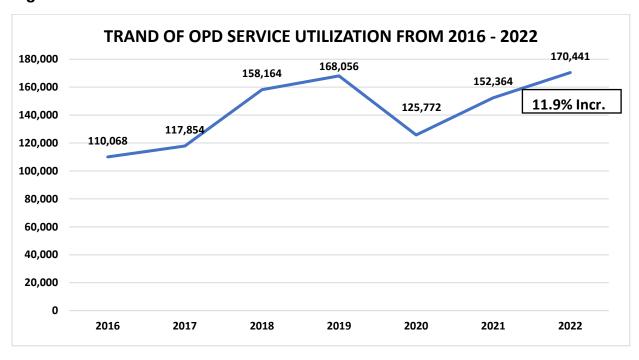


Table 7.4. 1: General OPD Clinic Attendance

INDICAT ORS	201 3	2014	2015	2016	2017	2018	2019	2020	2021	2022	REMAR KS
New OPD Registrants	-	-	-	40,06 5	39,40 4	28,36 1	23,33 4	22,63 6	24,26 6	22,93 3	5.5% Dec
OPD Attendance	93,3 32	100,7 56	103,9 14	110,0 68	117,8 54	158,1 64	168,0 56	125, 772	152,3 64	170,4 41	11.9% Inc
Average Daily OPD Visit	-	276	285	302	323	433	461	345	417	467	12% Inc
Insured Patients	86,7 72	93,07 6	95,85 5	101,9 57	109,2 80	130,5 57	146,2 27	107,1 69	129,5 30	148,0 31	14.3% Inc
Non- Insured Patients	6,56 0	7,680	8,059	8,111	8,574	27,60 7	21,77 9	18,60 3	22,83 4	22,41 0	1.9% Dec
Referrals In	2,33 5	3,647	3,911	3,443	4386	4,292	4,447	4113	3566	3,777	5.9% Inc
Referrals Out	-	-	-	-	-	-	146	64	-	157	

MONTHLY TREND OF OPD UTILIZATION **■** 2017 **■** 2018 **■** 2019 **■** 2020 **■** 2021 **■** 2022 16000 14000 12000 JAN **FEB** MAR APR MAY JUN JUL AUG **SEPT** OCT NOV DEC 

Figure 7.4. 2: Monthly Trend of OPD Utilization Service

Table 7.4. 2: Monthly Trend of OPD Utilization Service

■ 2022

YEA R	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	ОСТ	NOV	DEC
2017	9654	9915	1067 0	9112	1046 9	9844	9757	1051 3	9694	1063 3	8239	9354
2018	1246 3	1173 2	1325 3	1326 4	1346 0	1264 5	1327 5	1371 0	12793	1495 1	1442 6	1218 8
2019	1453 3	1343 6	1465 5	1460 7	1506 2	1375 9	1566 4	1215 1	12429	1485 5	1440 9	1249 6
2020	1354 3	1275 7	1028 6	7262	7729	8533	9179	9772	9808	1254 5	1213 0	1192 8
2021	1189 0	1130 7	1294 0	1198 1	1232 5	1294 1	1336 7	1393 6	11257 9	1272 4	1342 7	1284 7
2022	1262 2	1261 9	1257 0	1414 3	1531 4	1518 2	1421 0	1580 2	14352	1521 7	1573 7	1267 3

Table 7.4. 3: OPD Performance under the Key Performance Indicator

Indicator	2016	2017	2018	2019	2020	2021	2022	Rema rks	Targ et	Measure ment
OPD Cases Seen Per Doctor	1:118 4	1:103 0	1:116 3	1:109 8	1:749	1:560	1:177 5	incr	THs 1:10 80	Total no. of client attending OPDs / Total no. of Drs
Total OPD Attendance	110,0 68	117,8 54	158,1 64	168,0 56	125,7 72	152,3 64	170,4 41	11.9% Inc	CCT H 10 Incr	

Indicator	2016	2017	2018	2019	2020	2021	2022	Rema rks	Targ et	Measure ment
Total Number Of Doctors	93	114	136	153	168	273	96	64.8% Dec		
OPD Cases Seen Per Specialist	1:182 9	1:184 9	1:141	1:125 5	1:102	1:148	1:181 4	22.3% Inc	THs 1:12 00	Total no. of client attending specialist OPDs / Total no. of specialist/ Snr. Specialists/ Consultant s
Total Specialists OPD Attendant	73,15 2	83,21 7	75,13 0	90,33	69,60	80,11 4	105,2 28	31.3% Inc		
Total Number of Specialist /Snr. Specialists/Cons ultants	40	45	53	72	68	62	58	6.5% Dec		

Table 7.4. 4: OPD Service Statistical Performance by Clinic

CLINICS	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	REMAR KS
			INT	ERNAL	MEDIC	INE SE	RVICE				
General Medical	18,4 21 224	18,2 39 324	16,6 17 357	16,2 32 330	21,0 60 359	17,1 84 315	18,1 42 45	17,3 85 353	19,0 46 462	17,0 68 185	10.4% decr 60%
Dermatology											decr
Asthma	491	357	297	511	787	1,03 6	1,00 5	819	626	691	9.9% incr
Sickle Cell	151	179	235	454	650	567	423	595	269	301	11.9% incr
Gastroentero logy	183	315	359	560	690	620	749	662	866	663	23.4% decr
Cardiology	546	506	516	1,59 0	2,15 3	2,10 4	2,58 3	2,55 8	2718	2,43 8	10.3% decr
Diabetes	11,3 32	9,13 5	9,20 1	9,30 9	9,96 6	10,6 36	11,3 04	8,96 5	9356	8,59 0	8.2% decr
Hepatitis B	1,62 2	1,11 4	794	940	1,05 9	1179	1,21 2	850	775	748	3.5% decr
TB CLINIC	-	36	35	42	39	131 (42 - CCT H Clien ts)	361 (31 CCT H Clien ts)	292	271	187	31% decr
HIV CLINIC	-	-	5,89 5	5,37 7	6,06 8	-	4,91 3	5,33 7	4057	4,45 7	9.9% incr
Adolescent Clinic	-	-	57	126	218	171	178	126	102	162	58.8% incr
Endocrinolog y	-	-	-	82	125	111	106	97	184	136	26% decr
Haematology	-	-	-	223	298	431	437	396	427	366	14% decr
Renal Clinic	-	-	-	389	849	888	1,33 4	919	1005	1,16 7	16.1% incr
Oncology Clinic	-	-	-	-	-	-	-	62	183	200	9.3% incr

CLINICS	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	REMAR
											KS
	1					ERVICE		1 4 0 =			4.4.007
General	4,62	4,37	3,98	4,37	5,70	4,23	3,43	1,35	2442	2,08	14.6%
Surgery Orthopaedic	7 1,53	5 1,46	3 1,91	6 2,22	2,34	2,48	3 2,31	6 1,33	2530	5 2,64	decr 4.6%
Orthopaedic	4	6	3	3	7	5	1	7	2550	7	incr
Uro-Surgery	1,02	1,76	2,20	2,84	3,27	4,10	6,11	4,88	3,04	4,81	58.04%
3 ,	9	9	8	3	5	2	9	0	4	1	incr
Neuro-	-	112	200	129	312	351	620	485	487	1,00	106.2%
Surgery			4=0		224	400	101	100		4	incr
Plastic	-	-	176	564	601	433	461	408	739	654	11.5%
Surgery Colorectal	_	_	_	_	_	_	82	196	300	270	decr 10%
Colorectal						_	02	130	300	270	decr
	<u> </u>						ARE SE			ı	
Anaesthesia	-	329	689	943	868	782	894	480	1042	721	30.8%
Clinic	DEN	TAL EV	/E AND	LEAD I	NOSE S	TUDO	AT (DEI	ENT\ CE	DVICE		decr
ENT	4,99	5,09	5,90	6,08	6,66	6,23	<b>AT (DEI</b> 8,21	6,00	5588	5,12	8.3%
LINI	5	4	7	0,00	4	0,23	1	4	3300	6	decr
Eye	6,05	5,87	6,60	8,42	9,34	8,91	12,0	8,45	1083	10,7	0.8%
	5	2	o <sup>°</sup>	0	8	7	78	1	7	55	decr
Dental &	4,13	2,32	4,16	4,29	5,11	4,76	5,20	4,66	4922	4,62	6% decr
Maxillofacial	1	5	5	4	2	9	4	7		7	
Orthodontist Service	-	-	-	-	-	-	-	-	25	-	
Service			МΔ	TERNA	I HEA	LTH SE	RVICE				
ANC	6,77	7,33	8117	8434	10,1	8,99	9,41	7,71	9,29	10,4	12.4%
7	9	2	0111	0.0.	41	1	9	7	8	49	incr
PNC	-	-	2430	2750	3,31 4	3,49 5	3,38 4	1,86 6	2520	3,90 4	54.9% incr
Gynae	-	-	4761	4075	4,09 2	4,07 8	4,26 5	2,55 3	3368	3,90 4	15.9% incr
Reproductive Endocrinolog y & Fertility Services	-	-	-	-	-	-	-	-	271	357	31.7% incr
Gynae. Oncology Services	-	-	-	-	-	-	-	-	11	77	600% incr
Total	-	15,5 15	15,3 08	15,2 59	17,5 47	16,5 64	17,0 68	12,1 36	15,4 68	18,6 91	20.8% incr
	L	<u> </u>		CH	ILD HE	ALTH S	ERVICE	1	l	<u> </u>	
General Paediatrics Clinic	7,39 1	6,76 7	7,69 0	7,81 0	8,18 0	7490	8,66 6	6,00 3	9244	8,46 1	8.5% decr
Paediatric Sp Clinic	ecialist	<u> </u>									
NICU	-	-	-	-	-	155	206	247	890	958	7.6%
Follow-Up Paedics Asthma	-	-	-	-	-	87	78	57	102	111	incr 8.8% incr
Paedics Neuro	-	-	-	-	-	168	137	213	245	294	20% incr
Paedics Renal	-	-	-	-	-	99	97	216	115	79	31.3% decr
Paedics Cardio	-	-	-	-	-	30	21	60	58	38	34.5% decr

CLINICS	2013	2014	2015	2010	2017	2010	2019	2020	2021	2022	KEWAK
Paediatrics - Sickle Cell clinic	-	-	-	-	-	205	331	328	351	463	31.9% incr
Paediatrics Oncology	-	-	-	-	-	-	-	48	22	23	4.5% incr
Total Paediatric Specialist Clinic Attendance	-	-	-	-	-	744	870	1,16 9	1783	1,92 1	7.7% incr
			R	EHABII	LITATIO	N SER	VICE				
Diet Clinic	953	1,00 8	1,74 3	1,41 7	1,91 6	1,26 5	1,22 4	1,07 0	1313	1,56 8	12.5% decr
Clinical Psychology	-	-	150	163	261	301	592	557	798	428	49.1% decr
Physiotherap y	-	-	5,04 8	14,4 51	9,22 8	9,57 9	10,0 90	5,67 0	5,05 5	8,71 2	72.3% incr
Speech Therapy	-	-	-	-	-	24	68	208	415	642	54.7% incr
Community Psychiatry	-	-	-	-	-	-	-	56	66	225	240.9% incr
· ·				OTH	IER SE	RVICES	3				
Polyclinic	-	-	-	-	-	-	348	6,67 4	0	1	
Minor Procedures (Treatment Room)	-	-	8,70 6	9,93 2	9,21 8	7464	9280	8,37 5	10,4 09	8,62 4	17.1% decr
Weekend & Holiday Clinic	402	1,16 0	383	362	362	355	358	-	-	-	-

CLINICS 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 REMAR

# 7.5 TOP 10 OPD MORBIDITY

Non-communicable diseases continue to remain the leading cause of OPD morbidities being reported at the facility over the past years. Hypertension has remained the number one leading OPD morbidity in the hospital for the past three years. In 2022, Hypertension cases recorded at the OPD constituted 22% of morbidities, compared to 11.9% recorded in 2021. Acute Urinary Tract Infection (7.5%) and Rheumatism/ Other Joint Pains/ Arthritis (5.8%) ranked 2<sup>nd</sup> and 3<sup>rd</sup> leading OPD morbidities respectively. On the other hand, Viral Hepatitis (1.2%) and Typhoid Fever (1.1%) constitute the least among the top 20 OPD morbidities recorded in 2022. Table 7.5.1 and figure 7.5.1 shows further the detailed analysis below.

Figure 7.5. 1: Top Twenty OPD Morbidities in 2022

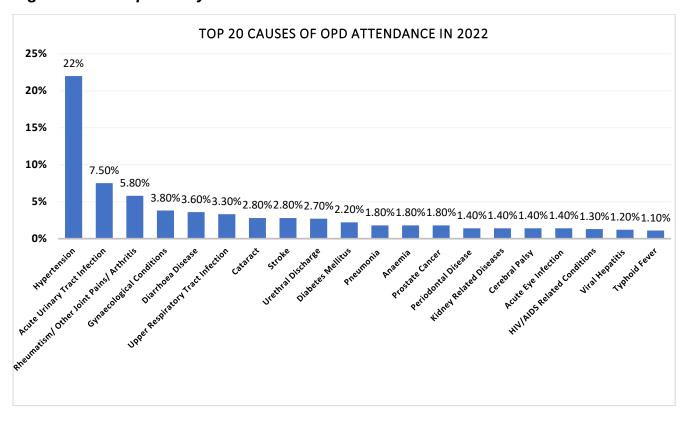


Table 7.5. 1: Trend of Top Twenty OPD Morbidities

NO.	2	019	20	20	20	21	20	22
	CONDITI	PROPORTI ON	CONDI TION	PROPO RTION	CONDITI ON	PROPOR TION	CONDITI	PROPO RTION
1.	Hyperten sion	12.0%	Hyperte nsion	12%	Hypertens ion	11.49%	Hyperten sion	22%
2.	Diabetes Mellitus	7.9%	Diabete s Mellitus	9%	Diabetes Mellitus	7.77%	Acute Urinary Tract Infection	7.5%
3.	Acute Eye Infection	1.7%	Acute 7% Urinary Tract Infectio n		Acute Urinary Tract Infection	5.95%	Rheumati sm/ Other Joint Pains/ Arthritis	5.8%
4.	Upper Respirat ory Tract Infection	1.7%	Urethral Dischar ges	6%	Upper Respirator y Tract Infection	4.34%	Gynaecol ogical Condition s	3.8%
5.	Stroke	1.3%	Diarrho ea Diseas e	4%	Urethral Discharge	3.06%	Diarrhoe a Disease	3.6%
6.	Pneumo nia	0.9%	Upper Respira tory Tract Infectio n	4%	Anaemia	3.01%	Upper Respirato ry Tract Infection	3.3%

NO.	2	019	20	20	20	21	20	22
	CONDITI	PROPORTI	CONDI	PROPO	CONDITI	PROPOR	CONDITI	PROPO
	ON	ON	TION	RTION	ON	TION	ON	RTION
7.	Asthma	0.9%	Pneum onia	4%	Typhoid Fever	2.8%	Cataract	2.8%
8.	Prostate Cancer	0.9%	Malaria	3%	Kidney Related Diseases	2.45%	Stroke	2.8%
9.	Otitis Media	0.9%	Kidney Related Diseas e	3%	Pneumoni a	2.39%	Urethral Discharg e	2.7%
10.	Cataract	0.7%	Rheum atism & Joint Pains	3%	Rheumati sm/ Other Joint pain/Arthri tis	2.28%	Diabetes Mellitus	2.2%
11.	Viral Hepatitis	0.7%	Diseas es of the Reprod uctive System	3%	Cataract	2.13%	Pneumo nia	1.8%
12.	Sickle Cell Disease	0.6%	Cancer	2%	Otitis Media	1.71%	Anaemia	1.8%
13.	Anaemia	0.3%	Gynaec ological Conditi ons	2%	Skin Diseases	1.56%	Prostate Cancer	1.8%
14.	Obesity	0.3%	Acute Eye Infectio n	2%	Diarrhoea Diseases	1.39%	Periodon tal Disease	1.4%
15.	Cervical Cancer	0.3%	Typhoid Fever	2%	Ulcer	1.38%	Kidney Related Diseases	1.4%
16.	Uncompl icated Malaria Tested Positive	0.3%	Ulcer	1%	Viral Hepatitis	1.36%	Cerebral Palsy	1.4%
17.	HIV/AID S Related Conditio ns	0.3%	Anaemi a	1%	Stroke	1.33%	Acute Eye Infection	1.4%
18.	Cardiac Diseases	0.2%	Catarac t	1%	Gynaecol ogical Condition	1.31%	HIV/AIDS Related Condition s	1.3%
19.	Urethral Discharg es	0.2%	Pregna ncy related complic ations	1%	HIV / AIDS Related Condition s	1.19%	Viral Hepatitis	1.2%
20.	Septicae mia	0.2%	Stroke	1%	Periodont al Diseases	1.19%	Typhoid Fever	1.1%

# 7.6 REHABILITATION SERVICES

The hospital also provides rehabilitation services among the numerous specialty services. These services are; Clinical Psychology, Physiotherapy, Diet and Nutrition, Speech Therapy as well as Community Psychiatry. The total rehabilitation services attendance in 2022 increased significantly by 51.4% (from 7,647 in 2021 to11,156 in 2022). The Physiotherapy clinic recorded the highest rehabilitation OPD clinic attendance for 2022. Further, the Physiotherapy clinic attendance went up significantly by 72.3% (from 5,055 in 2021 to 8,712 in 2022). Diet & Nutrition, Community Psychiatry and Speech Therapy clinics also recorded increment in attendance by 19.4%, 54.7% and 240.9% respectively in the year under review. However, Clinical Psychology clinic recorded a declined in its OPD attendance by 46.4% in the year under review. Table 7.6.1 and figure 7.6.1 to figure 7.6.2 below illustrates details of the analysis below.

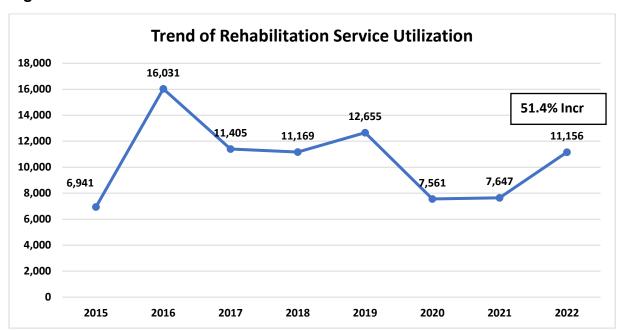


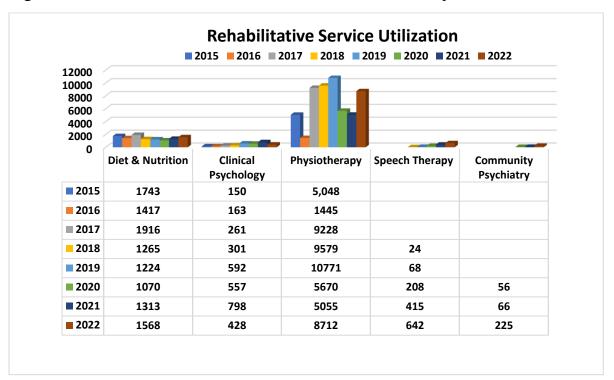
Figure 7.6. 1: Trend in Rehabilitation Service Utilization

Table 7.6. 1: Rehabilitation Services

REHABILITAT ION	201 5	2016	2017	2018	2019	202 0	202 1	2022	REMAR KS
SERVICES									
Diet &	1,74	1,41	1,91	1,26	1,22	1,07	131	1,568	19.4%
Nutrition	3	7	6	5	4	0	3		incr
Clinical	150	163	261	301	592	557	798	428	46.4%
Psychology									decr
Physiotherapy	5,04	14,4	9,22	9,57	10,7	5,67	5,05	8712	72.3%
	8	51	8	9	71	0	5		incr
Speech	-	-	-	24	68	208	415	642	54.7%
Therapy									incr
Community	-	-	-	-	-	56	66	225	240.9%
Psychiatry									incr

REHABILITAT ION SERVICES	201 5	2016	2017	2018	2019	202	202 1	2022	REMAR KS
Total attendance	6,94	16,0	11,4	11,1	12,6	7,56	7,64	11,5	51.4%
	1	31	05	69	55	1	7	75	Incr

Figure 7.6. 2: Trend in Rehabilitation Service Utilization by Clinics



#### 7.6.1 PHYSIOTHERAPY

The Physiotherapy services in the hospital has recorded the highest rehabilitation outpatient clinic attendance over the past years. The clinic's attendance in 2022 increased significantly by 72.3% (from 5,055 in 2021 to 8,712 in 2022). Stroke, Low back pain and Spondylosis were the leading conditions seen at the clinic. Stroke remain the number one condition among the cases seen at the clinic over the past years. In the year under review, Stroke cases went up marginally by 3.3% (from 2,095 in 2021 to 2165 in 2022), followed by Spondylosis which also went up by 3.6% (from 1684 in 2021to 1,744 in 2022), whereas, low back pain condition equally increased by 13.9% in 2022 (from 1,475 in 2021 to 1,680 in 2022). Amputation and Contractures and Fractures, on the other hand, were the least among the top 10 conditions seen in 2022. Amputation cases reduced by 77.4% in 2022 % (from 230 in 2021 to 52 in 2022) while Contractures cases appreciated by 12.9% in the same year (from 70 in 2021 to 79 in 2022). Table 7.6.1.1 and figures 7.6.1.1 to figure 7.6.1.2 below shows detailed analysis.

Figure 7.6.1. 1: Physiotherapy Service Utilization Trend

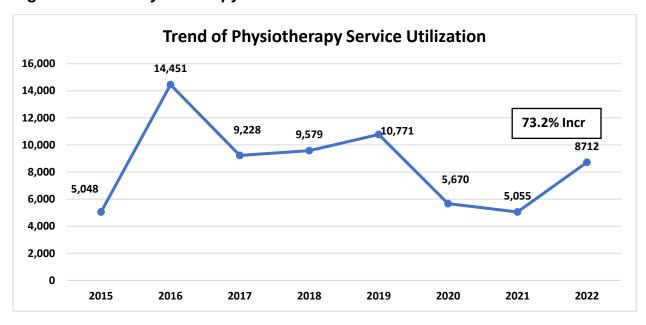


Figure 7.6.1. 2: Comparative Analysis of Physiotherapy Cases

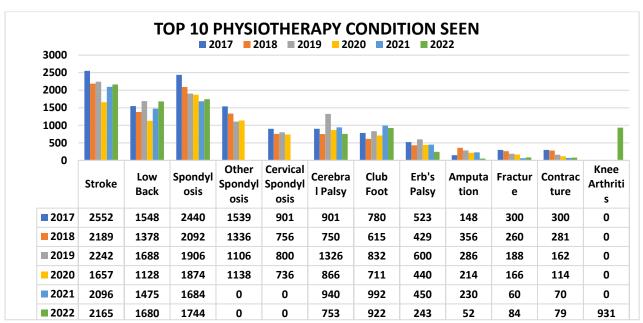


Table 7.6.1. 1: Comparative Analysis of Physiotherapy Cases

No.	Physiotherapy Conditions	2017	2018	2019	2020	2021	2022	Remarks
1.	Stroke	2552	2189	2242	1657	2096	2165	3.3% incr
2.	Low Back	1548	1378	1688	1128	1475	1680	13.9% incr
3.	Spondylosis	2440	2092	1906	1874	1684	1744	3.6% incr
4.	Other Spondylosis	1539	1336	1106	1138	-	-	-
5.	Cervical Spondylosis	901	756	800	736	-	-	-
6.	Cerebral Palsy	901	750	1326	866	940	753	9.8% decr
7.	Club Foot	780	615	832	711	992	922	7.1% decr

No.	Physiotherapy Conditions	2017	2018	2019	2020	2021	2022	Remarks
8.	Erb's Palsy	523	429	600	440	450	243	46% decr
9.	Amputation	148	356	286	214	230	52	77.4% decr
10.	Fracture	300	260	188	166	60	84	40% incr
11.	Contracture	300	281	162	114	70	79	12.9% incr
12.	Knee Arthritis	-	-	-	-	-	931	Seen in 2022

#### 7.6.2: CLINICAL PSYCHOLOGY SERVICES

The Clinical Psychology Unit provides clinical psychological services and psychoeducation to out-patients, in-patient as well as staff of the Hospital. The Unit since 2015 has been recording a steady increase in the number of attendants. However, in 2022, the number of attendants declined highly by 46.4% (from 798 in 2022 to 428 in 2022). Major depression has been the leading condition over the past years but in the year under review, Stress was the leading cases seen representing 23.1% (99) of the total cases. Depression and Anxiety accounted for 2<sup>nd</sup> and 3rd most common cases seen with 93 and 92 cases respectively. Further, Adjustment disorder, Sexual deviance, Autism etc were among the least cases seen in 2022. Out of the 428 cases seen at the Clinical Psychology department, 59.1% (253) were females whilst 40.9% (175) were males. Figures 7.6.2.1, 7.6.2.2 and tables 7.6.2.1, 7.6.2.2 shows details of the analysis.

Figure 7.6.2. 1: Trend of Clinical Psychology Service Utilization

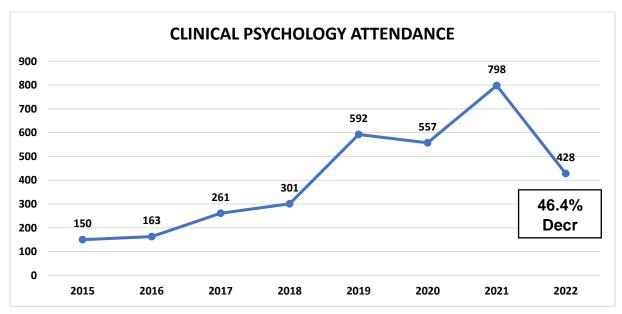


Figure 7.6.2. 2: Trend of Clinical Psychology Cases seen

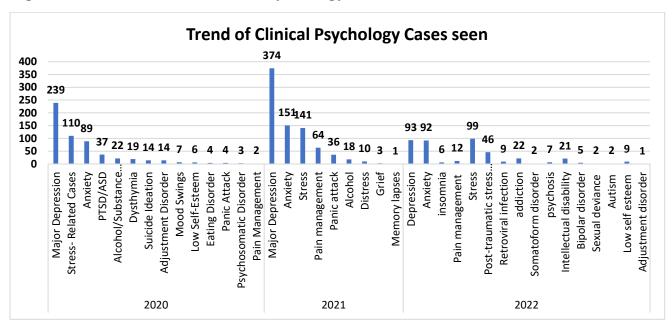


Table 7.6.2. 1: Trend of Clinical Psychology Cases seen

2018		2019		2020		2021		2022	
CONDITION	NO.	CONDITIO N	NO.	CONDITION	NO.	CONDITI	NO.	CONDITI ON	NO.
Major depression	84	Depression	257	Major Depression	239	Major Depressi on	374	Depressi on	93
Stress- related cases	60	Anxiety	75	Stress- Related Cases	110	Anxiety	151	Anxiety	92
Dysthymia	47	Suicidal Ideations	40	Anxiety	89	Stress	141	insomnia	6
Social Phobia	31	PTSD/ASD	36	PTSD/ASD	37	Pain manage ment	64	Pain manage ment	12
Somatoform disorders	24	Stress	30	Alcohol/Subst ance Abuse	22	Panic attack	36	Stress	99
School reports/psychologi cal assessment	15	Panic Attacks	26	Dysthymia	19	Alcohol	18	Post- traumatic stress disorder	46
Alcohol/substance abuse	15	Pain Manageme nt	18	Suicide Ideation	14	Distress	10	Retroviral infection	9
		Alcohol Dependen cy	15	Adjustment Disorder	14	Grief	3	addiction	22
		Specific Phobia	10	Mood Swings	7	Memory lapses	1	Somatofo rm disorder	2
		Substance Abuse	10	Low Self- Esteem	6			psychosi s	7
		Low Self - Esteem	5	Eating Disorder	4			Intellectu al disability	21

2018		2019		2020		2021		2022	
CONDITION	NO.	CONDITIO N	NO.	CONDITION	NO.	CONDITI ON	NO.	CONDITI ON	NO.
		Auditory Hallucinati ons	4	Panic Attack	4			Bipolar disorder	5
		Eating Disorder	3	Psychosomati c Disorder	3			Sexual deviance	2
				Pain Management	2			Autism	2
								Low self esteem	9
								Adjustme nt disorder	1

# 7.6.3 COMMUNITY PSYCHIATRY SERVICES

The Community Psychiatry services was introduced in 2020 to improve access to mental health care in the hospital. Though there is inadequate staff, the Unit have been recording increases in number of cases seen over the past years. In 2022, the total attendance recorded went up by 240% (from 66 in 2021 to 250 in 2022). Out of the 250 cases seen, 164 were old clients and 61 were new clients, whilst male and female constituted 41.8% and 58.2% respectively. The highest number of cases seen was recorded in the month of June (31 cases) and 8 were new clients while 23 were old cases as shown in table 7.6.3.1 below.

Table 7.6.3. 1: Community Psychiatry Cases seen in 2021

MON			202	20					202	21					202	22		
TH	FEM ALE	M AL E	TO TA L	O L D	N E W	TO TA L	FEM ALE	M AL E	TO TA L	O L D	N E W	TO TA L	FEM ALE	M AL E	TO TA L	O L D	N E W	TO TA L
Janu ary	-	-	-	-	-	-	2	1	3	1	2	3	6	4	10	6	4	10
Febr uary	5	5	10	0	1 0	10	5	1	6	1	5	6	11	10	21	1	1 0	21
Marc h	2	2	4	2	2	4	2	1	3	0	3	3	6	8	14	1 0	4	14
April	2	1	3	1	2	3	1	1	2	0	2	2	7	7	14	1 2	2	14
May	2	0	2	1	1	2	2	2	4	1	3	4	9	5	14	1 0	4	14
June	3	0	3	1	2	3	1	2	3	0	3	3	15	16	31	2 3	8	31
July	4	1	5	1	4	5	2	3	5	0	5	5	13	10	23	1 6	7	23
Augu st	3	6	9	1	8	9	4	6	10	0	1 0	10	12	13	25	1 9	6	25
Sept embe r	3	3	6	1	5	6	2	5	7	3	4	7	10	4	14	1	4	14
Octo ber	1	1	2	1	1	2	3	3	6	5	1	6	12	4	16	1	5	16
Nove mber	0	5	5	1	4	5	5	3	8	6	2	8	11	9	20	1 8	2	20

MON			202	20			2021						2022					
ТН	FEM ALE	M AL E	TO TA L	0 1 0	N E W	TO TA L	FEM ALE	M AL E	TO TA L	0 1 0	N E W	TO TA L	FEM ALE	M AL E	TO TA L	0 1 0	NEW	TO TA L
Dece mber	4	3	7	1	6	7	4	5	9	6	3	9	19	4	23	1 8	5	23
Total	29	27	56	1	4 5	56	33	33	66	3	4 3	66	131	94	22 5	1 6 4	6 1	22 5

### 7.6.4 DIET & NUTRITION SERVICES

The Diet and Nutrition Unit developed and implemented nutritional programmes over the years. The diet and nutrition clinic attendance kept fluctuating since 2015. In 2022, the total diet & nutrition clinic attendance improved significantly by 19.4% (from 1313 in 2021 to 1,568 in 2022). 64.5% of the cases seen by the Unit in 2022 were OPD clients whereas 35.5% were in-patients. Diabetes Mellitus, Hypertension and Obesity have been the leading conditions reported to Diet and Nutrition clinic since 2019. Diabetes Mellitus (34.98%) was recorded as the highest condition seen by the diet and nutrition Unit followed by hypertension (18.36%) and obesity (15.18%) whereas CVA (1.31%) and Surgical (1.23%) were the least conditions seen by Unit. Detailed analysis is provided in figure 7.6.4.1 to figure 7.6.4.4 and table 7.6.4.1 to table 7.6.2 below.

Figure 7.6.4. 1: Trend of Cases seen by the Diet & Nutrition Clinic Trend of Diet & Nutrition Clinic Attendance

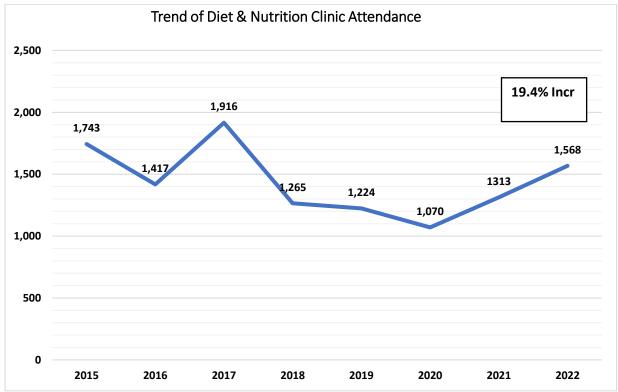


Figure 7.6.4. 2: Comparative Analysis of Diet & Nutrition Cases Seen

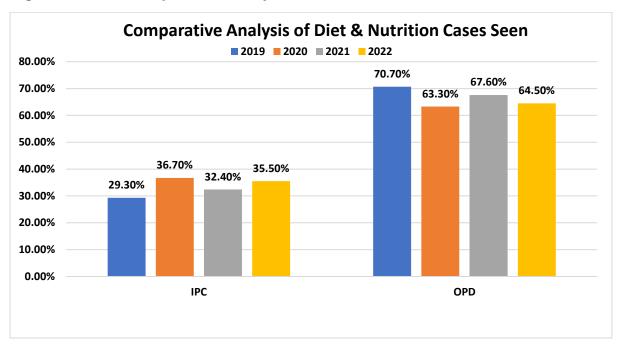
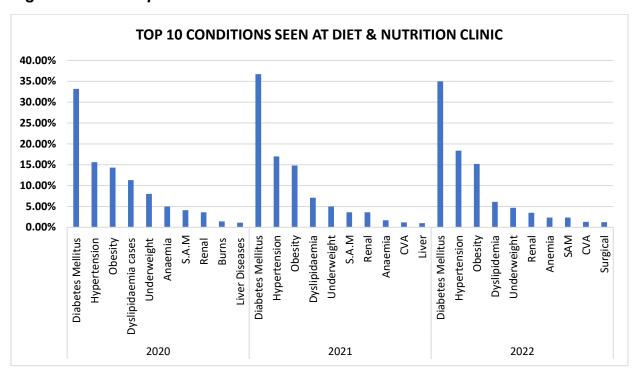


Table 7.6.4. 1: Top Ten Diet & Nutrition Cases

2019		2020		20:	21	2022	
CONDITIO N	PROPO RTION	CONDITION	PROPO RTION	CONDITI ON	PROPO RTION	CONDI TION	PROPO RTION
Diabetes Mellitus	27%	Diabetes Mellitus	33.2%	Diabete s Mellitus	36.7%	Diabete s Mellitus	34.98%
Hypertens ion	19.3%	Hypertensio n	15.6%	Hyperte nsion	17%	Hyperte nsion	18.36%
Dyslipidae mia	13.8%	Obesity	14.3%	Obesity	14.8%	Obesity	15.18%
Obesity	12.8%	Dyslipidaem ia cases	11.3%	Dyslipid aemia	7.1%	Dyslipid emia	6.08%
S.A.M	6.3%	Underweigh t	8.0%	Underw eight	5%	Underw eight	4.69%
Renal	5.7%	Anaemia	5.0%	S.A.M	3.6%	Renal	3.50%
Underwei ght	4.6%	S.A.M	4.1%	Renal	3.6%	Anemia	2.34%
Liver Disease	1.3%	Renal	3.6%	Anaemi a	1.7%	SAM	2.34%
HIV	1.0%	Burns	1.4%	CVA	1.2%	CVA	1.31%
ТВ	0.5%	Liver Diseases	1.1%	Liver	1%	Surgica I	1.23%
Others	7.8%						

Figure 7.6.4. 3: Top Ten Diet & Nutrition Cases



# **CHAPTER EIGHT**

# **ACCIDENT AND EMERGENCY SUB-BMC**

#### 8.1 INTRODUCTION

The A&E Sub-BMC of Cape coast Teaching Hospital operates a 24-hour tertiary emergency health services, Training and Research for the people of Central Region and beyond. As an emergency entry point of the hospital, the A&E department provides initial treatment for a broad range of illnesses and injuries, some of which may be life threatening and requires emergency attention.

The department is managed by five (5) management team, consisting of an Emergency Physician who is the head of the Sub-BMC, DDNS, a Business Manager, a Pharmacist and an Accountant, with well-motivated workforce, evidenced based practice and cutting-edge technology.

# 8.2 A&E SUB-BMC's 2022 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVE

Table 8.2. 1: A&E sub-BMC's 2022 Performance Against CCTH Strategic Objectives

# Objectives 2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

Utilization of emergency services for intended purpose:

56% of cases seen in 2022 were yellow and above as compared to 45% in 2021

**CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY** 

# **CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.**

	COTT OBCCOTTO L. IIIII NOVE QUALITY OF HEALTH CARE DELIVERY:									
		Actual Performance Trend								
	2016 Annua I	2017 Annua I	2018 Annua I	2019 Annua I	2020 Annua I	2021 Annua I	2022 Annua I	Targe t	Remark s % Diff.	
Average length of stay at the Emergenc y ward	-	2.8	4.2%	3.0	2.0	2.9	1.0	THs = 2.0	decr	

13,485 emergency cases were seen in 2022 as compared to 16,503 in 2021 constituting 18.3% decrease in cases seen.

Average length of stay reduced from 2.9 days in 2021 to 1.0 days in 2022.

Organized customer care and infection prevention training for staff

Mortality rate at the Accident & Emergency department reduced from 8.9 in 2021 to 2.4 in 2022

Conducted 5 LHIMS training sessions for staff

Audited 92% of mortalities (target 80%).

# CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE

Received 9 equipment from Management:

- 1 defibrillator
- 1 ventilator
- 1 cardiac monitor
- 2-wheel chairs
- 3 oxygen flowmeters
- 1 ultrasound machine

## **CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM**

## 4.1: Governance Related Performance

#### 2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

Organised one (1) Triage and one (1) START Triage workshops on the 22nd & 23rd June 2022 respectively

1 Cardiopulmonary resuscitation workshop was held on 5th & 6th October 2022.

Held four (4) Sub-BMC Management meetings

Organized.44 departmental morning meetings (target 30)

1 staff durbar held on 7th December 2022.

#### 4.2: Human Resource Related Performance

Seven (7) staff sponsored for further training (target 3)

- 3 doctors and
- 4 nurses

Seven (7) MO's were posted to the Sub-BMC

5 nurses were posted to the Sub-BMC

#### 4.3: Finance related performance

Total revenue generated from non-insured clients amounted to GH¢421,396.00 as compared to GH383,346.00 in 2021 constituting a 9.9% increase in revenue with a Total calculable expenditure of GH¢312,526.99 in 2022 which includes

receipts from stores and petty cash as compared to GH¢244,682.14 in 2021 constituting 27.7% increase in expenditure

# CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING

#### 5.1 Improve on Research:

1 research conducted and published in 2022 in a Journal in radiology case reports.

Title: Situs inversus totalis in a 34-year-old diabetic woman. A case report

**Authors:** Nana Ama Amankwa, Eugene Kojo Adomako, Edwina Okaikai Obodai, Sanaa Poku Afriyie-Ansah, Abdul Raman Asemah, and Frank Quarshie

Publication Link: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9764125/

#### 5.2 Improve on Teaching and Learning:

40 Medical students and PAs passed through the department in 2022 as compared to 28 students in 2021.

Trained the first Emergency Medicine House Officer

3 family medicine residents rotated through the department.

# CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS

Visited 1 referral site (UCC Hospital)

5 radio talks and 2 TV shows were conducted

550 referrals cases were received and managed.

# 8.3 TREND OF CASES SEEN AT A&E

The Accident and Emergency service utilization in the hospital has been flatulating over past years. In 2021, the provision and service utilization improved leading to a significant rise in the total cases recorded by 25.5% (from13,146 in 2020 to 16,503 in 2021). However, in 2022, the cases seen declined significantly by 18.3% (from 16,503 in 2021 to 13,485 in 2022). Furthermore, the A&E mortality rate went down drastically from 8.9% in 2021 to 2.4% in 2022, whilst the cases brought in dead (BID) increased significantly by 29.5% (57 BID cases) in 2022 as compared to 44 BIDs recorded in 2021. Also, the average length of stay at the A&E department declined to one (1) day in 2022 from approximately 3 days in 2021. The A&E cases admitted went down by 6.2% in the year under review (from 5,183 in 2021 to 4,861 in 2022) of which 3,269

were transferred to the various wards in the hospital. Detailed illustration is provided in table 8.3.1 to table 8.3.3 and figures 8.3.1 to figure 8.3.4 below.

Table 8.3. 1: Comparative Performance Trend at A&E

PARAMET ER	201 6	2017	2018	2019	2020	2021	2022	REMAR KS	TARG ET
Total A&E Cases Seen	5,50 1	12,0 41	15,9 49	17,9 31	13,1 46	16,5 03	13,4 85	18.3% decr	-
"Admission s"	-	4,71 5	4,37 0	4,51 3	4,87 7	5183	4,86 1	6.2% decr	•
Trans-in	-	19	4	1	0	0	0	-	-
Trans-Out	-	3,16 8	2,99 3	3,22 3	3,50 4	3567	3,26 9	8.4% decr	-
Deaths	-	398	364	435	365	436	330	24.3% decr	-
Mortality Rate	-	8.4	8.4	9.6	8.5	8.9	2.4	6.5% decr	-
Brought In Dead (BID)	-	189	102	97	74	44	57	29.5% incr	-
Average Length of Stay	-	2.8	4.2	3.9	2.0	2.9	1.0	1.9% decr	THs = 2.0
Procedure s	-	259	85	1,08 3	351	1247	2,00 0	60.4% incr	-
Referrals-	-	999	1,41	1,83	1,54	746	550	26.3%	-
in			9	3	6			decr	

Figure 8.3. 1: Trend of Cases Seen at A&E

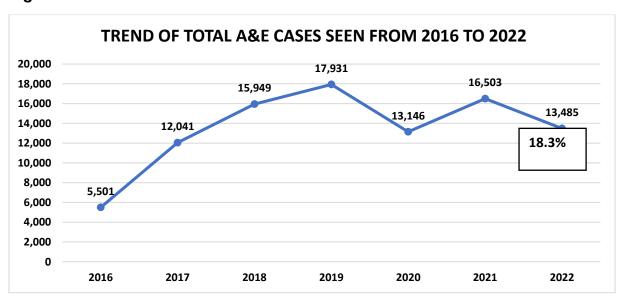


Figure 8.3. 2: Trend Analysis of Deaths Recorded at the A&E

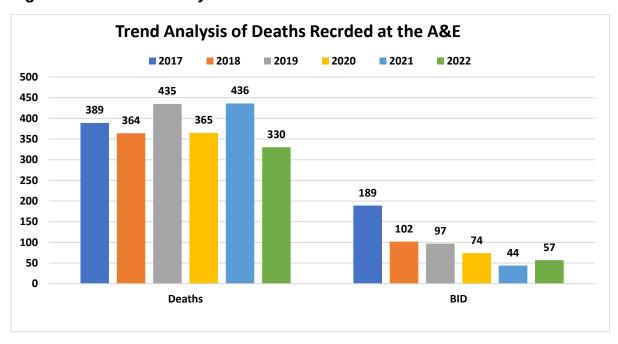


Figure 8.3. 3: Monthly Trend Analysis of Cases Seen at A&E

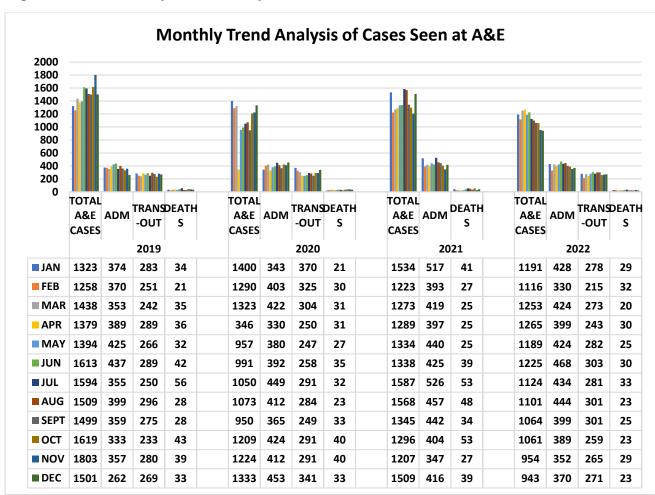


Table 8.3. 2: Monthly Trend Analysis of Cases Seen at A&E

INDICATOR						MON	TH					
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	ОСТ	NOV	DEC
					201	8						
CASES	1,289	994	1433	1366	1407	1302	1319	1313	1301	1393	1423	1409
ADM	413	364	371	335	452	367	350	349	331	348	321	369
TRANS-OUT	276	224	249	235	301	255	240	240	229	240	238	266
DEATHS	39	29	25	30	32	22	34	27	26	31	33	38
	2019											
CASES	1323	1259	1438	1379	1394	1613	1594	1509	1499	1619	1803	1501
ADM	374	370	353	389	425	437	355	399	359	333	357	362
TRANS-OUT	283	251	242	289	266	289	250	296	275	233	280	269
DEATHS	34	21	35	36	32	42	56	28	28	43	39	33
2020												
CASES	1400	1290	1323	346	957	991	1050	1073	950	1209	1224	1333
ADM	434	403	422	330	380	392	449	412	365	424	412	453
TRANS-OUT	370	325	304	250	247	258	291	284	249	294	291	341
DEATHS	21	30	31	31	27	35	32	23	33	29	40	33
					202	:1						
CASES	1534	1223	1273	1289	1334	1338	1587	1568	1345	1296	1207	1509
ADM	517	393	419	397	440	425	526	457	442	404	347	416
TRANS-OUT	374	264	280	286	315	278	358	309	315	265	239	284
DEATHS	41	27	25	25	25	39	53	48	34	53	27	39
					202	2						
CASES	1191	1116	1253	1265	1189	1225	1124	1101	1064	1061	954	943
ADM	428	330	424	399	424	468	434	444	399	389	352	370
TRANS-OUT	278	215	273	243	282	303	281	301	301	259	265	271
DEATHS	29	32	20	30	25	30	33	23	25	23	29	23

Figure 8.3. 4: A&E Admission Trend

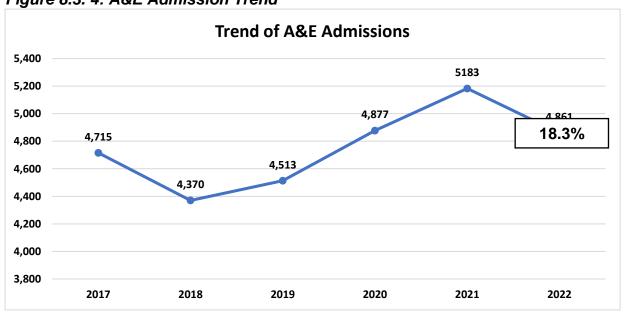


Table 8.3. 3: Trend Analysis of A&E Admissions

INDICATOR	2017	2018	2019	2020	2021	2022	REMARKS
Total A&E	12,041	15,949	17,931	13,146	16,503	13,485	18.3%
Cases Seen							decr
"Admissions"	4,715	4,370	4,513	4,877	5183	4,861	6.2% decr
Trans in	19	4	1	0	0	0	-
Trans Out	3,168	2,993	3,223	3,504	3567	3,269	8.4% decr

## 8.4 TOP TEN CAUSES OF A&E ADMISSION

In the year under review, Gastroenteritis related emergencies was the leading condition among the top ten cases, constituting 11.7% (569). Pneumonia/ LRTI (520) and Trauma (345) cases constituted 10.7% and 7.3% and ranked 2<sup>nd</sup> and 3<sup>rd</sup> among the top ten conditions admitted respectively. Again, Diabetic Emergencies (168) and Hernia (99) related emergencies were the least among the top ten cases admitted in 2022, constituting 3.5% and 2% of the total A&E admissions respectively. In addition, out of the number of Traumatic conditions recorded at the A&E department, fractures/dislocations cases recorded the highest cases but declined by 74.8 % in 2022 as compared to the previous year (from 469 in 2021 to 118 in 2022), followed by Laceration/Abrasion (56) with the least being traumatic amputation (10). Detailed trend analysis is provided in tables 8.4.1 to table 8.4.2 and figure 8.4.1 below.

Table 8.4. 1: Top Ten Causes of A&E Admission

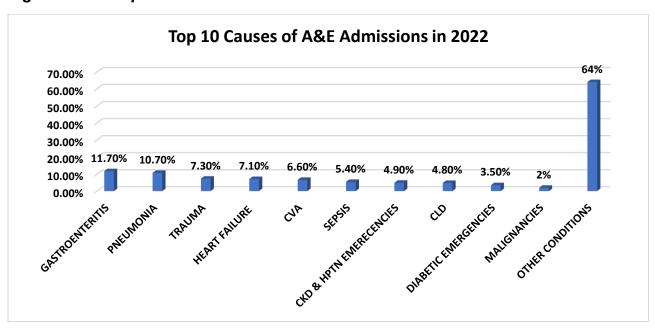
2019			2020			2021			2022		
DIAGNOS IS	NO. OF CAS ES	(%)	DIAGN OSIS	NO. OF CAS ES	(%)	DIAGNO SIS	NO. OF CAS ES	(%)	DIAGON OSIS	NO. OF CAS ES	(%)
Trauma	486	10. 8	Trauma	487	10.0	Fracture	86	5.57 %	GASTROEN TERITIS	569	11. 7%
Malaria	363	8.0	Pneum onia/ LRTI	137	2.8	Pneumo nia / RTI	77	4.99 %	PNEUMON IA	520	10. 7%
Hypertens ive Emergenc y	201	4.5	Acute abdome n	79	1.6	Trauma	50	3.24 %	TRAUMA	354	7.3 %
Acute Abdomen	156	3.5	Diabetic related emerge ncies	73	1.5	Malaria	48	3.11 %	HEART FAILURE	345	7.1 %
Pneumoni a/LRTI	132	2.9	CVA	64	1.3	Sepsis	36	2.33	CVA	322	6.6 %
Gastroent eritis	111	2.4	Hernia	61	1.3	Diabetic related emergen cies	34	2.2	SEPSIS	261	5.4 %
CVA	107	2.4	Haemat uria	59	1.2	Hyperte nsive Emerge ncy	25	1.62 %	CKD & HPTN EMERECEN CIES	236	4.9 %

2019			2020			2021			2022		
DIAGNOS IS	NO. OF CAS ES	(%)	DIAGN OSIS	NO. OF CAS ES	(%)	DIAGNO SIS	NO. OF CAS ES	(%)	DIAGON OSIS	NO. OF CAS ES	(%)
UTI	101	2.2	Sepsis	58	1.2	Gastroe nteritis	25	1.62 %	CLD	233	4.8 %
Gastritis/P UD	93	2.1	Hyperte nsive emerge ncy	46	0.9	UTI	24	1.55 %	DIABETIC EMERGEN CIES	168	3.5 %
Haematuri a	82	1.8	Malaria	44	0.9	Hernia	24	1.55 %	MALIGNAN CIES	99	2%
Other Condition s	2,68 1	59. 4	Other conditio n	3,76 8	77.3	Other condition	111 4	11.6 5%	OTHER CONDITI ONS	3,10 7	64 %
Total	4,51 3	100	Total	4,51 3		Total	154 3	0.19 %	TOTAL	4,86 1	

Table 8.4. 2: Traumatic Conditions Breakdown

DIAGNOSIS	2019	2020	2021	2022	REMARKS
Fracture/Dislocation	153	133	469	118	74.8% decr
Laceration/Abrasion	109	41	101	56	44.6% decr
Head Injury	121	84	126		
Traumatic	24	2	14	10	28.6% decr
Amputation					
Unspecified	79	51	17	10	41.2% decr
Trauma					

Figure 8.4. 1: Top Ten Causes of A&E Admission in 2022



## 8.5 EMERGENCY CASES SEEN ACCORDING TO THE ACUITY

Over the past years, A&E department of the hospital has implemented SATS colour coding system of triaging to triage cases seen at the department, based on the acuity of the emergency. The colour coding system helps the clinicians and the nurses to prioritise the cases or patient's care. The colours used are red (immediate), orange, yellow, green and black.

Out of 13,485 cases recorded in 2022, the red colour coded cases declined significantly by 12% (from 885 in 2021 to 779 in 2022), which constituted 5.8% of the total cases recorded. The orange coded (2,679 cases), yellow coded (4,158 cases) and green coded (5,812 cases) constituted 19.9%, 30.8%, and 43.1% respectively, whilst blue coded (57 cases) constituting 0.4%. Detailed analysis provided in figure 8.5.1 to figure 8.5.2 and table 8.5.1 to table 8.5.3 below.

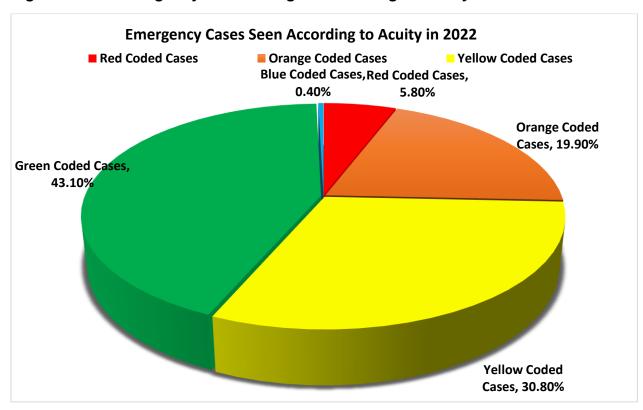


Figure 8.5. 1: Emergency Cases Triaged According to Acuity in 2022

Figure 8.5. 2: Yearly Trend of Emergency Cases Triaged by Acuity

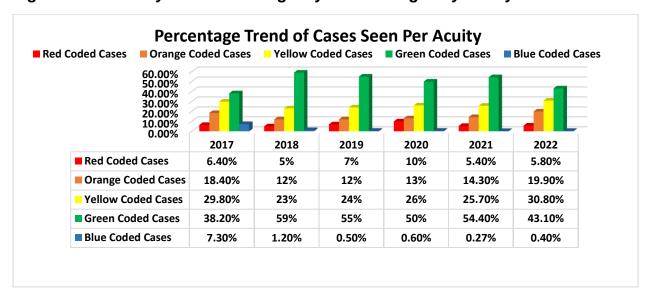


Table 8.5. 1: Percentage Composition of Cases Seen Per Acuity

COLOR CODES	2017	2018	2019	2020	2021	2022	REMARKS
Red	6.40%	5%	7%	10%	5.4%	5.8%	0.4% incr
Orange	18.40%	12%	12%	13%	14.3%	19.9%	5.6% incr
Yellow	29.80%	23%	24%	26%	25.7%	30.8%	5.1% incr
Green	38.20%	59%	55%	50%	54.4%	43.1%	113% decr
Blue	7.3%	1.2%	0.5%	0.6%	0.27%	0.4%	0.13% incr

Table 8.5. 2: Yearly Trend of Emergency Cases Triaged Per Acuity

COLOR CODES	2017	2018	2019	2020	2021	2022	REMARKS
Red	769	773	1,310	1,360	885	779	12% decr
Orange	2,215	1,866	2,244	1,736	2359	2,679	13.6% incr
Yellow	3,587	3,676	4,357	3,381	4234	4,158	1.8% decr
Green	4,594	9,445	9,923	6,595	8981	5,812	35.3%
							decr
Blue	876	189	97	74	44	57	29.5 incr
Total	12,041	15,949	17,931	13,146	16503	13,485	18.3%
							decr

Table 8.5. 3: Monthly Trend of Emergency Cases Triaged by Acuity in 2022

MONTH	COLOUR CODE								
	RED	ORANGE	YELLOW	GREEN	BLUE	TOTAL			
January	78	189	227	693	4	1,191			
February	50	197	297	568	4	1,116			
March	77	232	352	587	5	1,253			
April	78	216	353	613	5	1,265			
May	66	264	431	425	3	1,189			
June	65	242	374	542	2	1,225			

MONTH			COLOUF	RCODE		
	RED	ORANGE	YELLOW	GREEN	BLUE	TOTAL
July	69	246	350	456	3	1,124
August	65	240	360	428	8	1,101
September	69	221	379	387	8	1,064
October	61	235	330	430	5	1,061
November	43	193	336	376	5	953
December	58	204	369	307	5	943
2022 Total	779	2,679	4,158	5,812	57	13,485

## 8.6 TOP 10 FACILITIES A&E CASES REFERRED-IN

Cape Coast Teaching Hospital being a referral and strategically placed institution, receives emergency cases from Central Region and beyond. The total cases referred to the A&E in 2022 reduced significantly by 26.3% (from 746 in 2021 to 550 in 2022). St. Francis Xavier hospital, for the past two years has been the highest referring facility with 49 cases in 2022 followed by Ewim Polyclinic (32 cases), Abura Dunkwa Hospital (31 cases) with Cape Coast Metro. Hospital (18 cases) ranking 10<sup>th</sup> among the top ten referral facilities in 2022 as shown in figure 8.6.1 to figure 8.6.2 and table 8.6.1 to table 8.6.2 below

Figure 8.6. 1: Trend of Total A&E Referrals

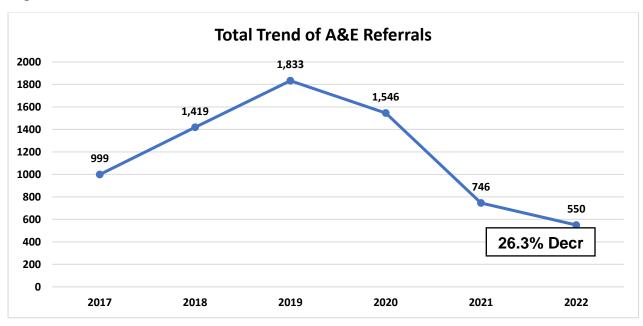
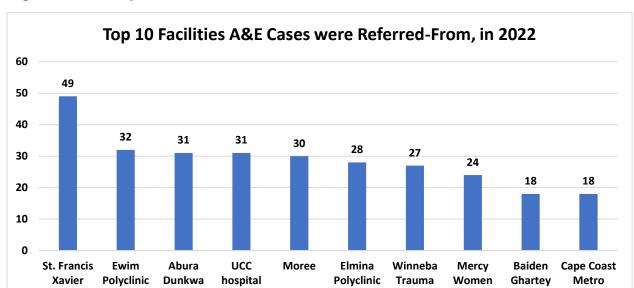


Table 8.6. 1: Trend of Total A&E Referrals

INDICATOR	2017	2018	2019	2020	2021	2022	REMARKS
A&E Referrals-in	999	1,419	1,833	1,546	746	550	26.3% decr



Center

Center

Clinic

Hospital

Figure 8.6. 2: Top 10 Facilities A&E Cases Were Referred-From, in 2022

Table 8.6. 2: Top 10 Referring Facilities to A&E

Hospital

hospital

2019	)	2020	)	2021		20	22
Facilities	No. of cases	Facilities	No. of cases	Facilities	No. of cases	Facilities	No. of cases
UCC	147	UCC	150	St. Francis Xavier hospital	114	St. Francis Xavier hospital	49
Mercy Women Centre	119	St. Francis Xavier hospital	115	Ewim Polyclinic	100	Ewim Polyclinic	32
Saltpond Hospital	112	Abura Dunkwa Hospital	111	UCC hospital	82	Abura Dunkwa Hospital	31
Abura Dunkwa Hospital	93	Cape Coast Metro Hospital	99	Abura Dunkwa Hospital	76	UCC hospital	31
Effia Nkwanta Regional Hospital	91	Saltpond Hospital	98	Elmina Polyclinic	76	Moree	30
Elmina Polyclinic	81	Trauma and Specialist Hospital	93	Moree	74	Elmina Polyclinic	28
Cape Coast Metro Hospital	80	Mercy women center	88	Cape Coast Metro Hospital	68	Winneba Trauma Center	27
St. Francis Xavier hospital	66	Elmina Polyclinic	82	Mercy Women Center	60	Mercy Women Center	24
Ankaful LEP/Gen. hospital	65	Ewim polyclinic	80	Adisadel Urban Health	54	Baiden Ghartey Clinic	18

2019		2020		2021		20	22
Facilities	No. of cases	Facilities	No. of cases	Facilities	No. of cases	Facilities	No. of cases
Ewim polyclinic	64	Moree Health center	76	Effia Nkwanta	42	Cape Coast Metro Hospital	18
		Effia Nkwanta Regional Hospital	73			·	
		Ankaful LEP/Gen. hospital	53				

## 8.7 TOP CAUSES OF DEATH AT A&E IN 2022

Acute respiratory distress syndrome (25) was the leading cause of deaths at the A&E of the hospital in 2022 followed by Cerebrovascular accident (18) cases, Pneumonia (15) cases, chronic liver disease (13) cases in that order. Again, from the mortality records, Pneumonia, kidney and heart related cases has remained among the top ten leading causes of deaths at A&E department of the hospital. Table 8.7.1 and figure 8.7.1 below illustrates the detailed analysis.

Top Causes of Death at A&E 97 100 90 80 66 70 56 60 46 <sup>39</sup> 37 32 32 <sub>30</sub> 50 40 30 <sup>18</sup> <sub>15</sub> <sub>13</sub> <sub>12</sub> 17 17 <sub>15</sub> 20 10 Sepsis Liver Disease S Sepsis RTA Shock Heart failure Query TB Acute respiratory distress. S Renal Failure Pneumonia **Chronic Kidney Disease** Shock Cerebrovascular accident Acute abdomen Sepsis/septic shock Renal failure cardiovascular Pneumonia/LRTI **Head Injury** Anaemia **Cardiac arrest** Head Injury HPT Chronic liver disease Congestive heart failure Septic shock End stage kidney disease Malignancies Pneumonia Other 2019 2022 2020 2021

Figure 8.7. 1: Top Causes of Death at the A&E Department

Table 8.7. 1: Top Causes of Death at A&E

2019		2020		2021		2022	
DIAGNOSIS	NO. OF CASES	DIAGNOSIS	NO. OF CASES	DIAGNOSIS	NO. OF CASES	DIAGNOSIS	NO. OF CASES
Sepsis/septic shock	97	CCF	14	Pneumonia	46	Acute respiratory	25

2019		2020		2021		2022	
DIAGNOSIS	NO. OF CASES	DIAGNOSIS	NO. OF CASES	DIAGNOSIS	NO. OF CASES	DIAGNOSIS	NO. OF CASES
						distress syndrome	
CVA	66	CVA	13	Chronic Kidney Disease	26	Cerebrovascular accident	18
Anaemia	56	Renal Failure	8	CVA	22	Pneumonia	15
Renal failure	46	Sepsis	7	Shock	17	Chronic liver disease	13
Liver Disease	39	Pneumonia/LRTI	7	Sepsis	17	End stage kidney disease	12
Other cardiovascular	37	Head Injury	5	Cardiac arrest	15	Malignancies	12
Heart failure	32	Anaemia	5	Head Injury	10	Congestive heart failure	13
Cancers	32	RTA	5	CCF	9	Septic shock	8
Query TB	30	Shock	5	HPT	7	Acute abdomen	5
Total	435		69		169		121

## **CHAPTER NINE**

## **DIAGNOSTIC SERVICES**

## 9.1 INTRODUCTION

Diagnostic Service activities in Cape Coast Teaching Hospital are provided by the following departments: the Medical Laboratory department and the Imaging Sub-BMC. The services provided under the Medical Laboratory department includes Biochemistry, Microbiology services (Bacteriology, Parasitology & Serology), Pathology and Haematology. The Imaging sub-BMC also provides x-ray, CT scan, Ultrasound services.

# 9.2 PERFORMANCE OF DIAGNOSTICS AND IMAGING SUB-BMCs AGAINST CCTH STRATEGIC OBJECTIVES

Table 9.2. 1: Summary of the 2022 Annual Performance of Diagnostics Sub-BMC under the Strategic Objectives.

	20	22 ANNUA	AL OUTCO	ME AND	DUTPUT P	ERFORMA	ANCE				
CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY											
Actual Performance Trend											
Access	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	2022 Annual	2022 Target	Remar ks		
Utilisation of laboratory services	-	-	78%	62.5%	260.3%	221.3%	538.7%	TH = 60%	incr		
Total laboratory Investigation	159,37 2	266,63 5	275,32 9	291,67 7	241,85 8	180,41 5	558,29 8	-	209.5% incr		
Utilisation of radiological services	-	-	79.4%	86.9%	530.7%	87%	81.1%	TH = 60%	decr		
Total Radiology Investigation	14,286	17,342	20,766	20,285	23,697	20,587	20,787	-	1%		

Increased the number of tests conducted by 209% from 180,415 in 2021 to 558,298 in 2022-

Introduced ten (10) new laboratory tests (Ca, Mg, P, D-dimer, Insulin, Ferritin, hsCRP, CA-19.9, CA-72.4, Myoglobin)

Completed and operationalized the PCR Lab

#### **IMAGING SUB-BMC**

Increased the number of radiology tests conducted by 0.97% from 20,587 in 2021 to 20,787 in 2022 Introduced dental x-ray services (362 cases seen

**PATHOLOGY** 

Performed a total of 250 autopsies

## CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.

## **Laboratory Department**

Participated and excelled in External quality assessment (EQA) for HIV, malaria, TB and covid-19 testing Conducted medical screening for staffs

## **IMAGING SUB-BMC**

Organized one (1) refresher training on the usage of the CT-Scan machine.

One (1) Continuous Professional Development (CPD) workshop was organized for radiographers.

## CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE

## **Laboratory Department**

Acquired the following equipment;

- A high-capacity biochemistry auto analyser
- ADDI equipment
  - 1 centrifuge
  - o 1 water bath

#### 2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

- 1 hot air oven
- 1 incubator
- o 1 mini fridge
- 1 incubator

#### **IMAGING SUB-BMC**

Six (6) ultrasound machines were procured for the sub-BMC

Five (5) ultrasound printers were procured for the sub-BMC

One (1) 32 slides ultra-modern CT-Scan machine was procured for the sub-BMC

Five (5) office printers were purchased for the sub-BMC

Procured a 50 inches TCL TV and two air conditioning machines

Ultrasound suite room was created to accommodate two ultrasound machines

#### **Pathology**

Repaired the condenser motor and the motor compressor of cold-room one

Two (2) external and two (2) internal trolleys were refurbished

Renovated the mortuary attendant restroom (new fan, mattress, painting etc.)

#### **CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM**

#### 4.1: Governance Related Performance

#### **Laboratory Department**

Held four (4) quarterly laboratory meetings

Organised twelve (12) monthly scientific presentations

#### **IMAGING SUB-BMC**

Three (3) sub-BMC management meetings were organized

Two (2) sub-BMC durbars were organized.

#### **Transfusion Medicine Unit**

Organised two (2) management meetings

Held one (1) staff durbar

#### Pathology Unit

Four meetings were organized at the department.

#### 4.2: Human Resource Related Performance

#### **Laboratory Department**

84% of staff were appraised

## **IMAGING SUB-BMC**

Received the following cadre of staff at the Sub-BMC;

- One (1) radiologist
- Two (2) sonographers
- Two (2) administrative managers
- One (1) receptionist

## **Transfusion Medicine Unit**

The following cadre of staff were posted to the unit;

- Six (6) Laboratory scientists
- One (1) haematologist
- One (1) blood donor organiser

#### 4.3: Finance related performance

#### **Laboratory Department**

#### **IMAGING SUB-BMC**

- Total Revenue Generation amounted to GH¢1,588,317.00 in 2022 as compared to GH¢1,171,139.00 in 2021 constituting 35.63% Increase in revenue.
- Total expenditure amounted to GH¢379,939.78 in 2022 as compared to GH¢511,953.60 in 2021 constituting 34.75% decrease in expenditure

## Pathology Unit

Total revenue generation amounted to GH¢285,582.00 as compared to GH¢320,325.00 in 2021 constituting 11.00% decrease in revenue with a Total expenditure of GH¢61,048.20 in 2022 as compared to 83,010.00 in 2021 constituting 26. % decrease in expenditure

## CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING

## 5.1 Improve on Research:

## **Laboratory Department**

#### 2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

Two (2) researches conducted

one published:

**Title:** Factors Accounting for Doner Blood Discard At Cape Coast Teaching Hospital; A Retrospective Study. **Authors:** Wemochigah Grace, Dr. Edward Morkporkpor Adela, Daniel Edem Azumah, Francis Britwum, Storp R. Peniel, Evans Duah

#### **IMAGING SUB-BMC**

#### **PATHOLOGY**

#### 4 research articles:

5. A case report of a teenager with hepatitis B surface antigen-positive multifocal hepatocellular carcinoma in a noncirrhotic liver.

**Authors:** Kwadwo Apeadu Danso, Rosemary Sefakor Akuaku, Rebekah Ruth Taylor, Emmanuella Amoako, Kofi Ulzen-Appiah, Bashiru Babatunde Jimah, Lily Gloria Tagoe

Publication Link: <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8935124/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8935124/</a>

6. Embryonal tumor with multilayered rosettes in a teenager

Authors: Kofi Ulzen-Appiah & Kafui Patrick Akakpo

Publication Link: https://doi.org/10.4322/acr.2021.373

7. A Report of Rosai-Dorfman Disease in an Adolescent

Authors: Emmanuella Amoako Kwadwo Apeadu Danso, Rosemary Sefakor Akuaku Kofi Ulzen-Appiah

#### **Publication Link:**

https://pubmed.ncbi.nlm.nih.gov/35664545/#:~:text=Rosai%2DDorfman%20disease%20(RDD),nodes%20and%2For%20extranodal%20tissues.

8. Pilomatricoma in the neck of an adult male

Authors: Kofi Ulzen-Appiah

Publication Link: <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9083798/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9083798/</a>

## 5.2 Improve on Teaching and Learning:

## **Laboratory Department**

Participated in EQA for TB, COVID-19, Malaria and HIV

Staff benefitted from training programs and continuous professional education

- Ergonomics,
- QMS
- TB,
- Blood Transfusion
- Endocrinology
- Malaria
- Influenza
- Molecular Diagnosis

Staff facilitated key training programs and also served as Regional OTSS and EQA supervisors in the Region

#### **IMAGING SUB-BMC**

More than 212 students (both sonographers and radiographers) and two (3) residents rotated through the sub-BMC.

#### **Pathology Services**

417 Medical students rotated through the unit

2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY								
POINTS								
Laboratory Department								
Provide diagnostic support for lower level facilities in the region (ie TB , COVID-19 ,Viral load and EID testing ).								
IMAGING SUB-BMC								
Coordinated 107 referral cases from lower level of care								

## 9.3 TREND OF DIAGNOSTIC INVESTIGATIONS

Generally, the laboratory and radiology investigations in 2022 all increased as compared to 2021. The total laboratory investigations carried out by the institution in the year under review increased by a whopping 209.44% (from 180,415 in 2021 to 558,298 in 2022) with total laboratory client equally appreciating by 16.3% (from 55,871 in 2021 to 64,967 in 2022). Furthermore, total radiology investigations went up marginally by 1% (from 20,587 in 2021 to 20787 in 2022). However, total radiology clients declined by 6.3% in the period under review (from 17,983 in 2021 to 16,857 in 2022).

On the other hand, the pathology department also recorded a significant increment in the total number of autopsies performed in 2022 by 10.1% (from 227 in 2021 to 250 in 2022). Figure 9.3.2 and table 9.3.1 to table 9.3.2 provides detailed analysis below.

Figure 9.3. 1: Diagnostics Services Utilization Trend

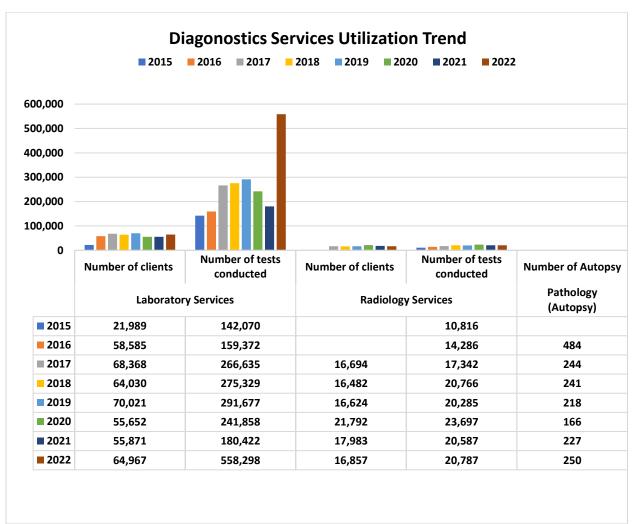


Table 9.3. 1: Diagnostics Services Trend

INDICATO R	2015	2016	2017	2018	2019	2020	2021	2022	REMARK S		
	LABORATORY SERVICES										
Number of clients	41,989	58,585	68,368	64,030	70,021	55,652	55,871	64,967	16.3% incr		
Number of tests conducted	142,07 0	159,37 2	266,63 5	275,32 9	291,67 7	241,85 8	180,42 2	558,29 8	209.44% incr		
			RAI	DIOLOGY	SERVIC	ES					
Number of clients	-	-	16,694	16,482	17,624	21,792	17,983	16,857	6.3% decr		
Number of tests conducted	10,816	14,286	17,342	20,766	20,285	23,697	20,587	20,787	1% incr		
	PATHOLOGY SERVICES (AUTOPSY)										
Number of Autopsy	-	484	244	241	218	166	227	250	10.1% incr		

Table 9.3. 2: Performance under THs KPI

KEY INDICATO RS	2018	2019	2020	2021	2022	REMAR KS	TARG ET	MEASUREME NT
Utilization of Laboratory services	78%	62.5% (decr)	260.3 %	221.30	538.70 %	317.4% incr	THs = 60%	Total laboratory Investigations / Total Lab request * 100
Total laboratory Investigations	275,3 29	291,677	241,8 58	180,41 5	558,29 8	209.44% incr		-
Total Lab request	59,47 8	61,900	92,90 7	73,953	103,63 8	40.1% incr		-
Number of laboratory Client	64,03 0	70,021	55,65 2	55,871	64,967	16.28% incr		-
Utilization Radiologic al services	79.4%	86.9% (increas e)	530.7 %	87%	81.1%	5,9% decr	THs = 60%	Total Radiological Investigations / Total Radio. request * 100
Total Radiologic al Investigatio ns	20,76 6 (27.1 % incr)	20,285 (2.3% decr)	23,69 7	20,587	20,787	1% incr		-
Total Radio. request	16,48 2 (1.3% decr.)	17,624 (6.9% incr.)	4,465	17,983	16,857	6.3% decr		-
Number of radiology client	18,53 5	17,624 (4.9% decr)	21,79 2	17,983	16,857	6.3% decr		

KEY INDICATO RS	2018	2019	2020	2021	2022	REMAR KS	TARG ET	MEASUREME NT
	(20.3							
	%							
	incr)							

#### 9.4 LABORATORY SERVICES

The Laboratory department of Cape Coast Teaching Hospital recorded an unprecedented percentage increase in laboratory investigations of 209.44% in the year under review (from 180,415 in 2021 to 558,298 in 2022). Again, out of the 64,967 clients seen, 27,871 were in-patients representing 43%, whereas 37,097 (57%) were out-patient clients. In view of the above, some investigations equally went up. Microbiology-Parasitology recorded an increase of 3.3% (from 13,627 in 2021 to 14,071), whilst Microbiology – Bacteriology went up by 14.6% (from 5,735 in 2020 from12,422 in 2021 to 14241 in 2022). Furthermore, other laboratory Investigations conducted saw astronomical increases in 2022 as compared to 2021. For instance, Liver Function Test, Kidney Function Test, and Lipid Profile investigations appreciated in 2022, by 1661.6%, 290.03%, and 149% respectively. Biochemistry investigations such as Thyroid & Cardiac Profile and Tumour & Infectious Markers all went up significantly by 23% (from 243 in 2021 to 299 in 2022) and 258.4% (from 77 in 2021 to 276 in 2022) respectively in 2022 expect Fertility Markers which declined by 49.3% (from 148 in 2021 to 75 in 2022).

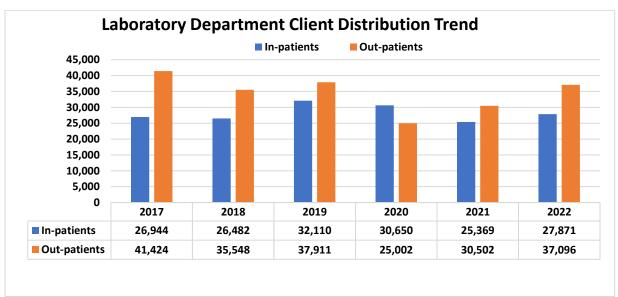


Figure 9.4. 1: Laboratory Department Client Distribution Trend

Table 9.4. 1: Laboratory Department Client Distribution Trend

TYPE OF CLIENTS	2017	2018	2019	2020	2021	2022	REMARKS
In-patients	26,944	26,482	32,110	30,650	25,369	27,871	9.9% incr
Out-patients	41,424	35,548	37,911	25,002	30,502	37,096	21.6% incr

Figure 9.4. 2: Proportion of Laboratory Clients in 2022

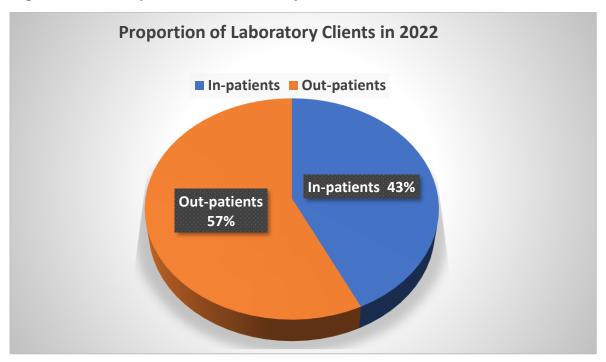


Figure 9.4. 3: Biochemistry Profile Trend

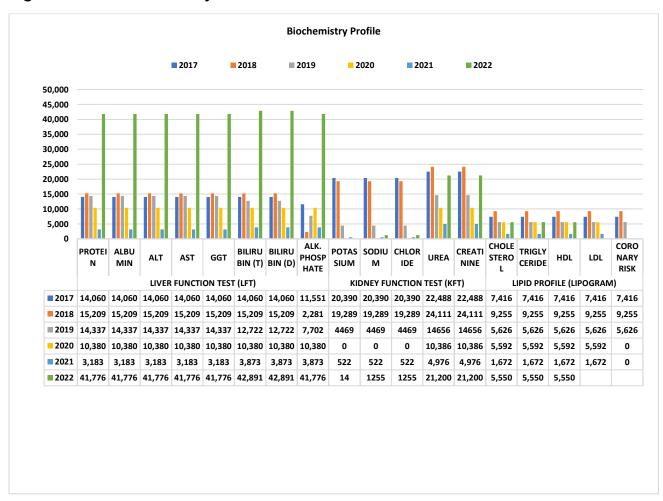


Table 9.4. 2: Biochemistry Profile Trend

INVESTIGATION	2017	2018	2019	2020	2021	2022	REMARKS
		LIVER F	UNCTION	TEST (LI	FT)		
PROTEIN	14,060	15,209	14,337	10,380	3,183	41,776	1212.5% incr
ALBUMIN	14,060	15,209	14,337	10,380	3,183	41,776	1212.5% incr
ALT	14,060	15,209	14,337	10,380	3,183	41,776	1212.5% incr
AST	14,060	15,209	14,337	10,380	3,183	41,776	1212.5% incr
GGT	14,060	15,209	14,337	10,380	3,183	41,776	1212.5% incr
BILIRUBIN (T)	14,060	15,209	12,722	10,380	3,873	42,891	1007.4% incr
BILIRUBIN (D)	14,060	15,209	12,722	10,380	3,873	42,891	1007.4% incr
ALK. PHOSPHATE	11,551	2,281	7,702	10,380	3,873	41,776	1212.5% incr
TOTAL	109,971	108,744	104,831	83,040	19,098	336,438	1661.6%
		KIDNEY I	FUNCTION	I TEST (K	(FT)		
POTASSIUM	20,390	19,289	4469	-	522	14	97.3% decr
SODIUM	20,390	19,289	4469	-	522	1255	140.2% incr
CHLORIDE	20,390	19,289	4469	-	522	1255	140.2% incr
UREA	22,488	24,111	14656	10,386	4,976	21,200	326.04% incr
CREATININE	22,488	24,111	14656	10,386	4,976	21,200	326.04% incr
TOTAL	106,146	106,089	42,719	20,772	11,518	44,924	290.03% incr
		LIPID P	ROFILE (L	.IPOGRA	M)		
CHOLESTEROL	7,416	9,255	5,626	5,592	1,672	5,550	231.9% incr
TRIGLYCERIDE	7,416	9,255	5,626	5,592	1,672	5,550	231.9% incr
HDL	7,416	9,255	5,626	5,592	1,672	5,550	231.9% incr
LDL	7,416	9,255	5,626	5,592	1,672	-	-
CORONARY RISK	7,416	9,255	5,626	-	-	-	-
TOTAL	37,080	46,275	28,130	22,368	6688	16,650	149% incr

Figure 9.4. 4: Biochemistry Investigation Trend

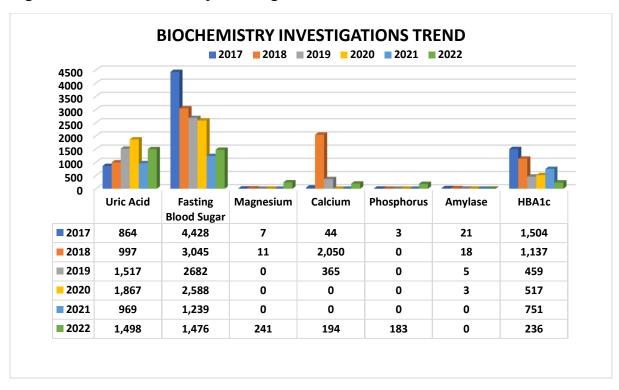


Table 9.4. 3: Biochemistry Investigation Trend -Thyroid & Cardiac Profile

Test	2019	2020	2021	2022	Remarks
FT3	57	220	54	93	72.2% incr
FT4	57	218	53	91	71.7% incr
TSH	78	311	46	94	104.3% incr
T3	0	0	0	0	-
T4	0	0	0	0	-
CK-MB	15	39	20	9	55% decr
Troponin I	17	77	37	5	84.5% decr
Troponin THs	17	74	33	7	78.8% decr
Total	241	939	243	299	23.0% incr

Table 9.4. 4: Biochemistry Investigation Trend - Fertility Markers

Test	2019	2020	2021	2022	Remarks
FSH	10	74	32	1	96.9% decr
Prolactin	11	77	46	16	65.2% decr
Progesterone	5	16	12	2	83.3% decr
Testosterone	10	44	17	14	17.6% decr
Estradiol (E2)	5	18	18	5	72.2% decr
ß-HCG	7	67	5	33	560% incr
(Quantitative)					
LH	-	67	18	4	77.8% decr
Total	48	363	148	75	49.3% decr

Table 9.4. 5: Biochemistry Investigation Trend - Tumour & Infectious Markers

Test	2019	2020	2021	2022	Remarks
T-PSA	147	607	17	237	1294% incr
F-PSA	1	0	0	0	-
CEA	3	7	0	0	-
AFP	9	30	1	33	3200% incr
CA 125	8	32	20	2	90% decr
CA 15.3	0	0	0	0	-
HBsAg	0	0	14	0	100% decr
(Confirmatory)					
HBsAg	0	1	0	0	-
(Quantification)					
HCV	1	0	8	0	100% decr
(Confirmatory)					
HIV	1	0	17	4	76.5% decr
(Confirmatory)					
Total	170	677	77	276	258.4% incr

Figure 9.4. 5: Microbiology – Parasitology and Bacteriology Investigations Trend

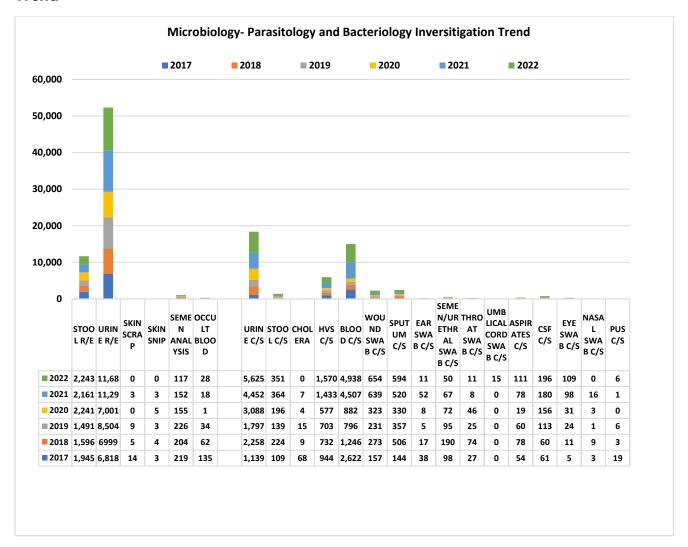


Table 9.4. 6: Microbiology - Parasitology and Bacteriology Trend

INVESTIGATION	2017	2018	2019	2020	2021	2022	REMARKS
	F	ARASI	OLOGY				
STOOL R/E	1,945	1,596	1,491	2,241	2,161	2,243	3.8% incr
URINE R/E	6,818	6999	8,504	7,001	11,290	11,683	3.5% incr
SKIN SCRAP	14	5	9	0	3	0	100% decr
SKIN SNIP	3	4	3	5	3	0	100% decr
SEMEN ANALYSIS	219	204	226	155	152	117	23.0%
							decr
OCCULT BLOOD	135	62	34	1	18	28	55.6% incr
TOTAL	9,134	8,870	10,267	9,403	13,627	14,071	3.3% incr
	E	BACTER	IOLOGY				
URINE C/S	1,139	2,258	1,797	3,088	4,452	5,625	26.3% incr
STOOL C/S	109	224	139	196	364	351	3.6% decr
CHOLERA	68	9	15	4	7	0	100% decr
HVS C/S	944	732	703	577	1,433	1,570	9.6% incr

INVESTIGATION	2017	2018	2019	2020	2021	2022	REMARKS
BLOOD C/S	2,622	1,246	796	882	4,507	4,938	9.6% incr
WOUND SWAB C/S	157	273	231	323	639	654	2.3% incr
SPUTUM C/S	144	506	357	330	520	594	14.2% incr
EAR SWAB C/S	38	17	5	8	52	11	78.8% decr
SEMEN/URETHRAL SWAB C/S	98	190	95	72	67	50	25.4% decr
THROAT SWAB C/S	27	74	25	46	8	11	37.5% incr
UMBLICAL CORD SWAB C/S	-	-	-	-	-	15	
ASPIRATES C/S	54	78	60	19	78	111	42.3% incr
CSF C/S	61	60	113	156	180	196	8.9% incr
EYE SWAB C/S	5	11	24	31	98	109	11.2% incr
NASAL SWAB C/S	3	9	1	3	16	0	100% decr
PUS C/S	19	3	6	0	1	6	500% incr
	5,488	5,690	4,367	5,735	12,422	14,241	14.6% incr
TOTAL							

Table 9.4. 7: Microbiology – Bacteriology Trend

INVESTIGATION	2016	2017	2018	2019	2020	2021	2022	REMARKS
AFB (MICROSCOPY)	842	1,194	1,586	1,024	276	322	344	6.8% incr
GeneXpert (MTB/Rif)	365	1,133	1,750	2,470	2131	2515	2553	1.5% incr
					(233)	(300)		
TB CULTURE (DR, DST)	16	32	71	218	71	0	0	-
H1N1 (INFLUENZA)	18	256	89	-	-	69 (4)	395	472.5%
								incr
TOTAL	1,241	2,615	3,496	3,712	2,478	2,837	2,897	2.1% incr

Figure 9.4. 6:Microbiology – Bacteriology Trend

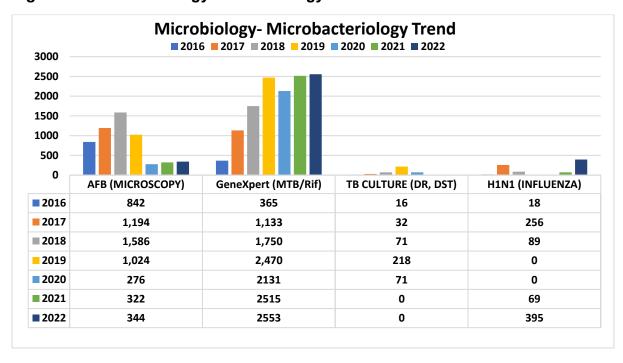


Figure 9.4. 7: Trend of Outcome of TB Culture (Mycobacteriology for TB)

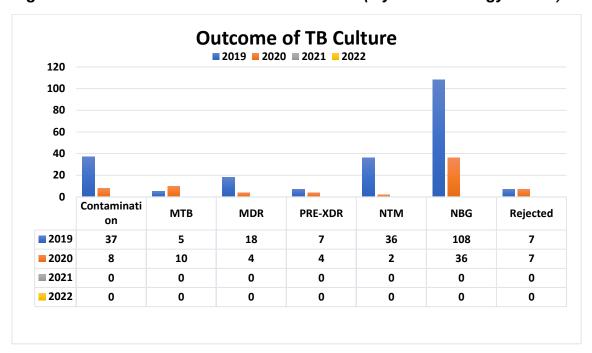


Table 9.4. 8: Trend of Outcome of TB Culture (Mycobacteriology for TB)

OUTCOME	2019	2020	2021	2022	REMARKS
Contamination	37	8	0	0	-
MTB	5	10	0	0	-
MDR	18	4	0	0	-
PRE-XDR	7	4	0	0	-
NTM	36	2	0	0	-
NBG	108	36	0	0	-
Rejected	7	7	0	0	-
Total Cases	218	71	0	0	

Figure 9.4. 8: Microbiology - Serology Trend

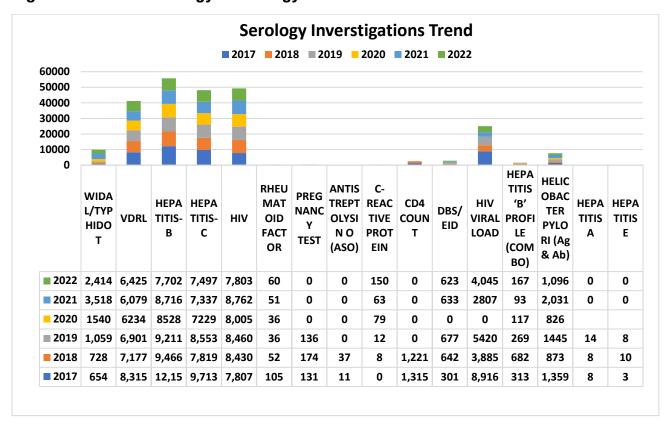


Table 9.4. 9: Microbiology - Serology Trend

INVESTIGATION	2017	2018	2019	2020	2021	2022	REMARK S
WIDAL/TYPHIDOT	654	728	1,05 9	1540	3,51 8	2,41 4	31.4% decr
VDRL	8,315	7,17 7	6,90 1	6234	6,07 9	6,42 5	5.7% incr
HEPATITIS-B	12,15 2	9,46 6	9,21 1	8528	8,71 6	7,70 2	11.6% decr
HEPATITIS-C	9,713	7,81 9	8,55 3	7229	7,33 7	7,49 7	2.2% incr
HIV	7,807	8,43 0	8,46 0	8,00 5	8,76 2	7,80 3	10.9% decr
RHEUMATOID FACTOR	105	52	36	36	51	60	17.6% incr
PREGNANCY TEST	131	174	136	-	-	-	-
ANTISTREPTOLYSIN O (ASO)	11	37	0	-	0	0	-
C-REACTIVE PROTEIN	0	8	12	79	63	150	138.1% incr
CD4 COUNT	1,315	1,22 1	0	-	-	-	-
DBS/ EID	301	642	677	-	633	623	1.6% decr
HIV VIRAL LOAD	8,916	3,88 5	5420	-	2807	4,04 5	44.1% incr
HEPATITIS 'B' PROFILE (COMBO)	313	682	269	117	93	167	79.6% incr
HELICOBACTER PYLORI (Ag & Ab)	1,359	873	1445	826	2,03 1	1,09 6	46.0% decr
HEPATITIS A	8	8	14		0	0	-

INVESTIGATION	2017	2018	2019	2020	2021	2022	REMARK S
HEPATITIS E	3	10	8		0	0	-

Table 9.4. 10: Serology & Immunology - ELISA Test

ELISA TEST	2019	2020	2021	2022	REMARKS
HBsAg	70	2,688	3,453	3089	10.5% decr
HCV Antibody	70	2,688	3,453	3049	10.5% decr
HIV Antigen/Antibody	71	2,688	3,453	2554	26.3% decr
Syphilis Antibody	73	2,688	3,453	3088	10.6% decr

Table 9.4. 11: Microbiology – Virology/SARS-CoV-2 – Summary of Performance

202	20	202	21	20	22
Indicator	Number	Indicator	Number	Indicator	Number
Grand Total number of Cases	530	Grand Total number of Cases	3,468	Grand Total number of Cases	1,471
Grand Total number of Positives	107	Grand Total number of Positives	1,198	Grand Total number of Positives	277
Grand Total number of Negatives	423	Grand Total number of Negatives	2,270	Grand Total number of Negatives	1,194
Test Positivity Rate (%)	20.189%	Test Positivity Rate (%)	34.544%	Test Positivity Rate (%)	18.831%

Figure 9.4. 9: Haematology Investigation Trend

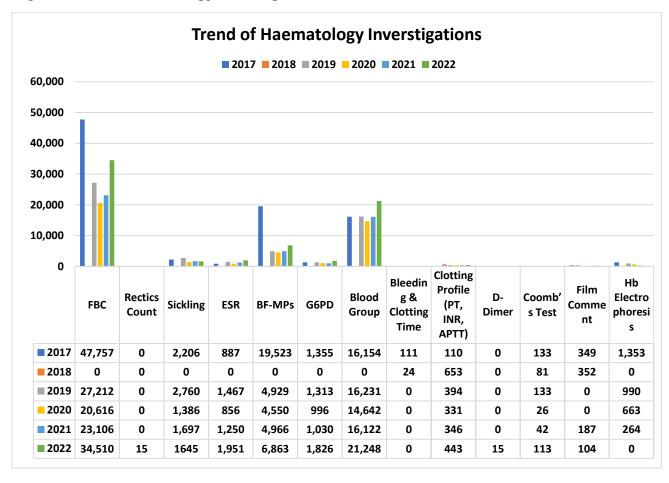


Table 9.4. 12: Haematology Investigation Trend

TEST	2017	2018	2019	2020	2021	2022	REMARKS
FBC	47,757	43, 506	27,212	20,616	23,106	34,510	49.4% incr
Rectics Count	-	-	-	-	-	15	
Sickling	2,206	1, 610	2,760	1,386	1,697	1645	3.1% decr
ESR	887	1, 094	1,467	856	1,250	1,951	56.08% incr
BF-MPs	19,523	15, 122	4,929	4,550	4,966	6,863	38.2% incr
G6PD	1,355	1, 253	1,313	996	1,030	1,826	77.3% incr
Blood Group	16,154	15, 943	16,231	14,642	16,122	21,248	31.8% incr
Bleeding & Clotting Time	111	24	-	-	-	-	-
Clotting Profile (PT, INR, APTT)	110	653	394	331	346	443	28.0% incr
D-Dimer	-	-	-	•	-	15	
Coomb's Test	133	81	133	26	42	113	169.04% incr
Film Comment	349	352	0	•	187	104	44.4% decr

TEST	2017	2018	2019	2020	2021	2022	REMARKS
Hb Electrophoresis	1,353	1,	990	663	264	0	100% decr
		163					

## 9.5 LABORATORY SAMPLES REFERRED OUTSIDE CCTH

The hospital over the years has collaborated with other institutions to conduct test on some of the suspected surveillance diseases that are of public health concern and reports appropriately. Some of these cases include; H1N1, Rubella, HIVL, Buruli Ulcer, TB, etc., with the recent one being Covid-19. However, in 2022, only 395 H1N1 (Influenza) samples were referred out as shown in table 9.5.1 below.

Table 9.5. 1: Laboratory Samples Referred to Outside Facilities

TESTS	2016	2017	2018	2019	2020	2021	2022	REMARKS
TB CULTURE (DR, DST)	10	4	13	-	-	-	-	-
TB CULTURE (LPA)	-	-	9	-	-	-	-	-
H1N1 (INFLUENZA)	18	256	89	215	18	69	395	472.5% incr
RUBELLA	8	7	4	0	-	0	0	-
BURULI ULCER	-	3 (1)	0	0	-	0	0	-
HIVL	-	-	-	559	3184	0	0	-
EID	-	-	-	73	489	0	0	-
COVID-19 SAMPLES	-	-	-	-	2,631	2749	-	100% decr

## 9.6 BLOOD TRANSFUSION & BLOOD DONATION

The hospital exists to save the life of patients who report to the facility and to achieve this mandate, Transfusion of blood and blood product remains essential live saving treatment. In the year under review, the total number of whole blood cross-matched increased by 3.44% (from 4,127 in 2021 to 4,269 in 2022), whereas the total number of whole Blood transfused reduced by 10.07% (from 3,971 in 2021 to 3,572 in 2022). A total of 4,201 Whole Blood was Issued to various wards, with Obstetrics & Gynaecology ward receiving the highest proportion 75117.1% (719) of the whole blood transfused in 2022, followed by male surgical 15% (630) and female surgical 10.5% (440). Executive Suite received the least proportion of 0.1% (3) of the whole blood issued by the hospital's blood bank. However, the total number of fresh frozen plasma issued increased by 8% (from 992 in 2021 to 1,067 in 2022). 35.1% (374) of FFP was issued to the Paediatric ward, 25.5% (272) was issued to the male medical, 238 was issued to the Obstetrics & Gynaecology ward, with Dialysis and COVID-19 Treatment Centre receiving none. The hospital over the years have recorded a general decline in blood donations. However, there was significant increase in blood donations in the hospital by 159.9% in 2022 (from 674 in 2021 to 1752 in 2022) due to incentive packages put in place for voluntary blood donors by management.

Blood donations from Mobile blood donations session as well as blood donated by clients from ANC went up in 2022 by 175.1%, and 41.7% respectively. However, blood donated by walk-in clients declined in 2022 by 32.3% (from 130 in 2021 to 80 in 2022). Also, Blood replacement/pre-deposit dropping significantly by13.1% (from 2925 in 2021 to 2541 in 2022). In all, 107 pints of blood were discarded, due to reasons such as, TTIs, clotting, expiration, transfusion reaction, Presence of visible protein & lipid particles (cloudy plasma), etc. Figures 9.51 to figure 9.6.2 and table 9.6.1 to table 9.6.4 provides detailed trend analysis below.

Figure 9.6. 1: Blood Transfusion Services

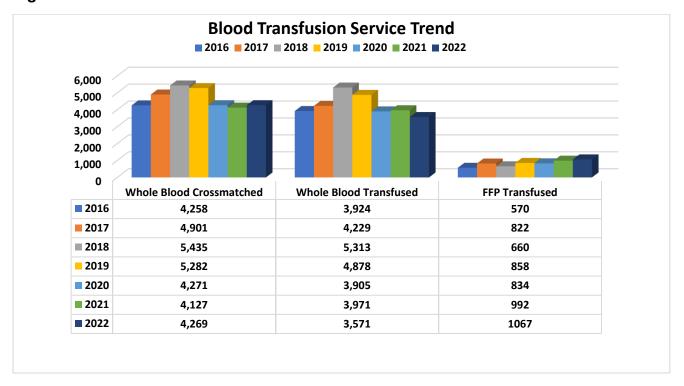


Table 9.6. 1: Trend in Blood Transfusion

INDICATOR	2016	2017	2018	2019	2020	2021	2022	% Diff.
Whole Blood	4,258	4,901	5,435	5,282	4,271	4,127	4,269	3.44 incr
Crossmatched								
Whole Blood	3,924	4,229	5,313	4,878	3,905	3,971	3,571	10.07
Transfused								decr
FFP	570	822	660	858	834	992	1067	7.7 incr
Transfused								

Figure 9.6. 2: Blood Donation Trend

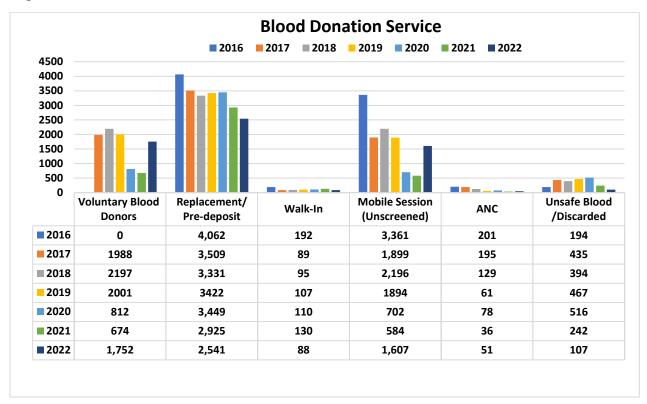


Table 9.6. 2: Blood Donation Trend

GROUPS			QU	JANTIT	Y OBTA	INED		% Diff.
GROUPS	2016	2017	2018	2019	2020	2021	2022	
Voluntary Blood Donors	-	1988	2197	2001	812	674	1,752	159.9% incr
Replacement/ Pre-deposit	4,062	3,509	3,331	3422	3,449	2,925	2,541	13.1% decr
Walk-In	192	89	95	107	110	130	88	32.3 decr
Mobile Session (Unscreened)	3,361	1,899	2,196	1894	702	584	1,607	175.1% incr
ANC	201	195	129	61	78	36	51	41.7% incr
Unsafe Blood /Discarded	194	435	394	467	516	242	107	55.8% decr

Table 9.6. 3: Trend of Blood and Blood Products Transfused to Various Wards

Ward		Who	le Bloo	d Issue	d			FFI	)	
	2019	2020	2021	2022	Remarks	2019	2020	2021	2022	Remarks
Accident & Emergency	635	282	379	355	6% decr	36	15	47	41	13% decr

Ward		Who	le Bloo	d Issue	d			FFI	Р	
	2019	2020	2021	2022	Remarks	2019	2020	2021	2022	Remarks
Female Medical	341	276	251	283	13% incr.	23	19	61	71	16% incr
Female Surgical	410	415	502	440	12.4% decr.	12	14	36	40	11% incr
Male Medical	331	391	236	272	15.3% incr	10	8	15	272	27% incr
Male Surgical	578	499	630	630	-	18	62	72	75	4% incr
Neonatal Intensive Care Unit	128	85	138	130	5.7% decr	28	3	51	61	20% incr
Paediatric Ward	338	334	327	374	14.4% incr.		26	327	374	14.4% incr
Intensive Care Unit	139	143	97	126	30% incr.	69	61	62	70	13% incr
Delivery Suite	209	116	116	189	62.9% incr.	117	80	117	160	37% incr
Obstetrics & Gynaecology	826	728	674	719	7% incr.	272	303	242	238	2% decr
ETAT	235	158	197	268	36% incr.	239	125	222	216	3% decr
Dialysis	197	153	207	178	14% decr.	0	0	0	-	-
Executive Suite	20	22	27	3	89% decr.	0	2	1	4	300% incr
Ward Not Indicated	283	185	61	21	66% decr	14	77	17	12	29% decr
Out-Stations	168	92	67	197	194 % incr	20	39	29	31	7% incr
COVID-19 Treatment Centre	-	26	17	16	6% decr.	-	0	0	0	-
Total	4,876	3,905	3,971	4,201	7% incr.	858	834	992	1067	8% incr

Table 9.6. 4: Reasons for Discarding Blood

2020	2021	2022				
REASONS FOR	REASONS FOR	REASONS FOR				
DISCARDING BLOOD	DISCARDING BLOOD	DISCARDING BLOOD				
1. TTIs	1. TTIs	1. TTIs				
2. Clotted	2. Clotted	2. Clotted				
<ol><li>Under or over bled</li></ol>	3. Under	3. Under				
4. Expired	4. Expired	4. Expired				
<ol><li>Transfusion reaction</li></ol>	5. Incomplete blood	5.Incomplete blood				
	transfusion	transfusion				
6. Haemolysed	6. Haemolysed	6.Haemolysed				
7. Polycythaemia	7. Polycythaemia	7.Polycythaemia				
8. Presence of visible	8. Presence of visible	8.Presence of visible				
protein & lipid	protein & lipid	protein & lipid particles				
particles (cloudy	particles (cloudy	(cloudy plasma)				
plasma)	plasma)					

## 9.7. HAEMATOLOGY SERVICES

The Haematology OPD Service utilization increased over the years. However, in 2022, the department recorded a drop of 14.2% in its total clinic attendance (from 427 in 2021 to 366 in 2022). On other hand, the number of Haematology related cases admitted went up significantly by 360% (from 10 in 2021 to 46 in 2022), whilst Haematology related mortalities also went up by 20% (from 5 in 2021 to 6 in 2022). Again, sickle cell conditions appreciated by a whopping percentage of 242% in the year under review (from 87 in 2021 to 298 in 2022).

Further, Chronic Lymphocytic Leukaemia (16), Chronic Myeloid Leukaemia (8), Polycythaemia Vera (7) were the leading conditions among the top 6 cases managed by the Haematology department in 2022. Figures 9.7.1 to figure 9.7.2 and tables 9.7.1 to table 9.7.3 below provides detailed analysis.

Figure 9.7. 1: Haematology Clinic OPD Attendance

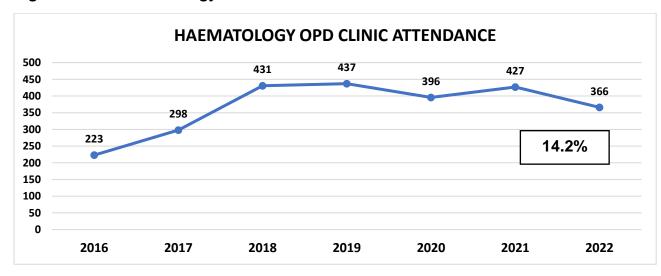


Table 9.7. 1: Haematology Clinic OPD Attendance

CLINICS	2016	2017	2018	2019	2020	2021	2022	REMARKS
Haematology	223	298	431	437	396	427	366	14.2%
								decr

Table 9.7. 2: Trend of Haematology Service Utilization

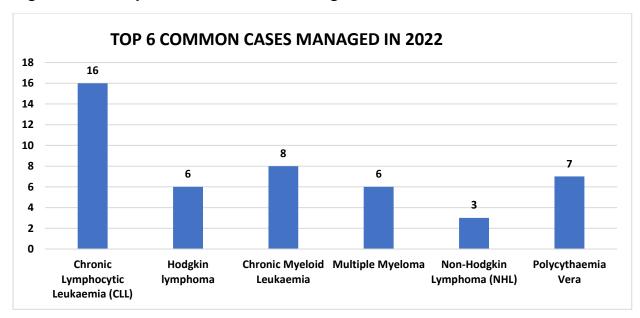
INDICATOR	2019	2020	2021	2022	REMARKS
No. of Bone marrow Aspirates	13	31	5	17	240% incr
No. of remissions	11	6	2	1	50% decr
No. of mortalities	5	10	5	6	20% incr
No. of relapse Patients	2	3	1	1	-
No. of Admissions	23	17	10	46	360% incr
Sickle cell	65	46	87	298	242.5% incr
Haematology	78	69	102	357	250% incr

Table 9.7. 3: Top 6 Common Haematology Cases Managed

2020		2021		20	)22
CONDITION	NO	CONDITION	NO	CONDITION	NO
Chronic Myeloid Leukaemia	20	Chronic Lymphocytic Leukaemia (CLL)	11	Chronic Lymphocytic Leukaemia (CLL)	16
Chronic Lymphocytic Leukaemia (CLL)	10	Hodgkin lymphoma	10	Hodgkin lymphoma	6
Non-Hodgkin Lymphoma (NHL)	9	Chronic Myeloid Leukaemia	7	Chronic Myeloid Leukaemia	8
Multiple Myeloma	7	Multiple Myeloma	7	Multiple Myeloma	6

2020		2021		20	)22
CONDITION	NO	CONDITION	NO	CONDITION	NO
Polycythaemia Vera	5	Non-Hodgkin Lymphoma (NHL)	6	Non-Hodgkin Lymphoma (NHL)	3
Hodgkin lymphoma	2	Polycythaemia Vera	4	Polycythaemia Vera	7

Figure 9.7. 2: Top 6 Common Cases Managed in 2022



## 9.8 RADIOLOGICAL SERVICES

In the year under review, the number of clients recorded at the radiology unit declined by 5.9% (from 17,983 in 2021 to 16,917 in 2022). However total radiology investigations conducted went up marginally by 1% in the same year (from 2958 in 2021 to 2022 in 2022). A total of 2,215 investigations were conducted in march representing the month with the highest number of radiology investigations. X-ray 12,001 (57.7%) investigations constituted the highest proportion of the radiology investigations conducted in 2022 followed by ultrasound (35.9%) and Specials (Hsg, Mcug Rug, Mammo, Dental, Ba. studies) (6.3%) respectively with the least being interventional radiology investigations. The hospital's CT scan broke down in the first quarter of 2021, resulting in 100% non-utilization in 2022.

Further, Specials (Hsg, Mcug Rug, Mammo, Dental, Ba. studies investigations recorded the highest increase of 82.4% in 2022 (from 721 in 2021 to 1315 in 2022). Figure 9.7.1 to figure 9.7.4 and table 9.7.1 to table 9.7.4 below provides details of the analysis.

Figure 9.8. 1: Radiology Service Utilization Trend

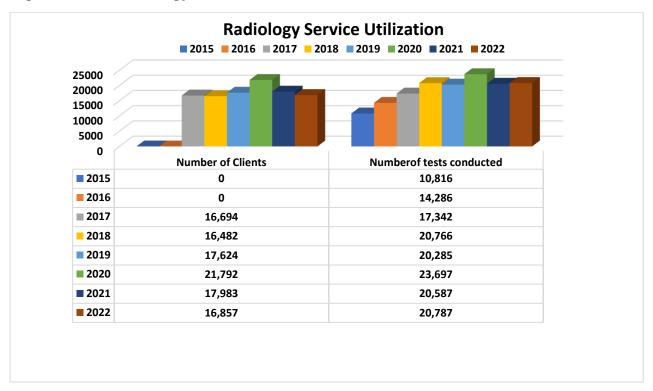


Table 9.8. 1: Trend of Total Radiology Investigations and Clients

INDICATO R	2015	2016	2017	2018	2019	2020	2021	2022	REMARK S
Number of clients	-	-	16,69 4	16,48 2	17,62 4	21,79 2	17,98 3	16,85 7	6.3% decr
Number of tests conducted	10,81 6	14,28 6	17,34 2	20,76 6	20,28 5	23,69 7	20,58 7	20,78 7	1% incr.

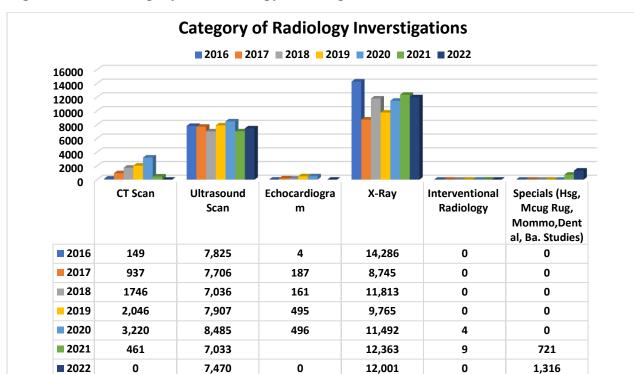


Figure 9.8. 2: Category of Radiology Investigations

Table 9.8. 2: Category of Radiology Investigations

RADIOLOGY SERVICES	2016	2017	2018	2019	2020	2021	2022	REMARKS
CT Scan	149	937	1746	2,046	3,220	461	0	100% decr.
Ultrasound Scan	7,825	7,706	7,036	7,907	8,485	7,033	7,470	6.2% incr
Echocardiogram	4	187	161	495	496		-	-
X-Ray	14,286	8,745	11,813	9,765	11,492	12,363	12,001	3% decr
Interventional Radiology	-	-	-	-	4	9	1	88.9% decr
Specials (Hsg, Mcug Rug, Mammo, Dental, Ba. studies)	-	-	-	-	-	721	1,315	<b>82.4</b> % incr

Figure 9.8. 3: Monthly Trend of Radiology Investigations in 2022

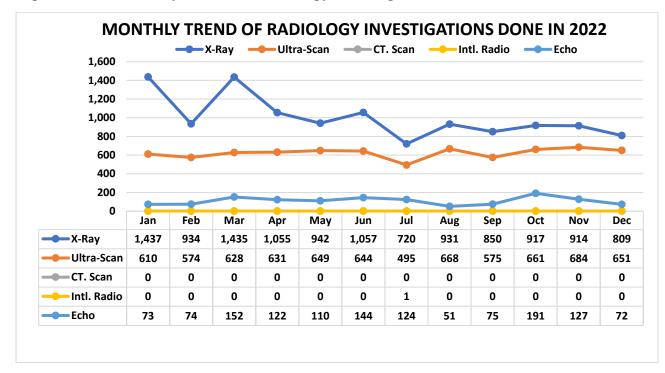
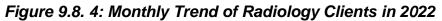


Table 9.8. 3: Table Monthly Trend of Radiology Investigations

Mo nth			20	20					20	21			2022						
	X- Ra y	Ult ra- Sc an	CT Sc an	Intl Ra dio	Ec ho	Tot al	X- Ra y	Ult ra- Sc an	CT Sc an	Intl Ra dio	Ec ho	Tot al	X- Ra y	Ult ra- Sc an	CT Sc an	Intl Ra dio	Ec ho	Tot al	
Jan	1,2 47	93 6	22 8	1	52	2,4 63	126 2	55 6	26 3	0	59	2,1 40	1,4 37	61 0	-	-	73	2,1 20	
Fe b	1,2 38	87 7	22 4	1	48	2,3 87	105 9	36 3	19 8	2	69	1,6 91	934	57 4	-	-	74	1,5 82	
Ma r	851	73 4	21 6	0	25	1,8 26	956	56 3	-	0	85	1,6 04	1,4 35	62 8	-	-	15 2	2,2 15	
Apr	629	53 6	18 8	1	26	1,3 80	864	56 3	-	3	55	1,4 85	1,0 55	63 1	-	-	12 2	1,8 08	
Ma y	406	46 9	22 6	1	25	1,1 28	106 2	60 1	-	0	67	1,7 30	942	64 9	-	-	11 0	1,7 01	
Jun	662	57 5	22 1	0	30	1,4 88	108 1	61 7	-	1	52	1,7 51	1,0 57	64 4	-	-	14 4	1,8 45	
Jul	646	54 5	28 4	0	38	1,5 13	107 2	64 1	-	1	71	1,7 85	720	49 5	-	1	12 4	1,3 40	
Au g	887	65 2	21 4	0	40	1,7 93	971	67 1	-	0	58	1,7 00	931	66 8	-	-	51	1,6 50	
Se p	123 3	65 5	37 2	0	34	2,2 94	978	61 9	-	0	36	1,6 33	850	57 5	-	-	75	1,5 00	
Oct	138 7	90 1	34 8	0	47	2,6 83	982	57 5	-	1	34	1,5 92	917	66 1	-	-	19 1	1,7 69	
No v	120 0	76 5	35 6	0	63	2,3 84	967	64 8	-	1	76	1,6 92	914	68 4	-	-	12 7	1,7 25	
De c	110 5	84 1	34 4	0	68	2,3 58	110 9	61 6	-	0	59	1,7 84	809	65 1	-	-	72	1,5 32	
Tot al	11, 492	8,4 85	3,2 20	4	49 6	23, 697	12, 363	7,0 33	46 1	9	72 1	20, 587	12, 001	7,4 70	-	1	1,3 15	20, 787	



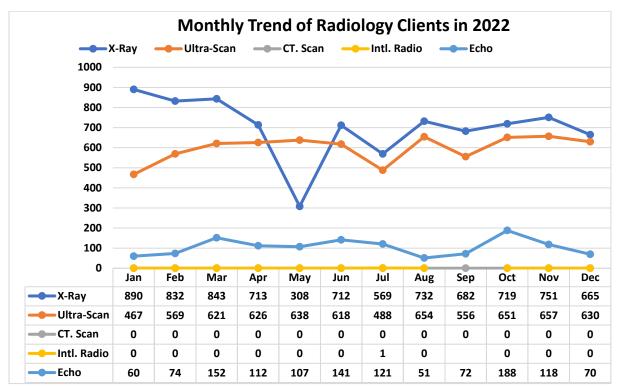


Table 9.8. 4: Monthly Trend of Radiology Clients

M on			20	20					20	)21					20	)22		
th	X- Ra y	UI tr a- Sc an	C T. S ca n	Int I. Ra di o	E ch o	To tal	X- R a y	UI tr a- Sc an	C T. S ca n	Int I. Ra di o	E ch o	To tal	X- Ra y	UI tra - Sc an	C T. S ca n	Int I. Ra di o	Ec ho	Tot al
Ja n	12 47	93 6	22 8	1	52	2,4 63	1 0 0 5	55 3	26 3	0	59	1,8 80	8 9 0	4 6 7	-	-	6 0	14 17
Fe b	12 38	87 7	22 4	1	48	2,3 87	8 0 4	36 3	19 8	2	69	1,4 36	8 3 2	5 6 9	-	-	7	14 75
Ma r	85 1	73 4	21 6	0	25	1,8 26	7 6 9	55 2	0	0	85	1,4 06	8 4 3	6 2 1	1	1	1 5 2	16 16
Ap r	62 9	53 6	18 8	1	26	1,3 80	6 6 5	60 1	0	3	55	1,3 24	7 1 3	6 2 6	-	-	1 1 2	14 51

M on		2020							20	)21			2022					
th	X- Ra y	UI tr a- Sc an	C T. S ca n	Int I. Ra di o	E ch o	To tal	X- R a y	UI tr a- Sc an	C T. S ca n	Int I. Ra di o	E ch o	To tal	X- Ra y	UI tra - Sc an	C T. S ca n	Int I. Ra di o	Ec ho	Tot al
Ma y	40 6	46 9	22 6	1	25	1,1 28	7 8 4	61 6	0	0	67	1,4 67	3 0 8	6 3 8	-	-	1 0 7	105 3
Ju n	66 2	57 5	22 1	0	30	1,4 88	8 0 4	64 0	0	1	52	1,4 97	7 1 2	6 1 8	-	-	1 4 1	14 71
Jul	64 6	54 5	28 4	0	38	1,5 13	8 3 1	67 0	0	1	71	1,5 73	5 6 9	4 8 8	-	1	1 2 1	11 78
Au g	88 7	65 2	21 4	0	40	1,7 93	7 2 9	60 8	0	0	58	1,3 95	7 3 2	6 5 4	-	-	5 1	14 37
Se p	1,2 33	65 5	37 2	0	34	2,2 94	7 9 5	65 4	0	0	36	1,4 85	6 8 2	5, 5 6	-		7 2	13 10
Oc t	1,3 87	90	34 8	0	47	2,6 83	8 7 1	56 6	0	1	34	1,4 72	7 1 9	6 5 1	-	-	1 8 8	15 58
No v	1,2 00	76 5	35 6	0	63	2,3 84	7 1 9	60	0	1	76	1,3 96	7 5 1	6 5 7	-	-	1 1 8	15 26
De c	1,1 05	84	34 4	0	68	2,3 58	9 6 9	62 4	0	0	59	1,6 52	6 6 5	6 3 0	-	-	7	13 65
To tal	11, 49 2	8, 48 5	3, 22 0	4	49 6	23, 69 7	9 7 4 5	70 47	46 1	9	72 1	17, 98 3	8 4 1 6	7 1 7 5	-	1	1 2 6 6	16, 85 8

#### 9.9 PATHOLOGY SERVICES

The number of bodies stored at pathology department of the hospital declined by 24% in 2022 (from 993 in 2021 to 757 in 2022), whereas the number of embalment done dropping significantly by 30% (from 540 in 2021 to 380 in 2022). However, the number of autopsies performed increased significantly by 10% (from 227 in 2021 to 250 in 2022), whilst the number of general bodies handled dropping by 22% (from 929 in 2021 to 724 in 2022)

In addition to the above, the total number of cases received from the wards went up by 9% (from 970 in 2021 to 1,237 in 2022). Out of the total cases received from the wards, 330 were from the Accident and Emergency department, with the least of 39 cases received from Maternal Health department. Tables 9.9.1 to table 9.9.2 and figure 9.9.1 to figure 9.9.2 shows detailed trend analysis below.

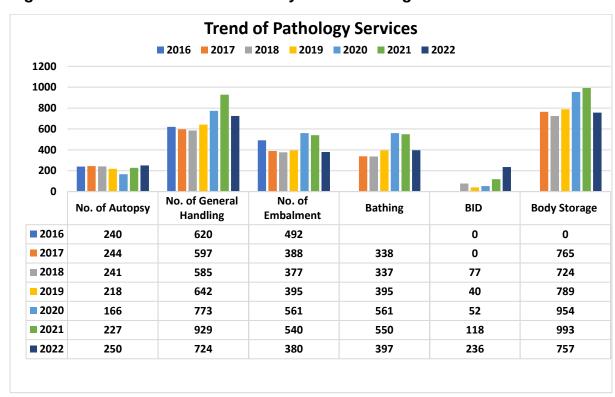


Figure 9.9. 1: Seven-Year Trend Analysis of Pathological Services

Table 9.9. 1: Trend of Pathology Services

INDICATOR	2016	2017	2018	2019	2020	2021	2022	REMARKS
No. of Autopsy	240	244	241	218	166	227	250	10% incr.
No. of General Handling	620	597	585	642	773	929	724	22% decr
No. of Embalment	492	388	377	395	561	540	380	30% decr.
Bathing		338	337	395	561	550	397	28% decr
BID	-	-	77	40	52	118	236	100% incr.
Body Storage	-	765	724	789	954	993	757	24% decr.

Figure 9.9. 2: Pathology Cases Received from the Wards

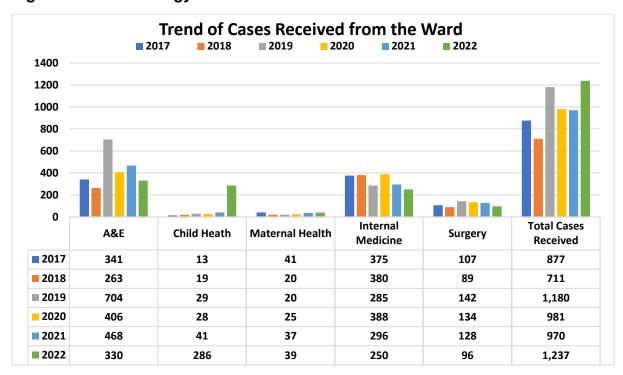


Table 9.9. 2: Pathology Cases Received from the Wards

WARD	2017	2018	2019	2020	2021	2022	REMARKS
A&E	341	263	704	406	468	330	29 decr
Child Heath	13	19	29	28	41	286	597.6%
							incr
Maternal Health	41	20	20	25	37	39	5% incr
Internal Medicine	375	380	285	388	296	250	16% decr
Surgery	107	89	142	134	128	96	25% decr
<b>Total Cases Received</b>	877	711	1,180	981	970	1,237	9% incr

## CHAPTER TEN

## MATERNAL HEALTH SUB-BMC

#### **10.1 INTRODUCTION**

The Maternal Health Sub-BMC is responsible for the management of Obstetric and Gynaecological conditions as well as its related emergencies. The sub-BMC is made up of O & G Ward, Delivery Suite, Delivery Suite Theatre and Recovery Ward, Antenatal & Postnatal Clinics (ANC & PNC), Gynaecological Clinic and ETAT. The Sub-BMC is managed by a six-member team consisting of the Head of Department, a Lead Clinician, DDNS, Business Manager, Pharmacist, and an Accountant. Other consultants and heads of various clinical teams support the Sub-BMC.

## 10.2 PERFORMANCE OF MATERNAL HEALTH SUB-BMC AGAINST CCTH STRATEGIC OBJECTIVES

Table 10.2. 1: 2022 Annual Performance of Maternal Health Sub-BMC Against **CCTH Strategic Objectives** 

2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY													
	HOSPITALWIDE LEVEL												
Actual Performance Trend													
Access	2017	2018	2019	2020	2021	2022	2022	Remark					
	Annual	Annual	Annual	Annual	Annual	Annual	Target	S					
i. Percentage of maternal admissions due to external referrals decreased	49%	41.4%	27.2%	21.2%	23%	26.71%	THs = 60%	incr					
ii. Total deliveries	3,055	3,160	3,027	2,883	3055	3,269	CCTH = 5% incr	7.0% incr					
iii. Delivery to midwife ratio (all midwives at the institution)	29:1	30:1	20:1	18:1	15:1	14:1	THs = 20:1	Decr					
iv. Couple year protection	1507	1,521.6	1,562.5	1,891.2	2,233	2,626	CCTH` = 5% incr TH = 2,500						
v. Caesarean section rate	v. Caesarean 35.9% 46.8% 41.2% 53.3% 51.4% 50.4% TH = decr												
Increased the number	of radiology te	sts conduct	ed by 0.97%	from 20,587	in 2021 to 2	20,787 in 20	022						
Introduced dental x-ray	services (362	cases seer	า)										

## MATERNAL HEALTH SUB-BMC

Introduced Feto-Maternal Medicine Services (912 Cases Seen)

Increased OPD attendance at the Maternal Health department by 21.1% from 15,468 in 2021 to 18,726 in 2022

## **CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.**

#### **HOSPITALWIDE LEVEL**

	Actual Performance Trend												
Impact	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	2022 Annual	Target	Remark s % Diff.					
i. Low birth rate	13%	13.5%	16.1%	16.8%	19.4%	20.5%	THs = 12%	Incr					

	2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE												
ii. Stillbirth rate (/1000LB)	35	37	42	31	42	35	THs = 15	decr					
iii. Total Fresh Still birth	53	29	39	38	43	55	-	27.9% incr					
iv. Total Macerated Still Birth	54	89	87	52	85	63	1	25.9% decr					
v. Institutional Maternal mortality ratio (/100,000LB)	1335	860	925	903	1,050	1,186	THs = 300	Incr					
vi. Number of institutional maternal deaths	41	27	28	26	32	39	CCTH = 50% Decr	21.9% incr					
vii. Partograph use rate	-	40.8%	46.12%	48.7%	48.5%	47.6%	THs = 60%	decr					

17 health promotion and education activities undertaken in 5 Communities and referral facilities visited

Audited all maternal mortality

Nurses and Midwives mortality audit in addition to team based and Sub-BMC wide audits conducted on all the 39 maternal mortalities

Organised one (1) customer care training for staff of the Sub-BMC in collaboration with the QA Team on how to handle patients

2 staff trained in critical care nursing

Trained 60 staff on BLS, ACLS, ETAT and Emergency readiness

Organised training for 30 staff on cervical cancer screening

90% of Perinatal mortalities audited

# CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE

Partitioned one consulting room (consulting room 44)

Received one (1) colposcope machine through donation

Purchased the following from PRA and SIL

- 5 Air Conditioners
- 5 table top fridges
- 5 Televisions
- 5 notice boards
- 4 microwaves

Tiled Delivery Suite Theatre 2

Renovated side ward 1

Repaired most faults and damages through imprest and SIL

## **CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM**

## 4.1: Governance Related Performance

8 Leadership training organized on the following topics:

- the art of leadership (part 1)
- the art of leadership (part 2)
- the role of a leader in data management and Emotional Intelligence
- disciplinary procedures and code of conduct, and
- 3 trainings on Labour Act.

Orientation conducted for all new staff posted to the Sub-BMC

Held 5 Sub-BMC meetings

Conducted 1 Sub-BMC Peer Reviews

## 4.2: Human Resource Related Performance

i.	Delivery to midwife ratio (i.e., all midwives	29:1	30:1	20:1	18:1	15:1	14:1		decr
	at the institution)								
ii.	Delivery to midwife ratio (i.e., productivity of the midwives at only the delivery suite)	62:1	77:1	75:1	70:1	46:1	50:1	-	incr

#### 2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

53 staff had a change of grade through promotion and upgrade activities

#### 4.3: Finance related performance

#### HOSPITALWIDE OUTCOME/IMPACT

Started billing for Ultrasound services

#### CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING

5.1 Improve on Research:

#### 5.2 Improve on Teaching and Learning:

Refurbished and equipped doctors and nurses to create a conducive environment.

5 Midwives received approval for postgraduate training

65 undergraduate medical students passed through the Sub-BMC for training.

## CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS

Collaborated with Regional Health Directorate and conducted mentorship support for peripheral facilities in Central Region

Conducted 5 Joint Zonal OBGYN Specialists EMONC Training

## 10.3 MATERNAL HEALTH OPD SERVICES UTILIZATION

Generally, the total OPD attendance at the Maternal Health Sub-BMC in 2022 went up by 23.3% (from 15,186 in 2021 to 18,726 in 2022). Attendance to the ANC clinic increased by 12.38% (from 9,298 in 2021 to 10,449 in 2022) whiles the PNC clinic attendance increased by 20.12% (from 2,520 in 2021 to 3,027 in 2022). Reproductive Endocrinology & Fertility clinic and Gynae. Oncology clinic attendance also went up by 31.73% and 600% respectively. Further, feto-maternal service was introduced in 2022 and a total of 912 cases were seen. Figures 10.3.1 to figure 10.3.2 and table 10.3.1 shows detailed trend analysis below.

Figure 10.3. 1: Trend of Total Maternal Health OPD Attendance

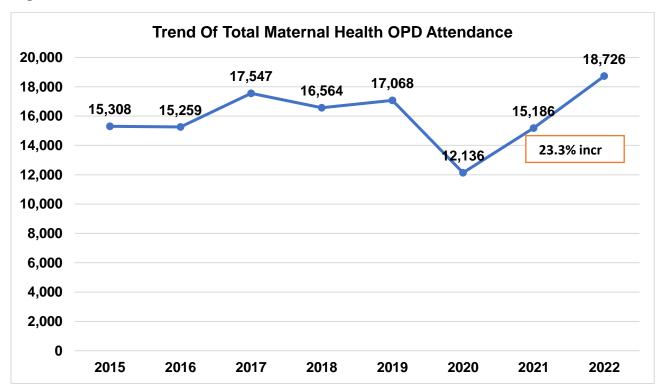


Figure 10.3. 2: Maternal Health OPD Services Utilization

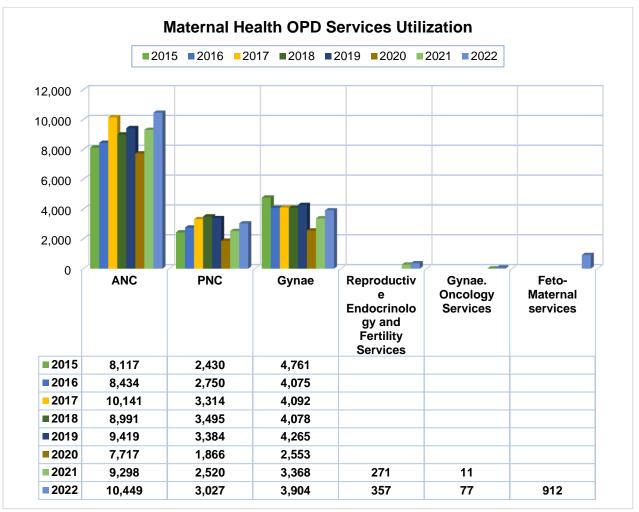


Table 10.3. 1: OPD Attendant for Maternal Health

CLINIC	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS
ANC	8117	8434	10,141	8,991	9,419	7,717	9,298	10,449	12.38% incr
PNC	2430	2750	3,314	3,495	3,384	1,866	2,520	3,027	20.12% incr
Gynae	4761	4075	4,092	4,078	4,265	2,553	3,368	3,904	15.91% incr
Reproducti ve Endocrinol ogy and Fertility clinic	-	-	-	-	-	-	271	357	31.73% incr
Gynae. Oncology	-	-	-	-	-	-	11	77	600% incr
Feto- Maternal services	-	-	-	-	-	-	-	912	Introduced in 2022
TOTAL	15,30 8	15,25 9	17,547	16,56 4	17,06 8	12,13 6	15,186	18,726	23.3% incr

## **10.4 IN-PATIENT STATISTICAL PERFORMANCE**

The total admissions at the Maternal Health Sub-BMC increased significantly in 2022 by 177.3% (from 2,058 in 2021 to 5,706 in 2022). Also, the percentage of maternal admissions due to external referrals increased in 2022 from 23% in 2021 to 26.71% in 2022. Admissions to the O&G ward however decreased marginally by 1.75% (from 2,058 in 2021 to 2,022 in 2022) compared to the Delivery Suite and ETAT that recorded an increase of 13.62% and 30.78% in their admissions. Further, bed occupancy rate and the average length of stay at the Maternal Health Sub-BMC decreased in 2022. Interestingly, the bed occupancy rate and the average length of stay at the individual departments increased within the same period. Table 10.4. 1 provides an overview of the in-patient statistics at the Maternal Health Sub-BMC whiles Table 10.4.2 highlights the in-patient statistics at the individual wards.

Figure 10.4. 1: Trend of total Admission at Maternal Health Department (2017 – 2022)

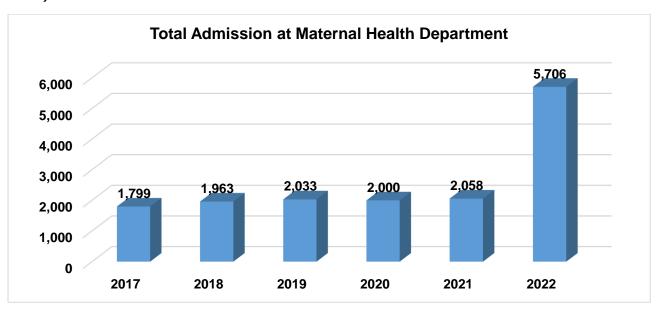


Table 10.4. 1: Maternal In-Patient Statistics

Indicator	2016	2017	2018	2019	2020	2021	2022	Remarks	Target	Measurement
Total Admission	1,713	1,799	1,963	2,033	2,000	2,058	5,706	177.3% incr	-	-
Number of maternal admissions due to external referrals	-	-	1392	976	776	556	1,077	93.7% incr		
Percentage of maternal admissions due to external referrals	-	49%	41.4%	27.2%	21.2%	23%	26.71%	incr	60%	No. of Maternal admissions due to referrals / Total Maternal admissions

Indicator	2016	2017	2018	2019	2020	2021	2022	Remarks	Target	Measurement
Total Discharges	2475	2653	2744	2541	2559	2,730	4,710	72.52% incr		
Trans-In	1364	1484	1473	1009	983	1,157	1,455	25% incr		
Trans-Out	598	635	682	617	389	460	2,404	Incr		
Average Daily Occupancy	33	29	28.6	31.0	32.4	32	45	Incr		
% Bed Occupancy	73.3%	65.2%	63.5%	68.8%	71.8%	71%	66.0%	Decr		
Average Length of Stay	4.8 days	4.0 days	3.8 days	4.5 days	4.0 days	4.2 days	3.5 days	Decr		
Total Death										

Table 10.4. 2: Trend of in-patient statistics at Maternal Sub-BMCs Wards (2017 – 2022)

WARD	2017	2018	2019	2020	2021	2022	REMARKS					
		ADM	ISSIONS	3								
O&G Ward	1,797	1963	2,180	2,000	2,058	2,022	1.75% decr					
Delivery Suite	2,690	2,487	1,861	1,655	1,769	2,010	13.62% incr					
ETAT	-	-	-	-	1,280	1,674	30.78% incr					
		DISC	HARGE	S								
O&G Ward	2,638	2,744	2,539	2,554	2,730	2,820	3.30% incr					
Delivery Suite	1,807	1,726	1,626	1,293	1,412	1,573	11.40% incr					
ETAT	-	ı	-	-	153	317	107.19% incr					
AVERAGE LENGTH OF STAY (DAYS)												
O&G Ward	4	3.8	4.4	4	4.2	4.3	Incr					
Delivery Suite	1.7	1.5	1.5	1.1	1	1.7	Incr					
ETAT	-	-	-	-	1	4.2	Incr					
	AVE	RAGE DAIL	Y BED C	CCUPA	NCY							
O&G Ward	29	29	30	32.4	32	33.7	Incr					
Delivery Suite	8	7	7	5.8	8	7.5	Decr					
ETAT	-	-	-	-	2	3.8	Incr					
		% BED 0	CCUPA	NCY								
O&G Ward	65.2	63.5	67.8	71.8	70.3	71.8	Incr					
Delivery Suite	43.6	36.2	34.8	30.3	27.7	30.3	Incr					
ETAT	-	ı	-	-	63	82.6	Incr					
		DE	EATHS									
O&G Ward	14	15	9	13	16	21	31.25% incr					
Delivery Suite	8	4	3	1	0	1	Incr					
ETAT	-	ı	-	-	6	-	•					
		DEATH	RATE (	(%)								
O&G Ward	0.4	0.40%	0.30%	0.40%	0.50%	0.70%	Incr					
Delivery Suite	0.2	0.10%	0.10%	0.10%	0.00%	0.10%	Incr					
ETAT	-	-	-	-	-	-						

#### **10.5 TOP 10 OBSTETRIC CONDITIONS**

Hypertensive disease in pregnancy was the leading cause of obstetric case presented at the hospital in 2022 and it formed 39.71% (471) of the cases seen. Abortion cases seen in 2022 increased significantly by 205.9% (from 51 in 2021 to 156 in 2022) and also forming 13.15% of the obstetric cases reported in 2022. This was followed by urinary tract infection (12.23%), anaemia in pregnancy (9.27%) and diabetes mellitus in pregnancy (6.75%). On the other hand, Premature rupture of membrane (3.71%) and Preterm Labor (2.95%) were ranked 8<sup>th</sup> and 9<sup>th</sup> respectively among the top ten obstetric conditions seen at the hospital in 2022. Detailed trend analysis of the top ten obstetric conditions seen at the hospital is shown in table 10.5.1 below

Table 10.5. 1: Top 10 Obstetric Conditions

2019		2020		2021		2022			
CONDITION	%	CONDITION	%	CONDITION	%	CONDITION	%		
UTI in Cyesis	16.2% (54)	Hypertensive Disorders of Pregnancy	16.84% (82)	Eclampsia	161 (30.09%)	Hypertensive disease in pregnancy (Eclampsia- 332)	471 (39.71%)		
Prolonged Pregnancy / Post term	12.5% (42)	UTI In Cyesis	14.78% (72)	Hypertensive Disorders of Pregnancy	73 (13.64%)	Abortion	156 (13.15%)		
PROM / PPROM	12.28% (41)	Gestational DM / DM In Pregnancy	12.94% (63)	Gestational diabetes	65 (12.14%)	Urinary tract infection	145 (12.23%)		
Anaemia in Pregnancy -	11.68% (39)	intrauterine fetal death (IUFD)	11.91% (58)	UTI in Cyesis	64 (11.96%)	Anaemia in pregnancy	110 (9.27%)		
Gestational Dm / Dm in Pregnancy	10.49% (35)	Postdatism	10.47% (51)	Abortion	51 (9.53%)	Diabetes mellitus in pregnancy	80 (6.75%)		
Hypertensive Disorders of Pregnancy	9.58% (32)	PROM	8.42% (41)	Malaria in Pregnancy	32 (5.98%)	Malaria in pregnancy	79 (6.66%)		
Pre – Term Labor – 30	8.98% (30)	Abnormal uterine bleeding (AUB)	7.6% (37)	Abnormal Uterine Bleeding	26 (4.86%)	Ectopic	66 (5.56%)		
PPH - 24 (7.19%)	7.19% (24)	Eclampsia	6.16% (30)	Anaemia in Pregnancy	22 (4.11%)	Premature rupture of membrane	44 (3.71%)		
Hyperemesis Gravidarum	6.29% (21)	PPH	5.54% (27)	Preterm Labour	21 (3.92%)	Preterm Labor	2.95% (35)		
IUFD	4.79% (16)	Malaria in Pregnancy –	5.34% (26)	Hyperemesis Gravidarum	20 (3.74%)				

## 10.6 MATERNAL HEALTH - KEY PERFORMANCE INDICATORS

The total deliveries at the hospital in 2022 increased by 7% (from 3,055 in 2021 to 3,269 in 2022). Similarly, the number of babies delivered went up by 7.3% (from 3,176

in 2021 to 3,408 in 2022). Also, 50.35% (1,646) of the babies were delivered through caesarean section, 49% (1,602) were delivered through spontaneous vaginal delivery whiles 0.65% (21) was through assisted vaginal delivery. The hospital since 2018 has been recording fluctuations in the partograph use rate. In 2022, the partograph use rate declined from 48.5% in 2021 to 47.6% in 2022.

Further, the deliveries to midwives' ratio at the facility decreased in 2022 (from 15:1 in 2021 to 14:1 in 2022) whiles the delivery to midwives' ratio at the delivery suite increased in 2022 (from 46:1 in 2021 to 50:1 in 2022). In addition, the low-birth-weight rate increased in 2022 (from 19.4% in 2021 to 20.5% in 2022). Although the hospital recorded an increase in the total number of still birth in 2022 by 9.3% (from 128 in 2021 to 140 in 2022), the still birth rate declined significantly in 2022 (from 42/1000LB in 2021 to 35/1000LB in 2022). In 2022, the number of new registrants at the ANC clinic increased by 5.2% (from 768 in 2021 to 808 in 2022) although the hospital failed to meet the 10% incremental target during the year under review whiles the ANC Attendance in 2022 went up by 12.4% (from 9,298 in 2021 to 10,449 in 2022). The hospital in 2022 recorded an increase in the Couple year protection (from 2,233 in 2021 to 2,626 in 2022) and also met the teaching hospital's target of 2500. Detailed analysis is highlighted in Figure 10.6. 1 to Figure 10.6. 5 and table 10.6. 1 below.

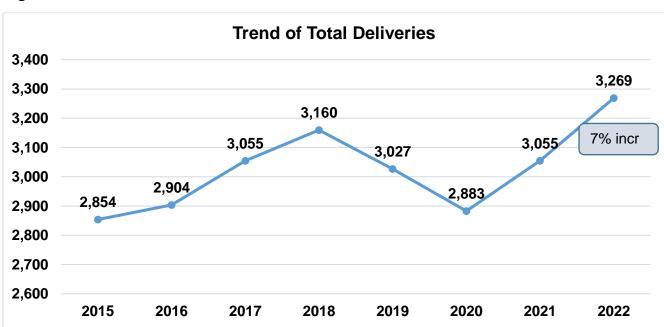


Figure 10.6. 1: Trend in Number of Deliveries

Figure 10.6. 2: Trend Analysis of Forms of Delivery

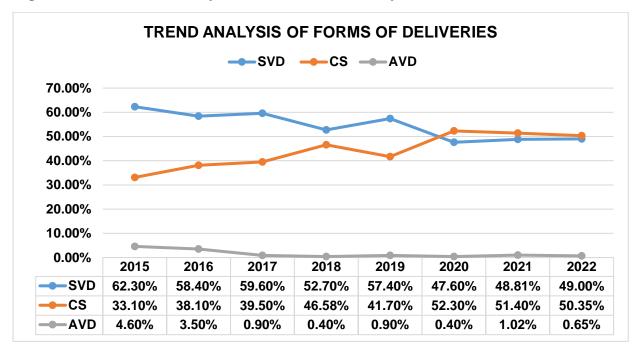
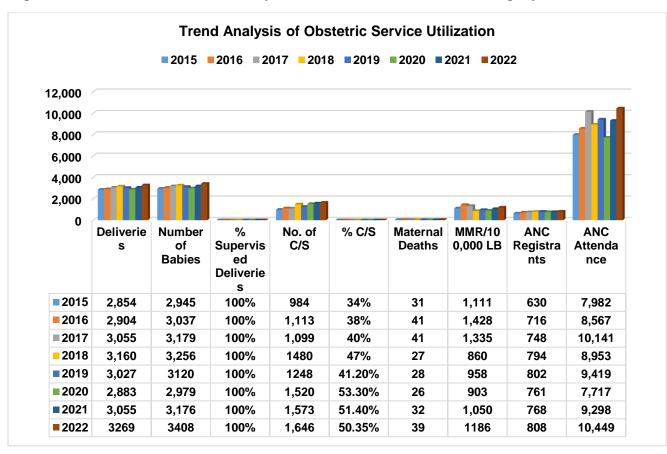
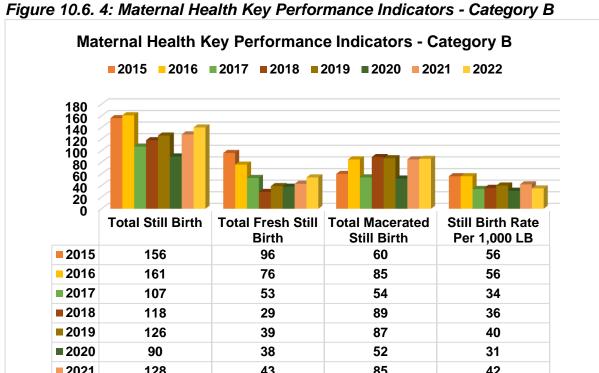


Figure 10.6. 3: Maternal Health Key Performance Indicators - Category A





128 43 **2021** 85 42

54

86

35

2022

140

Figure 10.6. 5: Maternal Health Key Performance Indicators - Category C Maternal Health Key Performance Indicators - Category C **■**2015 **■**2016 **■**2017 **■**2018 **■**2019 **■**2020 **■**2021 **■**2022 12,000 10,000 8,000 6,000 4,000 2,000 0 **Maternal Deaths Maternal Mortality ANC Registrants ANC Attendance** Ratio Per 100,000 Live Births **2015** 31 630 1,111 7,982 **2016** 41 1,428 716 8,567 **2017** 41 1,335 748 10,141 **2018** 27 860 794 8,953 **2019** 28 958 802 9,419 761 7,717 **2020** 26 903 **2021** 32 1,050 768 9,298 **2022** 1,186 808 10,449 39

Table 10.6. 1: Maternal Health Key Performance Indicators

INDICAT	2015	2016	2017	2018	2019	2020	2021	2022	REMA	TARG	MEASUR
ORS									RKS	ET	EMENT
Deliveries	2,854	2,904	3,055	3,160	3,027	2,883	3,055	3,269	7.0% incr	CCTH = 5% Incr	Total No. of Deliveries undertake n
Number of Babies	2,945	3,037	3,179	3,256	3,120	2,979	3,176	3,408	7.3% incr	-	-
Live births	2,789	2,870	3,072	3,138	2994	2,793	3,048	3,288	7.9% incr	CCTH = 5% Incr	-
Low birth Weight Rate		16.2%	13%	13.5%	16.1 %	16.8%	19.4%	20.5%	incr	THs = 12%	Total no. of babies < 2.5kg/ Total live births *100
Total Still Birth	156	161	107	118	126	90	128	140	9.3% incr	-	-
Total Fresh Still Birth	96	76	53	29	39	38	43	54	25.6% incr	-	-
Total Macerated Still Birth	60	85	54	89	87	52	85	86	1.2% incr	-	-
Still Birth Rate Per 1,00LB	56	56	34	36	40	31	42	35	decr	THs = 15/100 OLB	No. of babies born with no signs of life / Total no. of deliveries
% Supervised Deliveries	100	100	100	100	100	100	100	100		-	-
Number of Caesarean Section	984	1,113	1,099	1,480	1,248	1,520	1,573	1,646	4.6% incr	-	
% Caesarean Section	34%	38%	40%	47%	41.2 %	53.3%	51.4%	50.35 %	Decr	THs = 40%	-
Partograph use rate	-	-	-	40.8%	46.12 %	48.7%	48.5%	47.6%	Decr	THs = 60%	Deliveries done with use or support of Partograp h / Total deliveries * 100
ANC Registrants	630	716	748	794	802	761	768	808	5.2% incr	CCTH = 10% Incr	-
ANC Attendance	7,982	8,567	10,14 1	8,953	9,419	7,717	9,298	10,44 9	12.4% incr	-	-

INDICAT ORS	2015	2016	2017	2018	2019	2020	2021	2022	REMA RKS	TARG ET	MEASUR EMENT
Couple year protection	-	2,777.6	1,507	1,521. 6	1,562 .5	1,891	2,233	2,626	incr	THs = 2,500	Total No. of Commodi ties dispense d / CYP factor

## **10.7 TOP 10 GYNAECOLOGY CONDITIONS**

The hospital in 2022 recorded Leiomyoma as the leading cause of gynaecological conditions seen and it formed 50.61% (124) of the total cases seen. However, the number of Leiomyoma cases seen in 2022 went up by 143% (from 51 in 2021 to 124 in 2022). This was followed by Endometritis, Malignant neoplasm/ cancers of the female reproductive system, Ovarian cyst, Uterine prolapse which formed 24.08% (59), 8.57% (21), 5.71% (14) and 4.49% (11) of the total gynae cases seen respectively. On the other hand, Vaginal prolapse (2.04%) and Female infertility (0.41%) were ranked as the least cases amongst the top 10 gynaecology cases seen in 2022. Detailed trend analysis of the top ten gynaecological conditions recorded at the hospital is shown in table 10.7.1 below.

Table 10.7. 1: Top 10 Gynaecology Conditions

20′	19	202	0	202	1	202	2
CONDITIONS	NO. OF CASES	CONDITIONS	NO. OF CASES	CONDITIONS	NO. OF CASES	CONDITIONS	NO. OF CASES
Uterine Fibroids	151 (30.2%)	Uterine Fibroids	48 (41.7%)	Leiomyoma of uterus (Uterine Fibroids)	51 (30.54%)	Leiomyoma (Abnormal uterine bleeding - 33)	50.61% (124)
Ectopic Pregnancy	80 (16%)	Abnormal uterine and vaginal bleeding	21 (18.26%)	Ectopic Pregnancy	49 (29.34%)	Endometritis (Pelvic inflammatory dx – 29)	24.08% (59)
Abnormal uterine and vaginal bleeding	62 (12.4%)	Ectopic Pregnancy	15 (13.04%)	Endometritis	21 (12.57%)	Malignant neoplasm/ cancers of the female reproductive system	8.57% (21)
Threatened abortion	57 (11.4%)	Cervical Cancer	8 (6.96%)	Pelvic Inflammatory disease	15 (8.98%)	Ovarian cyst	5.71% (14)
Incomplete abortion	50 (10%)	Pelvic Inflammatory Disease	7 (6.09%)	Ovarian cyst	13 (7.7.8%)	Uterine prolapse	4.49% (11)
Pelvic Inflammatory Disease	36 (7.2%)	Threatened abortion	7 (6.09%)	Molar pregnancy	7 (4.19%)	Cervical polyps	4.08% (10)
Missed abortion	34 (6.8%)	Ovarian Cysts	5 (4.35%)	Endometrial hyperplasia	4 (2.40%)	Vaginal prolapse	2.04%
Ovarian Tumours	18 (3.6%)	Uterovaginal prolapse	2 (1.74%)	Cervical cancer	4 (2.40%)	Female infertility	0.41%

201	2019		2020		1	202	2
CONDITIONS	NO. OF CASES	CONDITIONS	NO. OF CASES	CONDITIONS	NO. OF CASES	CONDITIONS	NO. OF CASES
Uterovaginal	12 (2.4%)	Ovarian	1	Uterovaginal	2 (1.20%)		
prolapse		tension	(0.87%)	Prolapse			
		Molar	1	Ovarian	1 (0.60%)		
		Pregnancy	(0.87%)	Torsion			

## 10.8 OBS & GYNAE SURGERIES PERFORMED

The hospital since 2018 has seen fluctuations in the total obstetric and gynaecological surgeries performed. In 2022, the total obs. & gynae surgeries conducted went up by 13.7% (from 1703 in 2021 to 1937 in 2022). However, whiles the total number of major obs. & gynae surgeries went by 14.4% (from 1676 in 2021 to 1918 in 2022), the number of minor obs. & gynae surgeries declined by 29.6% (from 27 in 2021 to 19 in 2022).

Further, the total number of obstetric major surgeries performed in 2022 increased by 7.6% (from 1,655 in 2021 to 1,780 in 2022). Caesarean section constituted the highest proportion of obstetric surgeries in 2022 forming 92.5% (1646). Surgeries on ectopic pregnancies increased by 53.44% in 2022 (from 58 in 2021 to 89 in 2022) and it formed 5% of the total obstetric major surgeries. Also, the total gynaecological major surgeries performed in 2022 increased significantly by 87.7% (from 73 in 2021 to 137 in 2022). The number of total abdominal hysterectomy performed went up by 150% (from 20 in 2021 to 50 in 2022). Similarly, the number of myomectomies conducted increased by 43.75% (from 48 in 2021 to 69 in 2022) whiles the number of cervical cerclages conducted increased by 20% (from 5 in 2022 to 6 in 2022). Figure 10.8.1 to figure 10.8.2 and Table 10.8.1 below provides detailed analysis.

Figure 10.8. 1: Trend of total Obs. & Gynae Surgeries Performed (2014 – 2022)

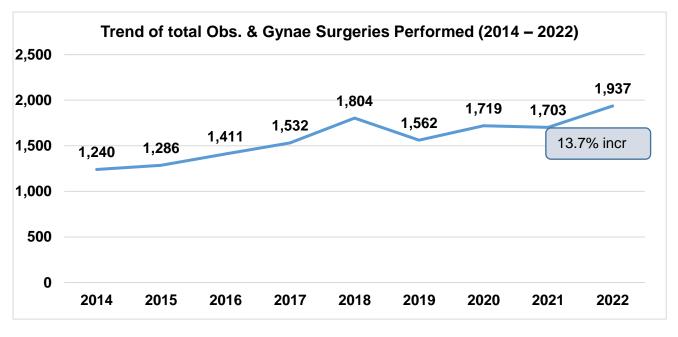


Figure 10.8. 2: Trend of Major and Minor Obs. & Gynae Surgeries Performed

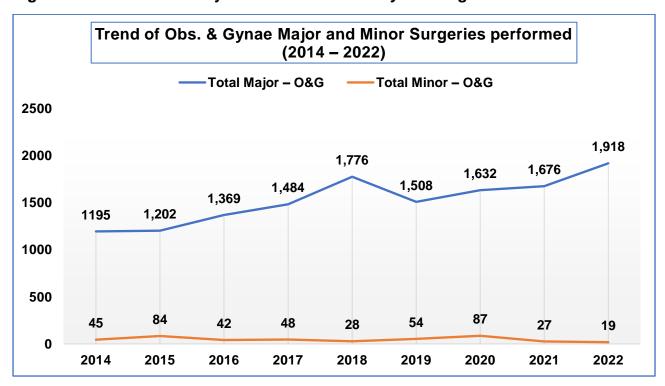


Table 10.8. 1: Major Obs. & Gynae Surgeries Performed in the Hospital

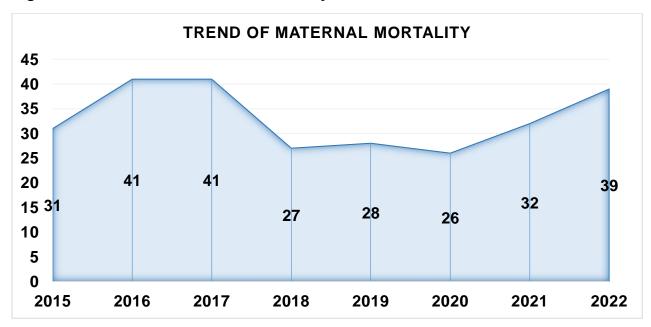
TYPE OF OPERATIONS	2016	2017	2018	2019	2020	2021	2022	Remarks
	MA	JOR OBS	STETRIC I	RELATE	D SUR	GERIE	3	
Caesarean Section	1,014	1,194	1,261	1,264	1,520	1,462	1,646	12.58% incr
Hysterectomy	5	14	6	3	3	7	-	
Sterilization	1	0	23	-	-	0	-	
Laparotomy for,  • Ectopic	44	76	65	72	76	58	89	53.44% incr
<ul><li>Ovarian</li><li>Cyst</li></ul>	2	1	18	-	10	17	17	-
<ul> <li>Exploratory</li> </ul>	10	19	24	30	21	27	28	3.7% incr
Others	12	0	7	-	-	84	-	-
Total	1,088	1,304	1,404	1,369	1,630	1,655	1,780	7.6% incr
		MAJ	OR GYNA	E SUR	GERIES	3		
Myomectomy	119	67	69	66	44	48	69	43.75% incr
Total Abdominal Hysterectomy (TAH)	35	51	50	53	29	20	50	150% incr
Vaginal Hysterectomy	14	11	4	5	6	0	8	Incr
Cervical cerclage	4	3	2	7	5	5	6	20% incr
Fistula repair	-	-	-	1	3	-	4	-

TYPE OF	2016	2017	2018	2019	2020	2021	2022	Remarks
OPERATIONS								
Total	172	132	125	132	87	73	137	87.7% incr

## **10.9 MATERNAL MORTALITY**

The hospital in 2022 recorded an increase of 21.9% in the number of maternal deaths (from 32 in 2021 to 39 in 2022). Similarly, the institutional maternal mortality rate went up in 2022 (from 1,050 in 2021 to 1,186 in 2022). Further, majority of the reported maternal deaths (81.2%) were cases referred to the hospital. Also, 56.4% (22) of the deaths occurred in less than 48 hours of admission whiles 43.6% (17) occurred in 48 hours or more upon admission at the hospital. Details of the analysis is presented in figures 10.9.1 and figure 10.9.2 and table 10.9.1 below provide detailed trend analysis.

Figure 10.9. 1: Trend of Maternal Mortality





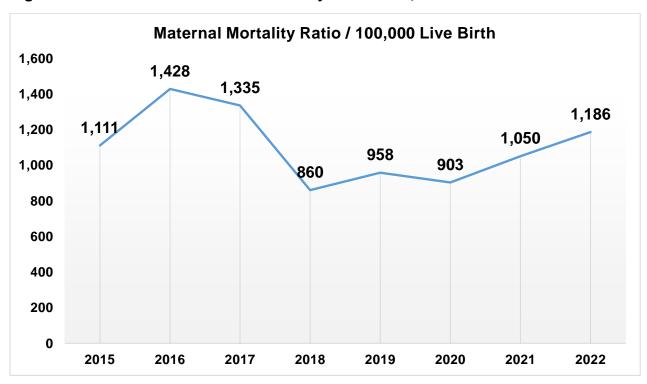


Table 10.9. 1: Trend of Maternal Mortality

INDICAT ORS	2015	2016	2017	2018	2019	2020	2021	2022	REMA RKS	TARG ET	MEASU REMENT
Matern al Deaths	31	41	41	27	28	26	32	39	21.9% incr	-	-
Referre d cases	80.6 % (25)	31	85.4% (35)	88.9% (24)	89.7 % (24)	92.3% (24)	75.0% (24)	82.1% (32)	incr		
CCTH cases	19.4 % (6)	75.6 % (10)	14.6% (6)	11.1% (3)	10.3 % (4)	3.8% (2)	25.0% (8)	17.9% (7)	Decr		
Matern al Mortalit y Ratio Per 100,00 0 Live Births	1,111	1,428	1,335	860	958	903	1,050	1,186	incr	THs = 300	No of maternal deaths / total live births * 100 000
% of matern al mortaliti es audited	100 %	100 %	100%	100%	100 %	100%	100%	100%	100%	100%	

Table 10.9. 2: Duration of Maternal Deaths

INDICATOR	2019	2020	2021	2022	REMARKS						
Time of death											
Deaths in less than 48 hrs. upon Admission (<48 Hours)	58.6%	57.7%	52%	56.4%	Increased						
Deaths in 48hrs/more upon (≥ 48 Hours)	41.4%	42.3%	48.4%	43.6%	Decreased						

#### 10.10 TOP CAUSES OF MATERNAL MORTALITY

The hospital in 2022 recorded sepsis as the leading cause of maternal mortality and it constitutes 30.8% (12) of the total causes of maternal mortality, followed by obstetric haemorrhage 28.2% (11) and hypertensive disorders in pregnancy 23.1% (9). In addition, Embolism and metastatic gall bladder cancer formed 5.1% (2) and 2.56% (1) respectively of the causes of maternal mortality in 2022. Table 10.10.1 below presents a trend of the causes of maternal deaths in the hospital.

Table 10.10. 1: Top Causes of Maternal Mortality

2019		2020		202	21	202	22
Condition	%	Condition	%	Condition	%	Condition	%
Haemorrhage / Severe Anaemia	39.29% (11)	Haemorrhage / Severe Anaemia	11 (46.2%)	Hypertensive diseases in pregnancy (Eclampsia)	13 (40.6%)	Sepsis	12 (30.8%)
Hypertensive Disorders of Pregnancy	32.14% (9)	Hypertensive Disorders of Pregnancy	9 (26.9%)	Sickle Cell	5 (15.6%)	Obstetric Haemorrhage	11(28.2%)
Sepsis	17.86% (5)	Sepsis	5 (11.5%)	Acute Kidney Injury	5 (15.6%)	Hypertensive Disorders in Pregnancy	9(23.1%)
Pulmonary Embolism	7.14% (2)	Pulmonary Embolism	2 (15.4%)	Anaemia in Pregnancy	2 (6.25%)	Embolism	2 (5.1%)
Sudden Cardiac Death (Pm Diagnosis	3.57% (1)	Sudden Cardiac Death (PM Diagnosis)	1	Pneumonia	2 (6.25%)	Metastatic Gall Bladder Cancer	1 (2.56%)

## 10.11 REFERRAL FACILITIES AND THE MATERNAL DEATHS RECORDED

The hospital in 2022 recorded 39 maternal deaths out of which 82.1% (32) were cases from referral facilities. Majority of the maternal deaths were cases from Abrem Agona Health Center. As a strategy to improve on the survival chances of pregnant women, the CCTH continue to provide mentorship training on safe motherhood and lifesaving service (LSS) in Emergency Obstetric and New-born Care (EmONC) to peripheral facilities in Central region. This is to enable them to be able to improve on the management of cases before referring them to CCTH for specialised care. Nonetheless, it is crucial for stakeholders to be committed in their shared responsibilities geared towards improving the survival chances of these pregnant women, especially during emergencies. Table 10.11.1 below provides details of the number of maternal deaths recorded and the referring facility.

Table 10.11. 1: Referral Facilities of The Maternal Deaths

2019		2020		2021		2022	
INSTITUTION	NO	INSTITUTION	NO	INSTITUTION	NO	INSTITUTION	NO
Mercy Women's Clinic – Mankessim	3	St. Luke's Catholic Hospital, Apam	2	Saltpond Municipal Hospital	3	Abrem Agona H/C	3
Winneba Trauma and Specialist Centre	3	Abura Dunkwa Hospital	2	Kissi Health Centre	2	Twifo Praso	2
Cape Coast Metropolitan Hospital	3	Ankaful Leprosarium Hospital	3	Adisadel Hospital	2	Komenda Health Centre	2
Saltpond Municipal Hospital	2	Elmina Health Centre	1	Cape Coast Metro	3	St. Francis Xavier Hospital	2
UCC Hospital	2	UCC	1	St. Francis X'avier	2	Swedru Government Hospital	2
Moree Health centre	2	Mercy Womens Centre	4	Ankaful Psychiatric Hospital	1	TAMDH	2
Ewim Polyclinic	1	Kissi Health Centre	1	Gomoa Fetteh	1	Cape Coast Metro Hospital	1
Elmina Urban Health Center	1	Efutu Health Centre	1	Winneba Trauma	1	Mercy Women's Hospital	1
Atobiase Community Clinic	1	Saltpond Polyclinic	2	Mother &Child Clinic	1	Moree District Hospital	1
St. Luke's Catholic Hospital, Apam	1	Nyame Tease	1	Moree Hospital	1	UCC Hospital	1
St. Francis X'avier	1	Jukwa Health Centre	1	U.C.C Hospital	1	Akatakyiwa CHPS	1
Ankaful	1	Twifo Praso	2	Ankaful General Hospital	1	Tarkwa Municipal Government	1
ССТН	4	Tarkwa Municipal Hospital	1	Abrem Agona	1	Ankaful Leprosy and General Hospital	1
Unknown facilities	3	ССТН	2	Komenda	1	Bisease Polyclinic	1
-				ST. Luke, Apam	1	Amosima CHPS	1
-				Twifo Praso	1	Breman Asikuma	1

2019		2020		2021		2022	
INSTITUTION	NO	INSTITUTION	NO	INSTITUTION	NO	INSTITUTION	NO
-						Elmina	1
						polyclinic	
-						Sanford Clinic	1
TOTAL	24	TOTAL	24	TOTAL	24	CCTH	7
(REFERRALS)		(REFERRALS)		(REFERRALS)			
CCTH cases	4	CCTH cases	2	CCTH cases	8	Total	39
GRAND	28	GRAND	26	GRAND	32		
TOTAL		TOTAL		TOTAL			

## CHAPTER ELEVEN

## **CHILD HEALTH SUB-BMC**

#### 11.1 BACKGROUND

The Child Health Sub-BMC was established on 20<sup>th</sup> July, 2016 and mandated to oversee the management of patients who are aged from zero (0) to sixteen (16) years with surgical, Orthopaedics, Eye, ENT as well as medical conditions. The sub-BMC also has a Special Care Baby Unit (NICU) which serves as a referral Centre for newborns in Central, Western Regions and parts of Ashanti. The Management team of the Sub-BMC is made up of the Head, the DDNS, Business Manager, Accountant, and a pharmacist.

# 11.2 CHILD HEALTH SUB-BMC'S 2022 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES

Table 11.2. 1: Child Health Sub-BMC's 2022 Annual Performance Against CCTH Strategic Objectives

#### 2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

#### **CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY**

#### **HOSPITALWIDE LEVEL**

#### **Actual Performance Trend**

Introduced the following services;

- Osteogenesis Imperfecta Multi-Disciplinary Service (8 Patients Seen).
- Paediatric Endocrine Services (17 Cases Seen)

Neonatal specialist clinic attendance increased by 7.64% from 890 in 2021 to 958 in 2022

Trained a cook to provide blenderised food service

## **CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.**

#### **HOSPITALWIDE LEVEL**

Actual Performance Trend											
Impact	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	2022 Annual	Target	Remark s % Diff.			
<ul><li>i. Number of institutional maternal deaths</li></ul>	41	27	28	26	32	39	CCTH = 50% Decr	21.9% incr			
<ul><li>ii. Institutional infant mortality rate (/1000LB)</li></ul>	65	69	91	89	88	77	THs = 15	decr			
iii. Number of Infant deaths	201	216	272	284	267	252	-	5.62% decr			
iv. Institutional neonatal mortality rate (/1000)	59	63	80	81	78	67	TH = 25	decr			
v. Number of institutional neonatal deaths	180	197	239	233	239	219	CCTH = 5% Decr	8.4% decr			
vi. Under-five mortality rate (/1000LB)	71	77	101	106	95	80	-	decr			
vii. Institutional under-five mortality	219	242	301	307	290	264	-	9.0% decr			

Conducted the following In-service trainings for staff:

- 2 ETAT and neonatal resuscitation training
- Clinical teachings sessions held on the ward averagely twice a week

#### 2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

- 1 customer service training
- 1 IPC training organised

## CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE

Acquired the following set of medical equipment;

- 2 CPAP machines
- 1 ECG machine
- 1 Infusion pump
- 1 Incubator
- 1 Radiant warmer
- 14 pulse oximeters
- 2 Firefly phototherapy machines
- 2 Nebulizer machines

Purchased two (2) telephones

Upgraded one (1) side ward to a VIP ward

Installed 4 donated air conditioners (ACs)

Installed one poly-tank

#### **CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM**

#### 4.1: Governance Related Performance

Organized 4 sub-BMC meetings

Organized2 staff durbars

#### 4.2: Human Resource Related Performance

One (1) medical officer sent for specialist training

One (1) 1 specialist sent for subspecialty/fellowship training

4 nurses in training

- 1 haematology
- 1 neonatal membership
- 1 paediatric membership
- 1 critical care)

6 nurses returned from training

- 2 paediatric members
- 2 neonatal members
- 2 paediatric oncology nurses

#### 4.3: Finance related performance

Established a needy fund to support the children on the ward

#### CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING

#### 5.1 Improve on Research:

Published one (1) research

Title: Feasibility of Establishing and Acceptability of Breastmilk Banks in Ghana: An Interrogative Study Involving Various Stakeholders

Authors: Dr. Nana Ama Frimpomaa Agyapong, Dr. Joyce Ashong, Dr. Jessica Ayensu, Dr. Enerst Teye, Dr. Moses Klevor, Dr. Christiana Nsiah-Asamoah

One research on-going;

 A 5-Year Review of Neonatal Mortality In A Tertiary Facility – Trends an Determinants For Survival. A Retrospective Cohort Study.

## 5.2 Improve on Teaching and Learning:

Clinical rotations by Physician Assistants, Nursing students as well as medical students

#### CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS

Organised a 3-day training in Neonatal Care and Paediatric Emergencies from 18th-20th October at RHD Conference Room

Provided telephone feedback on referred cases.

## 11.3 CHILD HEALTH OPD SERVICES UTILIZATION

CCTH over the last four years has seen mixed performance in the general paediatric OPD attendance and the paediatric specialist OPD attendance. In 2022, the general paediatric clinic attendance declined by 8.5% (from 9,244 in 2021 to 8,461 in 2022)

whiles the total paediatric specialist clinic attendance increased by 11.67% (from 1,783 in 2021 to 1,991 in 2022). The paediatric renal clinic and paediatric cardiology clinic saw a decline of 31.30% and 34.48% respectively in their attendance in 2022 compared to the other paediatric sub-specialty clinics that recorded an increase in their OPD attendance. In addition, the hospital in 2022 introduced two paediatric sub-specialties which were Paediatric Endocrine and Osteogenesis Imperfecta with 17 and 8 cases seen respectively. Detailed trend analysis is provided in Figure 11.3. 1 to Figure 11.3. 3 and Table 11.3. 1 below.

**General Paediatrics Clinic OPD Attendance** 10,000 9,244 8,666 8,461 9,000 8.180 7,810 7,690 7490 8,000 7,000 6,003 8.5% decr 6,000 5,000 4,000 3,000 2,000 1,000 0 2015 2016 2017 2018 2019 2020 2,021 2022

Figure 11.3. 1: Trend of General Paediatrics Clinic OPD Attendance



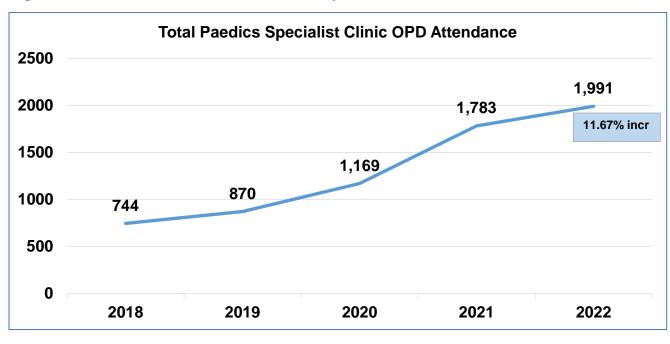


Figure 11.3. 3: Trend of Paediatric OPD Attendance per Specialty

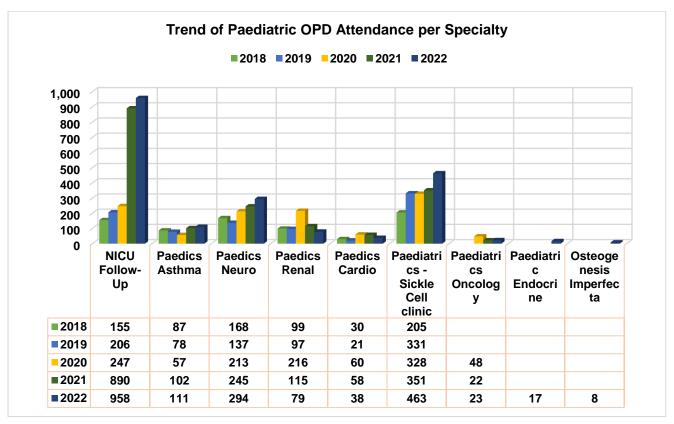


Table 11.3. 1: Child health OPD Clinic Attendance Trend

CLINICS	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS
General Paediatrics Clinic	7,690	7,810	8,180	7490	8,666	6,003	9,244	8,461	8.5% decr
Paediatric Specialist Clinic									
NICU Follow- Up	-	-	-	155	206	247	890	958	7.64% incr
Paedics Asthma	-	-	-	87	78	57	102	111	8.82% incr
Paedics Neuro	-	-	-	168	137	213	245	294	20% incr
Paedics Renal	-	-	-	99	97	216	115	79	31.30% decr
Paedics Cardio	-	-	-	30	21	60	58	38	34.48% decr

CLINICS	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS
Paediatrics - Sickle Cell clinic	-	-	-	205	331	328	351	463	31.91% incr
Paediatrics Oncology	-	-	-	-	-	48	22	23	4.55% incr
Paediatric Endocrine	-	-	-	-	-	-	-	17	Introduced in 2022
Osteogenesis Imperfecta	-	-	-	-	-	-	-	8	
Total Paediatric Specialist Clinic Attendance	-	-	-	744	870	1,169	1,783	1,991	11.67% incr

#### 11.4 CHILD HEALTH ADMISSIONS

In 2022, the number of admissions to the paediatric ward decreased by 3.6% (from 1,968 in 2021 to 1,898 in 2022) compared to NICU which saw an increase of 19.2% (from 903 in 2021 to 1,076 in 2022) in the number of admissions. The bed occupancy rate at the paediatric ward declined in 2022 (from 69% in 2021 to 63.1% in 2022). Similarly, the bed occupancy rate at NICU dropped to 63% from 80.6% in 2021. Also, the average length of stay at the paediatric ward reduced in 2022 (from 5.9 days in 2021 to 5.4 days in 2021) whereas the average length of stay at NICU decreased from 7.8 days in 2021 to 7.3 days in 2022). Further, the hospital recorded a decline in both the death rate at the Paediatric ward (from 5.6% in 2021 to 4.9% in 2022) and death rate at NICU (from to 23.6% in 2021.to 22.2% in 2022). Detailed trend analysis is provided in figure 11.4.1 and tables 11.4.1 to table 11.4.2 below.

Figure 11.4. 1: Trend of Paediatric and Neonatal Admissions

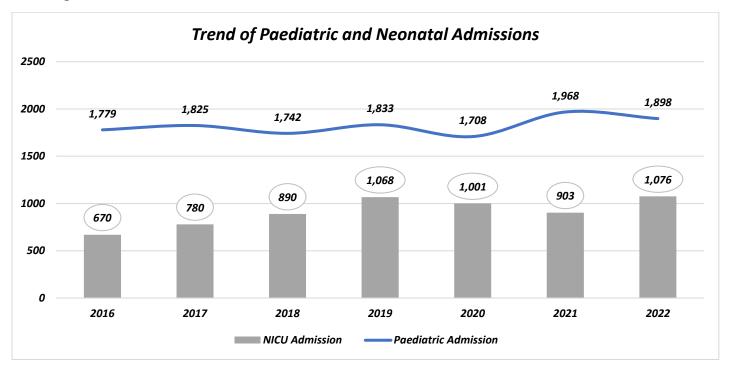


Table 11.4. 1: Trend of Child Health In-patients Performance Analysis – Paediatric Ward

INDICATOR	2016	2017	2018	2019	2020	2021	2022	REMARKS
Admissions	1,779	1,825	1,742	1,833	1,708	1,968	1,898	3.6% decr
Discharges	-	1,839	1,765	1,791	1,512	1,940	1,969	1.5% incr
Average Daily	29	28	27	32	30.4	33	33.7	Incr
Occupancy								
% Bed Occupancy	61.2	59.1	62.7	67.2	63.1	69	63.1	Decr
Average Length of	5.9	5.4	5.3	6.2	6.1	5.9	5.4	Decr
Stay (Days)								
Number of Deaths	106	80	88	119	99	117	101	13.7% decr
Death Rate (%)	5.7	4.1	4.7	6.2	6.1	5.6	4.9%	Decr

Table 11.4. 2: Trend of Child Health In-patients Performance Analysis - NICU Ward

Indicator	201 6	201 7	2018	2019	2020	2021	2022	Remarks	Target	Measur ement
Total Admissio ns	670	780	890	1,068	1,001	903	1,076	19.2% incr	-	-
No. of Neonatal admissio ns due to referrals			232	291	262	131	149	13.7% incr	-	-
Percenta ge of	-	28%	26.1%	27.2%	25.5%	15%	13.8%	Decr	30%	No. of Neonatal admission

Indicator	201 6	201 7	2018	2019	2020	2021	2022	Remarks	Target	Measur ement
neonatal admissio ns due to external referrals										s due to referrals / Total neonatal admission s
Discharg es	-	557	617	802	702	649	751	15.37% incr	-	-
Average Daily	12	13	16	20	18.1	19	18.8	Decr	•	•
% Bed Occupan cy	50.1	53.2	65.5	83.3	75.3	80.6	63.0	Decr	-	-
Average Length of Stay	6.8	6.5	7.2	7.2	7.2	7.8	7.3	Decr		-
Number of Deaths	179	155	176	218	227	201	185	8.0% decr	-	-
Death Rate (%)	26.8	19.8	19.7	20.5	24.2	23.6	22.2	decr	-	-

## 11.5 TOP 10 CAUSES OF CHILD HEALTH ADMISSION

Since 2018, jaundice, sepsis, and asphyxia have consistently been the three most common cause of paediatric hospital admissions at CCTH, accounting for 14.4% (567), 8.9% (348), and 7.7% (304) of all paediatric admissions in 2022, respectively. In addition, 6.2% (245) of all child admissions in 2022 were due to prematurity, which remained in fourth place. The least common reasons for child health admission in 2022—representing 2.7% (108), 2.3% (90), and 2.2% (88) of all admissions—were low birth weight, gastroenteritis & colitis, and sickle cell anaemia. Below in figure 11.5. 1 and table 11.5. 1 is the details of the analysis.

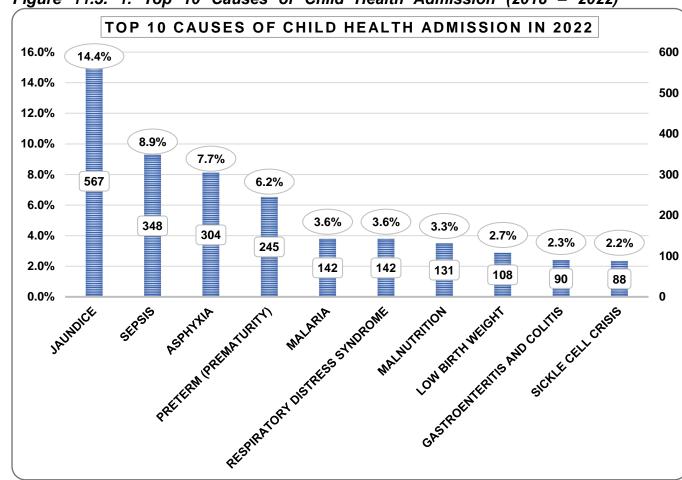


Figure 11.5. 1: Top 10 Causes of Child Health Admission (2018 - 2022)

Table 11.5. 1: Top 10 Causes of Child Admission

2018		2019		2020		2021		202	2
CONDITION	NO.	CONDITION	NO.	CONDITION	NO	CONDITION	NO.	CONDITION	NO.
Jaundice	392	Asphyxia	328	Jaundice	37	Sepsis	414	Jaundice	567
					8				(14.4%)
Pre-Maturity	293	Pre-Maturity	277	Sepsis	35	Jaundice	340	Sepsis	348 (8.9%)
•		_			3			·	,
Neonatal	275	Jaundice	262	Pre-Maturity	30	Asphyxia	273	Asphyxia	304 (7.7%)
Sepsis					2	. ,		. ,	, ,
Bronchopneu	251	Bronchopneu	181	Asphyxia	26	Pre-	254	Prematurity	245 (6.2%)
monia .		monia .		, ,	5	Maturity			, ,
Neonatal	215	Sepsis	159	Malaria	19	Low Birth	137	Malaria	142 (3.6%)
Asphyxia		,			6	Weight			, ,
Malaria	153	Malaria	125	Low birth	16	Malaria	137	Respiratory	142 (3.6%)
				weight	4			distress	, ,
								syndrome	
Anaemia	96	Hernia	62	Pneumonia	12	RDS	119	Malnutrition	131 (3.3%)
					2				, ,
Hernia	64	Malnutrition	59	Malnutrition	90	Broncho	67	Low birth	108 (2.7%)
						pneumonia		weight	, ,
Sickle cell	64	Anaemia	50	Fracture	79	Sickle Cell	67	Gastroenteritis	90 (2.3%)
crisis								& colitis	
Tonsillitis	56	Sickle Cell	41	Sickle cell	75	Anaemia	60	Sickle cell	88 (2.2%)
								anaemia	

## 11.5.1 TOP CAUSES OF NEONATAL ADMISSIONS

Jaundice, sepsis, asphyxia, and prematurity continued to be the top four reasons for neonatal admissions in 2022, accounting for 25.2% (489), 14.7% (285), 13.8% (268), and 10.6% (206) of those admissions, respectively. Syphilis and haemorrhage made up 0.9% (17) of the top ten reasons for neonatal admissions in 2022. Table 11.5.1.1 present details of the analysis

Table 11.5.1. 1: Top Causes of Neonatal Admissions

2021		2022	
CONDITION	NO.	CONDITION	NO.
Jaundice	336 (18.9%)	Jaundice	489 (25.2%)
Sepsis	324 (18.2%)	Sepsis	285 (14.7%)
Asphyxia	269 (15.1%)	Asphyxia	268 (13.8%)
Pre-Maturity	246 (13.8%)	Pre-Maturity	206 (10.6%)
Low Birth Weight	137 (7.7%)	Respiratory distress syndrome	122 (6.3%)
Respiratory distress	117 (6.6%)	Low Birth Weight	85 (4.4%)
syndrome		_	
Meconium aspiration	25 (1.4%)	Transient tachypnoea	50 (2.6%)
Hypoglycaemia	21 (1.2%)	Meconium aspiration	29 (1.5%)
Heart disease unspecified	16 (0.9%)	Haemorrhage	17 (0.9%)
Hydrocephalous	14 (0.8%)	Syphilis	17 (0.9%)

#### 11.5.2 TOP CAUSES OF UNDER FIVE ADMISSIONS

The hospital in 2022 reported jaundice as the primary reason for under-five admissions, accounting for 18% of all under-five admissions and increasing by 67.3% from 2021 (from 339 in 2021 to 567 in 2022). In contrast to 2021, sepsis dropped to second place among the reasons for admissions of children under the age of five (10.8%) in 2022. In terms of the reasons for under-five admissions in 2022, asphyxia (9.7%) and prematurity (7.8%) held the third and fourth spots, respectively. In contrast, gastroenteritis and colitis made up 1.9% and 2.3%, respectively, of the under-five admissions in 2022. Details of the analysis is presented in table 11.5.2.1 below.

Table 11.5.2. 1: Top Causes of Under Five Admissions

2021		2022	
CONDITION	NO.	CONDITION	NO.
Sepsis	395 (14%)	Jaundice	567 (18.0%)
Jaundice	339 (12.0%)	Sepsis	341 (10.8%)
Asphyxia	272 (9.6%)	Asphyxia	304 (9.7%)
Pre-Maturity	254 (9.0%)	Prematurity	245 (7.8%)
Low Birth Weight	137 (4.8%)	Respiratory distress syndrome	141 (4.5%)
Respiratory distress	119 (4.2%)	Low birth weight	108 (3.4%)
syndrome			
Malaria	81 (2.9%)	Malaria	80 (2.5%)
Broncho pneumonia	57 (2.0%)	Malnutrition	78 (2.3%)
Gastroenteritis	45 (1.6%)	Gastroenteritis & colitis	74 (2.3%)
Malnutrition	43 (1.5%)	Broncho pneumonia	59 (1.9%)

## 11.6 CHILD MORTALITIES

Generally, in 2022, the hospital recorded marginal improvement in the child health mortality rate indicators although the hospital was unable to meet the targets set by teaching hospitals in Ghana. The neonatal mortality rate declined from 78 /1000LB to 67/1000LB. Similarly, the institutional infant mortality rate decreased from 88/1000LB in 2021 to 77/1000LB in 2022 whereas the under-five mortality rate dropped to 80/1000LB in 2022 from 95/1000LB in 2021. Further, the neonatal deaths in 2022 declined by 8.4% (from 239 in 2021 to 219 in 2022). The number of infants death reduced by 5.6% (from 267 in 2021 to 252 in 2022) whiles the number of under-five mortality decreased by 9% (from 95 in 2021 to 80 in 2022). Figure 11.6.1 and table 11.6.1 below provides detailed trend analysis.

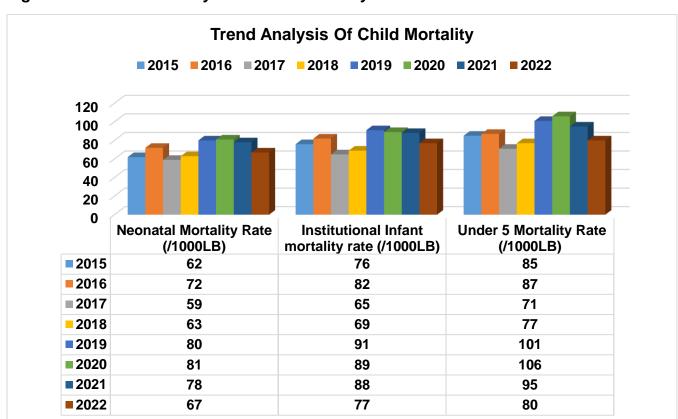


Figure 11.6. 1: Trend Analysis of Child Mortality

Table 11.6. 1: Trend Analysis of Child Mortality

INDICATORS	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS	TARGET
Neonatal	173	207	180	197	239	233	239	219	8.4%	-
Deaths									decr	
Neonatal Mortality Rate (/1000LB)	62	72	59	63	80	81	78	67	decr	THs = 25/1000LB
Infant Deaths	213	236	201	216	272	284	267	252	5.6% decr	-
Institutional Infant	76	82	65	69	91	89	88	77	decr	THs = 15/1000LB

INDICATORS	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS	TARGET
mortality rate										
(/1000LB)										
Infants	1,172	1,352	1,442	1,697	1660	1,357	1,734	1,975	13.9%	-
Admissions-									incr	
Institutional									11101	
Number Of <	237	250	219	242	301	307	290	264	9.0%	-
5 Deaths									decr	
Under 5	85	87	71	77	101	106	95	80	decr	-
Mortality Rate (/1000 LB)										

## 11.6.1 TOP TEN CAUSES OF CHILD MORTALITY

The hospital in 2022 recorded respiratory distress syndrome as the leading cause of child mortality and it constituted 22.45% (64) of the total child mortality in spite of a 8.6% drop in the total number of deaths compared to 2021 (from 70 in 2021 to 64 in 2022). In the same light, asphyxia (15%) and sepsis (11.5%) saw a decline in their number but remained at the 2<sup>nd</sup> and 3<sup>rd</sup> rank in 2022. On the other hand, aspiration pneumonia and pulmonary oedema were the least cause of child mortality in 2022 and they formed 1% (3) each among the top ten causes of child mortality. Details presented in figure 11.6.1.1 and table 11.6.1.1 below.

Figure 11.6.1. 1: Top Ten Causes of Child Mortality In 2022

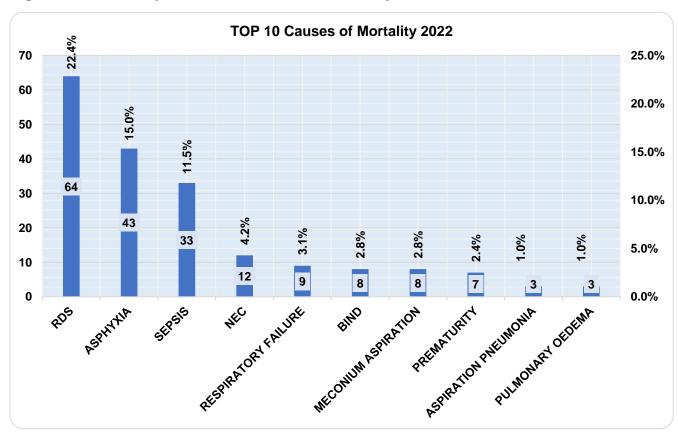


Table 11.6.1. 1: Top Ten Causes of Child Mortality

2021		2022	
CONDITION	NO. (%)	CONDITION	NO. (%)
Respiratory distress syndrome	70 (22.0%)	Respiratory distress syndrome	64 (22.45%)
Asphyxia	60 (18.9%)	Asphyxia	43 (15.0%)
Sepsis	41 (12.9%)	Sepsis	33 (11.5%)
BIND	22 (6.9%)	NEC	12 (4.2%)
Respiratory Failure	17 (5.3%)	Respiratory Failure	9 (3.1%)
Septic shock	14 (4.4\$)	BIND	8 (2.8%)
Aspiration pneumonia	7 (2.2%)	Meconium aspiration	8 (2.8%)
Bronchopneumonia	5 (1.6%)	Prematurity	7 (2.4%)
Congenital heart disease	5 (1.6%)	Aspiration pneumonia	3 (1.0%)
Anaemia	4 (1.3%)	Pulmonary oedema	3 (1.0%)

## 11.6.2 TOP TEN CAUSES OF NEONATAL MORTALITY

In 2022, respiratory distress syndrome accounted for 28.8% (63) of all neonatal deaths, making it the leading cause of neonatal mortality. Asphyxia (19.2%) and sepsis (11.4%) and NEC (5.5%) remained at the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> rank respectively in 2022. Also, cardiogenic shock and jaundice were the least common of the top ten causes of neonatal mortality in 2022, accounting for 1.4% (3) of neonatal mortalities each as shown in figure 11.6.2.1 and table 11.6.2.1 below

Figure 11.6.2. 1: Top Ten Causes of Neonatal Mortality in 2022

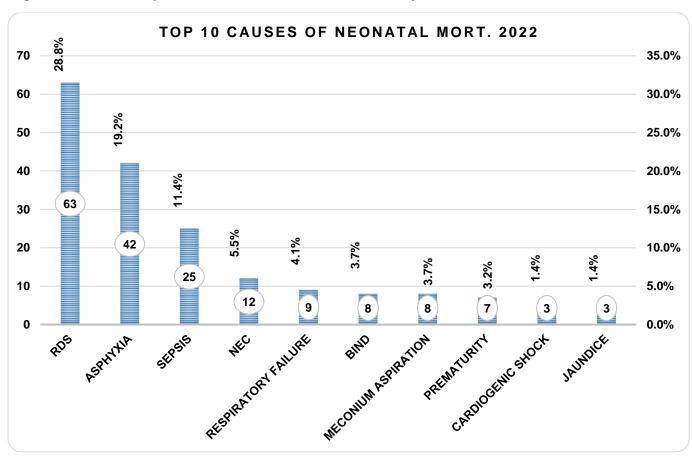


Table 11.6.2. 1: Top Ten Causes of Neonatal Mortality (2012 – 2022)

2021		2022	
CONDITION	NO. (%)	CONDITION	NO. (%)
Respiratory distress syndrome	65 (27.2%)	Respiratory distress syndrome	63 (28.8%)
Asphyxia	57 (23.8%)	Asphyxia	42 (19.2%)
Sepsis	34 (14.2%)	Sepsis	25 (11.4%)
BIND	22 (9.2%)	NEC	12 (5.5%)
Respiratory Failure	14 (5.9%)	Respiratory Failure	9 (4.1%)
Aspiration pneumonia	6 (2.5%)	BIND	8 (3.7%)
Septic shock	6 (2.5%)	Meconium aspiration	8 (3.7%)
Anaemia	3 (1.3%)	Prematurity	7 (3.2%)
Necrotizing enterocolitis	3 (1.3%)	Cardiogenic shock	3 (1.4%)
Congenital heart disease	2 (0.8%)	Jaundice	3 (1.4%)

#### 11.6.2.1 NEONATAL DEATH'S AUDITED

The important step in determining the cause of deaths and formulating prevention strategies is death auditing. In light of this, the hospital implemented measures to guarantee that all deaths, particularly neonatal deaths, are audited. For that matter, all neonatal deaths reported in 2022 were audited and recommendations implemented successfully. However, the hospital must keep carrying out focused interventions to lower the infant mortality rate in the hospital. Table 11.7.1 provides the percentage of deaths audited from 2018 to 2021 below.

Table 11.6.2.1. 1: Trend of neonatal deaths audited from 2018 to 2021

INDICATORS	2018	2019	2020	2021	2022	REMARKS
percentage to neonatal deaths	95%	99.05%	88%	100%	100%	Sustained
audited						

## 11.6.3 CHILDREN UNDER FIVE MORTALITIES

Over the past nine years, there have been fluctuations in the hospital's under-five mortality rate. in 2022, the under-five mortality rate reduced from 95/1000LB in 2021 to 80/1000LB in 2022 whilst the total number of under-five deaths decreased by 9.0% (from 290 in 2021 to 264 in 2022). Additional measures need to be put in place to sustain the gains and to also improve the outcome further. Figure 11.6.3.1 below provides detailed trend analysis.

Trend of U5 Mortality Rates and Number of U5 Mortality Under 5 Mortality Rate (/1000LB) Number of U5 mortality Under 5 Mortality Rate (/1000LB) Number of U5 mortality 

Figure 11.6.3. 1: Rate of Under 5 Year Mortality /1000LB

## 11.6.3.1 TOP TEN CAUSES OF UNDER 5 MORTALITIES

In 2022, respiratory distress syndrome (23.9% of cases; 63), asphyxia (16.3% of cases; 43), and sepsis (12.1% of cases; 32) were the three top causes of under-five mortality. Additionally, respiratory failure and BIND accounted for 3.4% (9 cases) and 3.0% (8 cases) of the overall under-five mortality, respectively. Aspiration pneumonia, on the other hand, accounted for 0.4% (1) of under-five mortality in 2022, making it the least common cause. Figures 11.6.3.1.1 and table 11.6.3.1.1 below provides trend analysis below.

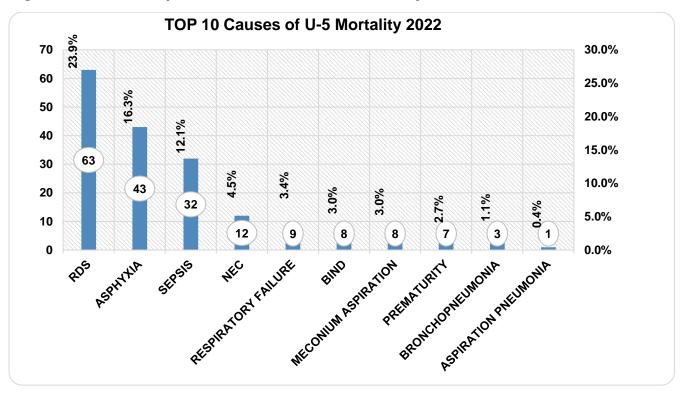


Figure 11.6.3.1. 1: Top Ten Causes of Under 5 Mortality in 2022

Table 11.6.3.1. 1: Comparative Analysis of Top Ten Causes of Under 5 Mortality

20	19	202	0	202	21	202	2
CONDITION	NO. (%)	CONDITION	NO. (%)	CONDITION	NO. (%)	CONDITION	NO. (%)
Asphyxia	78 (22.4%)	Pre-maturity	84 (27%)	RDS	70 (24.1%)	Respiratory distress syndrome	63 (23.9%)
Pre-maturity	70 (20.1%)	Asphyxia	55 (18%)	Asphyxia	60 (20.7%)	Asphyxia	43 (16.3%)
Sepsis	32 (9.2%)	Sepsis	49 (16%)	Sepsis	38 (13.1%)	Sepsis	32 (12.1%)
Neonatal Jaundice	30 (8.6%)	HIE	20 (7%)	BIND	22 (7.6%)	NEC	12 (4.5%)
Respiratory Failure	25 (7.2%)	Respiratory Distress	19 (6%)	Respiratory Failure	17 (5.9%)	Respiratory Failure	9 (3.4%)
Bronchopne umonia	23 (6.6%)	Jaundice	15 (5%)	Septic Shock	13 (4.5%)	BIND	8 (3.0%)
Encephalop athy	13 (3.7%)	Congenital Heart Disease	8 (3%)	Aspiration Pneumonia	7 (2.4%)	Meconium aspiration	8 (3.0%)
Respiratory Distress	12 (3.4%)	Kernicterus	8 (3%)	Broncho Pneumonia	5 (1.7%)	Pre-maturity	7 (2.75)
Malnutrition	11 (3.2%)	Aspiration	6 (2%)	Congenital Heart Disease	5 (1.7%)	Broncho Pneumonia	3 (1.1%)
Intestinal Obstruction	11 (3.2%)	Malaria	6 (2%)			Aspiration Pneumonia	1 (0.4%)

### **CHAPTER TWELVE**

## **INTERNAL MEDICINE SUB-BMC**

#### 12.1 INTRODUCTION

The Internal Medicine Sub BMC of Cape Coast Teaching hospital is a medical specialty dealing with the prevention, diagnosis, and treatment of medical cases. The department has a total bed complement of 97. Male Medical ward, Female Medical Ward, Intensive Care Unit, Dialysis, Executive suit are the areas under the Sub-BMC. The Sub-BMC is managed by five (5) management team, consisting of the head of the Sub-BMC, DDNS, a Business Manager, a Pharmacist and an Accountant.

# 12.2 INTERNAL MEDICINE SUB-BMC'S PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES

# Table 12.2. 1: Internal Medicine Sub-BMC's 2022 Annual Performance Against CCTH Strategic Objectives

#### 2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

#### **CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY**

Range of medical services maintained through continued work of oncologists, Cardiologist, Gastroenterologist and Dermatologist services whilst adolescent health and endocrinology were merged

Improved in-patient's services

 CPAP services available for patients and additional respiratory support services available for patients

Four (4) clients prepared for kidney transplantation

Two (2) clients received kidney transplant

Fistula surgeries were performed for 7 renal patients

#### **CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.**

Organised training for staff on infection prevention control

Ensured adequate supply of PPEs provided on the ward and in clinics

Celebrated world Kidney Day

Public screened for kidney disease and awareness creation of kidney disease

Celebrated world Hepatitis Dav

Public screened for kidney disease and awareness creation of kidney disease

# CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE

Painted the High Dependency Unit and the Female Medical ward Installed four (4) new air conditioners,

- 2 at side wards and
- 2 at Executive suite wards

Repainted the dialysis Unit and the Executive suite

Painted the High Dependency Unit and Female Medical ward

Received the following donations from philanthropists

- A polytank
- Office desk for the Executive suite ward Doctors' consulting room

#### **CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM**

#### 4.1: Governance Related Performance

8 Sub BMC Meetings held

• More effective governance & update of financial reports

#### 2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

80% of staff attending each clinical meeting

Improved knowledge and competence of staff

#### 4.2: Human Resource Related Performance

#### 4.3: Finance related performance

Authentication system of billing before payment

Periodic financial report made available to HOD and Sub-BMC Staff

Notice posted designated at vantage points insisting patients to demand receipt upon payment.

Refresher training on billing procedure organised for Sub-BMC's Billing Clerks

# CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING

5.1 Improve on Research:

#### 5.2 Improve on Teaching and Learning:

Residency training continued with the start of one new resident One specialist physician graduated

CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS

12.3 INTERNAL MEDICINE OPD SERVICES UTILISATION

The hospital over the past years recorded fluctuating performance under Internal Medicine. The overall total Internal Medicine specialist OPD attendance dropped by 7.4% (from 40,347 in 2021 to 37,359 in 2022). Despite the general decline, some of the specialties recorded significant increase in the clinic attendance. For example, the Oncology clinic attendance went up by 9.3% (from183 in 2021 to 200 in 2022) whilst Asthma, Sickle cell, HIV and Adolescent clinics attendance went up by 10.38% (from 626 in 2021 to 691 in 2022), 11.9% (from 269 in 2021 to 301 in 2022), 9.9% (from 4057 in 2021 to 4457 in 2022) and 58.8 (from 102 in 2021 to 162 in 2022) respectively. Some clinics also recorded significant decline in attendance. Significant among them is the General medical clinic attendance which dropped by 10.39% (from 19,046 in 2021 to 17,068 in 2022). The Dermatology clinic also recorded a significant decline in the attendance by 59.97% (from 462 in 2021 to 185 in 2022). Detailed trend analysis is provided in figure 12.3.1 and table 12.3.1 below.

**Internal Medicine Total OPD Attendance** 50,000 44,321 42,792 45,000 40,347 39,416 37,359 40,000 36,165 34,363 35,000 30,205 7.4% 30,000 25,000 20,000 15,000 10,000

Figure 12.3. 1: Trend Analysis of Total OPD Attendance 2014 to 2022.

Table 12.3. 1: Internal Medicine OPD Services from 2014 to 2022.

2017

2018

2019

2020

2021

2022

2016

5,000

0

2014

2015

CLINICS	2014	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS
General Medical	18,239	16,617	16,232	21,060	17,184	18,142	17,385	19,046	17,068	10.39%
										decr
Dermatology	324	357	330	359	315	45	353	462	185	59.97%
										decr
Asthma	357	297	511	787	1,036	1,005	819	626	691	10.38% incr
Sickle Cell	179	235	454	650	567	423	595	269	301	11.90% incr
Gastroenterology	315	359	560	690	620	749	662	866	663	23.44 decr
Cardiology	506	516	1,590	2,153	2,104	2,583	2,558	2718	2,438	10.30%
										decr
Diabetes	9,135	9,201	9,309	9,966	10,636	11,304	8,965	9,356	8,590	8.19% decr
Hepatitis B	1,114	794	940	1,059	1179	1,212	850	775	748	3.48% decr
TB CLINIC	36	35	42	39	131	361	292	271	187	31.0% decr
					(42 -	(31				
					CCTH	CCTH				
					Clients)	Clients)				
HIV CLINIC	-	5,895	5,377	6,068	-	4,913	5,337	4,057	4,457	9.9% incr
Adolescent Clinic	-	57	126	218	171	178	126	102	162	58.8% incr
Endocrinology	-	-	82	125	111	106	97	184	136	26.09%
										decr
Haematology	-	-	223	298	431	437	396	427	366	14.29%
										decr
Renal Clinic	-	-	389	849	888	1,334	919	1,005	1167	16.12%
										decr
Oncology Clinic	-	-	-	-	-	-	62	183	200	9.3% incr
Total	30,205	34,363	36,165	44,321	35,373	42,792	39,416	40,347	37,359	7.4% decr
Attendance										

#### 12.4 INTERNAL MEDICINE IN-PATIENT PERFORMANCE

The Hospital recorded an increment in the total number of admissions at the Internal Medicine sub-BMC by 10.2% (from 1,752 in 2021 to 1,931 in 2022). Further, the total

admission at the male and female medical wards went up by 14.3% and 11% respectively. However, the executive ward recorded a significant decline of 33.3% in its admissions in the year under review (from 90 in 2021 to 60). In addition, the highest average length of stay of 7.1 was recorded at the male medical ward whilst the least of 4.7 was recorded at the executive suite in 2022. Also, the total number of deaths decline significantly by 22.4% (from 321 in 2021 to 249 in 2022). In the same light, the percentage bed occupancy at the Male Medical Ward, Female Medical Ward as well as the executive suite in 2022 were 50.2, 40 and 55.6 respectively. Detailed trend analysis is illustrated in figure 12.4.1 to figure 12.4.2 and table 12.4.1 to table 12.4.4 below.

Trend of Total In-Patient Service Utilization at Internal Medicine **2016 2017 2018 2019 2020 2021 2022** 2,500 2,000 1,500 1,000 500 0 Admissions Discharge Deaths **2016** 1,723 1,324 339 **2017** 364 2,122 1,592 **2018** 1,983 1,629 359 1,995 1,594 379 **2019 2020** 2,073 1,005 488 **2021** 1,752 1,425 321 **2022** 1,931 1,686 249

Figure 12.4. 1: Trend of Total In-Patient Service Utilization at Internal Medicine

Table 12.4. 1: Trend of Total In-Patient Service Utilization at Internal Medicine Sub-BMC

INDICATOR	2016	2017	2018	2019	2020	2021	2022	REMARKS
Admissions	1,723	2,122	1,983	1,995	2,073	1,752	1,931	10.2% incr
Discharge	1,324	1,592	1,629	1,594	1,005	1,425	1,686	18.3% incr
Deaths	339	364	359	379	488	321	249	22.4% decr

Figure 12.4. 2: Admissions by Wards at the Internal Medicine Sub-BMC

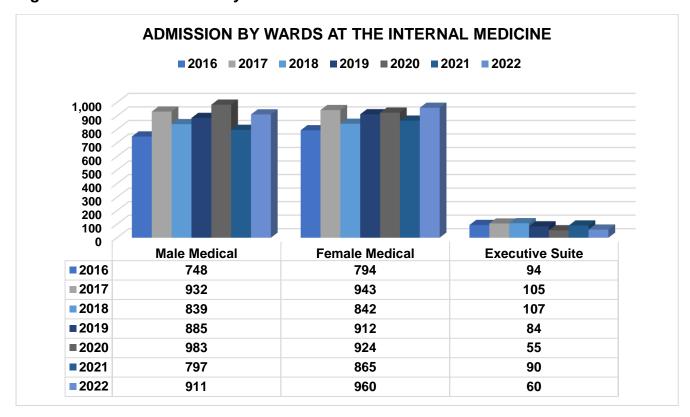


Table 12.4. 2: In-Patient Utilization at the Internal Medicine's per Ward

INDICATOR	YEAR		WARD	
		Male Medical	Female Medical	<b>Executive Suite</b>
Admissions	2016	748	794	94
	2017	932	943	105
	2018	839	842	107
	2019	885	912	84
	2020	983	924	55
	2021	797	865	90
	2022	911	960	60
Discharges	2016	640	684	87
	2017	773	828	101
	2018	699	737	99
	2019	733	772	83
	2020	211	722	62
	2021	626	709	90
	2022	771	845	70
Average Length of Stay	2016	8.0	7.2	10.5
	2017	5.8	6.2	6.1
	2018	7.0	6.1	6.9
	2019	6.5	6.5	10.3
	2020	6.2	6.6	8.7
	2021	6.6	6.4	0.9
	2022	7.1	6.4	4.7

INDICATOR	YEAR		WARD	
		Male Medical	Female Medical	<b>Executive Suite</b>
Average Daily Bed	2016	17	16	2
Occupancy	2017	15	16	2
	2018	16	14	2
	2019	16	16	2
	2020	17.1	17.2	1.7
	2021	15	15	2
	2022	17.8	16.8	0.9
% Bed Occupancy	2016	39.2	37.2	20.5
	2017	34.3	37.5	57.0
	2018	36.9	33.1	64.4
	2019	36.3	37.9	79.8
	2020	50.2	40	55.6
	2021	34.1	35.6	70.8
	2022	50.2	40	55.6

#### 12.4.1 TOP TEN CAUSES OF ADMISSION AT INTERNAL MEDICINE.

Non-communicable diseases remain the leading cause of admission at the Internal Medicine sub-BMC. In the year under review, Pneumonia conditions went up by 78.8% (from 170 in 2021 to 304 in 2022) and continue to rank as the number one among the ten common conditions seen at the internal medicine department, followed by hypertension (240) cases and Diabetes Mellitus (234). Although Kidney diseases and Stroke ranked 4<sup>th</sup> and 5<sup>th</sup> positions in 2022, the number of admissions due to kidney diseases and Stroke went up by 162% (from 82 in 2021 to 215 in 2022) and 6.7% (from 164 in 2021 to 175 in 2022) respectively. However, Gastritis was the least among the ten top causes of admissions at the Internal Medicine department accounting for 86 of the total admission. Detailed analysis is provided in table 12.4.1.1 and figure 12.4.1.1 below.

Figure 12.4.1. 1: Trend of Top Ten Causes of Admission at The Internal Medicine

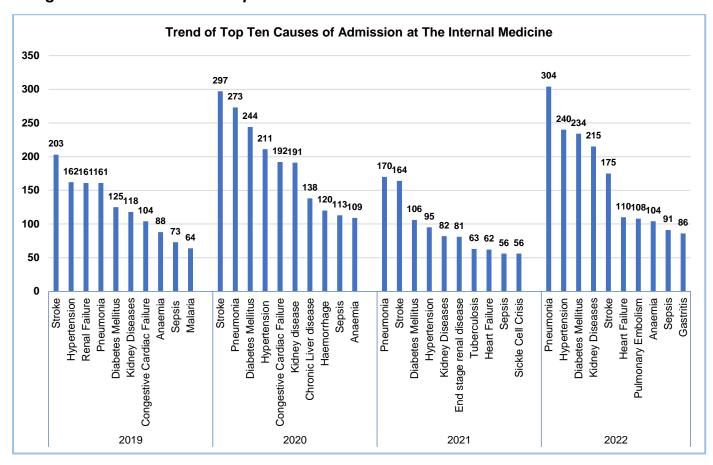


Table 12.4.1. 1: Top Ten Causes of Admission at Internal Medicine

201	9	2020	0	202	1	202	2
CONDITION	NUMBER	CONDITION	NUMBER	CONDITION	NUMBER	CONDITION	NUMBER
Stroke	203	Stroke	297	Pneumonia	170	Pneumonia	304
Hypertension	162	Pneumonia	273	Stroke	164	Hypertension	240
Renal Failure	161	Diabetes	244	Diabetes Mellitus	106	Diabetes Mellitus	234
Pneumonia	161	Hypertension	211	Hypertension	95	Kidney Diseases	215
Diabetes Mellitus	125	Congestive Cardiac Failure	192	Kidney Diseases	82	Stroke	175
Kidney Diseases	118	Kidney disease	191	End stage renal disease	81	Heart Failure	110
Congestive Cardiac Failure	104	Chronic Liver disease	138	Tuberculosis	63	Pulmonary Embolism	108
Anaemia	88	Haemorrhage	120	Heart Failure	62	Anaemia	104
Sepsis	73	Sepsis	113	Sepsis	56	Sepsis	91
Malaria	64	Anaemia	109	Sickle Cell Crisis	56	Gastritis	86

### 12.4.2 MORTALITY TREND AT INTERNAL MEDICINE SUB-BMC

The Hospital continue to record significant drop in the number of deaths at the internal medicine department. In 2022, the total number of deaths decline by 22.4% (from 321 in 2021 to 249 in 2022). The male medical ward recorded the highest death rate of 15% in 2022. However, the number of deaths at the Male Medical and Female Medical Wards and Executive Suite all declined significantly by 17.6% (from 165 in 2021 to 136 in 2022), 26.3% (from 152 in 2021 to 112 in 2022) and 75% (from 4 in 2021 to 1 in 2022) respectively. Figure 12.4.2.1 to figure 12.4.2.2 and table 12.4.2.1 provides detailed trend analysis below.

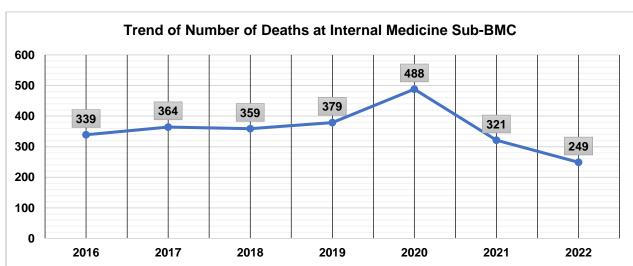


Figure 12.4.2. 1: Trend of Total Deaths at Internal Medicine Sub-BMC



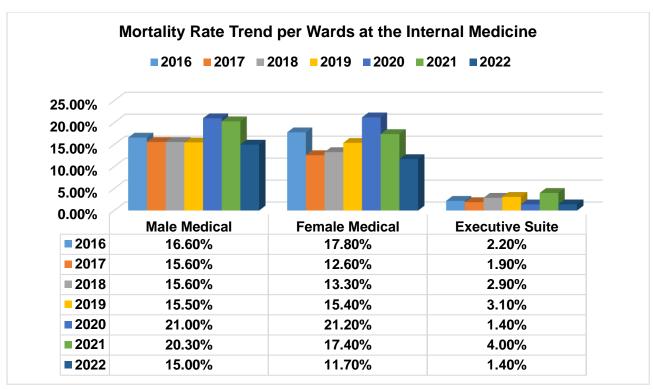


Table 12.4.2. 1: Mortality Trend Per Ward at Internal Medicine Sub-BMC

WARD	2017	2018	2019	2020	2021	2022	Remarks
Male Medical	148	134	140	211	165	136	17.6% decr
Female Medical	123	116	144	202	152	112	26.3% decr
Executive Suite	2	3	3	1	4	1	75% decr
Total	273	253	287	414	321	249	22.4%
							decr

Table 12.4.2. 2: Mortality Rate Trend Per Ward at Internal Medicine Sub-BMC

WARD	2017	2018	2019	2020	2021	2022	Remarks
Male Medical	15.6%	15.6%	15.5%	21.0%	20.3%	15.0%	Decr
Female	12.6%	13.8%	15.4%	21.2%	17.4%	11.7%	Decr
Medical							
Executive	1.9%	2.6%	3.1%	1.4%	4.0%	1.4%	Decr
Suite							

#### 12.4.3 TOP TEN CAUSES OF DEATH AT INTERNAL MEDICINE

In the year under review, Sepsis (51), kidney disease (34) and CVA (30) were the leading cause of deaths at the Internal Medicine department whiles HIV and Pulmonary Embolism were the least among the common ten causes of deaths at the department accounting for 5 and 4 deaths respectively. Figure 12.4.3.1 and table 12.4.3.1 provides details of the analysis.

Figure 12.4.3. 1: Top Ten Causes of Death at The Internal Medicine

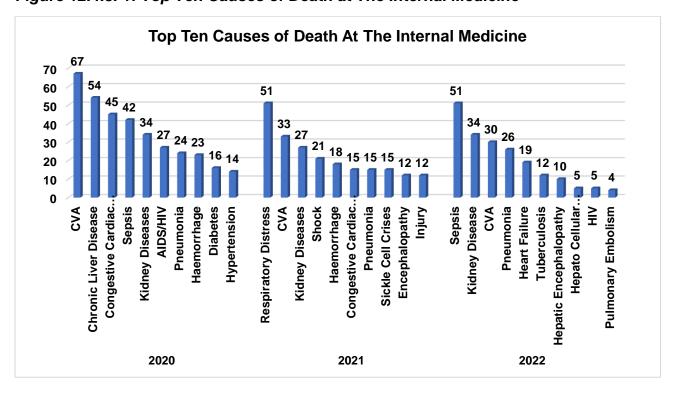


Table 12.4.3. 1: Top Ten Causes of Death at The Internal Medicine

2020		2021		2022	
CONDITION	No.	CONDITION	No.	CONDITIONS	No.
CVA	67	Respiratory Distress	51	Sepsis	51
Chronic Liver Disease	54	CVA	33	Kidney Disease	34
Congestive Cardiac Failure	45	Kidney Diseases	27	CVA	30
Sepsis	42	Shock	21	Pneumonia	26
Kidney Diseases	34	Haemorrhage	18	Heart Failure	19
AIDS/HIV	27	Congestive Cardiac Failure	15	Tuberculosis	12
Pneumonia	24	Pneumonia	15	Hepatic Encephalopathy	10
Haemorrhage	23	Sickle Cell Crises	15	Hepato Cellular Carcinoma	5
Diabetes	16	Encephalopathy	12	HIV	5
Hypertension	14	Injury	12	Pulmonary Embolism	4

### CHAPTER THIRTEEN

## CRITICAL CARE AND ANAESTHESIA SUB-BMC

#### **13.1 INTRODUCTION**

The Critical Care and Anaesthesia sub-BMC of Cape Coast Teaching hospital was established on 23rd of September 2020 and was previously managed indirectly by surgical sub-BMC as a recovery wards. The Sub-BMC is mandated to provide quality specialist service in critical care and anaesthesia, train undergraduate medical students and postgraduate residents in anaesthesia and critical care and to conduct research. The critical care and anaesthesia sub-BMC consist of medical (ICU) and theatre recoveries (surgical suite & delivery suite recoveries). The sub-BMC has a bed capacity of 15 and being managed by five (5) management team, consisting of the head of the Sub-BMC, DDNS, a Business Manager, a Pharmacist and an Accountant.

### Scope of the SUB-BMC includes:

- Critical care services
- Anaesthesia
- Theatre recoveries
- NICU/PICU- assistance
- Specialist clinics

# 13.2 CRITICAL CARE AND ANAESTHESIA SUB-BMC'S PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES

# Table 13.2.1: Critical Care and Anaesthesia Sub-BMC's 2022 Annual Performance Against CCTH Strategic Objectives

#### 2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

#### **CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY**

Consultation was held with O&G team to work on a proposal for the establishment of HDU

Three (3) CCNS and six (6) CRA's completed their trainings and joined the Sub-BMC

Two (2) doctors and four (4) nurses gained admission for training in Anaesthesiology and Critical Care respectively

#### CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.

A Training in customer care were organised

A mortality and morbidity audit team were formed with 50% audits done

All emergency drug trollies in the ICU, D/S Recovery and Theatre Recovery have been fully stocked

ICU beds labelled and directional signs pasted

Emergency point identified and labelled

# CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE

One (1) mobile x-ray accessible to the ICU, one (1) invasive monitor, ten (10) laryngoscopes, eight (8) infusion pumps and four (4) perfusors were purchased

Tiled the theatre Recovery room

Acquired two (2) filing cabinets for Anaesthesia office in Surgical Suite and one (1) filing cabinet, curtains and two(2) water heaters, renovation of the ICU

## **CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM**

#### 4.1: Governance Related Performance

Eight (8) management meetings were conducted

Five (5) expanded management meetings were conducted

One (1) staff durbar was organised

#### 4.2: Human Resource Related Performance

#### 2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

100% nurses and staff appraised

Two (2) CRA's were appointed as in-charges for Anaesthetists

#### 4.3: Finance related performance

#### CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING

#### 5.1 Improve on Research:

A research team was formed

Received ethical clearance and collected data on;

- An Investigation on Women's Labour Pain Experiences and Perception of Epidural Analgesia
- Nutrition in Critically ill Patients

#### 5.2 Improve on Teaching and Learning:

Ten (10) departmental meetings were organised

Three (3) trainings were organized on the following topics:

- Basic Life support
- Pre-Operative Preparations of patients

Customer care satisfaction

#### CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS

#### 13.3 ANAESTHESIA OPD SERVICES UTILISATION

The hospital over the past five years recorded fluctuating performance in Anaesthesia OPD attendance. The anaesthesia service utilization is largely dependent on the surgical cases from other specialties. The service utilization in the hospital declined significantly by 24.7% in 2022 (from 1042 in 2021 to 784 in 2022), due to responding reduction in the number of surgeries done in the hospital for 2022. Detailed trend analysis is provided in figure 13.3.1 and table 13.3.1 below.

Figure 13.3. 1: Anaesthesia OPD Service Utilisation

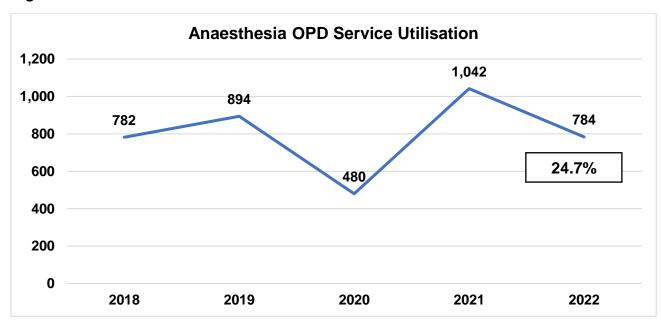


Table 13.3. 1: Anaesthesia OPD Service Utilisation

Clinic	2018	2019	2020	2021	2022	Remarks
Anaesthesia Clinic	782	894	480	1,042	784	24.7% decr

#### 13.4 CRITICAL CARE AND ANAESTHESIA IN-PATIENT PERFORMANCE

The survival chances of patients in critical state requires specialist care, medications and advanced medical equipment to survive. In view of that, Critical care services is very crucial in every tertiary health institution. The number of patients admitted to the intensive care unit has declined over the past year, however the number admitted to the intensive care unit went up by 7.6% in 2022 (from 79 in 2021 to 85 in 2022).

The average length of stay at the Intensive care unit increased from 6.3 in 2021 to 10.2 in 2022. Also, the average daily occupancy rate went up in the year under review (from 2.0 in 2021 to 2.2 in 2022). Also, the ICU recorded a steady decline in total number of deaths between 2018 to 2021. However, in 2022, the total death increased by 3.2% (from 63 in 2021 to 65 in 2022). Similarly, the death rate went up to 81.3% compared to the previous year of 47.4%. Detailed trend analysis provided in figure 13.4.1 to figure 13.4.3 and table 13.4.1 below.

Figure 13.4. 1: Trend of Admission at the Intensive Care Unit (ICU)

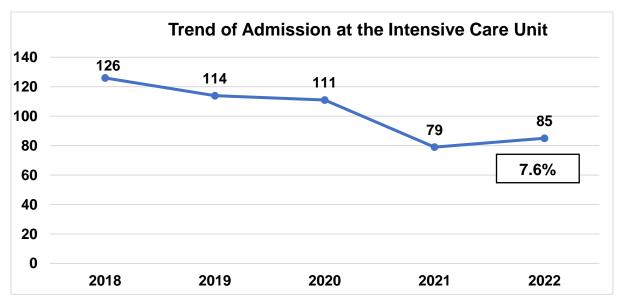


Figure 13.4. 2: Trend of In-Patient Service Utilization at Intensive Care Unit

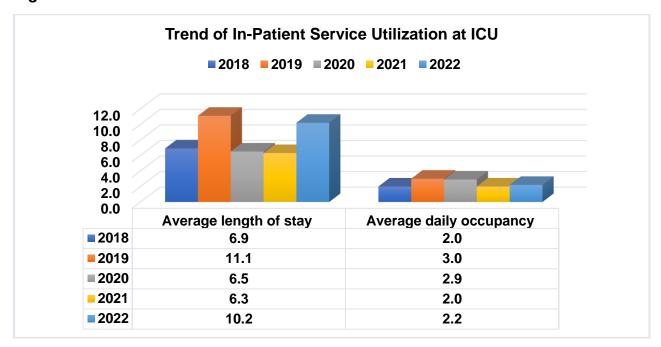


Figure 13.4. 3: Trend Analysis of ICU Death Rate

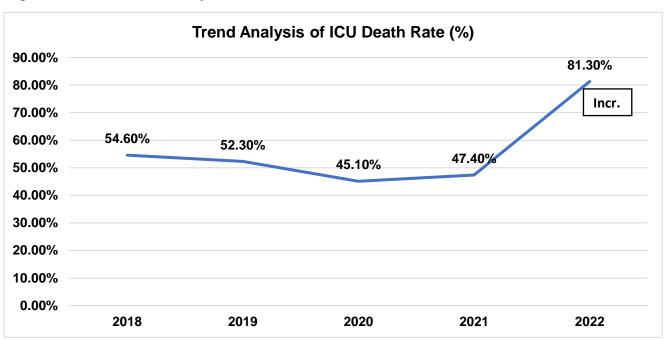


Table 13.4. 1: Critical Care Unit (ICU) In-patient Service Utilization

KPI	2018	2019	2020	2021	2022	REMARKS
Admission	126	114	111	79	85	7.6% incr
Discharge	9	6	10	12	15	25% incr
Average length of stay	6.9	11.1	6.5	6.3	10.2	Incr

KPI	2018	2019	2020	2021	2022	REMARKS
Average daily	2	3	2.9	2.0	2.2	Incr
occupancy						
% Bed occupancy	36.2%	49.5%	58.4%	38.0%	58.4%	Incr
Deaths	106	92	74	63	65	3.2% incr
Death rate	54.6%	52.3%	45.1%	47.4%	81.3%	Incr

## **CHAPTER FOURTEEN**

## **SURGICAL SUB-BMC**

#### 14.1 BACKGROUND

The Surgical Sub-BMC is one of the Clinical Sub-BMCs established in July 2016. The Sub-BMC is mandated to provide specialist surgical services, outreach and a supporting role to the rest of the surgical services within its catchment area and beyond, the sub-BMC also support clinical teaching/training and research. The Surgical sub-BMC has a bed capacity of 77 and offers the following sub-specialty services at both outpatient and inpatient level (Male and Female surgical wards); General Surgery, Orthopaedic, Uro-surgery, Neurosurgery, Plastic & Reconstructive Surgery and colorectal surgery. The sub-BMC is maned by a five-member team comprising of the Head of the Sub-BMC, DDNS, a Business Manager, a Pharmacist and an Accountant.

# 14.2 SURGICAL SUB-BMC'S 2022 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES

Table 14.2. 1: Surgical Sub-BMC's 2022 Annual Performance Against CCTH Strategic Objectives

	2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE											
CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY												
Access	Access 2017 2018 2019 2020 2021 2022 2022 Remark											
	Annual Annual Annual Annual Annual Target s											
iii. Total surgical	3,853	3,728	4,815	3,883	5,961	5,357	CCTH =	10.13%				
operations							5% Incr	decr				
iv. Surgery to	154:1	133:1	127:1	108:1	199:1	179:1	THs =	decr				
Surgeon ratio							250:1					

Emergency drugs were acquired by the Sub-BMC to stock two trays at the Male and Female Surgical Ward's Emergency trays

Surgical services were streamlined through implementation of the surgical pack system.

Two HDU's have been created on both Male and Female Surgical wards but not fully furnished

Collaborated with Czech Medevac mission-

- 27 Plastic surgeries done
- 43 Orthopaedic surgeries done

### **CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.**

	Actual Performance Trend												
Impact	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	2022 Annual	Target	Remark s % Diff.					
v. Theatre Death Rate	0.4%	0.3%	0.6%	0.1%	0.4%	0.1%	THs = 0.5%	decr					
vi. Surgical site infection rate	-	-	0.27	12.61%	-	-	THs = 5%						

A training was organised for staff on customer care

Three PROs were appointed for the wards and theatre

Ensured 100% compliance with Surgical safety checklist used before, during and after every surgical procedure

# CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE

Renovated the treatment room at the Female Surgical Ward

Spot painting of the Male and Female Wards

Installed an AC at the Doctors Office, Treatment Room and General Office.

Patient mattresses were covered and faulty toilet seats were replaced

Some equipment were purchased/ acquired;

#### 2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

- 2 suction machines
- 4 air conditioners
- 3 rollers for lifting patients
- 3 diathermy pads
- 1 industrial washing machine for theatre

Purchased of 4screens, 80 led bulbs, BP cuffs, 10 vomitus bowls, rechargeable batteries, 5 sinks and 5 toilet bowls for the various units

Renovated the rotten hand wash basin in surgical suite

Renovated the stand for processing of used instruments for sterilization at the Surgical Suite

Carried out tiling works in theatres one and two as well as a portion of the sluice end

#### **CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM**

#### 4.1: Governance Related Performance

Five management meetings were organised

3 General meetings were organised

Units' meetings were held at least once a week

Organised In-service training on BLS for all staff

More than 90% of staff appraised

6 nurses gained admission to pursue various specialized courses

3 doctors gained admission to pursue further studies

#### 4.3: Finance related performance

#### CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING

#### 5.1 Improve on Research:

6 Departmental researches were conducted

Authors(S)	Research Topic	Department
Dr. Patrick Maison.	An Analysis of Prostate Biopsy Results at The Cape Coast	Surgery
Dr Patrick Akakpo	Teaching Hospital, Ghana	Pathology
Dr Martin T Morna	Covidsurg-3: Outcomes of Surgery in Covid-19 Infection	Surgery
Dr. Patrick Maison.	Surgical Outcome in Children Undergoing Hypospadias Repair	Surgery
Dr. Oluwayemisi Ekor	Under Caudal Epidural Versus Penile Block at The Cape Coast	
	Teaching Hospital.	Anaesthesia
Dr. Vincent Kudoh	Comparing The Effectiveness of Iv Morphine with IV Paracetamol	Surgery
Dr. Samuel Mensah	Vs Rectal Diclofenac with Oral Paracetamol in Controlling Acute	
Prof. Ganiyu Rahman	Post-Elective Open Primary Unilateral Inguinal Mesh Herniorrhaphy Pain in Cape Coast Teaching Hospital (CCTH)	
Dr Kwasi Agyen Mensah	African Surgical Outcomes Study in Paediatric Patients (Asos-Paeds)	Surgery
Dr. Emmanuel Owusu Ofori	Hippo Study; A Global Prospective Cohort Study on Inguinal Hernia Surgery	Surgery

7 research reports published in health journals

#### 5.2 Improve on Teaching and Learning:

Organised 44 clinical meetings

Nursing students from various Nursing Training Colleges did clinicals at the sub-BMC

11 foreign medical students did their rotation at the Sub-BMC

8 physician assistants from various universities did their clerkship at the Sub-BMC

3 PON students came for internship and clinicals

CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS

#### 14.3 OUTPATIENT SURGICAL SERVICES UTILIZATION

Generally, the hospital in 2022 recorded an increase of 20.2% in the total Surgical OPD attendance (from 9,542 in 2021 to 11,471 in 2022). The Neuro-surgery clinic attendance constituted 42% (4,811) of the total surgical OPD representing the highest, followed by Orthopaedic clinic, 23% (2,647) and General Surgery clinic,18% (2,085)

with Colorectal clinic recording the least representing 2% (270) of the Surgical OPD attendance.

Further, the Neuro-surgery OPD attendance in 2022 went up significantly by 106.2% (from 487 in 2021 to 1,004 in 2022). Similarly, Uro-Surgery and Orthopaedic OPD attendance increased in 2022 by 58% and 4.6% respectively. On the other hand, General Surgery, Plastic Surgery and Colorectal clinics OPD attendance dropped in 2022. Attendance to the General Surgery clinic saw the highest decline of 14.6% (from 2,442 in 2021 to 2,085 in 2022). Plastic Surgery OPD attendance recorded a decrease of 11.5% (from 739 in 2021 to 654 in 2022) whiles Colorectal OPD attendance declined by 10% (from 300 in 2021 to 270 in 2022). Figure 14.3. 1 to Figure 14.3. 3 and table 14.3. 1 below provides details of the analysis.

TREND OF SURGICAL OPD SERVICES UTILIZATION 14,000 13,026 12.237 11,605 11.471 12,000 10,135 9,542 10,000 20.2% 8,662 8,480 incr 7,722 8,000 6,000 4,000 2,000

2018

2019

2020

2021

2022

Figure 14.3. 1: Trend in Total Surgical OPD Attendance

0

2014

2015

2016

2017

Figure 14.3. 2: OPD Utilization by Surgical Sub-Specialties in 2022

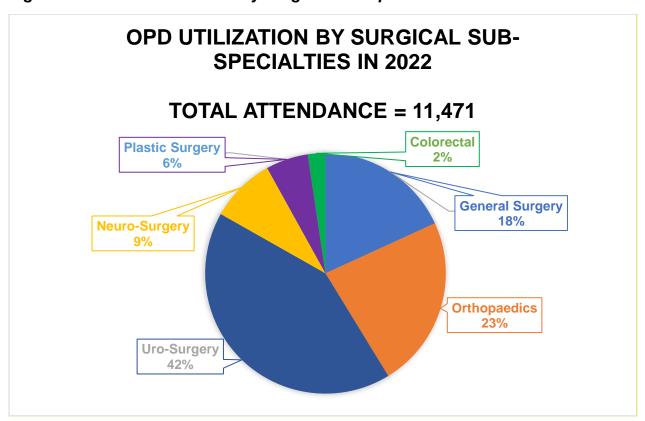


Figure 14.3. 3: Trend in Surgical OPD Attendance by Specialties

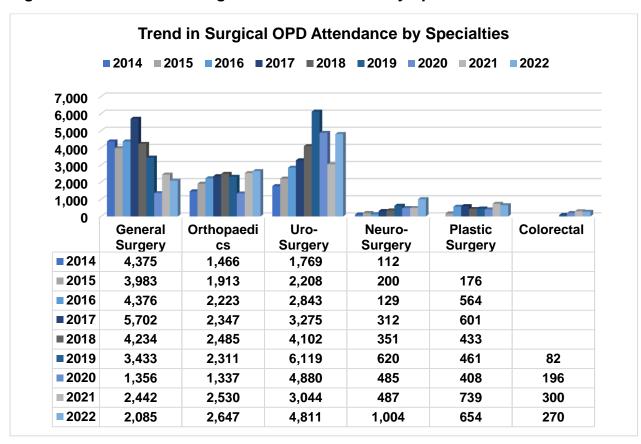


Table 14.3. 1: Trend in Surgical OPD Attendance by Specialties

CLINICS	2014	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS
General	4,375	3,983	4,376	5,702	4,234	3,433	1,356	2,442	2,085	14.6%
Surgery										decr
Orthopaedics	1,466	1,913	2,223	2,347	2,485	2,311	1,337	2,530	2,647	4.6% incr
<b>Uro-Surgery</b>	1,769	2,208	2,843	3,275	4,102	6,119	4,880	3,044	4,811	58.0% incr
Neuro-	112	200	129	312	351	620	485	487	1,004	106.2%
Surgery										incr
Plastic	-	176	564	601	433	461	408	739	654	11.5%
Surgery										decr
Colorectal	-	-	-	-	-	82	196	300	270	10.0%
										decr
Total	7,722	8,480	10,135	12,237	11,605	13,026	8,662	9,542	11,471	20.2% incr

#### 14.4 SURGICAL STATISTICAL PERFORMANCE - INPATIENT

The total admissions at the surgical department in 2022 dropped by 9.2% (from 2,120 in 2021 to 1,926 in 2022). Admissions to the Male Surgical Ward in 2022 declined by 8.6% (from 1,316 in 2021 to 1,203 in 2022) whereas admissions to the Female Surgical Ward decreased by 10.1% (from 804 in 2021 to 723 in 2022). The average length of stay at both the Male and Female Surgical Wards declined in 2022. Further, compared to the Female Surgical Ward, the average daily bed occupancy and bed occupancy rate at the Male Surgical Ward decreased in 2022.

In addition, the total surgical deaths in 2022 dropped by 25% (from 128 in 2021 to 96 in 2022). The number of deaths at the Male and Female Surgical Wards also declined by 20% and 30.2% respectively. Although the number of deaths at the theatre increased in 2020 (from 2 in 2021 to 4 in 2022), the theatre death rate reduced in 2022 (from 0.4% in 2021 to 0.1% in 2022). Detailed analysis is provided in figure 14.4.1 to figure 14.4.2 and table 14.4.1 to table 14.4.3 below.

Figure 14.4. 1: Surgical In-Patient Services Utilization

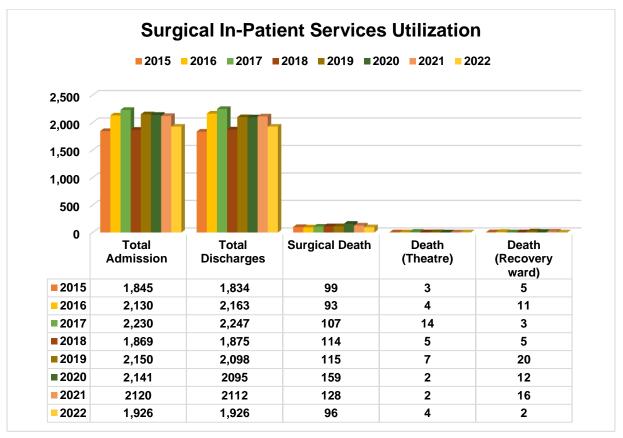


Table 14.4. 1: Surgical In-Patient Services Utilization

INDICTOR	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS
Total	1,845	2,130	2,230	1,869	2,150	2,141	2,120	1,926	9.2% decr
Admission									
total	1,834	2,163	2,247	1,875	2,098	2,095	2,112	1,926	8.8% decr
Discharges									
Surgical	99	93	107	114	115	159	128	96	25% decr
Death									
(MSW+									
FSW+									
Surgical									
Suite +									
Recovery									
Ward +									
ICU									
surgical									
cases +									
Paedics									
surgical									
cases)									
Death	3	4	14	5	7	2	2	4	100% incr
(Theatre)									
Theatre	0.3%	0.4%	0.3%	0.3%	0.6%	0.1%	0.4%	0.1%	Decr
death rate									

INDICTOR	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS
Death	5	11	3	5	20	12	16	2	87.5%
(Recovery									decr
ward)									

Figure 14.4. 2: In-patient utilization at the Male and Female Surgical Wards

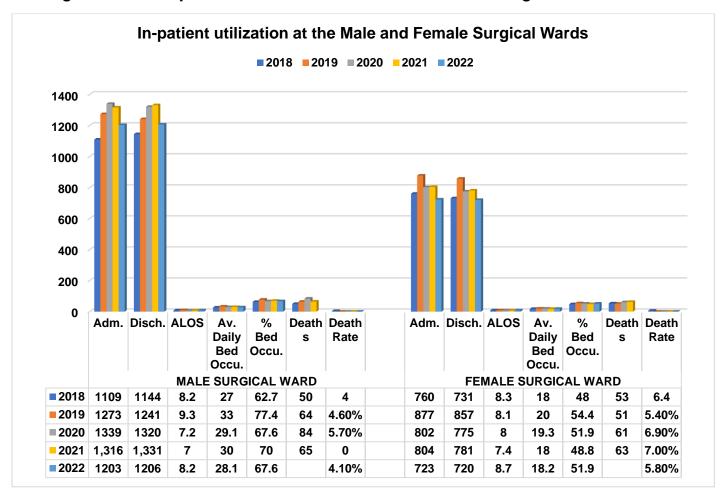


Table 14.4. 2: In-patient utilization at the Male Surgical Ward

INDICATOR		MALE S	SURGIC	AL WAR	D	REMARKS
	2018	2019	2020	2021	2022	
Admissions	1,109	1,273	1,339	1,316	1,203	8.6% decr
Discharges	1,144	1,241	1,320	1,331	1,206	9.4% decr
Average Length of Stay (days)	8.2	9.3	7.2	7.4	8.2	Incr
Average Daily Bed Occupancy	27	33	29.1	30	28.1	Decr
% Bed Occupancy	62.7	77.4	67.6	70.1	67.6	Decr
Deaths	50	64	84	65	52	20% decr
Death Rate	4.0	4.6%	5.7%	4.4%	4.1%	Decr

Table 14.4. 3: In-patient utilization at the Female Surgical Ward

INDICATOR	F	<b>EMALE</b>	SURGI	CAL WAF	RD	REMARKS
	2018	2019	2020	2021	2022	
Admissions	760	877	802	804	723	10.1% decr
Discharges	731	857	775	781	720	7.8% decr
Average Length of Stay	8.3	8.1	8.0	7.4	8.7	Incr
Average Daily Bed Occupancy	18	20	19.3	18	18.2	Incr
% Bed Occupancy	48.0	54.4	51.9	48.8	51.9	Incr
Deaths	53	51	61	63	44	30.2% decr
Death Rate	6.4	5.4%	6.9%	7.0%	5.8%	decr

#### 14.4.1 TOP TEN CAUSES OF SURGICAL ADMISSIONS

The hospital in 2022 recorded fracture as the leading cause of surgical admission although the number of cases reduced by 23.6% (from 216 in 2021 to 165 in 2022). This was followed by Hernia and Benign Neoplasm with 163 and 134 cases respectively. Also, Malignant Neoplasm (133) and Cellulitis (94) ranked 5th and 6th whiles Abscess (53) and Haemorrhage (49) were the least among the leading ten causes of surgical admission in 2022. Figure 14.4.1.1 and table 14.4.1.1 below provides details of the analysis.

**Top Ten Causes of Surgical Admissions in 2022** 

Figure 14.4.1. 1: Top Ten Causes of Surgical Admissions in 2022

asm Cellulitis to trainna Obstraction Appendicitis Acute pain due to trainal Obstraction Appendicitis Herris Meoplasm Heoplasm

Table 14.4.1. 1: Top Ten Causes of Surgical Admissions

2018		2019		2020		2021		2022	
Condition	No.	Condition	No.	Condition	No.	Condition	No.	Condition	No.
Hernia	316	Hernia	349	Fractures	375	Hernia	240	Fracture	165
Fracture	173	Laparotomy	145	Hernia		Malignant neoplasm	220	Hernia	163
Bleeding Prostrate	152	Appendectomy	119	Bleeding Prostrate	206	Fracture		Benign Neoplasm	134
Intestinal Obstruction	107	Fractures	221	Cellulitis		Benign neoplasm	130	Malignant Neoplasm	133
Injury	106	Intestinal Obstruction	90	Breast Cancer		Obstruction Intestinal	99	Cellulitis	94
Cellulitis	105	Neurosurgeries	85	Intestinal Obstruction	119	Cellulitis	96	Acute pain due to trauma	81
Breast Cancer	102	Plastic Surgeries	82	Injury	109	Injuries	89	Intestinal Obstruction	74
Appendicitis	95	Superficial Tumours	69	Appendicitis	87	Abscess	85	Appendicitis	67
Gangrene	76	Thyroidectomy	41	Acute Abdomen	62	Appendicitis	76	Abscess	53
Goitre	42	Orchiectomy	37	Neurosurgery	/10	Haemorrhage	52	Haemorrhage	49

#### 14.5 SURGERIES PERFORMED PER SURGICAL SUB-SPECIALTY

The total surgeries performed at the hospital over the years kept fluctuating. However, in 2022, the total surgeries performed dropped by 10.13% (from 5,961 in 2021 to 5,357 in 2022). Also, in 2022, the surgery - surgeon ratio declined from 199:1 in 2021 to 179:1 in 2022. The theatre death rate in 2022 improved to 0.01% from 0.38% in 2021.

Further, the number of surgeries conducted by the various surgical sub-specialties saw varied performance. The Uro-Surgery specialty recorded an increase of 5.9% in the number of surgeries conducted in 2022 (from 256 in 2021 to 271 in 2022). Also, the number of Neurosurgeries performed in 2022 went up marginally by 1.3% (from 88 in 2021 to 89 in 2022). However, the other surgical sub-specialties saw a dip in their number of surgeries performed in 2022. Figure 14.5.1 to figure 14.5.2 and table 14.5.1 to table 14.5.3 below provides detailed trend analysis.

Figure 14.5. 1: Trend Analysis of Total Surgeries Performed at the Hospital

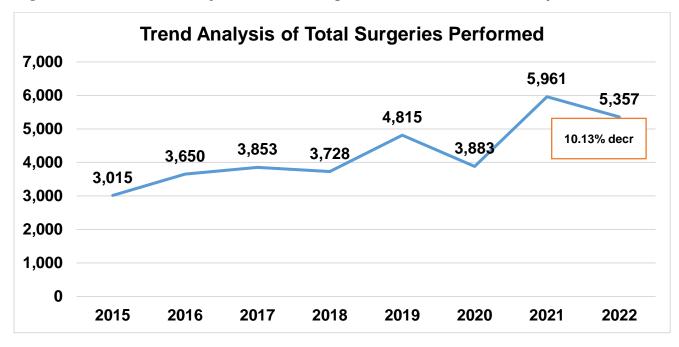


Table 14.5. 1: Trend Analysis of Total Surgeries Performed

INDICATOR	2015	2016	2017	2018	2019	2020	2021	2021	REMARKS	TARGET
Total	3,015	3,650	3,853	3,728	4,815	3,883	4726	5,357	10.13% decr	CCTH =
Surgeries										10% Incr
Performed										

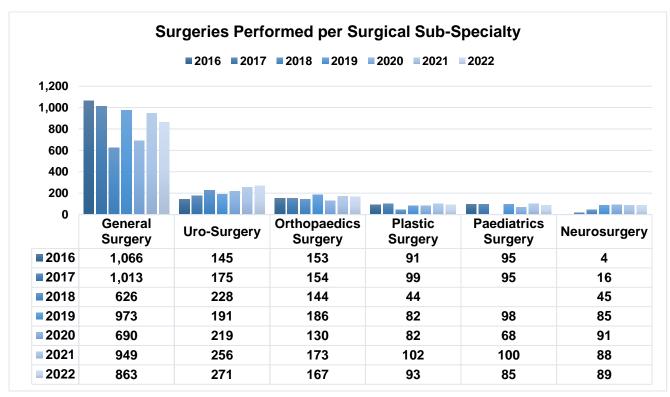
Table 14.5. 2: Surgical Service Performance under THs KPI (Hospital Level Performance)

KEY INDICATORS	2016	2017	2018	2019	2020	2021	2022	REMARKS	MEASURE MENT	TARGET
Surgical site infection rates	-	-	-	0.27%	12.61% (Falcon)	-	-		Total infected wounds / Total Surgeries * 100	THs = 5%
Surgery - Surgeon Ratio	152:1	154:1	133:1	127:1	108:1	199:1	179:1	decr	Total no. of surgeries performed/ total no. of Surgeons	THs = 250:1
Theatre Deaths Rate	0.4%	0.4%	0.3%	0.6%	0.1%	0.38%	0.01%	decr	Total No. of deaths at the theatre / Total Surgeries * 100	0.5%

Table 14.5. 3: Surgeries Performed per Surgical Sub-Specialty

SURGICAL SPECIALTY	2016	2017	2018	2019	2020	2021	2022	REMARKS
General Surgery	1,066	1,013	626	973	690	949	863	9.1% decr
Uro-Surgery	145	175	228	191	219	256	271	5.9% incr
Orthopaedics Surgery	153	154	144	186	130	173	167	3.5% decr
Plastic Surgery	91	99	44	82	82	102	93	8.8% decr
Paediatrics Surgery	95	95	-	98	68	100	85	15.0% decr
Neurosurgery	4	16	45	85	91	88	89	1.3% incr
Total Surgeries	1,554	1,552	1,082	1,615	1,280	1,668	1,568	6.0% decr

Figure 14.5. 2: Surgeries Performed Per Surgical Sub-Specialty



#### 14.5.1 TOP TEN CAUSES OF SURGICAL PROCEDURES

The hospital in 2022 recorded eye surgeries (32.2%) as the leading cause of surgical procedure and it went up by 54.64% (From 1120 in 2021 to 1723 in 2022). Following that were Caesarean Section 31.5% (1,691) and Hernia Reducible 3.7% (198). Further, plastics surgeries dropped to the nineth position in 2022 from the 7th position whiles removal of tonsils ad adniols ranked at the 10<sup>th</sup> position among the top ten causes of surgical operations in 2022. Detailed analysis is presented in Table 14.5.1. 1 below.

Table 14.5.1. 1: Top 10 Surgical Operations at CCTH

2019		2020		2021		2022	
Type of Case	No.	Type of Case	No.	Type of Case	No.	Type of Case	No.
Eye Surgeries	1,305	Caesarean	1520	Caesarean	1462	Eye Surgeries	1723
	(27.1%)	Section	(39.1%)	Section	(30.94%)		(32.2%)
Caesarean	1,248	Ophthalmic	428	Eye Surgeries	1120	Caesarean	1691
Section	(25.9%)	Surgery	(11.0%)		(23.70%)	Section	(31.5%)
Hernia	349	Urological	219	Hernia	240	Hernia	198
	(7.2%)	conditions	(5.6%)	(Reducible)	(5.08%)	Reducible	(3.7%)
ENT	181	Hernia	209	Laparotomy	198	Laparotomy For	147
Surgeries	(3.8%)	Reducible	(5.4%)	for Exploratory	(4.19%)	Exploratory	(2.7%)
Laparotomy	145	Laparotomy for	133	Appendicecto	107	ENT Operations	134
for	(3.0%)	Exploratory	(3.4%)	my	(2.26%)		(2.5%)
Exploratory							
Appendicecto	119	Orthopaedic	130	ENT	107	Operation on	109
my	(2.5%)	surgery	(3.3%)	Operations	(2.26%)	Fractures	(2.0%)
Laparotomy -	88	ENT	109	Plastics	102	Appendectomy	90
Ectopic	(1.8%)		(2.8%)	Surgeries	(2.16%)		(1.7%)
Neurosurgeri	85	Neurosurgeries	91 (2.3%)	Operation on	99	Neurosurgeries	86
es	(1.8%)			Fractures	(2.09%)		(1.6%)
Plastics	82	Intestinal	90 (2.3%)		88	Plastics	77
Surgeries	(1.7%)	Obstruction		Neurosurgerie s	(1.86%)	Surgeries	(1.4%)
Removal of	74	Operation on	90 (2.3%)	Intestinal	75	Removal of	75
superficial	(1.5%)	Fractures		Obstruction	(1.59%)	Tonsils ad	(1.4%)
Tumours						Adniols	
Others	1139 (23.7%)	Others	864 (22.3%)	Others	1027 (19.2%)	others	1027 (19.2%)
Total Surgery	4815	Total Surgery	3,883	Total Surgery	5,961	Totals Operations	5,357

### **CHAPTER FIFTEEN**

## DENTAL, EYE EAR NOSE & THROAT (DEENT) SUB-BMC

#### 15.1 INTRODUCTION

The DEENT Sub-BMC was created in 2019 and was carved out of the bigger Surgical Sub-BMC. This is because the DEENT involves many areas quite different from mainstream Surgery E.g., Dentistry, Audiology, Speech Therapy, Ophthalmology, Optometry (dispensing and sale of spectacles etc.) The sub-BMC provides Dental and Maxillofacial services as well as Eye, Ear Nose and Throat services, hence, the name DEENT. The DEENT Sub-BMC is managed by five (5) management team, consisting of the head of the Sub-BMC, DDNS, a Business Manager, a Pharmacist and an Accountant.

# 15.2 DEENT SUB-BMC'S 2022 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES

The general performance of the DEENT Sub-BMC is outlined against the hospital's strategic objectives. This is provided in table 15.2.1 below

# Table 15.2.1: DEENT Sub-BMC's 2022 Annual Performance against CCTH Strategic Objectives

### 2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

#### CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY

Triaged 21,150 patients and process for various specialist consultation

Collaborated with Himalayan Cataract Project/ National Cataract Outreach programme to conduct eye screening for 17,338 people and performed 2,415 eye surgeries under the project.

Collaborated with Operation-Smile Ghana to provide free Cleft lip and palate (7 surgeries)

Collaborated with UTAH to perform 22 ENT surgical campaigns /surgeries

Provided 4,759 DEENT surgical services

#### CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.

Developed six (6) protocols-

- Care of Ophthalmic instrument,
- Customer Care,
- New management of sinuses.
- Voice Disorder.
- Principles of Fluid and Electrolyte Balance
- Antibiotic regimen for Odontogenic Infections

Celebrated Diabetic and Autism Day and screened 100 beneficiaries

Appointment reminders sent to client to remind them of their appointment days (1000) reminders through phone calls and text messages).

3 Units received sensitization programmes: (Eye-432 new staff were screened, Speech:(Paedics- 2 & Delivery Suite-1)

Provided Educational Talks (300 at the General OPD: ENT-3 times a week, Eye-Daily and STL-8

Provided 9 Sensitization programs (Churches- 5 - Anomabo Methodist Church, Abura Mosque, Pedu SDA, Fountain Gate Chapel and Kotokuraba Mosques -299 beneficiaries) and 4 Health Facilities (Esikado, Effiakuma, CCTH and Takoradi Hospital) with 542 beneficiaries

Developed 2 educational materials videos on Autism and What Speech and Language Therapy is"

Provided 8 Radio/TV Talk Shows on Ocean TV, ATL FM, Ahomka FM and Sky FM

# CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE

Commenced the construction of the Eye Centre: Sod Cutting for the Construction done work to Commence by 1st August 2022 and as at Dec, 2022 at the foundation level

#### 2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

Procured the following equipment and tools:

- Swivel chairs (3)
- Printer (1)

Received the following items from Himalayan Cataract Project:

- 1 B-scan.
- 2 Ophthalmoscopy
- 2 Cutlery
- 2 Oculoplastic
- 2 Eye Care Tonometer
- 3 Cataract Set

#### **CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM**

#### 4.1: Governance Related Performance

Organized one (1) training on communication disorders in children for UCC Nursery/Primary School Teachers with 40 teachers trained.

Organized three (3) major management and eight (8) clinical meetings conducted

Sub-BMC management trained on 2023 POW & Budget and issues relating to Monitoring and Evaluation.

Orientation was organized for new staff nurses posted to the Sub-BMC

#### 4.2: Human Resource Related Performance

#### Appraised 32 staff

Five (5) nurses were posted to the department

- Eye 2,
- ENT 2
- Dental 1

Six (6) Nurses completed specialized nursing in May 2022;

- 3 SSN
- 2 Ophthalmic
- 1 ENT

#### 4.3: Finance related performance

\_

#### CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING

#### 5.1 Improve on Research:

Four (4) clinical research on-going:

- STL- Knowledge of Autism among Health workers in CCTH,
- Eye Prevalence of Glaucoma cases in CCTH &
- ENT- Congenital Laryngeal Hemangioma-case Report of a Rare Presentation
- Dental: Incidence and Treatment outcome of Odontogenic infections at CCTH

#### 5.2 Improve on Teaching and Learning:

305 students trained and supervised:

- STL-6 (ENT students)
- Eye- 85 (11 Ophthalmic, Rotation Nurses (51) and 23 NMTC student),
- ENT-102 (ENT students (11), Rotation/NMTC Students (91),
- Medical Students both Eye and ENT (110) & Optometrist Interns (2)

Conducted six (6) clinical presentations with - Presentation by;

- DOF –Hospital Finances
- DD-NHIS -Presentation on NHIS Services and Tariffs
- DD-HR Customer Care
- Physiotherapy Unit: Posture Management Training
- Eye Unit: Refractive Errors/Red Eye
- Dental Unit: Periodontal Diseases

## CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS

The eye unit undertook outreach program to 6 districts namely Shama, Gomoa East, Agona West, Gomoa Central, Abura Asabu Kwaman and Twifo Hemeng Lower Denkyira District to screen clients for cataract surgery

Undertook cleft and other Dental Maxillofacial repair outreach program with 7 cleft repairs done Expanded eye care services to include other surgical and non-surgical intervention under donor funding with 2,415 cataract surgeries performed.

22 ENT collaborative surgical campaigns /surgeries performed by UTAH.

#### 15.3 DEENT OPD SERVICES UTILIZATION

In 2022, DEENT sub-BMC OPD services utilization declined by 0.92% in attendance (from 21,347 in 2021 to 21,150 in 2022) despite a marginal increase of 10.4% in 2021. Eye specialty clinic recorded the highest number of OPD attendance of 10,755 although it decreased by 0.8% (from 10,837 in 2021 to 10,755 in 2022) when compared to the previous year. All specialties under the DEENT recorded a decline in OPD attendance in 2022 with the exception of Speech and Language Therapy which recorded a significant increase of 54.69% (from 415 in 2021 to 642) in 2022.

A year-on-year analysis indicates that, DEENT referral cases over the years have seen some level of increments and 2022 has not been an exception. 2022 referral cases to the hospital increased by 21.2% (from 608 in 2021 to 737 in 2022). Eye specialty recorded the highest number of cases referred to the DEENT sub-BMC and this represents a true reflection of the Eye unit recording the highest number of OPD cases seen under the DEENT sub-BMC. The total number of cases referred out of CCTH in 2022 saw a decline of 8% as compared to 2021(from 137 in 2021 to 126 in 2022). Eye unit saw most of the OPD cases in 2022 and hence, most (62) of the cases referred out from the hospital where also from this same unit. Out of the 737 cases recorded for total referral cases, 23 of them were from Elmina Health Center. Most of the referral cases sent out of the hospital mostly end up at the Korle-Bu Teaching Hospital 69 out of the total 126 cases referred out the hospital were referred to the Korle-Bu Teaching Hospital. Detailed analysis provided in figure 15.3.1 to figure 15.3.3 and table 15.3.1 to table 15.3.3 below.

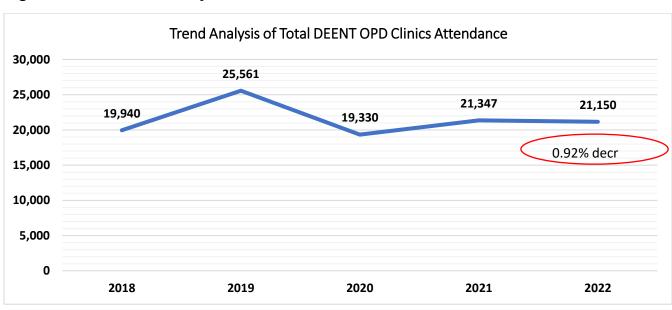


Figure 15.3. 1: Trend Analysis of Total DEENT OPD Clinics Attendance

Figure 15.3. 2: Trend Analysis of Total DEENT OPD Attendance Per Specialty

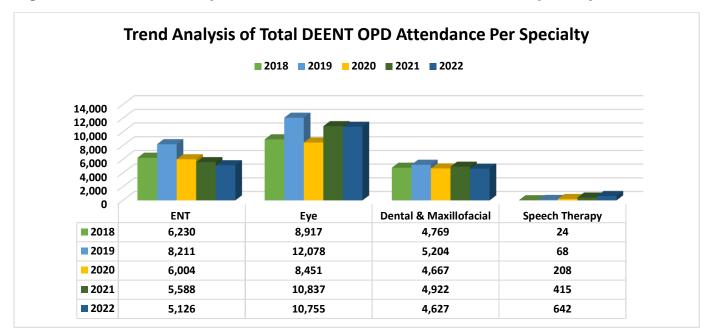


Table 15.3. 1: Trend Analysis of Total DEENT OPD Attendance Per Specialty

CLINICS	2018	2019	2020	2021	2022	REMARKS
ENT	6,230	8,211	6,004	5,588	5,126	8.3% decr
Eye	8,917	12,078	8,451	10,837	10,755	0.8% decr
Dental &	4,769	5,204	4,667	4,922	4,627	6% decr
Maxillofacial						
Speech Therapy	24	68	208	415	642	54.69% incr
Total	19,940	25,561	19,330	21,347	21,150	0.92% decr
Attendance						

Figure 15.3. 3: Trend Analysis of DEENT Referrals Per Specialty

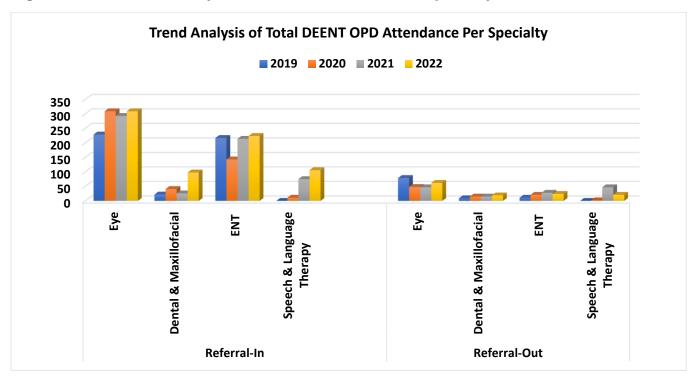


Table 15.3. 2: Trend Analysis of DEENT Referrals Per Specialty

CLINIC	2019	2020	2021	2022	REMARKS					
REFERRAL IN										
Eye	229	309	293	309	5.5% incr					
Dental & Maxillofacial	22	41	26	98	276.9% incr					
ENT	217	143	214	224	4.7% incr					
Speech & Language Therapy	-	11	75	106	41.3% incr					
Total	468	504	608	737	21.2% incr					
	REFE	RRAL -OUT								
Eye	79	48	47	62	31.9% incr					
Dental & Maxillofacial	9	15	15	19	26.7% incr					
ENT	11	21	28	24	14.3% decr					
Speech & Language Therapy	-	2	47	21	55.3% decr					
Total	99	86	137	126	8% decr					

Table 15.3. 3: Analysis of DEENT Referrals Per Facility in 2022

Top Ten Cases Referred-In	Cases Referred Out			
Name of Hospital	No.	Name of Hospital	No.	
Elmina Health Centre	23	KBTH	69	
Efia Nkwanta Regional Hospital	22	KATH	4	
Ewim Urban Health Centre	21	Kumasi South	4	
Abura Dunkaw District Hospital	15	St Barnabas Family	3	
Our Lady of Grace Hospital	26	Others	46	
St. Francis Xavier Hospital	14			
Ajumako District Hospital	13			
UCC Hospital/ University Health Services	13			
Mercy Women's Hospital	12			
Essikado Government Hospital	10			
Others	568			
TOTAL	737	TOTAL	126	

#### 15.4 TOP TEN DEENT OPD CONDITIONS SEEN

Among the top ten (10) eye conditions seen in 2022, Conjunctivitis (All forms) recorded the most cases of 727. Although this condition has topped the chart over, the number of cases recorded for 2022 decreased by 1.22% (from 736 in 2021 to 727 in 2022). This was followed by Cataract of 548 cases with the least being Cornea Ulcer of 19 cases. Apical Periodontitis over the years have gone down to be the most recorded cases under the Dental and Maxillofacial specialty. Out of the 4,627cases recorded for 2022, 727 cases were recorded for Apical Periodontitis. This was seconded by Plague Induced Gingivitis of 411 cases with the least being Malocclusions. ENT specialty saw Otitis Media recording the highest number of cases of 887 followed Impacted Wax of 822 cases and Epistaxis of 55 cases were recorded as the least condition under ENT specialty. Speech and Language specialty recorded Language Delay/ Disorder as the highest condition of 373 cases for 2022. This condition has topped the chart over the years and with that said, the number of cases being recorded has since being increasing and with that, 2022 saw a significant increase of 59.4%. Speech disorder came second with 111 cases with Dysphagia recording the least form of Speech and language cases of 2. Table 15.4.1 to table 15.4.4 below provides details of the top ten DEENT OPD conditions seen per specialty in 2022.

Table 15.4. 1: Top Ten Eye Conditions Seen

2019		2020		2021		2022	
Condition	No.	Condition	No. Of	Condition	No.	Condition	No.
	Of Cases		Cases		Of		Of
					Cases		Cases
Glaucoma	2,266	All Forms of	629	All Forms of	736	All Forms of	727
		Conjunctivitis		Conjunctivitis		Conjunctivitis	
All Forms of	1,922	Glaucoma	548	Refractive	606	Cataract	548
Conjunctivitis				Error			
Cataract	1,191	Cataract	418	Cataract	544	Refractive	501
						Error	
Refractive	948	Refractive	392	Glaucoma	346	Glaucoma	295
Error		Error					
Pterygium	327	Pterygium	187	Pterygium	211	Pterygium	232
Lid	151	Ocular	132	Trauma	144	Retinopathies	71
abnormalities		Trauma					
Normal Eyes	99	Lid	101	Retinopathies	113	Trauma	64
		abnormalities					
Cornea Ulcer	96	Normal Eyes	59	Lid	103	Normal Eyes	66
				Abnormalities		-	
Trauma	88	Cornea Ulcer	50	Cornea Ulcer	31	Lid	25
						Abnormalities	
Others	5,256	Others	1,327	Ocular	26	Cornea Ulcer	19
			_	Tumour			

Table 15.4. 2: Top Ten Dental & Maxillofacial Conditions Seen

2019		2020		2021		2022	
Condition	No. Of Cases	Condition	No. Of Cases	Condition	No. Of Cases	Condition	No. Of Cases
Apical Periodontitis	1,074	Apical Periodontitis	1,010	Apical Periodontitis	1,115	Apical Periodontitis	938
Plaque induced gingivitis	550	Plaque induced gingivitis	444	Plaque Induced Gingivitis	530	Plaque Induced Gingivitis	411
Irreversible Pulpitis	545	Irreversible Pulpitis	354	Developmental Lesion	268	Reversible Pulpitis	342
Reversible Pulpitis	462	Dentoalveolar abscess	255	Reversible Pulpitis	171	Periapical Abscess	289
Dentoalveolar abscess	198	Reversible Pulpitis	253	Fractured Tooth	171	Developmental Lesion	279
Fractured Tooth	152	Fractured Tooth	160	Dentoalveolar Abscess	110	Chronic Periodontitis	180
Periapical abscess	136	Periapical abscess	93	Displaced Tooth	95	Dentoalveolar Abscess	160
Fractured Jaw	92	Fractured Jaw	87	Periapical Abscess	63	Missing Tooth	140
Pericoronitis	78	Pericoronitis	80	Fractured Jaw	59	Displaced Tooth	121

2019		2020		2021		2022	
Condition	No. Of Cases	Condition	No. Of Cases	Condition	No. Of Cases	Condition	No. Of Cases
Avulsion	61	Avulsion	64	Irreversible Pulpitis	59	Malocclusions	90

Table 15.4. 3: Top Ten ENT Conditions Seen

2019		2020		2021		2022	
Condition	No. Of Case s	Condition	No. Of Case s	Condition	No. Of Case s	Condition	No. Of Cases
Otitis Media	1,281	Otitis Media	1,089	Otitis Media	911	Otitis Media	887
Impacted wax	930	Impacted wax	802	Impacted wax	851	Impacted wax	822
Tonsillitis/Phary ngitis	900	Otitis Externa	542	Otitis Externa-	736	Tonsillitis/Pharyngit is	530
Otitis Externa	831	Sinusitis	525	Tonsillitis/Ph aryngitis	621	Otitis Externa-	504
Sinusitis	795	Tonsillitis/Pha ryngitis	518	Sinusitis	571	Sinusitis	480
Allergies	795	Allergies/ Rhinitis	367	Allergies/Rhi nitis	534	Allergies/Rhinitis	406
Adenoids Hypertrophy	644	Adenoids Hypertrophy	205	Adenoids Hypertrophy	288	Adenoids Hypertrophy	330
Otomycosis	242	Otomycosis	157	Otomycosis	83	Hearing Loss	91
Epistaxis	139	Hearing Loss	76	Hearing Loss	112	Otomycosis	61
Hearing Loss	130	Epistaxis	47	Epistaxis	58	Epistaxis	55

Table 15.4. 4: Top Ten Speech & Language Therapy Conditions Seen

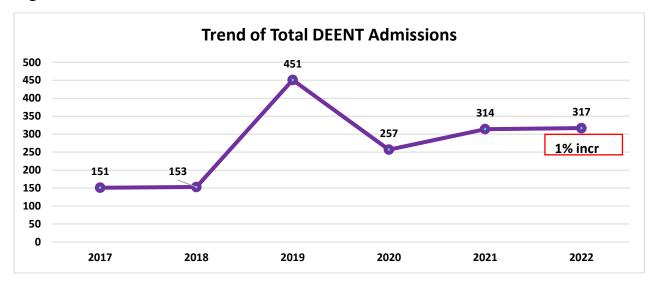
2019		2020		2021		2022	
Condition	No. Of Cases	Condition	No. Of Cases	Condition	No. Of Cases	Condition	No. Of Cases
Autism Spectrum Disorder (ASD)	43	Language Delay/Disorder	97	Language Delay / Disorder	234	Language Delay / Disorder	373
Language Delay / Disorder	25	Speech Disorder	30	Autism Spectrum Disorder (ASD)	82	Speech Disorder	111
Articulation Disorder	14	Aphasia	29	Aphasia	42	Autism Spectrum Disorder (ASD)	68
Aphasia	12	Autism Spectrum Disorder (ASD)	28	Speech Disorders	37	Aphasia	46
Stammering	8	Stammering	9	Dysphonia	10	Dysarthria	21

2019		2020		2021		2022	
Condition	No. Of	Condition	No. Of	Condition	No. Of	Condition	No. Of
	Cases		Cases		Cases		Cases
Dysarthria	6	Dysarthria	6	Stammering	4	Stammering	6
Dysphonia	4	Dysphonia	2	Laryngectomy	1	Dysphonia	4
Others	4	Others	7	Others	4	Dysphagia	2

# 15.5 DEENT ADMISSIONS

DEENT admissions in general recorded a marginal increase of 1% in 2022 (from 314 in 2021 to 317 in 2022). This is a true reflection on all the specialties recording increases in their admissions in 2022. ENT specialty recorded the highest number of admissions of 153 (48.27%) and saw a 12.5% increase in the number of admissions (from 136 in 2021 to 153 in 2022) recorded in 2022. This was followed by the Eye specialty, which recorded 107 admissions but recorded a decline in its 2022 admissions by 1.84% (from 109 in 2021 to 107 in 2022). Dental and Maxillofacial specialty recorded the least number of 57 (17.98%) cases admitted in the DEENT sub-BMC. In 2022, the Dental and Maxillofacial specialty recorded a decline in the number of cases admitted by 17.39% (from 69 in 2021 to 57 in 2022). Detailed trend analysis is provided in figure 15.5.1 to figure 15.5.2 and table 15.5.1 below.

Figure 15.5. 1: Trend of Total DEENT Admissions



Trend of DEENT Admissions by Specialty **■** 2017 **■** 2018 **■** 2019 **■** 2020 **■** 2021 **■** 2022 200 150 **EYE DENTAL & MAX. ENT** 

Figure 15.5. 2: Trend of DEENT Admissions by Specialty

Table 15.5. 1: Trend of DEENT Admissions by Specialty

DEPARTMENT	2017	2018	2019	2020	2021	2022	REMARKS
EYE	118	123	79	122	109	107	1.84% decr
DENTAL & MAX.	33	30	112	48	69	57	17.39% decr
ENT	-	-	242	87	136	153	12.5% incr
TOTAL	151	153	451	257	314	317	1% incr

# 15.6 SURGERIES PERFORMED BY DEENT SUB-BMC

The total number of DEENT surgeries performed for 2022 went up by 28% (from 3,718 in 2021 to 4,759 in 2022). Eye specialty contributed the highest number of surgeries performed in the sub-BMC in 2022 and recorded a 16.17% (from 2,295 in 2021 to 2,666 in 2022) against the previous year. In the same light, Dental specialty recorded an impressive 50.12% increase in surgeries that were performed. Whereas ENT specialty recorded a 24.10% (from 166m in 2021 to 206 in 2022) increase in surgeries performed in 2022. Also, the overall total number of major surgeries performed in 2022 went up by 13.58% (from 2,408 in 2021 to 2,735 in 2022). In the same light, the minor surgeries performed in 2022 also went up by 54.15% (from 1,313 in 2021 to 2,024 in 2022)

To add up, the eye specialty performed other procedures which included; refractions, automated visual field assessment and binocular vision assessment. Refraction procedures performed saw an increase of 9.2% (from 741 in 2021 to 673 in 2022) in 2022. Procedures performed for Automated visual field assessment also went up by 12.1% (from 58 in 2021 to 65 in 2022) in 2022. Detailed trend analysis surgeries performed by the DEENT provided in figure 15.6.1 to figure 15.6.3 and table 15.6.1 to table 15.6.3 below.

Figure 15.6. 1: Trend of Total Surgeries Performed by DEENT Sub-BMC

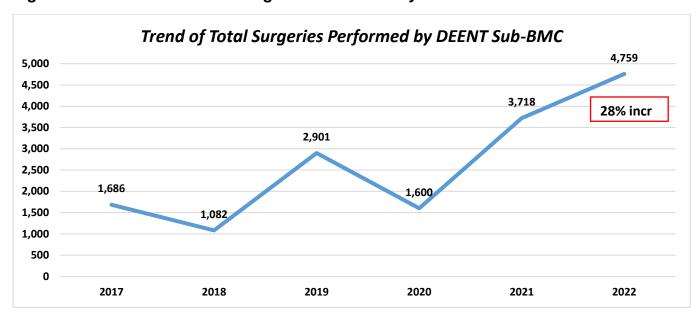


Figure 15.6. 2: Total DEENT Surgeries Performed by Specialty

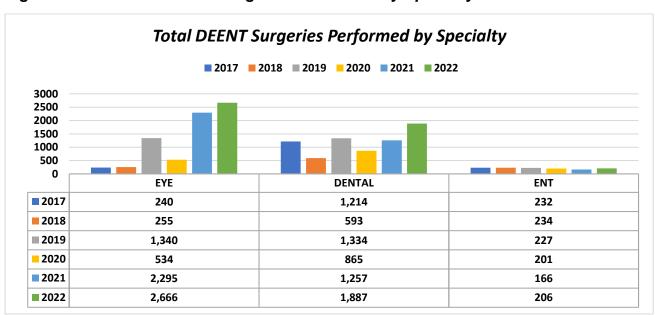


Table 15.6. 1: Total DEENT Surgeries Performed by Specialty

DEENT SPECIALTY	2017	2018	2019	2020	2021	2022	REMARKS
EYE	240	255	1,340	534	2295	2,666	16.17% incr
DENTAL	1,214	593	1,334	865	1,257	1,887	50.12 incr
ENT	232	234	227	201	166	206	24.10% incr
TOTAL	1,686	1,082	2,901	1,600	3,718	4,759	28% incr

Figure 15.6. 3: Major and Minor Surgeries Performed by DEENT Specialty

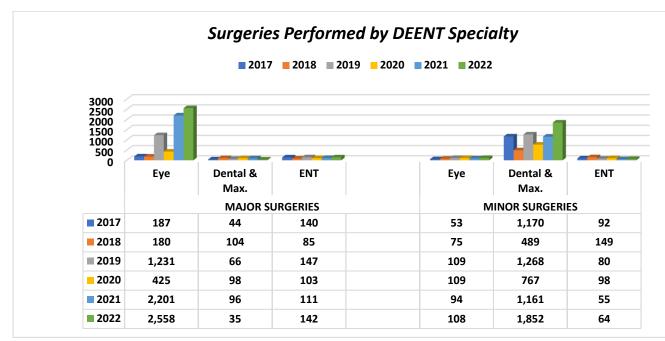


Table 15.6. 2: Surgeries Performed by DEENT Specialty

DEENT SPECIALTY	2017	2018	2019	2020	2021	2022	REMARKS
OI LOIALI I		MAJO	R SURG	ERIES			
EYE	187	180	1,231	425	2,201	2,558	16.22% incr
ORAL	44	104	66	98	96	35	64.21% decr
ENT	140	85	147	103	111	142	27.93% incr
TOTAL	371	369	1,444	626	2,408	2,735	13.58% incr
		MINO	R SURG	ERIES			
EYE	53	75	109	109	94	108	14.89% decr
ORAL	1,170	489	1,268	767	1,161	1,852	59.51% incr
ENT	92	149	80	98	55	64	16.36% incr
TOTAL	1,315	713	1,457	974	1,313	2,024	54.15% incr

Table 15.6. 3: Other Eye Procedures Performed

PROCEDURE	2017	2018	2019	2020	2021	2022	REMARKS
Refractions	1,098	2,182	1,559	596	741	673	9.2% decr
Automated visual	8	-	10	89	58	65	12.1% incr
field Assessment							
Binocular vision	1	-	-	1	120	-	
Assessment							

# 15.7 PERFORMANCE FROM OUTREACH PROGRAMME

The DEENT department has emerged over the years as one of the departments within the hospital that perform outreach services intensively. Schools, churches, communities, corporate organizations and peripheral health facilities within catchment areas within the region and beyond are some of the places where these outreaches are undertaken. Over the years, there has been fluctuations in the number of visits to the communities and as a result, the total number of communities visited in 2022 declined massively (from 398 in 2021 to 6 in 2022) and had a repel effect on the number of beneficiaries (from 40,830 in 2021 to 16,887 in 2022). The total number of visits to schools in 2022 was sustained as compared to the previous year but the total number of beneficiaries decreased Table 15.7.1 to table 15.7.2 provides detailed trend analysis on the outreaches performed.

Table 15.7. 1: Performance from Outreach Programme

INDICATOR	2019	2020	2021	2022	REMARKS
		Community Outre	aches		
Total Communities Visited	159	102	398	6	
Number of	12,756	6872	40,830	16,887	
Beneficiaries	<ul><li>Eye Unit = 10,791</li><li>ENT Unit = 1,381</li></ul>	• Sub-BMC Level = 719	• Sub-BMC Level = 20,415	• Eye - 16,182 • ENT - 338	
	Dental Unit = 584	<ul> <li>Eye Unit = 4,982</li> <li>ENT Unit = 1,171</li> </ul>	<ul> <li>Eye Unit = 19,098</li> <li>ENT Unit = 641</li> </ul>	<ul><li>Dental - 105</li><li>STL - 262</li></ul>	
		Dental Unit = -     School Outreac	• Dental Unit = 676 <b>hes</b>		
	T			T	
Number of Schools visited	8	8	3	3	
Number of Beneficiaries	495	1,142	1,271	277	
	Su	rgical Outreaches to	o Facilities		
Number of Health Facilities Visited for Surgical Support	4	-	1	-	
Number of beneficiaries	86	-	28	-	
	C	Outreaches to Organ	nizations		
Number of Organizations visited	-	-	4	1	
Number of beneficiaries	-	-	540	372	

Table 15.7. 2: DEENT Outreach Activities in 2022

EYE UNIT		EN1	Γ	DEENT S	SUB-BMC
Community/ School	No. of Clients Screened	Community/ School	No. of Clients Screened	Community/ School	No. of Clients Screened
Shama District	2,277	Aba Krampa	114	Oxford Practice Academy	109
Gomoa East District	2,073	Total	114	Ogua Secondary Technical School	168
Agona West District	1,529			St Lawrence School	35
Gomoa Central	1,150			Total	277
Abura Asebu Kwaman District	1,158				
Twifo Hemeng Lower Denkyira District	1,105				

EYE UNIT		ENT		DEENT SUB-BMC	
Community/ School	No. of Clients Screened	Community/ School	No. of Clients Screened	Community/ School	No. of Clients Screened
Others	6,890				
Total	16,182				

# **CHAPTER SIXTEEN**

# **PUBLIC HEALTH SERVICES**

### **16.1 INTRODUCTION**

Public Health Unit contributes to the improvement of health and well-being of the population of all age groups through: Preventive, Promotional, Rehabilitative and Curative Services.

Services provided at the unit includes

Health Promotion	Disease Surveillance
Immunization	School Health
Child Welfare Clinic	Home Visits
Family Planning	Sickle Cell Clinic
Adolescent Health Services	TB Management
Counselling Services	HIV Clinic
<ul> <li>Some aspects of Post Natal Services</li> </ul>	

# 16.2 PUBLIC HEALTH UNIT'S 2022 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES

Table 16.2. 1: Public Health Unit's 2022 Annual Performance Against CCTH Strategic Objectives

	2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
<b>CCTH OBJECTIVE 1:</b>	CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY								
		A	ctual Perf	ormance	Trend				
Access	2016	2017	2018	2019	2020	2021	2022	2022	Remark
	Annual	Annual	Annual	Annual	Annual	Annual	Annual	Target	S
Couple year	2,277.6	1507	1,521.6	1,562.5	1,891.2	2,233	2,626	CCTH =	17.6%
protection								5% incr	incr
								TH =	
								2,500	
Conducted public edu	ootion on convi	aal aanaar c	orooning						

Conducted public education on cervical cancer screening

Created social media platforms such as Facebook, Twitter, to enhance public health education

# **CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.**

COVID-19 Response outcome in 2022:

- 95 number of CCTH Staff tested positive for COVID-19.
- Total of 227 COVID-19 positive cases were recorded.
- 2 (0.72%) COVID-19 related deaths were recorded.
- 275 (99.3%) recoveries/discharges were recorded.
- Recorded 100% recovery rate of the 95 CCTH Staff who tested positive for Covid-19 in 2022.
- Active Case as at the end of 2022 = 0

Continued to provide daily Covid-19 data (institutional) update to the hospital management members, HODs of sub-BMCs and Unit as well as to the general staff.

Administered COVID-19 vaccines in 2022

Vaccines	Dose Type	Total Vaccination	Total Booster Vaccination
AstraZeneca	First	4,250	202
	Second	2,225	
Moderna	First	336	0
	Second	136	0
J&J	Single dose	412	158

	2022 ANNUAL OUTCOME AND OUTPUT PERFORMANCE						
Pfizer	First	0	7				
	Second	2					
Total		7,361	368				

525 communities visited with 21,360 people screened.

- Cataract = 17,388
- Hernia = 178
- Blood Donation = 2,136
- Maternal Health Issues =66
- General screening = 1,592
  - o Diabetes = 796
  - o HPT = 796

132 women screened for Cervical Cancer

Recorded 50 new registrants for Adolescent Clinic

12,762 people screened for TB out of which 843 tested positive.

Organized training for staff on customer care

Conducted one training for public health staff on data analysis, interpretation and report writing

Held weekly and monthly analysis and interpretation of surveillance data

Prepared and distributed monthly epidemiologic bulletin

Engaged stakeholders (Diabetes Mellitus clinic, internal medicine clinics) on non-communicable disease (NCD) policy

Advocated through the Medical Director for a committee to work on policy document

Celebrated the following national and international health days

- TB
- Malaria
- Hepatitis B
- Exclusive Breastfeeding
- Rabies
- HIV

# CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE

The Public Health Unit was allocated a conducive space for TB care

#### **CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM**

### 4.1: Governance Related Performance

Conducted 2 quarterly leadership training for unit heads and focal persons

Set specific objectives/task for each staff for the year

# 4.2: Human Resource Related Performance

Appraised all staff

# 4.3: Finance related performance

# CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING

5.1 Improve on Research:

#### 5.2 Improve on Teaching and Learning:

Organised bi-weekly teaching/training sessions

# **16.3 IMMUNIZATION TREND (EPI)**

One of the essential ways in which a person can be made resistant to an infectious disease which may as a result lead to either disabilities or in serious situations deaths is typically by the administration of a vaccine. The hospital recorded an increase of 8.7% increase (from 13,888 in 2021 to 15,096 in 2022) in the total immunization. BCG vaccinations went up by 5.4% (from 2,462 in 2021 to 2,462 in 2022). Pentavalent (1-3) vaccinations recorded an impressive 31.02% (from 1,418 in 2021 to 1,858 in 2022) increase over the previous year. Both Vitamin 'A' 100,000 IU and Vitamin 'A' 200,000 IU recorded 32.74% (from 281 in 2021 to 189 in 2022) and 23.62% (from 343 in 2021 to 424 in 2022) decreases respectively in 2022. Yellow fever vaccination in 2022

increased massively by 75% (from 176 in 2021 to 308 in 2022). Detailed trend analysis is provided in figure 16.3.1 and table 16.3.1 below.

Figure 16.3. 1: Total Immunization Trend at CCTH

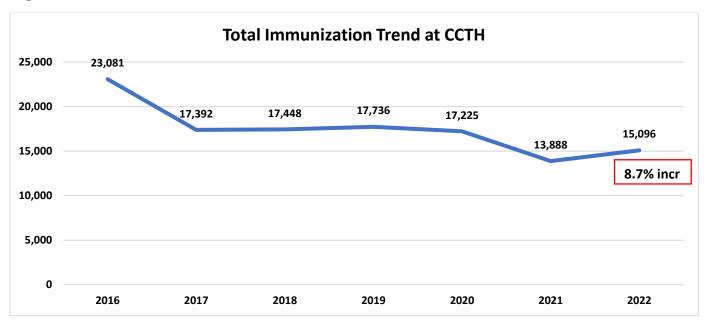


Table 16.3. 1: Total Immunization Trend at CCTH

VACCINES	2016	2017	2018	2019	2020	2021	2022	REMARKS
BCG	3,565	3,190	3,000	3,182	3,271	2,462	2,596	5.4% incr
Polio	5,088	4,514	5,122	5,398	5,003	3,853	3,232	16.12%
								decr
Pentavalent (1-	2,496	1,881	2,121	2,198	1,745	1,418	1,858	31.02% incr
3)								
• Pentavalent 1	-	-	-	-	-	998	1,023	2.51% incr
• Pentavalent 2	-	-	-	-	-	551	446	19.06% decr
• Pentavalent 3	•	•	•	•	-	399	389	2.51% decr
Rota Virus	1,226	1,596	1,780	1,844	1,409	1,122	1,327	18.27% incr
Vaccine (ROTA								
1&2)								
MCV	2,496	-	-	-	-	-	-	-
Yellow Fever	332	263	182	283	270	176	308	75% incr
MMR	20	-	-	-	-	-	-	-
TD1/TD2	962	-	-	1004	734	623	610	2.09% decr
Vitamin 'A'	332	251	245	181	215	281	189	32.74%
100,000 IU								decr
Vitamin 'A'	1496	364	301	296	368	343	424	23.62%
200,000 IU								decr
Maternal VIT A	1,224	1,426	678	-	-	-	-	-
Pneumococcal	1,842	1,879	2,121	2189	1,745	1,418	1,843	30% incr
Vaccine								
M.R. 1	256	258	175	283	270	179	285	59.2% incr
M.R 2	164	218	119	-	185	143	205	43.4% incr

VACCINES	2016	2017	2018	2019	2020	2021	2022	REMARKS
Tetanus	1,307	1,032	1,202	1,250	734	718	791	10.2% incr
Pregnant								
Tetanus Non-	275	333	275	422	410	158	162	2.53% incr
Pregnant								
Inactivated	-	-	-	354	336	296	348	29.50% incr
Polio Vaccine								
(IPV)								
RTSS (Malaria	-	-	-	261	496	560	725	12.90% incr
Vaccine)								
LLIN	-	-	-	132	185	138	193	39.86% incr
Total	23,081	17,392	17,448	17,736	17,225	13,888	15,09	8.70% incr
							6	

#### 16.4: CHILD WELFARE SERVICES

The public health department of the hospital carry out series of activities in order to protect and improve the health of people and their communities. Among these series of activities includes child welfare practices for children under under-five years. Although the number of new registrants in 2022 decreased by 47.41% (from 772 in 2021 to 406 in 2022), this did not reflect on the number of attendants, which recorded a marginal increase of 8.43% (from 4,391 in 2021 to 4,761 in 2022). All attendants by age recorded decreases in 2022 with the exception of age 0-11months which recorded a 17.25% increase (from 3,346 in 2021 to 3,923 in 2022). Detailed trend analysis provided in table 16.4.1 below.

Table 16.4. 1: Trend Analysis of Child Welfare Clinic

AGE (MONTHS)	2017	2018	2019	2020	2021	2022	REMARKS				
		NEW	REGIS	TRANTS	BY AGE						
0-11 190 286 278 510 548 359 34.49% decr											
12-23	107	86	47	133	156	29	81.41% decr				
24-59	22	10	12	79	68	18	73.53% decr				
Total	319	382	337	722	772	406	47.41% decr				
		-	ATTENE	DANT BY	AGE						
0-11	3,064	3,032	2,681	3,209	3,346	3,923	17.25% incr				
12-23	655	786	469	769	748	671	10.29% decr				
24-59	129	155	146	265	297	167	43.80% decr				
Total	3,848	3,973	3,296	4,243	4,391	4,761	8.43% incr				

### 16.5 INTEGRATED DISEASE SURVEILLANCE AND RESPONSE

In order to prevent the outbreak of diseases, the public health department of the hospital undertake series of regular surveillance activities to ensure the early detection and management of diseases. Prior to this, 227 cases of COVID-19 were recorded in 2022 representing a significant decrease of 85.28% against 2021 (from 1,542 in 2021 to 227 in 2022). Three (3) cases of Human Rabies were recorded out of the 3 suspected cases in 2022. No confirmed case was recorded out of the 29 meningitis suspected cases in 2022. Also, no cases of the 2 and 3 suspected cases were confirmed for Neonatal TT and AFP in 2022 respectively. In addition, no cases were

confirmed for the 2, 2 and 3 cases of Measles, Yellow fever and Acute Haemorrhagic Fevers respectively Also, the hospital since 2019 has recorded no case of Cholera. Detailed information provided in table 16.5.1 below.

Table 16.5. 1: Surveillance Activities

Condition		Numb	er Susp	ected		Number Investigated				Lab Confirmed					
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Covid-19	-	-	2607	4,085	227	-	-	2607	4,085	227	-	-	447	1,542	227
Measles	3	0	0	0	2	3	0	0	0	2	0	0	0	0	0
Yellow Fever	4	2	0	0	2	4	2	0	0	2	0	0	0	0	0
Meningitis	6	15	20	23	29	0	15	20	23	29	0	0	9	2	0
Cholera	4	0	0	0	0	4	0	0	0	0	1	0	0	0	0
Neonatal TT.	2	0	3	0	0	2	0	3	0	0	2	0	3	0	0
AFP	5	1	1	2	0	5	1	1	0	0	0	0	0	0	0
Human Rabies	0	1	1	2	3	0	1	1	2	3	0	0	0	1	3
Acute Haemorrhagi c Fevers	2	3	0	0	3	2	3	0	0	3	0	0	0	0	0

#### 16.6 INFLUENZA SENTINEL SURVEY

The total RTI cases recorded for 2022 decreased by 16.47%% (from 2,247 in 2021 to 1,877 in 2022). The influenza-like samples sent for testing increased significantly from 26 in 2021 to 725 in 2022. Out of this, 12 (1.66%) of the cases were confirmed positive. Also, the RTI cases admitted in 2022 decreased significantly by 97% (from 13,074 in 2021 to 398 in 2022). Among the 398 RTI cases admitted in 2022, 119 samples were sent for testing and 4(3.36%) cases were confirmed positive. Table 16.6.1 below shows the trend analysis of the influenza cases detected and the outcome over the past seven years.

Table 16.6. 1: Influenza Sentinel Survey

INDICATOR	2016	2017	2018	2019	2020	2021	2022	REMARKS				
INFLUENZA LIKE ILLNESS												
RTI	100	2025	2163	1897	1475	2,247	1,877	16.47% decr				
Samples Sent	18	187	86	215	10	26	725	Incr				
Positive Cases	0	10	4	19	0	5	12	140% incr				
	SE	VERE A	<b>ACUTE</b> R	ESPIRA	TORY IN	<b>IFECTION</b>	I (SARI)					
RTI Admitted	0	76	9	10	0	13,074	398	97% decr				
Samples Sent	0	24	2	10	0	36	119	230.56% incr				
Positive Cases	0	1	0	0	0	3	4	33.33% incr				

### 16.7 REPRODUCTIVE AND CHILD HEALTH SERVICES

The public health department of the hospital continue to provide unlimited services to effectively improve on reproductive and child health services. In 2022, the total number of supervised deliveries recorded increased by 7.01% (from 3,055 in 2021 to 3,269 in 2022). The total number of babies vaccinated with BCG went down by 19.3% (from 3,271 in 2021 to 2,596 in 2022). The number of post-natal registrants went up by 56.67% (from 3,155 in 2021 to 4,943 in 2022). Maternal deaths in 2022 increased by 18.75% (from 32 in 2021 to 38 in 2022). Interestingly, the total number of still birth weight went down by 7.81% (from 128 in 2021 to 118 in 2022) whilst the total number

of low birth weight (<2.5kg) went up by 11.92% (from 604 in 2021 in 676 in 2022). Details of the above is illustrated in table 16.7.1 below.

Table 16.7. 1: Reproductive and Child Health Services

INDICATOR	2017	2018	2019	2020	2021	2022	REMARKS
Supervised Deliveries	3,055	3,160	3,027	2,883	3,055	3,269	7.01% incr
Number of BCG vaccination	3,190	3,000	3,182	3,271	3,217	2,596	19.3% decr
Number of Post-natal Registrants	1,612	1,454	3,398	3,181	3,155	4,943	56.67% incr
Number of Still Birth	107	118	126	89	128	118	7.81% decr
Number of Maternal Deaths	41	27	28	26	32	38	18.75% incr
Number of Low Birth Weight (<2.5KG)	385	423	481	512	604	676	11.92% incr

### **16.8 FAMILY PLANNING**

Family Planning Acceptors in 2022 increased by 13.53% (from 2,313 in 2021 to 2,626 in 2022). The total number of male condom patronage went down by 3.24% (from 710 in 2021 to 687 in 2022) whereas female condom as recorded over the past six years did not see any form of patronage at all in 2022. Vasectomy and Emergency Contraceptives (Postinor) services utilization has also not been patronized over the years.

On the other hand, Jaddelle recorded an impressive increase of 83.33% (from 24 in 2021 to 44 in 2022). Micro G recorded a significant 70.15% (from 67 in 2021 to 114 in 2022) whereas Micro N recorded an impressive increase from 4 in 2021 to 48 in 2022. Depo Provera recorded an increase of 11.04% (from 308 in 2021 to 342 in 2022). Also, patronage from Implanon services decreased in 2022 by 38.14% (from 970in 2021 to 60 in 2022). Detailed trend analysis is provided in figure 16.8.1 and table 16.8.1 below.

Figure 16.8. 1: Trend of Total Family Planning Acceptors

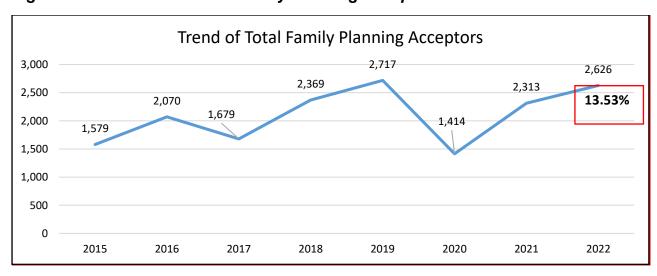


Table 16.8. 1: Family Planning Acceptors by Commodity

Acceptors	2015	2016	2017	2018	2019	2020	2021	2022	Remarks
Condom M	105	258	94	266	118	184	710	687	3.24% decr
Condom F	16	12	0	0	0	0	0	0	-
Copper T	15	29	14	39	45	8	27	25	7.41% decr
Depo Provera	130	297	89	231	299	79	308	342	11.04%
									incr
Jaddelle	29	45	41	92	111	20	24	44	83.33%
									incr
Implanon	11	131	45	82	132	21	97	60	38.14%
									decr
Cycle Beads	0	0	0	32	20	20	3	0	Decr
Micro G	17	37	22	18	104	34	67	114	70.15%
									incr
Micro N	9	12	5	40	154	18	4	48	Incr
Lus	-	7	0	0	0	0	0	0	-
Mini Lap/BTL	72	98	103	94	98	81	57	0	Decr
VASECTOMY	1	0	0	3	0	0	0	0	-
Norigynon	17	6	10	21	55	25	34	0	Decr
Emergency	0	0	0	0	-	-	0	0	-
Contraceptives									
(Postinor)									
LAM	1,157	1,138	1,256	1,454	1,581	924	982	1,354	37.88%
									incr
Total	1,579	2,070	1,679	2,369	2,717	1,414	2,313	2,626	13.53%
									incr

The hospital in 2022 recorded an impressive 107.95% (from 820.15 in 2021 to 1,705.50 in 2022) increase in C.Y.P. Short-term C.Y.P for 2022 went up by 27.67% (from 430.4 in 2021 to 549.5 in 2022). C.Y.P procedures for long-term on the other hand also recorded an of 196.6% (from 389.75 in 2021 to 1,156 in 2022). Detailed analysis is provided in figure 16.8.2 to figure 16.8.3 and table 16.8.2 below.

Figure 16.8. 2: Trend of Total Couple Year Protection

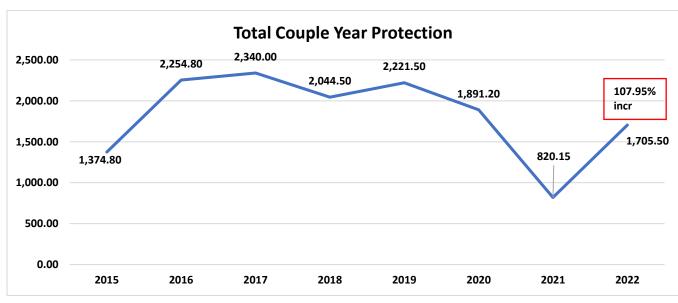


Figure 16.8. 3: Trend of Couple Year Protection

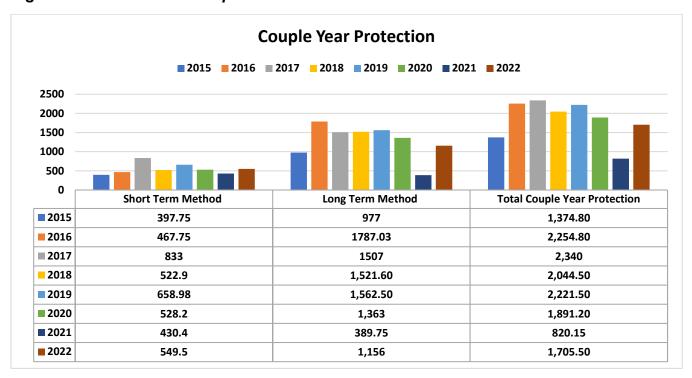


Table 16.8. 2: Trend of Family Planning Acceptor and CYP

COMMODITY	2015	2016	2017	2018	2019	2020	2021	2022	REMARK
	C.Y. P	C.Y. P	C.Y. P	C.Y.P	C.Y.P	C.Y.P	C.Y.P	C.Y.P	S
			S	HORT TE	RM				
PILL	12.2	15.4	12.7	23.61	76.38	32.5	13.2	34.15	158.71% incr
CONDOM	26.3	37.9	57.3	39.9	84.5	134.4	85.0	109.3	28.59% incr
LAM	289.25	284.5	628.0	363.5	395.25	231.0	245.5	283.3	37.8% incr
DEPO	67.75	125.75	132.0	92.75	97.75	125.0	82.5	120.5	46.10% incr
CYCLE BEADS	0	0	0	13.5	30.0	11.5	1.5	2.25	50% decr
NORIGYNON	2.25	1.5	3.0	3.2	5.1	5.3	2.7	0.0	Decr
TOTAL	397.75	467.75	833.0	522.9	658.98	528.2	430.4	549.5	27.67%
									incr
			L	ONG TE	RM				
JADELLE	101.5	150.53	178.5	217.0	192.5	164.5	63.0	70.0	11.11% incr
IMPLANON	27.5	467.5	132.5	169.6	185	152.5	225	288.0	28% incr
COPPER - T	56	91	63	87.5	77	143.5	87.5	105.0	20% incr
C/S BTL	792	1078	1133	1034	1078	891.0	14.25	693.0	Incr
TOTAL	977	1787.03	1507	1,521.6	1,562.5	1,363	389.75	1,156	196.6%
									incr
OVERALL TOTAL C.Y.P	1,374.8	2,254.8	2,340.0	2,044.5	2,221.5	1,891.2	820.15	1,705 .5	107.95% incr

### **16.9 HEALTH PROMOTION ACTIVITIES**

The Public Health department periodically undertakes health promotion and awareness activities. These educational activities are normally planned with the target grouped, the locations and mode of delivery with varied topics on immerging health issues. The activities are carried out at the OPD, on radio, TV, community, schools, churches among others.

The number of health talks by the public health unit at the OPD in 2022 decreased by 28.57% (from 245 in 2021 to 315 in 2022). Tv and Radio discussions in 2022 went up by 148.86% (from 88 in 2021 to 219 in 2022) and 40.37% (from 161 in 2021 to 226 in 2022) respectively. Health talks to schools in 2022 recorded a significant increase from 9 in 2021 to 99 in 2022. Also, outreach to communities decreased by 53.61% (from 429 in 2021 to 199 in 2022) whereas health promotion talks to focus client education went up by and 52.79% (from 197 in 2021 to 301 in 2022).

Table 16.9. 1: Health Promotion Activities

ACTIVITIES							
	2017	2018	2019	2020	2021	2022	REMARKS
OPD Health Talk	144	147	217	366	245	315	28.57% decr
Radio Discussion	36	64	93	104	161	226	40.37% incr
TV Discussion	0	41	54	45	88	219	148.86% incr
Community Outreach	0	6	159	49	429	199	53.61% incr
School Health Talks	24	32	24	3	9	99	Incr
Focus Client Education	226	502	1293	280	197	301	52.79% incr

### 16.10 HIV / AIDS CLINIC

In 2022, the number of people screened for HIV decreased by 31.85% (from 4,057 in 2021 to 2,765 in 2022). Out of the 2,765 clients screened for HIV, 221 (7.99%) were confirmed positive which was a decline of 1.57% (from 225 in 2021 to 221 in 2022) in 2022 compared to 2021. Also, the number of babies exposed to HIV went down by 26.47% (from 34 in 2021 to 202 in 2022) and out of this, no baby tested positive. To add up, the total number of clients screened for TB increased significantly from 225 in 2021 to 4,457 in 2022. Detailed trend analysis is provided in table 16.10.1 below.

Table 16.10. 1: HIV Diagnosis Summary

Indicator	2016	2017	2018	2019	2020	2021	2022	Remarks
Total People Screened for HIV	1951	1718	1202	3159	507	4,057	2,765	31.85% decr
No. HIV Positives	176	188	167	243	95	225	221	1.57% decr
HIV Positivity Rate	9.02%	10.94%	13.89%	7.7%	18.7%	5.5%	7.6	Incr
No. of HIV positive clients placed on treatment	176	188	167	215	95	225	221	1.57% decr
TB Screening	176	188	167	243	95	225	4,457	Incr

Indicator	2016	2017	2018	2019	2020	2021	2022	Remarks
		Early Inf	ant Diagno	osis for H	IV			
Number of Exposed Babies Tested	41	26	59	43	37	34	25	26.47% decr
Number of Babies with results positive for HIV	0	3	2	1	1	1	0	Decr
Positivity Rate %	-	11.5%	3.4%	2.3	2.7%	2.9%	0	Decr

# 16.11 PREVENTION OF MOTHER TO CHILD TRANSMISSION (PMTCT) PROGRAMME

CCTH over the years has been putting in keen measures through the public health and obstetrics departments to prevent the spread of mother to child viral infection. In 2022, the number of new ANC registrants went up by 5.21% (from 768 in 2021 to 808 in 2022) and were all counselled and screened for HIV. Out of the total 808 clients screened for HIV, 6 were confirmed positive. Also, 12 clients received ARVs in 2022 compared to 42 in 2021. Detailed representation is shown in table 16.11.1 below.

Table 16.11. 1: Pregnant Mother to Child Transmission (PMTCT)

INDICATORS	2015	2016	2017	2018	2019	2020	2021	2022	REMARKS
Number of ANC Registrants	565	716	748	794	802	761	768	808	5.21% incr
Number Tested & Received Post-test Counselling	595	716	748	794	802	761	768	808	5.21% incr
Percentage (%) of Clients Tested	584 (98.2%)	716 (100%)	748 (100%)	100%	100%	100%	100%	100%	-
Number Positive	20	4	8	4	4	4	0	6	Incr
Number Positive at 34wks	0	0	2	0	0	1	0	3	Incr
Number Given ARVs	36	6	16	4	4	5	0	12	Incr
Number of Babies on ARVs	20	15	20	-	-	-	42	0	Decr
Number of EID Tested	58	48	69	59	43	37	34	25	26.47% decr
Number of EID Positive (6wks - 18mths)	3	4	10	2	1	1	1	0	Decr
Given ARVs as Prophylaxis	16	-	-	-	43	37	42	15	64.29% decr

# **16.12 POST EXPOSURE PROPHYLAXIS**

People naturally become traumatized when exposed to HIV especially due to the stigma that is associated with it. Therefore, it requires courage or an individual to report to the hospital or any other health center when exposed. HIV prophylaxis is the

treatment given to such individuals when the exposure is reported timely to reduce the chances of contracting the disease. Over the years, the number of people exposed to HIV kept fluctuating. The number of people reported to have been exposed in 2022 went up by 38.46% (from 26 in 2021 to 36 in 2022). Out of the 34 clients that were reported to be exposed, 5 (14.71%) were at very low risk, 26(76.47%) were at low risk and 3 (8.82%) were at high risk. None of the clients tested positive for HIV as seen over the years. Detailed trend analysis is provided in table 16.12.1.

Table 16.12. 1: Post Exposure Prophylaxis

INDICATORS	2016	2017	2018	2019	2020	2021	2022	REMARKS
Number of Cases	27	24	18	19	30	26	34	30.77% incr
Reported								
Number at Very	7	1	0	7	4	21	5	400% decr
Low Risk								
Number at Low	6	2	15	7	9	2	26	Incr
Risk								
Number at High	15	21	3	5	17	3	3	Sustained
Risk				(2			(3	
				Rape)			Rape)	
Number who	0	0	0	0	0	0	0	Sustained
Tested Positive								

### 16.13 TUBERCULOSIS STATISTICAL TREND ANALYSIS

Tuberculosis is a public health concern and turns to be given all the attention needed by the relevant stakeholders across board. Suspected clients are screened for TB and the clients who tested positive are placed on treatment but once a while some of the clients' default on their treatment and relapse. In 2022, the total number of normal TB cases recorded went down by 21.09% (from 147 in 2021 to 116 in 2022) with 22 MDR cases. The number of TB cases referred to other DOT centers decreased by 34.52% (from 113 in 2021 to 84 in 2022). Out of the 84 TB cases referred to other DOT centers in 2022, 67 (79.76%) were adults and 17 (20.24%) were paediatrics. Also, 49 (58.33%) were males, out of which 38 (77.55%) and 11 (22.45%) were adult and paediatric males respectively. Whiles 35 (41.67%), females, out of which 31 (82.86%) and 6 (17.14%) were adult and paediatric females respectively. Detailed trend analysis provided in table 16.13.1 to 16.13.4 below.

Table 16.13. 1: Tuberculosis Case Detection Trend Analysis

INDICATOR	2017	2018	2019	2020	2021	2022	REMARKS
Total Normal Cases Detected	137	154	214	115	147	116	21.09% decr
MDR Cases	0	5 (4+1PXDR)	3 (2+1PXDR)	1	0	22	Incr
Total Referred	96	102	161	81	113	84	34.52% decr
Total Registered	39	45	28	34	26	14	46.15% incr
Total ward Deaths						12	

Table 16.13. 2: Yearly Cohort Analysis of Registered Cases

CATEGORY OF CASES	2017	2018	2019	202 0	202 1	2022	Remark s
New Smear positive	4	11	11	18	14	13	22.22% decr
Smear negative	23	16	16	8	3	4	62.5% decr
Extra Pulmonary	8	12	1	6	3	3	50% decr
Relapse	0	0	0	0	4	4	
Return after Defaulter	1	2	0	0	0	0	
TTT after failure	0	0	0	0	3	0	
Other previously	1	1	0	1	0	1	-
Total cases	37	45	28	34	27	25	20.59% decr
		Out	comes				
Cured	5	4	9	-	-		-
Treatment completed	25	26	16	1			-
Died	3	10	1	-	-		-
Treatment fail	0	3	1	-	-		-
Default	4	0	0	-	-		-
Loss to follow	0	3	1		-		-
Cure rate%	100%	36.4%	81.8%	-	-		-
Treatment success%	81.0%	66.7%	-	-	-		-

Table 16.13. 3: TB Referrals to Other DOT Centres

CAS	ES			REMARKS				
	GENDER	2017	2018	2019	2020	2021	2022	
Adult	Males	59	43	75	47	70	38	45.71%
								decr
	Females	29	40	53	23	39	29	25.64%
								decr
Paediatrics	Males	5	12	21	4	2	11	450% incr
	Females	6	7	12	7	2	6	200% incr
Total		99	102	161	81	113	84	25.66%
								decr

Table 16.13. 4: Audiometric Assessment for TB Management

CLASSIFICATION	2019	2020	2021	2022	Remarks
Normal Hearing	8	2	52	0	
Mild Hearing Loss	15	3	1	0	
Moderate Hearing Loss	6	0	5	0	

CLASSIFICATION	2019	2020	2021	2022	Remarks
Severe – Profound	15	0	0	0	
Hearing Loss					
Total	44	5	58	0	

# **CHAPTER SEVENTEEN**

# PHARMACEUTICAL SERVICES

### 17.1 INTRODUCTION

The pharmacy is headed by a Director, with the mandate of coordinating continuous availability of medicines in the management of patients. The directorate provides services at OPD, Polyclinic, ward and 24-hour emergency and retail services to promote access to all categories of medicine to all regardless of it being covered by NHIS or not.

# 17.2 PHARMACY DIRECTORATE'S 2022 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES

Table 17.2. 1: Pharmacy Directorate's 2022 Annual Performance against CCTH Strategic Objectives

	2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE											
CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY												
			Actual Pe	erformance	Trend							
Access 2017 2018 2019 2020 2021 2022 2022 Remark												
	Annual	Annual	Annual	Annual	Annual		Target					
% Tracer Drug	96.1%	96.1%	88.5%	84.62%	95%	86.2%	CCTH = 100%	Decr				
Availability							TH = 90%					
Prescription to	13,511:	16,097:	8,288:1	9425:1	6,422:1	6,495:1	TH = 12000:1	Incr				
pharmacy ratio	1	1										
Percentage	15.2%	18.4%	16.18%	17.1%	11.6%	8.5%	TH = 35%	Decr				
antibiotic prescribed												
Percentage	1.8%	6.3%	5.8%	24.2%	1.6%	7.23%	TH = 10%	Incr				
Injectable												
Utilization of	79.2%	97.3%	99%	11.5%	21.2%	97%	TH = 30%	Incr				
Pharmaceutical												
Care interventions												

Received and addressed 17 queries at the Drug Information Centre

Received and submitted 40 ADR reports to FDA through Pharmacovigilance monitoring (15)

Produced 14,900L liquid soap, 3,375L strong antiseptic, 10,060L distilled water and 61.70L of Syrup

58 emergency drug monitoring done to manage emergency medicine stocks

Tracer medicines list expanded from 52 to 160 by DTC and approved by management

### **CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.**

Produced 14,900L liquid soap, 3,375L strong antiseptic, 10,060L distilled water and 61.70L of Syrup

58 emergency drug monitoring done to manage emergency medicine stocks

1,007 discharge counselling done at the wards

Tracer medicines list expanded from 52 to 160 by DTC and approved by management

86.2% Availability of tracer medicines

# CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE

Constructed an operationalised a model pharmacy

Installed thermometers and thermo-hygrometer

Installed shelves in the cold with support from Roche

Funding, approval, and site allocated to setup a Renal Pharmacy

### **CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM**

# 4.1: Governance Related Performance

Medicine requirement compiled and submitted to ETC through Procurement unit

Held five (5) management meetings done

Facilitated for 3 Staff to do a 3month online training in leadership in health by the University of Washington

# 2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

#### 4.2: Human Resource Related Performance

		Actual Performance Trend									
Indicator	2017 Annual										
Doctor to pharmacist ratio	12.6:1	15.1:1	8.5:1	9:1	6.4:1	7.5:1	THs =10:1	% Diff.			
Prescription to pharmacy ratio	13,511:1	16,097:1	8,288:1	9,425:1	6,422:1	6,495:1	THs = 12000:1	Incr			

100% Staff were appraised

6 Pharmacists enrolled in Ghana College of Pharmacists residency programme

1 new Staff (Pharmacist) recruited to the pharmacy department

4.3: Finance related performance

## CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING

### 5.1 Improve on Research:

15 Pharmacovigilance monitoring done. 40 ADRs recorded and submitted to FDA.

1 survey conducted (RUM). Result ready for dissemination

# 5.2 Improve on Teaching and Learning:

Appointed five (5) preceptors in 2022 to support training of students

Held 27 clinical meetings

Organised 53 case presentations

# CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS

-

# 17.3 RATIONAL USE OF MEDICINE (RUM)

Globally, the inability for people to use medicines rationally is of great concern. Medicines are either inappropriately prescribed, dispensed, misused, overused or underused leading to scarcity or health hazards. There is also the problem of "poly pharmacy" etc. The rational use of drugs requires that patients receive medicines appropriate to their clinical needs, in doses that meet their own individual requirements, for an adequate period and at the lowest cost to them and the community, (WHO 2019 and WHO,1988).

RUM survey has been conducted regularly in CCTH over the past years as a collaboration between Drug and Therapeutics Committee and the Pharmacy Directorate. Results are usually disseminated to all clinical staff and measures are put in place to improve on the performance.

# 17.3.1 RUM SURVEY FINDINGS

The hospital in 2022 recorded an increase in its average dispensing communication time from 70.20sec to average waiting time for clients in hospital in 2022 went down by 14.18mins (from 24.45mins in 2021 to 10.27mins in 2022). Percentage generic medicines prescribed in 2022 went down marginally by 0.31% (from 92.60% in 2021 to 92.29% in 2022). Furthermore, the hospital in 2022 recorded a decrease of 3.08% (from 11.58% in 2021 to 8.5% in 2022) in percentage of antibiotics prescribed. Percentage of injectables prescribed recorded a significant increase from 1.61% in 2021 to 7.23% in 2022. In the same light, the percentage of medicines prescribed from EDL increased from 86% in 2021 to 94.24% in 2022. Also, percentage of tracer drug

availability decreased by 8.75% from 95 in 2021 to 86.25% in 2022. Detailed trend analysis provided in table 17.3.1.1 to table 17.3.1.2 below.

Table 17.3.1. 1: RUM Survey Result - Prescriber Indicator

Rum Prescribing Indicators	2017	2018	2019	2020	2021	2022	Remarks	Target
Average consulting time	14.1 mins	15.7 mins	-	21.9 mins	16.12	10.27 mins	Decr	-
Av dispensing communication time	61.5	99.2 sec	75 sec	69.51 sec	70.20 sec	80 sec	Incr	-
Average waiting time	-	30.6 mins	30.8 mins	11.9 mins	24.45 mins	10.27 mins	Decr	-
% Generic medicine prescribed	94.25%	84%	-	97.25%	92.60%	92.29%	Decr	-
% Antibiotics prescribed	15.2%	18.4%	16.18 %	17.13%	11.58%	8.5%	Decr	TH = 35%
% of injectable prescribed	1.8%	6.3%	5.8%	24.16%	1.61%	7.23%	Incr	TH = 10%
% of medicines prescribed from EDL	98.4%	90.3%	-	93.88%	85.85%	89.88%	Incr	-
% of medicines adequately labelled	78.6%	89.5%	89.9%	89%	86%	94.24%	Incr	-
% with knowledge of correct dosage regimen	92.3%	88.9%	77.9%	83.75%	79.25%	85.92%	Incr	-

Table 17.3.1. 2: RUM Survey Result - Dispensing Indicators

RUM Patient Care Indicators	2016	2017	2018	2019	2020	2022	Remarks	Target
Av dispensing comm time	61.5	99.2 secs	75 sec	69.51 sec	70.20 Sec	80 Sec	Incr	
Av waiting time	-	30.6 mins	30.8mins	11.9 mins	24.45 mins	10.27	Decr	
% of tracer drug availability	96.2%	96.1%	88.50%	84.62%	95%	86.25%	Decr	CCTH = 100% TH = 90%
% Of medicines adequately labelled	78.6%	89.5%	89.9%	89%	86%	94.24%	Incr	
% With knowledge of correct dosage regimen	92.3%	88.9%	77.9%	83.75%	79.25%	85.92%	Incr	

# 17.4 TREND PERFORMANCE OF PHARMACY DEPARTMENT

Percentage tracer medicines availability in 2022 decreased from 95% in 2021 to 86.25% in 2022. Clinical pharmacy practice on the wards decreased from 90% in 2021 to 76% in 2022. In the same light, the number of prescriptions served decreased by

6.96% (from 160,563n in 2021 to 149,390 in 2022). Also, prescription to pharmacist ratio in 2022 increased from 6,422:1 from 2021 to 6,495:1 in 2022.

The 24hr pharmacy in 2022 as seen over the years recorded the highest prescriptions served to clients but with a marginal decrease of 9.23% (from 62,996 in 2021 to 57,180 in 2022) compared to 2021. Prescriptions served at the Accident and Emergency pharmacy reduced by 12.63% (from 26,265 in 2021 to 22, 947 in 2022). In the same light, prescriptions served at the Outpatient (main) pharmacy went down by 11.62% (from 21,677 in 2021 to 19,159 in 2022). Also, TB clinic recorded a significant decrease of 54.90% in number of prescriptions served and ART clinic recorded a decrease of 14.2% (from 5,721 in 2021 to 4,896 in 2022). Outpatients Annex pharmacy on the other hand recorded a marginal increase of 0.30% (from 22,377 in 2021 to 22,445 in 2022) in 2022. Also, prescriptions served at the in-patient/ward pharmacy went up by 5.9% (from 20,600 in 2021 to 21,815 in 2022). Further, prescriptions served at the oncology suite went up significantly by 145.83% (from 264 in 2021 to 649 in 2022). In 2022, utilization of pharmaceutical care interventions in the hospital went up by 75.8% (from 21.2% in 2021 to 97% in 2022). Detailed analysis is provided in table 17.4.1 to table 17.4.3 below.

Table 17.4. 1: Trend Performance of Pharmacy Department

Indicator	2017	2018	2019	2020	2021	2022	Remarks
% Tracer Medicines Availability	96.15%	96.1%	88.5%	84.62%	95%	86.25%	Decr
Clinical Pharmacy Practice on Wards	90%	90%	90%	90%	90%	76%	Decr
No of Drug Bulletins issued	6	6	2	4	4	2	Decr
No of Students trained	41	30	13	11	106	90	15.09% decr
Total number of prescriptions served	109,557	144,882	149,294	169,655	160,563	149,390	6.96% decr
No of Researches conducted	2	2	1	2	2	1	50% decr
Prescriptions to Pharmacists ratio	13,694:1	16,097:1	8,288:1	9425:1	6,422:1	6,495:1	Incr

Table 17.4. 2: Five-Year Trend of Prescriptions Served by Various Pharmacy Outlets

PRESCRIPTIONS SERVED	2018	2019	2020	2021	2022	REMARKS
Out-Patient Dept. (OPD) Main	25,344	26,944	18,916	21,677	19,159	11.62% decr
Out-Patient Dept. (OPD) Annex	18,804	21,895	17,431	22,377	22,445	0.30% incr
Accident & Emergency	31,152	33,964	52,548	26,265	22,947	12.63% decr
In-Patient/Ward Pharmacy	8,584	8,539	11,966	20,600	21,815	5.9% incr
24hour Pharmacy	36,872	57,952	62,548	62,996	57,180	9.23% decr
Oncology suite	-	-	314	264	649	145.83% incr
TB Clinic	-	-	456	663	299	54.90% decr

PRESCRIPTIONS SERVED	2018	2019	2020	2021	2022	REMARKS
ART Clinic	-	-	6,276	5721	4,896	14.42% decr
Total	120,756	149,294	169,655	160,563	149,390	6.96% decr

Table 17.4. 3: Pharmaceutical Services Performance under THs KPI

KPI	2017	2018	2019	2020	2021	2022	REMA RKS	TARGET	MEASUREMENT
Tracer Drug availability	96.15%	96.10%	88.5%	84.62	95%	86.25 %	Decr	CCTH = 100% TH = 90%	Medicines available / Total medicines in the tracer medicines list * 100
Prescriptions - Pharmacist Ratio	13,511: 1	16,097: 1	8,288:1	9425:1	6422:1	6495:1	Incr	TH = 12000:1	Total no. of prescription served / total no. of pharmacists
Percentage antibiotic prescribed	15.2%	18.4%	16.2%	17.13	11.58 %	8.5	Decr	TH = 35%	Total number of antibiotic / Total of medicines on a prescription * 100
Percentage injectable prescribed	1.8%	6.3%	5.8%	24.16	1.61%	7.23	Incr	TH = 10%	Total number of injectable / Total of medicines on a prescription * 100
Utilization of pharmaceutic al care interventions	79.2%	97.3% (18.1% incr)	99% (1.7% incr)	11.52 %	21.2%	97%	Incr	TH = 30%	No. of interventions / no. of cases seen * 100
Proportion of ward round inputs by clinical pharmacist utilized	-	80%	-	89.29 %	100%	100%	Sustai ned		Number of clinical pharmacist inputs utilized / Total number of inputs

# 17.5 ANTI-RETRO VIRAL THERAPY (ART)

The total number of HIV clients served with ART in 2022 decreased by 14.42% (from 5,721 in 2021 to 4,896 in 2022). In the same light, the average number of clients seen per month also went down by 8.72% (from 447 in 2021 to 408 in 2022). The number of children below 14yrs placed on ARV drugs for 2022 went up by 33.33% (from 3 in 2021 to 4 in 2022). The number of HIV exposed babies given prophylaxis in 2022 also went down by 13.85% (from 65 in 2021 to 56 in 2022). Detailed analysis is provided in table 17.5.1 below.

Table 17.5. 1: Summary of Performance - Anti-Retro Viral Therapy (ART)

INDICATOR	2019	2020	2021	2022	REMARKS
Attendance (Total no. of Clients)	5,520	6,276	5,721	4,896	14.42% Decr
Av. number of Client Seen per month	460	523	477	408	8.72% decr
New Adults	84	81	77	57	25.97% decr

INDICATOR	2019	2020	2021	2022	REMARKS
Males	22	20	26	19	26.92% decr
Females	62	61	51	38	25.49% decr
No. of Children below 14yrs put AVR	6	13	3	4	33.33% incr
drugs					
Males	2	6	1	3	200% decr
Females	4	7	2	1	50% decr
No. of HIV exposed babies given prophylaxis	55	66	65	56	13.85% decr
No. of post exposure prophylaxis	43	47 (42 CCTH cases)	39	34	10.26% decr

# **SECTION 4**

# **CHAPTER EIGHTEEN**

# CHALLENGES, MITIGATING STRATEGIES AND CONCLUSION

# **18.1 CHALLENGES AND MITIGATING STRATEGIES**

Table 18.1. 1: Challenges and Mitigating Strategies

KEY CHALLENGES	MITIGATION STRATEGIES
High Institutional Maternal and Neonatal Mortalities	Dialogue with GHS to support periphery referring facilities through training and MOs support
Absence of NICU and PICU	Continue engagement of key stakeholders for support
Inadequate space for Clinical Services (Inadequate Infrastructure)	Continue engagement of key stakeholders for support
Delay in NHIS reimbursement	Continuous dialogue with NHIA yielded some positive results. However more will be done going forward
Illegal sale, development and encroachment of hospital lands	Continue with court issue and others measures to prevent illegal developments on the hospital land
Inadequate Staff Accommodation	Pursue the PPP agreement for the construction of 270 accommodation units
Inadequate and ageing equipment e.g., Power Generators, Laundry and CSSD equipment, etc.	Work with MOH for replacement of obsolete equipment and machinery (Laundry, CSSD, Generator Sets, etc).
MRI Machines not functioning	Still engaging key stakeholders for support
Funding Challenges for key projects	Continue to engage key stakeholders for support
Sustainability of the programme initiatives due to funding	Implementation of Sustainability plans

### **18.2 CONCLUSION**

The hospital recorded some significant improvement in 2022 over the previous year as a result of collective effort from all stakeholders. In the same light, some gaps were identified in performance, which are of great concern to all. We will deal with the key challenges hindering the hospital's capacity to deliver effectively on its mandate during the coming year. We implore all to support us in our holistic and targeted strategic approach to achieve the vision of the hospital.