

CAPE COAST TEACHING HOSPITAL



2021 ANNUAL PERFORMANCE REPORT

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TABLE OF CONTENTS

LIST OF TABLES.....	viii
LIST OF FIGURES.....	xvii
LIST OF ACRONYMS.....	xxiii
ACKNOWLEDGEMENT.....	xxvi
MESSAGE FROM THE CHIEF EXECUTIVE	xxvii
PREFACE	xxx
SECTION 1	1
CHAPTER ONE	2
INTRODUCTION.....	2
1.0 BACKGROUND.....	2
1.1 PROFILE OF CCTH	2
1.1.1 VISION	2
1.1.2 MISSION	2
1.1.3 CORE VALUES	3
1.2 MEDIUM-TERM STRATEGIC OBJECTIVES (2020 -2025).....	3
1.3 SERVICES PROVIDED AT CCTH.....	3
1.4 PRIORITIES FOR 2021	4
1.5 SUMMARY OF 2021 CCTH PERFORMANCE UNDER THE STRATEGIC OBJECTIVES	5
SECTION 2	31
CHAPTER TWO	32
HUMAN RESOURCE.....	32
2.1: INTRODUCTION.....	32
2.2: STAFF STRENGTH ANALYSIS.....	32
2.3 STAFF GAP ANALYSIS AND INTERVENTION IN 2021	38
2.4. PROMOTIONS AND STAFF DEVELOPMENT	41
2.4.1 PERFORMANCE APPRAISAL.....	45
2.5 STAFF TURNOVER.....	46
2.6: HUMAN RESOURCE WASTAGE.....	48
2.7 IMPROVING TEACHING AND LEARNING	48
2.7.1 GENERAL TRAINING REPORT IN 2021	48
2.7.2 POSTGRADUATE TRAINING	49
CHAPTER THREE	51
CLINICAL CARE SERVICES	51
3.0: INTRODUCTION.....	51

3.1 PART ONE - THE HOSPITAL'S COVID-19 PANDEMIC RESPONSE STRATEGY IMPLEMENTATION STATUS FROM 2020 TO 2021.....	51
3.1.2 OUTCOME OF THE COVID-19 PANDEMIC RESPONSE AT CCTH.....	52
3.1.3 EXECUTION OF CCTH COVID-19 RESPONSE STRATEGY.....	53
3.1.4 MANAGEMENT OF COVID-19 CASES AT CCTH.....	54
3.1.5 COVID-19 INFECTION AMONG CCTH STAFF.....	59
3.1.6 COVID 19 LABORATORY INVESTIGATION.....	61
3.1.7 ANALYSIS OF COVID-19 VACCINATION AT CCTH.....	61
CHAPTER THREE.....	63
CLINICAL CARE SERVICES.....	63
3.2 OUT-PATIENT SERVICES UTILIZATION.....	63
3.3 TOP TWENTY OPD MORBIDITIES IN 2021.....	69
3.4 IN-PATIENT SERVICE UTILIZATION.....	71
3.5 TOP TEN CAUSES OF ADMISSION.....	75
3.6 INSTITUTIONAL MORTALITY.....	75
3.6.1 TOP TEN CAUSES OF MORTALITY.....	78
3.7 OBSTETRIC SERVICES.....	78
3.7.1 MATERNAL MORTALITY.....	80
3.7.2 CAUSES OF MATERNAL MORTALITY.....	81
3.7.3: REFERRAL FACILITIES OF MATERNAL DEATHS.....	81
3.8 CHILD HEALTH SERVICES.....	82
3.8.1 TOP 10 CAUSES OF CHILD HEALTH ADMISSION.....	84
3.8.2 CHILD HEALTH PERFORMANCE INDICATORS.....	85
3.8.3 TOP TEN CAUSES OF MORTALITY AMONG CHILDREN UNDER FIVE YEARS.....	86
3.9 SURGICAL SERVICES.....	88
3.9.1 THEATRE SERVICES UTILIZATION.....	88
3.9.2 TOP TEN SURGICAL OPERATIONS.....	91
3.10: DIAGNOSTIC SERVICES UTILIZATION.....	91
3.11 BLOOD TRANSFUSION AND BLOOD DONATION.....	93
3.12 LABORATORY SAMPLES REFERRED-OUT OF CCTH.....	95
3.13 DIALYSIS SERVICE UTILIZATION.....	96
3.13.1 DIALYSIS SERVICE UTILIZATION.....	96
CHAPTER FOUR.....	97
TECHNICAL AND GENERAL SERVICES.....	97
4.1 INTRODUCTION.....	97
4.2 ESTATE - PHYSICAL INFRASTRUCTURE.....	97

4.3 ICT	97
4.4 GENERAL AND MEDICAL EQUIPMENT & MEDICAL FURNITURE	97
4.5 EQUIPMENT UTILIZATION AND DOWN TIME ANALYSIS	98
4.6 TRANSPORT SERVICES.....	100
CHAPTER FIVE	101
FINANCIAL PERFORMANCE.....	101
5.1 INTRODUCTION.....	101
5.2 SOURCES OF FUNDING.....	101
5.3 FINANCIAL PERFORMANCE HIGHLIGHTS	101
5.4 TREND OF IGF BUDGET EXECUTION GH¢.....	103
5.5 IGF PERFORMANCE STRUCTURE GH¢.....	105
5.6 REVENUE CONTRIBUTION BY DEPARTMENT (GH¢).....	106
5.7 STATUS OF NHIS CLAIMS FOR 2021	108
5.8 ANALYSIS OF ASSETS AND LIABILITIES AND CASH FLOWS	109
CHAPTER SIX.....	111
COLLABORATION AND SUPPORT	111
6.1 INTRODUCTION.....	111
6.2 COLLABORATORS	111
SECTION 3	113
CHAPTER SEVEN	114
OUT PATIENT SUB-BMC	114
7.1 BACKGROUND.....	114
7.2 OPD SERVICES	114
7.3 OPD 2021 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES.....	115
7.4 SUMMARY OF OPD PERFORMANCE	116
7.5 TOP 10 OPD MORBIDITY	120
7.6 REHABILITATION SERVICES	122
7.6.1 PHYSIOTHERAPY.....	123
7.6.2: CLINICAL PSYCHOLOGY SERVICES	125
7.6.3 COMMUNITY PSYCHIATRY SERVICES	127
7.6.4 DIET & NUTRITION SERVICES	127
CHAPTER EIGHT.....	130
ACCIDENT AND EMERGENCY SUB-BMC.....	130
8.1 INTRODUCTION.....	130
8.2 A&E SUB-BMC'S 2021 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVE.....	130
8.3 TREND OF CASES SEEN AT A&E.....	131

8.4.1 TOP TEN CAUSES OF A&E ADMISSION.....	134
8.5 EMERGENCY CASES SEEN ACCORDING TO THE ACUITY	136
8.6 TOP 10 FACILITIES A&E CASES REFERRED-IN	138
8.7 TOP CAUSES OF DEATH AT A&E IN 2021	139
CHAPTER NINE	141
DIAGNOSTIC SERVICES.....	141
9.1 INTRODUCTION.....	141
9.2 PERFORMANCE OF DIAGNOSTICS AND IMAGING SUB-BMCs AGAINST CCTH STRATEGIC OBJECTIVES	141
9.3 TREND OF DIAGNOSTIC INVESTIGATIONS	143
9.4 LABORATORY SERVICES.....	145
9.5 LABORATORY SAMPLES REFERRED OUTSIDE CCTH	153
9.6 BLOOD TRANSFUSION & BLOOD DONATION.....	154
9.7. HAEMATOLOGY SERVICES.....	157
9.8 RADIOLOGICAL SERVICES	159
9.9 PATHOLOGY SERVICES	163
CHAPTER TEN	165
MATERNAL HEALTH SUB-BMC.....	165
10.1 INTRODUCTION.....	165
10.2 PERFORMANCE OF MATERNAL HEALTH SUB-BMC AGAINST CCTH STRATEGIC OBJECTIVES.....	165
10.3 MATERNAL HEALTH OPD SERVICES UTILIZATION	167
10.4 IN-PATIENT STATISTICAL PERFORMANCE	169
10.5 TOP 10 OBSTETRIC CONDITIONS.....	169
10.6 MATERNAL HEALTH - KEY PERFORMANCE INDICATORS	170
10.7 TOP 10 GYNAECOLOGY CONDITIONS	174
10.8 OBS & GYNAE SURGERIES PERFORMED.....	175
10.9 MATERNAL MORTALITY	176
10.10 TOP CAUSES OF MATERNAL MORTALITY.....	177
10.11 REFERRAL FACILITIES OF THE MATERNAL DEATHS.....	177
CHAPTER ELEVEN	180
CHILD HEALTH SUB-BMC.....	180
11.1 BACKGROUND.....	180
11.2 CHILD HEALTH SUB-BMC'S 2021 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES	180
11.3 CHILD HEALTH OPD SERVICES UTILIZATION.....	182
11.4 CHILD HEALTH ADMISSIONS	183
11.5 TOP 10 CAUSES OF CHILD HEALTH ADMISSION.....	184

11.6 CHILD MORTALITIES.....	185
11.7 NEONATAL DEATH'S AUDITED.....	186
11.8 CHILDREN UNDER FIVE MORTALITY.....	187
11.9 TOP TEN CAUSES OF UNDER 5 MORTALITY.....	187
CHAPTER TWELVE.....	190
INTERNAL MEDICINE SUB-BMC.....	190
12.1 INTRODUCTION.....	190
12.2 INTERNAL MEDICINE SUB-BMC'S PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES.....	190
12.3 INTERNAL MEDICINE OPD SERVICES UTILISATION.....	191
12.4 INTERNAL MEDICINE IN-PATIENT PERFORMANCE.....	192
12.4.1 TOP TEN CAUSES OF ADMISSION AT INTERNAL MEDICINE.....	194
12.4.2 MORTALITY TREND AT INTERNAL MEDICINE SUB-BMC.....	196
12.4.3 TOP TEN CAUSES OF DEATH AT INTERNAL MEDICINE.....	197
CHAPTER THIRTEEN.....	198
CRITICAL CARE AND ANAESTHESIA SUB-BMC.....	198
13.1 INTRODUCTION.....	198
13.2 CRITICAL CARE AND ANAESTHESIA SUB-BMC'S PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES.....	198
13.3 ANAESTHESIA OPD SERVICES UTILISATION.....	199
13.4 CRITICAL CARE AND ANAESTHESIA IN-PATIENT PERFORMANCE.....	200
CHAPTER FOURTEEN.....	202
SURGICAL SUB-BMC.....	202
14.1 BACKGROUND.....	202
14.2 SURGICAL SUB-BMC'S 2021 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES.....	202
14.3 OUTPATIENT SURGICAL SERVICES UTILIZATION.....	203
14.4 SURGICAL STATISTICAL PERFORMANCE – INPATIENT.....	205
14.4.1 TOP TEN CAUSES OF SURGICAL ADMISSIONS.....	206
14.5 SURGERIES PERFORMED PER SURGICAL SUB-SPECIALTY.....	207
14.5.1 TOP TEN CAUSES OF SURGICAL PROCEDURES.....	209
CHAPTER FIFTEEN.....	211
DENTAL, EYE EAR NOSE & THROAT (DEENT) SUB-BMC.....	211
15.1 INTRODUCTION.....	211
15.2 DEENT SUB-BMC'S 2021 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES.....	211
15.3 DEENT OPD SERVICES UTILIZATION.....	212
15.4 TOP TEN DEENT OPD CONDITIONS SEEN.....	215
15.5 DEENT ADMISSIONS.....	217

15.6 SURGERIES PERFORMED BY DEENT SUB-BMC.....	218
15.7 PERFORMANCE FROM OUTREACH PROGRAMME.....	220
CHAPTER SIXTEEN	222
PUBLIC HEALTH SERVICES	222
16.1 INTRODUCTION	222
16.2 PUBLIC HEALTH UNIT'S 2021 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES.....	222
16.3 IMMUNIZATION TREND (EPI).....	223
16.4: CHILD WELFARE SERVICES	225
16.5 INTEGRATED DISEASE SURVEILLANCE AND RESPONSE	225
16.6 INFLUENZA SENTINEL SURVEY	226
16.7 REPRODUCTIVE AND CHILD HEALTH SERVICES.....	226
16.8 FAMILY PLANNING	227
16.9 HEALTH PROMOTION ACTIVITIES	229
16.10 HIV / AIDS CLINIC	230
16.11 PREVENTION OF MOTHER TO CHILD TRANSMISSION (PMTCT) PROGRAMME	231
16.12 POST EXPOSURE PROPHYLAXIS.....	231
16.13 TUBERCULOSIS STATISTICAL TREND ANALYSIS.....	232
CHAPTER SEVENTEEN.....	234
PHARMACEUTICAL SERVICES	234
17.1 INTRODUCTION	234
17.2 PHARMACY DIRECTORATE'S 2021 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES.....	234
17.3 RATIONAL USE OF MEDICINE (RUM)	235
17.3.1 RUM SURVEY FINDINGS	235
17.4 TREND PERFORMANCE OF PHARMACY DEPARTMENT.....	236
17.5 ANTI-RETRO VIRAL THERAPY (ART).....	238
SECTION 4	240
CHAPTER EIGHTEEN	241
CHALLENGES, MITIGATING STRATEGIES AND CONCLUSION	241
18.1 CHALLENGES AND MITIGATING STRATEGIES.....	241
18.2 CONCLUSION.....	241

LIST OF TABLES

TABLE 1.3. 1: CURRENT HEALTH CARE SERVICES.....	3
TABLE 1.5. 1: SUMMARY OF 2021 PERFORMANCE UNDER THE STRATEGIC OBJECTIVES	5
TABLE 2.2. 1: TREND ANALYSIS OF TOTAL STAFF STRENGTH.....	33
TABLE 2.2. 2: TREND OF TOTAL STAFF AVAILABLE AT CCTH IN 2021	33
TABLE 2.2.2. 1: COMPOSITION OF TOTAL STAFF BY DIRECTORATES AT CCTH.....	34
TABLE 2.2. 3:TREND OF DOCTORS BY CATEGORY	34
TABLE 2.2. 4: NUMBER OF SPECIALISTS BY CATEGORY	34
TABLE 2.2.4. 1 : TREND OF NURSES AND MIDWIVES BY CATEGORY	35
TABLE 2.2. 5: CATEGORIES OF NEWLY RECRUITED STAFF AT CCTH IN 2021	35
TABLE 2.3. 1: GAP ANALYSIS FOR DOCTORS	38
TABLE 2.3. 2: STAFF GAP ANALYSIS – NURSES	39
TABLE 2.3. 3: GAP ANALYSIS FOR ALLIED HEALTH PROFESSIONALS	40
TABLE 2.3. 4: GAP ANALYSIS FOR PHARMACISTS	40
TABLE 2.4. 1: CHANGE OF GRADES IN 2021	41
TABLE 2.4. 2: TREND ANALYSIS OF CHANGE OF GRADES	42
TABLE 2.4.3: ANALYSIS OF STUDY LEAVES GRANTED	42
TABLE 2.4. 4: ANALYSIS OF STUDY LEAVE GRANTED TO DOCTORS.....	43
TABLE 2.4. 5: DOCTORS WHO RESUMED DUTY.....	44
TABLE 2.4. 6: NURSES WHO RESUMED DUTY FROM STUDY LEAVE	45
TABLE 2.4.7: OTHER CATEGORIES OF STAFF WHO RESUMED DUTY	45
TABLE 2.5. 1: STAFF TURNOVER IN 2021	47
TABLE 2.5. 2: ANALYSIS OF LEAVE OF ABSENCES AT CCTH	47
TABLE 2.6. 1: ANALYSIS OF HUMAN RESOURCE WASTAGE	48
TABLE 2.7.2. 1: DOCTORS UNDER TRAINING BY SPECIALTIES	49
TABLE 2.7.2. 2: RESIDENCY TRAINING.....	50
TABLE 3.1.4. 1: MONTHLY TREND OF COVID-19 CASES MANAGED AT CCTH FROM 2020 TO 2021	55
TABLE 3.1.4. 2: SUMMARY OF OVERALL CASE MANAGEMENT FROM APRIL 2020 TO 2021	56
TABLE 3.1.4. 3: TREND OF COVID-19 CASE ADMISSION AT CCTH.....	57
TABLE 3.1.4. 4: ANALYSIS OF COVID-19 CASES MANAGED AND ADMISSION OPTIONS	57

TABLE 3.1.5. 1 : CADRE OF STAFF INFECTED WITH COVID-19.....	60
TABLE 3.1.6. 1: COVID 19 LABORATORY INVESTIGATION	61
TABLE 3.1.7. 1: DETAILS OF THE COVID-19 VACCINATION CARRIED OUT BY CCTH FROM MONDAY 29TH MARCH TO AS AT 28 TH MARCH 2022.	62
TABLE 3.2. 1: OPD UTILIZATION BY SPECIALTY FROM 2018 TO 2021	63
TABLE 3.2. 2: GENERAL OPD CLINIC ATTENDANCE.....	64
TABLE 3.2. 3: MONTHLY TREND OF OPD SERVICES UTILIZATION.....	65
TABLE 3.2. 4: OPD PERFORMANCE UNDER THs KPIs.....	66
TABLE 3.2. 5: TREND IN OPD SERVICES UTILIZATION BY CLINIC SPECIALTY	66
TABLE 3.2. 6: UTILIZATION OF HIV/TB SERVICES	69
TABLE 3.3. 1: TOP TWENTY OPD MORBIDITIES IN 2021	70
TABLE 3.4. 1: ADMISSION TREND OF CLINICAL SUB-BMCs	72
TABLE 3.4. 2: PERCENTAGE TREND OF REFERRALS AND BED UTILISATION.....	73
TABLE 3.4. 3: IN-PATIENT SERVICE UTILIZATION BY WARDS – BED STATE - A	74
TABLE 3.4. 4: IN-PATIENT SERVICE UTILIZATION – BED STATE - B	74
TABLE 3.4. 5: IN-PATIENT SERVICE UTILIZATION – BED STATE - C.....	74
TABLE 3.5. 1: TOP TEN CAUSES OF ADMISSION	75
TABLE 3.6. 1: INSTITUTIONAL MORTALITY CATEGORIZATION	77
TABLE 3.6. 2: INSTITUTIONAL MORTALITY RATE BY WARD.....	77
TABLE 3.6.1. 1: TOP TEN CAUSES OF INSTITUTIONAL MORTALITY	78
TABLE 3.7. 1: OBSTETRIC SERVICE INDICATORS.....	79
TABLE 3.7.1. 1: DURATION OF MATERNAL DEATH.....	81
TABLE 3.7.2. 1: CAUSES OF MATERNAL MORTALITY.....	81
TABLE 3.7.3. 1: REFERRAL FACILITIES OF MATERNAL DEATHS.....	82
TABLE 3.8. 1: CHILD HEALTH OPD SERVICES UTILIZATION.....	83
TABLE 3.8. 2: TREND OF PAEDIATRIC AND NEONATAL ADMISSIONS.....	84

TABLE 3.8.1. 1: TOP 10 CAUSES OF CHILD HEALTH ADMISSION.....	84
TABLE 3.8.2. 1: CHILD HEALTH PERFORMANCE INDICATORS.....	85
TABLE 3.8.3. 1: THE COMPARATIVE ANALYSIS OF TOP TEN CAUSES OF UNDER 5 MORTALITY	87
TABLE 3.9.1. 1: TREND OF THEATRE SERVICE UTILIZATION	89
TABLE 3.9.1. 2: SURGICAL SERVICE PERFORMANCE UNDER THS KPI	89
TABLE 3.9.1. 3: TREND OF SURGERIES PERFORMED BY SPECIALTY.....	90
TABLE 3.9.2. 1: TOP TEN SURGICAL OPERATIONS PERFORMED.....	91
TABLE 3.10. 1: TREND ANALYSIS OF DIAGNOSTICS SERVICES	92
TABLE 3.10. 2: PERFORMANCE UNDER THS KPI.....	93
TABLE 3.11. 1: TREND ANALYSIS OF BLOOD TRANSFUSION SERVICES	94
TABLE 3.11. 2: TREND ANALYSIS OF BLOOD DONATION	95
TABLE 3.12. 1: SAMPLES REFERRED-OUT OF CCTH.....	95
TABLE 3.13.1. 1: TREND ANALYSIS OF RENAL AND DIALYSIS SERVICES	96
TABLE 4.5. 1: SELECTED EQUIPMENT DOWNTIME ANALYSIS OF IMAGING EQUIPMENT.....	98
TABLE 4.5. 2: EQUIPMENT UTILIZATION – IMAGING	99
TABLE 4.6. 1: VEHICLE INVENTORY BY AGE BLOCK.....	100
TABLE 5.3. 1: BROAD REVENUE CATEGORY.....	102
TABLE 5.3. 2: REVENUE DISTRIBUTION BY SOURCE.....	103
TABLE 5.3. 3: TREND OF FINANCIAL HIGHLIGHTS	103
TABLE 5.4. 1: SUMMARY OF IGF BUDGET EXECUTION RATE	104
TABLE 5.4. 2: DETAILS OF IGF BUDGET EXECUTION RATE	104
TABLE 5.5. 1: IGF PERFORMANCE STRUCTURE GH¢.....	105
TABLE 5.5. 2: COMPOSITION OF IGF	106
TABLE 5.5. 3: PERCENTAGE COMPOSITION OF IGF REVENUE.....	106
TABLE 5.6.1: PROPORTION OF REVENUE CONTRIBUTION BY DEPARTMENT.....	107

TABLE 5.6. 2: FINANCIAL PERFORMANCE, EXPENDITURE (GH¢)	108
TABLE 5.7. 1: STATUS OF NHIS CLAIMS	108
TABLE 5.8. 1: TREND OF ASSETS AND LIABILITIES.....	109
TABLE 5.8. 2: CASH FLOW.....	109
TABLE 6.2. 1: COLLABORATOR(S) AND SUPPORTS RECEIVED IN 2021	111
TABLE 7.2. 1: TYPES OF OPD SERVICES PROVIDED.....	114
TABLE 7.3. 1: SUMMARY OF OPD 2021 ANNUAL PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES.....	115
TABLE 7.4. 1: GENERAL OPD CLINIC ATTENDANCE.....	117
TABLE 7.4. 2: MONTHLY TREND OF OPD UTILIZATION SERVICE	118
TABLE 7.4. 3: OPD PERFORMANCE UNDER THE KEY PERFORMANCE INDICATOR	118
TABLE 7.4. 4: OPD SERVICE STATISTICAL PERFORMANCE BY CLINIC	119
TABLE 7.5. 1: TREND OF TOP TWENTY OPD MORBIDITIES	121
TABLE 7.6. 1: REHABILITATION SERVICES	123
TABLE 7.6.1. 1: COMPARATIVE ANALYSIS OF PHYSIOTHERAPY CASES	124
TABLE 7.6.2. 1: TREND OF CLINICAL PSYCHOLOGY CASES SEEN	126
TABLE 7.6.3. 1: COMMUNITY PSYCHIATRY CASES SEEN IN 2021	127
TABLE 7.6.4. 1: TOP TEN DIET & NUTRITION CASES.....	128
TABLE 8.2. 1: A&E SUB-BMC'S 2021 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES	130
TABLE 8.3. 1: COMPARATIVE PERFORMANCE TREND AT A&E.....	131
TABLE 8.3. 2: MONTHLY TREND ANALYSIS OF CASES SEEN AT A&E.....	133
TABLE 8.3. 3: TREND ANALYSIS OF A&E ADMISSIONS	134
TABLE 8.4.1. 1: TOP TEN CAUSES OF A&E ADMISSION	135

TABLE 8.4.1. 2: TRAUMATIC CONDITIONS BREAKDOWN.....	135
TABLE 8.5. 1: PERCENTAGE COMPOSITION OF CASES SEEN PER ACUITY.....	137
TABLE 8.5. 2: YEARLY TREND OF EMERGENCY CASES TRIAGED PER ACUITY	137
TABLE 8.5. 3: MONTHLY TREND OF EMERGENCY CASES TRIAGED BY ACUITY IN 2021.....	137
TABLE 8.6. 1: TREND OF TOTAL A&E REFERRALS.....	138
TABLE 8.6. 2: TOP 10 REFERRING FACILITIES TO A&E	139
TABLE 8.7. 1: TOP CAUSES OF DEATH AT A&E	140
TABLE 9.2. 1: SUMMARY OF THE 2021 ANNUAL PERFORMANCE OF DIAGNOSTICS SUB-BMC UNDER THE STRATEGIC OBJECTIVES.	141
TABLE 9.3. 1: DIAGNOSTICS SERVICES TREND.....	144
TABLE 9.3. 2: PERFORMANCE UNDER THS KPI.....	144
TABLE 9.4. 1: LABORATORY DEPARTMENT CLIENT DISTRIBUTION TREND	146
TABLE 9.4. 2: BIOCHEMISTRY PROFILE TREND	147
TABLE 9.4. 3: BIOCHEMISTRY INVESTIGATION TREND -THYROID & CARDIAC PROFILE.....	148
TABLE 9.4. 4: BIOCHEMISTRY INVESTIGATION TREND - FERTILITY MARKERS.....	148
TABLE 9.4. 5: BIOCHEMISTRY INVESTIGATION TREND - TUMOUR & INFECTIOUS MARKERS ...	148
TABLE 9.4. 6: MICROBIOLOGY – PARASITOLOGY AND BACTERIOLOGY TREND	149
TABLE 9.4. 7: MICROBIOLOGY – BACTERIOLOGY TREND	150
TABLE 9.4. 8: TREND OF OUTCOME OF TB CULTURE (MYCOBACTERIOLOGY FOR TB)	151
TABLE 9.4. 9: MICROBIOLOGY – SEROLOGY TREND.....	152
TABLE 9.4. 10: SEROLOGY & IMMUNOLOGY - ELISA TEST.....	152
TABLE 9.4. 11: MICROBIOLOGY – VIROLOGY/SARS-CoV-2 – SUMMARY OF PERFORMANCE	152
TABLE 9.4. 12: HAEMATOLOGY INVESTIGATION TREND.....	153
TABLE 9.5. 1: LABORATORY SAMPLES REFERRED TO OUTSIDE FACILITIES	153
TABLE 9.6. 1 TREND IN BLOOD TRANSFUSION.....	155
TABLE 9.6. 2: BLOOD DONATION TREND.....	155
TABLE 9.6. 3: TREND OF BLOOD AND BLOOD PRODUCTS TRANSFUSED TO VARIOUS WARDS	156
TABLE 9.6. 4: REASONS FOR DISCARDING BLOOD	157
TABLE 9.7. 1: HAEMATOLOGY CLINIC OPD ATTENDANCE	157
TABLE 9.7. 2: TREND OF HAEMATOLOGY SERVICE UTILIZATION	158
TABLE 9.7. 3: TOP 6 COMMON HAEMATOLOGY CASES MANAGED	158

TABLE 9.8. 1: TREND OF TOTAL RADIOLOGY INVESTIGATIONS AND CLIENTS	159
TABLE 9.8. 2: CATEGORY OF RADIOLOGY INVESTIGATIONS	160
TABLE 9.8. 3: TABLE MONTHLY TREND OF RADIOLOGY INVESTIGATIONS	161
TABLE 9.8. 4: MONTHLY TREND OF RADIOLOGY CLIENTS	162
TABLE 9.9. 1: TREND OF PATHOLOGY SERVICES	163
TABLE 9.9. 2: PATHOLOGY CASES RECEIVED FROM THE WARDS	164
TABLE 10.2. 1: 2021 ANNUAL PERFORMANCE OF MATERNAL HEALTH SUB-BMC AGAINST CCTH STRATEGIC OBJECTIVES.....	165
TABLE 10.3. 1: OPD ATTENDANT FOR MATERNAL HEALTH	168
TABLE 10.4. 1: MATERNAL IN-PATIENT STATISTICS	169
TABLE 10.5. 1: TOP 10 OBSTETRIC CONDITIONS.....	169
TABLE 10.6. 1: MATERNAL HEALTH KEY PERFORMANCE INDICATORS	173
TABLE 10.7. 1: TOP 10 GYNAECOLOGY CONDITIONS	174
TABLE 10.8. 1: MAJOR OBS. & GYNAE SURGERIES PERFORMED IN THE HOSPITAL	175
TABLE 10.9. 1: DURATION OF MATERNAL DEATHS.....	177
TABLE 10.10. 1: TOP CAUSES OF MATERNAL MORTALITY	177
TABLE 10.11. 1: REFERRAL FACILITIES OF THE MATERNAL DEATHS	178
TABLE 11.2. 1: CHILD HEALTH SUB-BMC'S 2021 ANNUAL PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES	180
TABLE 11.3. 1: CHILD HEALTH OPD CLINIC ATTENDANCE TREND	183
TABLE 11.4. 1: TREND OF CHILD HEALTH IN-PATIENTS PERFORMANCE ANALYSIS – PAEDIATRIC WARD.....	184
TABLE 11.4. 2: TREND OF CHILD HEALTH IN-PATIENTS PERFORMANCE ANALYSIS – NICU WARD.....	184

TABLE 11.5. 1: TOP 10 CAUSES OF CHILD ADMISSION.....	185
TABLE 11.6. 1: TREND ANALYSIS OF CHILD MORTALITY	186
TABLE 11.7. 1: TREND OF NEONATAL DEATHS AUDITED FROM 2018 TO 2021.....	187
TABLE 11.9. 1: COMPARATIVE ANALYSIS OF TOP TEN CAUSES OF UNDER 5 MORTALITY	188
TABLE 12.2 1: INTERNAL MEDICINE SUB-BMC'S 2021 ANNUAL PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES	190
TABLE 12.3. 1: INTERNAL MEDICINE OPD SERVICES FROM 2013 TO 2021.....	192
TABLE 12.4. 1: TREND OF TOTAL IN-PATIENT SERVICE UTILIZATION AT INTERNAL MEDICINE	193
TABLE 12.4. 2: ADMISSIONS BY WARDS AT THE INTERNAL MEDICINE.....	194
TABLE 12.4. 3: INTERNAL MEDICINE'S IN-PATIENT UTILIZATION	194
TABLE 12.4.1. 1: TOP TEN CAUSES OF ADMISSION AT INTERNAL MEDICINE	195
TABLE 12.4.2. 1: MORTALITY TREND PER WARD AT INTERNAL MEDICINE SUB-BMC.....	196
TABLE 12.4.3. 1: TOP TEN CAUSES OF DEATH AT THE INTERNAL MEDICINE.....	197
TABLE 13.2. 1: CRITICAL CARE AND ANAESTHESIA SUB-BMC'S 2021 ANNUAL PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES	198
TABLE 13.3. 1: ANAESTHESIA OPD SERVICE UTILISATION	200
TABLE 13.4. 1: CRITICAL CARE UNIT (ICU) IN-PATIENT SERVICE UTILIZATION	201
TABLE 14.2. 1: SURGICAL SUB-BMC'S 2021 ANNUAL PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES	202
TABLE 14.3. 1: TREND IN SURGICAL OPD ATTENDANCE BY SPECIALTIES.....	205
TABLE 14.4. 1: SURGICAL IN-PATIENT SERVICES UTILIZATION.....	206
TABLE 14.4.1. 1: TOP TEN CAUSES OF SURGICAL ADMISSIONS	207

TABLE 14.5. 1: TREND ANALYSIS OF TOTAL SURGERIES PERFORMED	208
TABLE 14.5. 2: SURGICAL SERVICE PERFORMANCE UNDER THs KPI.....	208
TABLE 14.5. 3: SURGERIES PERFORMED PER SURGICAL SUB-SPECIALTY	208
TABLE 14.5.1. 1: TOP 10 SURGICAL OPERATIONS.....	209
TABLE 15.2. 1: DEENT SUB-BMC's 2021 ANNUAL PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES	211
TABLE 15.3. 1: TREND ANALYSIS OF TOTAL DEENT OPD ATTENDANCE PER SPECIALTY ...	213
TABLE 15.3. 2: TREND ANALYSIS OF DEENT REFERRALS PER SPECIALTY	214
TABLE 15.3. 3: ANALYSIS OF DEENT REFERRALS PER FACILITY IN 2021	214
TABLE 15.4. 1: TOP TEN EYE CONDITIONS SEEN	215
TABLE 15.4. 2: TOP TEN DENTAL & MAXILLOFACIAL CONDITIONS SEEN.....	215
TABLE 15.4. 3: TOP TEN ENT CONDITIONS SEEN	216
TABLE 15.4. 4: TOP TEN SPEECH & LANGUAGE THERAPY CONDITIONS SEEN.....	216
TABLE 15.5. 1: TREND OF DEENT ADMISSIONS BY SPECIALTY	218
TABLE 15.6. 1: TOTAL DEENT SURGERIES PERFORMED BY SPECIALTY	219
TABLE 15.6. 2: SURGERIES PERFORMED BY DEENT SPECIALTY.....	220
TABLE 15.6. 3: OTHER EYE PROCEDURES PERFORMED	220
TABLE 15.7. 1: PERFORMANCE FROM OUTREACH PROGRAMME	220
TABLE 15.7. 2: DEENT OUTREACH ACTIVITIES IN 2021	221
TABLE 16.2. 1: PUBLIC HEALTH UNIT'S 2021 ANNUAL PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES	222
TABLE 16.3. 1: TOTAL IMMUNIZATION TREND AT CCTH.....	224
TABLE 16.4. 1: TREND ANALYSIS OF CHILD WELFARE CLINIC.....	225
TABLE 16.5. 1: SURVEILLANCE ACTIVITIES.....	226
TABLE 16.6. 1: INFLUENZA SENTINEL SURVEY	226

TABLE 16.7. 1: REPRODUCTIVE AND CHILD HEALTH SERVICES.....	226
TABLE 16.8. 1: FAMILY PLANNING ACCEPTORS BY COMMODITY.....	227
TABLE 16.8. 2: TREND OF FAMILY PLANNING ACCEPTOR AND CYP	229
TABLE 16.9. 1: HEALTH PROMOTION ACTIVITIES	230
TABLE 16.10. 1: HIV DIAGNOSIS SUMMARY.....	230
TABLE 16.11. 1: PREGNANT MOTHER TO CHILD TRANSMISSION (PMTCT).....	231
TABLE 16.12. 1: POST EXPOSURE PROPHYLAXIS	231
TABLE 16.13. 1: TUBERCULOSIS CASE DETECTION TREND ANALYSIS	232
TABLE 16.13. 2: YEARLY COHORT ANALYSIS OF REGISTERED CASES.....	232
TABLE 16.13. 3: TB REFERRALS TO OTHER DOT CENTRES	233
TABLE 16.13. 4: AUDIOMETRIC ASSESSMENT FOR TB MANAGEMENT.....	233
TABLE 17.2. 1: PHARMACY DIRECTORATE’S 2021 ANNUAL PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES	234
TABLE 17.3.1. 1: RUM SURVEY RESULT - PRESCRIBER INDICATOR.....	236
TABLE 17.3.1. 2: RUM SURVEY RESULT - DISPENSING INDICATORS.....	236
TABLE 17.4. 1: TREND PERFORMANCE OF PHARMACY DEPARTMENT	237
TABLE 17.4. 2: FOUR-YEAR TREND OF PRESCRIPTIONS SERVED BY VARIOUS PHARMACY OUTLETS	237
TABLE 17.4. 3: PHARMACEUTICAL SERVICES PERFORMANCE UNDER THs KPI	238
TABLE 17.5. 1: SUMMARY OF PERFORMANCE - ANTI-RETRO VIRAL THERAPY (ART).....	238
TABLE 18.1. 1: CHALLENGES AND MITIGATING STRATEGIES	241

LIST OF FIGURES

FIGURE 2.2. 1: TREND ANALYSIS OF TOTAL STAFF STRENGTH	33
FIGURE 2.3. 1: CATEGORIES OF NEWLY RECRUITED STAFF AT CCTH IN 2021	38
FIGURE 2.4. 1: TREND ANALYSIS OF CHANGE OF GRADES	41
FIGURE 2.4. 2: TREND ANALYSIS OF CATEGORY OF STUDY LEAVE GRANTED.....	43
FIGURE 2.4.1. 1: TREND OF STAFF APPRAISED	46
FIGURE 2.5. 1: STAFF TURNOVER	46
FIGURE 3.1.2. 1: OUTCOME OF COVID-19 CASES MANAGED BY CCTH FROM 2020 - 2021 ...	52
FIGURE 3.1.4. 1: MONTHLY ANALYTICAL TREND OF COVID-19 CASES CONFIRMED/MANAGED	ERROR! BOOKMARK NOT DEFINED.
FIGURE 3.1.4. 2: COMPARATIVE ANALYSIS OF COVID-19 MORTALITY RATE BY SEX, AT CCTH	58
FIGURE 3.1.4. 3: ANALYSIS OF THE COVID-19 RELATED DEATHS BY PLACE OF DEATH	58
FIGURE 3.1.5. 1: ANALYSIS OF STAFF WHO TESTED POSITIVE FOR COVID-19 BY DEPARTMENT	59
FIGURE 3.1.5. 2: CADRE OF STAFF INFECTED WITH COVID-19 IN 2021	60
FIGURE 3.2. 1: OPD UTILIZATION BY SPECIALTIES.....	63
FIGURE 3.2. 2: TREND ANALYSIS OF OPD SERVICE UTILIZATION	64
FIGURE 3.2. 3: MONTHLY TREND OF OPD SERVICES UTILIZATION.....	65
FIGURE 3.3. 1:TOP TWENTY OPD MORBIDITIES IN 2021	70
FIGURE 3.4. 1: TREND ON TOTAL HOSPITAL ADMISSIONS	71
FIGURE 3.4. 2: PROPORTION OF SPECIALTY ADMISSIONS IN 2021.....	72
FIGURE 3.4. 3: ADMISSION TREND OF CLINICAL SUB-BMCs.....	72
FIGURE 3.4. 4: PERCENTAGE TREND OF REFERRALS AND BED UTILISATION	73
FIGURE 3.6. 1: TREND OF INSTITUTIONAL MORTALITY RATE.....	76
FIGURE 3.6. 2: INSTITUTIONAL MORTALITY BY CATEGORIZATION.....	77
FIGURE 3.7. 1: OBSTETRIC SERVICE UTILIZATION.....	79

FIGURE 3.7.1. 1: TREND OF MATERNAL MORTALITY RATIO (PER 100,000 LIVE BIRTHS).....	80
FIGURE 3.7.1. 2: TREND OF TOTAL MATERNAL DEATHS.....	80
FIGURE 3.8. 1: TREND OF PAEDIATRIC AND NEONATAL ADMISSIONS	83
FIGURE 3.8.1. 1: TOP 10 CAUSES OF CHILD HEALTH ADMISSION IN 2021	84
FIGURE 3.8.2. 1: TREND OF NEONATAL AND INFANT MORTALITY RATES	86
FIGURE 3.8.2. 2: TREND OF UNDER 5 YEAR MORTALITY RATE.....	86
FIGURE 3.8.3. 1: TOP TEN CAUSES OF UNDER 5 MORTALITY IN 2021	87
FIGURE 3.8.3. 2: CASE SPECIFIC RATE FOR TOP TEN UNDER 5 MORTALITY IN 2021	87
FIGURE 3.9.1. 1: TREND ANALYSIS OF TOTAL SURGERIES PERFORMED.....	88
FIGURE 3.9.1. 2: TREND OF THEATRE SERVICE UTILIZATION	89
FIGURE 3.9.1. 3: ANALYSIS OF SURGERIES PERFORMED BY SPECIALTY	90
FIGURE 3.10. 1: TREND ANALYSIS OF DIAGNOSTICS SERVICES	92
FIGURE 3.11. 1: TREND ANALYSIS OF BLOOD TRANSFUSION SERVICES	94
FIGURE 3.11. 2: TREND ANALYSIS OF BLOOD DONATION	95
FIGURE 3.13.1. 1: TREND ANALYSIS OF DIALYSIS SERVICE UTILIZATION	96
FIGURE 4.5. 1: UTILIZATION RATES OF IMAGING EQUIPMENT	99
FIGURE 5.4. 1: SUMMARY OF IGF BUDGET EXECUTION RATE.....	104
FIGURE 5.5. 1: COMPOSITION OF IGF.....	105
FIGURE 5.6. 1: PROPORTION OF REVENUE CONTRIBUTION BY DEPARTMENT	107
FIGURE 7.4. 1: TREND IN OPD SERVICE UTILIZATION	117
FIGURE 7.4. 2: MONTHLY TREND OF OPD UTILIZATION SERVICE.....	118
FIGURE 7.5. 1: TOP TWENTY OPD MORBIDITIES IN 2021.....	121
FIGURE 7.6. 1: TREND IN REHABILITATION SERVICE UTILIZATION	122
FIGURE 7.6. 2: TREND IN REHABILITATION SERVICE UTILIZATION BY CLINICS.....	123

FIGURE 7.6.1. 1: PHYSIOTHERAPY SERVICE UTILIZATION TREND	124
FIGURE 7.6.1. 2: COMPARATIVE ANALYSIS OF PHYSIOTHERAPY CASES	124
FIGURE 7.6.2. 1: TREND OF CLINICAL PSYCHOLOGY SERVICE UTILIZATION	125
FIGURE 7.6.2. 2: TREND OF CLINICAL PSYCHOLOGY CASES SEEN	126
FIGURE 7.6.4. 1: TREND OF CASES SEEN BY THE DIET & NUTRITION CLINIC	127
FIGURE 7.6.4. 2: COMPARATIVE ANALYSIS OF DIET & NUTRITION CASES SEEN	128
FIGURE 7.6.4. 3: TOP TEN DIET & NUTRITION CASES	129
FIGURE 8.3. 1: TREND OF CASES SEEN AT A&E.....	132
FIGURE 8.3. 2: TREND ANALYSIS OF DEATHS RECORDED AT THE A&E.....	132
FIGURE 8.3. 3: MONTHLY TREND ANALYSIS OF CASES SEEN AT A&E	133
FIGURE 8.3. 4: A&E ADMISSION TREND	134
FIGURE 8.4.1. 1: TOP TEN CAUSES OF A&E ADMISSION IN 2021	135
FIGURE 8.5. 1: EMERGENCY CASES TRIAGED ACCORDING TO ACUITY IN 2021	136
FIGURE 8.5. 2: YEARLY TREND OF EMERGENCY CASES TRIAGED BY ACUITY	137
FIGURE 8.6. 1: TREND OF TOTAL A&E REFERRALS	138
FIGURE 8.6. 2: TOP 10 FACILITIES A&E CASES WERE REFERRED-FROM, IN 2021	138
FIGURE 8.7. 1: TOP CAUSES OF DEATH AT THE A&E DEPARTMENT	140
FIGURE 9.3. 1: DIAGNOSTICS SERVICES UTILIZATION TREND	144
FIGURE 9.4. 1: LABORATORY DEPARTMENT CLIENT DISTRIBUTION TREND	145
FIGURE 9.4. 2: PROPORTION OF LABORATORY CLIENTS IN 2021	146
FIGURE 9.4. 3: BIOCHEMISTRY PROFILE TREND	146
FIGURE 9.4. 4: BIOCHEMISTRY INVESTIGATION TREND.....	147
FIGURE 9.4. 5: MICROBIOLOGY – PARASITOLOGY AND BACTERIOLOGY INVESTIGATIONS TREND	149
FIGURE 9.4. 6: MICROBIOLOGY – BACTERIOLOGY TREND	150
FIGURE 9.4. 7: TREND OF OUTCOME OF TB CULTURE (MYCOBACTERIOLOGY FOR TB)	151
FIGURE 9.4. 8: MICROBIOLOGY – SEROLOGY TREND	151
FIGURE 9.4. 9: HAEMATOLOGY INVESTIGATION TREND	153
FIGURE 9.6. 1 BLOOD TRANSFUSION SERVICES	154
FIGURE 9.6. 2: BLOOD DONATION TREND	155

FIGURE 9.7. 1: HAEMATOLOGY CLINIC OPD ATTENDANCE.....	157
FIGURE 9.7. 2: TOP 6 COMMON CASES MANAGED IN 2021	158
FIGURE 9.8. 1: RADIOLOGY SERVICE UTILIZATION TREND	159
FIGURE 9.8. 2: CATEGORY OF RADIOLOGY INVESTIGATIONS.....	160
FIGURE 9.8. 3: MONTHLY TREND OF RADIOLOGY INVESTIGATIONS IN 2021	161
FIGURE 9.8. 4: MONTHLY TREND OF RADIOLOGY CLIENTS IN 2021.....	162
FIGURE 9.9. 1: FIVE-YEAR TREND ANALYSIS OF PATHOLOGICAL SERVICES.....	163
FIGURE 9.9. 2: PATHOLOGY CASES RECEIVED FROM THE WARDS	164
FIGURE 10.3. 1: TREND OF TOTAL MATERNAL HEALTH OPD ATTENDANCE	167
FIGURE 10.3. 2: MATERNAL HEALTH OPD SERVICES UTILIZATION	168
FIGURE 10.6. 1: TREND IN NUMBER OF DELIVERIES.....	171
FIGURE 10.6. 2: TREND ANALYSIS OF FORMS OF DELIVERY	171
FIGURE 10.6. 3: MATERNAL HEALTH KEY PERFORMANCE INDICATORS - CATEGORY A	172
FIGURE 10.6. 4: MATERNAL HEALTH KEY PERFORMANCE INDICATORS - CATEGORY B	172
FIGURE 10.6. 5: MATERNAL HEALTH KEY PERFORMANCE INDICATORS – CATEGORY C	173
FIGURE 10.9. 1: TREND IN MATERNAL MORTALITY RATIO / 100,000 LIVE BIRTHS	176
FIGURE 10.9. 2: TREND OF MATERNAL MORTALITY DEATH	176
FIGURE 11.3. 1: EIGHT-YEAR TREND OF PAEDIATRICS OPD ATTENDANCE	182
FIGURE 11.3. 2: TREND OF TOTAL PEDIATRIC SPECIALIST CLINIC OPD ATTENDANCE	182
FIGURE 11.3. 3: TREND OF PAEDIATRIC OPD ATTENDANCE PER SPECIALTY	183
FIGURE 11.5. 1: TOP 10 CAUSES OF CHILD HEALTH ADMISSION IN 2021	185
FIGURE 11.6. 1: TREND ANALYSIS OF CHILD MORTALITY	186
FIGURE 11.8. 1: RATE OF UNDER 5 YEAR MORTALITY /1000LB.....	187
FIGURE 11.9. 1:TOP TEN CAUSES OF UNDER 5 MORTALITY IN 2021	188
FIGURE 11.9. 2: CASE SPECIFIC RATE FOR TOP TEN UNDER 5 MORTALITY IN 2021	188
FIGURE 12.3. 1: TREND ANALYSIS OF TOTAL OPD ATTENDANCE	192

FIGURE 12.4. 1: TREND OF TOTAL IN-PATIENT SERVICE UTILIZATION AT INTERNAL MEDICINE	193
FIGURE 12.4. 2: ADMISSIONS BY WARDS AT THE INTERNAL MEDICINE SUB-BMC.....	194
FIGURE 12.4.1. 1: TREND OF TOP TEN CAUSES OF ADMISSION AT THE INTERNAL MEDICINE	195
FIGURE 12.4.2. 1: TREND OF TOTAL DEATHS AT INTERNAL MEDICINE SUB-BMC	196
FIGURE 12.4.2. 2: MORTALITY RATES TREND PER WARDS AT THE INTERNAL MEDICINE	196
FIGURE 12.4.3. 1: TOP TEN CAUSES OF DEATH AT THE INTERNAL MEDICINE FOR 2021	197
FIGURE 13.3. 1: ANAESTHESIA OPD SERVICE UTILISATION	199
FIGURE 13.4. 1: TREND OF ADMISSION AT THE INTENSIVE CARE UNIT (ICU)	200
FIGURE 13.4. 2: TREND OF IN-PATIENT SERVICE UTILIZATION AT INTENSIVE CARE UNIT.....	201
FIGURE 13.4. 3: TREND ANALYSIS OF ICU DEATH RATE	201
FIGURE 14.3. 1: TREND IN TOTAL SURGICAL OPD ATTENDANCE	204
FIGURE 14.3. 2: TREND IN SURGICAL OPD ATTENDANCE BY SPECIALTIES	205
FIGURE 14.4. 1: SURGICAL IN-PATIENT SERVICES UTILIZATION	206
FIGURE 14.4.1. 1: TOP TEN CAUSES OF SURGICAL ADMISSIONS IN 2021	207
FIGURE 14.5. 1: TREND ANALYSIS OF TOTAL SURGERIES PERFORMED	208
FIGURE 14.5. 2: SURGERIES PERFORMED PER SURGICAL SUB-SPECIALTY	209
FIGURE 15.3. 1: TREND ANALYSIS OF TOTAL DEENT OPD CLINICS ATTENDANCE	213
FIGURE 15.3. 2: TREND ANALYSIS OF TOTAL DEENT OPD ATTENDANCE PER SPECIALTY..	213
FIGURE 15.3. 3: TREND ANALYSIS OF DEENT REFERRALS PER SPECIALTY.....	214
FIGURE 15.5. 1: TREND OF TOTAL DEENT ADMISSIONS	217
FIGURE 15.5. 2: TREND OF DEENT ADMISSIONS BY SPECIALTY	217
FIGURE 15.6. 1: TREND OF TOTAL SURGERIES PERFORMED BY DEENT SUB-BMC	218
FIGURE 15.6. 2: TOTAL DEENT SURGERIES PERFORMED BY SPECIALTY.....	219
FIGURE 15.6. 3: MAJOR AND MINOR SURGERIES PERFORMED BY DEENT SPECIALTY	219
FIGURE 16.3. 1: TOTAL IMMUNIZATION TREND AT CCTH	224

FIGURE 16.8. 1: TREND OF TOTAL FAMILY PLANNING ACCEPTORS 227
FIGURE 16.8. 2: TREND OF TOTAL COUPLE YEAR PROTECTION..... 228
FIGURE 16.8. 3: TREND OF COUPLE YEAR PROTECTION 229

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
10.	BMC	-	Budget Management Center
11.	CCMH	-	Cape Coast Metropolitan Hospital
12.	CCTH	-	Cape Coast Teaching Hospital
13.	CEO	-	Chief Executive Officer
14.	CPD	-	Continuous Professional Development
15.	CSSD	-	Central Sterilization Supply Department
16.	CT	-	Computed Tomography
17.	CVA	-	Cerebrovascular Accident
18.	CWC	-	Child Welfare Clinic
19.	CYP	-	Couple Year Protection
20.	DDNS	-	Deputy Director Nursing Services
21.	DHIMS	-	District Health Information Management System
22.	DOTS	-	Directly Observed Treatment Short Course
23.	DTC	-	Drug & Therapeutic Community
24.	E-Health	-	Electronic Health System
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
31.	FBS	-	Fresh Still Birth
32.	FP	-	Family Planning
33.	GCNM	-	Ghana College of Nurses and Midwives
34.	GCPS	-	Ghana College of Physicians and Surgeons
35.	G. CPham	-	Ghana College of Pharmacist
36.	GH¢	-	Ghana Cedi
37.	GHS	-	Ghana Health Service
38.	GOG	-	Government of Ghana
39.	HAMs	-	Health Information Management System
40.	HDU	-	High Dependency Unit
41.	HIM	-	Health Information Management

42.	HIV	-	Human Immunodeficiency Virus
43.	HMS	-	Hyperactive Malarial Splenomegaly
44.	HO	-	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
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

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We also appreciate the support received from the Ministry of Health and the following stakeholders for their contribution to the hospital's 2021 achievements.

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- Health Donors & Partners (Local and International)
- Regional Health Administration, GHS, Central Region
- The University of Cape Coast - School of Medical Science
- Board & Management of CCTH
- The hardworking Staff of CCTH
- All other institutions/partners/stakeholders
- Clients/Patients
- Press

We are also thankful to the 2021 Annual Performance Review Planning team for their hard work and immense contributions that resulted in a successful review, leading to the development of this report.

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POSITION

- Director of Administration
- Medical Director
- Director of Finance
- Director of Pharmacy
- Director of Nursing Services
- Deputy Director, Research, Monitoring & Evaluation
- Deputy Director, Human Resource
- Deputy Director, Finance
- Deputy Director of Administration
- Deputy Director, Policy Planning and Budget
- Head of Health Information Management Unit
- Head of General Administration Unit
- Health Research Officer – RME Unit

MESSAGE FROM THE CHIEF EXECUTIVE



CEO – DR. ERIC KOFI NGYEDU

The Cape Coast Teaching Hospital being a relatively young teaching hospital in Ghana have over the years tried to implement various strategies towards achieving its medium-term strategic plans, in line with the hospital's mandate, mission and vision. The hospital's performance was negatively affected in 2020 due to the impact of Covid – 19 Pandemic however, it was observed that the situation began to improve in 2021. The year 2021 is also the second year of implementation of the hospital's 6-Years Strategic Plan (2020-2025) and despite difficulties encountered during the year, the hospital was able to record some successes.

Since the upgrade of the hospital into a tertiary institution in the year 2014, it has not received corresponding infrastructure and equipment upgrade, although there have been enormous increases in its service portfolio. Our main objective has been to introduce new specialists' services and expand the existing ones, to serve the people of the Central Region, Western Regions, and parts of the Ashanti Region and beyond. However, inadequate equipment and infrastructure sometimes hinder the efficient and effective delivery of these services.

To improve the situation, the hospital dedicated its Medium-Term (2020 to 2025) Strategic plan to redevelopment, with the theme; **'Redevelopment for Quality Health Care Services'**. The strategies for the redevelopment agenda focused on improvement on the clinical infrastructure and equipment base of the hospital. Partnership and Networking were the key vehicles in the delivery of these strategies. Key achievements were recorded in this direction during the year amidst the effect of the COVID-19 pandemic. These include; the operationalization of the hospital's Blood Bank which was constructed and equipped by MTN Foundation, with the aim to reduce haemorrhage related maternal mortalities. Also, with the support of the Ministry of Health (MoH), the construction of an infectious disease centre is near completion and the Accident and Emergency expansion project has also commenced. Further, the hospital secured funding from USAID-ASHA and Himalayan Cataract Project (USA NGO) for the construction of a new Eye Centre. Additionally, collaboration between CCTH and Roche was launched to improve Oncology Services and the oncology pharmacy was also created and operationalized. The hospital

further completed the construction of a Cold Room with funding support from Roche for the storage of cold chain medications, and Pharmaceutical Warehouse was also completed and operationalized for efficient and effective storage and management of medicines with the support from Pharmanova. These projects are results of the hospital's strategic partnership initiatives, which was started in the year 2019. In the area of equipment retooling, assorted equipment including, ventilators and Monitors, beds, etc. were received from the MoH and other NGOs to improve service delivery in the area of critical care.

In addition, the hospital is still in pursuit of the protection of its acquired land which has been under massive encroachment. Key strategies were also implemented to ensure effective governance and management systems at all levels in the hospital.

In the year under review, the hospital recorded an increment in its human resource by 14.5% (from 1,792 in 2020 to 2,051 in 2021). The hospital also continues to sponsor staff every year to further their education as part of efforts to bridge the gaps in skill mix and as a motivation strategy. As a result, 98 staff benefited from this sponsorship in 2021 compared to the 104 staff sponsored in 2020. In addition, the hospital sustained its previous accreditations with the Ghana College of Physicians and Surgeons for postgraduates training of medical doctors.

In 2021, significant improvement was also recorded in the services utilization amidst the COVID-19 pandemic, compared to the year 2020 (during the earlier stages of the pandemic). For instance, the total General Outpatients (OPD) attendance went up significantly by 21.1% in 2021 (from 125,772 in 2020 to 152,364 in 2021), with Hypertension and Diabetes conditions remaining the leading causes of OPD morbidities. The total Specialist Outpatient clinics attendance also increased by 15.1% (from 69,603 in 2020 to 80,114 in 2021). The hospital also recorded a significant rise in the total admission by 22.2% (from 10,578 in 2020 to 12,930 in 2021), with Maternal Health sub-BMC recording the highest proportion of admissions (39.51%) in 2021. Over the years, various strategies were implemented to improve upon institutional mortality indicators this resulted in a marginal reduction in the institutional mortality rate by recording 11% in 2021, compared to the 12.35% recorded in 2020. Respiratory Failure [(14.2% (121))] and Birth (Neonatal) Asphyxia [(7% (60))] leading the list of causes of institutional mortalities in 2021.

The first COVID-19 case in the hospital was recorded in April 2020, and by the close of year 2021 the total number of COVID-19 cases confirmed seen was 1,109(40.34), out of the 2,749 suspected cases. This is compared to the 17% (447) cases confirmed, out of the 2,607 suspected cases recorded in 2020. Out of the 1,109 COVID-19 cases directly managed in 2021, the hospital recorded a recovery rate of 94% (1042), which is a great improvement, compared to the 90% recovery rate on the 447 cases managed in 2020. Also, the proportion of CCTH staff who tested positive for COVID-19 was 13.4% in 2021 (against the total hospital staff of 2,051 in 2021), compared to the 7.3% recorded in 2020 (against the total hospital staff of 1,792 in 2020), with 100% recovery rate among staff over the past two years.

These were achieved due to the implementation of key strategies, such as; the development of institutional COVID-19 guidelines and protocols, the setting up of a command structure (managerial and functional task team) to ensure flow of work in terms of rapid response to case identification, case management (home care team and centre

care team), information management and dissemination, logistical provision and support team including robust monitoring and evaluation system. 150 staff were selected to support the COVID-19 Management (home care team and centre case management team), institutional contacts tracking and reporting within 24 hours, and limiting the entry points for patients and clients into the hospital to ensure that they go through pre-triaging. A joint monitoring team was also set up within the institutional COVID-19 Task Team with weekly and monthly update meetings to review the situation. Also, a system was put in place to ensure the development and dissemination of daily data update report on the COVID-19 situation in the hospital to all senior managers and key stakeholders on demand, to guide decision making and strategies. The Staff were periodically trained on infection prevention and control measures, and the use of PPEs. The hospital also started SARS-CoV-2 testing at its own Laboratory since September 2020, with the support of the Ministry of Health and has also received a new PCR machine to improve the testing (PCR machine installation near completion).

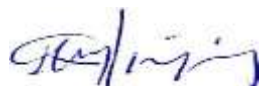
Internally Generated Funds (IGF) remains the utmost source of funding for almost all operations of the hospital, hence, the institution cannot afford any form of delays in the reimbursement of NHIS claims, which accounts for about 80% of our revenue.

Despite the gains made during the year under review, the hospital continues to face a number of challenges in various areas. Key among them were: High Institutional Maternal and Neonatal Deaths, inadequate infrastructure, encroachment of the hospital land, Inadequate accommodation for staff, Inadequate and ageing equipment, such as, the Power Generators, Laundry and CSSD equipment, etc. Absence of a Relative Hostel, overcrowding and congestion at OPD, Inadequate and absence of critical equipment e.g., Magnetic Resonance Imaging, Anaesthesia equipment, Endoscopy equipment, etc.

The Hospital Board and Management believe that in order to deliver on its mandate in the midst of these challenges, all stakeholders both in the public and private sector have to come on board to support its redevelopment agenda.

I would like to use this opportunity to thank the Government, the Ministry of Health, our International and Local Partners, Corporate Ghana, the Board, Directors, Heads of Departments, and indeed, all hardworking staff for their various support towards the hospital's performance, not forgetting our cherished clients for believing in CCTH.

Thank you.



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DR. ERIC KOFI NGYEDU
CHIEF EXECUTIVE OFFICER

PREFACE

The Cape Coast Teaching Hospital's 2021 Annual Performance Review was held from Tuesday 15th to Thursday 17th February 2022 at the Hospital's Lecture Hall under the theme "Re-Development of Cape Coast Teaching Hospital to Optimize Healthcare Outcomes in the New Normal". The aim of the review was to take stock of the 2021 performance, identify and discuss the key issues that hindered the attainment of the objectives planned for the year under review. The performance review was geared towards the assessment of the performance in line with the institution's Medium-Term (2020 – 2025) Strategic Objectives. The presentations at the event focused on the 2021 key priorities of the hospital which were;

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

Performance evaluation is essential, as it enables performance to be assessed and to identify key issues that hindered the attainment of set objectives and goals. 2021 is the second year of implementation of the hospital's second Medium-Term Strategic Plan (2020-2025). Review of performance especially at the end of the year plays a key role in determining whether the performance is in line with the hospital's strategic objectives and the Ministry of Health's priorities. Also, evaluation of performance helps to identify the outputs achieved under the various strategic objectives and to determine the efficiency, effectiveness and the impact of the hospital strategies as well as review relevance of the strategies. The 2021 Annual Performance Report provides a summary of the achievements made by the hospital amidst the COVID-19 pandemic and also provides a comparative trend analysis of 2021 performance with the previous years. It also highlights the key challenges that hindered performance. The report intends to provide information for evidence-based decision making and for effective planning process. It also serves as a reference document for health research towards improvement of the health systems.

1.1 PROFILE OF CCTH

The Cape Coast Teaching Hospital (CCTH) with a bed capacity of 400 is the only tertiary health facility in the Central Region and was formally the Central Regional Hospital. It was established in August 1998 and later upgraded to a Teaching Hospital status on 21st March 2014, with the start of the School of Medical Science at the University of Cape Coast. As a tertiary health facility, CCTH is mandated to provide tertiary clinical services, train medical and post graduate students and also undertake researches to ensure evidence-based decision making and also to improve the quality of lives of the people.

CCTH is accredited by various health institutions including the Ghana College of Physicians and Surgeons, the Medical and Dental Council, for the training of health professionals. The facility also serves as a training ground for undergraduate and postgraduate students from the Ghana College of Nursing and Midwifery, School of Nursing and Midwifery and School of Health and Allied Sciences and also PHARM D final year students from KNUST.

The hospital is geographically located at the northern part of Cape Coast (capital town of the Central Region of Ghana) and bounded on the North by Abura Township, on the South by Pedu Estate and 4th Ridge, Nkanfoa on the East and Abura / Pedu Estate on the West.

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

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 provides both in-patient and out-patient services in general and specialized areas in addition to rehabilitative and diagnostic services. Table 1.3.1 below provides details of the clinical services provided at the hospital.

Table 1.3. 1: Current Health Care Services

CLINICAL SERVICES		
GENERAL CLINICAL CARE 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. Child Health Services
1. Intensive Care Services 2. Diabetic & Hypertension 3. Sickle Cell Clinic 4. Endocrine Clinic 5. Gastro Intestinal Clinic 6. Dermatology Clinic 7. Hepatitis Clinic 8. Cardiology Clinics 9. Haemodialysis services 10. Oncology Clinic 11. Asthma 12. Renal	1. General surgery clinic - Thyroid & Breast (cancer & chemotherapy) 2. Uro-Surgical Clinics 3. Neuro-Surgical Clinic 4. Burns & Plastic Surgical Clinic 5. Orthopaedic Surgical clinic 6. Paediatric surgical clinic 7. Colorectal clinic	Paediatric specialized clinics
C. DEENT Services	D. Public Health Services	
1. Dental & Maxillofacial Clinic 2. Eye Care 3. Ear, Nose and Throat clinic 4. Orthodontist services	1. Child Welfare Clinic 2. Family Planning 3. HIV Counselling 4. TB Dot Centre 5. Adolescent Clinics	
E. Rehabilitation Services	F. Obstetric & Gynaecological Services	

CLINICAL SERVICES	
1. Physiotherapy 2. Diet Therapy 3. Clinical Psychology 4. Speech Therapy 5. Community Psychiatry	1. Obstetric & Gynaecologic Emergencies 2. Antenatal clinic 3. Post-natal clinic 4. Gynaecology clinic 5. Reproductive Endocrinology and Fertility Services 6. Gynae Oncology Clinic
CLINICAL INVESTIGATION SERVICES	
G. Imaging	H. Laboratory Services
1. MRI 2. CT Scan 3. Fluoroscopy 4. Mammography	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 2021

1. Scale up existing Sub-Specialist Services
2. Improve clinical pharmacy and pharmaceutical services.
3. Introduce new specialized services
4. Reorganization of OPD Service.
5. Strengthen client's relations
6. Strengthen clinical services.
7. Development and implementation of protocols for quality care
8. Improvement on Blood and Blood products for service delivery
9. Reduction in communicable and non-communicable disease burden.
10. Reduce Institutional mortalities
11. Expansion of existing infrastructure and equipment.
12. Retooling of equipment and furniture
13. Development of new infrastructure with equipment
14. Development of capacity knowledge (knowledge and skills) of staff to improve performance
15. Expansion of transport base
16. Strengthen institutional collaborations.
17. Support the training of Undergraduate and post graduate health professionals.
18. Improve on partnership training programs (local & International)
19. Expansion and improvement of research capacity.
20. Development of capacity knowledge (knowledge and skills) of staff to improve performance

21. Expansion of transport base
22. Strengthen institutional collaborations.
23. Support the training of Undergraduate and post graduate health professionals.
24. Improve on partnership training programs (local & International)
25. Expansion and improvement of research capacity.

1.5 SUMMARY OF 2021 CCTH PERFORMANCE UNDER THE STRATEGIC OBJECTIVES

The assessment of the hospital's performance for 2021 was done against the six (6) medium-term strategic objectives of the hospital. Table 1.5.1 below provides at a glance, the overall summary of performance of the hospital, in terms of the outputs achieved and their correspondent outcomes. The table also outlines the outputs achieved at the level of various Sub-BMCs and Units.

Table 1.5. 1: Summary of 2021 Performance under the Strategic Objectives

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY								
HOSPITALWIDE LEVEL								
Actual Performance Trend								
Access	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	2021 Target	Remarks
i. Total OPD Attendance	110,068	117,854	158,164	168,056	125,772	152,364	CCTH = 15% incr	21.1% incr
ii. OPD cases seen per doctor	1:1184	1:1030	1:1163	1:1098	1:749	1:560	THs= 1:1080	Decr
iii. Total Specialist OPD attendance	73,152	83,217	75,130	90,336	69,603	80,114	-	15.1% incr
iv. OPD Cases seen per specialist	1:1829	1:1849	1:1418	1:1255	1:1024	1:1483	THs= 1:1255	Incr
v. Total Referrals– In	3,443	4,386	4,292	6778	3609	3,566	-	1.2% decr
vi. Total Patients admission	10,666	14,444	10,865	11,088	10,578	12,930	CCTH = 2% incr	22.2% incr
vii. Percentage of patients admitted due to external referrals	-	35%	25.8%	40.4%	21.6%	68.2%		Incr
viii. Percentage of neonatal admissions due to external referrals	-	28%	26.1%	27.2%	25.5%	15%	THs = 30%	Decr
ix. Percentage of maternal admissions due to external referrals decreased	-	49%	41.4%	27.2%	21.2%	23%	THs = 60%	1.9% incr
x. Nurse and Midwife admission ratio	1:21	1:20	1:20	1:16	1:13	1:13	THs =1:25	

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
xi. Percentage bed occupancy	55%	53%	51%	55%	55.5%	71%	THs = 75%	15.5% incr
xii. Total surgical operations	3,650	3,853	3,728	4,815	3,883	5,961	CCTH = 10% Incr	16.7% decr
xiii. Surgery to Surgeon ratio	152:1	154:1	133:1	127:1	108:1	199:1	THs = 250:1	Incr
xiv. Total deliveries	2,904	3,055	3,160	3,027	2,883	3055	CCTH = 5% incr	5.97% incr
xv. Delivery to midwife ratio (all midwives at the institution)	29:1	29:1	30:1	20:1	18:1	15:1	THs = 20:1	Decr
xvi. Couple year protection	2,277.6	1507	1,521.6	1,562.5	1,891.2	820.15	CCTH = 5% incr TH = 2,500	56.6% decr
xvii. Caesarean section rate	38.1%	35.9%	46.8%	41.2%	53.3%	51.4%	TH = 40%	1.9% decr
xviii. % Tracer Drug Availability	84.8%	96.1%	96.1%	88.5%	84.62%	95%	CCTH = 100% TH = 90%	Incr
xix. Prescription to pharmacy ratio	13,491:1	13,511:1	16,097:1	8,288:1	9425:1	6,422	TH = 12000:1	Decr
xx. Percentage antibiotic prescribed	13.5%	15.2%	18.4%	16.18%	17.1%	11.6%	TH = 35%	Decr
xxi. Percentage Injectable	1.6%	1.8%	6.3%	5.8%	24.2%	1.6%	TH = 10%	Decr
xxii. Utilization of Pharmaceutical Care interventions	-	79.2%	97.3%	99%	11.5%	21.2%	TH = 30%	Incr
xxiii. Utilisation of laboratory services	-	-	78%	62.5%	260.3%	221.3%	TH = 60%	Decr
xxiv. Total laboratory Investigation	159,372	266,635	275,329	291,677	241,858	180,415	-	25.4% incr
xxv. Utilisation of radiological services	-	-	79.4%	86.9%	530.7%	87%	TH = 60%	Decr
xxvi. Radiology investigation	14,286	17,342	20,766	20,285	23,697	20,587	-	13.1% decr

HOSPITALWIDE LEVEL OUTPUTS

Specialist OPD attendance increased by 15.1% (from 69,603 in 2020 to 80,114 in 2021).

Introduced 3 additional specialised services

- Reproductive Endocrinology and Fertility Services
- Gynae. Oncology Services
- Orthodontist Services (25 cases seen)
- Psychiatry Specialist Services

Collaborated with Himalayan Cataract Project to conduct eye screening for 18,103 people and performed 2,083 eye surgeries under the project.

Expansion of Chemotherapy Services with support from Roche Products Ltd

Scaled up implementation of appointment system at all specialist clinics

Improved neonatal services (Sponsored 2 nurses for neonatal nursing specialist training)

Dental laboratory Set up at the dental department

NB: Initiated the process for Paediatric sub-specialization (Following up on sponsored training for Paediatric Specialist)

DEPARTMENTAL LEVEL OUTPUTS

OUT-PATIENTS SUB-BMC

OPD attendance increased by 21.1%

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
Two (2) modules developed one (1) for home/ community visit and one (1) for outreach programmes								
Three (3) community outreach services conducted								
ACCIDENT AND EMERGENCY SUB-BMC								
Utilization of emergency services for intended purpose: NB: the % of patients yellow and above decreased from 49% in 2020 to 45.3% in 2021)								
DIAGNOSTICS SERVICES								
-								
MATERNAL HEALTH SUB-BMC								
Revamped Infertility clinic by introducing two (2) new specialist clinics; Reproductive Endocrinology and Fertility, and Gynae. Oncology Clinics.								
CHILD HEALTH SUB-BMC								
Neonatal specialist clinic attendance increased by 260% from 247 in 2020 to 890 in 2021								
Paediatric sub-Specialty clinic attendance increased by 57.1% from 1,121 in 2020 to 1,176 in 2021								
INTERNAL MEDICINE SUB-BMC								
Range of specialized medical services augmented with the appointment through appointment of Oncologists, Cardiologist, Gastroenterologist and Nephrologist (however, there is general delays with UCC recruitment of local specialists)								
Inpatients' services improved due the availability of ECG services <ul style="list-style-type: none"> Improved diagnosis and management of MI and arrhythmias 								
SURGICAL SUB-BMC								
Reduced the number of elective surgeries cancelations by 90%								
Pre-operative anaesthesia sessions were expanded to the wards								
ANAESTHESIA & CRITICAL CARE SUB-BMC								
Some advanced anaesthesia techniques started, e.g., Epidural Anaesthesia/analgesia, TIVA								
Conducted Specialist-led perioperative consults and reviews								
Advocated for increment of quota for CCN and CRA								
DENTAL, EYE, EAR, NOSE & THROAT (DEENT) SUB-BMC								
Collaborated with Himalayan Cataract Project to conduct eye screening for 18,103 people and performed 2,083 eye surgeries under the project.								
Collaborated with Operation-Smile Ghana to provide free Cleft lip and palate (29 surgeries)								
Introduced new Orthodontist specialized services with 25 cases seen								
Provided 3,718 DEENT surgical services								
PUBLIC HEALTH SUB-BMC								
Conducted 12 outreach activities to communities								
Conducted specialist health education via TV, Radio, OPD and Focus client education TV on the ward								
PHARMACEUTICAL SERVICES								
Forty-seven (47) queries received and addressed at the newly created Drug Information Centre								
Pharmacovigilance week celebrated with 73 ADR reports received								
CCTH-Roche collaboration in Oncology Services launched								
REHABILITATION SERVICES								
The physiotherapy unit continued to intensify OPD and In-Patients specialized physiotherapy services								
The physiotherapy department offered paediatric and Geriatric services done								
Physiotherapy offered orthopaedic services such as musculoskeletal, sport and manual therapy services								
Provided diettherapy to 1313 clients								
Introduced psychiatry services								
Intensified awareness creation of Speech Language Therapy (SLT) services among staff within the hospital, religious centres and child welfare clinics								
CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.								
HOSPITALWIDE LEVEL								
<i>Actual Performance Trend</i>								
	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	Target	Remarks % Diff.
i. Total Institutional Death	1,097	1,148	1,120	1,307	1,379	1,306	CCTH = 5% Decr	5.3% decr
ii. Institutional death rate	10.2%	8.8%	9.0%	10.3%	12.3%	11%	THs = 5%	Decr
iii. Theatre Death Rate	-	0.4%	0.3%	0.6%	0.1%	0.4%	THs = 0.5%	Incr

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
iv. Low birth rate	16.2%	13%	13.5%	16.1%	16.8%	19.4%	THs = 12%	Incr
v. Stillbirth rate (/1000LB)	54	35	37	42	31	42	THs = 15	Incr
vi. Total Fresh Still birth	86	53	29	39	38	43	-	11.6% incr
vii. Total Macerated Still Birth	71	54	89	87	52	85	-	63.5% incr
viii. Institutional Maternal mortality ratio (/100,000LB)	149	1335	860	925	903	1,050	THs = 300	Incr
ix. Number of institutional maternal deaths	41	41	27	28	26	32	CCTH = 50% Decr	23.1% incr
x. Institutional infant mortality rate (/1000LB)	82	65	69	91	89	88	THs = 15	Decr
xi. Number of Infant deaths	236	201	216	272	284	267	-	6% decr
xii. Institutional neonatal mortality rate (/1000)	72	59	63	80	81	78	TH = 25	Decr
xiii. Number of institutional neonatal deaths	207	180	197	239	233	239	-	2.6% incr
xiv. Under-five mortality rate (/1000LB)	87	71	77	101	106	95	-	Decr
xv. Institutional under-five mortality	250	219	242	301	307	290	-	5.5% decr
xvi. Average length of stay (Proxy-C/S, Appendectomy, severe malaria in children)	5.4	4.8	5.1	5.6	5.9	5.6	-	Decr
xvii. Partograph use rate	-	-	40.8%	46.12%	48.7%	48.5%	THs = 60%	Decr
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	THs = 2.0	Incr
xx. Availability and access to appropriate hand hygiene institution	0.2	0.18	0.8	0.15	0.21	0.18	-	Decr
xxi. Number of hands washing basins	240	240	240	240	368	368	-	
xxii. Availability and appropriate disposal of waste	0.9	0.8	0.3	0.6	0.6	-	TH = 4	

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
xxiii. Number of waste disposal bins	270	270	270	270	270	270	-	
xxiv. Availability of toilet institution	0.23	0.23	0.23	0.23	0.43	0.42	THs = 0.25	Decr
xxv. Total number of functioning toilets at the institution	92	92	92	92	173	169	2.3% decr	
xxvi. Percentage of clients satisfied with overall services at the institution	-	96.8%	87.3%	97%	93.4%	84.3%	THs = 95%	
HOSPITALWIDE LEVEL OUTPUTS								
Strengthened health promotion activities at the facility including IPC practices								
Provided signages at OPD vantage points to educate client on health-related issues								
Commencement of A&E expansion works.								
COVID-19 Response outcome in 2021: <ul style="list-style-type: none"> • 284 number of CCTH Staff tested positive for COVID-19. • Total of 1,109 COVID-19 positive cases were recorded. • 67 (6%) COVID-19 related deaths were recorded. • 1042 (94%) recoveries/discharges were recorded. • Recorded 100% recovery rate of the 284 CCTH Staff who tested positive for Covid-19 in 2021. • Active Case as at the end of 2021 = 0 								
Introduced SARS-CoV-2 testing (NB: CCTH Lab started conducting PCR test (Covid-19 test) on 24th September 2020 and the hospital received a new PCR machine in January 2021)								
Continued to provide daily (every evening) Covid-19 data (situational) update to the hospital management members, HODs of sub-BMCs and Unit as well as to the general staff.								
Administered COVID-19 vaccines to 6,947 people <ul style="list-style-type: none"> AstraZeneca = 6,475 <ul style="list-style-type: none"> • First Dose = 4,250 • Second Dose = 2,225 Moderna = 472 <ul style="list-style-type: none"> • First Dose = 336 • Second Dose = 136 Johnson and Johnson = 335 								
Renovated the infectious disease tent at the A&E department								
Streamlined medicines inclusion/exclusion into hospital's medicines formulary by developing and operationalizing medicines addition/exclusion form								
Streamline supply chain process for award of contracts and payment of suppliers by developing an SOP								
Pharmacovigilance monitoring was conducted on all the wards and recorded 36 rounds								
5 additional LHIMS access points created in addition to five (5) computers received								
Completed and operationalized the blood bank with the support of MTN Ghana								
New Autoclaves installed to improve CSSD services with the support from the MOH								
DEPARTMENTAL LEVEL OUTPUTS								
OUT-PATIENTS SUB-BMC								
Five visual aids printed								
All OPD clinics start on specific appointment time								
90% of nurses trained on triaging								
One workshop organized on customer care, and work ethics for all cadre of staff with 70% of staff attending								
Two (2) management members at the OPD sub-BMC were enrolled on management related course								
ACCIDENT AND EMERGENCY SUB-BMC								
16,503 emergency cases were seen in 2021 as compared to 13,146 in 2020 constituting 25.5% increase in cases seen.								
Cardiopulmonary resuscitation workshop held on 10th-11th March, 2021								
5 radio talks and 1 TV show were carried out.								
Audited all (100%) mortalities at the emergency department								
Ward emergency drugs restocked at 94.5% in 2021 as compared to 92% in 2020.								
Infectious disease tent at the emergency department renovated.								

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
Triaging workshops were held on the 17th-18th February 2021 and 25th November 2021.
2 LHIMS training sessions were held
DIAGNOSTICS SERVICES SUB-BMC
The Haematology department continued to provide education on nutrition and preventive measures for non-communicable diseases to patients
Laboratory Department:
Laboratory departmental staff benefitted from training programmes (IPC, QMS, TB, Malaria, Phlebotomy, etc.).
The laboratory department conducted a Customer Satisfaction Survey
Some of the laboratory staff served as Regional OTSS and EQA supervisors
Partnered with KHRC and NMIMR in undertaking the MVPE program and HINI surveillance respectively.
GeneXpert and Viral Load & EID for lower level facilities.
IMAGING SUB-BMC
Organised 2 infection prevention training for staff
Organised 1 re-fresher training on LHIMS for staff
MATERNAL HEALTH SUB-BMC
90% of mortalities audited and recommendations being implemented
85% perinatal mortalities audited and recommendations being implemented
2 health promotion and education activities undertaken in 2 Communities
Established Nurses and Midwives mortality audit in addition to team based and Sub-BMC wide audits
60 staff trained in BLS, ACLS, ETAT and Emergency readiness
CHILD HEALTH SUB-BMC
Conducted radio and TV talk shows during the following World Health Days;
<ul style="list-style-type: none"> i. Cancer ii. Jaundice iii. Breastfeeding iv. Prematurity day
Provided educational talks and videos at the OPD
In-service training:
<ul style="list-style-type: none"> • 2 ETAT and neonatal resuscitation training sessions • Clinical teachings were done online as well as in-person • 1 customer service training held
INTERNAL MEDICINE SUB-BMC
Improved diagnosis and management of MI and arrhythmias
Organised two training workshops for 60 staff (nurses and doctors) on advance life support/basic support (ALS/BLS)
Monitored the stock and re-stocking of emergency trays monthly and ensured 100% availability of emergency drugs
Public screened for kidney disease and awareness created on kidney disease
All staff re-trained in infection control measures
SURGICAL SUB-BMC
Three (3) in-service training were organised for staff on BLS, COVID 19 protocols, patient rollers etc)
100% compliance with Surgical safety checklist used before, during and after every surgical procedure (whether minor/major or elective/emergency)
Two emergency trays were stocked up and protocols were developed for its use
Surgical services were streamlined through implementation of the surgical pack system.
Management protocols for breast, colorectal and prostate cancers were developed
ANAESTHESIA & CRITICAL CARE SUB-BMC
Conducted Specialist-led perioperative consults and reviews
A morbidity and mortality audit committee were set up
Enhanced quality of care by introducing modern standards e.g., bear huggers, infusomats, syringe pumps, revised monitoring charts were introduced
Developed 3 protocols and guidelines for practice
<ul style="list-style-type: none"> ○ Guideline for the practice of Anaesthesia ○ ICU Management Protocol (Adopted from KBTH) ○ Protocol for ICU Admission
Introduced standard procedures like epidural anaesthesia/ analgesia, ultrasound to guide procedure
Organized in-service training for all staff on BLS/ACLS/ATLS, etc
DENTAL, EYE, EAR, NOSE & THROAT (DEENT) SUB-BMC
Successful collaborative surgeries were done
Developed (1) Eye clinic/service guideline and (6) protocols-
<ul style="list-style-type: none"> • Sterilization

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
<ul style="list-style-type: none"> • Disinfection • Medio legal Issue • Medical Emergency • Serial Extraction • Hand washing protocols
Celebrated World Sight and Autism Day
Sub-BMC Clinical workshop organized on (Sick Staff Policy, Cavernous Sinus Thrombosis, Autism Spectrum Disorder.
PUBLIC HEALTH SUB-BMC
Trained all unit staff on customer care
Administered COVID-19 vaccines 6,947 people <ul style="list-style-type: none"> AstraZeneca = 6,475 <ul style="list-style-type: none"> • First Dose = 4,250 • Second Dose = 2,225 Moderna = 472 <ul style="list-style-type: none"> • First Dose = 336 • Second Dose = 136 Jonson and Jonson = 335
Total of 1,109 COVID-19 positive cases were recorded and out of this, 1,042 (94%) recovered/discharged and 67 (6%) related deaths.
431 communities visited with 21,871 people screened. <ul style="list-style-type: none"> • Cataract = 387 • Hernia = 2 • Blood Donation = 16 • Diabetes = 3 • Maternal Health Issues = 2 • General screening = 21
151 women screened for Cervical Cancer
Recorded 96 new registrants for Adolescent Clinic
11,453 people screened for TB out of which 486 tested positive.
PHARMACEUTICAL SERVICES
Commenced 12 hourly shift for in-Patient Pharmacy with 20,600 clients attended to.
Introduced discharge counselling with 607 patients counselled
Emergency drugs were monitored (28 rounds done)
Revised tracer medicines list for CCTH from 52 to 160
95% availability of tracer medicines
Streamlined medicines inclusion/exclusion into hospital's medicines formulary by developing and operationalizing medicines addition/exclusion form
Streamline supply chain process for award of contracts and payment of suppliers by developing an SOP
Pharmacovigilance monitoring was conducted on all the wards and recorded 36 rounds
Initiated the processes to have Insurance cover for Pharmacy stores
REHABILITATION SERVICES DEPARTMENT
<i>Clinical Psychology Department</i>
Provided effective clinical psychological services.
Provided psychoeducation to in-patients and out-patients (OPD)
Provided enhanced sensitization and psycho-education on Covid-19 and its related effects on local radio stations and television stations.
Collaborated with the Dialysis Unit to Promote kidney awareness
<i>Physiotherapy Department</i>
Conducted 4 monthly clinical in-services training out of 12 due to pandemic
Held 3 meetings with parents of children with challenges
Conducted 4 radio education and 2 educations for staff
Improved patients' waiting time at the physiotherapy unit from 50 minutes 35 minutes
Reduction of appointment waiting time of physiotherapy clients from three weeks to two weeks
<i>Diet & Nutrition Department</i>
Conducted individualized counselling and education on client conditions which saw 1,313 clients.
Educated 2,959 pregnant and lactating mothers on lactation management
Educate 20 clients at the general O.P.D on healthy eating and active living
Conduct 6 outreach services to nearby communities

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE								
HOSPITALWIDE LEVEL ACTIVITY OUTPUTS								
Output	Actual Performance Trend						Target	Remarks
	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual		
i. Equipment Down time (proxy: CT SCAN)	82.94%	7.69%	1.92%	0%	0%	82.5%	THs = 5%	Incr (the CT Scan machine was down for a long period)
ii. PPM (Planned Preventive Maintenance) Output achieved	-	60%	62%	80%	75%	61.7%	THs = 80%	Decr
iii. Equipment Utilisation (Proxy: CT SCAN)	25.1%	34.8%	74.2%	83.1%	98.72%	21.4%	THs = 90%	Decr
HOSPITALWIDE LEVEL OUTPUTS								
Construction of an infectious disease centre on-going - Building at plastering level								
Completed and operationalized the blood bank with the support of MTN- Ghana								
Cold Room constructed under Phamanova funding for the storage of cold chain medications								
Constructed and operationalized an oncology pharmacy								
Pharmaceutical Ware house constructed and operationalized								
Replaced and installed 10 new networking switches								
Commenced the expansion of the Accident and Emergency Centre <ul style="list-style-type: none"> Evaluation of Contractor was done at the Ministry level 								
Received various key medical equipment from six (6) organisations namely; <ul style="list-style-type: none"> NMIMR, GHS/USAID, Africa Health Supply, CMS/MOH, Roche Ltd and Sismex Company 								
Procured 5, four-in-one workstations for PPB, RME, HR, Finance, and Audit Units								
Three Boreholes drilled at the hospital's residential facilities (Block F, Block D and Hospital Premises) to ensure continuous water supply								
Created waiting area for patients' relatives with 20 chairs (close to Male Medical Ward).								
A nine (9) seater waiting area for clients was created at the pathology department.								
Commenced interfacing of Lightwave e-Health solutions (LHIMS) and the Lab and X-ray Equipment								
Upgraded the hospital's wireless network connectivity majority to improve access								
Refurbished the lamina flow cabinet and process on-going for the acquisition of a new one								
Contract awarded for the construction of workshop for Equipment, Estates and ICT Units								
New cold room at the pathology unit completed and operationalized.								
Renovation of microbiology work top; funded with WHO-TDR grant.								
Two incubators procured for microbiology unit.								
Following donations received: <ul style="list-style-type: none"> One (1) double decker refrigerator (storing microbiological media), purchased from a mentorship grant by the European Society for Clinical Microbiology and Infectious Diseases one (1) SD Biosensor F200 and three (3) Lumira DX for SARS COV 2 testing laboratory One (1) chest freezer donated by the MVPE program for sample storage. 								
The departments provided with computers by management in 2021: <ul style="list-style-type: none"> Imaging department received four (4) computers A&E department provided with five (5) additional computers and 5 additional LHIMS access points. 								
Renovated 2nd and 3rd stage delivery rooms at the delivery suite								
Provided the following to the various department; <ul style="list-style-type: none"> 100 pieces of bedsheets 60 scrubs 2 BP apparatus 1 UV light 3 Air Conditioners 								

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
<ul style="list-style-type: none"> • 2 suction machines • 2 wall flowmeters • 2 pulse oximeters
All Dental consulting and procedure rooms renovated with 3 new dental chairs
PCR machine installation near completion
DEPARTMENTAL LEVEL OUTPUTS
OUT-PATIENTS SUB-BMC
One training organized in collaboration with the Technical Services Sub-BMC on efficient use of assets and maintenance procedures
Two consulting rooms partitioned
Two consulting rooms painted
ACCIDENT AND EMERGENCY SUB-BMC
Work commenced for the expansion of A&E centre
Accident & Emergency received 11 equipment from Management.
Five (5) additional LHIMS access points were created in addition to five (5) computers
Six (6) Patient bed mattresses were re-covered.
Constructed trolley for the new ECG machine.
DIAGNOSTICS SERVICES SUB-BMC
Two incubators procured for microbiology unit.
Donation of one (1) refrigerator, one (1) SD Biosensor F200 and three (3) Lumira DX for SARS COV 2 testing laboratory.
One (1) chest freezer donated by the MVPE program for sample storage.
One (1) double decker refrigerator (storing microbiological media), purchased from a mentorship grant by the European Society for Clinical Microbiology and Infectious Diseases
Renovation of microbiology work top; funded with WHO-TDR grant
The Pathology department created a nine (9) seater waiting area for clients
New pathology unit's cold room operationalized.
Renovation (tiling) works at the rest room of the pathology department
The pathology department had an air-conditioner and a ceiling fan fixed at both the autopsy room and the reception area respectively.
The Haematology department acquired 2 beds, 4 reclining chairs, 1 TV and a computer acquired for the chemotherapy suite
One (1) binocular microscope received at haematology unit
IMAGING SUB-BMC
Shimadzu machine was repaired
The department received 4 new air-conditioners from management <ul style="list-style-type: none"> • 2 fixed at CT-Scan room • 2 at the X-ray department
The imaging sub-BMC received 1 digital dental equipment from management
The department received 4 Computers from Management
Provision of curtains at the front desk of x-ray dept.
MATERNAL HEALTH SUB-BMC
Acquired 5 ACs, 2 fridges, 1 Television, wall fans etc.
Painted internal walls of all Units Under Sub-BMC; O & G Ward, Delivery Suite, Delivery Suite Theatre & Recovery, ANC and ETAT
Tiled senior doctors and anaesthetists' rooms to improve working environment
Repaired most faults and damages through Imprest and SIL
Partitioned 5 consulting rooms and ETAT Detention room
Changed curtains into blinds at all Units and consulting rooms
Renovated 2nd and 3rd stage rooms at Delivery Suite
Renovated D/S Theatre In-Charge's office
Set up ETAT Nurses Station Reception
Created Store under Stair case at ETAT
Equipment Staff Pantries at O & G, Delivery Suite, and ETAT
CHILD HEALTH SUB-BMC
Oxygen piping at the ward and NICU <ul style="list-style-type: none"> • 4 ports at the HDU • 2 ports at NICU
Acquired the following equipment; <ul style="list-style-type: none"> • 2 Infant incubators

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

- 1 Bilimeter
- 1 Infusion pump
- 1 Hisense TV 32'
- 1 Nebulizer set
- 4 Oxygen concentrators
- 1 Haemoglobinometer
- 2 Radiant warmers

INTERNAL MEDICINE SUB-BMC

Procured the following medical equipment;

- ECG machines
- Dialysis machine
- Nebulizers
- 2 crash carts for emergency medicines
- Defibrillator

Acquired additional computers to increase access points for LHIMS

Replacement of new mosquito proof nets Male & Female medical wards

Replacement of 9 new hand washing sinks

Painting of Male and Female Medical wards

Replacement of broken louvre blades Male & Female Medical wards

Replaced two faulty side ward air conditioners with new ones

Replaced two faulty wall heaters with new ones

Received office items including;

- 2 desk top computers
- 2 printers
- 2 metal lockers
- 2 office desks
- 1 three in one sofa
- 1 projector
- Book shelf from Lancet Laboratories

SURGICAL SUB-BMC

The Sub-BMC acquired the following equipment to enhance service delivery

- 6 oxygen flowmeters
- 2 suction machines
- 3 patient rollers
- Pad for diathermy machine
- 2 ceiling fans
- 2 Air Conditioners

The department received from the hospital;

- 100 pieces of bedsheets
- 60 scrubs
- 2 BP apparatus
- 1 UV light
- 3 Air Conditioners
- 2 suction machines
- 2 wall flowmeters
- 2 pulse oximeters

All broken/missing wall tiles at Surgical Suite, Female and Male wards were replaced

Theatre ceiling fungus was treated and repainted

Theatre reception area was re-modernised and furnished

Installed a water reservoir for use at both male and female surgical wards

ANAESTHESIA & CRITICAL CARE SUB-BMC

The department received the following equipment;

- Mobile x-ray machine
- 1 transport ventilator
- ABG machine
- ECG machine
- Defibrillator and AEDs
- 1 infusion pump

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
<ul style="list-style-type: none"> 3 sire ventilators for the ICU 								
Liaised with other Sub-BMCs to identify designated areas for HDU								
Renovated the theatre recoveries								
<ul style="list-style-type: none"> Tiling Repair of sink/cabinet 								
DENTAL, EYE, EAR, NOSE & THROAT (DEENT) SUB-BMC								
DEENT PRA used to provide equipment such as Air conditions and TV in the clinical areas								
All Dental consulting and procedure rooms renovated with 3 new dental chairs								
PUBLIC HEALTH SUB-BMC								
-								
PHARMACEUTICAL SERVICES								
New Pharmacy Store constructed and operationalized								
New cold room constructed and operationalized								
New Oncology Pharmacy operationalised								
REHABILITATION SERVICES								
-								
CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM								
4.1: Governance Related Performance								
HOSPITALWIDE LEVEL ACTIVITY OUTPUTS								
Output	Actual Performance Trend						Target	Remarks
	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual		
i. Number of Board meetings held	-	1	6	4	4	1	-	Decr
ii. Number of additional accreditations secured	-	-	-	2	0	0	-	-
				<ul style="list-style-type: none"> Group Accreditation for Family Medicine (Cluster of Hospitals) and Accreditation in Radiology & Paedics 				
iii. Proportion of senior managers trained on leadership and management	N/A	N/A	N/A	N/A	-	59	-	-
HOSPITALWIDE LEVEL OUTPUTS								
Organized 7 Directors meetings and 13 other meetings								
Organised an awards programme in December 2021 and awarded the following:								
<ul style="list-style-type: none"> CEO special award Departmental peer-review award Retiree awards 								
Awards received for the acquisition of 2 Pick-ups for the Hospital (but still inadequate).								
Organised training workshop on "Leadership and Management" for Senior Managers in the Hospital on the following subjects/topics:								
<ul style="list-style-type: none"> Imprest System Occupational Health and safety Code of Conduct and Disciplinary Administrative Procedures Principles of Planning and Budgeting Performance Monitoring, Evaluating and Reporting Objective Setting/Performance Management Finance management 								

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
<ul style="list-style-type: none"> • Customer Care
Secured funding from USAID-ASHA & Himalayan Cataract Project (USA NGO) for the construction of a new Eye Centre
CCTH-Roche collaboration in Oncology Services launched
Strategic partnership unit created
Developed land use plan towards the construction of the following centres; <ul style="list-style-type: none"> i. NICU, ii. Oncology centres iii. Emergency and trauma centre (land cleared and site being developed) iv. Eye centre v. Infectious disease centre (Building at plastering stage) vi. Renal transplant centre
Continued with the measures to secure hospital lands (Afforestation, Court, Patrol Team, Radio Adverts) <ul style="list-style-type: none"> ➤ Nurturing of teak tree ongoing and land issues still in court (joint patrol still ongoing)
<i>Institutional Policies & Agreements/MOUs</i>
Institutional Policies developed, approved & being implemented Approved: <ul style="list-style-type: none"> • 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; <ul style="list-style-type: none"> • 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
MOUs and Agreements signed in 2020 were; <ul style="list-style-type: none"> i. Pharmacy Directorate signed an MOU with Ministry of Health for framework contracting ii. MoU between CCTH and F. Hoffmann-La Roche Limited iii. MoU between CCTH and NEEK Courtney Ltd iv. MoU between CCTH and Technical Service Agreement v. MOU with KNUST and process ongoing for Ghana College of Pharmacists for Training of Pharmacists in the Hospital
<i>Institutional Collaborations</i>
Collaborated with the following institutions/organizations; <ul style="list-style-type: none"> i. Himalayan Cataract Project/ National Cataract Outreach Programme to screen 18,103 people and also conduct 2,083 Surgeries. ii. Operation-Smile Ghana to perform 27 free Cleft lip and palate-surgeries iii. UCC-SMS iv. Continued to collaborate with private and internal security to improve security of hospital staff, clients and properties
<i>Institutional Donations</i>
The Imaging department received donation of Ultrasound Scanner from MTN Foundation with an amount of GH¢3,150.00 for Purchase of trolley
Received donation of fistula Repair instruments from United Nations Population Fund (UNFPA)

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
<i>Performance Monitoring and Evaluation</i>
Organised the hospital's 2020 annual performance review conference in February 2021
Monitored the implementation of the hospital's annual programme of work and report on the status quarterly to key stakeholder to guide decision and future plans
Continuously ensured the joint validation of CCTH Covid-19 data daily.
Provided daily update on the Covid-19 situation at CCTH daily (every evening) to the Hospital Management Members, Heads of sub-BMC and Units, CCTH staff and also to key stakeholders on demand, to guide decision making.
Developed comprehensive report on the Covid-19 management at CCTH in line with the response strategy and submitted to Management, MOH and other key stakeholders on demand.
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: <ul style="list-style-type: none"> • 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
Management instituted departmental performance peer-reviewed system <ul style="list-style-type: none"> • A committee was set up and the 1st peer review was carried out in December 2021 and report submitted to management • The highest performing department from the scores were awarded at the end on year awards ceremony in December 2021
DEPARTMENTAL LEVEL OUTPUTS
OUT-PATIENTS SUB-BMC
Two (2) sub-BMC management members enrolled in management related course
Six (6) management meetings were held
ACCIDENT AND EMERGENCY SUB-BMC
Four (4) Sub-BMC Management meetings held.
Organized 40 departmental morning meetings
DIAGNOSTICS SERVICES SUB-BMC
Improvement projects were conducted (Review of some policies, protocols, SOPs were done).
IMAGING SUB-BMC
A maiden sub-BMC management meeting was held as a newly created sub-BMC
MATERNAL HEALTH SUB-BMC
Orientation conducted for all new staff posted to the Sub-BMC
Acquired phones for critical areas to form a communication group for prompt response to emergency calls.
Held 12 Sub-BMC meetings
Conducted 3 Sub-BMC Peer Reviews among the units within the maternal health sub-BMC
CHILD HEALTH SUB-BMC
Four (4) sub-BMC meetings organized
One (1) staff durbar organized
INTERNAL MEDICINE SUB-BMC
Ten (10) Sub BMC Meetings held
SURGICAL SUB-BMC
Four (4) management meetings were organised
Units' meetings were held at least once a week
Two AO Alliance training on management of fracture was organised
ANAESTHESIA & CRITICAL CARE SUB-BMC
The department organised ten (10) management meetings
Appraised all the Sub-BMC staff
Worked together with Management to meet the requirement for the appointment of Sub-BMC management team
Established a fully functional Specialist Clinic
DENTAL, EYE, EAR, NOSE & THROAT (DEENT) SUB-BMC
Ophthalmology Unit was privilege to receive the CEO's award of excellence outstanding entity category
The sub-BMC management members benefited from the management and leadership training organised by the hospital
Liaised with other Sub-BMCs to organize training for staff on communication disorders in children.

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE									
Orientation given to new staff nurses posted to the SUB BMC									
PUBLIC HEALTH SUB-BMC									
Held 32 weekly management meetings									
PHARMACEUTICAL SERVICES									
Eleven (11) monthly managers meeting were organised									
Performance management workshop organized for all staff (53 attended)									
REHABILITATION SERVICES									
Diet and Nutrition unit									
The mentored 99 (110%) students which included Interns and rotation nurses on nutrition programs and policies									
Trained 30 staff at the paediatric ward on management of Severe Acute Malnutrition (S.A.M)									
Clinical Psychology									
Organized stress management awareness programs for staff									
Physiotherapy									
Draft an organogram for the creation of physiotherapy and rehabilitation clinic administration									
4.2: Human Resource Related Performance									
HOSPITALWIDE LEVEL									
		Actual Performance Trend							
	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	Target	Remarks % Diff.	
i. Total number staff	1,199	1,320	1,325	1,627	1792	2,051	-	Incr	
ii. % change in total number of staff	52.5% incr	10.1% incr	0.4% incr	22.8% incr	10.1% incr	14.5% incr	-	Incr	
iii. Number of staff sponsored for training	-	-	-	50	103	98	-	Decr	
iv. Proportion of Staff appraised	36.5%	60%	37.7%	39%	45.13%	30.9%	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)	-	104.1% incr	
viii. Health workers who benefited from occupational health and safety interventions	-	100%	100%	100%	100%	100%			
ix. Total number of Covid-19 Infection among CCTH Staff	-	-	-	-	131	274	-	109% incr	
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%	THs = 1%	Incr	

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
xii. Consultant to resident doctor ratio	1:7	1:12	1:7	1:4	1:5	1:1.4	THs = 1:3	Der
xiii. Doctor to Nurse and midwife ratio	6:1	5:1	4:1	5:1	5:1	7:1	-	Incr
xiv. Delivery to midwife ratio (i.e., all midwives at the institution)	-	1:29	1:30	1:20	1:18	1:15	-	Decr
xv. Delivery to midwife ratio (i.e., productivity of the midwives at only the delivery suite)	-	1:62	1:77	1:75	70:1	46:1	-	Decr
xvi. Doctor to pharmacist ratio	10.3:1	12.6:1	15.1:1	8.5:1	9:1	6.4:1	THs =10:1	Decr
xvii. Prescription to pharmacy ratio	13,491:1	13,511:1	16,097:1	8,288:1	9,425:1	6,422:1	THs = 12000:1	Decr
xviii. Number of welfare packages available for staff	1	1	1	1	1	1	-	-
xix. Surgeon to surgery ratio	152:1	154:1	133:1	127:1	108:1	199:1	250:1	Incr
xx. Nurse and midwives to admission ratio	1:21	1:20	1:20	1:16	1:13	1:13	-	-

HOSPITALWIDE LEVEL OUTPUTS

Successfully recruited 342 staff to reduce the staff gap

All new entrants got their salaries processed and paid before the end of the year.

The HR unit conducted change of grade interviews which saw 140 staff promoted, upgraded and converted

The HR unit conducted a headcount at the last quarter of the year which saw 30 ghost names removed from our payroll.

Improvement in the archive system of keeping and tracking of folders of transferred out and wasted staff

Improvement in the filling system

Improvement in the staff performance appraisal.

Appointment of Deputy Head of Pharmacy

DEPARTMENTAL LEVEL OUTPUTS

OUT-PATIENTS SUB-BMC

Two (2) Medical Officers at the OPD sub-BMC had postgraduate training to become family physician

All staff appraised

ACCIDENT AND EMERGENCY SUB-BMC

Eight (8) Medical Officers posted to the sub-BMC.

(3) staff sponsored for further training (2 doctors and 1 nurse)

DIAGNOSTICS SERVICES SUB-BMC

Additional Medical Laboratory Scientists reported for permanent duties

One (1) permanent Medical Officer was posted to the haematology department

Two (2) specialists were posted to the department

IMAGING SUB-BMC

One (1) HR Officer was posted to the sub-BMC

Two (2) Residents and four (4) radiographers were engaged.

Six (6) intern radiographers and 9 sonographers were engaged.

MATERNAL HEALTH SUB-BMC

-

CHILD HEALTH SUB-BMC

Two (2) medical officers were sent for specialist training

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

Three (3) specialists sent for subspecialty/fellowship training
 Eleven (11) nurses went for training.

- Oncology nursing – 2
- Haematology – 1
- Neonatal Membership - 3
- Paediatric membership – 3
- Paediatric Associate – 1
- Critical Care - 1

Following staff returned from school:

- Three (3) Nurses returned from school;
 - i. Paediatric membership – 1
 - ii. Paediatric oncology – 2
- One (1) Paediatric specialist doctor returned

INTERNAL MEDICINE SUB-BMC

Full time Business Manager at posted to the sub-BMC

SURGICAL SUB-BMC

About 90% of staff appraised

Two (2) doctors gained admission to pursue further studies

Eight (8) nurses gained admission to pursue various specialized courses

ANAESTHESIA & CRITICAL CARE SUB-BMC

Trained House Officers, Medical Officer and Residency rotation in Anaesthesiology and Critical Care

Five (5) nurses gained admission to pursue various specialist courses

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

Appraised 44 staff

The following staffs were posted to the department

- Nurses - 5
 - Eye - 2,
 - ENT - 2
 - Dental - 1
- Dental Assistance - 3
- Ophthalmology
 - Opticians - 5
 - Dr. Optometrist - 5

PUBLIC HEALTH SUB-BMC

Conducted 30 (83%) timely routine appraisals for staff

Organized a zoom leadership seminar for staff

PHARMACEUTICAL SERVICES

Appointed ten (10) Pharmacy Managers

Appointed nine (9) sub-BMC pharmacists

Three (3) pharmacists enrolled in Ghana College of Pharmacists residency programme

Eight (8) new Staff were appointed

100% Staff were appraised

REHABILITATION SERVICES

The diet therapy unit appointed one (1) Outpatient and Inpatient head each to serve as line managers

4.3: Finance related performance

HOSPITALWIDE OUTCOME/IMPACT

Actual Performance Trend

	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	Target	Remarks % Diff.
Revenue Proxy								
i. Total Revenue GH¢	-	-	56,781,792	69,606,362	92,743,531	24,217,381.36	CCTH = 87,018,166.0	
ii. % change in the hospital's revenue	-	-	-	22.6% (incr)	33.2% (incr)	73.9% decr	-	
iii. Proportion of total revenue generated from partners/donors	-	-	-	0.65%	0.78%	0.9%	-	Incr

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE									
iv. Proportion of total revenue from IGF	-	-	33.2%	31%	24%	23.1%	-		Decr
v. IGF Revenue	14,161,833.00	17,089,470.00	18,944,945.89	21,579,680.33	22,268,693.6	24,217,381.36	CCTH =24,387,598		Incr
vi. % change in IGF revenue	+40.5%	+20.7%	+10.9%	+ 13.9%	+ 3.2%	+73.9%	-		Incr
vii. Total service income	10,287,152	12,497,893	12,982,266.79	15,832,185	15,089,523.72	15,816,701.56	-		4.8% incr
viii. Proportion of IGF revenue generated from services	72.6%	73.1%	68.5%	73.4%	67.8%	67%	-		Decr
ix. Total Drug Income GH¢	3,874,689	4,591,576	5,962,679.10	5,747,495	7,179,169.88	8,400,679.80	-		17% incr
x. Proportion of IGF revenue generated from pharmaceutical services	27.4%	26.9%	31.5%	26.6%	32.2%	33%	-		Incr
xi. Ratio of cash revenue to NHIA reimbursement	-	-	0.66:1	1.32:1	0.85:1	1.1:1	-		Decr
xii. % IGF Revenue from NHIS	65.8%	61.8%	50.8%	54.8%	51%	50.8%	-		Decr
xiii. % Revenue from out-of-pocket	32.6%	43.8%	48.7%	43.8%	48.3%	48.5%	-		Incr
xiv. Proportion of revenue generated from specialist services	-	-	-	-	-	-	-		-
Expenditure Proxy									
i. Total Expenditure GH¢	12,778,483	14,027,784	19,935,983.92	20,761,126.11	24,832,641.11	24,665,476.40	-		0.7% decr
ii. Budget execution rate	-	76.79%	96.6%	92.4%	85.9%	91.7%	-		5.8% incr
iii. Proportion of funds spent on services	71.6%	80.6%	77.5%	76.3%	70.8%	74.9%	-		Incr
iv. Proportion of funds spent on pharmaceutical services	24.8%	19.4%	22.5%	18.2%	32.59%	25.1%	-		Incr
v. Proportion of IGF spent on PPM	-	4.13%	3.52%	3.51%	3.8%	5.4%	THs = 5%		Incr
vi. Percentage IGF paid as compensation	-	11.47%	9.68%	9.55%	10.82%	9.4%	THs = 10%		Decr
vii. Proportion of funds spent on investment	-	-	-	-	2.87%	-	-		-
viii. Proportion of funds spent on infrastructure	-	-	-	-	-	-	-		-

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE									
ix.	Proportion of funds spent on equipment	-	-	-	-	-	-	-	-
x.	Proportion of funds spent specialist service provision	-	-	-	-	-	-	-	-
xi.	Proportion of revenue spent to improve quality of care at the facility	-	-	-	-	-	-	-	-
xii.	Proportion of funds spent on outreach services	-	-	-	-	-	-	-	-
xiii.	Proportion of funds spent on Goods	-	-	-	-	-	-	-	-
Other Indicators									
i.	Percentage of submitted claims paid	-	58.68%	20.88%	21.89%	11.2%	53.1%	THs = 75%	Incr
ii.	Debtors' days	-	283.22	346.29	393	215	194	THs = 90	Decr
iii.	Creditor's days	-	184.73	100.82	175	182	224.8	THs = 120	Incr
iv.	Ratio of cash revenue to NHIA reimbursement	-	-	0.66:1	1.32:1	0.85:1	1.1:1	-	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 recommendations implemented	100%	100%	100%	100%	100%	100%	THs = 100%	
viii.	Number of Audit Committee meetings	-	-	4	5	4	4	-	
HOSPITALWIDE LEVEL OUTPUTS									
Achieved the projected revenue of GHC27m									
Expenditure was kept within budget limits									
Comply with financial regulations – GIFMIS									
The hospital through the finance department met financial reporting deadlines and all statutory audit obligations									
Organised GIFMIS training for the key departmental staff									
Resource mobilisation desk created and an officer identified									
Raised all payments vouchers on the GIFMIS platform									
Submitted proposal on tariff for NHIA exclusion services for approval to improve cash flow									
Conducted training for NHIS clerks and oriented new staff on LHIMS.									
Captured data on all assets of the entity (buildings, machinery, plants, Equipment, vehicles, furniture & fittings).									

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
DEPARTMENTAL LEVEL OUTPUTS								
OUT-PATIENTS SUB-BMC								
9.5% increase in revenue								
ACCIDENT AND EMERGENCY SUB-BMC								
-								
DIAGNOSTICS SERVICES SUB-BMC								
The Pathology Department's revenue increased by 5.6% from GH¢303,480.00 in 2020 to GH¢320,325. In addition, the total expenditure in 2021 increased by 26.6% from GH¢65,579.20 in 2020 GH¢83,010.00 in 2021								
Two (2) pathologists and three (3) transition managers were posted to the pathology department								
The haematology unit continued supervision of house officers and medical officer, as well as other staff at various levels								
IMAGING SUB-BMC								
Decreased total revenue generated by 38.8% from GH¢1,913,120 in 2020 to GH¢1,171,139.00 in 2021. In the same line, the total expenditure decreased by 48.3% from GH¢989,433.68 in 2020 to GH¢511,953.60 in 2021 (The decrease in revenue for 2021 was as a result of the faulty CT-Scan machine in the early part of the year).								
<ul style="list-style-type: none"> Services provided under the Hospital's Sick Staff Policy at the imagine sub-BMC for 2021 stands at GH¢ 27,906.00 								
MATERNAL HEALTH SUB-BMC								
The sub-BMC started billing for CTG services								
CHILD HEALTH SUB-BMC								
The sub-BMC established a needy fund to support the children on the ward								
INTERNAL MEDICINE SUB-BMC								
Put in place an authentication system for billing before payment								
Periodic financial reports made available Sub-BMC Staff								
Notice posted on vantage points insisting patients to demand receipt upon payment of bills.								
Organised refresher training on billing procedure to Sub-BMC Billing Clerks								
SURGICAL SUB-BMC								
Payment for surgical services were streamlined through implementation of the surgical pack system								
All indiscriminate payments were harmonised into a single payment point at the Sub BMC office and officially receipted								
ANAESTHESIA & CRITICAL CARE SUB-BMC								
Collaborated with Pharmacy directorate to streamline the costing of Anaesthesia drugs								
DENTAL, EYE, EAR, NOSE & THROAT (DEENT) SUB-BMC								
Improved hospital's revenue through the Himalayan Cataract Project carried out in the course of 2021								
PUBLIC HEALTH SUB-BMC								
-								
PHARMACEUTICAL SERVICES								
-								
REHABILITATION SERVICES								
-								
CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING								
5.1 Improve on Research:								
HOSPITALWIDE LEVEL								
	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	Target	Remarks % Diff.
i. Operational research conducted	1	2	3	6	2	14	TH = 4	600% Incr
ii. Total number of researches conducted	1	2	14	13	50	60	-	20% incr
iii. Number of researches published	-	-	11	10	15	12	TH = 20	20% decr
iv. No. of Research Applications received at the Facility	-	-	-	92	112	135		20.5% incr
v. No. of Researches Approved	-	-	-	80	110	121		10% incr
vi. % of research applications	-	-	-	87%	98.2%	89.6%		Decr

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE							
approved by the facility/ERC							
HOSPITALWIDE LEVEL OUTPUTS							
Research Conducted by Staff in 2021;							
Authors(S)	Research Topic	Publication link	Department				
Agbeno EK, Osarfo J, Ashong J, Anane Fenin B, Okai E, Ofori AA, et al. (2021)	Determinants of preterm survival in a tertiary hospital in Ghana: A ten-year review.	PLoS ONE 16(1): e0246005. https://doi.org/10.1371/journal.pone.0246005					
Kwadwo Apeadu Danso et al. (2021)	Pfeiffer syndrome type 3 with FGR2 c.1052C>G (p. Ser351Cys) variant in West Africa: a case report.	Pan African Medical Journal. 2021;40(136).10.11604/pamj.2021.40.136.31395					
M. Asante-Bremang; B. A. B. Alhassan; E. O. Ofori; S. Yussif; K. Agyen-Mensah; G. A. Rahman; P. K. Mbroh; K. M. Edzie.	Kernohan-Woltman Notch Phenomenon in Chronic Subdural Hematoma: An under-Diagnosed Phenomenon?	Journal of Advances in Medicine and Medical Research, Page 115-123 DOI: https://doi.org/10.9734/jammr/2021/v33i2131139	A&E dept. in collaboration with surgical dept.				
Bashiru Babatunde Jimah, Teresa Aba Mensah, Kofi Ulzen-Appiah, Benjamin Dabo Sarkodie, Dorothea Akosua Anim, Emmanuella Amoako, and Evelyn Antwiwaa Gyamfi	(2021) Prenatal Diagnosis of skeletal Dysplasia and Review of the Literature Case Reports in Obstetrics and Gynaecology	Volume 2021, Article ID 9940063, 5 pages https://doi.org/10.1155/2021/9940063					
	Assessing The Prevalence and Drivers of Over-the-counter Sales of Antibiotics Among Community Pharmacies and Over the Counter Medicine Sellers in Ghana to Develop Mitigatory Behaviour Change Interventions to Tackle Amr: A Mixed-methods Study		Office of the CEO				
Patrick K. Akakpo	Determining The Prevalence of High-risk Human Papilloma Virus Infection in Cervical Cancer Patients, A Countrywide Study in Ghana						
Princess Gloria Ofori, Frederick Mensah Acheampong, Patrick Kafui Akakpo and Evans Fuakye-Akyempim	Counting The Cost of Covid-19 On Health Care Provision and Access; The Case of a Tertiary Healthcare Institution in Ghana	Under journal review					
Daniel Lawer Egbenya	Prevalence, Associated Risk Factors and Impact Of HIV/Aids-associated Neurocognitive Disorders On HIV/Aids Patients at Cape Coast Teaching Hospital, Ghana						
Yaw Asante Awuku	An International Registry of Patients with Or at Risk for Hepatobiliary Cancers, Including Hepatocellular Carcinoma, Cholangiocarcinoma, And Gallbladder Adenocarcinoma, And Those Patients with Normal Risk Factors						
Ansumana Bockarie	Phone-based Intervention Under Nurse Guidance After Stroke II (Pings II)						
Alidu Abdulai	Human Resource Development Practices and Performance of Cape Coast Teaching Hospital						
Joseph Elikem Efui Acolatse	Development Of a Laboratory Quality Management System for The Cape Coast						

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE			
	Teaching Hospital to Enhance AMR Detection and Surveillance Capacity		
Jerry Paul Ninnoni	Mental Health and Psychological Wellbeing Assessment of People Living With HIV/AIDS in Cape Coast Teaching Hospital		
Elizabeth Tabitha Botchway	A prospective cohort study on the clinicopathologic characteristics and clinical outcomes of TB patients coinfecting with nontuberculous mycobacteria at a teaching hospital in Ghana		
Angela Owusu-Ansah	Pharmacovigilance in Cape Coast Teaching Hospital (CCTH): Knowledge, Attitude and Practices of Healthcare Professionals		
Edna Obodai	Acute Paediatric Critical Illness in Resource-limited Settings: A Novel Point Prevalence Study		
Yaw Bediako	Liquid Biopsy for Detection of Actionable Genomic Mutations in Women of African Descent with Advanced Breast Cancer (Amber-01 Study)		
Emmanuel Okai	Exploring Neonatal Transport Practices and Feasibility of Implementation of Kangaroo Mother Care in Neonatal Transport in Ghana		
Jonathan Olesu	Incidence, Types and Outcomes of Odontogenic Infection at Cape Coast Teaching Hospital (CCTH)		
Kate Pobee	Patients Perception of Communication in Healthcare: Evidence from The Cape Coast Teaching Hospital		
Akua Nyarko Owusu Achiaw	Assessing The Level of Knowledge and Practices of Covid 19 Among Healthcare Workers in Cape Coast Teaching Hospital		
Bashiru Babatunde Jimah	Uterine Fibroid Characteristics and Complications in Early Pregnancy Ultrasound Scan; A Retrospective Analytical Study at RAAJ Specialist Scan		
Christian Eddy Bonney	Utility Of Herbal Preparation and Its Effect on Bedside Clotting Time Among Pre-Surgical Patients at Cape Coast Teaching Hospital.		
Marfo Joseph	Incidence Of Intraoperative and Postoperative Nausea and Vomiting During Spinal Anaesthesia for Caesarean Section in Cape Coast Teaching Hospital Delivery Suit Theatre		
Blankson Fotwe Endorah	Blood Transfusion in Obstetrics; The Perception of Pregnant Women in TheCape Coast Metropolis		
Wadere Michael	Relationship Between Fear of Covid-19 And Consumer Preference of Health Care Services: A Case of Cape Coast Teaching Hospital, Ghana		
Kwasi Agyen-Mensah	An Audit of Six Years' Gastrointestinal Endoscopy at A Single Referral Centre in The Central Region, Ghana		
Rebecca Peniel Storph	Prevalence Of Human T-cell Lymphotropic Virus Among Blood Donors in Three (3) Regions of Ghana: A Comparative Study		
Kofi Adum-Attah	Two Cases of Acute Thyrotoxicosis After Covid-19 Mrna Vaccination in Ghana"		

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE			
Ernest Sarfo-Gyan	Knowledge, Perception and Attitude of Pregnant Women to Epidural Analgesia During Labor in Cape Coast Teaching Hospital		
Kofi Adum-Attah	Incarceration As a Key Variable in Tuberculosis Transmission in Ghana: A Retrospective Study at Communicable Diseases Prison, Ankaful From 2008-2012		
Audrey Addy	The Relationship Between Social Influence and Usage of Telehealth and Its Impact on Teamwork in Cape Coast Teaching Hospital, Ghana		
Ama Gyeduah Boadu	Epidemiology Of Deep Vein Thrombosis in A Tertiary and Two District Hospitals in Ghana		
George Akafity	An Investigation on Women's Labour Pain Experiences and Perceptions and Its Effect on Their Perception of Epidural Analgesia: An Exploratory Qualitative Study		
Mr. George Akafity	Assessing The Prevalence and Drivers of Over-the-counter Sales of Antibiotics Among Community Pharmacies and Over the Counter Medicine Sellers in Ghana to Develop Mitigatory Behaviour Change Interventions to Tackle Amr: A Mixed-methods Study.		
Ansumana Bockarie	Phone-based Intervention Under Nurse Guidance After Stroke II (Pings II)"		
Mercy Aseye Bockor	Cardiopulmonary Resuscitation Knowledge and Skills Among Nurses in The Paediatric Ward of The Cape Coast Teaching Hospital		
Amanj Kurdi	Assessing The Prevalence and Drivers of Over-the-counter Sales of Antibiotics Among Community Pharmacies and Over the Counter Medicine Sellers in Ghana to Develop Mitigatory Behaviour Change Interventions to Tackle Amr: A Mixed-methods Study		
OUT-PATIENTS SUB-BMC			
-			
ACCIDENT AND EMERGENCY SUB-BMC			
Conducted 1 research <ul style="list-style-type: none"> • Kernohan-Woltman notch phenomina in chronic subdural haematomal: under diagnosed phenomenon. Published in Journal in advances in medicine and medical research 			
DIAGNOSTICS SERVICES SUB-BMC			
The Pathology department conducted and published one (1) operational research <ul style="list-style-type: none"> • Case Reports in Obstetrics and Gynaecology: Prenatal Diagnosis of skeletal dysplasia and review of the literature. Volume 2021, Article ID 9940063, 5 pages https://doi.org/10.1155/2021/9940063 Publication website-Hindawi The laboratory department conducted three (3) researches <ul style="list-style-type: none"> • Prevalence Of Human T-cell Lymphotropic Virus Among Blood Donors in Three (3) Regions of Ghana: A Comparative Study • Blood Transfusion in Obstetrics; The Perception of Pregnant Women in The Cape Coast Metropolis • Development Of a Laboratory Quality Management System for The Cape Coast Teaching Hospital to Enhance Amr Detection and Surveillance Capacity 			
The laboratory department also partnered with KHRC and NMIMR in undertaking the MVPE program and HINI surveillance respectively.			
Haematology department improved on documentation and data collection			
IMAGING SUB-BMC			
The imaging department conducted one (1) research			

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
<ul style="list-style-type: none"> Uterine Fibroid Characteristics and Complications in Early Pregnancy Ultrasound Scan; A Retrospective Analytical Study at RAAJ Specialist Scan 								
MATERNAL HEALTH SUB-BMC								
-								
CHILD HEALTH SUB-BMC								
The conducted three (3) researches of which two was published and one (1) was ongoing.								
Published;								
<ul style="list-style-type: none"> Agbeno EK, Osarfo J, Ashong J, Anane Fenin B, Okai E, Ofori AA, et al. (2021) Determinants of preterm survival in a tertiary hospital in Ghana: A ten-year review. PLoS ONE 16(1): e0246005. https://doi.org/10.1371/journal.pone.0246005 Kwadwo Apeadu Danso et al. Pfeiffer syndrome type 3 with FGR2 c.1052C>G (p. Ser351Cys) variant in West Africa: a case report. Pan African Medical Journal. 2021;40(136). 10.11604/pamj.2021.40.136.31395 								
Ongoing;								
<ul style="list-style-type: none"> Acute Paediatric Critical Illness in A Resource –Limited Setting: A Novel Point Prevalence Study. 								
INTERNAL MEDICINE SUB-BMC								
Three (3) collaborative research projects ongoing								
SURGICAL SUB-BMC								
The department also conducted four (4) departmental researches;								
<ul style="list-style-type: none"> An Audit of six years' Gastrointestinal Endoscopy at a Single Referral Centre in The Central Region, Ghana Liquid Biopsy for Detection of Actionable Genomic Mutations in Women of African Descent with Advanced Breast Cancer (Amber-01 Study Genomic Mutations in Women of African Descent with Advanced Breast Cancer (Amber-01 Study 								
ANAESTHESIA & CRITICAL CARE SUB-BMC								
A research desk was set up								
Commenced three researches in emerging Anaesthesiology and Critical Care medicine								
DENTAL, EYE, EAR, NOSE & THROAT (DEENT) SUB-BMC								
-								
PUBLIC HEALTH SUB-BMC								
-								
PHARMACEUTICAL SERVICES								
Conducted 2 researches;								
<ul style="list-style-type: none"> Assessing the Prevalence and Drivers of Over-The-Counter Sales of Antibiotics Among Community Pharmacies and Over the Counter Medicine Sellers in Ghana to Develop Mitigatory Behaviour Change Interventions to Tackle Amr: A Mixed-Methods Study. Pharmacovigilance in Cape Coast Teaching Hospital (CCTH): Knowledge, Attitude and Practices of Healthcare Professionals 								
REHABILITATION SERVICES								
The Clinical Psychology unit collaborated with the psychiatric department to conduct one (1) research on "the effects of burnout amongst health professionals".								
5.2 Improve on Teaching and Learning:								
HOSPITALWIDE LEVEL								
	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	Target	Remarks % Diff.
i. Resident pass rate	-	-	90%	100%	-	91%	THs= 60%	Decr
ii. Number enrolled in postgraduate colleges	-	-	53	48	-	38	-	
iii. Consultant to Resident Doctor ratio	1:7	1:12	1:7	1:4	1:5	1:1.4	THs = 1:3	Decr
iv. Proportion/number of clinical staff enrolled in postgraduate colleges	-	-	-	-	23	38	-	65.2%

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
HOSPITALWIDE LEVEL OUTPUTS
Joint committee meeting held towards the implementation of the MOU between CCTH and UCC-SMS including the agreement to create a joint training coordinating desk with the SMS.
65" Samsung TU7000 TV, Jabra 510 Speaker received from Echo Institute from India towards teleconferencing.
A generic MoU developed with training institutions
Trained staff on Emergency preparedness
3 staff enrolled in Ghana College of Pharmacists residency programme
Organized in-service training for nurses and midwives on customer care/quality assurance/professional ethics
DEPARTMENTAL LEVEL OUTPUTS
OUT-PATIENTS SUB-BMC
Referral desk established with focal person
Six (6) Clinical meetings held
One (1) SOP developed
ACCIDENT AND EMERGENCY SUB-BMC
28 Medical students, Pre-med students, foreign medical students and physician assistants passed through the department.
Nursing students rotated through the unit
16 pharmacy students rotated through the unit
DIAGNOSTICS SERVICES SUB-BMC
The laboratory department participated in EQA for TB, Malaria, HIV
The pathology department saw 417 medical students rotating through the department.
The Haematology department continued teaching sessions during ward rounds and in the laboratory (examination of slides)
The microbiology department partnered with KHRC and NMIMR in undertaking the MVPE program and HINI surveillance respectively.
Microbiology department organised monthly scientific presentation on selected topics
Facilitation of seminars/workshops by laboratory staff
There were regular laboratory meetings, presentations and continuous professional education.
Staff at the laboratory benefited from training programmes (IPC, QMS, TB, Malaria, Phlebotomy, etc.).
The haematology department resumed Wednesday morning meetings
The haematology unit continued to offer teaching sessions during ward rounds and in the laboratory (through the examination of slides)
IMAGING SUB-BMC
17 people including residents, radiographers and sonographers were trained
MATERNAL HEALTH SUB-BMC
Thirty-two (32) undergraduate medical students passed through the sub-BMC for training.
Seven (7) midwives received approval postgraduate training
Refurbished and equipped doctors and nurses to create a conducive environment.
CHILD HEALTH SUB-BMC
Clinical rotations by physician assistants, nursing students as well as medical students
INTERNAL MEDICINE SUB-BMC
GCPS/WACP candidates prepared for membership exams <ul style="list-style-type: none"> • Residency training continued with the start of two new residents • Two (2) specialist physicians graduating.
Six (6) Nurses were on study leave; <ul style="list-style-type: none"> • Critical care nursing - 2 • Nephrology - 1 • Oncology - 1 • Critical care - 2
SURGICAL SUB-BMC
Forty-two (42) clinical meetings organised
Refresher teaching on operating room protocols for O.R staff was organized
Eight (8) foreign medical students did their rotation at the Sub-BMC
Twenty-five (25) physician assistants from various universities did their clerkship at the Sub-BMC
Six (6) PON students came for internship and clinicals
Nursing students from various NTCs did clinicals at the sub-BMC

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
ANAESTHESIA & CRITICAL CARE SUB-BMC								
Applied and prepared for accreditation for housemanship, Diploma in Anaesthesia (GCPS, WACS), and residency training in Anaesthesiology								
Trained CRAs, CCNs								
Established seminars, clinical audits on BLS/ ACLS/ ATLS drills								
DENTAL, EYE, EAR, NOSE & THROAT (DEENT) SUB-BMC								
Training of ENT Nurse on ENT Oncology for 3 months in India								
Trained and supervised 199 medical, nursing, optometry & dental students on clinical practice								
One SSN completed ophthalmic specialized training and joined the unit in May 2021.								
Conducted eight (8) clinical presentations								
Conducted CPDS under DEENT related topics								
Training of ENT Nurse on ENT Oncology for 3 months in India								
PUBLIC HEALTH SUB-BMC								
Carry out 12 bi-weekly presentation								
Continued to orient and trained ten (10) nurses on rotation								
PHARMACEUTICAL SERVICES								
Two (2) in-service training done with KNUST and UCC for preceptors								
Five (5) preceptors were appointed at UCC, UHAS and Ghana College of Pharmacists								
All twenty-five (25) pharmacists at the department attended the 2021 virtual AGM in September 2021								
Fifty-two (52) staff participated in training on Drug Information in September								
Thirty-two (32) clinical presentations/meetings organised which saw thirteen 13 Case Presentation organised								
MOU signed with KNUST for the training of Pharm D students and with UHAS ongoing								
REHABILITATION SERVICES								
Clinical Psychology Department								
Organized a successful stress/ burnout management workshop at the wards for both staff and patients.								
Improved awareness of the clinical psychology unit leading to a higher patronage by and especially staff of the hospital								
Increased collaboration between medical officers and clinical health psychologists leading to a more thorough approach to patient health delivery.								
Provided clinical psychological training to ten (10) students from the University of Cape Coast								
Continued training of clinical psychology interns from the Ghana psychology council								
Provided practical experiences for undergraduates and MPhil students of psychology and other disciplinary								
Physiotherapy Department								
Trained fifteen (15) allied health professional								
Scholarship awarded to four (4) staff								
Diet & Nutrition Department								
-								
CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS								
	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	Target	Remarks % Diff.
Proportion of planned specialist outreach support to facilities carried out	-	100%	150%	50%	0	100%		
Number of outreach visits carried out	-	-	100%	100%	100%	100%	THs = 16%	
Outreach visits carried out	-	-	17	174	164	398	-	142.7%
Total number of outreaches planned visits carried out	-	-	17	174	164	398	-	142.7% incr
Number of Beneficiaries recorded	-	-	1,062	13,873	8,276	20,415	THs= 11,215	146.7% incr
HOSPITALWIDE LEVEL OUTPUTS								
Outreach support to peripheral institutions								
a. Total outreaches carried out:								
✓ Outreaches (communities)								
○ Total Community/ Church = 830 (DEENT = 399, PHU = 431)								
○ Number of People = 21,415								
✓ Outreaches (Schools)								

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
<ul style="list-style-type: none"> ○ Total number of Schools visited = 3 ○ Number of beneficiaries/pupils = 1,271
<ul style="list-style-type: none"> ✓ Surgical Outreaches to facilities <ul style="list-style-type: none"> ○ Number of centres = 1 ○ Total surgeries done = 28
<ul style="list-style-type: none"> ✓ Surgical Outreaches to Communities <ul style="list-style-type: none"> ○ Number of communities visited = 399 ○ Number of beneficiaries = 21,415
Provided continuous support to lower facilities on phone and visits to site
GeneXpert and Viral Load & EID for lower-level facilities.
Some lab Staff served as Regional OTSS and EQA supervisors
DEPARTMENTAL LEVEL OUTPUT
OUT-PATIENTS SUB-BMC
Partnered with Internal Medicine to scale up mentorship program on DM for one adopted peripheral facility
ACCIDENT AND EMERGENCY SUB-BMC
-
DIAGNOSTICS SERVICES SUB-BMC
The Laboratory department provided GeneXpert and Viral Load & EID for lower-level facilities.
Some laboratory staff served as Regional OTSS and EQA supervisors
IMAGING SUB-BMC
Provided imaging services to lower-level facilities.
MATERNAL HEALTH SUB-BMC
Provided mentorship support to Twifo Praso and Salt Pond Hospitals
Organised One (1) joint Zonal OBGYN specialists EMONC training
CHILD HEALTH SUB-BMC
Provided Telephone Feedback to peripheral facilities on referred cases sent
INTERNAL MEDICINE SUB-BMC
-
SURGICAL SUB-BMC
-
ANAESTHESIA & CRITICAL CARE SUB-BMC
-
DENTAL, EYE, EAR, NOSE & THROAT (DEENT) SUB-BMC
The eye department undertook outreach program in 5 districts namely; KEEA, Gomoa East, Assikuma Odobeng Abrakwa, AEA, Wassa Amenfi East District to screen clients for cataract surgery
The eye department organised outreach services and coordination with 20,415 cases seen
The eye department organised one (1) specialist outreach at European Hospital with 21 cataract surgeries and 7 pterygiums
PUBLIC HEALTH SUB-BMC
Collaborated with other sub-BMCs to conduct outreach programmes with 431 communities benefiting
PHARMACEUTICAL SERVICES
The department provided mentorship support at five (5) peripheral facilities; <ul style="list-style-type: none"> • Komenda Health Centre, Moree Health Centre, Elmina Health Centre, Anomabo Health Centre and Winneba Government Hospital
REHABILITATION SERVICES
-

SECTION 2

CHAPTER TWO

HUMAN RESOURCE

2.1: INTRODUCTION

Human resource recruitment and management is important to deliver on the mandate of any institution. As such, the hospital continues to implement strategic and innovative approaches to improve the capacity of staff. This is based on the medium-term and yearly human resource needs assessment towards achieving the objectives and goals of the hospital.

2.2: STAFF STRENGTH ANALYSIS

The hospital's staff strength continues to improve over the years. Total number of Staff went up significantly from 786 staff in 2015 to 2,051 in 2021. Also, the hospital recorded 14.5% increase in total staff in 2021 compared 2020 (from 1,792 in 2020 to 2,051 in 2021). Out of the total staff of 2,051 recorded in 2021, 93.2% (1,912) were permanent staff, 2.6% (53) were NABCO personnel, 2.4% (49) were CCTH staff, whereas, 1.4% (28) and 0.44% (9) were UCC SMS staff and staff on secondment respectively.

Also, the total doctors went up by 2.8% in 2021 compared to 2020 (from 291 in 2020 to 299 in 2021), leading to a reduction in the ratio of OPD cases seen per doctor, from 1:749 in 2020 to 1:560 in 2021. However, there is still inadequate specialist doctors, thereby, reflecting in the ratio of OPD cases seen per specialist from 1:1,024 in 2020 to 1:1,483 in 2021. Further, there is continuous improvement in the total number of professional nurses and midwives over the years. In 2021, total nurses and midwives went up significantly by 21.9% and 21.3% respectively, leading to the increment in the doctor to nurse and midwife ratio from 1:5 in 2020 to 1:7 in 2021. In the same light, there was a slight reduction in the delivery to midwife ratio from 1:18 in 2020 to 1:15 in 2021 (i.e. using the total midwives in the hospital). Similarly, the hospital recorded a significant improvement in the total number of pharmacists from 18 in 2020 to 25 in 2021, representing 38.5% increment in 2021 compared to 2020, thereby leading to an improvement in the prescription to pharmacist ratio, from 9,425:1 in 2020 to 6,422:1 in 2021.

In 2021, the hospital received reports on 23 staff purported to have acquired various forms of injuries and were attended to promptly. Percentage of accidental needle injury recorded among staff increased by 1.1% in 2021 compared to 0.67% in 2020. In addition, 284 (13.9%) out of the total hospital staff were infected with COVID-19 in 2021, with 100% recovery rate. Detailed trend analysis of the hospital's staff strength is provided in figure 2.2.1 and tables 2.2.1 to table 2.2.6 below.

Figure 2.2. 1: Trend Analysis of Total Staff Strength

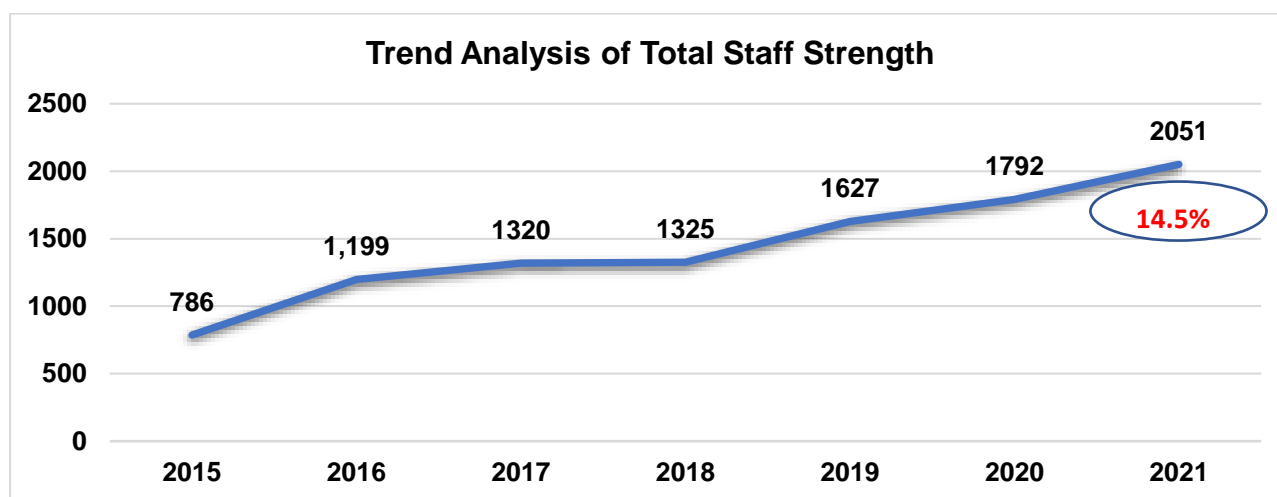


Table 2.2. 1: Trend Analysis of Total Staff Strength

CADRE	2015	2016	2017	2018	2019	2020	2021	REMARKS
Doctors	116	178	186	221	266	291	299	2.8% incr
Radiology Technicians	3	3	5	8	7	-	-	-
Radiologist	-	1	2	3	3	3	2	33.3% decr
Radiographers	3	3	5	5	5	6	6	No change
Professional & Enrolled Nurses	317	535	554	546	647	713	855	19.9% incr
<i>Professional Nurses</i>		433	455	449	562	643	784	21.9% incr
<i>Enrolled Nurses</i>		102	99	97	85	70	71	1.4% incr
Midwives	31	100	106	105	152	164	199	21.3% incr
Pharmacist	8	9	9	9	18	18	25	38.9% incr
Pharmacist Tech	6	7	6	6	7	7	7	
Accountants & Finance Officers	14	14	18	24	27	31	47	51.6% incr
Laboratory & Lab Tech	15	16	18	20	18	51	46	9.8% decr
Health Services Administrators	5	4	8	8	7	9	13	44.4% incr.
Optometrist	2	2	2	2	2	2	6	200% incr
Other GOG Pay Roll Staff	176	221	317	363	314	585	486	16.9% decr
CCTH Pay Roll Staff	96	116	91	105	61	76	49	35.5% decr
TOTAL STAFF	786	1,199	1,320	1,325	1,627	1,792	2,051	4.5% incr

Table 2.2. 2: Trend of Total Staff Available at CCTH in 2021

DIRECTORATE	PERMANENT	UCC SMS	SECONDMENT	CCTH STAFF	NABCO	TOTAL
Administration	275	0	7	14	40	336
Finance	47	0	0	0	10	57

DIRECTORATE	PERMANENT	UCC SMS	SECONDMENT	CCTH STAFF	NABCO	TOTAL
Medical	493	28	2	22	2	547
Nursing	1061	0	0	0	1	1062
Pharmacy	36	0	0	13	0	49
Grand Total	1,912	28	9	49	53	2,051

Table 2.2.2. 1: Composition of Total Staff by Directorates at CCTH

DIRECTORATE	2018	2019	2020	2021	REMARKS
Administration	243	308	332	336	1.2% incr
Finance	24	43	51	57	11.8% incr
Medical	327	392	450	547	21.6% incr
Nursing	703	845	918	1,062	15.7% incr
Pharmacy	28	39	41	49	19.5% incr
Grand Total	1,325	1,627	1,792	2,051	14.5% incr

Table 2.2. 3:Trend of Doctors by Category

CATEGORY	NUMBER					REMARKS
	2017	2018	2019	2020	2021	
Consultants, Senior Specialist and Specialists	45 (*25 SMS)	53 (*31 SMS)	72 (*33 SMS)	68 sms	76 sms	11.8% incr
<i>Consultants</i>	4	4	4	4	6	50% incr
<i>Senior Specialist</i>	1	4	8	9	21	133% incr
<i>Specialists</i>	40	45	60	55	49	10.9% decr
Medical Officers	69	29	33	38	46	21.1% incr
Residents	47	53	48	62	38	38.7% decr
House Officers	108	86	113	123	139	13% incr
TOTAL	222	221	266	291	299	2.8% incr

Table 2.2. 4: Number of Specialists by Category

SPECIALTY	2018	2019	2020	2021
Anaesthesia	1	1	2	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

SPECIALTY	2018	2019	2020	2021
Endocrinology	1	1	1	1
ENT	2	2	2	1
Family Medicine	2	2	2	2
Haematology	2	2	2	2
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
Trauma & Orthopaedics Specialist	2	2	2	4
Physician specialist	-	-	7	
Pathology	2	2	3	6
Plastic Surgery	1	1	-	1
Radiology	3	3	3	3
Surgery	7	13	13	10
Urology	1	2	2	1
Grand Total	53	72	58	62

Table 2.2.4. 1 : Trend of Nurses and Midwives by Category

CADRE	2018	2019	2020	2021	REMARKS
Midwives	105	152 (44.8% incr)	164 (7.9% incr)	199	21.3% incr
Community Health Nurse	9	10 (11.1% incr)	7 (30% decr)	7	
Professional Nurses	449	562 (25.2% incr)	643 (14.4% incr)	784	21.9% incr
Enrolled nurse	97	85 (12.4% decr)	70 (17.6% decr)	71	1.4% incr
TOTAL	659	724 (9.9% incr)	807 (11.5%)	1,061	31.5% incr

Table 2.2. 5: Categories of Newly Recruited Staff at CCTH in 2021

2020		2021	
GRADES	NUMBER	GRADES	NUMBER
Specialist	1	Specialists	5
Medical Officers	23	Medical Officers	19
Nursing Officers	47	Nursing Officers	30
Biomedical Scientist	21	Biomedical Scientist	18

2020		2021	
GRADES	NUMBER	GRADES	NUMBER
Staff Nurses	70	Staff Nurses	108
Midwives	19	Midwives	38
Technical Officer (lab)	11	Technical Officer (lab)	17
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
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

Table 2.2. 6: HR Performance under Teaching Hospital's (THs) KPIs

KPIs	2016	2017	2018	2019	2020	2021	REMARKS	TARGET	MEASUREMENT
OPD cases seen per doctor	1:1184	1:1030	1:1163	1:1098	1:749	1:560	Decr.	THs = 1:1080	Total no. of client attending OPDs / Total no. of Drs
OPD Cases seen per specialist	1:1829	1:1849	1:1418	1:1255	1:1024	1:1483	Incr.	THs = 1:1200	Total no. of OPD client attending specialist clinics / Total no. of specialist/Snr.

KPIs	2016	2017	2018	2019	2020	2021	REMARKS	TARGET	MEASUREMENT
									Specialists/Consultants.
Consultant Resident Doctor ratio	1:7	1:12	1:7	1:4	1:5	1:1.4	Decr	THs = 1:3	Total number of consultants and snr specialist/ Resident Doctors
Doctor to Nurse/ Midwives Ratio	1:6	1:5	1:4	1:5	1:5	1:7	Incr	-	Total number of doctors in the hospital / Total of Nurses
Nurse and Midwife admission ratio	1:21	1:20	1:20	1:16	1:13	1:13.2	Incr	THs = 1:25	Total no. of clients admitted / total no. of nurses and midwives
Doctor Pharmacist Ratio	10.3:1	12.6:1	15.1:1	8.5:1	9:1	6.4:1	Decr	THs =10:1	Total number of Doctors/Total Pharmacist in the Hospital
Prescription to pharmacy ratio	13,491:1	13,511:1	16,097:1	8,288:1	9,425:1	6,422:1	Decr	THs = 12000:1	Total no. of prescription served/ total no. of pharmacists
Deliveries to midwives' ratio at the Facility	29:1	29:1	30:1	20:1	18:1	15:1	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	Decr		

2.3 STAFF GAP ANALYSIS AND INTERVENTION IN 2021

In other to bridge the human resource gaps, the hospital recruited a total of 342 staff in 2021. Detailed trend analysis of the hospital's newly recruited staff and key human resource gaps are provided in figure 2.3.1 and table 2.3.1 to table 2.3.4 below.

Figure 2.3. 1: Categories of Newly Recruited Staff at CCTH in 2021

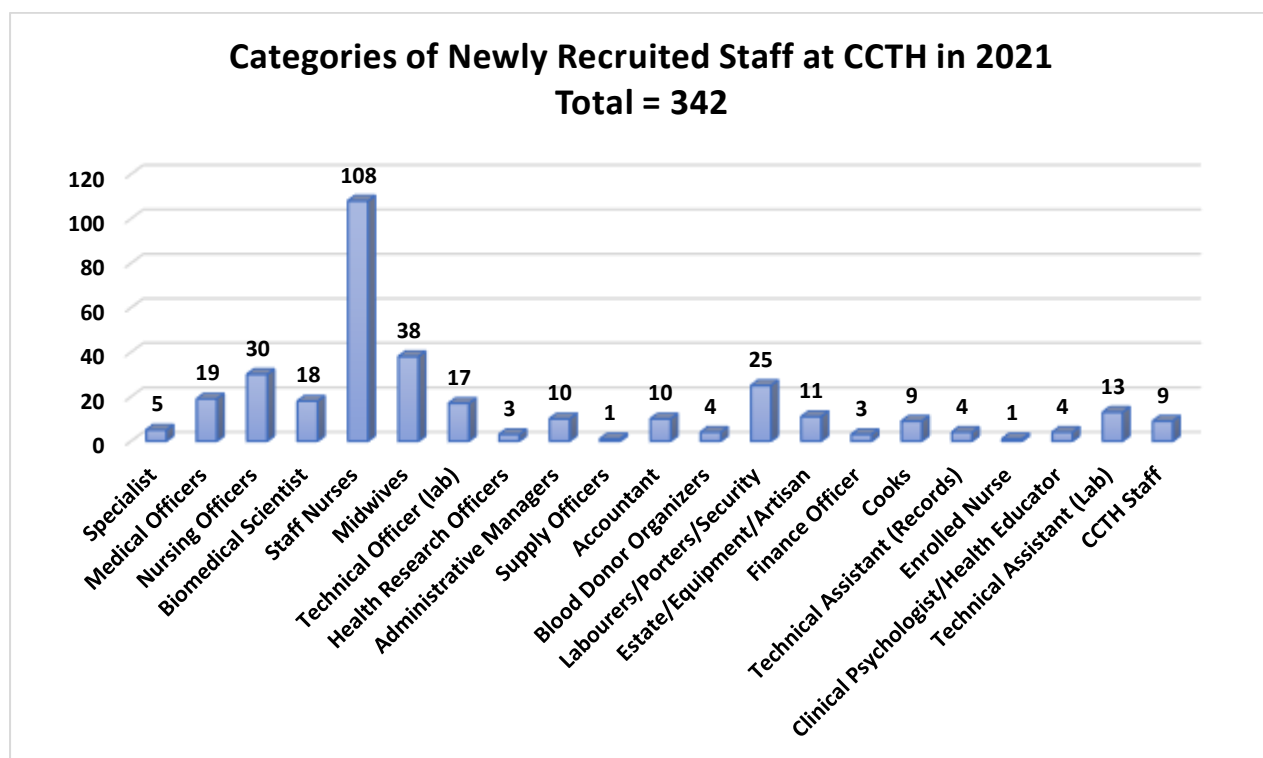


Table 2.3. 1: Gap Analysis for Doctors

CADRE	NO. REQUIR ED	NO. AVAILABLE IN 2018	NO. AVAILABLE IN 2019	NO. AVAILABLE IN 2020	NO. AVAILABL E IN 2021	GAP IN 2021	UNDER TRAINING IN 2021
Medical Officers	56	29	33	38	28	28	0
Maxillofacial surgeon	5	-	3	2	2	3	1
Specialist Community Oral Health /Dentist	6	-	0	0	0	6	-
Specialist Orthodontist	2	-	0	0	1	1	1
Specialist Restorative Dentistry	4	-	0	0	0	4	0
Cardiologist	4	-	1	1	1	3	0
Dermatologist	2	-	0	1	1	1	0
Doctor Anaesthetist	27	1	1	2	1	26	2
Emergency Medicine Physician	22	2	2	2	2	20	-
Endocrinologist	2	-	1	1	1	1	0
Family Physician	7	2	2	2	4	3	1
Gastroenterologis t	4	-	0	0	1	3	0

CADRE	NO. REQUIRED	NO. AVAILABLE IN 2018	NO. AVAILABLE IN 2019	NO. AVAILABLE IN 2020	NO. AVAILABLE IN 2021	GAP IN 2021	UNDER TRAINING IN 2021
Infectious Disease Specialist	4	-	0	0	0	4	0
Nephrologist	3	-	0	0	0	3	0
Neurosurgeon	2	-	1	1	1	1	1
Obstetrician & Gynaecologist	21	10	13	11	9	12	6
Ophthalmologist	7	3	3	3	3	4	2
Paediatric Endocrinologist	2	-	1	0	0	2	0
Paediatric Nephrologist	2	-	0	0	0	2	0
Paediatric Neurologist	2	-	0	0	0	2	0
Paediatric Oncologist	2	-	0	0	0	2	1
Paediatrician (General)	16	3	7	6	3	13	6
Pathologist	6	2	3	3	5	1	0
Physician Specialist (Medicine)	32	3	6	7	9	13	8
Respiratory Physician	2	-	0	0	0	2	0
Rheumatologist	2	-	0	0	0	2	0
Specialist Haematology	5	-	3	2	3	2	0
Specialist Microbiology	5	-	2	2	2	3	0
Trauma & Orthopaedic Specialist	6	-	2	2	2	4	1
Urologist	4	-	2	2	1	3	0
General Surgeon	11	7	12	13	2	9	4
Paediatric Surgeon	8	-	0	0	0	8	0
Clinical Medical Physicist	8	-	0	0	0	8	0
ENT specialist	5	-	2	2	2	3	1
Radiologist	7	-	3	3	2	5	2
Radiation Oncologist	9	-	0	0	1	8	1
TOTAL	312	62	103	106	87	214	38

Table 2.3. 2: Staff Gap Analysis – Nurses

CADRE	NO. REQUIRED	NO. AVAILABLE IN 2018	NO. AVAILABLE IN 2019	NO. AVAILABLE IN 2020	NO. AVAILABLE IN 2021	GAP IN 2021
Midwives	175	105	152	164	199	24
Community Health Nurse	14	9	10	7	7	7
Registered (Profession	955	449	562	643	784	171

CADRE	NO. REQUIRED	NO. AVAILABLE IN 2018	NO. AVAILABLE IN 2019	NO. AVAILABLE IN 2020	NO. AVAILABLE IN 2021	GAP IN 2021
a) General Nurses						
TOTAL	1144	563	724	814	990	202

Table 2.3. 3: Gap Analysis for Allied Health Professionals

CADRE	NO. REQUIRED	NO. AVAILABLE IN 2019	NO. AVAILABLE IN 2020	NO. AVAILABLE IN 2021	GAP IN 2021
Physiotherapist	29	3	3	4	25
Physiotherapy Assistant	12	8	8	7	5
Radiographers/ X-ray Technician	17	7	6	6	11
Radiotherapist	6	0	0	0	6
Biomedical Scientist	96	12	34	48	48
Biostatistics Officer	11	1	0	2	9
Technical Officer (Biostats. /HI)	18	11	9	9	9
TOTAL	189	42	60	76	113

Table 2.3. 4: Gap Analysis for Pharmacists

CADRE	NO. REQUIRED	NO. AVAILABLE IN 2019	NO. AVAILABLE IN 2020	NO. AVAILABLE IN 2021	GAP IN 2021
Pharmacists (General)	57	18	15	22	15
Pharmacy Specialist - Drug Information	7	0	0	0	7
Pharmacy Specialist- Manufacturing	6	0	0	0	6
Pharmacy Specialist – Radio	5	0	0	0	5
Clinical Pharmacist	15	1	3	1	14
Pharmacy Technician	38	7	7	8	30
Total	128	26	25	31	77

2.4. PROMOTIONS AND STAFF DEVELOPMENT

Over the years, the hospital has been consistent in conducting promotion interviews twice yearly to qualified personnel towards change of grade or appointment to management position. These exercises undoubtedly improve staff motivation, whereas, the establishment of a system to improve staff development (through the granting of study leaves to those eligible and merited it), impacts positively on staff performance and retention. A total of 140 staff went through change of grade after successfully passing their interview. Out of the 140, seven (7) went through grade conversion, whilst 81 and 50 went through promotion and upgrading respectively.

The total staff granted study leave in 2021 dropped by 5.8% (from 104 in 2020 to 98 in 2021). Out of the 98, 60 were granted study leave with pay whilst 38 received approval to undertake various sandwich programmes. Generally, out of the disciplines granted leave in 2021, nurses were 59 (60.2%), doctors were 23 (23.5%) and other staff were 16 (16.3%). On the other hand, 49 staff resumed duty. Out of which, 24 were doctors, 23 were nurses and 2 were other staff. Detailed analysis on staff promotion and development is further illustrated in figure 2.4.1 to figure 2.4.2 and table 2.4.1 to table 2.4.13.

Figure 2.4. 1: Trend Analysis of Change of Grades

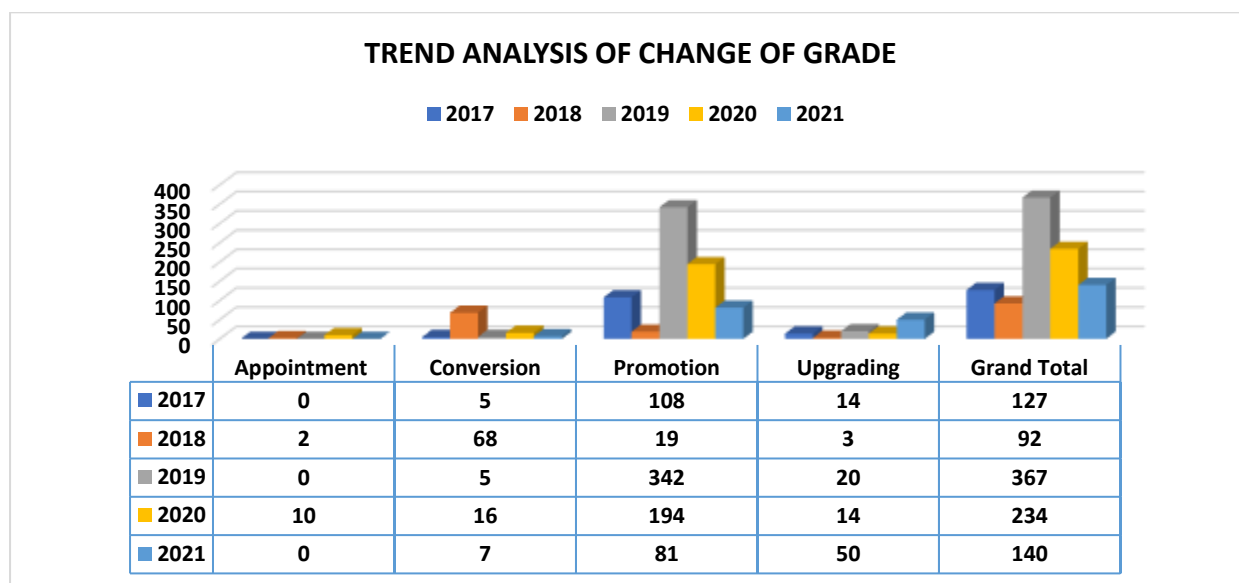


Table 2.4. 1: Change of Grades in 2021

TYPE OF CHANGE	1 st Half of 2021 PHASE 1	2 nd Half of 2021 PHASE 2	GRAND TOTAL
Appointment	-	-	-
Conversion	1	6	7
Promotion	44	37	81
Upgrading	25	27	50
Grand Total	70	70	140

Table 2.4. 2: Trend Analysis of Change of Grades

Category	2017	2018	2019	2020	2021	REMARKS
Appointment	0	2	0	10	-	-
Conversion	5	68	5	16	7	56.3% decr
Promotion	108	19	342	194	81	58.3% decr
Upgrading	14	3	20	14	50	257.1% incr
Grand Total	127	92	367	234	138	41% decr

Table 2.4.3: Analysis of Study Leaves Granted

CADRE	STUDY LEAVE WITH PAY	STUDY WITHOUT PAY	SANDWICH	TOTAL GRANTED
2021				
Nurses	32	0	27	59
Doctors	23	0	0	23
Other Staff	5	0	11	16
TOTAL	60	0	38	98
2020				
Nurses	33	1	9	43
Doctors	34	0	0	34
Other Staff	4	0	11	15
TOTAL	77	1	26	104
2019				
Nurses	28	1	14	43
Doctors	18	0	0	18
Other Staff	4	0	5	9
TOTAL	50	1	19	70
2018				
Nurses	18	0	0	18
Doctors	13	1	0	14
Other Staff	4	0	5	9
Total	35	1	5	41

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

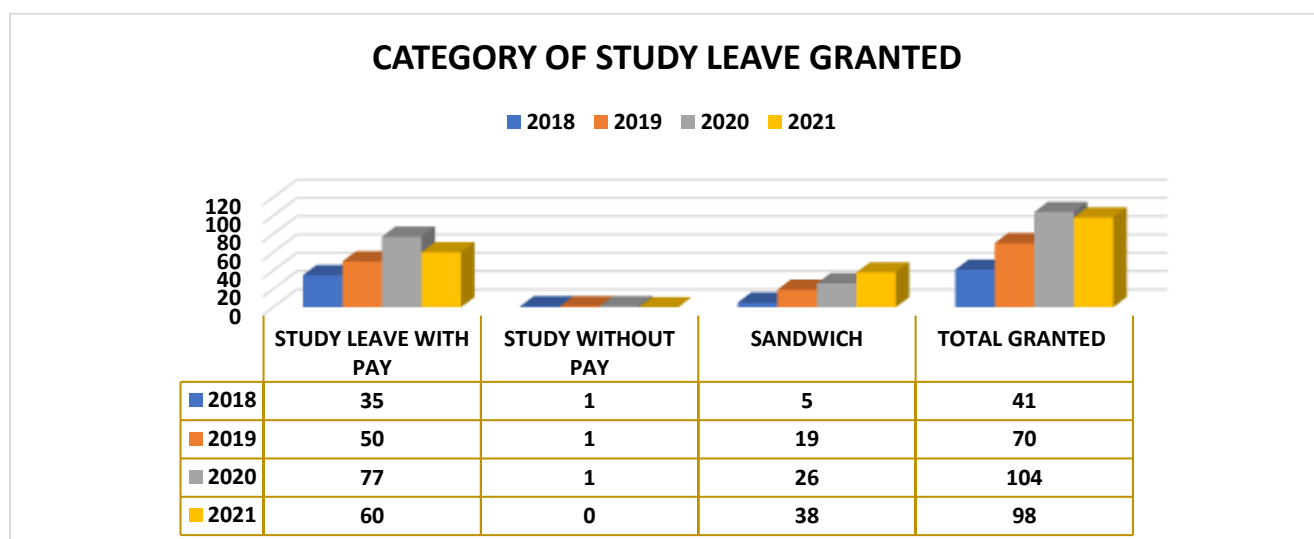


Table 2.4. 4: Analysis of Study Leave Granted to Doctors

2020				2021			
Programme	No. Approved	No. in school	No. yet to report	Programme	No. Approved	No. in school	No. yet to report
Membership Program				Membership Program			
Ophthalmology	3	2	1	Obstetrics & Gynaecology	2	2	
Obstetrics & Gynaecology	1	1	-	Child Health	2	2	
Child Health	4	2	2	Internal Medicine	2	2	
Internal Medicine	5	4	1	Radiology	2	2	
Anaesthesia	2	2	-	General Surgery	4	4	
General Surgery	5	5	-	Dental Surgery	1	1	
Neurosurgery	1	1	-	Laboratory Medicine	1	1	
Family Medicine	1	1	-	Maxillofacial Surgery	1	1	
				Neuroscience	1	1	
Total	22	18	4	Total	16	16	
Fellowship Program				Fellowship Program			
Fellowship in Child Health	1	1	-	Fellowship Neurosurgery	1	1	
Fellowship in Paediatric Endocrinology	1	-	1	Fellowship Paediatric Oncology	1	1	
Fellowship in Paediatric Infectious Disease	1	-	1	Fellowship in Family Medicine	1	1	
Fellowship in Obstetrics & Gynaecology	1	1	-	Fellowship in Microbiology	1	1	
Fellowship in Neurology	1	-	1	Fellowship in Oral &	1	1	

2020				2021			
Programme	No. Approved	No. in school	No. yet to report	Programme	No. Approved	No. in school	No. yet to report
				Maxillofacial Surgery			
Fellowship in Orthopaedic	1	1	-	Total	5	5	
Fellowship in Surgery	1	1	-				
Fellowship in Family Medicine	1	-	1				
Fellowship in Dermatology	2	-	2				
Fellowship in Critical Care	2	1	1				
Total	12	5	7				

Table 2.4. 5: Doctors who Resumed Duty

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

Table 2.4.6: Nurses Who Resumed Duty From Study Leave

2020		2021	
PROGRAMME	NUMBER	PROGRAMME	NUMBER
BSc. Peri-operative	4	BSc Public Health Nursing	2
BSc. Critical Care Nursing	4	BSc Nursing (Critical Care)	4
Membership in Paediatric Nursing	6	BSc Nursing (Perioperative)	2
Membership in Neonatal Intensive Care	3	BSc Anaesthesia	3
Public Health Nursing	2	Ophthalmic Nursing	1
Oncology Nursing membership	2	General Nursing (Dip)	5
BSc. Anaesthesia	1	BSc Nursing	1
MSc. Speech & Language Therapist	1	Diploma in Nursing	1
Emergency Nursing	1	Paediatric Oncology Nursing	2
BSc. Midwifery	6	Nephrology Nursing	2
Post Basic Midwifery	5	Total	23
Post Basic Nursing	6		
Total	41		

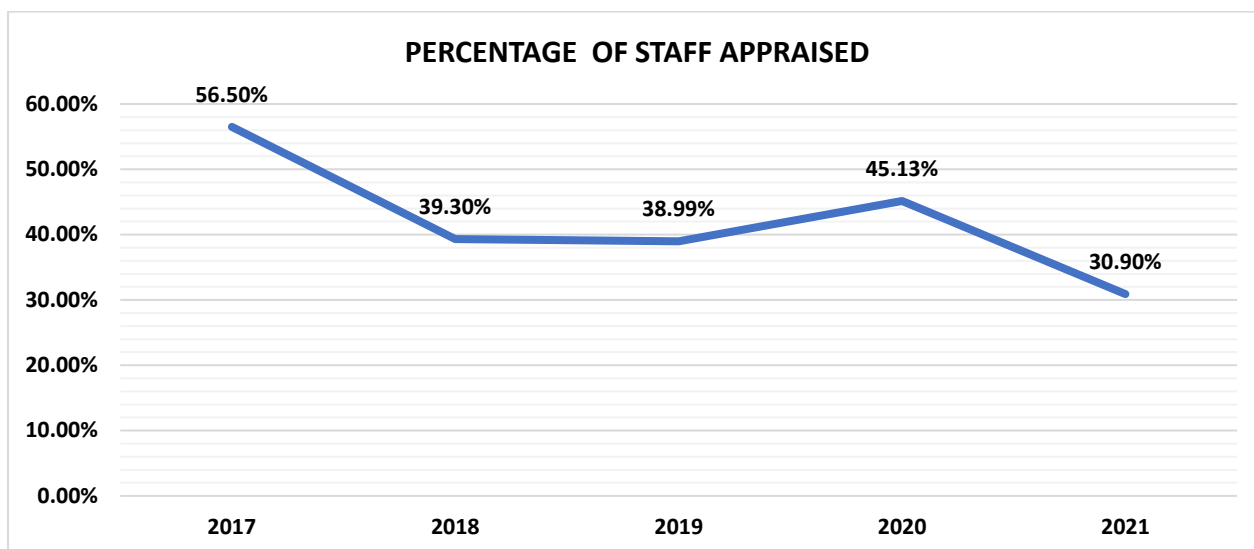
Table 2.4. 7: Other Categories Of Staff Who Resumed Duty

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

2.4.1 PERFORMANCE APPRAISAL

The percentage of staff appraised over the years remained low and of concern to the hospital. The highest percentage of staff appraised was recorded in 2017 and the lowest recorded in 2021. The percentage of staff appraised in 2021 dropped by 14.23% from an initial increase of 6.13% in 2020. That is, from 45.13% in 2020 to 30.90%. As a result, there is the need to sensitize staff and supervisors to understand the importance of appraisal to staff performances and development. Detailed trend analysis of staff appraised is illustrated in figure 2.4.1.1 and tables 2.4.1.1 below.

Figure 2.4.1. 1: Trend of Staff Appraised



2.5 STAFF TURNOVER

Staff turnover remains a concern to the hospital. Over the years, the number of Staff who applied for transfer-out of the hospital were very high compared to the number who transferred-in. Detailed analysis is provided in figure 2.5.1 and tables 2.5.1 to table 2.5.3 below.

Figure 2.5. 1: Staff Turnover

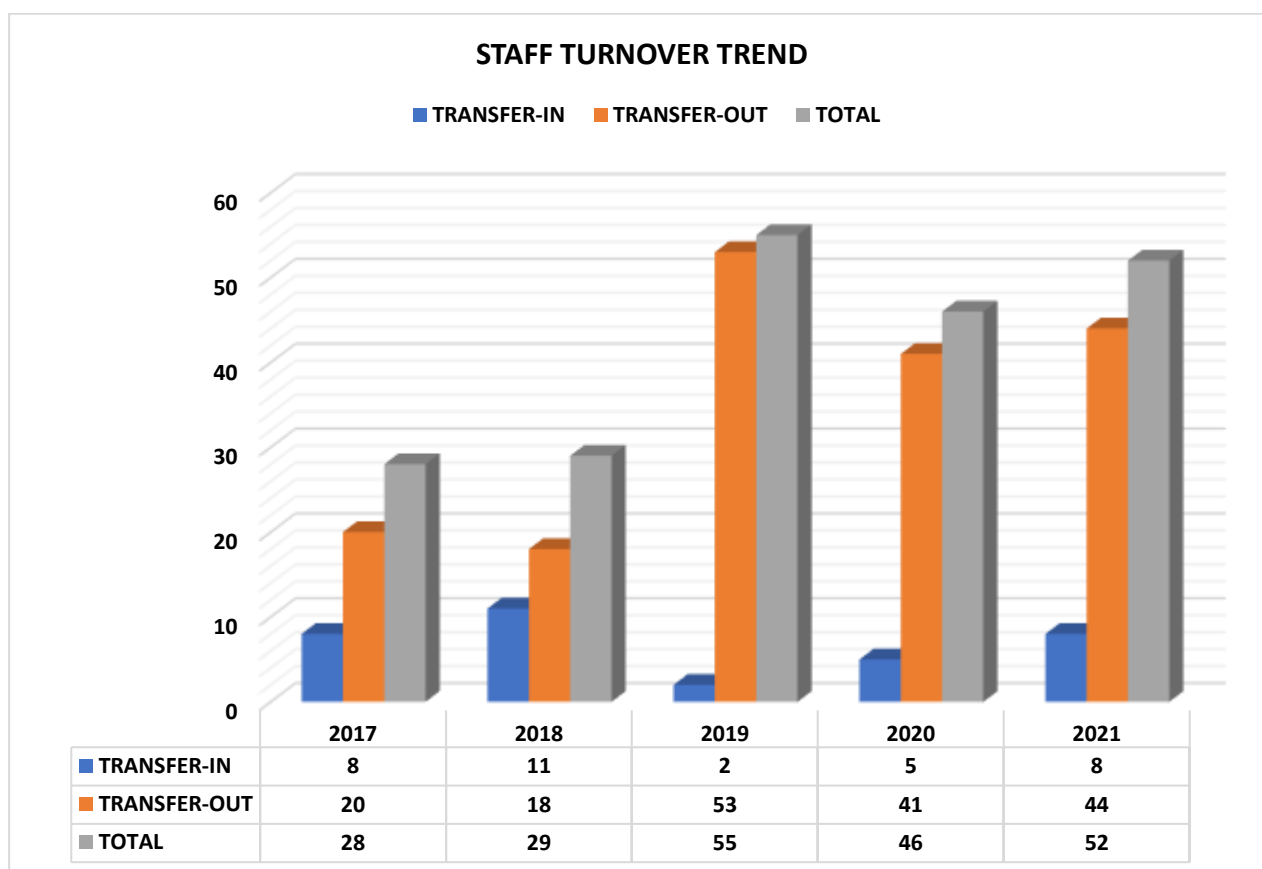


Table 2.5.1: Staff Turnover in 2021

CATEGORY	TYPE OF TRANSFER		GRAND TOTAL
	IN	OUT	
Medical Officer	0	1	1
Specialist doctors	0	2	2
Senior Nursing Officer	0	6	6
Nursing Officer	0	3	3
Senior Staff Nurse	1	17	18
Staff Nurse	0	2	2
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
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
Grand Total	8	44	52

Table 2.5.2: Analysis of Leave of Absence at CCTH

2020			2021		
TYPE OF LEAVE	DAYS	SUM OF DAYS	TYPE OF LEAVE	DAYS	SUM OF DAYS
Annual Leave	Days Taken	27,562	Annual Leave	Days Taken	43,703
	Days Wasted	2,475		Days Wasted	38,885
Casual Leave	Days Taken	374	Casual Leave	Days Taken	80
	Days Wasted	7		Days Wasted	0
Maternity Leave	Days Taken	8,242	Maternity Leave	Days Taken	3,600
	Days Wasted	31		Days Wasted	0
Others	Days Taken	444	Others	Days Taken	0
	Days Wasted	0		Days Wasted	0
Paternity Leave	Days Taken	6	Paternity Leave	Days Taken	20
	Days Wasted	0		Days Wasted	0
Sick Leave/Excuse Duty	Days Taken	744	Sick Leave/Excuse Duty	Days Taken	467
Sum of Days Taken		37,372	Sum of Days Taken		47,870
Sum of Days Wasted		2,513	Sum of Days Wasted		38,885

2.6: HUMAN RESOURCE WASTAGE

A total of 44 staff exited the hospital in 2021, either through Compulsory Retirement, Death, Resignation, or Vacation of Post. Out of the 44, 18 of the staff vacated their post, 10 went on leave without pay, 7 resigned, 7 retired and 1 went on compulsory retirement. One (1) staff also died in 2021. The categories of staff wastage in 2021 is provided in table 2.6.1 below.

Table 2.6. 1: Analysis of Human Resource Wastage

2020		2021	
TYPE	NUMBER	TYPE	NUMBER
Compulsory Retirement	7	Voluntary Retirement	1
Death	3	Retirement	7
Resignation	4	Death	1
Vacation of Post	5	Resignation	7
Grand Total	19	Vacation of Post	18
		Leave without pay	10
		Grand Total	44

2.7 IMPROVING TEACHING AND LEARNING

One of the mandates of the hospital is to promote teaching and learning by creating the needed opportunities and enabling environment in order to have a well-trained, skilled and motivated workforce to provide the needed tertiary health care services. This includes undergraduate and postgraduate training as well as basic and post-basic training.

2.7.1 GENERAL TRAINING REPORT IN 2021

1. Ninety-eight (98) staff of the hospital were granted study leave with pay to pursue various programs.
2. Fifty-two (52) staff participated in training on Drug Information
3. Seven (7) midwives received approval postgraduate training
4. Staff at the laboratory participated in EQA for TB, Malaria, HIV & SARS-COV-2
5. Organized one-week training for senior managers on Enterprise Risk Management from 14th to 18th September 2021 with 59 beneficiaries.
6. Residency training continued with the start of two new residents and two (2) specialist physicians graduating.
7. Trained ENT Nurse in ENT Oncology for 3 months in India
8. Organized a successful stress/ burnout management workshop at the wards for both staff and patients.
9. Organised 3 days training for managers in leadership and management
10. MOU signed with KNUST for the training of Pharm D students and with UHAS ongoing.
11. Joint committee meeting held towards the implementation of the MOU between CCTH and UCC-SMS including the agreement to create a joint training coordinating desk with the SMS.
12. 65" Samsung TU7000 TV, Jabra 510 Speaker received from Echo Institute from India towards teleconferencing.

13. A generic MoU developed with training institutions
14. Trained staff on Emergency preparedness
15. Organized in-service training for nurses and midwives on customer care/quality assurance/professional ethics.

2.7.2 POSTGRADUATE TRAINING

1. Residency training in internal Medicine continued with the start of two new residents
2. Two specialist physicians at Internal Medicine department graduated
3. Three (3) staff enrolled in Ghana College of Pharmacists residency programme
4. In 2021, fourteen (14) nurses and midwives were enrolled in Ghana College of Nurses and Midwives in the following specialty areas;
 - Emergency Nursing (Membership) - 1
 - Nephrology (Membership) – 1
 - Peri-operative Nursing (Membership) - 1
 - Neuroscience (Membership) – 1
 - Critical Care (Membership) - 3
 - Infectious Disease Nursing (Membership) - 1
 - Paediatric Nursing (Membership) - 1
 - Oncology (Membership) - 1
 - Orthopaedic (Associate membership) - 2
 - Paediatric (Associate membership) - 2
5. Other post graduate programs being pursued by other staff includes;
 - Masters in Health Policy & Financing - 1
 - MPhil Applied Epidemiology & Disease Control - 1
 - Master of Health Economics - 1
6. Twenty-one (21) doctors went to school in 2021 to undergo training in various specialty areas, as shown in table 2.7.2.1 whilst table 2.7.2. 2 shows the assessment of the hospital's residency training under key performance indicators.

Table 2.7.2. 1: Doctors under Training by Specialties

2020		2021	
Programme	No. in school	Programme	No. in school
Membership Program		Membership Program	
Ophthalmology	2	Obstetrics & Gynaecology	2
Obstetrics & Gynaecology	1	Child Health	2
Child Health	2	Surgery	4
Internal Medicine	4	Radiology	2
Anaesthesia	2	Dental Surgery	1
General Surgery	5	Laboratory Medicine	1
Neurosurgery	1	Maxillofacial Surgery	1
Family Medicine	1	Internal Medicine	2
Total	18	Neuroscience	1
		Total	16
Fellowship Program		Fellowship Program	
Fellowship in Child Health	1	Family Medicine	1
Fellowship in Paediatric Endocrinology	-	Microbiology	1

2020		2021	
Programme	No. in school	Programme	No. in school
Fellowship in Paediatric Infectious Disease	-	Oral and Maxillofacial Surgery	1
Fellowship in Obstetrics & Gynaecology	1	Fellowship Neurosurgery	1
Fellowship in Neurology	-	Fellowship Paediatric Oncology	1
Fellowship in Orthopaedics	1		
Fellowship in Surgery	1		
Fellowship in Family Medicine	-		
Fellowship in Dermatology	-		
Fellowship in Critical Care	1		
Total	5		

Table 2.7.2. 2: Residency Training

Residency Training Under the THs KPIs	Actual Performance Trend						Target	Remarks
	2016	2017	2018	2019	2020	2021		
Resident pass rate	-	-	90%	100%	-	91%	THs= 60%	-
Number enrolled in postgraduate colleges	-	-	53	48	-	38	-	-
Consultant to resident doctor ratio	1:7	1:12	1:7	1:4	1:5	1:1.4	THs = 1:3	Decr
Proportion/number of clinical staff enrolled in postgraduate colleges	-	-	-	-	30 (23)	35 clinical staff	-	16.7% incr

CHAPTER THREE

CLINICAL CARE SERVICES

3.0: INTRODUCTION

This chapter is in two parts. Part one provides a summary report on the hospital's Covid-19 response strategy implementation status, whilst the part two provides an overview on performance of the hospital's routine clinical care services.

3.1 PART ONE - THE HOSPITAL'S COVID-19 PANDEMIC RESPONSE STRATEGY IMPLEMENTATION STATUS FROM 2020 TO 2021.

This section summarizes the hospital's Covid-19 pandemic related performance outputs and outcomes, based on deliverables and key performance indicators (such as cases confirmed and managed, the recovery rates, death rates etc.) as well as key challenges over the period

- i. The hospital recorded its first Covid-19 suspected case (sample taken) on 7th March 2020 and the first Covid-19 confirmed case was recorded on 8th April 2020.
- ii. The first confirmed Covid-19 case recorded among CCTH staff (1 staff) was on 24th April 2020 (a staff from the hospital's main laboratory department).
- iii. CCTH started implementing the 2nd National Discharge Protocol for Covid-19 cases being managed by the hospital on 20th June 2020.
- iv. The first Covid-19 patient was admitted to the hospital's Covid-19 treatment centre was on 8th April 2020 (The patient later fully recovered following effective management).
- v. The first Covid-19 mortality case recorded by the hospital was at the hospital's Covid-19 treatment centre on 14th June 2020.
- vi. CCTH with the support of the Ministry of Health established a Covid-19 testing site at the hospital on 24th September 2020.
- vii. The 1st dose of Covid-19 vaccination (AstraZeneca) for CCTH staff started on Monday 29th March 2021 while the 2nd dose started on Monday 6th September 2021.
- viii. Covid-19 Vaccine Reaction Report between Monday, 29th March 2021 to 30th September 2021: 1.49% (41) out of the 2,752 people who received the 1st dose of the vaccination (AstraZeneca) experienced Post Vaccination Reaction as at 30th September 2021. 4.9% (2) out of the 41 had severe post vaccination reaction while 95.1% (39) experienced mild/moderate post vaccination reaction.

3.1.2 OUTCOME OF THE COVID-19 PANDEMIC RESPONSE AT CCTH

The proportion of Covid-19 cases confirmed was 40.34% (1,109) out of the 2,749 suspected cases recorded in 2021, compared to the 17% (447) cases confirmed out of the 2,607 suspected cases recorded in 2020. Out of the 1,108 Covid-19 cases directly managed in 2021, the hospital recorded a recovery rate of 94% (1,042), which is a great improvement, compared to the 90% recovery rate on the 447 cases managed in 2020. Hence, the reduction in the Covid-19 related death rate from 6.2% in 2020 to 6% in 2021. Also, the proportion of CCTH staff who tested positive for Covid-19 was 13.4% in 2021 (against the total hospital staff of 2,051 in 2021), compared to the 7.3% recorded in 2020 (against the total hospital staff of 1,792 in 2020), with 100% recovery rate among staff over the past two years. Furthermore, out of the total 1,108 Covid-19 cases managed, the hospital recorded Covid-19 related death rate of 6% (67) in 2021 compared to the 6.2% death rate recorded out of the 447 cases managed in 2020. This is illustrated in figure 3.1.2.1 below.

Figure 3.1.2. 1: Outcome of Covid-19 Cases Managed by CCTH from 2020 - 2021

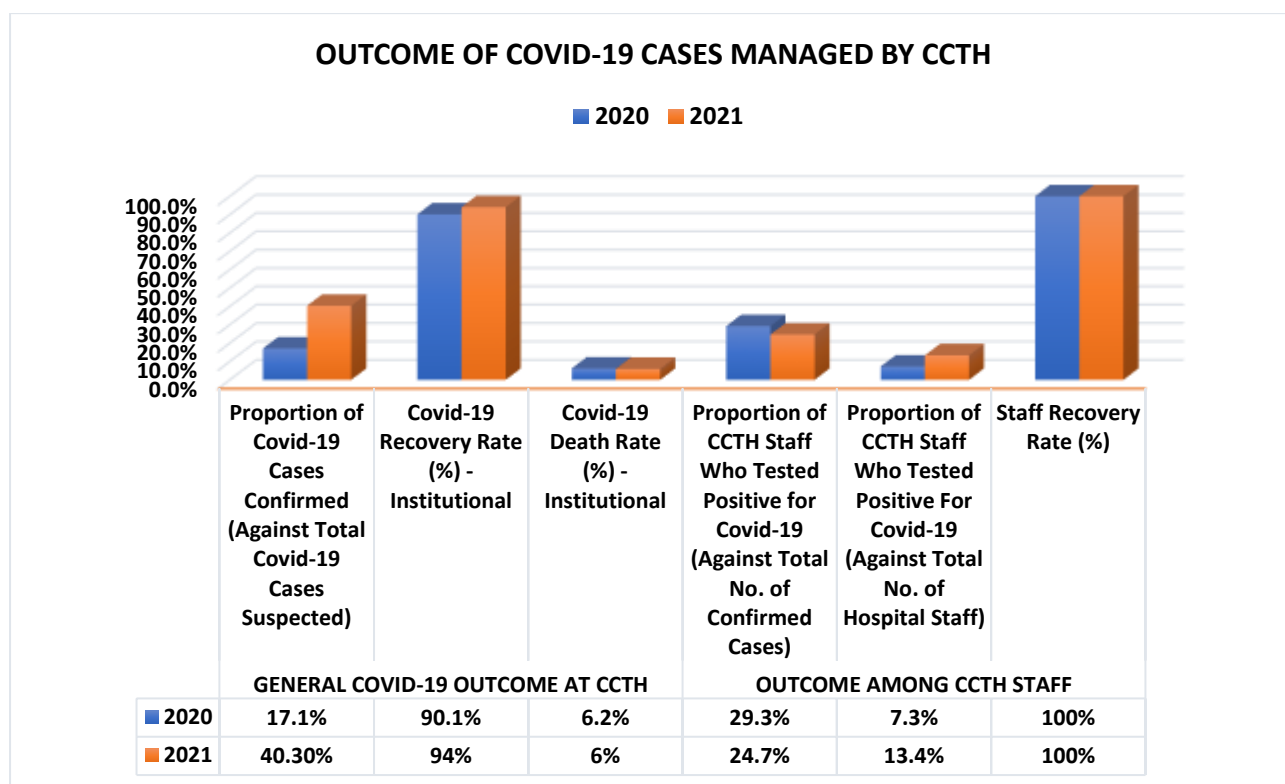
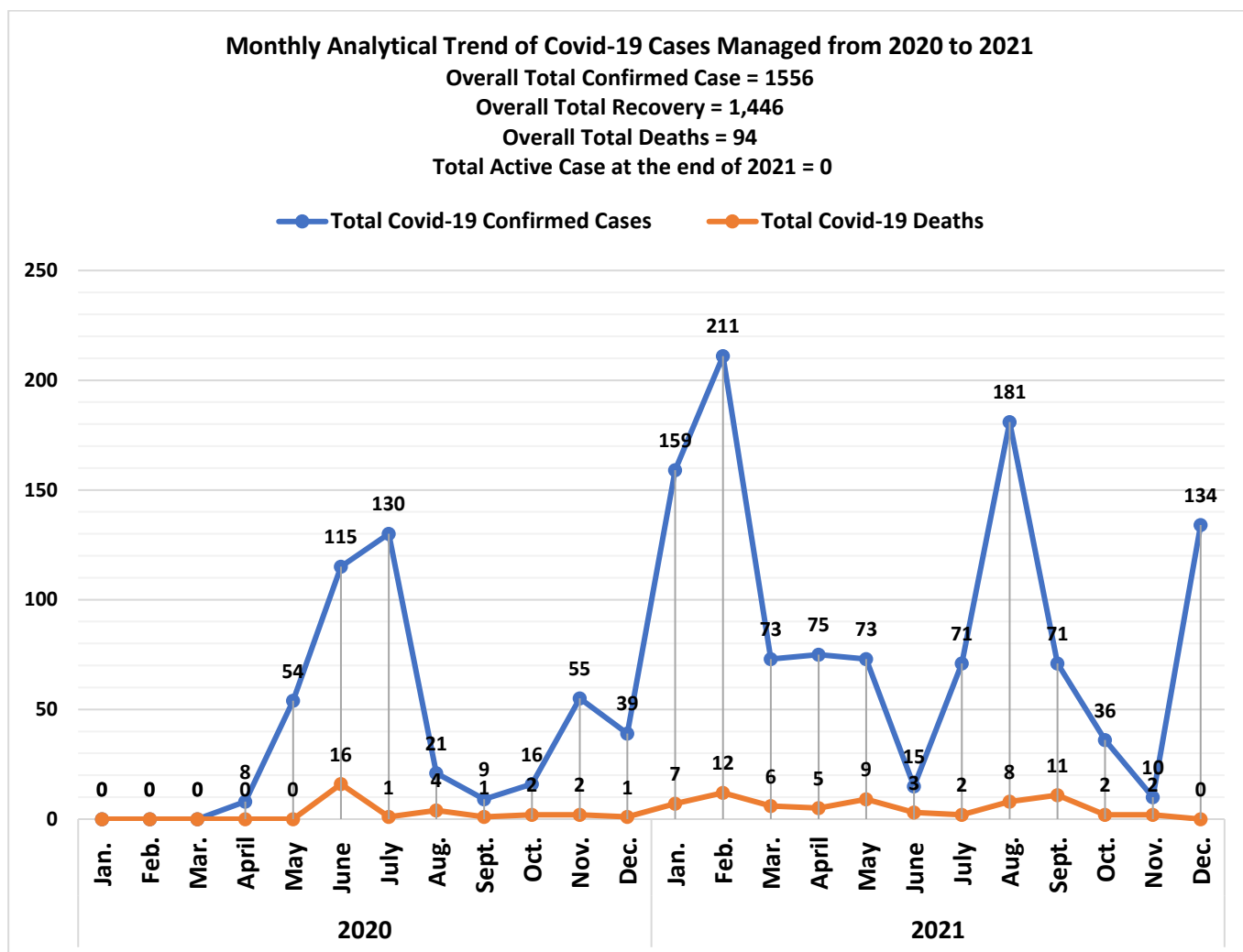


Figure 3.1.4. 1: Monthly Analytical Trend of Covid-19 Cases Confirmed/Managed



3.1.3 EXECUTION OF CCTH COVID-19 RESPONSE STRATEGY

The Covid-19 performance outcomes were achieved by the hospital, due to the implementation of the following outputs guided by the Covid-19 response guideline and strategic document, developed by the hospital as well as the support from key stakeholders and partners. Below are the key outputs achievement;

1. Institutional Covid-19 Policy guidelines with 23 Protocols developed and disseminated to all stakeholders
2. Set up of a command structure (managerial and functional task team) to ensure flow of work in terms of rapid response, to cases identification, case management, information management and dissemination, support and logistical provision).
3. The completion of the hospital Polyclinic as a Treatment Centre (7 bedded Treatment Center) to accommodate and treat Covid-19 confirmed patients
4. Designated and set up a theatre for Covid-19 cases with surgical emergencies
5. Suspension of Elective Surgeries across board to limit the spread of Covid-19 infection among staff and patient
6. Use of scrubs by uniformed staff in the hospital to minimise general home infections
7. Temporal suspension of all foreign trainee programme

8. Temporal suspension of all Clinical Meetings, Workshop, Conferences, Durbars etc. in 2020 unless it was related to Covid-19 management
9. A joint monitoring team set up within the institutional Covid-19 Task Team with weekly and monthly update meetings to review the situation and develop additional strategies where need be.
10. Continue to provide daily (every evening) Covid-19 data (situational) update to the hospital management members, HODs of sub-BMCs and Unit as well as to the general staff.
11. The hospital ensured effective prevention and control of the spread of covid-19 in the hospital environmental and humans through disinfection of Covid-19 dead bodies, the clinical areas contaminated and the clinical waste from the isolation and treatment centres, etc.
12. Continuous IPC training organised for all staff especially the frontline workers
13. Secured the GRNMA hostel for exposed staff under quarantine at the initial phase of the pandemic.
14. The designation and creation of a Holding/Isolation Bay (7 bedded Holding bay/isolation centre) at the UCC-SMS Diagnostic Centre to accommodate suspected cases
15. Recruitment of about 150 staff to support the Covid-19 Management team.
16. Procurement, acquisition and reception of some medical consumables and Personal Protective Equipment (PPEs) such as; N95 Mask, Coverall Gowns, Gloves, Goggles, Infra-Red (Gun) Thermometers, Surgical Mask, Disposable Tourniquets etc.) by the hospital, the Ministry of Health and Cooperate Organizations.
17. Limiting the entry points for patients and clients into the hospital to ensure that they go through pre-triaging
18. Limiting the number of relatives to visit patients to two (2) during the period with proper documentation of relatives visits and their movement within the hospital premises
19. Rescheduling of selected Out Patients Clinics to afternoons and on appointments basis to adhere to the Social Distancing Directive

3.1.4 MANAGEMENT OF COVID-19 CASES AT CCTH

The hospital's response to the Covid-19 Pandemic was guided by both an institutionally developed Covid-19 response guideline and strategic document as well as the National and International (WHO guidelines), in addition to general support from staff and other stakeholders. In 2021, out of 1,109 confirmed cases recorded, 24.7% (274) were CCTH Staff. One (1) confirmed case was referred-out to a peripheral facility out of the total 1,109 confirmed cases recorded, whilst 15 (1.4%) confirmed cases were referred-in to CCTH for management, and there was no active case at the end of the 2021. Out of the 1,108 cases, 20.4% (226) were managed institutionally, whilst 88.7% (983) received homecare. Detailed analysis is provided in figures and tables below.

Table 3.1.4. 1: Monthly Trend of Covid-19 Cases Managed at CCTH from 2020 to 2021

Year	Month	GENERAL COVID-19 CASES					CCTH STAFF CASES		
		Total Suspected Covid-19 Cases	Total Covid-19 Confirmed Cases	Total Covid-19 Deaths	Total Recoveries/ Discharged	Total Active Cases at the end of year	Total Staff Samples Taken	Total Staff Who Tested Positive	Total Covid-19 Deaths Among Staff
2020	January	0	0	0	= 404	= 16	0	0	= 0
	February	0	0	0			0	0	
	March	20	0	0			0	0	
	April	149	8	0			76	2	
	May	696	54	0			696	22	
	June	771	115	16			397	44	
	July	225	130	1			101	39	
	Aug	148	21	4			45	7	
	Aug	79	9	1			11	3	
	Oct	125	16	2			13	4	
	Nov	206	55	2			39	6	
	Dec	188	39	1			23	4	
	Sub-Total	2607	447	27			404	16	
2021	January	437	159	7	= 1,042	= 0	83	29	= 0
	February	640	211	12			163	40	
	March	312	73	6			65	16	
	April	174	75	5			31	15	
	May	151	73	9			41	17	
	June	68	15	3			17	8	
	July	20	71	2			22	24	
	Aug	189	181	8			13	40	
	Sept	178	71	11			15	10	
	Oct	179	36	2			19	8	
	Nov	100	10	2			5	2	
	Dec	301	134	0			113	65	

GENERAL COVID-19 CASES							CCTH STAFF CASES		
Year	Month	Total Suspected Covid-19 Cases	Total Covid-19 Confirmed Cases	Total Covid-19 Deaths	Total Recoveries/ Discharged	Total Active Cases at the end of year	Total Staff Samples Taken	Total Staff Who Tested Positive	Total Covid-19 Deaths Among Staff
	Sub-total	2749	1109	67	1,042	0	592	274	0
	Grand Total (from 2020 to 2021)	5356	1556	94	1,446	0	1993	405	0

Table 3.1.4. 2: Summary of Overall Case Management from April 2020 to 2021

INDICATOR	2020	2021	OVERALL TOTAL	REMARKS (% diff. b/n 2020 & 2021)
Total number of samples taken	3161	6,217	9,378	96.7% incr
Total number of suspected cases detected at CCTH	2607	2749	5,356	5.5% incr
Total COVID-19 cases recorded at CCTH	447	1109	1,556	148.1% incr
Number of COVID-19 cases confirmed at CCTH	431	1091	1,522	153.1% incr
Number of positive cases referred to CCTH for management	16	15	31	6.25% decr
Number of positive cases referred out for management	11	1	12	90.91% decr
Total number of positive cases directly managed by CCTH	436	1108	1,544	154.1% incr
Total number of positive cases managed at home	388	983	1,371	153.4% incr
Total number of positive cases managed at treatment	48	125	173	160.4% incr
Total number of positive cases managed at holding bay	0	101	101	-
Total Number of obstetric cases at CCTH who tested positive as	3	22	25	633.3% incr
Total number of Paediatric cases at CCTH who tested positive	19	14	33	26.3% decr
Total number of positive cases discharged/recovery	393	1041	1,434	164.9% incr
Total number of mortalities	27	67	94	137% incr
Total Active cases at the end of year	16	0	N/A	-

Table 3.1.4. 3: Trend of Covid-19 Case Admission at CCTH

YEAR	COVID-19 CASE ADMISSION AT TREATMENT CENTRE	COVID-19 CASE ADMISSION AT HOLDING BAY	COVID-19 CASE ADMISSION UNDER HOMECARE
2020	48	0	388
2021	125	101	983

Table 3.1.4. 4: Analysis of Covid-19 Cases Managed and Admission Options

2020						2021					
COVID-19 SUSPECTED CASE ADMISSION IN 2020		COVID-19 CONFIRMED CASE ADMISSION IN 2020				COVID-19 SUSPECTED CASE ADMISSION		COVID-19 CONFIRMED CASE ADMISSION			
Holding Bay	Total No.	Treatment Centre	Total No.	Home Care Admission	Total No.	Holding Bay	Total No.	Treatment Centre	Total No.	Home Care Admission	Total No.
Total Admissions at the Holding Bay	161	Total no. of Admissions at The Treatment Centre	48	Total Number of cases admitted into home care	388	Total Admissions at the Holding Bay	101	Total no. of Admissions at The Treatment Centre	125	Total Number of cases admitted into home care	983
Total Number of discharges	115	Number of cases on admissions as at 31st December	2	Total No. of Discharges	374	Total Number of discharges	75	Number of cases on admissions as at 31st December	0	Total No. of Discharges	
Number of cases on admissions as at 31 st December 2020	0	Total No. of Discharges	34	Number of active cases in home care	14	Number of cases on admissions as at 31 st December 2020	0	Total No. of Discharges	91	Number of active cases in home care	0
Total Number of Mortalities	42	Total Number of patients discharged against medical advice	1			Total Number of Mortalities	23	Total Number of patients discharged against medical advice	91		
Number of covid-19 deaths at the holding bay	8	Total number of treatment centre cases referred out to the region	4			Number of covid-19 deaths at the holding bay	23	Total number of treatment centre cases referred out to the region	5		
		Total Number of Mortalities	7					Total Number of Mortalities	40		

Figure 3.1.4. 2: Comparative Analysis of Covid-19 Mortality Rate by Sex, at CCTH

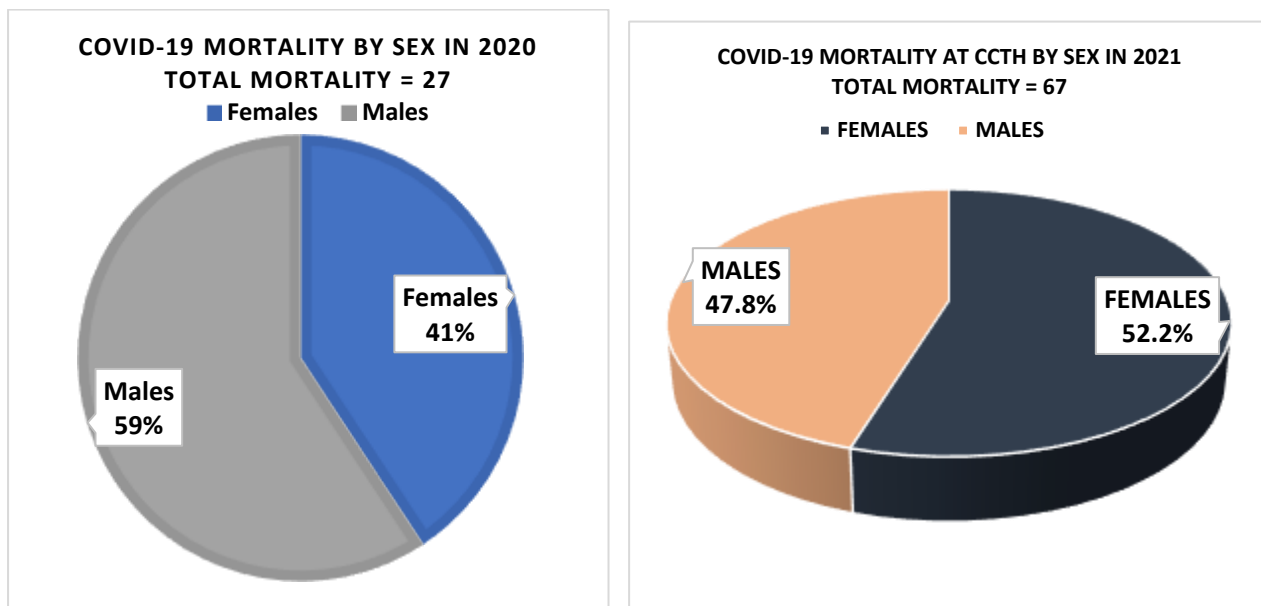
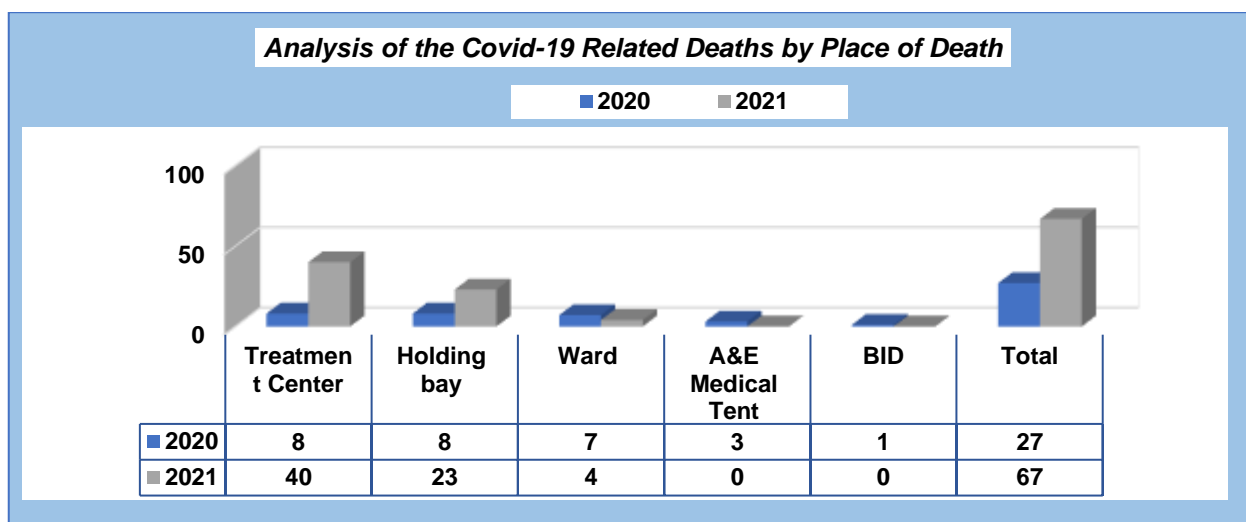


Figure 3.1.4. 3: Analysis of the Covid-19 Related Deaths by Place of Death



3.1.5 COVID-19 INFECTION AMONG CCTH STAFF

A total of 592 CCTH Staff were suspected of having Covid-19 in 2021, out of which 46.28% (274) were tested positive with 100% recovery rate. Detailed analysis is provided in figure 3.1.5.1 below.

Figure 3.1.5. 1: Analysis of Staff who tested Positive for Covid-19 By Department

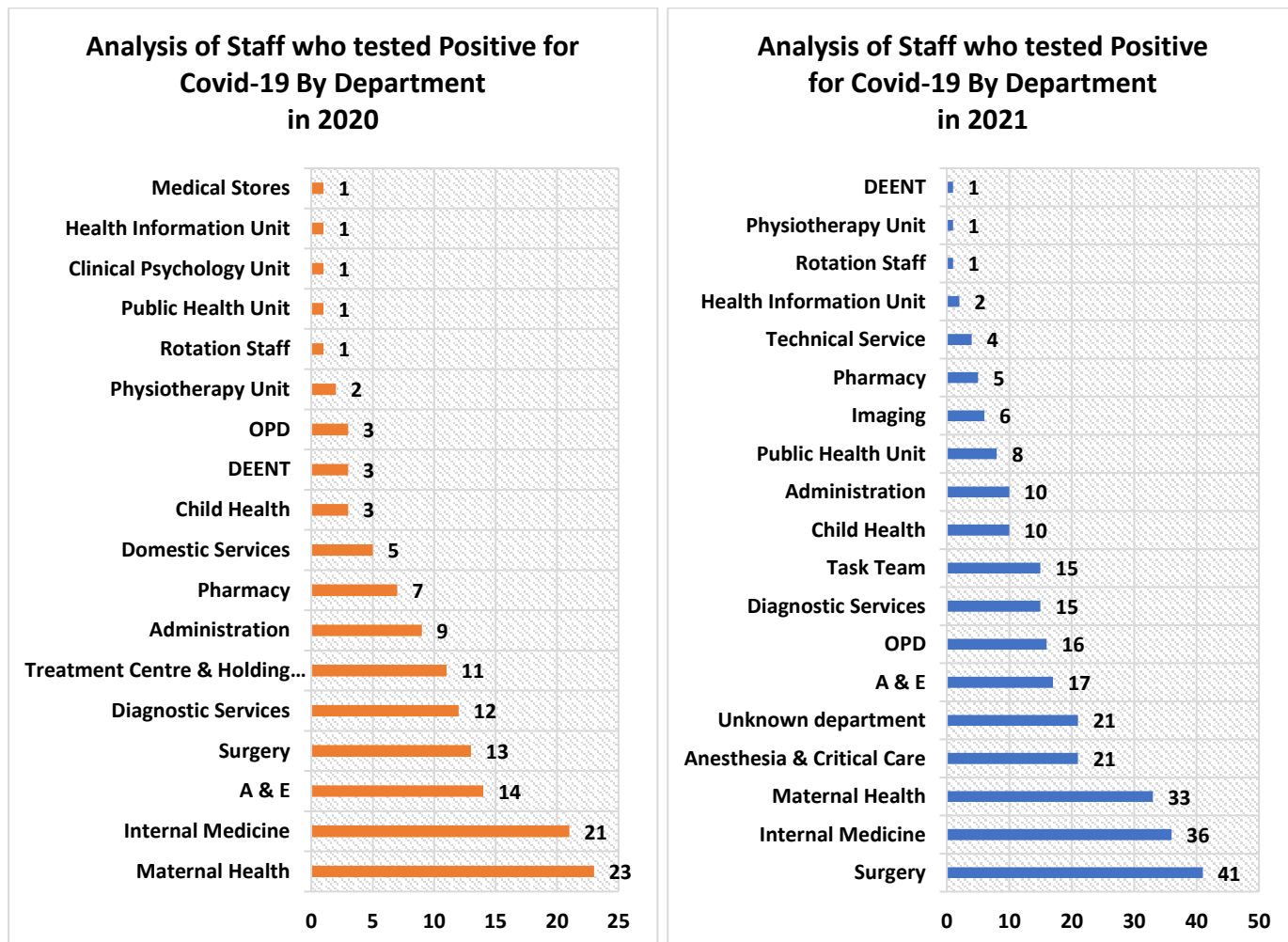


Figure 3.1.5. 2: Cadre of Staff Infected with Covid-19 In 2021

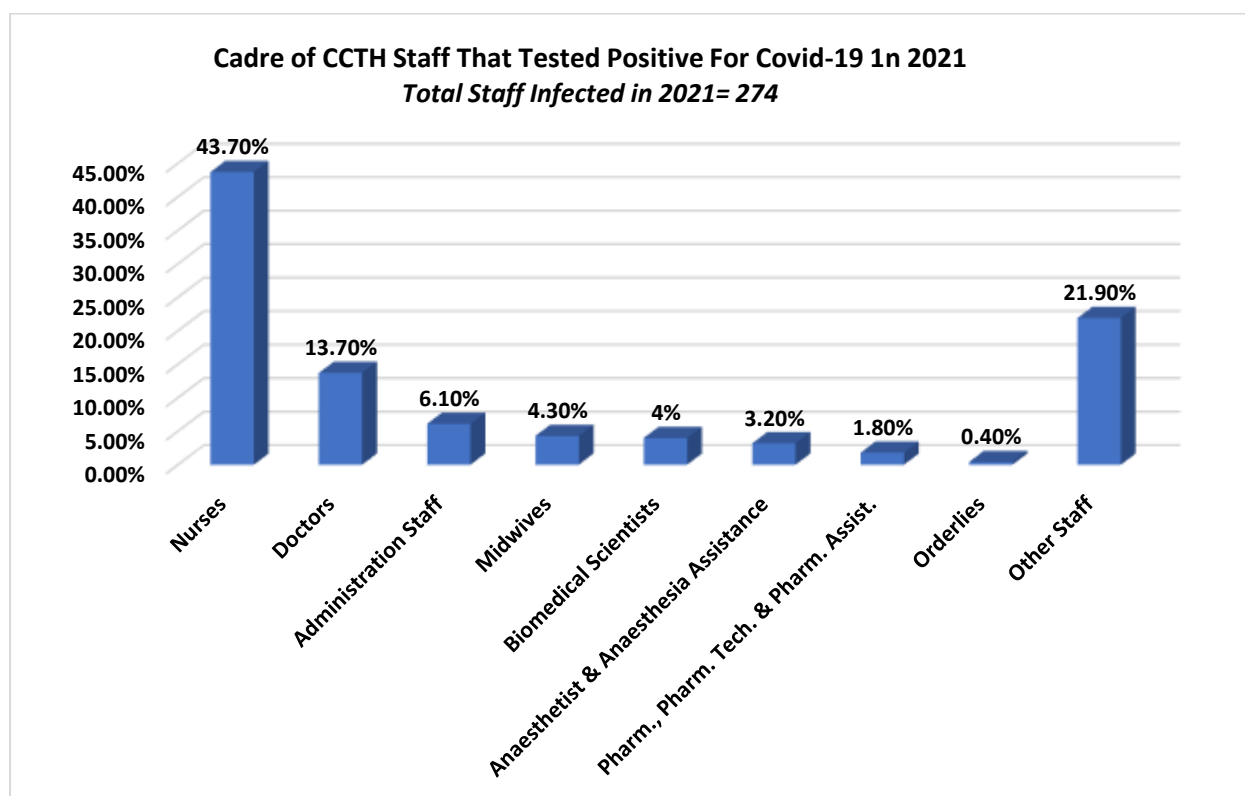


Table 3.1.5. 1 : Cadre of Staff Infected with Covid-19

STAFF CADRE	2020		STAFF CADRE	2021	
	Total	PROPORTION (%)		Total	PROPORTION (%)
Doctors	30	22.90%	Nurses	121	43.7%
Midwives	11	8.40%	Doctors	38	13.7%
Nurses	44	33.59%	Administration Staff	17	6.1%
Biomedical Scientist	9	6.87%	Midwives	12	4.3%
Pharm., Pharm. Tech. & Pharm. Assist.	6	4.58%	Biomedical Scientists	11	4%
Orderlies	3	2.29%	Anaesthetist & Anaesthesia Assistance	9	3.2%
Physiotherapist	1	0.76%	Pharm., Pharm. Tech. & Pharm. Assist.	5	1.8%
Dentist	1	0.76%	Orderlies	1	0.4%
Psychologist	1	0.76%	Other Staff	60	21.9%
Phlebotomist	1	0.76%			
Admin. staff	21	16.03%			
Other staff	3	2.29%			

2020			2021		
STAFF CADRE	Total	PROPORTION (%)	STAFF CADRE	Total	PROPORTION (%)
Total Infected with Covid-19 in 2020	131	7.31% (out of total CCTH population of 1,792 in 2020)			13.4% (out of total CCTH population 2,051 in 2021)

3.1.6 COVID 19 LABORATORY INVESTIGATION

On the 4th of June 2020, the hospital submitted a letter to the Ministry of Health to appeal for support in securing a PCR machine to set up a laboratory for testing for Covid-19 cases, as a follow-up step to what the President announced during his 7th update on measures Government is taking in the fight against the pandemic. Subsequently, the hospital upgraded its Laboratory to undertake Covid-19 testing using the Gene Expert machine. The testing commenced in September 2020, following the initial receipt of 400 test kits and reagents from the Ministry of Health. Also, the hospital has received a PCR machine which is being installed (installation is near completion as at April 2022). Table 3.1.6.1 below provides detailed analysis of Covid-19 samples tested externally and in-house.

Table 3.1.6. 1: COVID 19 Laboratory Investigation

INDICATOR	2020	2021	TOTAL
Overall total Covid-19 samples taken and tested	3,161	6,217	9,378
Overall total number of Covid-19 Positives	447	1,109	1,556
Overall total number of Covid-19 Negatives	2,714	5,108	7,822
COVID-19 Sample Tested Externally (outside CCTH)			
COVID-19 Sample tested at externally facility	2,631	2,749	5,380
COVID-19 Samples Tested In-house (in CCTH)			
Total number of Cases	530	3,468	3,998
Total number of Positives	107	1,198	1,305
Total number of Negatives	423	2,270	2,693
Test Positivity Rate (%)	20.189%	34.544%	

3.1.7 ANALYSIS OF COVID-19 VACCINATION AT CCTH

The 1st dose of Covid-19 vaccination (AstraZeneca) for CCTH staff started on Monday 29th March 2021, while the 2nd dose started on Monday 6th September 2021. Also, between the initial period of the Covid-19 vaccination, (Monday, 29th March 2021 to 30th September 2021), 1.49% (41) out of the 2,752 people who received the 1st dose of the vaccination (AstraZeneca) experienced post vaccination reaction, whilst 4.9% (2) out of the 41 had severe post vaccination reaction and 95.1% (39) experienced

mild/moderate post vaccination reaction. Further analysis on the state of the Covid-19 vaccination is provided in table 3.7.1 below.

Table 3.1.7. 1: Details of The Covid-19 Vaccination Carried Out By CCTH from Monday 29th March to As At 28th March 2022.

Vaccine Type	Dose Type	2021 Total Vaccination	2022 Total Vaccination as at 28th March 2022.	Booster Vaccination
AstraZeneca	First	4,250	273	121
	Second	2,225	438	
Moderna	First	336	0	0
	Second	136	0	0
John & Johnson	Single dose	335	505	19
Total	-	6947	1216	140

CHAPTER THREE

CLINICAL CARE SERVICES

3.2 OUT-PATIENT SERVICES UTILIZATION

OPD Sub-BMC provides general outpatient services including family medicine and rehabilitative services whilst hosting other specialized services provided by the Specialized Clinical Sub-BMCs.

In 2021, the hospital recorded an increase of 21.1% in total OPD attendance (from 125,772 in 2020 to 152,364 in 2021). Utilization of the Obs & Gynae constituted the highest proportion (27.46%) of the OPD attendance, followed by Internal Medicine services (23.40%) and General OPD (21.10%). Rehabilitation Services constituted the least (4.40%) amongst the OPD service utilization per specialty in 2021, as illustrated in figure 3.2.1 and table 3.2.1 below.

Figure 3.2. 1: OPD Utilization by Specialties

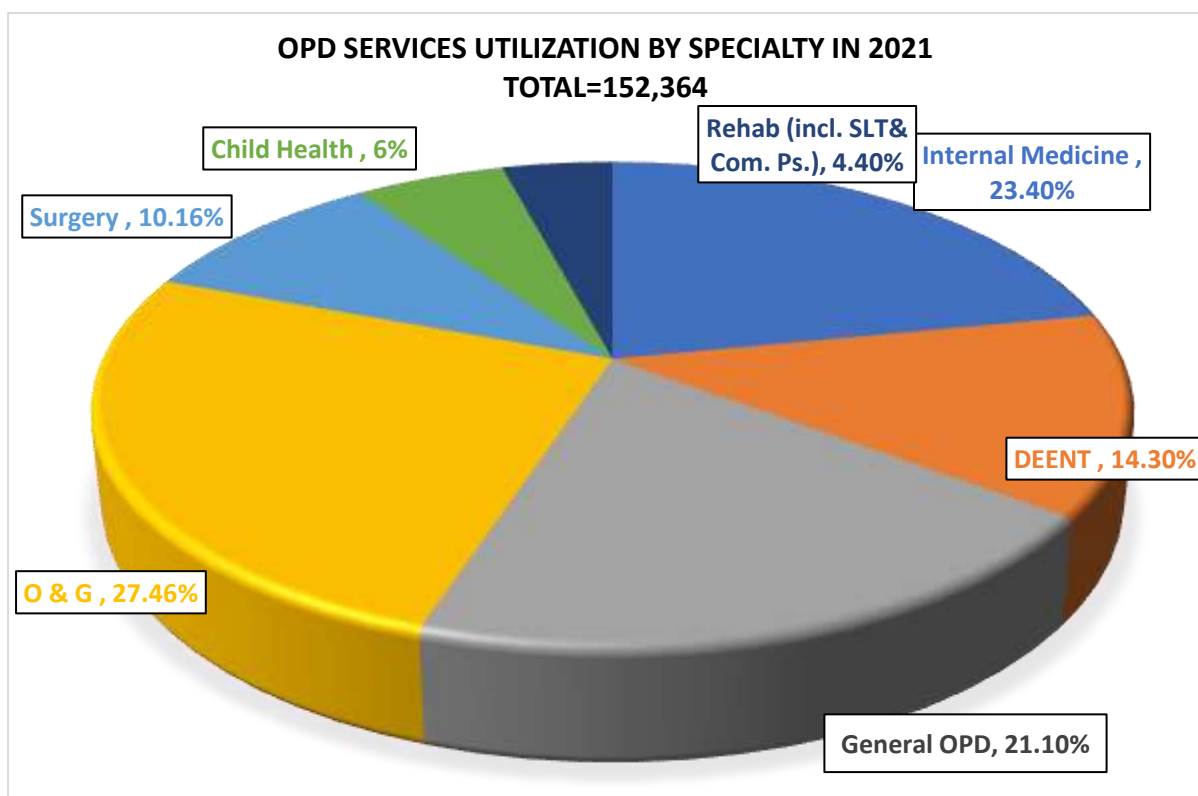


Table 3.2. 1: OPD Utilization by specialty from 2018 to 2021

Clinical Specialty	2018	2019	2020	2021	REMARKS
Internal Medicine	23%	20%	23%	23.4%	Incr
DEENT	18%	21%	20%	14.3%	Decr
General OPD	18%	15%	18%	21.1%	Incr
O & G	15%	14%	13%	27.46%	Incr

Clinical Specialty	2018	2019	2020	2021	REMARKS
Surgery	11%	12%	10%	10.16%	Incr
Child Health	7%	8%	8%	6%	Decr
Rehab (incl. SLT& Com. Ps.)	10%	10%	8%	4.4%	Decr
Total OPD Attendance =	158,164	168,056	125,772	152,364	21.1% Incr

The hospital recorded a steady increment in the total number of OPD attendance between the period 2013 to 2019., but in 2020, there was a significant decline of 25.2% in the OPD attendance, as a result of the impact of the Covid-19 pandemic. The hospital in 2021 also introduced additional specialty services. These are, Orthodontist Services, Reproductive Endocrinology and Fertility Services as well as Gynae. Oncology Services. The 2021 OPD attendance improved by 21.1% (from 125,772 in 2020 to 152,364 in 2021). In the year under review, the hospital also recorded varied significant rise in the Rehabilitation services as well as DEENT services. Detailed analysis is provided in figure 3.2. 2 to figure 3.2.3 and tables 3.2.2, to table 3.2.4 and 3.2.5 below.

Figure 3.2. 2: Trend Analysis of OPD Service Utilization

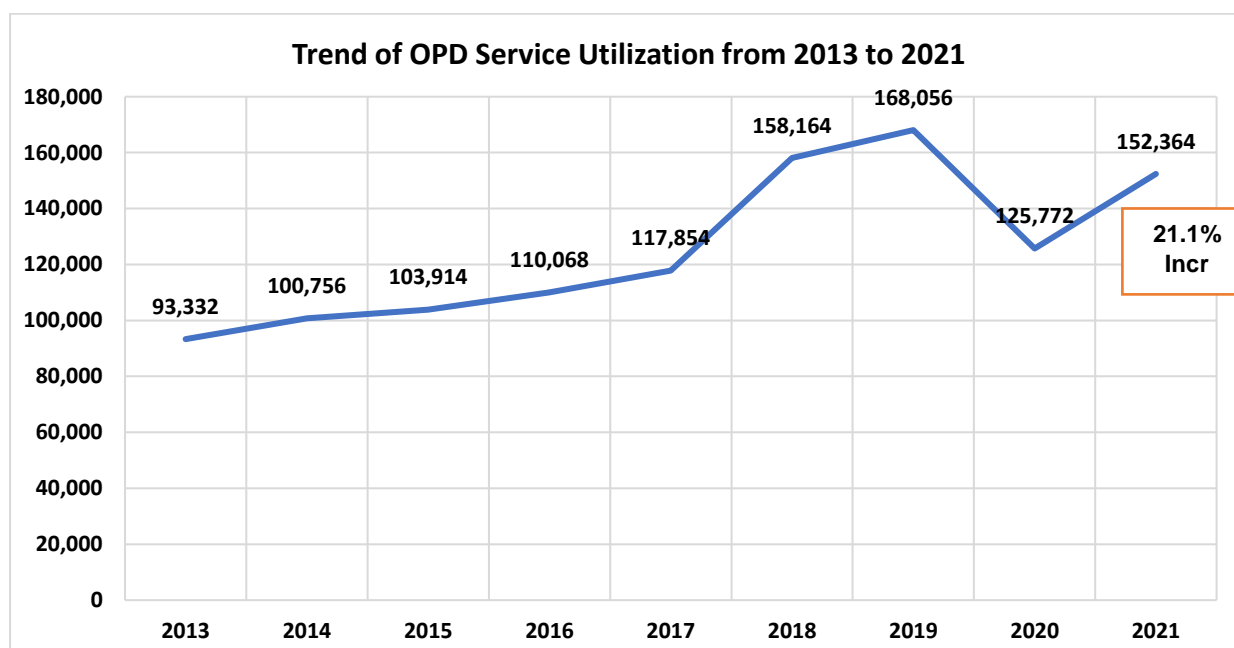


Table 3.2. 2: General OPD Clinic Attendance

INDICATORS	2013	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS
New OPD Registrants	-	-	-	40,065	39,404	28,361	23,334	22,636	24,266	7.2% Incr
OPD Attendance	93,332	100,756	103,914	110,068	117,854	158,164	168,056	125,772	152,364	21.1% Incr
Average Daily OPD Visit	-	276	285	302	323	433	461	345	417	20.87% Incr
Insured Patients	86,772	93,076	95,855	101,957	109,280	130,557	146,227	107,169	129,530	20.87% Incr
Non-Insured Patients	6,560	7,680	8,059	8,111	8,574	27,607	21,779	18,603	22,834	22.74% Incr
Referrals In	2,335	3,647	3,911	3,443	4386	4,292	4,447	4113	3,566	13.3% Incr
Referrals Out	-	-	-	-	-	-	146	64	-	

Figure 3.2. 3: Monthly Trend of OPD Services Utilization

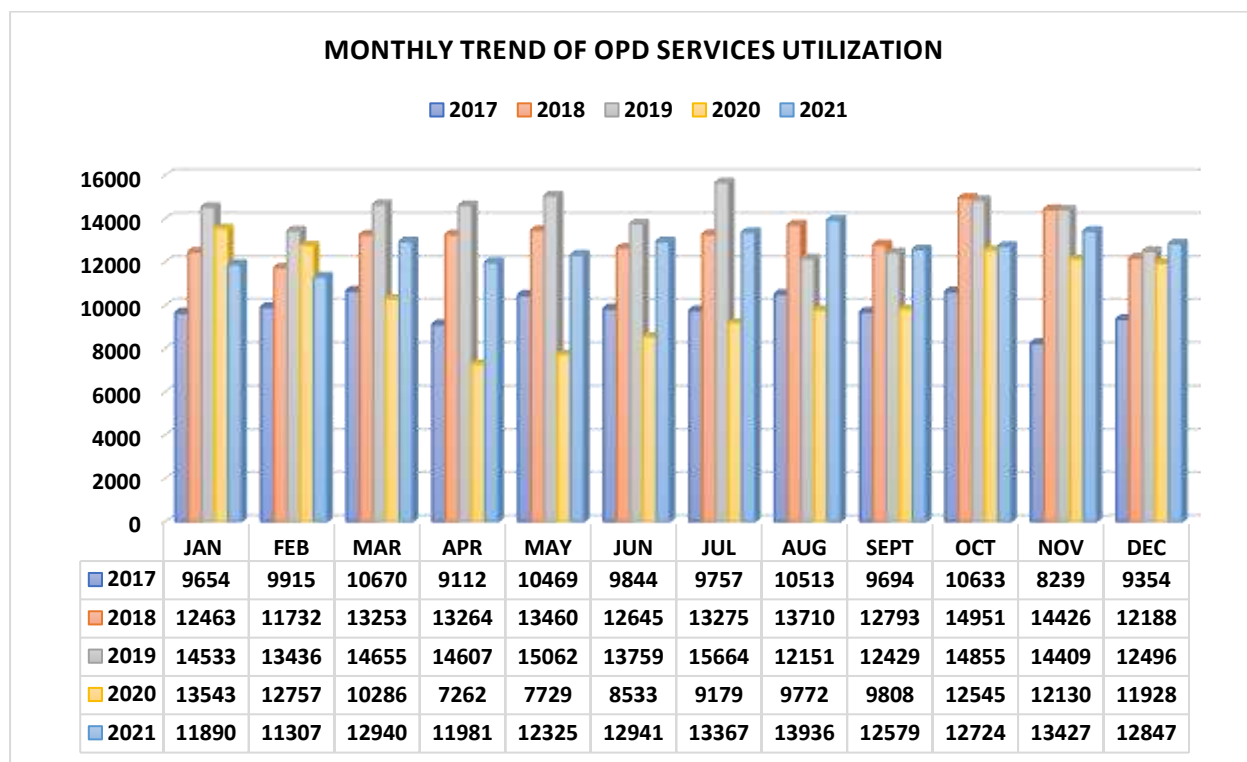


Table 3.2. 3: Monthly Trend of OPD Services Utilization

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
2017	9654	9915	10670	9112	10469	9844	9757	10513	9694	10633	8239	9354
2018	12463	11732	13253	13264	13460	12645	13275	13710	12793	14951	14426	12188
2019	14533	13436	14655	14607	15062	13759	15664	12151	12429	14855	14409	12496
2020	13543	12757	10286	7262	7729	8533	9179	9772	9808	12545	12130	11928
2021	11890	11307	12940	11981	12325	12941	13367	13936	12579	12724	13427	12847

Table 3.2. 4: OPD Performance under THs KPIs

Indicator	2016	2017	2018	2019	2020	2021	Remarks	Target	Measurement
OPD cases seen per doctor	1:1184	1:1030	1:1163	1:1098	1:749	1:560	Decr	THs = 1:1080	Total no. of client attending OPDs / Total no. of Doctors
Total OPD Attendance	110,068	117,854	158,164	168,056	125,772	152,364	21.1% Incr	CCTH = 10% Incr	
Total number of doctors (i.e. consultants, senior specialists, specialists, residents and Medical Officers only)	93	114	136	153	168	160	4.8% decr	-	
OPD Cases seen per specialist	1:1829	1:1849	1:1418	1:1255	1:1024	1:1483	Incr	THs = 1:1200	Total no. of client attending specialist OPDs / Total no. of specialist/ Snr. Specialists/ Consultants
Total Specialists OPD Attendant	73,152	83,217	75,130	90,336	69,603	80,114	15.1% Incr		
Total number of specialist /Snr. Specialists/Consultants	40	45	53	72	68	62	8.8% decr		

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

CLINICS	2013	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS
INTERNAL MEDICINE SERVICE										
General Medical	18,421	18,239	16,617	16,232	21,060	17,184	18,142	17,385	19,046	9.5% incr
Dermatology	224	324	357	330	359	315	45	353	462	30.9% incr
Asthma	491	357	297	511	787	1,036	1,005	819	626	23.5% decr
Sickle Cell	151	179	235	454	650	567	423	595	269	54.7% decr
Gastroenterology	183	315	359	560	690	620	749	662	866	30.8% incr
Cardiology	546	506	516	1,590	2,153	2,104	2,583	2,558	2,718	6.2% incr
Diabetes	11,332	9,135	9,201	9,309	9,966	10,636	11,304	8,965	9,356	4.4% incr
Hepatitis B	1,622	1,114	794	940	1,059	1,179	1,212	850	775	8.8% decr

CLINICS	2013	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS
TB CLINIC	-	36	35	42	39	131 (42 - CCTH Clients)	361 (31 CCTH Clients)	292	271	7.2% decr
HIV CLINIC	-	-	5,895	5,377	6,068	-	4,913	5,337	4,057	24% decr
Adolescent Clinic	-	-	57	126	218	171	178	126	102	19.1% incr
Endocrinology	-	-	-	82	125	111	106	97	184	89% incr
Haematology	-	-	-	223	298	431	437	396	427	7.8% incr
Renal Clinic	-	-	-	389	849	888	1,334	919	1005	9.3% incr
Oncology Clinic	-	-	-	-	-	-	-	62	183	195.2% incr
SURGICAL SERVICES										
General Surgery	4,627	4,375	3,983	4,376	5,702	4,234	3,433	1,356	2,442	80.09% incr
Orthopaedic	1,534	1,466	1,913	2,223	2,347	2,485	2,311	1,337	2,530	89.23% incr
Uro-Surgery	1,029	1,769	2,208	2,843	3,275	4,102	6,119	4,880	3,044	37.62% decr
Neuro-Surgery	-	112	200	129	312	351	620	485	487	0.41% incr
Plastic Surgery	-	-	176	564	601	433	461	408	739	81.13% incr
Colorectal	-	-	-	-	-	-	82	196	300	10.16% incr
ANAESTHESIA AND CRITICAL CARE SERVICES										
Anaesthesia Clinic	-	329	689	943	868	782	894	480	1,042	117% incr
DENTAL, EYE AND EAR, NOSE & THROAT (DEENT) SERVICE										
ENT	4,995	5,094	5,907	6,080	6,664	6,230	8,211	6,004	5,588	6.9% decr
Eye	6,055	5,872	6,600	8,420	9,348	8,917	12,078	8,451	10,837	28.2% incr
Dental & Maxillofacial	4,131	2,325	4,165	4,294	5,112	4,769	5,204	4,667	4,922	5.5% incr
Orthodontist Services									25	Introduced in 2021
MATERNAL HEALTH SERVICE										
ANC	6,779	7,332	8117	8434	10,141	8,991	9,419	7,717	9,298	20.49% incr
PNC	-	-	2430	2750	3,314	3,495	3,384	1,866	2,520	35.05% incr
Gynae	-	-	4761	4075	4,092	4,078	4,265	2,553	3,368	31.92% incr
Reproductive Endocrinology									271	Introduced in 2021

CLINICS	2013	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS
and Fertility Services	-	-	-	-	-	-	-	-		
Gynae. Oncology Services	-	-	-	-	-	-	-	-	11	Introduced in 2021
Total	-	15,515	15,308	15,259	17,547	16,564	17,068	12,136	15,468	27.46% incr
CHILD HEALTH SERVICE										
General Paediatrics Clinic	7,391	6,767	7,690	7,810	8,180	7490	8,666	6,003	9,244	54% incr
Paediatric Specialist Clinic										
NICU Follow-Up	-	-	-	-	-	155	206	247	890	260% incr
Paedics Asthma	-	-	-	-	-	87	78	57	102	78.9% incr
Paedics Neuro	-	-	-	-	-	168	137	213	245	15% incr
Paedics Renal	-	-	-	-	-	99	97	216	115	47% incr
Paedics Cardio	-	-	-	-	-	30	21	60	58	3% decr
Paediatrics - Sickle Cell clinic	-	-	-	-	-	205	331	328	351	7% incr
Paediatrics Oncology	-	-	-	-	-	-	-	48	22	54.2% incr
<i>Total Paediatric Specialist Clinic Attendance =</i>	-	-	-	-	-	744	870	1,169	1,783	57.1% incr
REHABILITATION SERVICE										
Diet Clinic	953	1,008	1,743	1,417	1,916	1,265	1,224	1,070	1,313	22.7% incr
Clinical Psychology	-	-	150	163	261	301	592	557	798	43.3% incr
Physiotherapy	-	-	-	-	9,228	9,579	10,090	5,670	5,055	10.9% decr
Speech Therapy	-	-	-	-	-	24	68	208	415	99.5% incr
Community Psychiatry	-	-	-	-	-	-	-	56	66	17.9% incr
OTHER SERVICES										
Polyclinic	-	-	-	-	-	-	348	6,674	0	<i>Data in the 1st quarter b/4 changed to treatment centre in 2020</i>
Minor Procedures (Treatment Room)	-	-	8,706	9,932	9,218	7464	9280	8,375	10,409	24.3% incr

CLINICS	2013	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS
Weekend & Holiday Clinic	402	1,160	383	362	362	355	358	-	-	-

Table 3.2. 6: Utilization of HIV/TB Services

INDICATOR	2016			2017			2018	2019			2020			2021		
	Adult	Kids	Total	Adult	Kids	Total	Adult Kids Total	Adult	Kids	Total	Adult	Kids	Total	Adult	Kids	Total
Total HIV Cases Seen	-	-	5377	-	-	6068	2018 report from the HIV clinic is not available due to the deployment of the E-tracker	-	-	4913	4998	339	5337	3863	194	4057
New Cases	217	27	244	223	30	253		20	116	136	8	18	94	71	4	75
Clinical Follow Ups	5,015	362	5,377	5657	411	6068		312	4465	4777	4998	339	5337	3863	194	4075
Total Death	7	0	7	10	1	11		1	6	7	2	0	2	0	3	3
No. Screened For TB	4,439	283	4,722	1146	91	1238		74	1081	1155	1,107	72	1179	1702	173	1875
No. Diagnosed TB	14	4	18	18	12	30		-	7	7	12	-	12	13	0	13
No. On TB Treatment	14	4	18	9	11	20		-	7	7	12	-	12	13	0	13
No. Of HIV Cases Receiving ARV	837	54	891	987	66	1053		76	1227	1303	1357	100	1457	1368	51	1419

3.3 TOP TWENTY OPD MORBIDITIES IN 2021

Non-communicable diseases remain the leading cause of OPD morbidities presented to the hospital. In 2021, Hypertension (11%) ranked 1st among the top twenty OPD morbidities, followed by Diabetes Mellitus (8%) and Acute Urinary Tract Infection (6%). On the other hand, Ulcer, Anaemia, Viral Hepatitis, Stroke, Gynaecological Conditions, HIV Related Conditions and Periodontal Diseases constituted 1% each of the total morbidities seen at the OPD in 2021. Figure 3.3.1 and table 3.3.1 below highlights the top twenty (20) OPD morbidities recorded by the hospital.

Figure 3.3. 1:Top Twenty OPD Morbidities in 2021

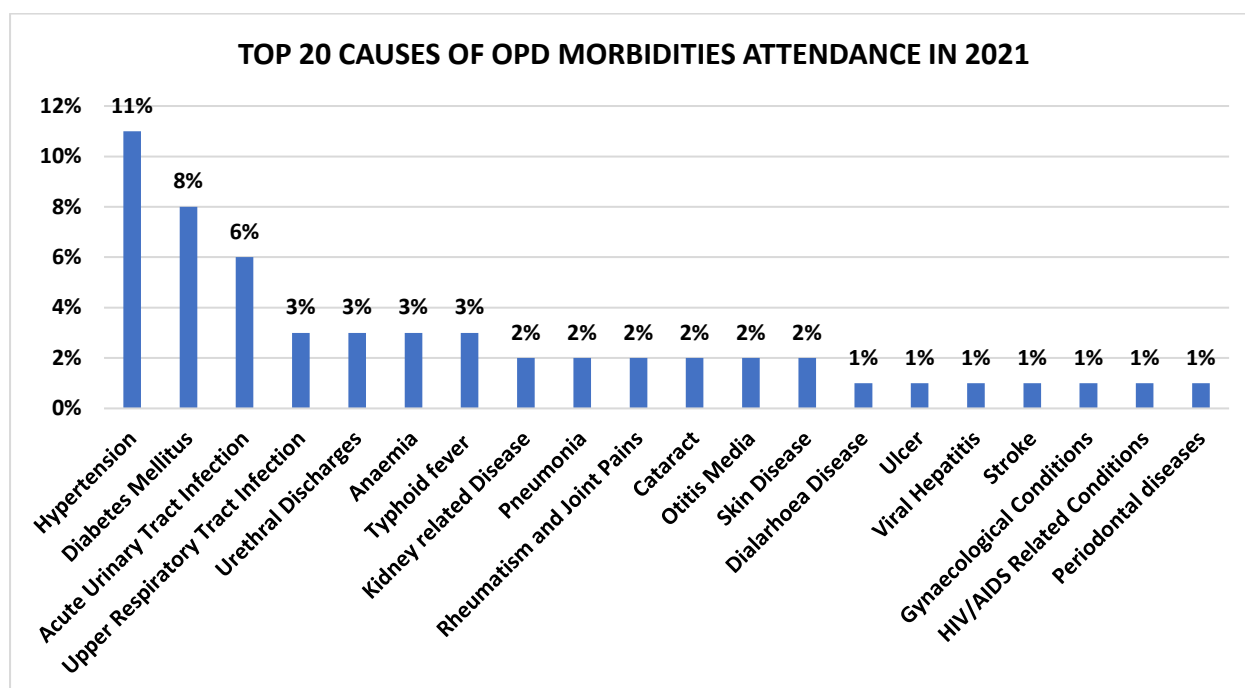


Table 3.3. 1: Top Twenty OPD Morbidities in 2021

2019		2020		2021	
CONDITION	PROPORTION	CONDITION	PROPORTION	CONDITION	PROPORTION
Hypertension	12.0%	Hypertension	12%	Hypertension	11%
Diabetes Mellitus	7.9%	Diabetes Mellitus	9%	Diabetes Mellitus	8%
Acute Eye Infection	1.7%	Acute Urinary Tract Infection	7%	Acute Urinary Tract Infection	6%
Upper Respiratory Tract Infection	1.7%	Urethral Discharges	6%	Upper Respiratory Tract Infection	3%
Stroke	1.3%	Diarrhoea Disease	4%	Urethral Discharges	3%
Pneumonia	0.9%	Upper Respiratory Tract Infection	4%	Anaemia	3%
Asthma	0.9%	Pneumonia	4%	Typhoid fever	3%
Prostate Cancer	0.9%	Malaria	3%	Kidney related Disease	2%
Otitis Media	0.9%	Kidney Related Disease	3%	Pneumonia	2%
Cataract	0.7%	Rheumatism & Joint Pains	3%	Rheumatism and Joint Pains	2%
Viral Hepatitis	0.7%	Diseases of the Reproductive System	3%	Cataract	2%
Sickle Cell Disease	0.6%	Cancer	2%	Otitis Media	2%
Anaemia	0.3%	Gynaecological Conditions	2%	Skin Disease	2%
Obesity	0.3%	Acute Eye Infection	2%	Dialarhoea Disease	1%
Cervical Cancer	0.3%	Typhoid Fever	2%	Ulcer	1%

2019		2020		2021	
CONDITION	PROPORTION	CONDITION	PROPORTION	CONDITION	PROPORTION
Uncomplicated Malaria Tested Positive	0.3%	Ulcer	1%	Viral Hepatitis	1%
HIV/AIDS Related Conditions	0.3%	Anaemia	1%	Stroke	1%
Cardiac Diseases	0.2%	Cataract	1%	Gynaecological Conditions	1%
Urethral Discharges	0.2%	Pregnancy related complications	1%	HIV/AIDS Related Conditions	1%
Septicaemia	0.2%	Stroke	1%	Periodontal diseases	1%

3.4 IN-PATIENT SERVICE UTILIZATION

The hospital since 2017 has recorded fluctuating performance in the total number of admissions. However, in 2021, there was a 22.2% increase in total admissions (from 10,578 in 2020 to 12,930 in 2021). The Maternal Health department recorded the highest proportion of admissions (39.51%) in 2021, with total admission increment of 39.75% (from 3,655 in 2020 to 5,108 in 2021). The Child Health department admission went up by 29.94%, whereas the Surgical and Internal Medicine Sub-BMC's admissions increased by 16.40% and 14.16% in 2021 respectively.

The percentage of admissions due to external referrals increased significantly from 21.6% in 2020 to 68.20% in 2021. On the other hand, the percentage of neonatal admissions due to external referrals declined from 25.5% in 2020 to 15% in 2021, whilst the percentage of maternal admissions due to external referrals increased from 21.2% in 2020 to 23% in 2021. The Nurse and Midwife to admission ratio in 2021 was sustained at 1:13 for both 2020 and 2021. Further, the percentage of bed occupancy went down from 55.5% in 2020 to 52.2% in 2021 whilst the average length of stay decreased from 5.9 days in 2020 to 5.6 days in 2021. 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

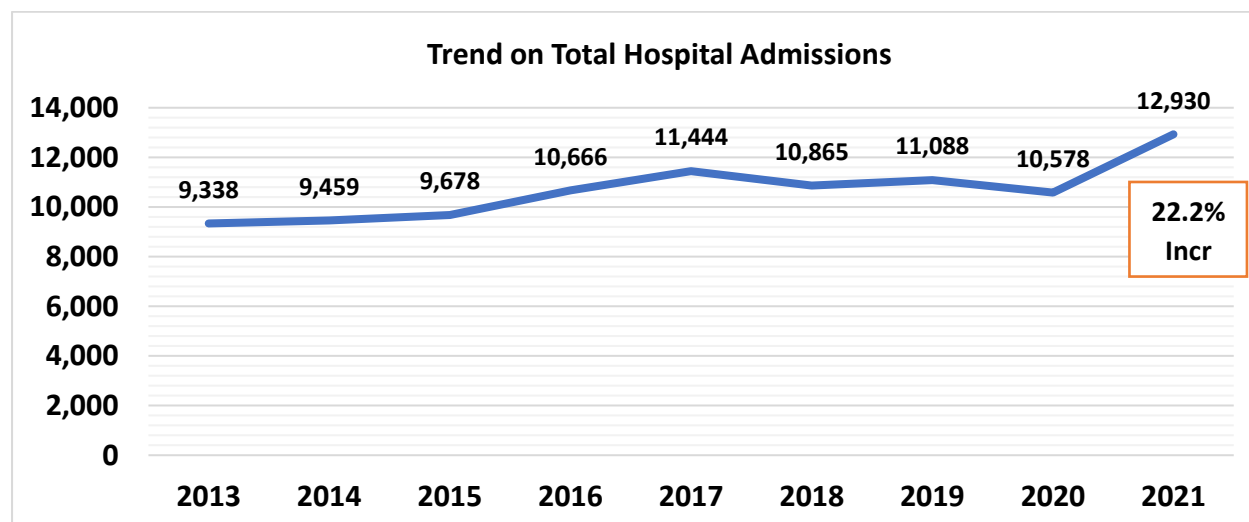


Figure 3.4. 2: Proportion of Specialty Admissions in 2021

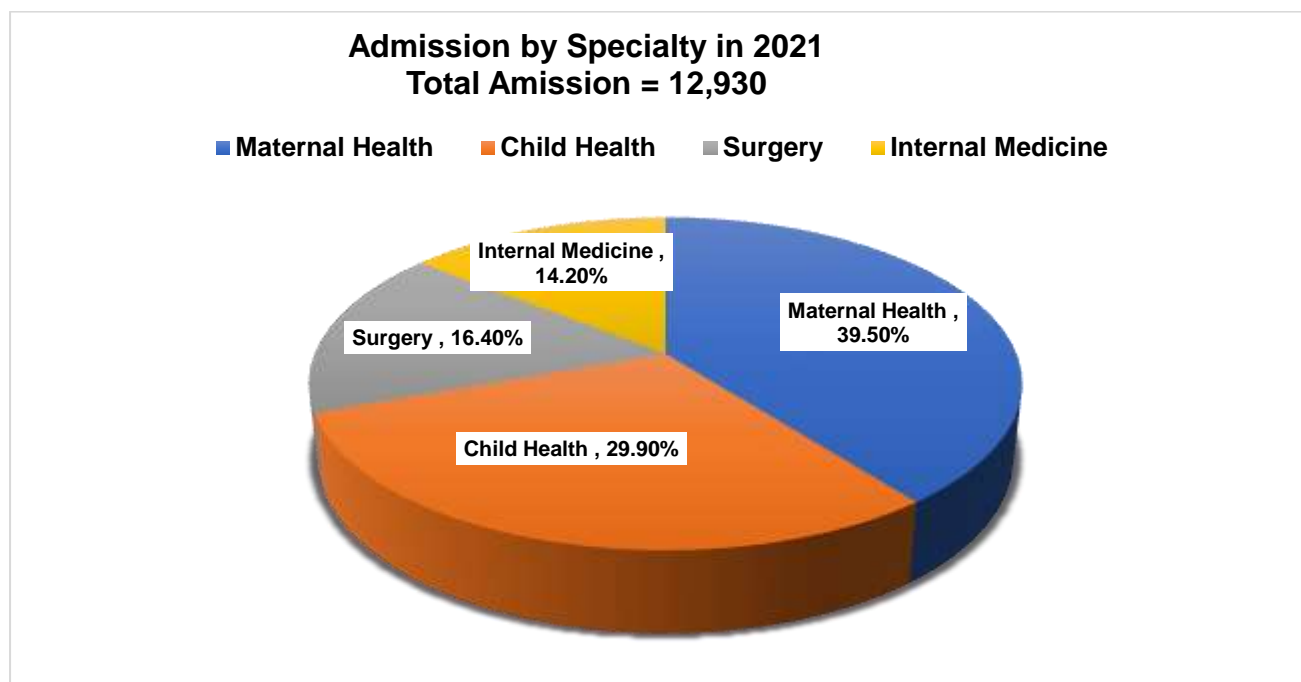


Figure 3.4. 3: Admission Trend of Clinical Sub-BMCs

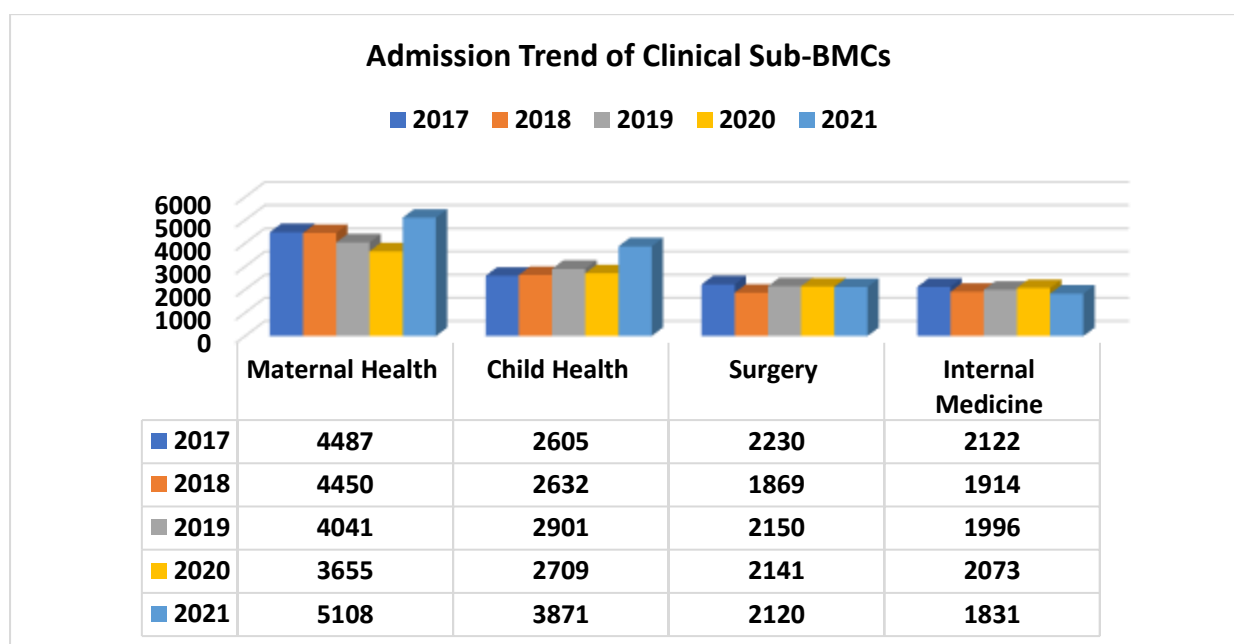


Table 3.4. 1: Admission Trend of Clinical Sub-BMCs

Clinical Sub-BMCs	2017	2018	2019	2020	2021	Remarks
Maternal Health	4487	4450	4041	3655	5108	39.8% incr
Child Health	2605	2632	2901	2709	3871	42.9% incr
Surgery	2230	1869	2150	2141	2120	1% decr
Internal Medicine	2122	1914	1996	2073	1831	11.7% decr

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

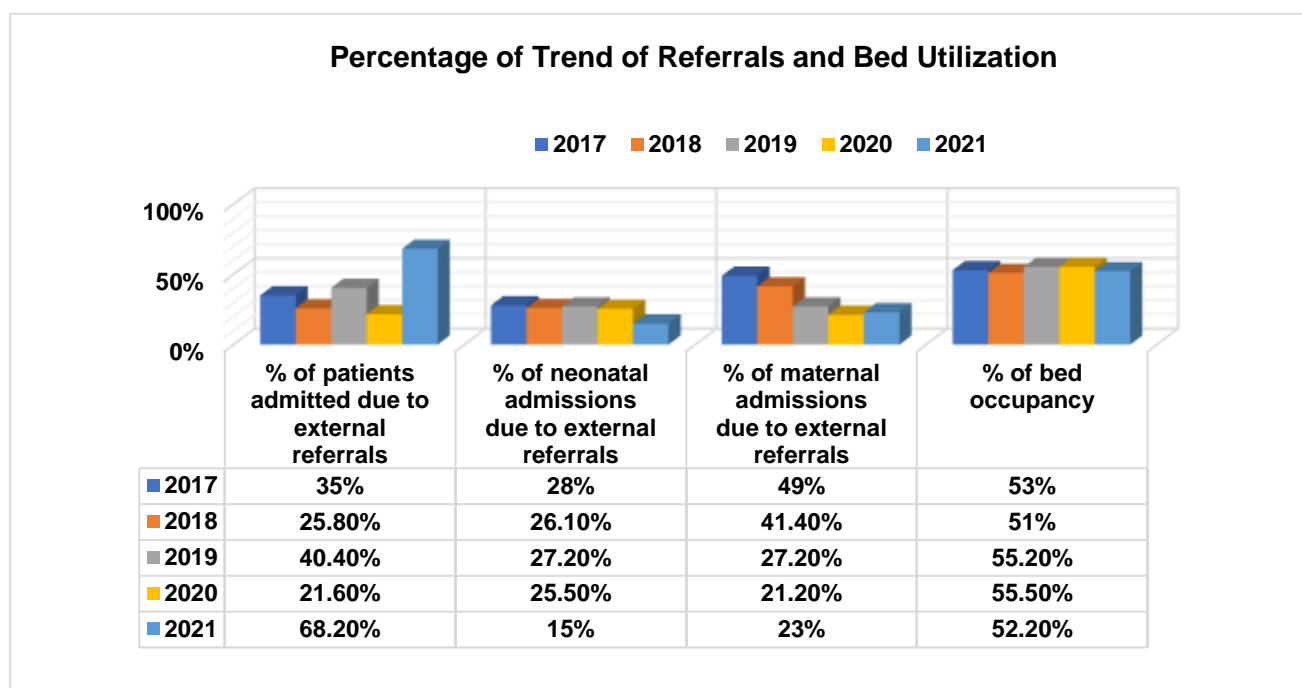


Table 3.4. 2: Percentage Trend of Referrals and Bed Utilisation

INDICATOR	2017	2018	2019	2020	2021	REMARKS	TARGET	MEASUREMENT
Percentage of patients admitted due to external Referrals	35%	25.8%	40.4%	21.6%	68.2%	46.6% 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%	1.8% 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%	10.5% decr	30%	No. of Neonatal admissions due to referrals / Total neonatal admissions*100
Bed occupancy rate	53%	51%	55.2%	55.5%	52.2%	3.3% decr	75%	No. of client days / No. of beds * No of days in the period

Table 3.4. 3: In-Patient Service Utilization by Wards – Bed State - A

WARD	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
	ADMISSIONS				DISCHARGES				AVERAGE LENGTH OF STAY			
Delivery Suite	2487	1861	1655	1769	1726	1626	1293	1412	1.5	1.5	1.1	1.0
Paediatric	1742	1833	1708	1968	1765	1791	1679	1940	5.3	6.2	6.1	5.9
Gynaecology	1963	2180	2000	2058	2744	2539	2554	2730	3.8	4.4	4.0	4.2
Male Surgical	1109	1273	1339	1316	1144	1241	1320	1331	8.2	9.3	7.2	7.4
Female Surgical	760	877	802	804	731	857	775	781	8.3	8.1	8.0	7.4
Male Medical	839	885	983	797	699	733	211	626	7.0	6.5	6.2	6.6
Female Medical	842	912	924	865	737	772	722	709	6.1	6.5	6.6	6.4
NICU	890	1068	1001	903	617	802	702	649	7.2	7.2	7.2	7.8
ICU	126 (Trans- in 70)	114 (Trans- in 66)	111	79	9	6	10	12	6.9	11.1	6.5	6.3
Executive Suite	107	84	55	90	99	83	62	90	6.9	10.3	8.7	0.9
ETAT				1,280				153				0.8
TOTAL =	10,865	11,087	10578	11,930	10,271	10,450	9872	10,433	5.2	5.8	5.9	5.6

Table 3.4. 4: In-Patient Service Utilization – Bed State - B

WARD	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
	AV. DAILY BED OCCUPANCY				% BED OCCUPANCY				DEATHS			
Delivery Suite	7	7	5.8	8	36.2	34.8	30.3	27.7	4	3	1	0
Paediatric	27	32	30.4	33	55.9	67.2	63.1	69.3	88	119	110	117
Gynaecology	29	30	32.4	32	63.5	67.8	71.8	70.3	15	9	13	16
Male Surgical	27	33	29.1	30	62.7	77.4	67.6	70.1	50	64	84	65
Female Surgical	18	20	19.3	18	48.0	54.4	51.9	48.8	53	51	61	63
Male Medical	16	16	17.1	15	36.9	36.3	50.2	34.1	134	140	211	165
Female Medical	14	16	17.2	15	33.1	37.9	40.0	35.6	116	144	202	152
NICU	16	20	19.9	19	65.5	83.3	82.6	80.6	176	218	244	201
ICU	2	3	2.9	2	36.2	49.5	58.4	38	106	92	74	63
Executive Suite	2	2	1.7	2	64.4	79.8	55.6	70.8	3	3	1	4
ETAT	-	-	-	2	-	-	--	62.5	-	-	-	6
Total	157	180	175.8	172	50.5	55.2	55.5	52.2	745	843	1001	852

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

WARD	DEATH RATE			
	2018	2019	2020	2021
Delivery Suite	0.1%	0.1%	0.1%	0.0%
Paediatric	4.7%	6.2%	6.1%	5.6%
Gynaecology	0.4%	0.3%	0.4%	0.5%
Male Surgical	4.0%	4.6%	5.7%	4.4%
Female Surgical	6.4%	5.4%	6.9%	7.0%
Male Medical	15.6%	15.5%	21.0%	20.3%
Female Medical	13.3%	15.4%	21.2%	17.4%
NICU	19.7%	20.5%	24.3%	22.2%

WARD	DEATH RATE			
	2018	2019	2020	2021
ICU	54.6%	52.3%	45.1%	47.4%
Executive Suite	2.8%	3.1%	1.4%	4%
Institutional Mortality Rate Total =	6.8%	10.3%	12.3%	11%

3.5 TOP TEN CAUSES OF ADMISSION

Since 2017, pregnancy complications remained the leading condition among the top ten causes of admissions in the hospital and forms 4.1% (419) of the total admissions in 2021, despite the 13.79% in reduction in cases, in 2021 (from 486 in 2020 to 419 in 2021). Sepsis, Jaundice and Birth Asphyxia (Neonatal) on the other hand, ranked 2nd, 3rd and 4th among the top ten leading causes of admissions in 2021. Fractures (1.8%), Pneumonia (1.4%) and Cerebrovascular Accident (CVA) (1.4%) were the least among the top ten causes of admissions in 2021 as detailed in table 3.5.1 below.

Table 3.5. 1: Top Ten Causes of Admission

2018		2019		2020		2021	
CONDITION	NO. (%)	CONDITION	NO. (%)	CONDITION	NO. (%)	CONDITION	NO. (%)
Pregnancy Complications	699 (6.4%)	Pregnancy complications	556 (4.6%)	Pregnancy complications	486 (4.6%)	Pregnancy complications	419 (4.1%)
Jaundice (Neo)	392 (3.6%)	Hernia	349 (2.9%)	Jaundice	378 (3.6%)	Sepsis	414 (3.5%)
Hernia	316 (2.9%)	Pneumonia	347 (2.9%)	Sepsis	353 (3.3%)	Jaundice	340 (3%)
Pre-Maturity	293 (2.7%)	Asphyxia	332 (2.8%)	Pre-Maturity	302 (2.8%)	Asphyxia birth (Neonatal)	273 (2.3%)
Sepsis (neo)	274 (2.5%)	Cancers	283 (2.4%)	Stroke	297 (2.8%)	Pre-Maturity	254 (2.1%)
Kidney Diseases	255 (2.3%)	Kidney Diseases	281 (2.3%)	Pneumonia	273 (2.6%)	Hernia	240 (2%)
Asphyxia birth (Neonatal)	215 (1.9%)	Pre-maturity	277 (2.3%)	Asphyxia birth (Neonatal)	265 (2.5%)	Malignant Neoplasm	220 (1.8%)
Bronchopneumonia	185 (1.7%)	Fractures	262 (2.2%)	Diabetes Mellitus	244 (2.3%)	Fractures	216 (1.8%)
Pneumonia	173 (1.5%)	Jaundice (neonatal)	228 (1.9%)	Hypertension	211 (2.0%)	Pneumonia	170 (1.4%)
Cerebrovascular Accident (CVA)	169 (1.5%)	CVA	225 (1.9%)	Malaria	196 (1.8%)	Cerebrovascular Accident (CVA)	164 (1.4%)

3.6 INSTITUTIONAL MORTALITY

Institutional mortality remains a concern for the hospital. As such, measures were put in place over the years to reduce the mortalities but sustaining the gains has been difficult over the past years due to multiple factors. However, in 2021, the hospital recorded a marginal decline in the institutional mortality rate from 12.35% in 2020 to 11% in 2021. In the same light, some of the individual wards recorded varied reductions in their mortality rate. For instance, Female Medical ward recorded decrease in their death rate, from 21.2% in 2020 to 17.4% in 2021. Also, the total number of cases Brought-In-Dead (BID) to the hospital in 2021, decreased by 40.5% (from 74 in 2020 to 44 in 2021). Detailed analysis is provided in figure 3.6.1 to figure 3.6.2 and table 3.6.1 to table 3.6.2 below.

Figure 3.6. 1: Trend of Institutional Mortality Rate

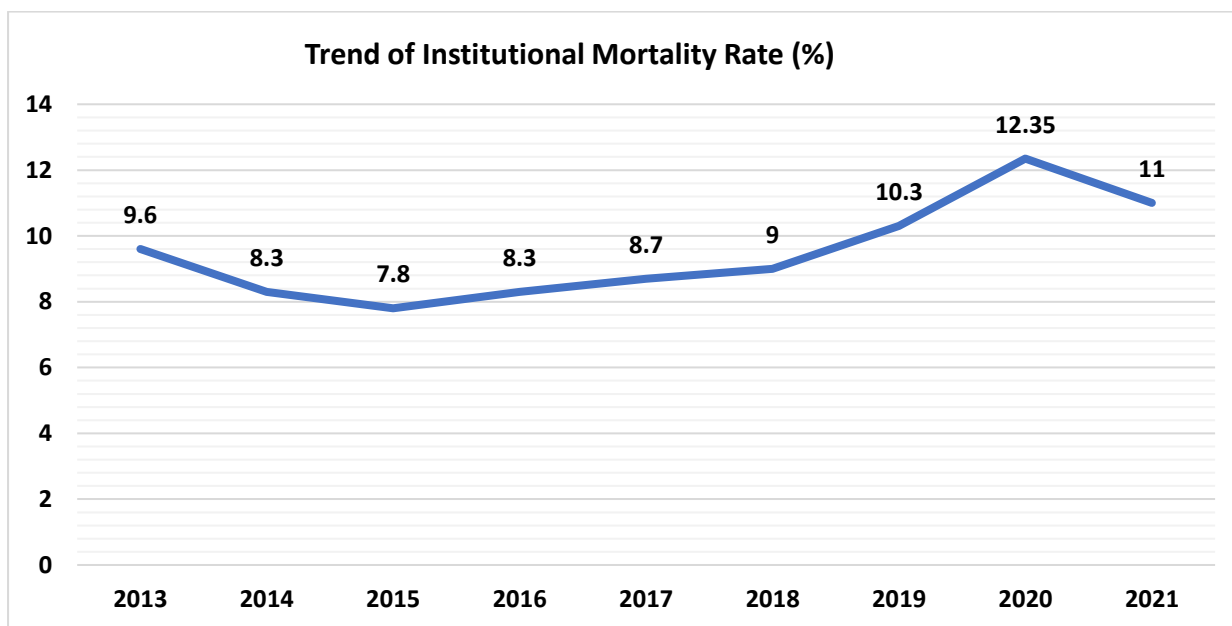


Figure 3.6. 2: Institutional Mortality by Categorization

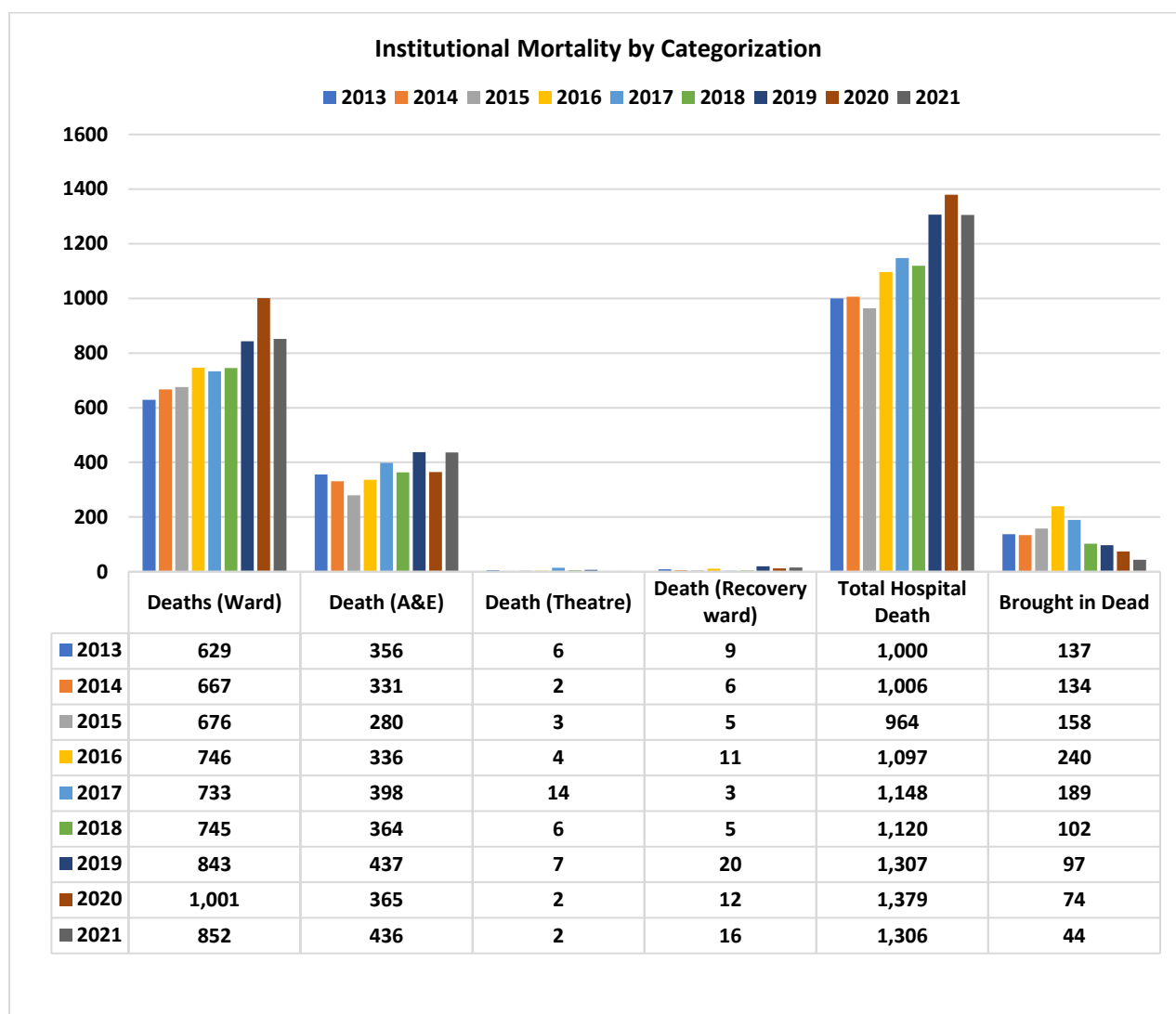


Table 3.6. 1: Institutional Mortality Categorization

INDICATORS	2013	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS	TARGET
Deaths (Ward)	629	667	676	746	733	745	843	1,001	852	15% incr	-
Death (A&E)	356	331	280	336	398	364	437	365	436	19.5% incr	-
Death (Theatre)	6	2	3	4	14	6	7	2	2		-
Death (Recovery ward)	9	6	5	11	3	5	20	12	16	30% incr	-
Total Hospital Death	1,000	1,006	964	1,097	1,148	1,120	1,307	1,379	1,306	5.3% Decr	CCTH = 5% Decr
Mortality Rate (%)	9.6%	8.3%	7.8%	8.3%	8.7%	9%	10.3%	12.35%	11%	1.35% decr	THs = 5%
Brought in Dead	137	134	158	240	189	102	97	74	44	40.5% decr	-

Table 3.6. 2: Institutional Mortality Rate by Ward

WARD	DEATH RATE				REMARKS
	2018	2019	2020	2021	
Delivery Suite	0.1	0.1	0.1	0%	0.1% decr
Paediatric	4.7	6.2	6.1	5.6%	0.5% decr
Gynaecology	0.4	0.3	0.4	0.5%	0.1% decr
Male Surgical	4.0	4.6	5.7	4.4%	1.3% decr

WARD	DEATH RATE				REMARKS
	2018	2019	2020	2021	
Female Surgical	6.4	5.4	6.9	7.0%	0.1% decr
Male Medical	15.6	15.5	21.0	20.3%	0.7% decr
Female Medical	13.3	15.4	21.2	17.4%	3.8% decr
NICU	19.7	20.5	24.3	22.2%	2.1% decr
ICU	54.6	52.3	45.1	47.4%	2.3% incr
Executive Suite	2.8	3.1	1.4	4%	2.6% incr
Total	6.8	10.3	12.3%	11%	1.3% decr

3.6.1 TOP TEN CAUSES OF MORTALITY

The hospital in 2021 recorded Respiratory Failure as the leading cause of the institutional mortality, accounting for 14.2% (121) of the total institutional deaths. This is followed by Birth Asphyxia (Neonatal) 7% (60) and Sepsis 4.8% (41). Septic Shock ranked 4th and constituted 4.1% (35), whilst CVA ranked 5th place with 3.8% (33). Pneumonia on the other hand ranked 10th among the top ten causes of Mortality in 2021 and constituted 1.76% (15 cases). 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

2018		2019		2020		2021	
CONDITION	NUMBER (%)	CONDITION	NUMBER (%)	CONDITION	NUMBER (%)	CONDITION	NUMBER (%)
Pre-maturity	71 (9.5%)	Sepsis	93 (11.1%)	Pre-maturity	84 (8.4%)	Respiratory Failure	121 (14.2%)
Birth Asphyxia (Neonatal)	47 (6.3%)	Asphyxia	78 (9.3%)	CVA	67 (6.7%)	Birth Asphyxia (Neonatal)	60 (7%)
Jaundice	27 (3.6%)	Prematurity	70 (8.3%)	Asphyxia Birth (Neonatal)	55 (5.5%)	Sepsis	41 (4.8%)
Breast Cancer	20 (2.6%)	Pneumonia	63 (7.5%)	Chronic Liver Disease	54 (5.4%)	Septic Shock	35 (4.1%)
Neonatal Sepsis	19 (2.5%)	Kidney Disease	50 (5.9%)	Sepsis	49 (4.8%)	CVA	33 (3.8%)
Prostate Cancer	16 (2.5%)	Congestive Cardiac Failure	44 (5.2%)	Congestive Cardiac Failure	45 (4.5%)	Kidney Disease	27 (3.2%)
Intestinal Obstruction	16 (2.5%)	Respiratory Failure	32 (3.8%)	Kidney Disease	34 (3.4%)	Bilirubin-Induced Neurologic Dysfunction (BIND)	22 (2.58%)
Ulcer	6 (0.8%)	Jaundice	32 (3.8%)	AIDS/HIV	27 (2.7%)	Haemorrhage	18 (2.1%)
Malnutrition	6 (0.8%)	Intestinal obstruction	32 (3.8%)	Pneumonia	24 (2.4%)	Congestive Cardiac Failure	15 (1.76%)
Hernia	6 (0.8%)	Cancer Breast	26 (3.1%)	Respiratory failure	20 (2.0%)	Pneumonia	15 (1.76%)

3.7 OBSTETRIC SERVICES

The hospital in 2021 recorded increment in total institutional deliveries by 5.97% (from 2,883 in 2020 to 3,055 in 2021), whilst the number of babies delivered increased by 6.61% (from 2,979 in 2020 to 3,176 in 2021). In the same light, partograph usage rate dropped slightly from 48.7% in 2020 to 48.5% in 2021. The ratio of deliveries to midwife

(using total number of midwives in the hospital) at the hospital level went down from 18:1 in 2020 to 15:1 in 2021. The hospital also recorded decline in Caesarean Section rate from 53.3% in 2020 to 51.4% in 2021. The total number of ANC registrants and ANC attendance increased by 0.92% and 20.49% respectively in 2021. Detailed trend analysis is shown in figure 3.7.1 and table 3.7.1 below.

Figure 3.7. 1: Obstetric Service Utilization

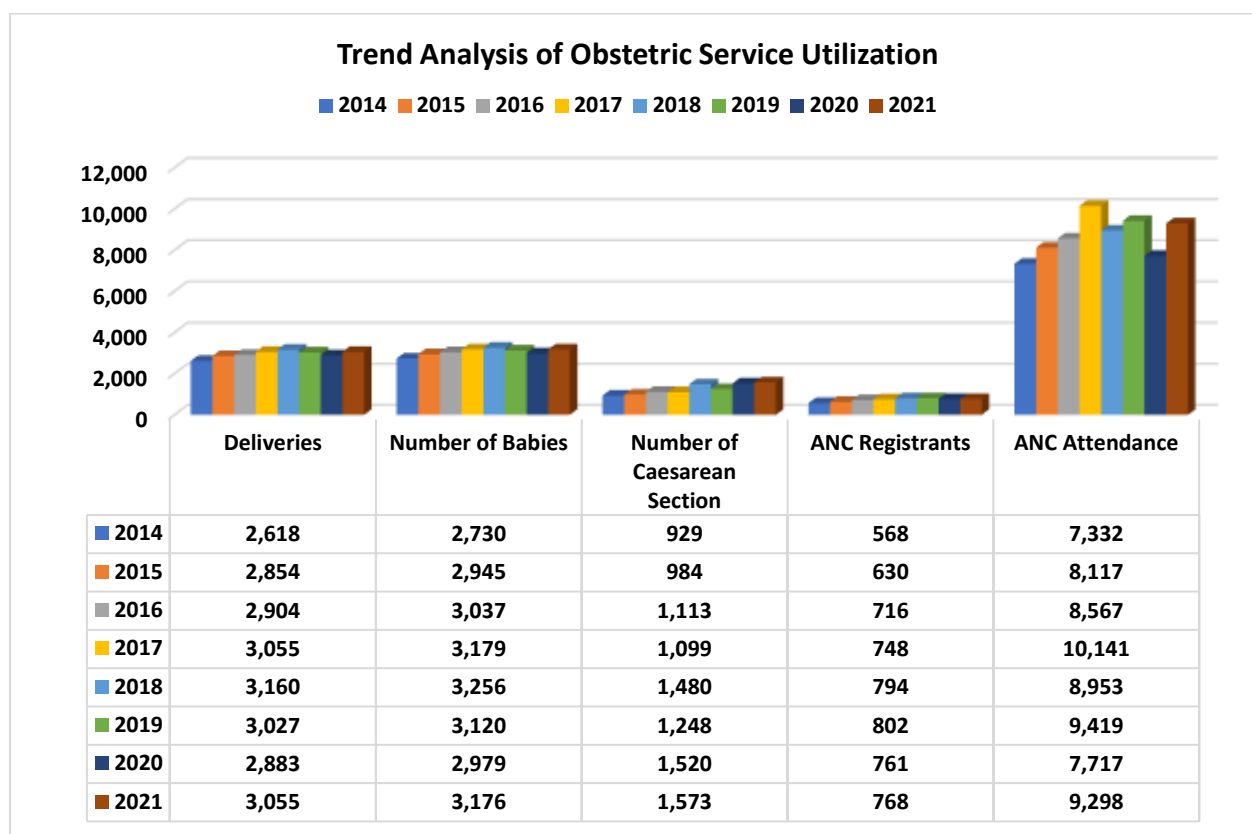


Table 3.7. 1: Obstetric Service Indicators

INDICATORS	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS	TARGET
Deliveries	2,618	2,854	2,904	3,055	3,160	3,027	2,883	3,055	5.9% incr	CCTH = 5% Incr
Number of Babies	2,730	2,945	3,037	3,179	3,256	3,120	2,979	3,176	6.6% incr	-
% Supervised Deliveries	100	100	100	100	100	100	100	100	sustained	-
Number of Caesarean Section	929	984	1,113	1,099	1,480	1,248	1,520	1,573	3.49% incr	-
% Caesarean Section	35%	34%	38%	40%	47%	41.2%	53.3%	51.4%	1.9% decr	THs = 40%
Partograph use rate	-	-	-	-	40.8%	46.12%	48.7%	48.5%	0.2% decr	60%
Maternal Deaths	20	31	41	41	27	28	26	32	23.08% incr	-
Maternal Mortality Ratio Per 100,000 Live Births	772	1,111	1,428	1,335	860	958	903	1,050		THs = 300

INDICATORS	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS	TARGET
ANC Registrants	568	630	716	748	794	802	761	768	0.92% incr	CCTH = 10% Incr
ANC Attendance	7,332	8,117	8,567	10,141	8,953	9,419	7,717	9,298	20.49% incr	-

3.7.1 MATERNAL MORTALITY

Maternal mortality remains one of the major concerns of the hospital and measures were implemented over the years to improve the survival chances of pregnant women. However, there is still room for improvement to reduce the mortalities and also sustain the gains. In 2021, the maternal mortality ratio recorded by the hospital increased to 1,050/100,000LB in 2021 as compared to 903/100,000LB in 2020, whereas, the total number of maternal deaths also increased by 23.08% (from 26 in 2020 to 32 in 2021). A clear indication that, a holistic approach needs to be adopted to address the high maternal mortality at the institution. Detailed trend analysis is provided in figures 3.7.1.1 to figure 3.7.1.2 and table 3.7.1.1 below.

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

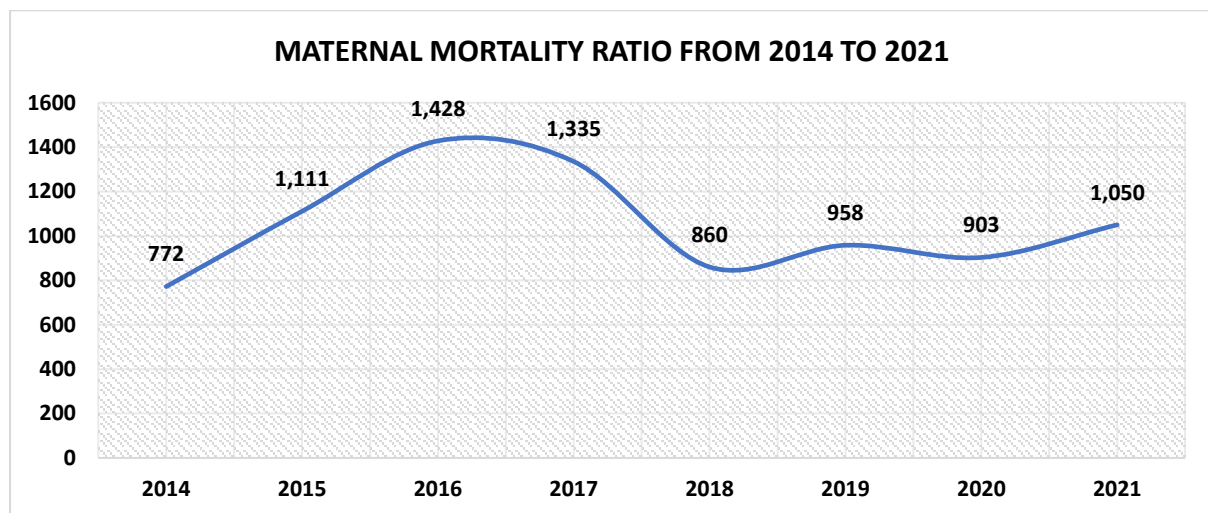


Figure 3.7.1. 2: Trend of Total Maternal Deaths

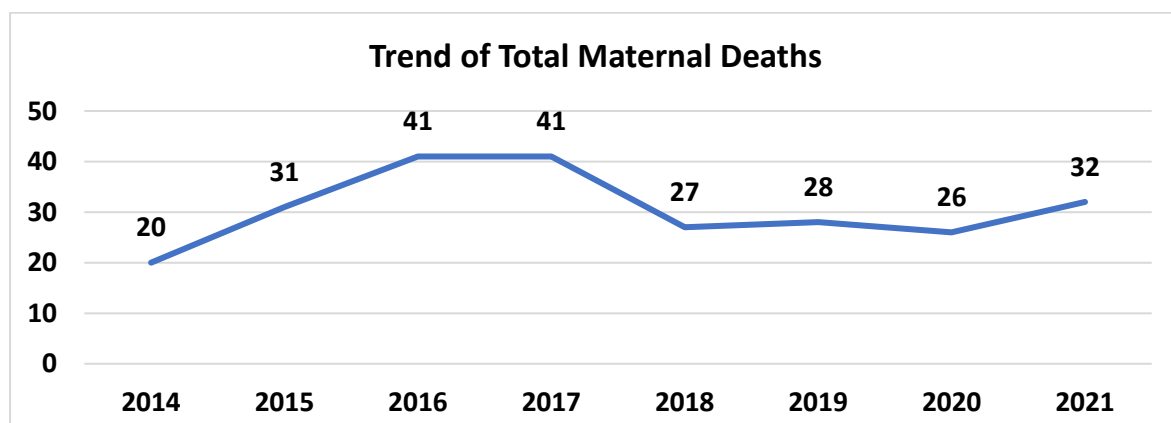


Table 3.7.1. 1: Duration of Maternal Death

Indicator	2019	2020	2021	REMARKS
Time of death				
Deaths in less than 48 hrs. upon Admission (<48 Hours)	58.6%	57.7%	52%	5.7% decr
Deaths in 48hrs/more upon (≥ 48 Hours)	41.4%	42.3%	48.4%	6.1% incr
Source of Patients				
Referred cases that died	89.7%	92.3%	24%	68.3% decr
Non-referred cases that died	10.3%	3.8%	9%	5.2% incr

3.7.2 CAUSES OF MATERNAL MORTALITY

The hospital in the past years recorded Haemorrhage as one of the major leading causes of maternal mortality. However, in 2021, hypertensive disease in pregnancy (Eclampsia) ranked 1st among as the leading cause of maternal death and constituted 40.6% (13 cases). The 2nd and 3rd leading causes maternal deaths in 2021, were Sickle Cell and Acute Renal Injury and both constituted 15.6% (5 cases) each of the total maternal deaths. Anaemia in Pregnancy and Pneumonia also constituted 6.25% (2 cases) each of the total causes of maternal mortality recorded in 2021. Detailed analysis on the leading causes of maternal death recorded over the past five years is provided in table 3.7.2.1 below.

Table 3.7.2. 1: Causes of Maternal Mortality.

2017		2018		2019		2020		2021	
Condition	%	Condition	%	Condition	%	Condition	%	Condition	%
Haemorrhage	34.1%	Pulmonary Embolism	33.3%	Haemorrhage / Severe Anaemia	39.29% (11)	Haemorrhage / Severe Anaemia	11 (46.2%)	Hypertensive diseases in pregnancy (Eclampsia)	13 (40.6%)
Hypertensive Disorders of Pregnancy	29.3%	Haemorrhage	29.63%	Hypertensive Disorders of Pregnancy	32.14% (9)	Hypertensive Disorders of Pregnancy	9 (26.9%)	Sickle Cell	5 (15.6%)
Sepsis	22.0%	Hypertensive Disorders of Pregnancy	29.63%	Sepsis	17.86% (5)	Sepsis	5 (11.5%)	Acute Kidney Injury	5 (15.6%)
Others	14.6%	Sudden Cardiac Death (Pm Diagnosis)	7.6%	Pulmonary Embolism	7.14% (2)	Pulmonary Embolism	2 (15.4%)	Anaemia in Pregnancy	2 (6.25%)
				Sudden Cardiac Death (Pm Diagnosis)	3.57% (1)	Sudden Cardiac Death (PM Diagnosis)	1	Pneumonia	2 (6.25%)

3.7.3: REFERRAL FACILITIES OF MATERNAL DEATHS

The hospital in 2021 recorded an increase in the percentage of maternal admission due to external referrals from 21.20% in 2020 to 23% in 2021. In the same light, the

total number of maternal deaths recorded went up from 26 death in 2020 to 32 deaths in 2021. All the mortalities recorded in 2021 were cases referred from the peripheral health facilities. However, the hospital remained committed to providing some level of specialist support to these facilities whilst addressing internal issues that also contributes to these mortalities. 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	
REFERRAL INSTITUTION	NO	REFERRAL INSTITUTION	NO
Mercy Womens Centre	4	Saltpond Municipal Hospital	3
Ankaful Leprosarium Hospital	3	ST. Francis X'avier	3
St. Luke's Catholic Hospital, Apam	2	Kissi Health Centre	2
Abura Dunkwa Hospital	2	Adisadel Hospital	2
Saltpond Polyclinic	2	Adisadel Hospital	2
Twifo Praso	2	Ankaful Psychiatric Hospital	2
Elmina Health Centre	1	Gomoa Fetteh	1
UCC	1	Winneba Trauma	1
Kissi Health Centre	1	Mother & Child Clinic	1
Efutu Health Centre	1	Moree Hospital	1
Nyame Tease	1	U.C.C Hospital	1
Jukwa Health Centre	1	Ankaful General Hospital	1
Tarkwa Municipal Hospital	1	Abrem Agona	1
Others	2	Twifo Praso	1
CCTH	2	Others	10
Total	26	Total	32

3.8 CHILD HEALTH SERVICES

The hospital provides Paediatric specialized services in addition to the general Paediatric services. These specialized services include, Paediatric Asthma, Paediatric Sickle Cell, Paediatric Renal, Paediatric Cardiology and Paediatric Neurology services. Also, measures are being put in place to introduce additional sub-specialty services in Paediatrics to increase access and improve the survival chances of these children. In 2021, the hospital recorded a significant increase in the general Paediatric clinic attendance by 54% (from 6,003 in 2020 to 9,244 in 2021). Similarly, the total Paediatric specialized OPD clinics attendance also went up significantly by 52.5% in 2021 (from 1,169 in 2020 to 1,783). Also, the Paediatric-Asthma clinic attendance went up by 78.9% (from 57 in 2020 to 102 in 2021). Further, as part of efforts to improve access to Paediatric cancer treatment, the hospital introduced Paediatric oncology services in 2020. However, there was a decrease in the attendance in 2021 by 54.2% (from 48 in 2020 to 22 in 2021).

The total general Paediatric admissions in the hospital went up by 15.2% (from 1,708 in 2020 to 1,968 in 2021). However, the total NICU admissions declined by 9.8% (from 1,001 in 2020 to 903 in 2021). Detailed trend analysis is provided in table 3.8.1 to table 3.8.2 and figure 3.8.1 below.

Table 3.8. 1: Child Health OPD Services Utilization

CLINICS	2013	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS
General Paediatrics Clinic	7,391	6,767	7,690	7,810	8,180	7490	8,666	6,003	9,244	54% incr
Paediatric Specialist OPD Services										
Total Paediatric Specialist Clinic Attendance	-	-	-	-	-	744	870	1,169	871	25.49% decr
Paedics-Neuro clinic	-	-	-	-	-	168	137	213	245	15% incr
Paedics-Asthma clinic	-	-	-	-	-	87	78	57	102	78.9% incr
Paedics-Renal clinic	-	-	-	-	-	99	97	216	115	47% decr
Paedics-Cardio. clinic	-	-	-	-	-	30	21	60	58	3% decr
Paediatrics - Sickle Cell clinic	-	-	-	-	-	205	331	328	351	7% incr
NICU Follow -Up	-	-	-	-	-	155	206	247	890	260.3% incr
Paediatrics Oncology clinic	-	-	-	-	-	-	-	48	22	54.2% decr
Total Paediatric Specialist Clinic Attendance	-	-	-	-	-	744	870	1,169	1,783	52.5% incr

Figure 3.8. 1: Trend of Paediatric and Neonatal Admissions

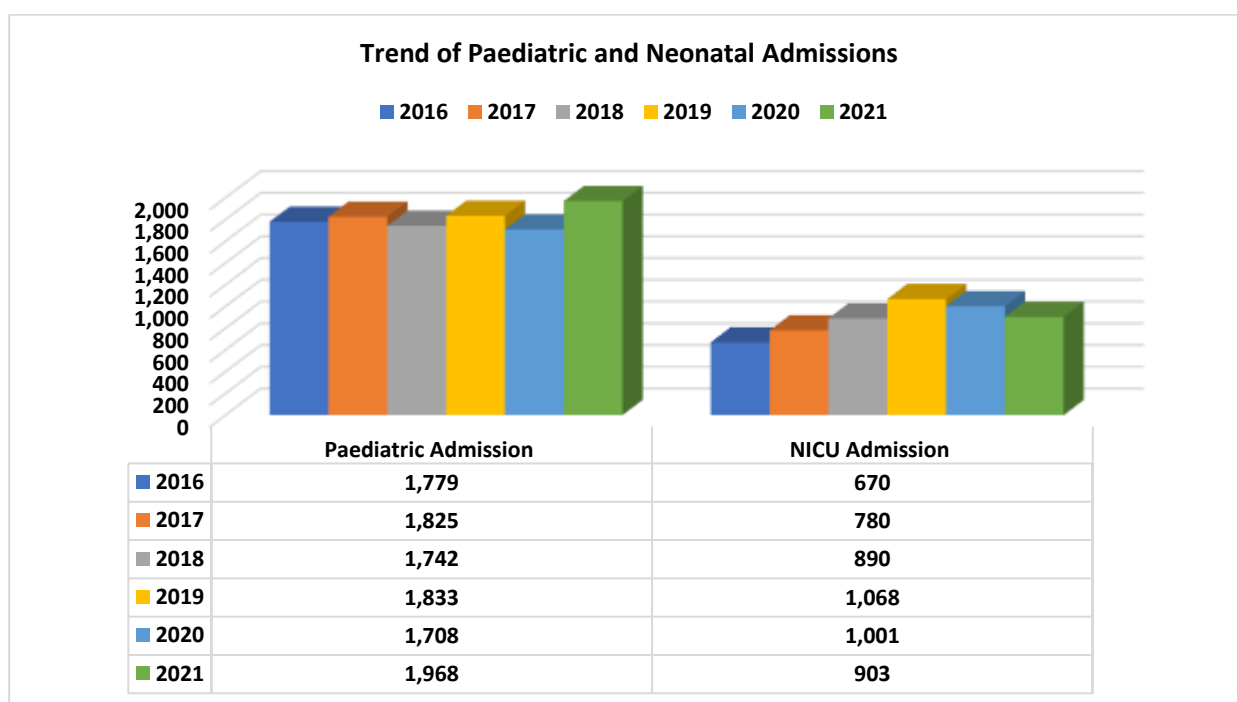


Table 3.8. 2: Trend of Paediatric and Neonatal Admissions

INDICATOR	2016	2017	2018	2019	2020	2021	REMARKS
Paediatric Admission	1,779	1,825	1,742	1,833	1,708	1,968	15.2% incr
NICU Admission	670	780	890	1,068	1,001	903	9.8% decr

3.8.1 TOP 10 CAUSES OF CHILD HEALTH ADMISSION

In 2021, Sepsis was recorded as the leading cause of child admission, accounting for 414 children being admitted, followed by Jaundice (340) and Asphyxia (273). The number of admissions due to Asphyxia increased by 3.02% (from 265 in 2020 to 273 in 2021). Although Low Birth Weight ranked 5th in 2021 causes of paediatric admissions, the cases decreased by 16.46% (from 164 in 2020 to 137 in 2021). Sickle Cell (67) and Anaemia (60) were the least ranked among the causes of Child Health admission in the year under review. Figure 3.8.1.1 and table 3.8.1.1 provides detailed analysis below.

Figure 3.8.1. 1: Top 10 Causes of Child Health Admission in 2021

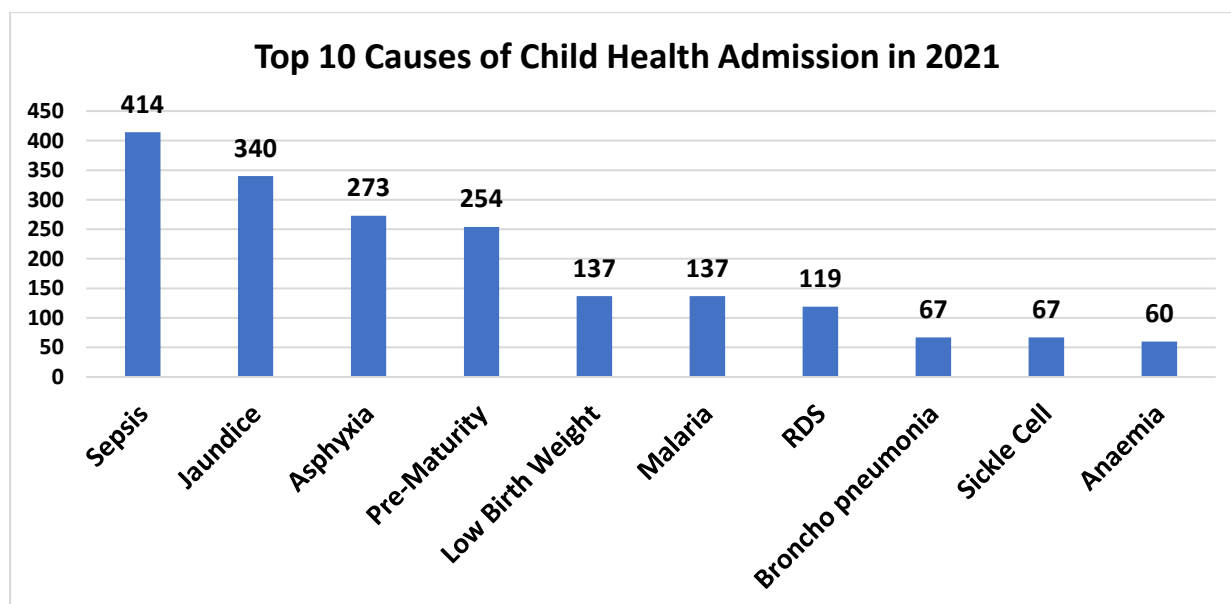


Table 3.8.1. 1: Top 10 Causes of Child Health Admission

2017		2018		2019		2020		2021	
CONDITION	NO.	CONDITION	NO.	CONDITION	NO.	CONDITION	NO	CONDITION	NO.
Pre-Maturity	290	Jaundice	392	Asphyxia	328	Jaundice	378	Sepsis	414
Jaundice	257	Pre-Maturity	293	Pre-Maturity	277	Sepsis	353	Jaundice	340
Bronchopneu monia	233	Neonatal Sepsis	275	Jaundice	262	Pre-Maturity	302	Asphyxia	273
Sepsis of the cord	196	Bronchopneu monia	251	Bronchopneu monia	181	Asphyxia	265	Pre-Maturity	254
Asphyxia birth	142	Neonatal Asphyxia	215	Sepsis	159	Malaria	196	Low Birth Weight	137
Anaemia	110	Malaria	153	Malaria	125	Low birth weight	164	Malaria	137
Pneumonia	93	Anaemia	96	Hernia	62	Pneumonia	122	RDS	119

2017		2018		2019		2020		2021	
CONDITION	NO.	CONDITION	NO.	CONDITION	NO.	CONDITION	NO.	CONDITION	NO.
Hernia	85	Hernia	64	Malnutrition	59	Malnutrition	90	Broncho pneumonia	67
Sickle cell crisis	72	Sickle cell crisis	64	Anaemia	50	Fracture	79	Sickle Cell	67
Bronchiolitis	50	Tonsillitis	56	Sickle Cell	41	Sickle cell	75	Anaemia	60

3.8.2 CHILD HEALTH PERFORMANCE INDICATORS

The total number of babies delivered in 2021 went up by 6.6% (from 2979 in 2020 to 3176 in 2021) and the number of live births recorded increased by 9.13%. In the same light, the stillbirth rate went up from 31/1000LB in 2020 to 42/1000LB in 2021. The institutional infant mortality rate decreased slightly from 89/1000LB in 2020 to 88/1000LB in 2021, whilst the institutional under-five mortality rate dropped significantly from 106/1000LB in 2020 to 95/1000LB in 2021. Similarly, the neonatal mortality rate declined from 81/1000LB in 2020 to 78/1000LB in 2021. Although there was some level of improvement in child health indicators, the hospital still requires a lot of support from all stakeholders to address these mortalities holistically. 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	REMARKS	TARGET
Number of Babies	2,730	2,945	3,027	3,179	3,256	3,120	2,979	3,176	6.6% incr	-
Live Births	2,590	2,789	2,870	3,072	3,138	2994	2,793	3,048	9.13% incr	-
Still Births	140	156	161	107	118	126	90	128	42.22% incr	-
Fresh Still Birth	65	96	76	53	29	39	38	43	13.6% incr	-
Macerated Still Birth	75	60	85	54	89	87	52	85	63.46% incr	-
Still Birth Rate /1000LB	51	53	53	34	36	42	31	42	11% incr	THs = 15/1000LB
Infants Admissions- Institutional	1,286	1,172	1,352	1,442	1,697	1660	1,357	1,734	27.8% incr	-
Number Of < 5 Deaths	254	237	250	219	242	301	307	290	5.5% decr	-
Under 5 Mortality Rate (/1000 LB)	98	85	87	71	77	101	106	95	10% decr	-
Infant Deaths	221	213	236	201	216	272	284	267	6% decr	-
Institutional Infant mortality rate (/1000LB)	85	76	82	65	69	91	89	88	1% decr	THs = 15/1000LB
Neonatal Deaths	189	173	207	180	197	239	233	239	2.6% incr	-

INDICATORS	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS	TARGET
Neonatal Mortality Rate (/1000LB)	73	62	72	59	63	80	81	78	3.7% decr	THs = 25/1000LB

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

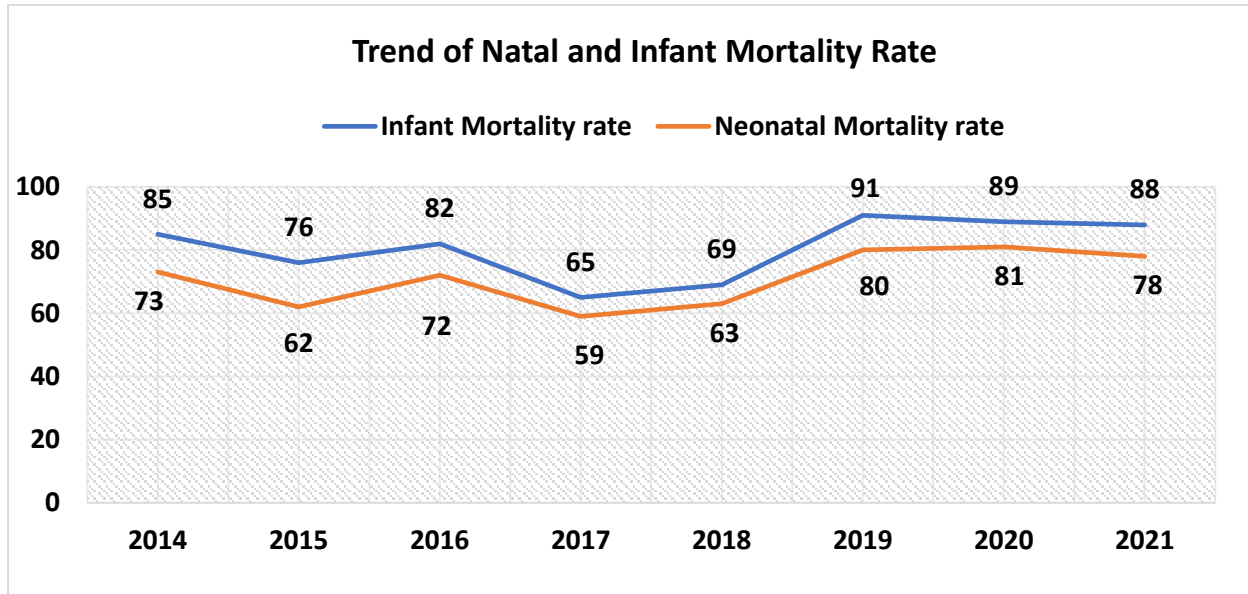
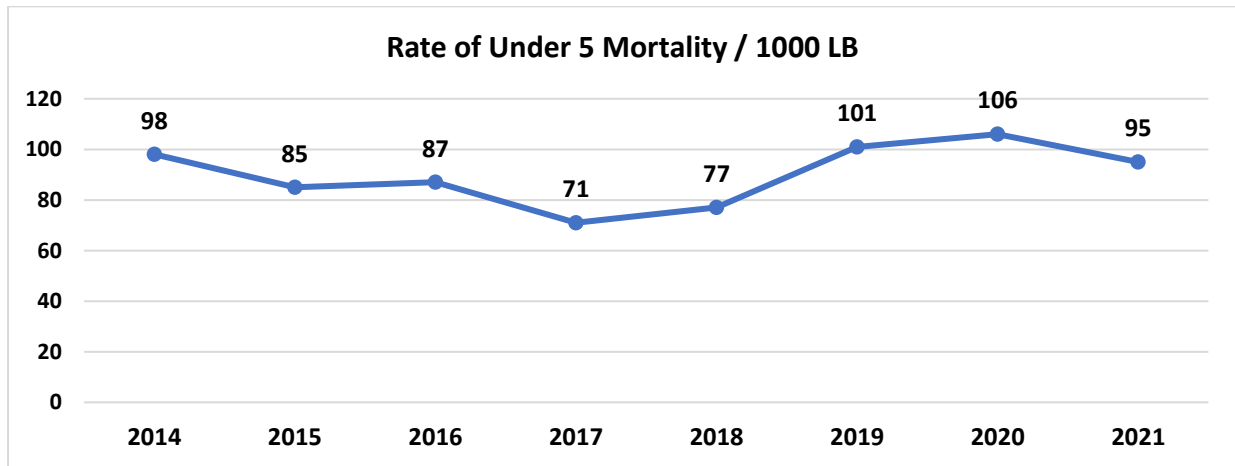


Figure 3.8.2. 2: Trend of Under 5 Year Mortality Rate



3.8.3 TOP TEN CAUSES OF MORTALITY AMONG CHILDREN UNDER FIVE YEARS

Respiratory Disease Syndrome [(RDS) (70)] was ranked as the top leading cause of under-five mortality in 2021, constituting 24.1% (70 cases) of the total causes of under-five deaths. This is followed by Asphyxia and Sepsis, which constituted 20.7% (60) and 13.1% (38) of the total causes of under-five deaths respectively. Broncho-Pneumonia (5 cases) and Congenital Heart Disease (5 cases) were the least ranked among the top ten causes of under-five mortality, with each constituting 1.7% of the total causes of under-five mortality. Figures 3.8.3.1 to 3.8.3.2 and table 3.8.3.1 provides detailed trend analysis below.

Figure 3.8.3. 1: Top Ten Causes of Under 5 Mortality in 2021

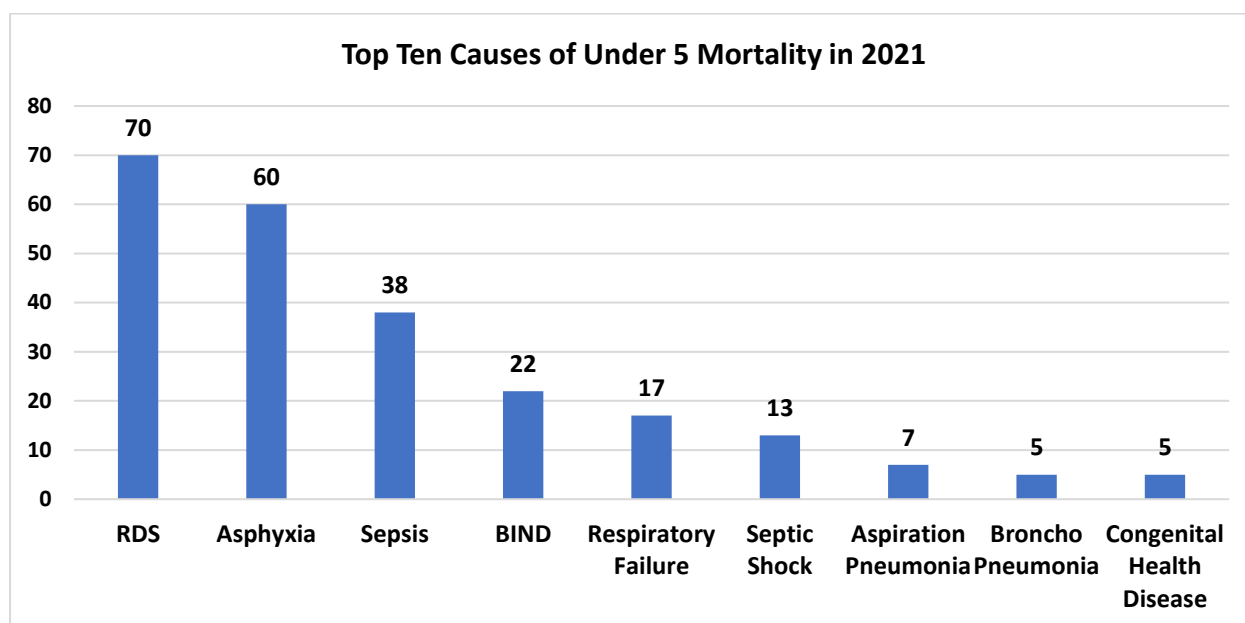


Figure 3.8.3. 2: Case Specific Rate for Top Ten Under 5 Mortality in 2021

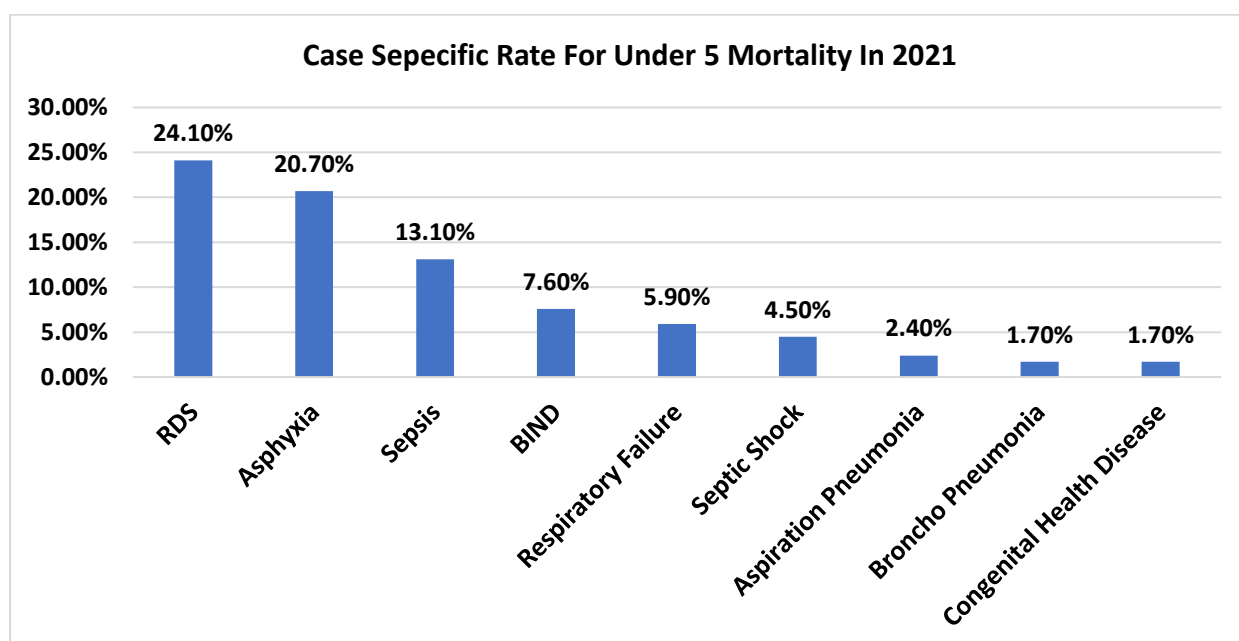


Table 3.8.3. 1: The Comparative Analysis of Top Ten Causes of Under 5 Mortality

2018		2019		2020		2021	
CONDITION	NO. OF CASES	CONDITION	NO. (%)	CONDITION	NO. (%)	CONDITION	NO. (%)
Pre-maturity	71	Asphyxia	78 (22.4%)	Pre-maturity	84 (27%)	RDS	70 (24.1%)
Asphyxia birth (neonatal)	47	Pre-maturity	70 (20.1%)	Asphyxia	55 (18%)	Asphyxia	60 (20.7%)
Neonatal Jaundice	31	Sepsis	32 (9.2%)	Sepsis	49 (16%)	Sepsis	38 (13.1%)
Neonatal Sepsis	22	Neonatal Jaundice	30 (8.6%)	HIE	20 (7%)	BIND	22 (7.6%)
Malnutrition	7	Respiratory Failure	25 (7.2%)	Respiratory Distress	19 (6%)	Respiratory	17 (5.9%)

2018		2019		2020		2021	
CONDITION	NO. OF CASES	CONDITION	NO. (%)	CONDITION	NO. (%)	CONDITION	NO. (%)
						Failure	
Bronchopneumonia	6	Bronchopneumonia	23 (6.6%)	Jaundice	15 (5%)	Septic Shock	13 (4.5%)
Meningitis	6	Encephalopathy	13 (3.7%)	Congenital Heart Disease	8 (3%)	Aspiration Pneumonia	7 (2.4%)
Anaemia	5	Respiratory Distress	12 (3.4%)	Kernicterus	8 (3%)	Broncho Pneumonia	5 (1.7%)
Burns	2	Malnutrition	11 (3.2%)	Aspiration	6 (2%)	Congenital Heart Disease	5 (1.7%)
Gastroenteritis	2	Intestinal Obstruction	11 (3.2%)	Malaria	6 (2%)		

3.9 SURGICAL SERVICES

The hospital provides various surgical specialty services such as Orthopaedics, Neurosurgery, Uro-surgery, Plastic Surgery, General Surgery Services, Maxillofacial and Dental, Eye and ENT Services.

3.9.1 THEATRE SERVICES UTILIZATION

The total number of surgeries performed declined by 19.4% in 2020, due to the impact of the Covid-19 pandemic. However, in 2021 it improved by 53.52% (from 3,883 in 2020 to 5,961 in 2021). There was an increment in the general major surgeries, whereas, the major Obstetrics and Gynaecology surgeries decreased in 2021 compared to the previous year. Further, the hospital's surgery to surgeon ratio went up from 108:1 in 2020 to 199:1 in 2021. The Eye surgeries performance in 2021 went up significant by 329.78% (534 in 2020 to 2,295 in 2021). Generally, the hospital's theatre death rate also increased in 2021 from 0.1% in 2020 to 0.38% in 2021. Detailed trend analysis is illustrated in figure 3.9.1.1 to figure 3.9.1.3 and table 3.9.1.1 to table 3.9.1.3 below.

Figure 3.9.1. 1: Trend Analysis of Total Surgeries Performed

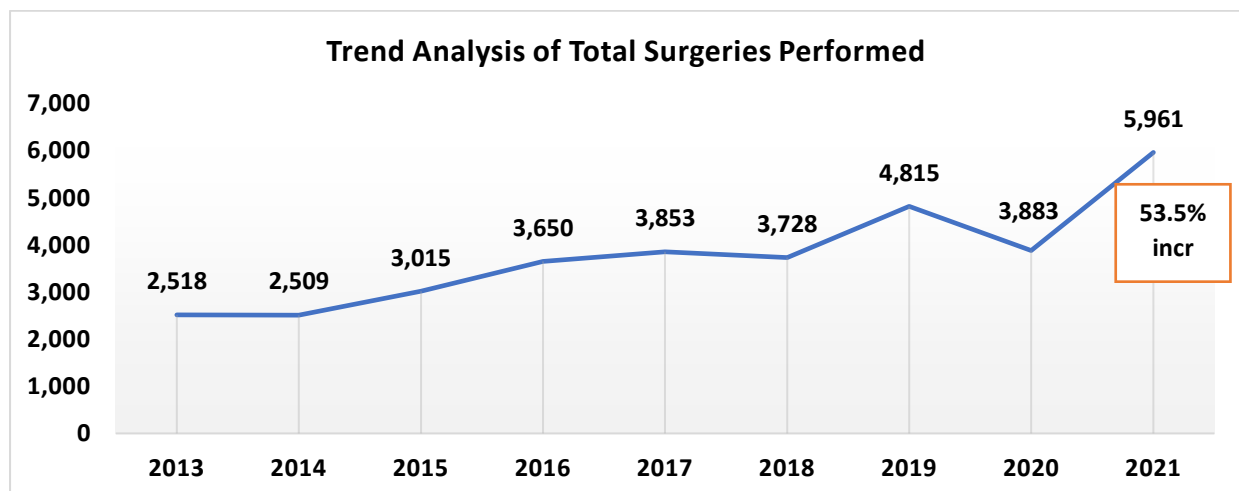


Figure 3.9.1. 2: Trend of Theatre Service Utilization

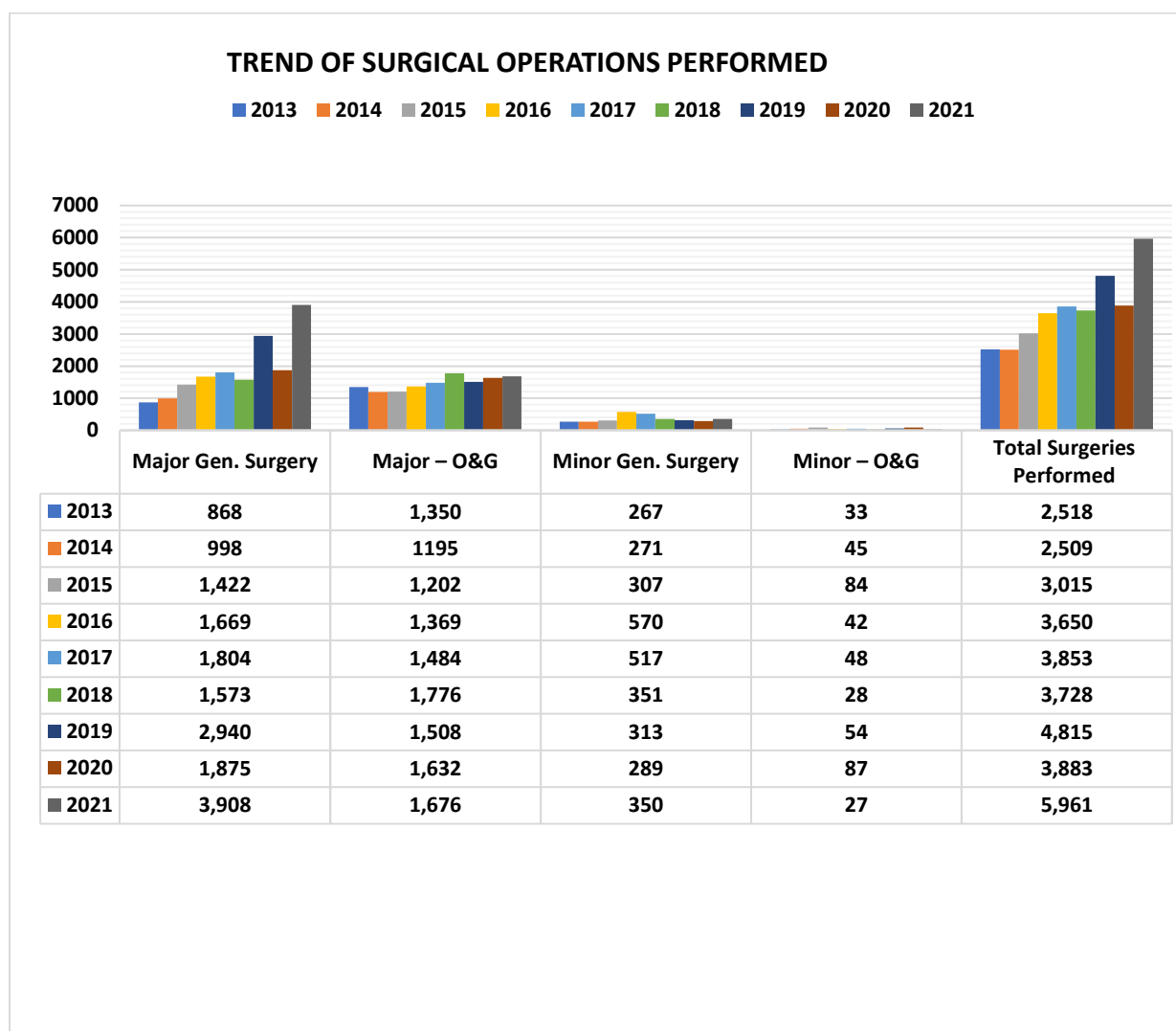


Table 3.9.1. 1: Trend of Theatre Service Utilization

SURGICAL PROCEDURE	2013	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS
Major Gen. Surgery	868	998	1,422	1,669	1,804	1,573	2,940	1,875	3,908	108.4% incr
Major – O&G	1,350	1,195	1,202	1,369	1,484	1,776	1,508	1,632	1,676	2.7% incr
Minor Gen. Surgery	267	271	307	570	517	351	313	289	350	21.1% incr
Minor – O&G	33	45	84	42	48	28	54	87	27	69% decr
Total Surgeries Performed	2,518	2,509	3,015	3,650	3,853	3,728	4,815	3,883	5,961	53.5% incr

Table 3.9.1. 2: Surgical Service Performance under THs KPI

KEY INDICATORS	2016	2017	2018	2019	2020	2021	REMARKS	MEASUREMENT	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	Incr	Total no. of surgeries performed/ total no. of Surgeons	THs = 250:1

KEY INDICATORS	2016	2017	2018	2019	2020	2021	REMARKS	MEASUREMENT	TARGET
Total surgeries	3,650	3,853	3,728	4,815	3,883	5,961	53.5% incr	-	CCTH = 10% Incr
Total surgeons	24	25	28	38	36	30	16.7% decr	-	-
Theatre Deaths Rate	0.4%	0.4%	0.3%	0.6%	0.1%	0.38%	0.28% incr	-	-

Figure 3.9.1. 3: Analysis of Surgeries Performed by Specialty

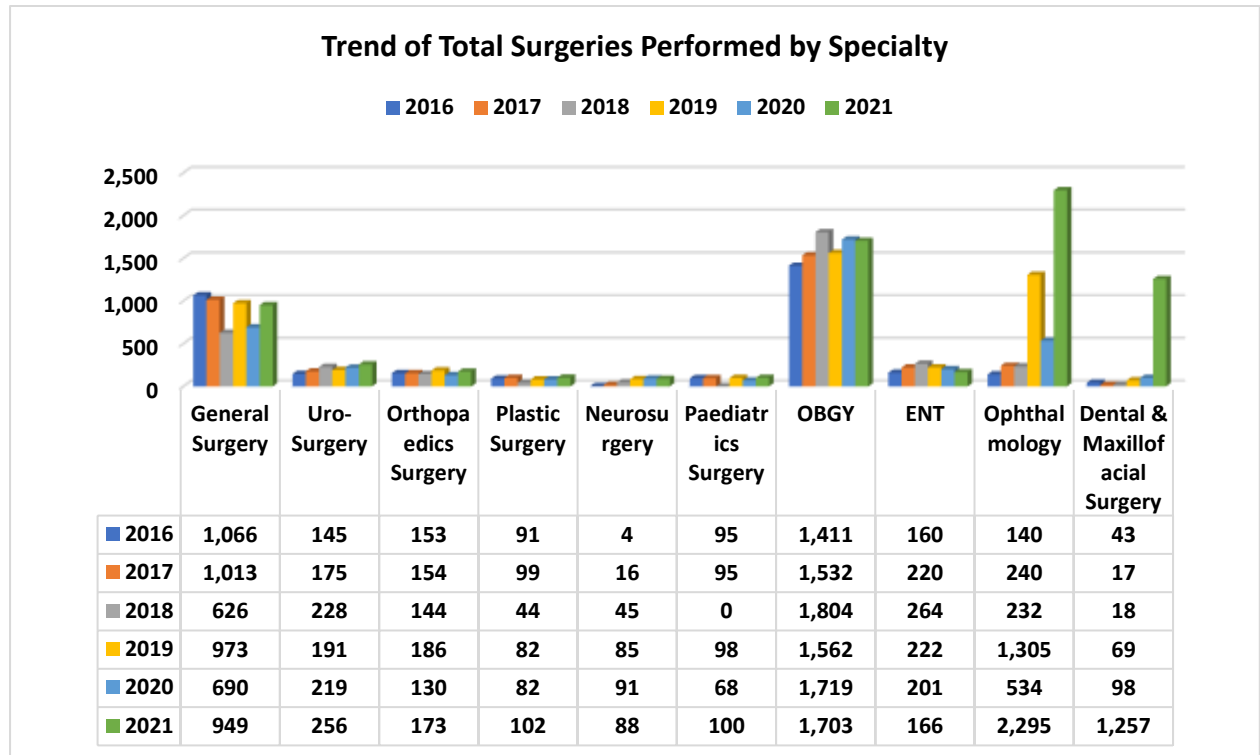


Table 3.9.1. 3: Trend of Surgeries Performed By Specialty

SURGICAL SPECIALTIES	2016	2017	2018	2019	2020	2021	REMARKS
General Surgery	1,066	1,013	626	973	690	949	37.54% incr
Uro-Surgery	145	175	228	191	219	256	16.90% incr
Orthopaedics Surgery	153	154	144	186	130	173	33.08% incr
Plastic Surgery	91	99	44	82	82	102	24.39% incr
Neurosurgery	4	16	45	85	91	88	3.30% decr
Paediatrics Surgery	95	95	-	98	68	100	47.06% incr
OBGY	1,411	1,532	1,804	1,562	1,719	1,703	0.93% decr
ENT	160	220	264	222	201	166	17.41% decr
Ophthalmology	140	240	232	1,305	534	2,295	329.78% incr

SURGICAL SPECIALTIES	2016	2017	2018	2019	2020	2021	REMARKS
Dental & Maxillofacial Surgery	43	17	18	69	98	1,257	45.32% incr

3.9.2 TOP TEN SURGICAL OPERATIONS

Over the past four years, Caesarean Section and Eye surgeries have been the top two leading surgical operations performed by the hospital. In 2021, Caesarean Section and Eye surgery accounted for 30.94% (1,462 cases) and 23.70% (1,120 cases) of the total surgeries performed respectively. Reducible Hernia and Laparotomy ranked the 3rd and 4th among the top 10 surgeries conducted in 2021, constituting 5.08% (240 cases) and 4.19% (198 cases) respectively. Table 3.9.2.1 below provides trend of the top ten surgeries performed in the hospital over the past four years.

Table 3.9.2. 1: Top Ten Surgical Operations Performed

2018		2019		2020		2021	
Type of Case	No. Performed	Type of Case	No. Performed	Type of Case	No. Performed	Type of Case	No. Performed
Caesarean Section	1,492 (40.0%)	Eye Surgeries	1,305 (27.1%)	Caesarean Section	1520 (39.1%)	Caesarean Section	1462 (30.94%)
Eye Surgeries	232 (6.2%)	Caesarean Section	1,248 (25.9%)	Ophthalmic Surgery	428 (11.0%)	Eye Surgeries	1120 (23.70%)
Hernia-Reducible	228 (6.1%)	Hernia	349 (7.2%)	Urological conditions	219 (5.6%)	Hernia (Reducible)	240 (5.08%)
Laparotomy-Exploratory	170 (4.6%)	ENT Surgeries	181 (3.8%)	Hernia Reducible	209 (5.4%)	Laparotomy for Exploratory	198 (4.19%)
ENT Operations	152 (4.1%)	Laparotomy for Exploratory	145 (3.0%)	Laparotomy for Exploratory	133 (3.4%)	Appendicectomy	107 (2.26%)
Laparotomy-Ectopic	81 (2.2%)	Appendicectomy	119 (2.5%)	Orthopaedic surgery	130 (3.3%)	ENT Operations	107 (2.26%)
Appendectomy	75(2.0%)	Laparotomy - Ectopic	88 (1.8%)	ENT	109 (2.8%)	Plastics Surgeries	102 (2.16%)
Myomectomy	75(2.0%)	Neurosurgeries	85 (1.8%)	Neurosurgeries	91 (2.3%)	Operation on Fractures	99 (2.09%)
Removal of Tonsils & Adenoid	72(1.9%)	Plastics Surgeries	82 (1.7%)	Intestinal Obstruction	90 (2.3%)	Neurosurgeries	88 (1.86%)
Operations on Fractures	52 (1.4%)	Removal of superficial Tumours	74 (1.5%)	Operation on Fractures	90 (2.3%)	Intestinal Obstruction	75 (1.59%)
Others	2,629	Others	1139 (23.7%)	Others	-	Others	-
Total Surgery	3,728	Total Surgery	4815	Total Surgery	3,883	Total Surgery	5,961

3.10: DIAGNOSTIC SERVICES UTILIZATION

In 2021, total laboratory investigations performed in the hospital dropped significantly by 25.40% (from 241,858 in 2020 to 180,415 in 2021), whereas, the number of

laboratory clients went up marginally by 0.39% (from 55,652 in 2020 to 55,871 in 2021). In the same light, the number of radiology investigations and the number of radiology clients declined in 2021 by 13.12% and 17.48% respectively. Also, the number of autopsies performed by the hospital in 2021 increased by 36.7% (from 166 in 2020 to 227 in 2021). Generally, the utilization of laboratory services and radiology services declined in 2021 compared to 2020. 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

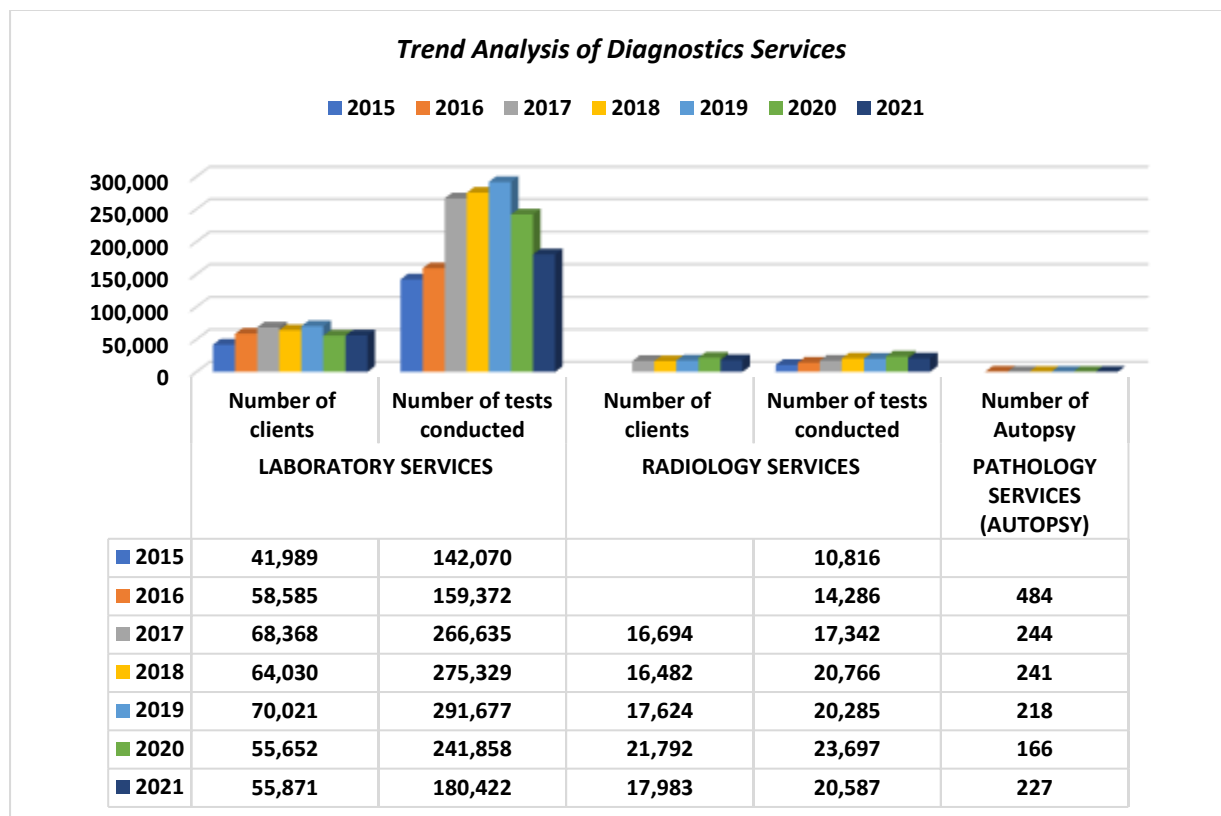


Table 3.10. 1: Trend Analysis of Diagnostics Services

INDICATOR	2015	2016	2017	2018	2019	2020	2021	REMARKS
LABORATORY SERVICES								
Number of clients	41,989	58,585	68,368	64,030	70,021	55,652	55,871	9% incr
Number of tests conducted	142,070	159,372	266,635	275,329	291,677	241,858	180,422	25.40% decr
RADIOLOGY SERVICES								
Number of clients	-	-	16,694	16,482	17,624	21,792	17,983	17.5% decr
Number of tests conducted	10,816	14,286	17,342	20,766	20,285	23,697	20,587	13.1% decr
PATHOLOGY SERVICES (AUTOPSY)								
Number of Autopsy	-	484	244	241	218	166	227	36.7%

Table 3.10. 2: Performance Under THs KPI

KEY INDICATORS	2018	2019	2020	2021	REMARKS	TARGET	MEASUREMENT
Utilization of Laboratory services	78%	62.5% (decr)	260.3%	221.3%	Decr	THs = 60%	Total laboratory Investigations / Total Lab request * 100
Total laboratory Investigations	275,329	291,677	241,858	180,422	25.4% decr	-	
Total Lab request	59,478	61,900	92,907	73,953	20.4% decr	-	
Number of laboratory Client	64,030	70,021	55,652	55,871	0.39% incr	-	
Utilization Radiological services	79.4%	86.9% (increase)	530.7%	87%	Decr	THs = 60%	Total Radiological Investigations / Total Radio. request * 100
Total Radiological Investigations	20,766 (27.1% incr)	20,285 (2.3% decr)	23,697	20,587	13.1% decr	-	
Total Radio. request	16,482 (1.3% decr.)	17,624 (6.9% incr.)	4,465	17,962	302.1% incr	-	
Number of radiology client	18,535 (20.3% incr)	17,624 (4.9% decr)	21,792	17,983	17.5% decr	-	

3.11 BLOOD TRANSFUSION AND BLOOD DONATION

Transfusion of blood and blood product remains an essential live saving treatment. Over the past six years, there has been increasing demand for blood and blood products to improve the survival chances of many patients in critical state. In 2021, total whole blood crossed matched decreased by 3.4% (from 4,271 in 2020 to 4,127 in 2021). However, the total whole blood transfused increased by 1.7% (from 3,905 in 2020 to 3,971 in 2021), whilst the total FFP transfused went up by 18.9% (from 834 in 2020 to 992 in 2021). Availability of blood remains a challenge in the hospital. Unfortunately, there has been a general decline in voluntary blood donations, blood replacement/pre-deposits, blood donation from ANC as well as blood from mobile blood mobilisation sessions over the years. In 2021, voluntary blood donations dropped by 17% (from 812 in 2020 to 674 in 2021). However, blood from walk-in clients went up by 18.2%. Also, unsafe blood discarded dropped significantly by 53.1% in 2021 (from 516 in 2020 to 242 in 2021). 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.

Figure 3.11. 1: Trend Analysis of Blood Transfusion Services

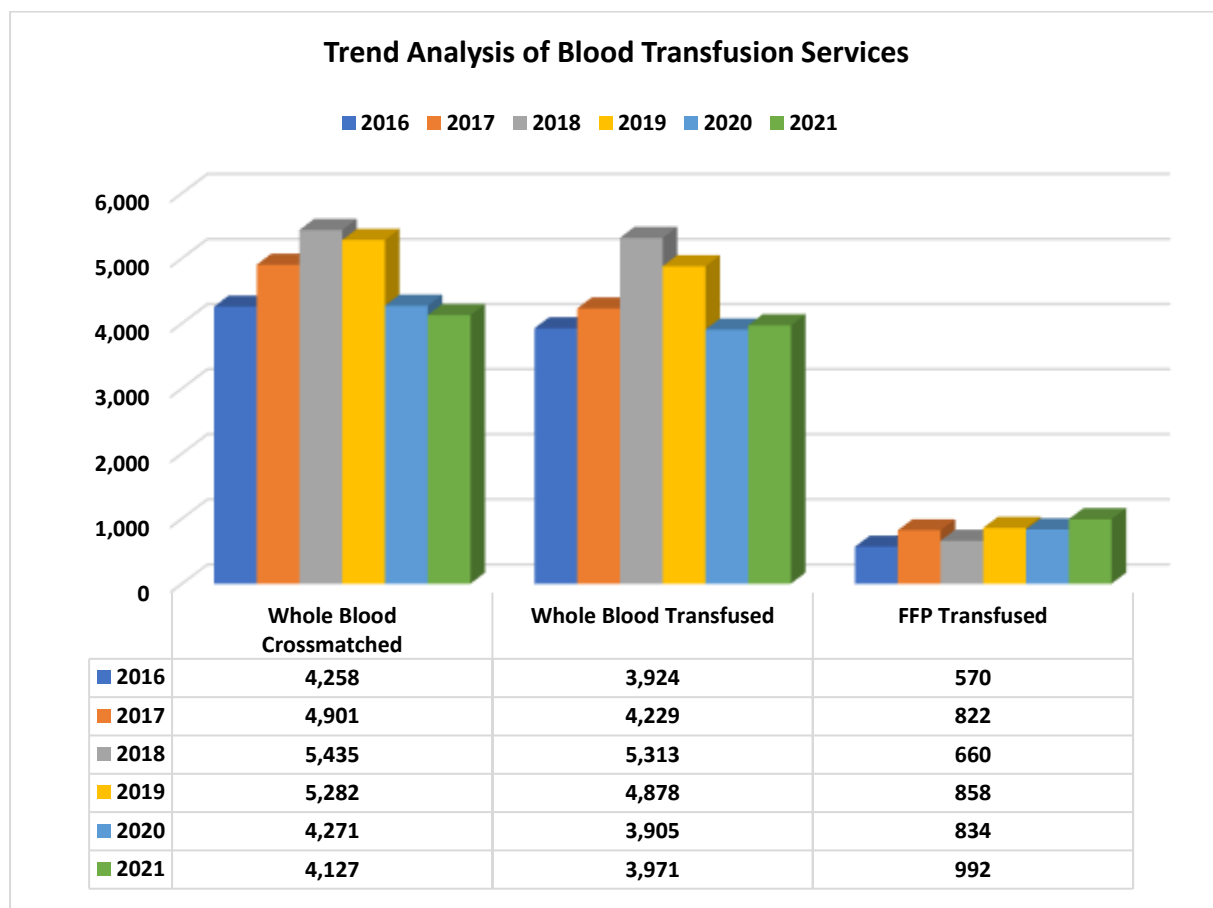


Table 3.11. 1: Trend Analysis of Blood Transfusion Services

INDICATOR	2016	2017	2018	2019	2020	2021	% Diff.
Whole Blood Crossmatched	4,258	4,901	5,435	5,282	4,271	4,127	3.4% decr
Whole Blood Transfused	3,924	4,229	5,313	4,878	3,905	3,971	1.7% incr
FFP Transfused	570	822	660	858	834	992	18.9% incr

Figure 3.11. 2: Trend Analysis of Blood Donation

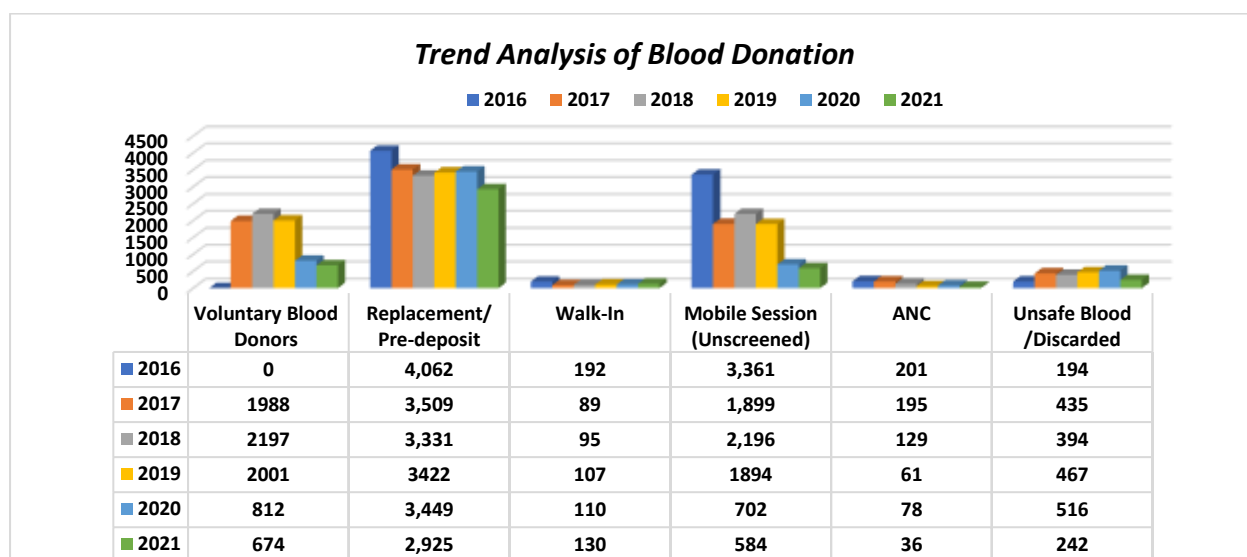


Table 3.11. 2: Trend Analysis of Blood Donation

GROUPS	QUANTITY OBTAINED						REMARKS
	2016	2017	2018	2019	2020	2021	
Voluntary Blood Donors	-	1988	2197	2001	812	674	17% decr
Replacement/ Pre-deposit	4,062	3,509	3,331	3,422	3,449	2,925	15.2% decr
Walk-In	192	89	95	107	110	130	18.2% incr
Mobile Session (Unscreened)	3,361	1,899	2,196	1,894	702	584	16.8% decr
ANC	201	195	129	61	78	36	53.9% decr
Unsafe Blood /Discarded	194	435	394	467	516	242	53.1% decr

3.12 LABORATORY SAMPLES REFERRED-OUT OF CCTH

The hospital collaborates yearly with other institutions to conduct test on some of the suspected surveillance diseases that are of public health concern and report appropriately. Some of these cases include; H1N1, Rubella, HIVL, Buruli Ulcer, TB, etc., with the recent one being Covid-19. However, in 2021, only H1N1 (Influenza) and Covid-19 samples were referred out as detailed in table 3.12.1 below.

Table 3.12. 1: Samples Referred-Out of CCTH

TESTS	2016	2017	2018	2019	2020	2021	REMARKS
TB CULTURE (DR, DST)	10	4	13	-	-	-	
TB CULTURE (LPA)	-	-	9	-	-	-	
H1N1 (INFLUENZA)	18	256	89	215	18	69	
RUBELLA	8	7	4	0	-	0	
BURULI ULCER	-	3 (1)	0	0	-	0	
HIVL	-	-	-	559	3184	0	
EID	-	-	-	73	489	0	
COVID-19 SAMPLES	-	-	-	-	2,631	2749	

3.13 DIALYSIS SERVICE UTILIZATION

The hospital's Dialysis Center is considered as the second largest renal centre in Ghana and it provides dialysis service to acute and chronic kidney disease patients within Central and Western Region. The Centre was refurbished by the Tokushukai Medical Group of Japan in collaboration with Ghana in August 2013 and it has since been operational.

3.13.1 DIALYSIS SERVICE UTILIZATION

In 2021, the hospital recorded an increase of 9.36% in the total Renal OPD clinic attendance (from 919 in 2020 to 1,005 in 2021). In the same light, Paediatric renal clinic attendance dropped significantly by 46.51% (from 216 in 2020 to 115 in 2021). Also, the number of patients who utilized the dialysis services in the hospital in 2021 reduced significantly by 70.42% (from 639 in 2020 to 189 in 2021), whilst the number of dialysis sessions went up by 14.93% (from 3,075 in 2020 to 3,534 in 2021). 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

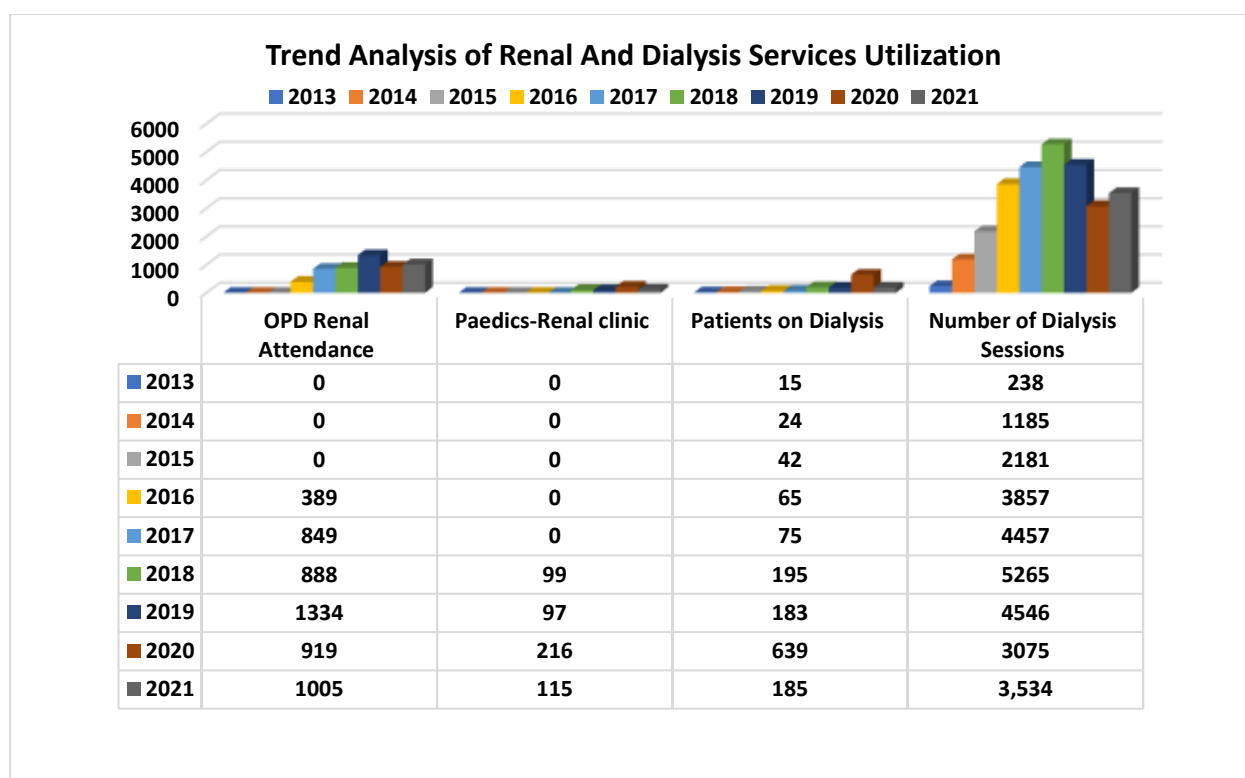


Table 3.13.1. 1: Trend Analysis of Renal and Dialysis Services

INDICATOR	2013	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS
OPD Renal Attendance	-	-	-	389	849	888	1334	919	1,005	9.3% incr
Paedics-Renal clinic	-	-	-	-	-	99	97	216	115	47% decr
Patients on Dialysis	15	24	42	65	75	195	183	639	185	71% decr
Number of Dialysis Sessions	238	1,185	2,181	3,857	4,457	5,265	4,546	3,075	3,534	14.9% incr

CHAPTER FOUR

TECHNICAL AND GENERAL SERVICES

4.1 INTRODUCTION

The Cape Coast Teaching Hospital in addition to delivering clinical services also provides technical and general services. These services are provided by the Technical Service and Domestic Service Sub-BMCs and the General Administration Unit. In addition to these departments are the Procurement and Medical Stores department who are responsible for providing logistical support.

The Technical Service Sub-BMC provides support relating to Estate, Equipment and ICT while 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;

1. Creation of additional Lab space for COVID-19 PCR testing machine at Diagnostic centre Alucoboard
2. External Renovation of Block C.
3. Refurbishment of kitchen.
4. Creation of additional space for I.T workshop at maintenance.
5. Drilling and Installation of 1no. borehole for the hospital.
6. Drilling and installation of 2no. borehole for the hospital's block of flats (Block E & Block F)
7. Improvement of illumination on the hospital premises
8. Purchase and installation of new Power Transformer at CT-Scan

4.3 ICT

Various activities were performed in 2021. Such as,

1. Liaised with Lightwave e-Solutions to interface the LHIMS with the Lab analysers
2. Upgraded / replaced desktops using wireless connectivity to cables
3. Subscribed to Vodafone Fibre internal service.
4. equipment.
5. Organized LHIMS training for newly recruited staff.
6. Organized a cyber – security training for CCTH staff and other selected staff.
7. Organized or facilitated in-service training / refresher training for other CCTH staff on the LHIMS application.
8. Networked the new blood bank.
9. Implemented Microsoft Office 365 platform by creating cooperate email accounts for all staff.

4.4 GENERAL AND MEDICAL EQUIPMENT & MEDICAL FURNITURE

1. Achieved 65% of planned preventive maintenance of hospital equipment and plants.

2. repaired and replacement of faulty instruments and equipment
3. Refurbished steel cabinets, couches, trolleys, medical furniture wheel chairs etc
4. Repaired and replacement of faulty diagnostic, life support and life monitoring equipment.
5. Extended oxygen pipelines to the various wards and Covid centre.
6. Acquired key equipment one (1) new Vertical and two (2) Horizontal Autoclaves for CSSD Unit.
7. Acquired installed four (4) new Oxygen generators at Oxygen bank and Covid Treatment Centre.

4.5 EQUIPMENT UTILIZATION AND DOWN TIME ANALYSIS

Equipment Downtime refers to the amount of time that an equipment is not operational due to mechanical fault or planned preventive maintenance whilst Equipment Utilization is the proportion of time that a piece of equipment is in use and its expressed as a percentage.

In 2021, the hospital's CT-Scan machine developed a major fault (from 23rd February 2021). This had some negative impact on performance and led to a significant increase in the CT SCAN downtime from 0% in 2020 to 82.52% in 2021. This also accounted for the significant decline in the CT SCAN utilization rate from 98.72% in 2020 to 21.39% in 2021.

Similarly, the downtime of one of the hospital's X-Ray machines was also 100% (from 47% downtime in 2020 to 100% downtime in 2021) and not operational in the year under review. However, the Ultra sound machine, worked in full capacity in 2021, resulting in an improvement in the downtime from 30.89% in 2020 to 0% in 2021, thereby, reflecting in an improvement in the ultrasound utilization rate for the year under review, from 69.11% in 2020 to 74.27% in 2021, Also, the PPM output achieved (using CT-Scan as proxy) went down from 75% in 2020 to 61.67% in 2021. Detailed analysis is provided in tables 4.5.1 to table 4.5.3 and figure 4.5.1 below.

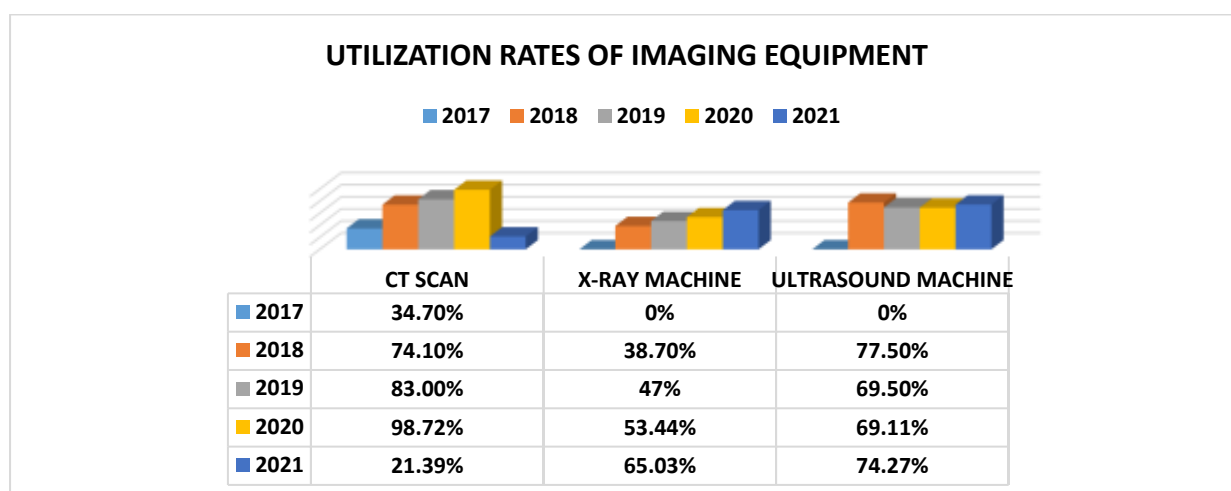
Table 4.5. 1: Selected Equipment Downtime Analysis of Imaging Equipment

Equipment Type	IMAGING EQUIPMENT DOWNTIME					Remarks
	Downtime Rate					
	2017	2018	2019	2020	2021	
CT-Scan	7.69%	1.92%	0%	0%	82.52%	Equipment developed fault on 23 rd February and has not been used since then.
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%	

Table 4.5. 2: Equipment Utilization – IMAGING

IMAGING EQUIPMENT UTILIZATION							
Equipment Type	Avg. Equipment Operating Hours	Equipment Utilization Rate for Year					Remarks
		2017	2018	2019	2020	2021	
CT-SCAN	8 hrs per working day 2 hours per weekend / public holiday	34.76%	74.18%	83.07%	*98.72%	21.39%	
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%	

Figure 4.5. 1: Utilization Rates of Imaging Equipment



4.6 TRANSPORT SERVICES

The hospital in 2021, had a total of fourteen (14) vehicles. Out of that, three (3) of the vehicles are between the age range of 1 to 5 years (green zone), four (4) of the vehicles are within the age range of 6 to 9 years, whilst five (5) of the vehicles are 10 years and above. Also, one (1) of the vehicles (pick-up) is being used by the CEO as an official vehicle, whilst one is used by hospital Directors for official assignment. Detailed analysis on vehicle inventory by age and colour code is provided in table 4.6.1 below.

Table 4.6. 1: Vehicle Inventory by Age Block

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

CHAPTER FIVE

FINANCIAL PERFORMANCE

5.1 INTRODUCTION

The financial performance of the hospital depends on internal and external factors. It is therefore mandatory for the hospital to ensure the prudent use of its funds with realistic budgeting. This chapter provides the summary of the 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.
3. 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.

The hospital's overall revenue envelope projection (budget) in 2021 was GH¢107,592,716.53 compared to GH¢87,056,927.00 in 2020. Also, the institution's budget execution rate in 2021 was 96.5% as compared to 106.5% in 2020 partly due to the impact of the Covid-19. In 2021, although the hospital's IGF revenue projection was GH¢27,987,110.96, the execution rate was 86.53% at the end of the year, which amounted to GH¢24,217,381.36. Generally, the GOG compensation went up by 13.27% (from GH¢70,106,668.00 in 2020 to GH¢79,407,405.56 in 2021), whilst the GOG service related funds/revenue went down by 46.5% (from GH¢370,200.00 in 2020 to GH¢198,200.00 in 2021).

In all, the total revenue generated by the hospital in 2021 went up by 11.9% (from GH¢ 92,745,361.60 in 2020 to GH¢103,822,986.92 in 2021). Out of the total revenue of GH¢103,822,986.92 recorded in 2021, the proportion of revenue from GOG compensation and GOG services related, constituted 76.5% (GH¢79,407,405.56) and 0.19% (GH¢198,200.00) respectively, whilst the proportion of revenue from IGF constituted 23.3% (GH¢24,217,381.36), which is 8.75% improvement in IGF revenue in 2021 over the previous year.

Further, the hospital in 2021 recorded 8.8% increase in total revenue (from GH¢22,268,693.6 in 2020 to GH¢24,217,381.36 in 2021). The total revenue from general services went up by 4.8% (from GH¢15,089,523.72 in 2020 to GH¢15,816,701.56 in 2021), whilst revenue from pharmaceutical services increased by 17% (from GH¢7,179,169.88 in 2020 to GH¢8,400,679.80 in 2021).

The hospital's total expenditure target was GH¢27,987,110.96 in 2021. However, the expenditure towards pharmaceutical services declined by 14.7% (from GH¢7,258,127.93 in 2020 to GH¢6,192,675.02 in 2021) whilst the amount spent on general services went up by 5.1% (GH¢17,574,513.18 in 2020 to GH¢18,472801.38 in 2021). Tables 5.3.1 to 5.3.3 below shows detailed analysis.

Table 5.3. 1: Revenue Category

REVENUE CATEGORY	2018			2019			2020			2021		
	BUDGET GH¢	PERF. GH¢	% EXECUTION	BUDGET GH¢	PERFORM GH¢	% EXECUTION	BUDGET GH¢	PERFORM GH¢	% EXECUTION	BUDGET GH¢	PERFORM GH¢	% EXECUTION
IGF REVENUE	24,387,598	18,863,206	14.40% (+)	24,387,598	21,579,680	88.5%	24,426,359	22,268,693.6	91.31%	27,987,110.96	24,217,381.36	86.53%
GOG COMPENSATION	48,435,279	37,898,586	26.43% (-)	48,435,279	47,916,682	98.93 %	62,530,568	70,106,668	112.12 %	79,407,405.56	79,407,405.56	100%
GOG SERVICE	100,000	20,000	-	100,000	110,000	110 %	100,000	370,200	110 %	198,200.00	198,200.00	100%
TOTAL RESOURCE ENVELOPE	72,922,877	56,781,792	74.8%	72,922,877	69,606,362	91.7%	87,056,927.00	92,745,562	106.5%	107,592,716.53	103,822,986.92	96.5%

Table 5.3. 2: Revenue Distribution By Source

Source of Funds	2018		2019			2020			2021		
	Amount GH¢	Proportion (%)	Amount GH¢	Proportion (%)	% Diff	Amount GH¢	Proportion (%)	% diff	Amount GH¢	Proportion (%)	% diff
IGF REVENUE	18,863,206	33.2%	21,579,680	31%	+14.4	22,268,693.6	24%	+3.2%	24,217,381.36	23.3%	+8.75
GOG COMPENSATION	37,898,586	66.7%	47,916,682	68.8%	+26.4%	70,106,668	75.6%	+46.3%	79,407,405.56	76.5%	+13.27%
GOG SERVICE	20,000	0.04%	110,000	0.16%	+450%	370,200	0.4%	+236.5%	198,200.00	0.19%	-46.5%
TOTAL	56,781,792	100%	69,606,362	100%	+22.6%	92,745,562	100%	+33.2%	103,822,986.92	100%	+11.9%

Table 5.3. 3: Trend of Financial Highlights

Financial Highlights	Target	Perf +/-	2021	2020	2019	2018	2017	2016	2015
REVENUE GH¢									
SERVICES	7,535,929.19	4.8% incr	15,816,701.56	15,089,523.72	15,832,185	12,982,266.79	12,497,893	10,287,152	7,559,080
MEDICINES	20,451,181.77	17% incr	8,400,679.80	7,179,169.88	5,747,495	5,962,679.10	4,591,576	3,874,689	2,518,013
TOTAL	27,987,110.96	8.8% incr	24,217,381.36	22,268,693.6	21,579,680	18,944,945.89	17,089,470	14,161,833	10,077,093
EXPENDITURE GH¢									
SERVICES	21,787,110.96	5.1% incr	18,472,801.38	17,574,513.18	15,832,184.9	15,450,199.35	11,304,559	9,829,251	6,440,080
MEDICINES	6,200,000	14.7% decr	6,192,675.02	7,258,127.93	5,747,495.43	4,485,784.57	2,723,225	2,949,233	2,542,074
TOTAL	27,987,110.96	0.67% decr	24,665,476.40%	24,832,641.11	20,761,126.11	19,935,983.92	14,027,784	12,778,483	8,982,154

5.4 TREND OF IGF BUDGET EXECUTION GH¢

The hospital in 2021 recorded 86.53% IGF budget execution, as compared to 91.2% execution rate in 2020. The revenue execution rate recorded under services increased from 83.4% in 2020 to 209.9% 2021. However, the medicine budget execution rate dropped significantly from 113% in 2020 to 41.1% in 2021.

On the other hand, the total hospital's IGF expenditure execution rate in 2021 went up by 1.3% as compared to 2020 (from 86.8% in 2020 to 88.1% in 2021). However, the expenditure rate of execution for both services and medicines declined considerably in 2021 as compared to 2020 (services declined from 78.1% in 2020 to 69% in 2021)

and (medicine declined from 119% to 99.9% in 2021) respectively. Detailed analysis is provided in tables 5.4.1 to 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	REMARKS
Revenue	92.2%	78.9%	88.5%	91.2%	86.53%	4.67% decr
expenditure	76.8%	90.6%	92.4%	86.8%	88.1%	1.3% incr

Figure 5.4. 1: Summary of IGF Budget Execution Rate

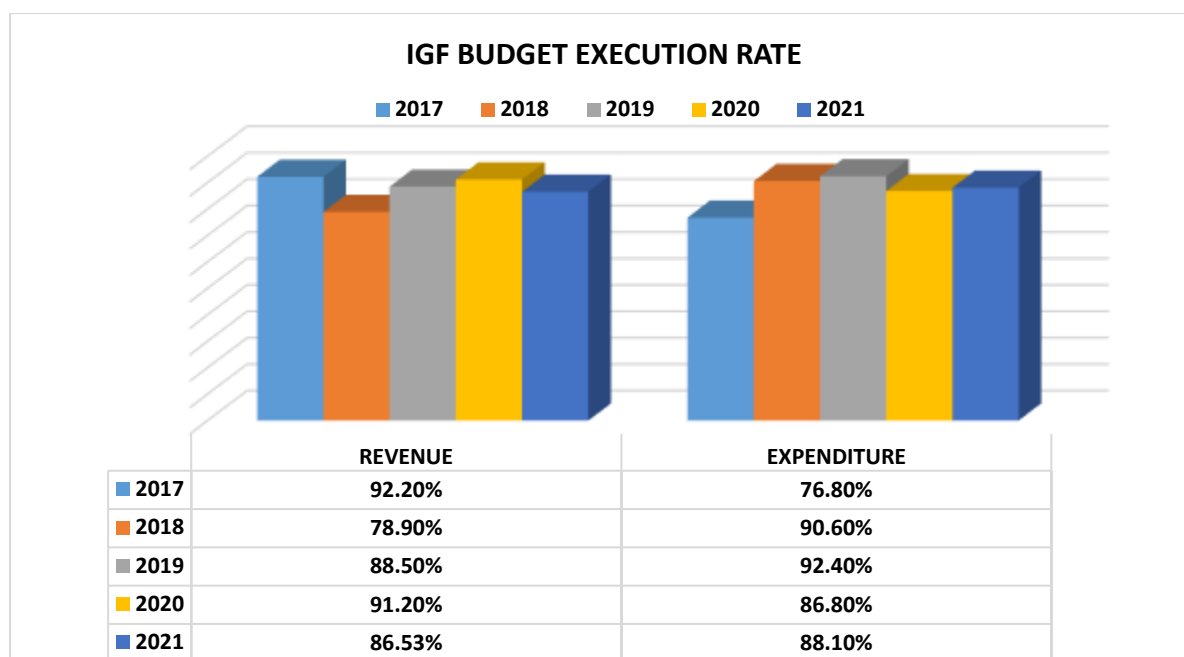


Table 5.4. 2: Details of IGF Budget Execution Rate

Category	% Execution Rate			2021		2020		2019		2018 GH¢		2017 GH¢	
	2021	2020	2019	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual
REVENUE													
Services	209.9%	83.4%	88.5%	7,535,929.19	15,816,701.56	18,090,429.81	15,089,523.72	17,887,598	15,832,185	17,664,070.81	12,982,266.79	13,800,000	12,497,894
Medicine	41.1%	113%	88.4%	20,451,181.77	8,400,679.8	6,335,929.19	7,179,169.88	6,500,000	5,747,495	6,335,929.19	5,962,679.10	4,733,500	4,591,576
TOTAL	86.53%	91.2%	88.5%	27,987,110.96	24,217,381.36	24,426,359	22,268,693.6	24,387,598.98	21,579,680	24,000,000.00	18,944,945.89	18,533,500	17,089,470
EXPENDITURE													
Services	69%	78.1%	88.2%	26,787,110.96	18,472,801.38	22,496,342.05	17,574,513.18	19,232,703.33	16,385,405.93	18,000,000.00	15,450,199.35	13,533,500	11,304,559
Medicines	99.9%	119%	86.2%	6,200,000	6,192,675.40	6,100,000	7,258,127.93	5,074,895.57	4,375,720.18	4,000,000.00	4,485,784.57	4,733,500	2,723,225
TOTAL	88.1%	86.8%	92.4%	27,987,110.96	24,665,476.40	28,596,342.05	24,832,641.11	24,387,598.98	20,761,126.11	22,000,000.00	19,935,983.92	18,267,000	14,027,784

5.5 IGF PERFORMANCE STRUCTURE GH¢

In 2021, the hospital generated IGF revenue of GH¢24,217,381.36 out of which 50.8% (GH¢12,304,287.46) of the revenue was from NHIS, while out-of-pocket revenue constituted 48.5% (GH¢11,745,526.38). Also, the revenue from cooperate/ private insurance amounted to GH¢167,567.52, which constituted 0.69%. Generally, the revenue from NHIS increased by 8.2% in 2021 (from GH¢11,368,136.98 in 2020 to GH¢12,304,287.46 in 2021), while, out-of-pocket revenue went up by 9.1% in 2021 (from GH¢10,765,740.42 in 2020 to GH¢11,745,526.38 in 2021).

Also, out of the total IGF of GH¢8,400,679.80 recorded from pharmaceutical services, the NHIS revenue component was GH¢3,937,944.33 which represent 19.7% increase over the previous year, whilst the cash and carry amounted to GH¢4,437,982.93 which is 14.6% increment over 2020 performance. Similarly, out of the total GH¢15,816,701.56 IGF revenue recorded from general services, GH¢8,366,343.13 was from NHIS with 3.6% rise, whilst the cash and carry revenue from general services was GH¢7,307,543.45, with 6% increase in 2021 over the previous year. 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 GH¢

REVENUE STATUS (CASH AND CARRY & NHIS)											
PERFORMANCE	TOTAL REVENUE	% DIFF	NHIS (GH¢)				CASH AND CARRY (GH¢)				% DIFF
			2021	2020	2019	2018	2018	2019	2020	2021	
Service	15,816,701.56	3.6% incr	8,366,343.13	8,077,704.07	8,955,294.47	6,544,400.88	6,584,892.91	6,876,890.43	6,894,250.32	7,307,543.45	6% incr
Medicine/Pharmaceuticals	8,400,679.80	19.7% incr	3,937,944.33	3,290,432.91	2,875,905.84	3,085,150.67	2,648,761.86	2,871,589.59	3,871,490.1	4,437,982.93	14.6% incr
TOTAL	24,217,381.36	8.2% incr	12,304,287.46	11,368,136.98	11,831,200.31	9,629,551.55	9,233,654.77	9,748,480.02	10,765,740.42	11,745,526.38	9.1% incr

Figure 5.5. 1: Composition of IGF

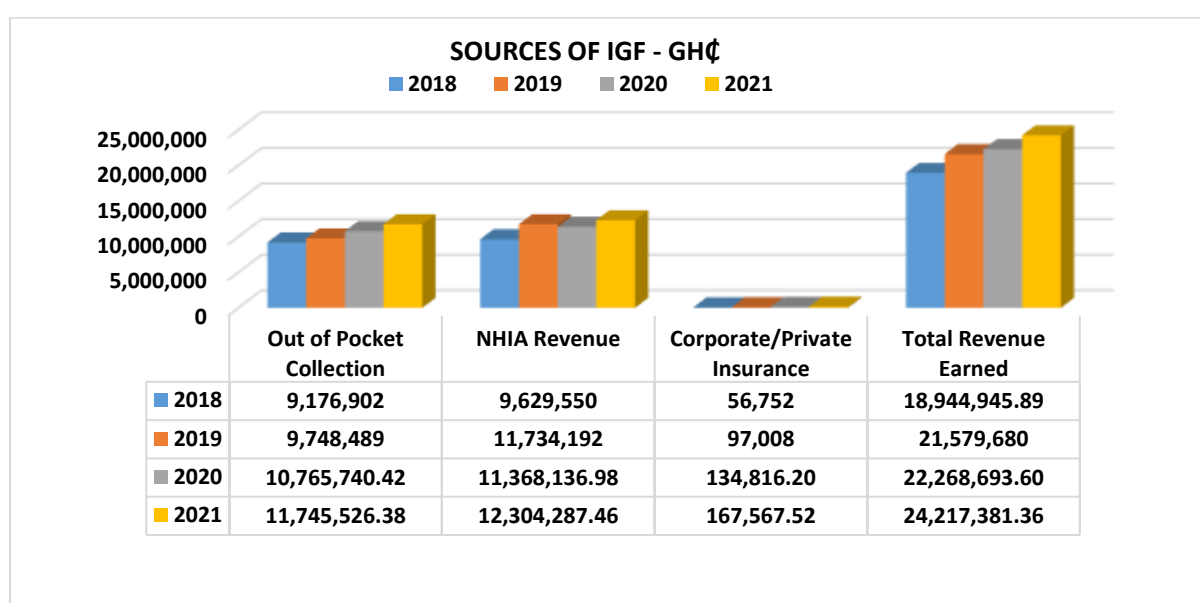


Table 5.5. 2: Composition of IGF

SOURCE OF IGF	2018 GH¢	2019 GH¢	2020 GH¢	2021 GH¢	REMARKS
Out of Pocket Collections	9,176,902	9,748,480	10,765,740.42	11,745,526.38	9.1% incr
NHIA Revenue	9,629,550	11,734,192	11,368,136.98	12,304,287.46	8.2% incr
Corporate/ Private Insurance	56,752	97,008.00	134,816.20	167,567.52	24.3% incr
Total Revenue Earned	18,944,945.89	21,579,680	22,268,693.60	24,217,381.36	8.8% incr

Table 5.5. 3: Percentage Composition of IGF Revenue

SOURCE OF IGF	2018	2019	2020	2021	REMARKS
Out of Pocket Revenue	48.4%	45.2%	48.3%	48.5%	0.2% incr
NHIA Revenue	50.8%	54.4%	51%	50.8%	0.2% decr
Corporate/Private Insurance	0.3%	0.4%	0.6%	0.7%	0.1% incr
Total Revenue GH¢	18,944,945.89	21,579,680	22,268,693.60	24,217,381.36	8.8% incr

5.6 REVENUE CONTRIBUTION BY DEPARTMENT (GH¢)

The total IGF from the hospital's departments in 2021 increased by 8.8% (from GH¢22,268,693.60 in 2020 to GH¢24,217,381.36 in 2021). Some departments however recorded significant increment in revenue through the services provided in 2021. For example, Eye departmental revenue increased by 100.2% (from GH¢350,939.81 in 2020 to GH¢702,666.70 in 2021), constituting 2.9% revenue to total hospital service revenue. Also, Dialysis departmental revenue increased by 29.6% (from GH¢647,214.07 in 2020 to GH¢839,061.50 in 2021), constituting 3.5% revenue to total hospital service revenue. Out of the total IGF of GH¢24,217,381.36 generated, the hospital recorded its highest departmental revenue contribution of 33.5% from pharmacy department and second and thirteenth highest revenue from surgical (14.6%) and OBGY (10.1%) respectively in 2021. Detailed trend analysis is provided in figure 5.6.1 to table 5.6.1 below.

Figure 5.6. 1: Proportion of Revenue Contribution by Department

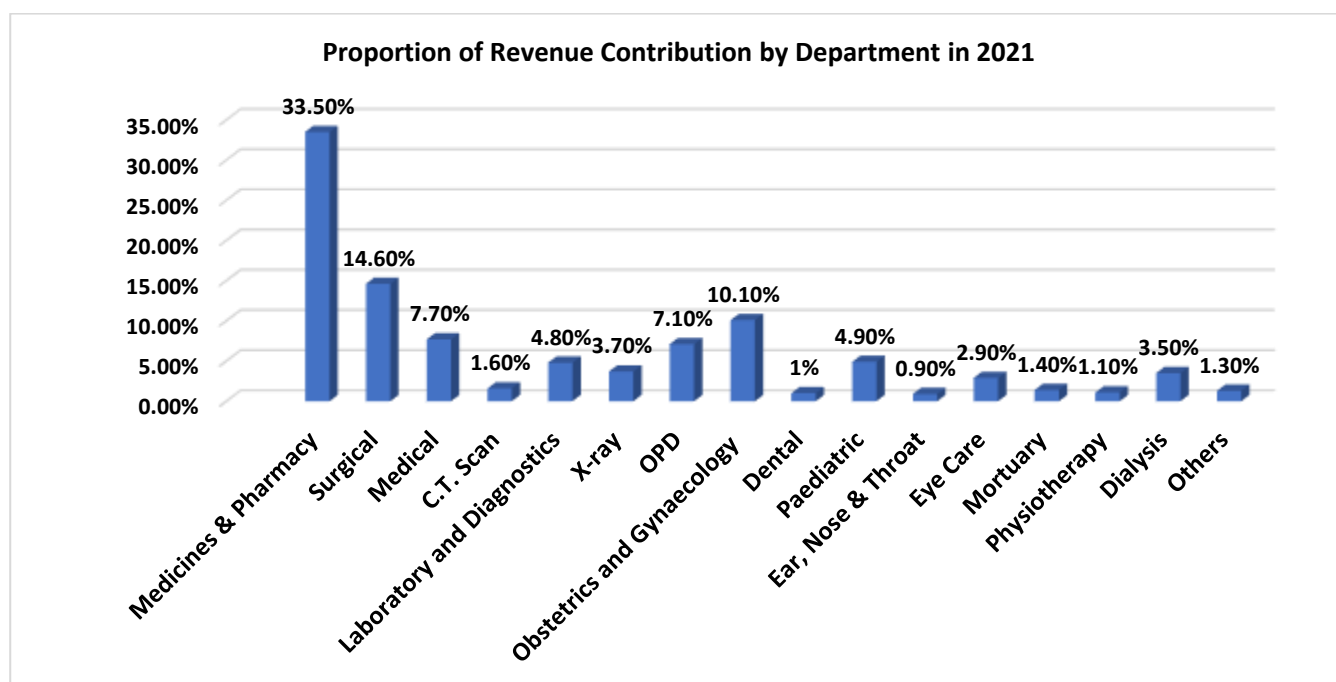


Table 5.6.1: Proportion of Revenue Contribution by Department

SERVICES	% Revenue Contribution In 2021	% Revenue Contribution In 2020	% DIFF	2021 GH¢	2020 GH¢	2019 GH¢	2018 GH¢
Medicines & Pharmacy	33.5%	31.6%	+15.04 %	8,105,789 .31	7,046,108.6 2	5,747,495. 43	5,733,912 .53
Surgical	14.6%	14.3%	+11.6%	3,544,206 .00	3,176,479.3 1	3,174,276. 85	1,853,007 .15
Medical	7.7%	9.2%	-9%	1,857,318 .67	2,041,275.3 8	2,446,169. 67	1,747,227 .41
C.T. Scan	1.6%	4.8%	-64.06%	383,441.0 0	1,066,877.0 0	824,025.00	573,855.0 0
Laboratory and Diagnostics	4.8%	4.2%	+24.3%	1,172,912 .00	943,553.27	586,245.60	566,900.1 5
X-ray	3.7%	4.1%	-2.2%	891,275.7 0	911,533.00	891,719.00	807,341.0 0
OPD	7.1%	7.4%	+3.9%	1,711,465 .80	1,647,485.0 1	1,909,435. 43	2,714,379 .82
Obstetrics and Gynaecology	10.1%	10%	+9%	2,436,670 .14	2,236,267.1 2	2,295,245. 70	1,661,906 .95
Dental	1%	0.92%	+19.4%	247,023.0 3	206,726.44	172,010.04	158,010.6 9
Paediatric	4.9%	4.6%	+15.9%	1,191,082 .97	1,028,066.0 3	1,126,813. 27	645,090.6 1
Ear, Nose & Throat	0.9%	0.8%	+16.6%	214,559.4 4	183,974.37	195,587.03	159,508.3 3
Eye Care	2.9%	1.6%	+100.2 %	702,666.7 0	350,939.81	440,261.44	252,769.9 5
Mortuary	1.4%	1.4%	+5.2%	329,904.2 0	313,730.00	262,247.93	248,811.0 0
Physiotherapy	1.1%	0.8%	+47%	268,317.4 4	182,476.84	207,488.34	183,580.6 8
Dialysis	3.5%	2.9%	+29.6%	839,061.5 0	647,214.07	818,989.00	1,008,281 .64

SERVICES	% Revenue Contribution In 2021	% Revenue Contribution In 2020	% DIFF	2021 GH¢	2020 GH¢	2019 GH¢	2018 GH¢
Others	1.3%	1.3%	+12.5%	321,687.46	285,987.33	481,670.60	569,953.81
Total	-	-	+8.8%	24,217,381.36	22,268,693.60	21,579,680.33	18,884,536.72

The hospital in 2021 recorded a slight decline in its total IGF expenditure by 6.2% as compared to 2020 (from GH¢24,933,641.13 in 2020 to GH¢23,398,840.96). Out of the total expenditure recorded in 2021, compensation, saw a 7.3% decline. Goods and Services expenditure declined by 5.7%, whilst Investment (CAPEX) dropped by 7.3%.

In the same light, the proportion of the fund spent on Goods and Services in 2021 constituted the highest expenditure item which was 88.2%. Also, 9.6% and 2.2% of the funds were spent on Compensation and Investment (CAPEX) respectively in 2021. Detailed information is in table 5.6.2 below.

Table 5.6.1: Financial Performance, Expenditure (GH¢)

	PERF. +/-	2021	2020	2019	2018	2017
Compensation	-7.3%	2,233,434.25	2,408,362.87	1,836,109.80	3,068,541.81	2,274,213.80
Goods and services	-5.7%	20,646,545.71	21,885,359.16	20,686,346.21	14,310,834.61	11,307,226.70
Investment (CAPEX)	-18.9%	518,861	639,919.10	-	648,500.01	522,788.62
Total	-6.2%	23,398,840.96	24,933,641.13	22,522,456.01	18,027,876.43	14,104,229.11

5.7 STATUS OF NHIS CLAIMS FOR 2021

The hospital in 2021 submitted a total of GH¢12,304,287.46 to NHIA for reimbursement, which is 8.2% rise over the previous year (from GH¢11,368,136 in 2020 to GH¢12,304,287.46 in 2021). However, the total Claims paid by NHIA dropped significantly by 15.4% (from GH¢12,715,888 in 2020 to GH¢10,748,624.26 in 2021), whilst the outstanding claims recorded as at close of 2021 was GH¢6,795,023.88, with unrecoverable claims of GH¢6,177,203.32. The outstanding number of months for NHIA reimbursement was 6 months as at the close of 2021. Detailed analysis is shown in table 5.7.1 below.

Table 5.7. 1: Status of NHIS Claims

ITEM	% DIFF	2021	2020	2019	2018	2017	2016
Claims Submitted	8.2% incr	12,304,287.46	11,368,136	11,734,191.92	9,629,551.55	10,549,108	9,679,184
Claims Paid	15.4% decr	10,748,624.26	12,715,888	7,367,571.40	9,393,716.11	9,121,870	6,289,301
Outstanding as at Close	40.5% decr	6,795,023.88	11,416,143	12,643,564.86	8,276,944.34	8,041,109	7,241,822
Adjustment for Unrecoverable Claims	-	6,177,203.32	-	-	-	-	-
No. of Month Outstanding	-	6	6	8	8	6	8

5.8 ANALYSIS OF ASSETS AND LIABILITIES AND CASH FLOWS

The hospital's total net asset in 2021 declined sharply by 25.7% (from GHC12,996,026.25 in 2020 to GHC 9,659,165.94 in 2021). However, the total current liabilities of the hospital went up significantly by 27.2% (from GHC 9,442,470.6 in 2020 to GHC12,008,866.84 in 2021).

In addition, the total cash inflow of the hospital for 2021 decreased by 1.8% as compared to 2020 (from 24,506,279.67 in 2020 to 24,072,184.55 in 2021) while net cash outflow for 2021 increased by 321% (from GHC 69,492.20 in 2020 to GHC 292,616.97 in 2021). Detailed analysis is provided in tables 5.8.1 and 5.8.2 below.

Table 5.8. 1: Trend of Assets and Liabilities

	2018	2019	2020	2021	REMARKS
Non-Current Assets:					
Cash & Cash Equivalent	1,257,996.37	694,206.58	763,698.88	1,073,813.65	40.6% incr
Accounts Receivables	8,726,095.52	12,748,013.24	11,416,143.98	8,873,138.10	22.3%% decr
Staff Receivables	-	-	-	47,200	100%
Inventories	9,013,519.61	6,002,442.47	6,445,365.39	7,357,920.65	14.2% incr
Total Current	18,997,611.50	19,444,662.29	18,682,212.25	17,352,072.4	7.1%% decr
Non-Current					
Property, Plant & Equipment	1,838,304.59	3,116,319.68	3,755,238.78	4,315,960.38	14.9% incr
Total Assets	20,835,916.09	22,560,981.97	22,437,451.03	21,668,032.78	3.4% decr
LIABILITIES					
Current Liabilities:					
Account Payables	5,606,678.95	822,876.75	9,337,117.28	11,774,418.76	26.1% incr
Trust Monies	39,044.16	89,687.93	105,353.32	234,448.08	122.5% incr
Total Current Liabilities	5,645,723	8,313,564.68	9,442,470.60	12,008,866.84	27.2% incr
Net Assets					
Total Net Assets	15,190,192.98	14,247,417.29	12,996,026.25	9,659,165.94	25.7% decr
Financed By					
Accumulated Fund B/F	12,379,659.73	15,190,192.97	14,247,417.29	12,996,026.25	8.8% decr
Surplus /Deficit Recorded	2,810,533.25	942,775.68	-1,251,391.05	1,025,181.82	18.1% decr
Accumulated Fund Carried Over	15,190,192.98	14,247,417.29	12,996,026.25	9,659,165.94	25.7% decr

Table 5.8. 2: Cash Flow

	2021	2020	2019	REMARKS
Cash Inflow				
Out of Pocket	11,745,526.38	10,764,780.42	10,125,338.52	9.1% incr
NHIA Re-Imbursement	10,748,624.26	12,715,888.45	7,367,571.40	15.5% decr
Other Receipts	1,578,033.91	1,025,610.80	577,954.81	68.1% incr
Total Inflows:	24,072,184.55	24,506,279.67	18,070,864.73	1.8% decr

	2021	2020	2019	REMARKS
Cash Outflows:				
IGF Compensation	2,173,839.80	2,357,163.82	1,751,383.36	7.8% decr
Goods/Services	20,176,117.65	22,048,723.65	16,773,372.91	8.5% decr
Salary Advance	45,200	30,900.00	60,300.00	46.3% incr
GRA-Tax Payment	543,820.51	-	-	100%
Total Outflow	23,779,567.58	24,436,787.47	18,585,056.27	2.7% decr
Net Cash Outflow	292,616.97	69,492.20	514,191.54	321.1% incr

CHAPTER SIX

COLLABORATION AND SUPPORT

6.1 INTRODUCTION

The Hospital periodically collaborates with and also receives donations from individuals and organisations that are all geared towards improving the quality of health care at the institution.

6.2 COLLABORATORS

Table 6.2.1 provides details of the major collaborators and type of support provided to the institution in 2021.

Table 6.2. 1: Collaborator(s) and Supports Received in 2021

NO.	COLLABORATOR(S)	SUPPORT / CONTRIBUTION
1.	Himalayan Cataract Project/ National Cataract Outreach Programme	Screened 18,103 with 2,083 Surgeries
2.	Operation-Smile Ghana	Provided free Cleft lip and palate with 29 Surgeries
3.	MTN Foundation	Constructed a blood bank for the hospital Engaged a contractor by name Pharma nova Limited to construct a warehouse for the Pharmacy Directorate
4.	COA	Donation of 50 bed sheets and patients' gowns
5.	Patient's Family	30 bed sheets for the Surgical suite
6.	Relative of an ICU patient	Donation of a ripple bed
7.	Image Ghana	Donation of various items (N95 face mask, ET tubes, oxygen delivery devices)
8.	Lancet Laboratories	Donated office items comprising 2 desk top computers, 2 printers 2 metal lockers 2 office desks 1 sofa three in one, 1 projector and book shelf.
9.	KHRC and NMIMR	Undertook the MVPE programme and H1N1 Surveillance respectively.
10.	MVPE	Donated one chest freezer or sample storage
11.	Unknown	Donation of one refrigerator, one SD Biosensor F200 and three (3) Lumira DX for SARS COV 2
12.	Grant by the European Society for Clinical Microbiology and Infectious Disease	Used to purchased one double decker refrigerator
13.	WHO-TDR Grant	Renovation of microbiology work top
14.	Specialist doctors and nurses from UTAH, Czech Republic, Himalayan and Korle-Bu (Dr. Etwire)	Collaborated with specialists' doctors and nurses to perform various surgeries.
15.	A patient	Donation of a wheel chair

NO.	COLLABORATOR(S)	SUPPORT / CONTRIBUTION
16.	Children of late Madam Rachael Adwowa Kuuma Pobee	Donation of 100 pieces each of bed sheets, pillow cases and table cover
17.	Ghanaian Doctors and Dentists Association in UK	Donation of COVID Relief Items
18.	Henry Ford Foundation under the Breast Cancer Project	Donation of assorted items
19.	Dr. Martin Morna	Donated two air-conditioners
20.	Ghana Prisons Service	Engagement of prisoners to control the weeds at CCTH immediate surroundings
21.	Ghana Police Service	Improved support to keep protecting clients, staff and property.
22.	Vodafone Ghana Ltd.	Paid an outstanding bill of 24 patients amounting to GH¢11,248.00 as part of their social responsibility.
23.	Government of Ghana	The unit received series of COVID-19 relief items from the Government through The Central Medical Stores (TCMS) and MOH, the following equipment and consumables were received and distributed;

SECTION 3

CHAPTER SEVEN

OUT PATIENT SUB-BMC

7.1 BACKGROUND

The Out-Patient Department (OPD) Sub-BMC is one of the clinical Sub-BMCs of the hospital and it serves as the first point of contact for patients and clients 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 quality outpatient care through effective and efficient delivery of quality healthcare through decentralisation.

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 an Accountant.

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
17.	Orthopaedics	17.	Clinical Psychology

NO.	CLINICS/SERVICES	NO.	CLINICS/SERVICES
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 2021 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES

Table 7.3. 1: Summary of OPD 2021 Annual Performance against CCTH Strategic Objectives

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY								
Actual Performance Trend								
	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	2021 Target	Remarks
Total OPD Attendance	110,068	117,854	158,164	168,056	125,772	152,364	CCTH = 15% incr	21.1% incr
OPD cases seen per doctor	1:1184	1:1030	1:1163	1:1098	1:749	1:560	THs= 1:1080	Decr
Total Specialist OPD attendance	73,152	83,217	75,130	90,336	69,603	80,114	-	15.1% incr
OPD Cases seen per specialist	1:1829	1:1849	1:1418	1:1255	1:1024	1:1483	THs= 1:1255	Incr
Total Referrals –In	3,443	4,386	4,292	6778	3609	3,566	-	1.2% decr
Scaled up implementation of appointment system at all specialist clinics								
Specialist OPD attendance increased by 15.1%								
OPD attendance increased by 21.1%								
Two (2) modules developed one (1) for home/ community visit and one (1) for outreach programmes								
Three (3) community outreach services conducted								
CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.								
	Actual Performance Trend							
	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	Target	Remark/ % Diff.
Percentage of clients satisfied with overall services at the institution	-	96.8%	87.3%	97%	93.4%	84.3%	THs = 95%	
Strengthened health promotion activities at the facility including IPC practices								
Five visual aids printed								

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
All OPD clinics start on specific appointment time
90% of nurses trained on triaging
One workshop organized on customer care, and work ethics for all cadre of staff with 70% of staff attending
Two (2) management members at the OPD sub-BMC were enrolled on management related course
CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE
One training organized in collaboration with the Technical Services Sub-BMC on efficient use of assets and maintenance procedures
Two consulting rooms partitioned
Two consulting rooms painted
CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM
4.1: Governance Related Performance
Two (2) sub-BMC management members enrolled in management related course
Six (6) management meetings were held
4.2: Human Resource Related Performance
Two (2) Medical Officers at the OPD sub-BMC had postgraduate training to become family physician
All staff appraised
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:
Six (6) Clinical meetings held
CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS
Partnered with Internal Medicine to scale up mentorship program on DM for one adopted peripheral facility

7.4 SUMMARY OF OPD PERFORMANCE

The hospital's OPD attendance improved by 21.1% in 2021 (from 125,772 in 2020 to 152,364 in 2021) as compared to the 25.2% decline recorded in 2020, which was due to impact of the Covid-19 pandemic. Generally, most of the OPD performance indicators in 2021 have seen some improvement as compared to the general decline situation recorded in 2020, during the peak of the Covid-19. For instance, new OPD registrants went up by 7.2% in 2021 (from 22,636 in 2020 to 24,266), whilst the average daily OPD visitations increased significantly by 20.9% (from 345 in 2020 to 417 in 2021). The total insured and non-insured clients went up significant in 2021 by 20.87% and 22.74% respectively as compared to 2020. However, cases referred-in declined by 13.3% in 2021 (from 4,113 in 2020 to 3,566 in 2021). Despite the general increase in attendance, the hospital in 2021 could not meet 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 declined from 1:749 in 2020 to 1:560 in 2021 against the THs' target of target of 1:1080 (it is a productivity indicator) whereas, the ratio of OPD cases seen per specialist increased from 1:1,024 in 2020 to 1:1,483 in 2021 against THs' target of 1:1200.

Also, there was some increment in specific clinics utilization/attendance in 2021. For instance, the Oncology clinic which was introduced in 2020, recorded a significant rise in attendance by 195.2% in 2021 (from 62 in 2020 to 183 in 2022). General Surgical and Orthopaedics clinics attendance went up significantly in 2021 by 80.1% and 89.2% respectively over the previous year. Eye and Dental & Maxillofacial recorded some increases in 2021 by 28.2% and 5.5% respectively, whereas the ENT clinic attendance reduced by 6.9% over previous year.

To improve access to specialists' services and serve the needs of clients/patients, the hospital introduced three (3) additional new specialized OPD clinics in 2021. They are; Orthodontist service, Reproductive Endocrinology & Fertility services as well as Gynae. Oncology service. Total cases recorded at the Orthodontist clinic in 2021 was 25, Reproductive Endocrinology & Fertility clinic recorded 271 cases, whilst Gynae. Oncology clinic recorded 11 cases. 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

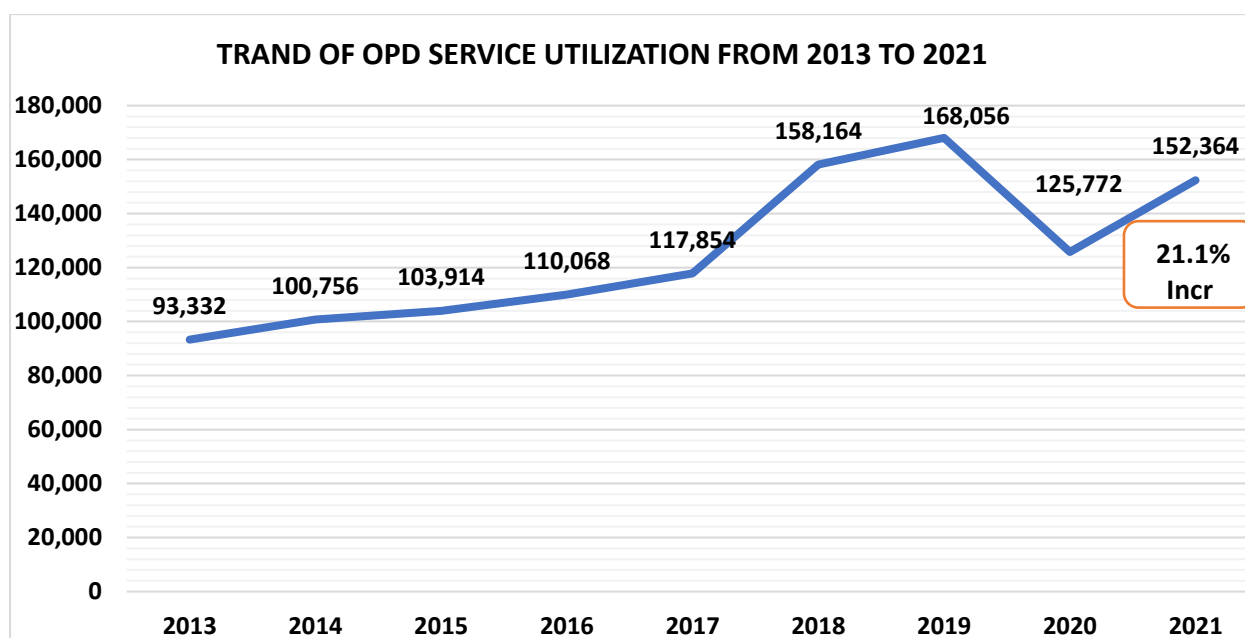


Table 7.4. 1: General OPD Clinic Attendance

INDICATORS	2013	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS
New OPD Registrants	-	-	-	40,065	39,404	28,361	23,334	22,636	24,266	7.2% incr
OPD Attendance	93,332	100,756	103,914	110,068	117,854	158,164	168,056	125,772	152,364	21.1% incr
Average Daily OPD Visit	-	276	285	302	323	433	461	345	417	20.87% incr
Insured Patients	86,772	93,076	95,855	101,957	109,280	130,557	146,227	107,169	129,530	20.87% incr
Non-Insured Patients	6,560	7,680	8,059	8,111	8,574	27,607	21,779	18,603	22,834	22.74% incr
Referrals In	2,335	3,647	3,911	3,443	4,386	4,292	4,447	4,113	3,566	13.3% decr
Referrals Out	-	-	-	-	-	-	146	64	-	-

Figure 7.4. 2: Monthly Trend of OPD Utilization Service

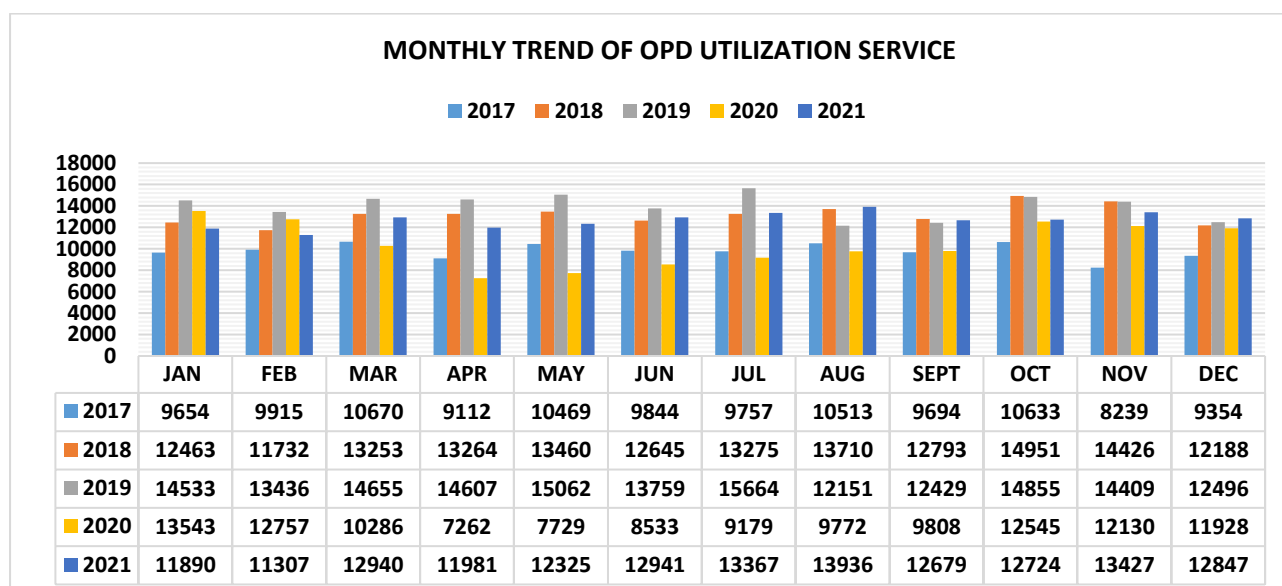


Table 7.4. 2: Monthly Trend of OPD Utilization Service

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
2017	9654	9915	10670	9112	10469	9844	9757	10513	9694	10633	8239	9354
2018	12463	11732	13253	13264	13460	12645	13275	13710	12793	14951	14426	12188
2019	14533	13436	14655	14607	15062	13759	15664	12151	12429	14855	14409	12496
2020	13543	12757	10286	7262	7729	8533	9179	9772	9808	12545	12130	11928
2021	11890	11307	12940	11981	12325	12941	13367	13936	112579	12724	13427	12847

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

Indicator	2016	2017	2018	2019	2020	2021	Remarks	Target	Measurement
OPD Cases Seen Per Doctor	1:1184	1:1030	1:1163	1:1098	1:749	1:560	decr	THs 1:1080	Total no. of client attending OPDs / Total no. of Drs
Total OPD Attendance	110,068	117,854	158,164	168,056	125,772	152,364	21.1% incr	CCTH 10 Incr	
Total Number Of Doctors	93	114	136	153	168	273	62.5% incr		
OPD Cases Seen Per Specialist	1:1829	1:1849	1:1418	1:1255	1:1024	1:1483	incr	THs 1:1200	Total no. of client attending specialist OPDs / Total no. of specialist/ Snr. Specialists/ Consultants
Total Specialists OPD Attendant	73,152	83,217	75,130	90,336	69,603	80,114	15.1% incr		
Total Number Of Specialist /Snr. Specialists/Consultants	40	45	53	72	68	62	8.8%decr		

Table 7.4. 4: OPD Service Statistical Performance by Clinic

CLINICS	2013	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS
INTERNAL MEDICINE SERVICE										
General Medical	18,421	18,239	16,617	16,232	21,060	17,184	18,142	17,385	19,046	9.5% incr
Dermatology	224	324	357	330	359	315	45	353	462	30.9% incr
Asthma	491	357	297	511	787	1,036	1,005	819	626	23.6% decr
Sickle Cell	151	179	235	454	650	567	423	595	269	54.7% decr
Gastroenterology	183	315	359	560	690	620	749	662	866	30.8% incr
Cardiology	546	506	516	1,590	2,153	2,104	2,583	2,558	2718	6.3% incr
Diabetes	11,332	9,135	9,201	9,309	9,966	10,636	11,304	8,965	9356	4.4% incr
Hepatitis B	1,622	1,114	794	940	1,059	1179	1,212	850	775	8.8% decr
TB CLINIC	-	36	35	42	39	131 (42 - CCTH Clients)	361 (31 CCTH Clients)	292	271	7.2% decr
HIV CLINIC	-	-	5,895	5,377	6,068	-	4,913	5,337	4057	24% decr
Adolescent Clinic	-	-	57	126	218	171	178	126	102	19% decr
Endocrinology	-	-	-	82	125	111	106	97	184	89.7% incr
Haematology	-	-	-	223	298	431	437	396	427	7.8% incr
Renal Clinic	-	-	-	389	849	888	1,334	919	1005	9.4% incr
Oncology Clinic	-	-	-	-	-	-	-	62	183	195.2% incr
SURGICAL SERVICES										
General Surgery	4,627	4,375	3,983	4,376	5,702	4,234	3,433	1,356	2442	80.1% incr
Orthopaedic	1,534	1,466	1,913	2,223	2,347	2,485	2,311	1,337	2530	89.2%incr
Uro-Surgery	1,029	1,769	2,208	2,843	3,275	4,102	6,119	4,880	3,044	37.62% decr
Neuro-Surgery	-	112	200	129	312	351	620	485	487	0.41% incr
Plastic Surgery	-	-	176	564	601	433	461	408	739	81.1% incr
Colorectal	-	-	-	-	-	-	82	196	300	53.1% incr
ANAESTHESIA AND CRITICAL CARE SERVICES										
Anaesthesia Clinic	-	329	689	943	868	782	894	480	1042	117% incr
DENTAL, EYE AND EAR, NOSE & THROAT (DEENT) SERVICE										
ENT	4,995	5,094	5,907	6,080	6,664	6,230	8,211	6,004	5588	6.9% decr
Eye	6,055	5,872	6,600	8,420	9,348	8,917	12,078	8,451	10837	28.2% incr
Dental & Maxillofacial	4,131	2,325	4,165	4,294	5,112	4,769	5,204	4,667	4922	5.5% incr
Orthodontist Service	-	-	-	-	-	-	-	-	25	Introduced in 2021
MATERNAL HEALTH SERVICE										
ANC	6,779	7,332	8117	8434	10,141	8,991	9,419	7,717	9,298	20.49% incr
PNC	-	-	2430	2750	3,314	3,495	3,384	1,866	2520	35.05% incr
Gynae	-	-	4761	4075	4,092	4,078	4,265	2,553	3368	31.92% incr
Reproductive Endocrinology & Fertility Services	-	-	-	-	-	-	-	-	271	Introduced in 2021
Gynae. Oncology Services	-	-	-	-	-	-	-	-	11	Introduced in 2021
Total	-	15,515	15,308	15,259	17,547	16,564	17,068	12,136	15,468	27.46% incr

CLINICS	2013	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS
CHILD HEALTH SERVICE										
General Paediatrics Clinic	7,391	6,767	7,690	7,810	8,180	7490	8,666	6,003	9244	54%% incr
Paediatric Specialist Clinic										
NICU Follow-Up	-	-	-	-	-	155	206	247	890	260.3% incr
Paedics Asthma	-	-	-	-	-	87	78	57	102	78.9% incr
Paedics Neuro	-	-	-	-	-	168	137	213	245	15% incr
Paedics Renal	-	-	-	-	-	99	97	216	115	46.8% decr
Paedics Cardio	-	-	-	-	-	30	21	60	58	3.3% decr
Paediatrics - Sickle Cell clinic	-	-	-	-	-	205	331	328	351	7% incr
Paediatrics Oncology	-	-	-	-	-	-	-	48	22	54.2% decr
<i>Total Paediatric Specialist Clinic Attendance =</i>	-	-	-	-	-	744	870	1,169	1783	57.1% incr
REHABILITATION SERVICE										
Diet Clinic	953	1,008	1,743	1,417	1,916	1,265	1,224	1,070	1313	22.7% incr
Clinical Psychology	-	-	150	163	261	301	592	557	798	43.3% incr
Physiotherapy	-	-	5,048	14,451	9,228	9,579	10,090	5,670	5,055	10.9% decr
Speech Therapy	-	-	-	-	-	24	68	208	415	99.5% incr
Community Psychiatry	-	-	-	-	-	-	-	56	66	17.9% incr
OTHER SERVICES										
Polyclinic	-	-	-	-	-	-	348	6,674	0	<i>The Polyclinic was converted to Covid-19 treatment centre since 2020</i>
Minor Procedures (Treatment Room)	-	-	8,706	9,932	9,218	7464	9280	8,375	10,409	24.3% incr
Weekend & Holiday Clinic	402	1,160	383	362	362	355	358	-	-	-

7.5 TOP 10 OPD MORBIDITY

Hypertension has remained the number one leading OPD morbidity in the hospital over the past years. In 2021, Hypertension cases recorded at the OPD constituted 11.49% of morbidities, which is a marginal decline compared to the 12% recorded in 2020. Diabetes Mellitus (7.77%) and Acute Urinary Tract Infection (5.95%) ranked 2nd and 3rd leading OPD morbidities respectively. Others among the top 10 morbidities recorded in 2021 includes; Upper Respiratory Tract Infection (4.34%), Urethral Discharge (3.06%), Anaemia (3.01%), Typhoid Fever (2.8%), Kidney diseases (2.45%), Pneumonia (2.39%) and Rheumatism/ Other Joint pain/ Arthritis (2.28%). Table 7.5.1 and figure 7.5.1 shows further the detailed analysis below.

Figure 7.5. 1: Top Twenty OPD Morbidities in 2021

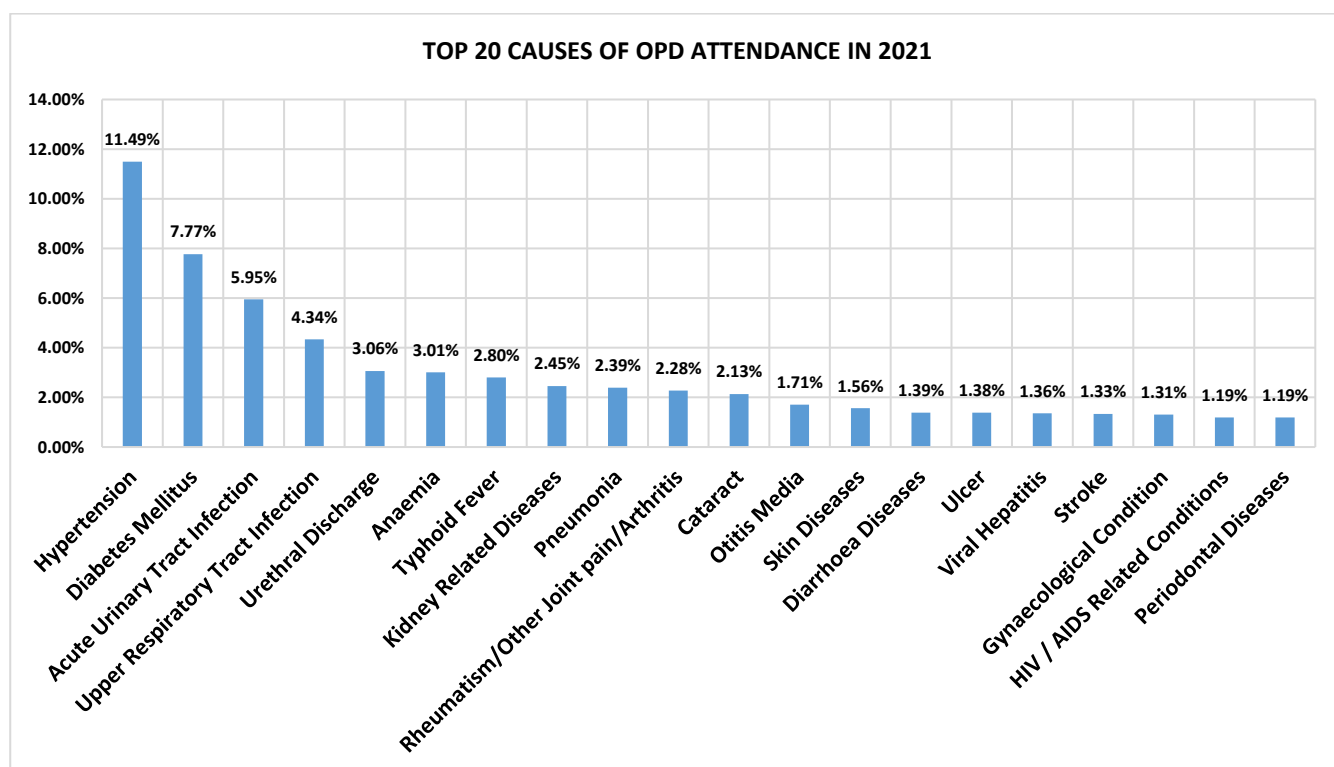


Table 7.5. 1: Trend of Top Twenty OPD Morbidities

NO.	2019		2020		2021	
	CONDITION	PROPORTION	CONDITION	PROPORTION	CONDITION	PROPORTION
1.	Hypertension	12.0%	Hypertension	12%	Hypertension	11.49%
2.	Diabetes Mellitus	7.9%	Diabetes Mellitus	9%	Diabetes Mellitus	7.77%
3.	Acute Eye Infection	1.7%	Acute Urinary Tract Infection	7%	Acute Urinary Tract Infection	5.95%
4.	Upper Respiratory Tract Infection	1.7%	Urethral Discharges	6%	Upper Respiratory Tract Infection	4.34%
5.	Stroke	1.3%	Diarrhoea Disease	4%	Urethral Discharge	3.06%
6.	Pneumonia	0.9%	Upper Respiratory Tract Infection	4%	Anaemia	3.01%
7.	Asthma	0.9%	Pneumonia	4%	Typhoid Fever	2.8%
8.	Prostate Cancer	0.9%	Malaria	3%	Kidney Related Diseases	2.45%
9.	Otitis Media	0.9%	Kidney Related Disease	3%	Pneumonia	2.39%
10.	Cataract	0.7%	Rheumatism & Joint Pains	3%	Rheumatism/ Other Joint pain/Arthritis	2.28%

NO.	2019		2020		2021	
	CONDITION	PROPORTION	CONDITION	PROPORTION	CONDITION	PROPORTION
11.	Viral Hepatitis	0.7%	Diseases of the Reproductive System	3%	Cataract	2.13%
12.	Sickle Cell Disease	0.6%	Cancer	2%	Otitis Media	1.71%
13.	Anaemia	0.3%	Gynaecological Conditions	2%	Skin Diseases	1.56%
14.	Obesity	0.3%	Acute Eye Infection	2%	Diarrhoea Diseases	1.39%
15.	Cervical Cancer	0.3%	Typhoid Fever	2%	Ulcer	1.38%
16.	Uncomplicated Malaria Tested Positive	0.3%	Ulcer	1%	Viral Hepatitis	1.36%
17.	HIV/AIDS Related Conditions	0.3%	Anaemia	1%	Stroke	1.33%
18.	Cardiac Diseases	0.2%	Cataract	1%	Gynaecological Condition	1.31%
19.	Urethral Discharges	0.2%	Pregnancy related complications	1%	HIV / AIDS Related Conditions	1.19%
20.	Septicaemia	0.2%	Stroke	1%	Periodontal Diseases	1.19%

7.6 REHABILITATION SERVICES

The hospital provides various rehabilitation services such as, Clinical Psychology, Physiotherapy, Diet and Nutrition, Speech Therapy as well as Community Psychiatry. Generally, the overall total of rehabilitation service utilization recorded in 2021 increased marginally by 1.1%% (from 7,561 to 7,647 in 2021). The Physiotherapy clinic has consistently recorded the highest OPD clinic attendance over the years, however, in 2021, the Physiotherapy clinic recorded a declined in attendance by 10.9% (from 5,670 in 2020 to 5,055 in 2021). Clinical Psychology and Community Psychiatry clinics recorded increment in attendance by 43.3% and 17.9% respectively in 2021, compared to the previous year. In the same light, Speech Therapy and Diet & Nutrition clinic attendance also went up significantly by 99.5% and 22.7% respectively, in the year under review, over the previous year. 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

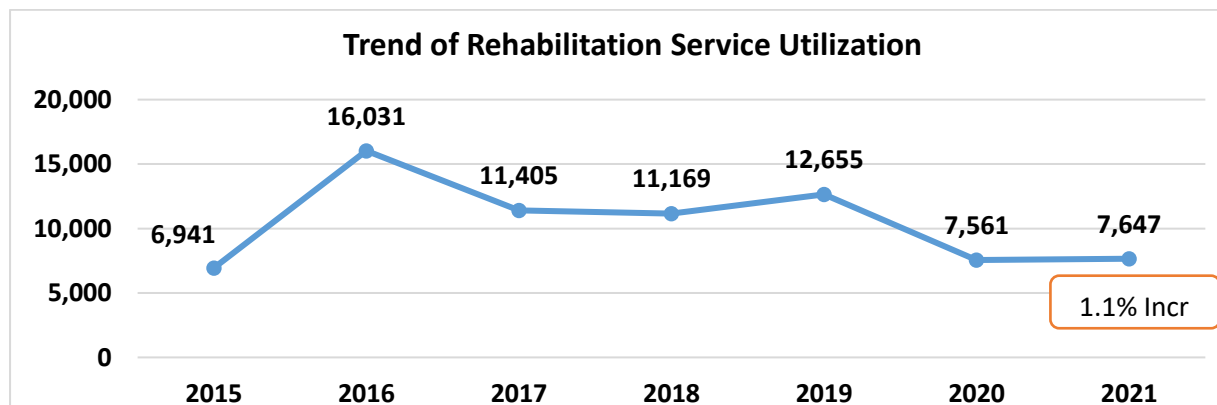
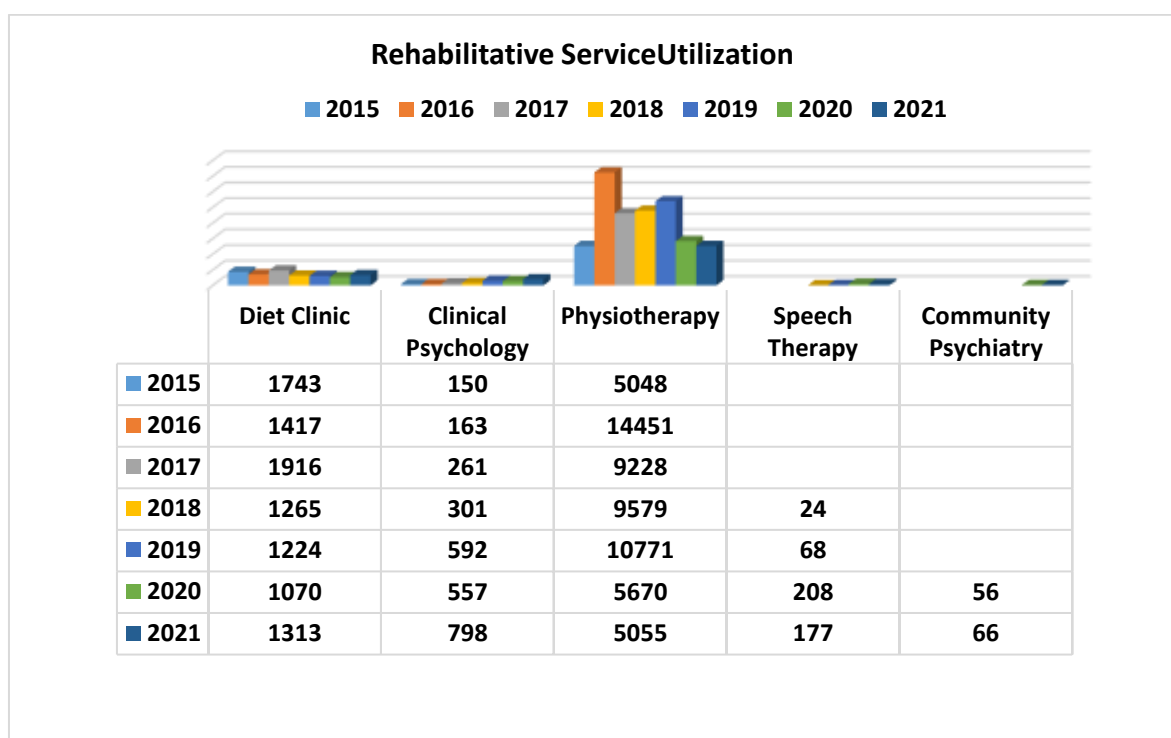


Table 7.6. 1: Rehabilitation Services

REHABILITATION SERVICES	2015	2016	2017	2018	2019	2020	2021	REMARKS
Diet & Nutrition	1,743	1,417	1,916	1,265	1,224	1,070	1313	22.7% incr
Clinical Psychology	150	163	261	301	592	557	798	43.3% incr
Physiotherapy	5,048	14,451	9,228	9,579	10,771	5,670	5,055	10.9% decr
Speech Therapy	-	-	-	24	68	208	415	99.5% incr
Community Psychiatry	-	-	-	-	-	56	66	17.9% incr
Total attendance	6,941	16,031	11,405	11,169	12,655	7,561	7,647	1.1% incr

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



7.6.1 PHYSIOTHERAPY

The Physiotherapy services has been highly utilized in the hospital over the years. However, the clinic attendance in 2021 declined by 10.9% (from 5,670 in 2020 to 5,055 in 2021). Stroke, Low back pain and Spondylosis were the leading conditions seen at the clinic. Over the past years, Stroke remain the number one condition among the cases seen at the clinic. In 2021, Stroke cases went up significantly by 26.5% (from 1,657 in to 2,095 in 2021, followed by low back pain which also went up by 30.8% (from 1,128 in to 1,475 in 2021), whereas, Spondylosis condition declined by 10.1% in 2021 (from 1874 in 2021 to 1684 in 2021). Contractures and Fractures, on the other hand, were the least among the top 10 conditions seen in 2021. Contractures cases declined by 38.6% (from 114 in 2020 to 70 in 2021), while fractures cases also reduced significantly by 63.9% (from 166 in 2020 to 60 in 2021). Table 7.6.1.1 and figures 7.6.1.1 to figure 7.6.1.2 shows detailed analysis below.

Figure 7.6.1. 1: Physiotherapy Service Utilization Trend

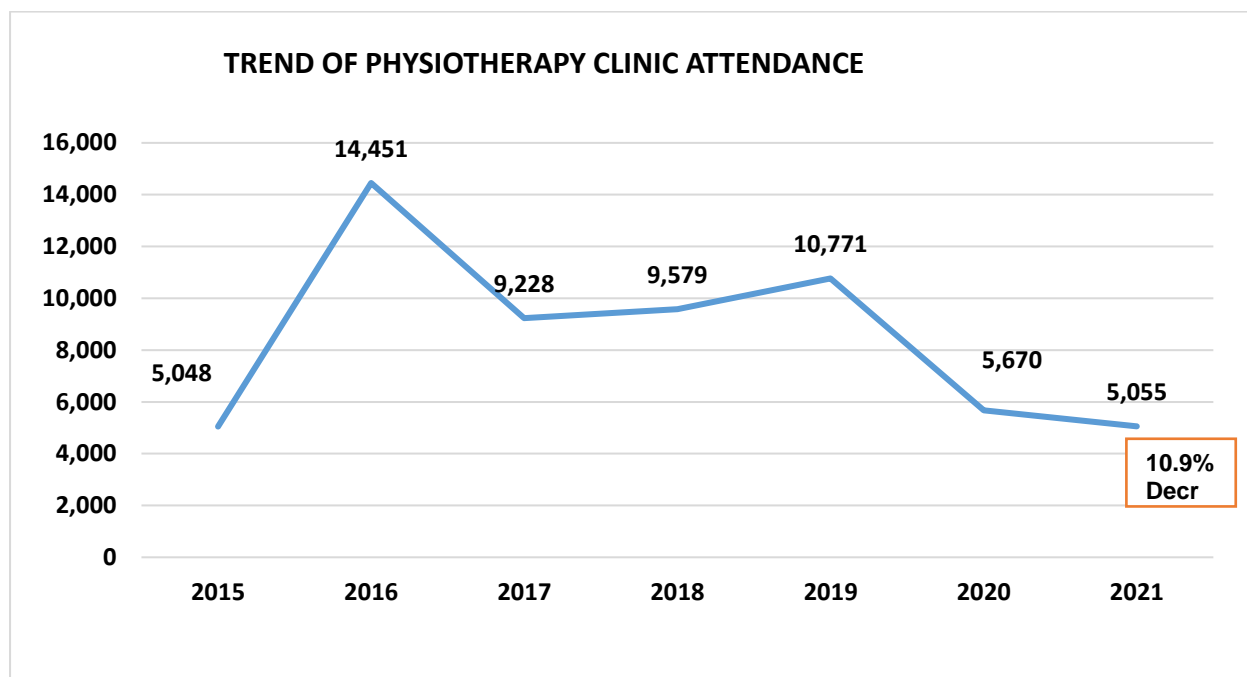


Figure 7.6.1. 2: Comparative Analysis of Physiotherapy Cases

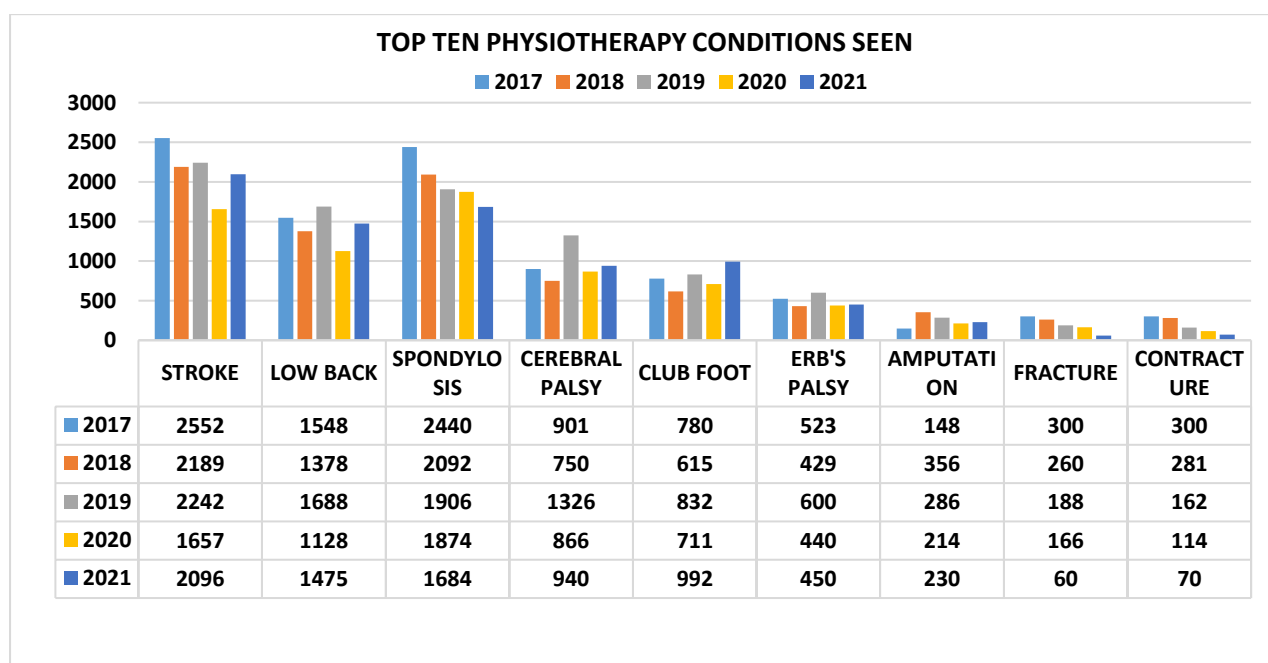


Table 7.6.1. 1: Comparative Analysis of Physiotherapy Cases

No.	Physiotherapy Conditions	2017	2018	2019	2020	2021	Remarks
1.	Stroke	2552	2189	2242	1657	2096	26.5% incr
2.	Low Back	1548	1378	1688	1128	1475	30.8% incr
3.	Spondylosis	2440	2092	1906	1874	1684	10.1% decr
4.	Other Spondylosis	1539	1336	1106	1138		
5.	Cervical Spondylosis	901	756	800	736		

No.	Physiotherapy Conditions	2017	2018	2019	2020	2021	Remarks
6.	Cerebral Palsy	901	750	1326	866	940	8.5% incr
7.	Club Foot	780	615	832	711	992	39.5% incr
8.	Erb's Palsy	523	429	600	440	450	2.3% incr
9.	Amputation	148	356	286	214	230	7.5% incr
10.	Fracture	300	260	188	166	60	63.9% decr
11.	Contracture	300	281	162	114	70	38.6% decr

7.6.2: CLINICAL PSYCHOLOGY SERVICES

Over the past years, the Clinical Psychology department recorded increment in the utilization of their services but with a deep in 2020, due to the Covid-19 pandemic impact. However, in 2021, the total Clinical Psychology OPD attendance went up significantly by 43.3% (from 557 in 2020 to 798 in 2021). Out of the total 798 cases recorded in 2021, 59.8% (477) were females and 40.2% (321) were males. Also, Major Depression has been the number one leading condition over the past years, with cases increasing from 239 in 2020 to 374 in 2021. Also, Anxiety and stress cases continued to feature among the top 2nd and 3rd cases recorded respectively. Detailed analysis provided in figure 7.6.2.1 to figure 7.6.2.2 and table 7.6.2.1 to table 7.6.2.2 below.

Figure 7.6.2. 1: Trend of Clinical Psychology Service Utilization

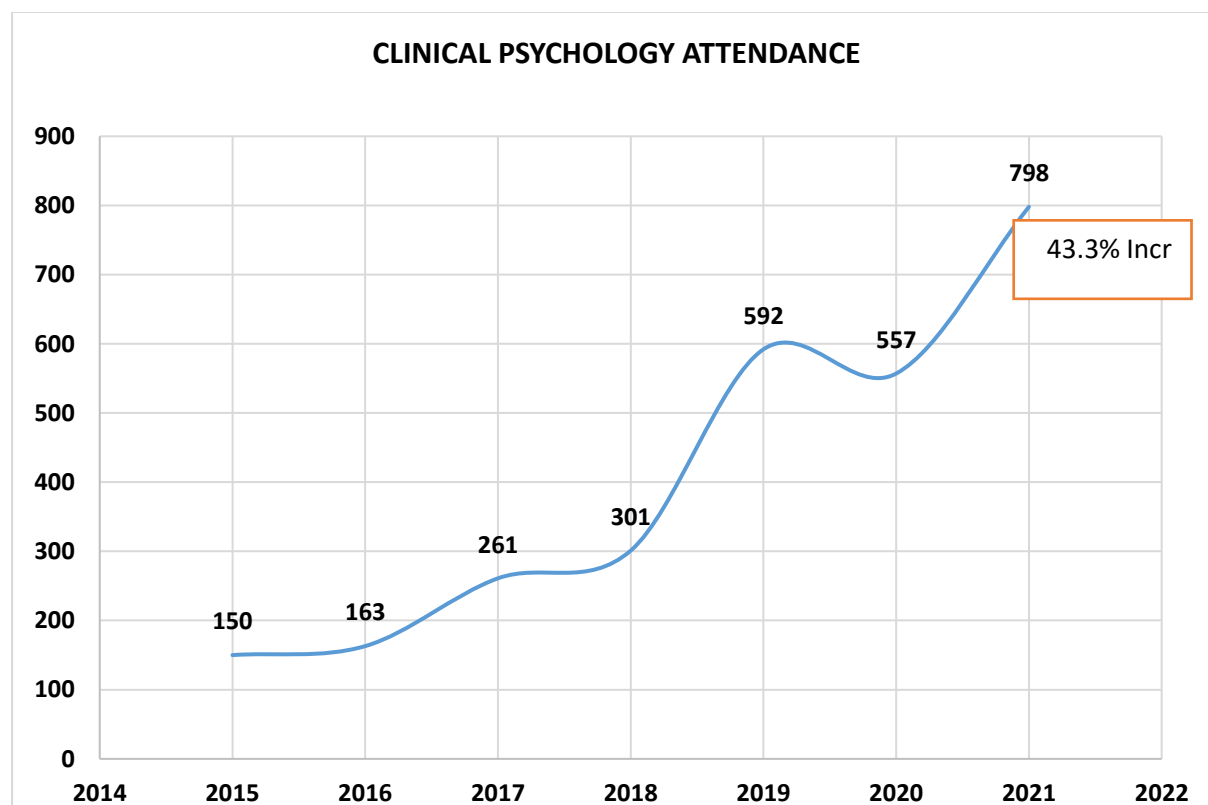


Figure 7.6.2. 2: Trend of Clinical Psychology Cases seen

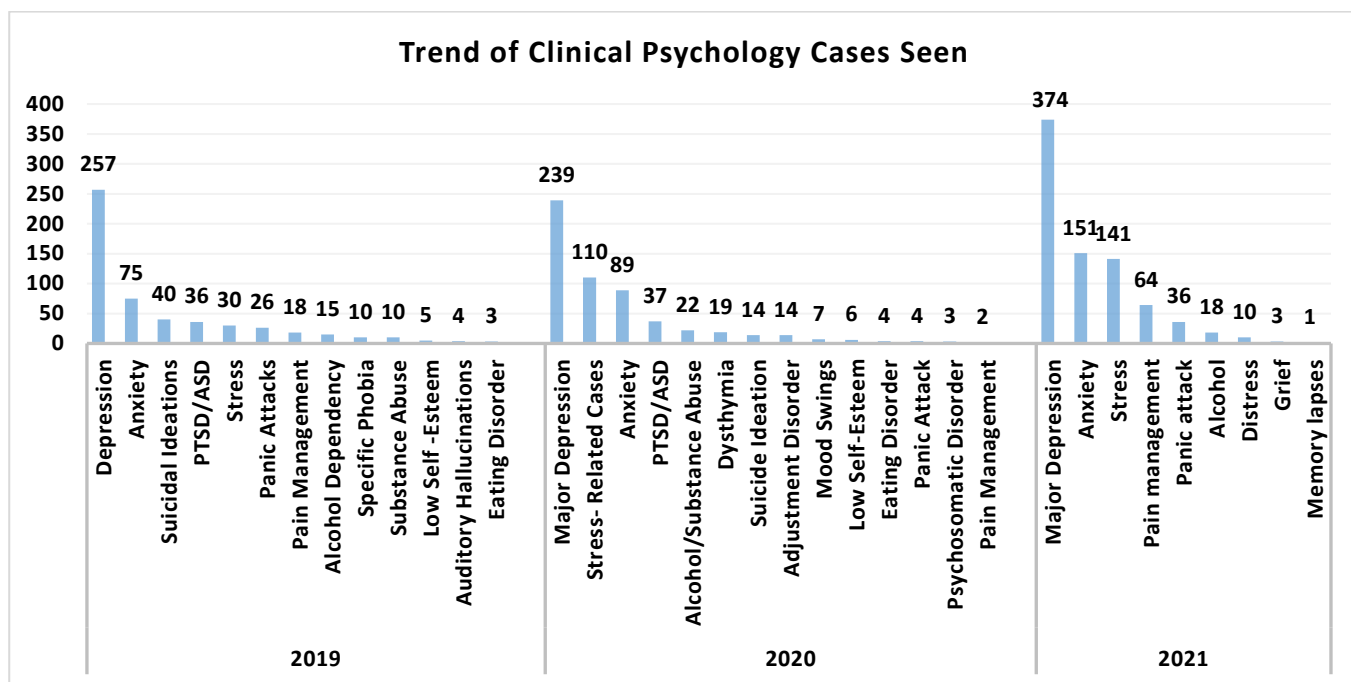


Table 7.6.2. 1: Trend of Clinical Psychology Cases seen

2018		2019		2020		2021	
CONDITION	NO.	CONDITION	NO.	CONDITION	NO.	CONDITION	NO.
Major depression	84	Depression	257	Major Depression	239	Major Depression	374
Stress- related cases	60	Anxiety	75	Stress- Related Cases	110	Anxiety	151
Dysthymia	47	Suicidal Ideations	40	Anxiety	89	Stress	141
Social Phobia	31	PTSD/ASD	36	PTSD/ASD	37	Pain management	64
Somatoform disorders	24	Stress	30	Alcohol/Substance Abuse	22	Panic attack	36
School reports/psychological assessment	15	Panic Attacks	26	Dysthymia	19	Alcohol	18
Alcohol/substance abuse	15	Pain Management	18	Suicide Ideation	14	Distress	10
		Alcohol Dependency	15	Adjustment Disorder	14	Grief	3
		Specific Phobia	10	Mood Swings	7	Memory lapses	1
		Substance Abuse	10	Low Self-Esteem	6		
		Low Self -Esteem	5	Eating Disorder	4		
		Auditory Hallucinations	4	Panic Attack	4		
		Eating Disorder	3	Psychosomatic Disorder	3		
				Pain Management	2		

7.6.3 COMMUNITY PSYCHIATRY SERVICES

The hospital introduced Community Psychiatry service in 2020. Although there is inadequate staff, the number of cases seen over the past two years went up. In 2021, the total attendance recorded went up by 17.9% (from 56 in 2020 to 66 in 2021). Out of the 66 cases seen in 2021, 23 were old clients and 43 were new clients, whilst male and female constituted 50% (33 males and 33 females) each. The highest number of cases seen was recorded in the month of August (10 cases) and they were all new clients as shown in table 7.6.3.1 below.

Table 7.6.3. 1: Community Psychiatry Cases seen in 2021

MONTH	2020						2021					
	FEMALE	MALE	TOTAL	OLD	NEW	TOTAL	FEMALE	MALE	TOTAL	OLD	NEW	TOTAL
January	-	-	-	-	-	-	2	1	3	1	2	3
February	5	5	10	0	10	10	5	1	6	1	5	6
March	2	2	4	2	2	4	2	1	3	0	3	3
April	2	1	3	1	2	3	1	1	2	0	2	2
May	2	0	2	1	1	2	2	2	4	1	3	4
June	3	0	3	1	2	3	1	2	3	0	3	3
July	4	1	5	1	4	5	2	3	5	0	5	5
August	3	6	9	1	8	9	4	6	10	0	10	10
September	3	3	6	1	5	6	2	5	7	3	4	7
October	1	1	2	1	1	2	3	3	6	5	1	6
November	0	5	5	1	4	5	5	3	8	6	2	8
December	4	3	7	1	6	7	4	5	9	6	3	9
Total	29	27	56	11	45	56	33	33	66	23	43	66

7.6.4 DIET & NUTRITION SERVICES

The highest diet and nutrition service utilization was recorded in 2017 (1,916 cases) and subsequently department recorded decline between the period of 2018 to 2020. However, in 2021, the total diet & nutrition clinic attendance improved significantly by 22.7% (from 1,070 in 2020 to 1,313 in 2021). Out of the total cases recorded, 67.6% (888) were OPD cases whilst 32.4% (425) were in-patient cases. Diabetes Mellitus, Hypertension, Obesity and Dyslipidaemia have been the leading conditions reported to Diet and Nutrition clinic since 2019, with Diabetes Mellitus (36.7%) being the highest among the top ten conditions. Hypertension (17%), Obesity (14.2%), Dyslipidaemia (7.1%) ranked 2nd, 3rd and 4th respectively, whilst CVA (1.2%) and Liver related (1%) cases were the least among the top ten cases recorded. Detailed trend analysis is illustrated in figure 7.6.4.1 to figure 7.6.4.3 and table 7.6.4.1 below.

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

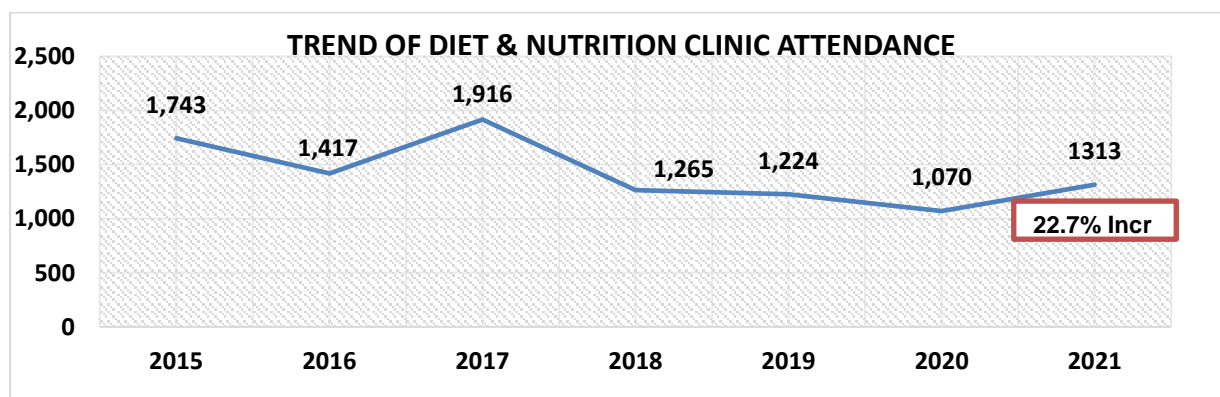


Figure 7.6.4. 2: Comparative Analysis of Diet & Nutrition Cases Seen

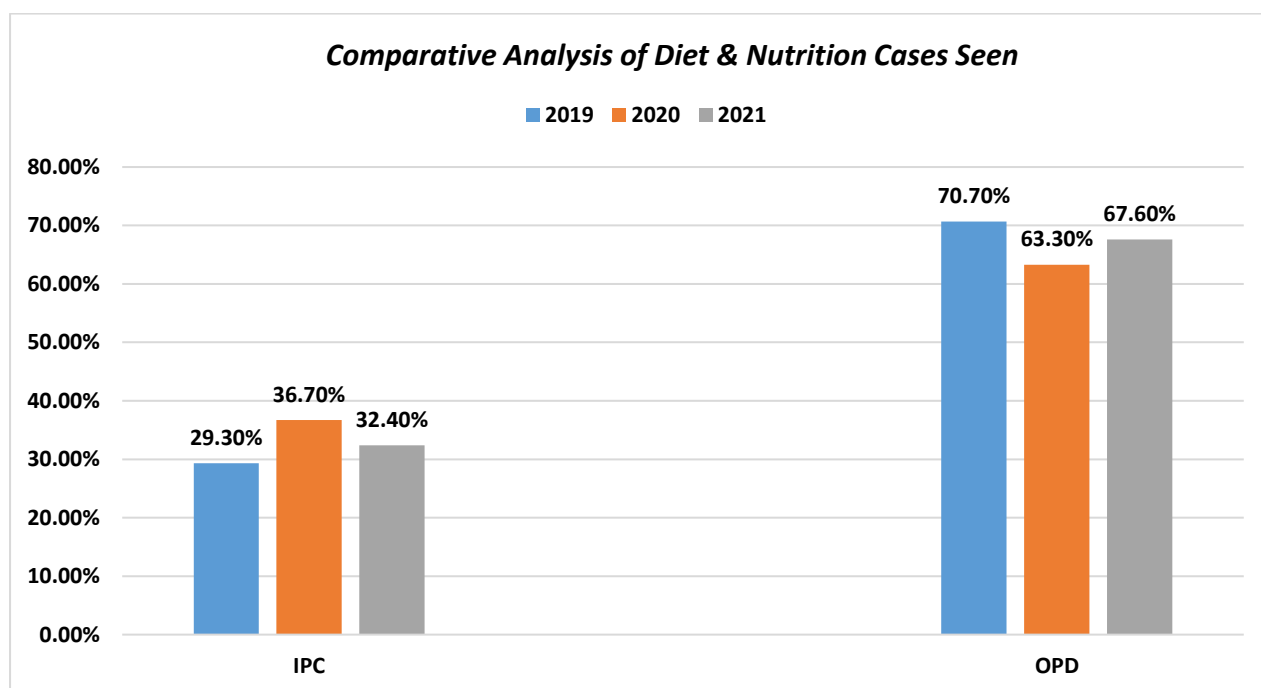
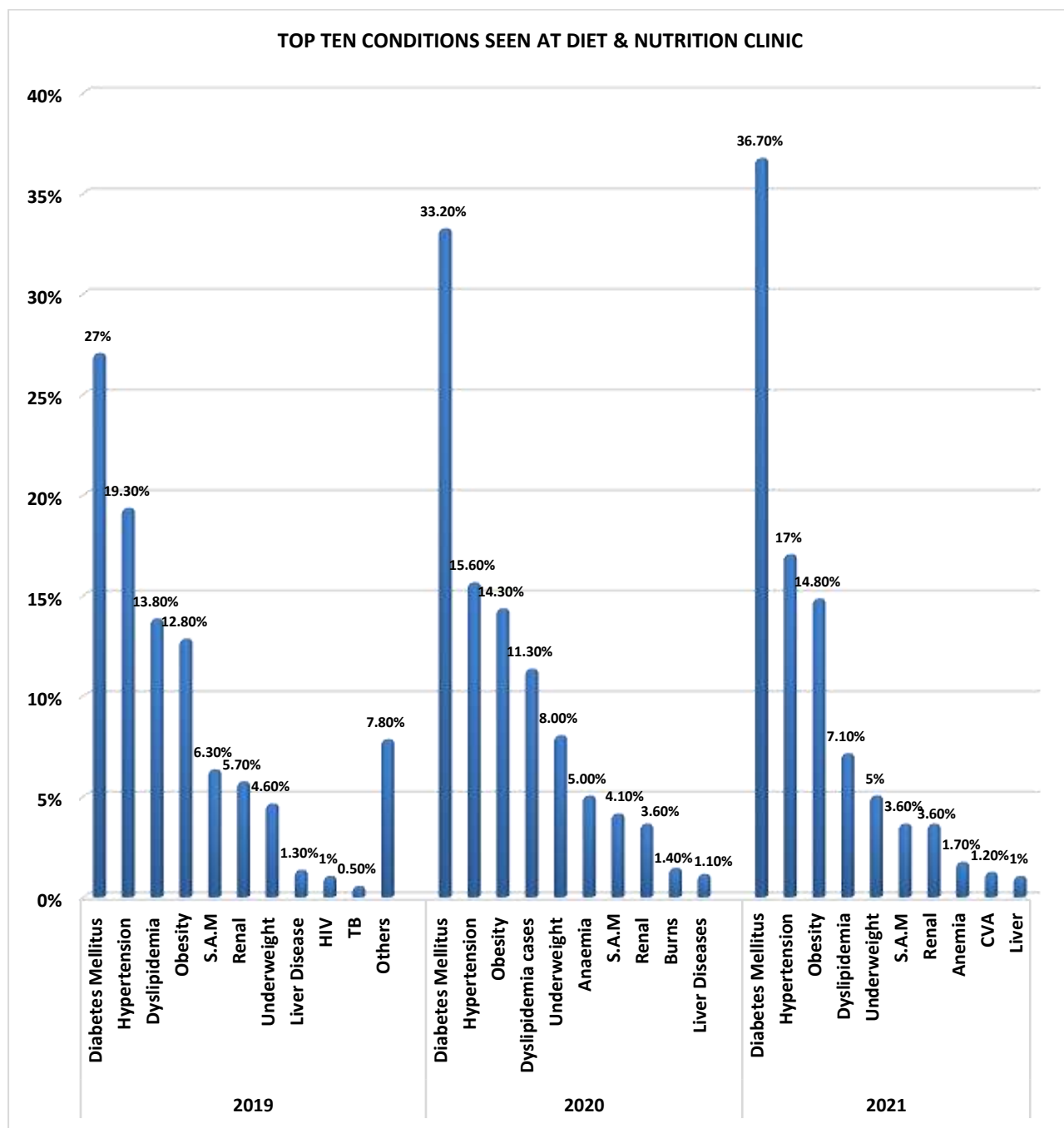


Table 7.6.4. 1: Top Ten Diet & Nutrition Cases

2019		2020		2021	
CONDITION	PROPORTION	CONDITION	PROPORTION	CONDITION	PROPORTION
Diabetes Mellitus	27%	Diabetes Mellitus	33.2%	Diabetes Mellitus	36.7%
Hypertension	19.3%	Hypertension	15.6%	Hypertension	17%
Dyslipidaemia	13.8%	Obesity	14.3%	Obesity	14.8%
Obesity	12.8%	Dyslipidaemia cases	11.3%	Dyslipidaemia	7.1%
S.A.M	6.3%	Underweight	8.0%	Underweight	5%
Renal	5.7%	Anaemia	5.0%	S.A.M	3.6%
Underweight	4.6%	S.A.M	4.1%	Renal	3.6%
Liver Disease	1.3%	Renal	3.6%	Anaemia	1.7%
HIV	1.0%	Burns	1.4%	CVA	1.2%
TB	0.5%	Liver Diseases	1.1%	Liver	1%
Others	7.8%				

Figure 7.6.4. 3: Top Ten Diet & Nutrition Cases



CHAPTER EIGHT

ACCIDENT AND EMERGENCY SUB-BMC

8.1 INTRODUCTION

The Accident and Emergency Sub-BMC of the hospital operates a 24-hour emergency services to both residents and non-residents of the Central Region. The A&E an important entry point for those without other means of access to medical care and also provides initial treatment for a broad spectrum of illnesses and injuries, some of which may be life threatening and requires immediate attention.

The A&E sub-BMC is managed by five (5) management team, consisting of a Emergency Physician who is the head of the Sub-BMC, DDNS, a Business Manager, a Pharmacist and an Accountant.

8.2 A&E SUB-BMC's 2021 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVE

Table 8.2. 1: A&E sub-BMC's 2021 Performance Against CCTH Strategic Objectives

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY								
The utilization of emergency services for the intended purpose has improved.								
<ul style="list-style-type: none"> The percentage of patients with yellow and green coded cases seen at A&E department declined from 49% in 2020 to 45.3% in 2021. 								
CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.								
	Actual Performance Trend						Target	Remarks
	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual		% Diff.
Average length of stay at the Emergency ward	-	2.8	4.2%	3.0	2.0	2.9	THs = 2.0	Incr
16,503 emergency cases were seen in 2021 as compared to 13,146 in 2020 constituting 25.5% increase in cases seen.								
Cardiopulmonary resuscitation workshop held on 10th-11th March, 2021								
5 radio talks and 1 TV show were carried out.								
Audited all (100%) mortalities at the emergency department								
Emergency drugs restocked at 94.5% in 2021 as compared to 92% in 2020.								
Infectious disease tent at the emergency department renovated.								
Triaging workshops were held on the 17th-18th February 2021 and 25th November 2021.								
2 LHIMS training sessions were held								
CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE								
The expansion of the Accident and Emergency Centre has commenced								
A&E department provided with five (5) additional computers and 5 additional LHIMS access points.								
Accident & Emergency received 11 equipment from Management.								
Six (6) Patient bed mattresses were re-covered.								
Constructed trolley for the new ECG machine.								
CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM								
4.1: Governance Related Performance								
Four (4) Sub-BMC Management meetings held.								
Organized 40 departmental morning meetings								
4.2: Human Resource Related Performance								
Eight (8) Medical Officers posted to the sub-BMC.								
(3) staff sponsored for further training (2 doctors and 1 nurse)								
4.3: Finance related performance								

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE

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

5.1 Improve on Research:

Conducted 1 research in collaboration with surgical department
 Titled: Kernohan-Woltman Notch Phenomenon in Chronic Subdural Hematoma: An under-Diagnosed Phenomenon?
 Authors: M. Asante-Bremang; B. A. B. Alhassan; E. O. Ofori; S. Yussif; K. Agyen-Mensah; G. A. Rahman; P. K. Mbroh; K. M. Edzie.
 Journal of Advances in Medicine and Medical Research, Page 115-123
 DOI: <https://doi.org/10.9734/jammr/2021/v33i2131139> Published: 29 October 2021.

5.2 Improve on Teaching and Learning:

28 Medical students, Pre-med students, foreign medical students and physician assistants passed through the department.

Nursing students rotated through the unit

16 pharmacy students rotated through the unit

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

8.3 TREND OF CASES SEEN AT A&E

The Accident and Emergency services utilization in the hospital has been consistently high over the years because of its unique location and being a tertiary health institution that is serving the people of Central and Western Regions and beyond. In 2020, the situation was impacted by the Covid-19 pandemic, thereby resulting in a sharp decline in the total A&E cases seen from 17,931 in 2019 to 13,146 in 2020. However, in 2021, the provision and service utilization improved leading to a significant rise in the total cases recorded by 25.5% (13,146 in 2020 to 16,503 in 2021). Interestingly, the A&E mortality rate also went up marginally from 8.5% in 2020 to 8.9% in 2021, whilst the cases brought in dead (BID) reduced drastically by 40.5% (44 BID cases) in 2021 as compared to 74 BIDs recorded in 2020. Also, the average length of stay at the A&E department increased to approximately 3 days in 2021 from 2 days in 2020.

The number of A&E cases admitted went up since 2018. In the year under review, the total admission increased by 6.3% (from 4,877 in 2020 to 5,183 in 2021), out of which 3,567 cases were trans-out to the various wards. Detailed trend analysis 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

PARAMETER	2016	2017	2018	2019	2020	2021	REMARKS	TARGET
Total A&E Cases Seen	5,501	12,041	15,949	17,931	13,146	16,503	25.5% incr	-
“Admissions”	-	4,715	4,370	4,513	4,877	5183	6.3% incr	-
Trans-in	-	19	4	1	0	0	0	-
Trans-Out	-	3,168	2,993	3,223	3,504	3567	1.8% incr	-
Deaths	-	398	364	435	365	436	19.5% incr	-
Mortality Rate	-	8.4	8.4	9.6	8.5	8.9	0.4% incr	-
Brought In Dead (BID)	-	189	102	97	74	44	40.5% decr	-
Average Length of Stay	-	2.8	4.2	3.9	2.0	2.9	0.9% incr	THs = 2.0
Procedures	-	259	85	1,083	351	1247	225.27% incr	-
Referrals-in	-	999	1,419	1,833	1,546	746	49.8% decr	-

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

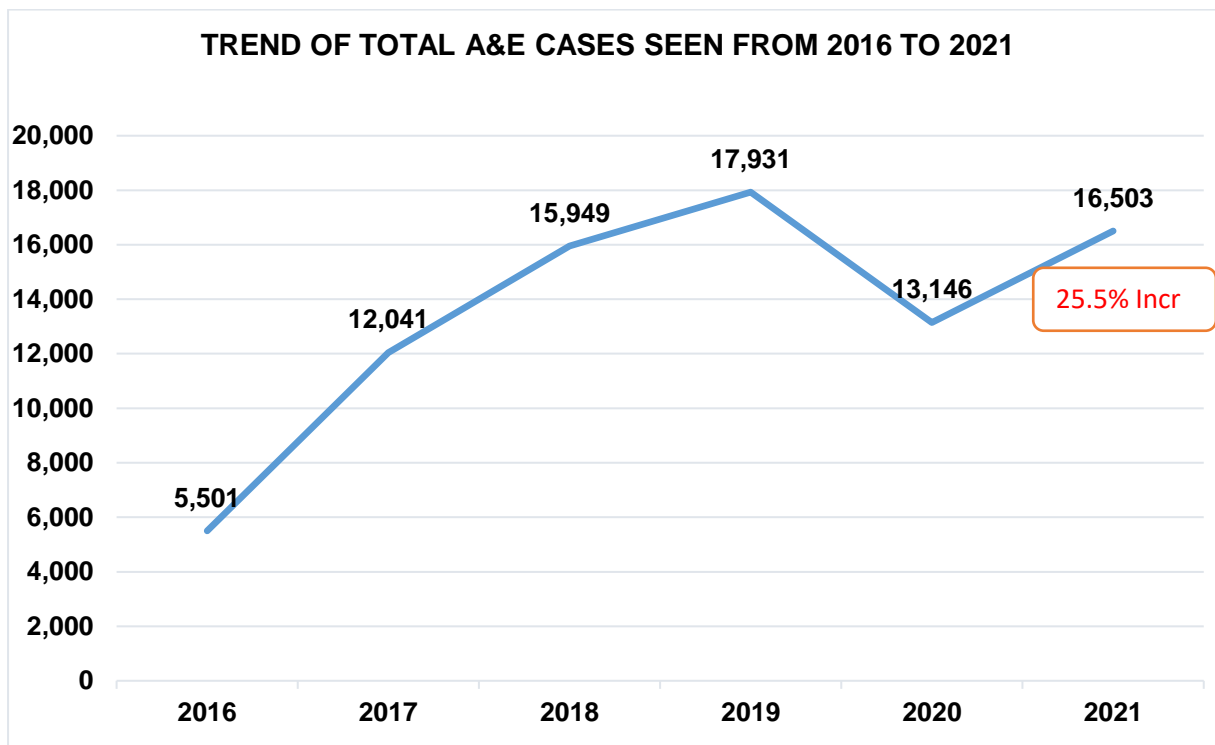


Figure 8.3. 2: Trend Analysis of Deaths Recorded at the A&E

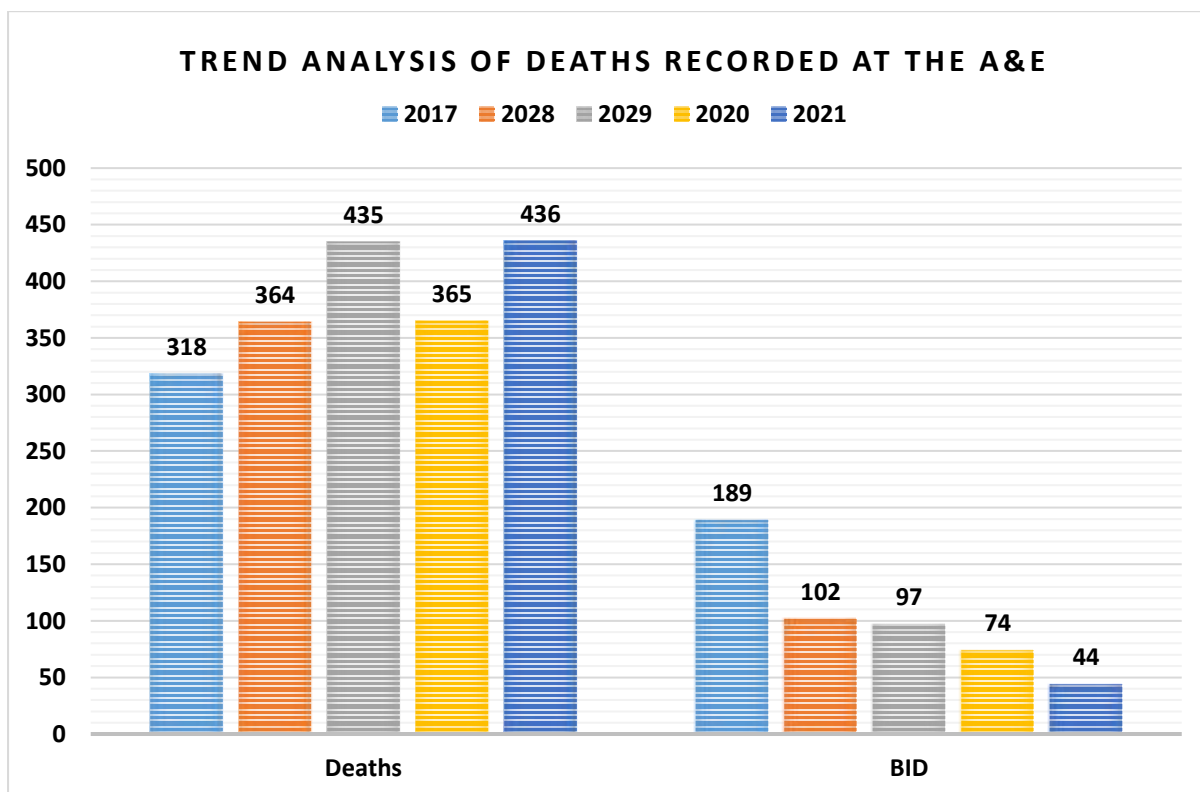


Figure 8.3. 3: Monthly Trend Analysis of Cases Seen at A&E

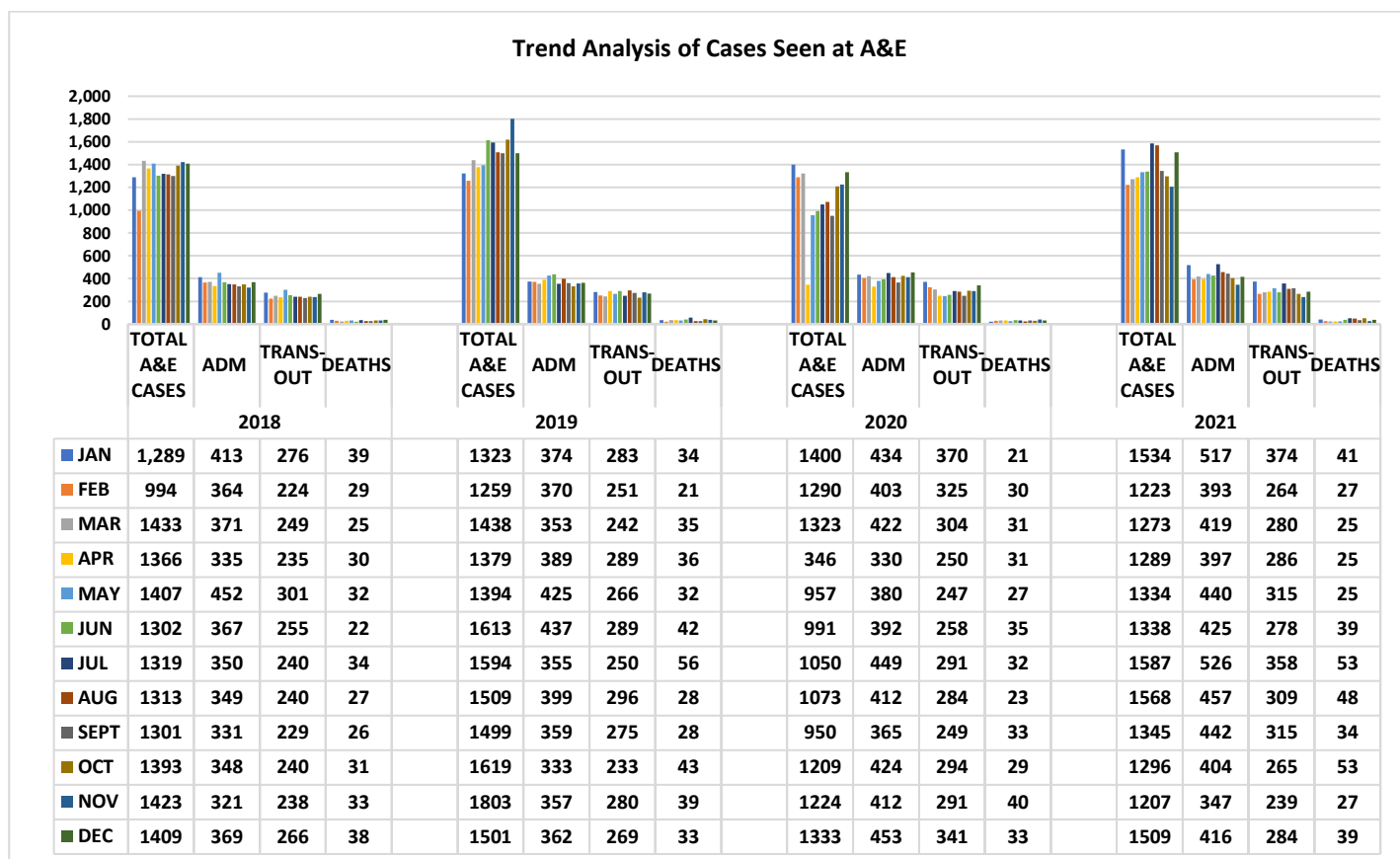


Table 8.3. 2: Monthly Trend Analysis of Cases Seen at A&E

INDICATOR	MONTH											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
2018												
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
2021												
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

INDICATOR	MONTH											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
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

Figure 8.3. 4: A&E Admission Trend

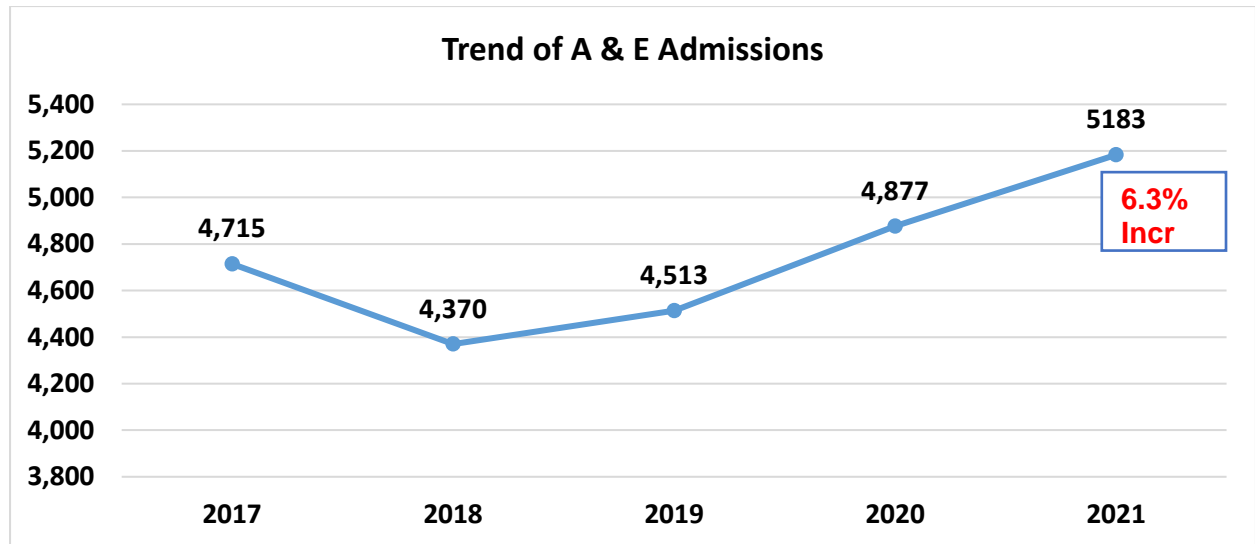


Table 8.3. 3: Trend Analysis of A&E Admissions

INDICATOR	2017	2018	2019	2020	2021	REMARKS
Total A&E Cases Seen	12,041	15,949	17,931	13,146	16,503	25.5% incr
“Admissions”	4,715	4,370	4,513	4,877	5183	6.3% incr
Trans in	19	4	1	0	0	-
Trans Out	3,168	2,993	3,223	3,504	3567	1.8% incr

8.4.1 TOP TEN CAUSES OF A&E ADMISSION

Out of the total A&E cases admitted in 2021, fracture was the leading condition among the top ten cases, constituting 5.57% (86) and of great concern. Pneumonia/ LRTI (77) and Trauma (50) cases constituted 4.99% and 3.24% and ranked 2nd and 3rd among the top ten conditions admitted respectively. Also, UTI (24) and Hernia (24) related emergencies were the least among the top ten cases admitted in 2021, constituting 1.55% each, of total A&E admissions respectively. Further, out of the number of Traumatic conditions recorded, fractures/dislocations cases were the highest, which went up by 252.6% in 2021 (from 133 in 2020 to 469 in 2021), followed by Laceration/Abrasion (126) with the least being traumatic amputation (14). Detailed trend analysis is provided in tables 8.4.1.1 to table 8.4.1.2 and figure 8.4.1.1 below.

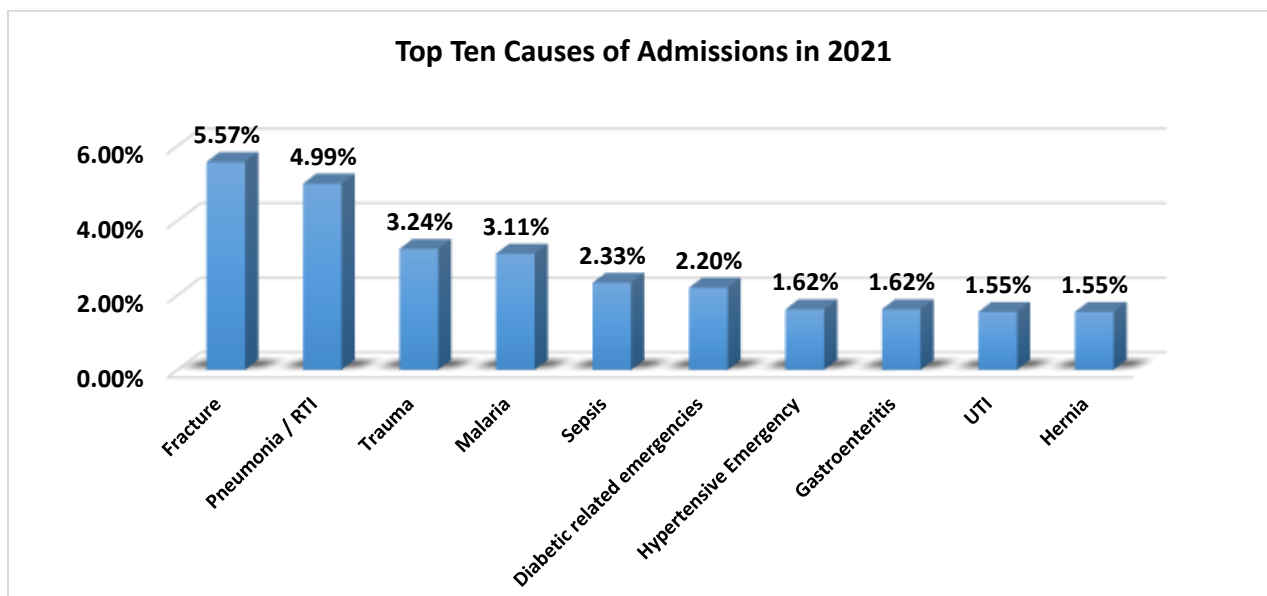
Table 8.4.1. 1: Top Ten Causes of A&E Admission

2019			2020			2021		
DIAGNOSIS	NO. OF CASES	(%)	DIAGNOSIS	NO. OF CASES	(%)	DIAGNOSIS	NO. OF CASES	(%)
Trauma	486	10.8	Trauma	487	10.0	Fracture	86	5.57%
Malaria	363	8.0	Pneumonia/ LRTI	137	2.8	Pneumonia / RTI	77	4.99%
Hypertensive Emergency	201	4.5	Acute abdomen	79	1.6	Trauma	50	3.24%
Acute Abdomen	156	3.5	Diabetic related emergencies	73	1.5	Malaria	48	3.11%
Pneumonia/LRTI	132	2.9	CVA	64	1.3	Sepsis	36	2.33%
Gastroenteritis	111	2.4	Hernia	61	1.3	Diabetic related emergencies	34	2.2%
CVA	107	2.4	Haematuria	59	1.2	Hypertensive Emergency	25	1.62%
UTI	101	2.2	Sepsis	58	1.2	Gastroenteritis	25	1.62%
Gastritis/PUD	93	2.1	Hypertensive emergency	46	0.9	UTI	24	1.55%
Haematuria	82	1.8	Malaria	44	0.9	Hernia	24	1.55%
Other Conditions	2,681	59.4	Other condition	3,768	77.3	Other condition	1114	11.65%
Total	4,513	100	Total	4,513		Total	1543	0.19%

Table 8.4.1. 2: Traumatic Conditions Breakdown

DIAGNOSIS	2019	2020	2021	REMARKS
Fracture/Dislocation	153	133	469	252.6% incr
Laceration/Abrasion	109	41	101	20.2% incr
Head Injury	121	84	126	207% incr
Traumatic Amputation	24	2	14	600% incr
Unspecified Trauma	79	51	17	66.7% decr

Figure 8.4.1. 1: Top Ten Causes of A&E Admission in 2021



8.5 EMERGENCY CASES SEEN ACCORDING TO THE ACUITY

The hospital's A&E over the years implement SATS colour coding system of triaging to triage patients seen at the department, based on the acuity of the disease or ailment. The use of the colour code system enables the prioritization of patient's care. These colours used are red (immediate), orange, yellow, green, blue and black.

Out of 16,503 cases recorded in 2021, the red colour coded cases were 885, which constituted 5.4% of the total. The orange, yellow and green coded cases constituted 14.3%, 25.7% and 54.4% respectively, whilst blue coded cases constituted 0.27%. 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 Triage According to Acuity in 2021

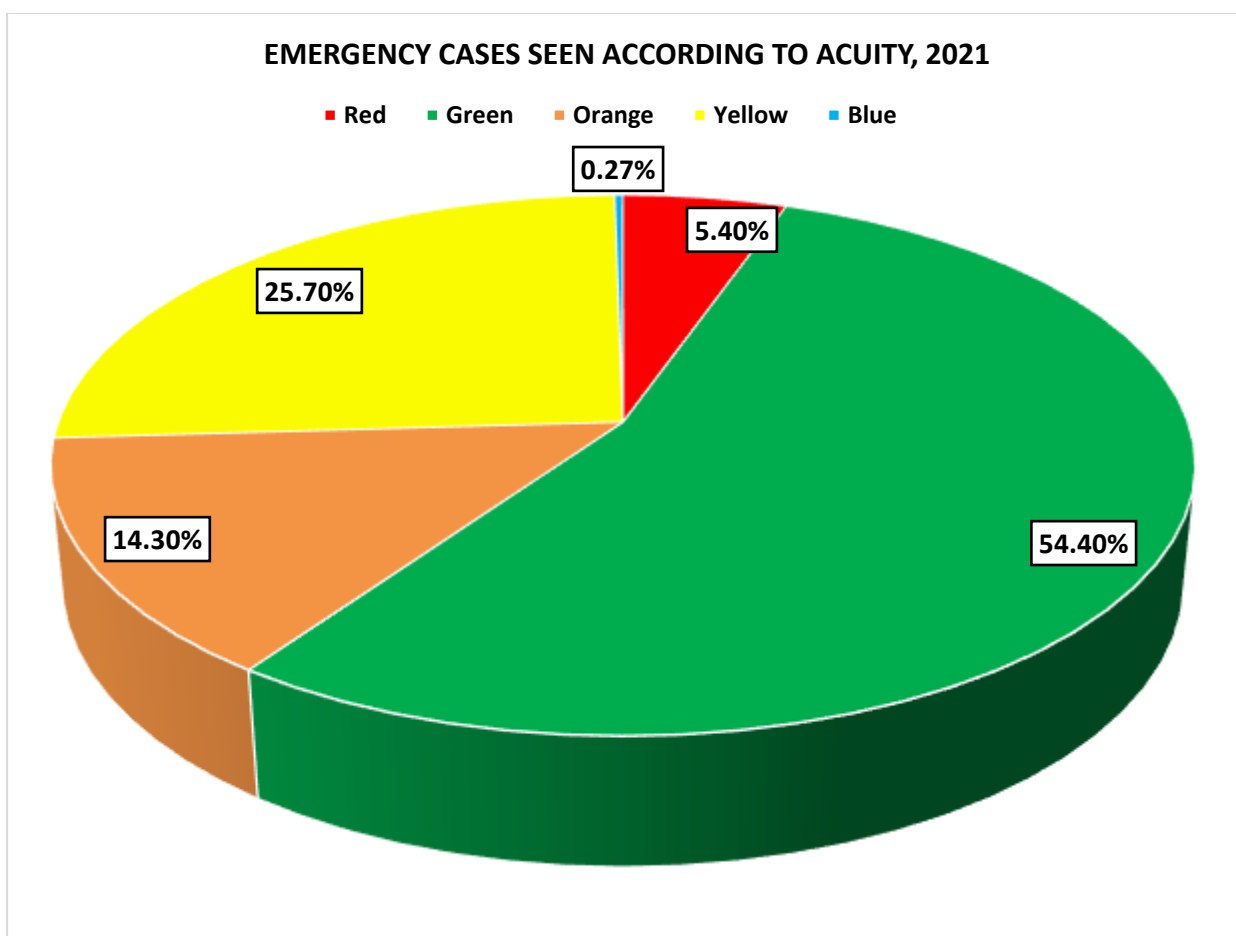


Figure 8.5. 2: Yearly Trend of Emergency Cases Triage by Acuity

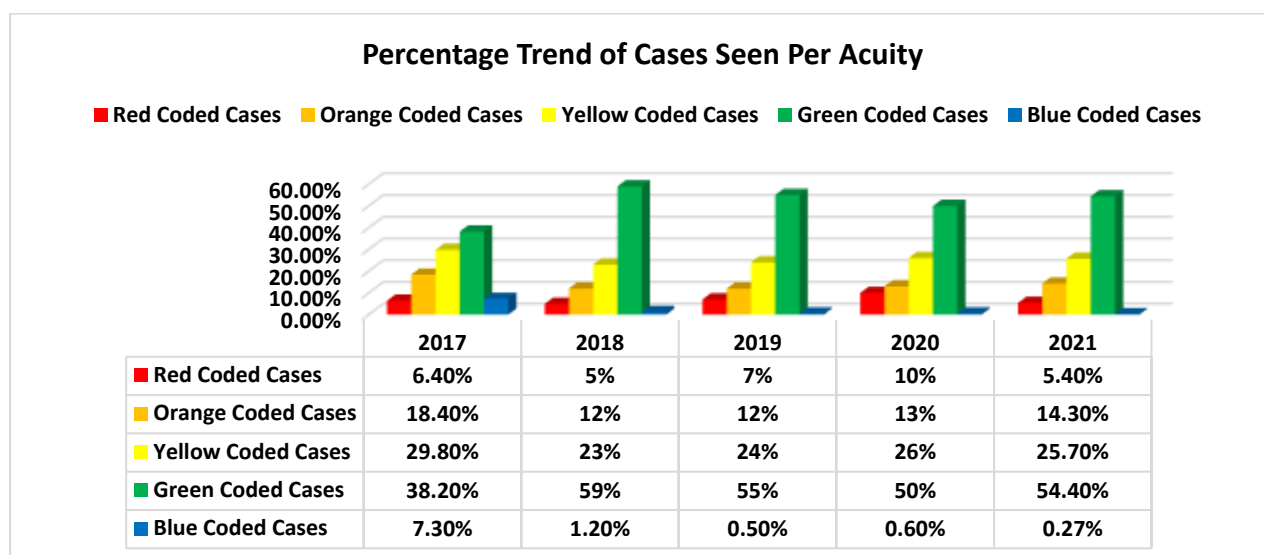


Table 8.5. 1: Percentage Composition of Cases Seen Per Acuity

COLOR CODES	2017	2018	2019	2020	2021	REMARKS
Red	6.40%	5%	7%	10%	5.4%	4.6% decr
Orange	18.40%	12%	12%	13%	14.3%	1.3% decr
Yellow	29.80%	23%	24%	26%	25.7%	0.3% decr
Green	38.20%	59%	55%	50%	54.4%	4.4% incr
Blue	7.3%	1.2%	0.5%	0.6%	0.27%	0.33% decr

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

COLOR CODES	2017	2018	2019	2020	2021	REMARKS
Red	769	773	1,310	1,360	885	34.9 decr
Orange	2,215	1,866	2,244	1,736	2359	35.9% incr
Yellow	3,587	3,676	4,357	3,381	4234	25.2% incr
Green	4,594	9,445	9,923	6,595	8981	36.2% incr
Blue	876	189	97	74	44	40.5% decr
Total	12,041	15,949	17,931	13,146	16503	25.5% incr

Table 8.5. 3: Monthly Trend of Emergency Cases Triage by Acuity in 2021

MONTH	COLOUR CODE					TOTAL
	RED	ORANGE	YELLOW	GREEN	BLUE	
January	81	162	382	906	3	1,534
February	71	160	277	711	4	1223
March	57	166	359	690	1	1273
April	72	174	366	672	5	1289
May	80	205	366	681	2	1334
June	54	198	359	723	4	1338
July	99	238	424	823	3	1587
August	80	213	378	894	3	1568
September	72	185	330	754	4	1345
October	64	224	327	678	3	1,296

MONTH	COLOUR CODE					
	RED	ORANGE	YELLOW	GREEN	BLUE	TOTAL
November	69	217	321	592	8	1,207
December	86	217	345	857	4	1,509
2021 Total	885	2359	4234	8981	44	16503

8.6 TOP 10 FACILITIES A&E CASES REFERRED-IN

As a referral institution, the hospital receives accident and emergency cases from Central Region and beyond. In 2021, the total cases referred to the A&E declined significantly by 49.8% (from 1,546 in 2020 to 746 in 2021). St. Francis Xavier hospital was the highest referring facility in 2021 with 114 cases. Also, among the top ten referring facilities are Ewim Polyclinic (100 cases), UCC hospital (82 cases), Abura Dunkwa Hospital (76) with Effia Nkwanta (42 cases) ranking 10th among the top ten referral facilities in 2021 as illustrated 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

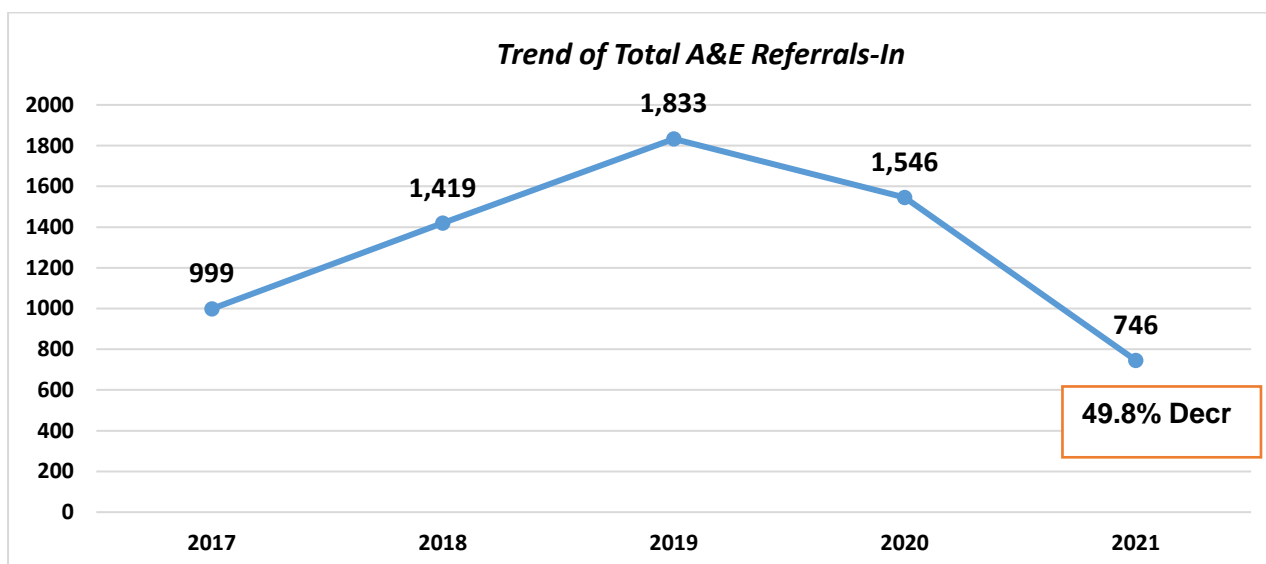


Table 8.6. 1: Trend of Total A&E Referrals

INDICATOR	2017	2018	2019	2020	2021	REMARKS
A&E Referrals-in	999	1,419	1,833	1,546	746	49.8%

Figure 8.6. 2: Top 10 Facilities A&E Cases Were Referred-From, in 2021

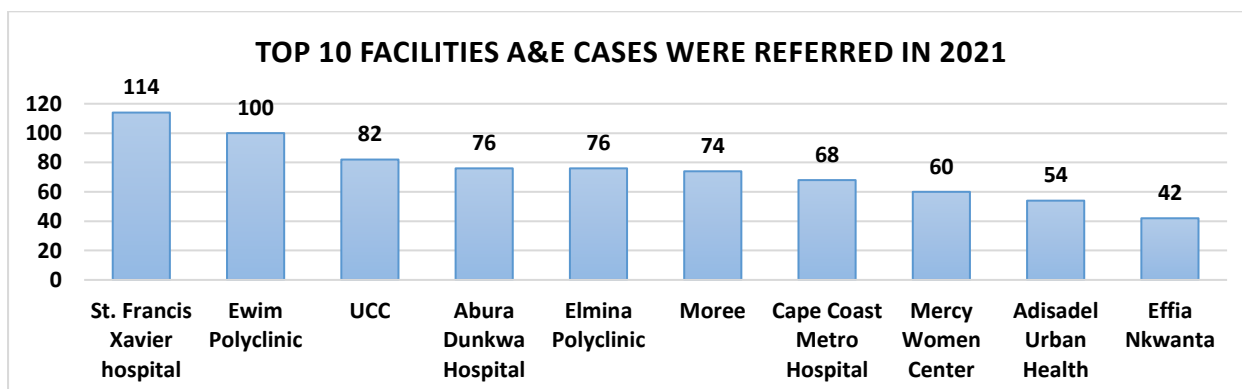


Table 8.6. 2: Top 10 Referring Facilities to A&E

2019		2020		2021	
Facilities	No. of cases	Facilities	No. of cases	Facilities	No. of cases
UCC	147	UCC	150	St. Francis Xavier hospital	114
Mercy Women Centre	119	St. Francis Xavier hospital	115	Ewim Polyclinic	100
Saltpond Hospital	112	Abura Dunkwa Hospital	111	UCC hospital	82
Abura Dunkwa Hospital	93	Cape Coast Metro Hospital	99	Abura Dunkwa Hospital	76
Effia Nkwanta Regional Hospital	91	Saltpond Hospital	98	Elmina Polyclinic	76
Elmina Polyclinic	81	Trauma and Specialist Hospital	93	Moree	74
Cape Coast Metro Hospital	80	Mercy women center	88	Cape Coast Metro Hospital	68
St. Francis Xavier hospital	66	Elmina Polyclinic	82	Mercy Women Center	60
Ankaful LEP/Gen. hospital	65	Ewim polyclinic	80	Adisadel Urban Health	54
Ewim polyclinic	64	Moree Health center	76	Effia Nkwanta	42
		Effia Nkwanta Regional Hospital	73		
		Ankaful LEP/Gen. hospital	53		

8.7 TOP CAUSES OF DEATH AT A&E IN 2021

Pneumonia (46 cases) accounted for the leading cause of A&E deaths in 2021 followed by chronic kidney disease (26) cases, CVA (22) cases, Shock (17) cases, Sepsis (17) cases in order of magnitude. Generally, Pneumonia related death cases at the A&E went up significantly from 7 cases in 2020 to 17 cases in 2021. Also, from the A&E mortality records, it is evident that over the past 3 years, (2019 to 2021), CVA, Head injury and septic shock remained among the top leading causes of A&E deaths in the hospital. A situation that required the engagement of key clinicians through clinical mortality audit to address and improve the survival chances of such patients. Table 8.7.1 and figure 8.7.1 shows the detailed analysis below.

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

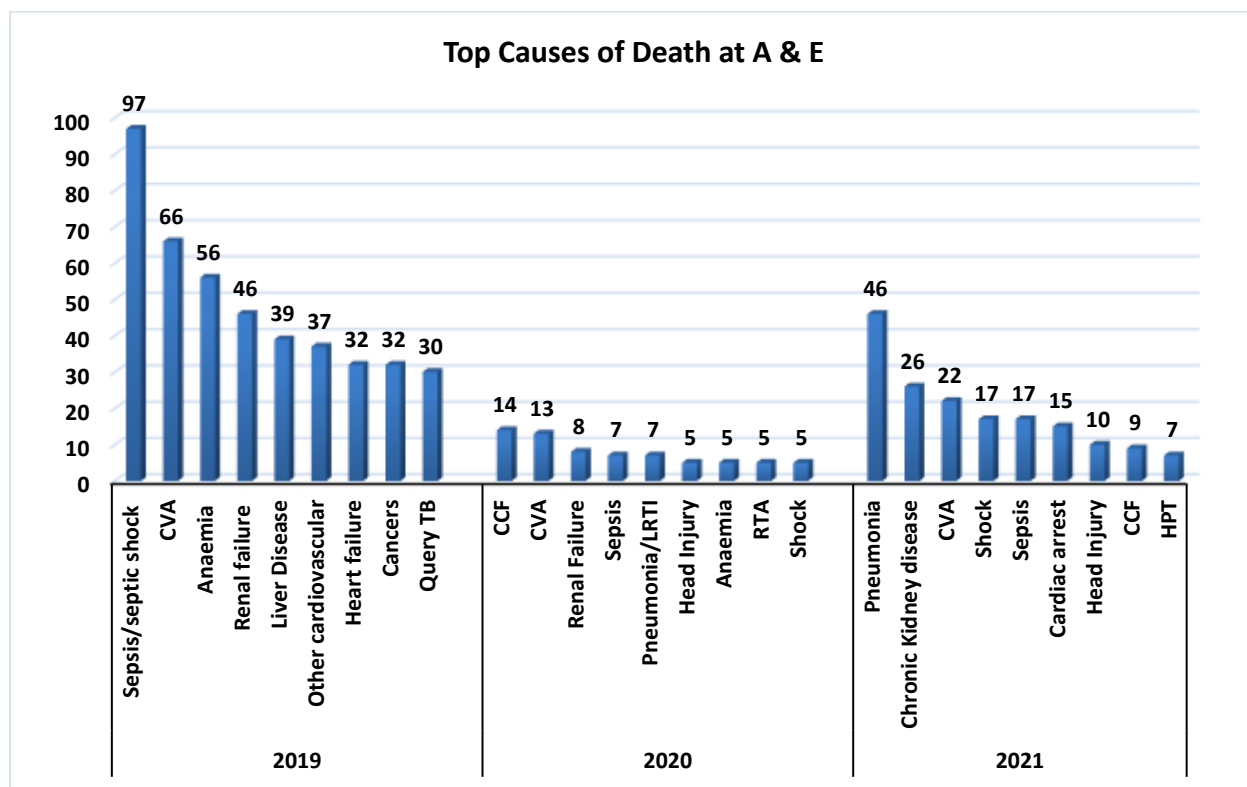


Table 8.7. 1: Top Causes of Death at A&E

2019		2020		2021	
DIAGNOSIS	NO. OF CASES	DIAGNOSIS	NO. OF CASES	DIAGNOSIS	NO. OF CASES
Sepsis/septic shock	97	CCF	14	Pneumonia	46
CVA	66	CVA	13	Chronic Kidney Disease	26
Anaemia	56	Renal Failure	8	CVA	22
Renal failure	46	Sepsis	7	Shock	17
Liver Disease	39	Pneumonia/LRTI	7	Sepsis	17
Other cardiovascular	37	Head Injury	5	Cardiac arrest	15
Heart failure	32	Anaemia	5	Head Injury	10
Cancers	32	RTA	5	CCF	9
Query TB	30	Shock	5	HPT	7
Total	435		69		169

CHAPTER NINE

DIAGNOSTIC SERVICES

9.1 INTRODUCTION

The Diagnostic Services in the hospital are provided by the following departments, namely; the Medical Laboratory department and the Imaging sub-BMC. The services provided by the Medical Laboratory department includes Haematology, Biochemistry, Microbiology services (Bacteriology, Parasitology & Serology) and Pathology. 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 2021 Annual Performance of Diagnostics Sub-BMC under the Strategic Objectives.

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
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	2021 Target	Remarks
Utilisation of laboratory services	-	-	78%	62.5%	260.3%	221.3%	TH = 60%	Decr
Total laboratory Investigation	159,372	266,635	275,329	291,677	241,858	180,415	-	25.4% incr
Utilisation of radiological services	-	-	79.4%	86.9%	530.7%	87%	TH = 60%	Decr
Total Radiology Investigation	14,286	17,342	20,766	20,285	23,697	20,587	-	13.1% decr
-								
CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.								
Laboratory Department								
The Haematology department continued to provide education on nutrition and preventive measures for non-communicable diseases to patients								
Laboratory departmental staff benefitted from training programmes (IPC, QMS, TB, Malaria, Phlebotomy, etc.).								
The laboratory department conducted a Customer Satisfaction Survey								
Some of the laboratory staff served as Regional OTSS and EQA supervisors								
Partnered with KHRC and NMIMR in undertaking the MVPE program and HINI surveillance respectively.								
GeneXpert and Viral Load & EID for lower level facilities.								
IMAGING SUB-BMC								
Organised 2 infection prevention training for staff								
Organised 1 re-fresher training on LHIMS for staff								
CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE								
Laboratory Department								
Completed and operationalized the blood bank with the support of MTN- Ghana								
A nine (9) seater waiting area for clients was created at the pathology department.								
Commenced interfacing of Lightwave e-Health solutions (LHIMS) and the Lab and X-ray Equipment								
Renovation of microbiology work top; funded with WHO-TDR grant.								
Two incubators procured for microbiology unit.								
Following donations received:								
<ul style="list-style-type: none"> • One (1) double decker refrigerator (storing microbiological media), purchased from a mentorship grant by the European Society for Clinical Microbiology and Infectious Diseases • one (1) SD Biosensor F200 and three (3) Lumira DX for SARS COV 2 testing laboratory • One (1) chest freezer donated by the MVPE program for sample storage. 								
The departments provided with computers by management in 2021:								
<ul style="list-style-type: none"> • Imaging department received four (4) computers 								

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
PCR machine installation near completion
New pathology unit's cold room operationalized.
Renovation (tiling) works at the rest room of the pathology department
The pathology department had an air-conditioner and a ceiling fan fixed at both the autopsy room and the reception area respectively.
The Haematology department acquired 2 beds, 4 reclining chairs, 1 TV and a computer acquired for the chemotherapy suite
One (1) binocular microscope received at haematology unit
IMAGING SUB-BMC
Shimadzu machine was repaired
The department received 4 new air-conditioners from management <ul style="list-style-type: none"> • 2 fixed at CT-Scan room • 2 at the X-ray department
The imaging sub-BMC received 1 digital dental equipment from management
The department received 4 Computers from Management
Provision of curtains at the front desk of x-ray dept.
CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM
4.1: Governance Related Performance
Laboratory Department
Improvement projects were conducted (Review of some policies, protocols, SOPs were done).
IMAGING SUB-BMC
A maiden sub-BMC management meeting was held as a newly created sub-BMC
4.2: Human Resource Related Performance
Laboratory Department
Additional Medical Laboratory Scientists reported for permanent duties
One (1) permanent Medical Officer was posted to the haematology department
Two (2) specialists were posted to the department
IMAGING SUB-BMC
One (1) HR Officer was posted to the sub-BMC
Two (2) Residents and four (4) radiographers were engaged.
Six (6) intern radiographers and 9 sonographers were engaged.
4.3: Finance related performance
Laboratory Department
The Pathology Department's revenue increased by 5.6% from GH¢303,480.00 in 2020 to GH¢320,325. In addition, the total expenditure in 2021 increased by 26.6% from GH¢65,579.20 in 2020 GH¢83,010.00 in 2021
The haematology unit continued supervision of house officers and medical officer, as well as other staff at various levels
Two (2) pathologists and three (3) transition managers were posted to the pathology department
IMAGING SUB-BMC
Decreased total revenue generated by 38.8% from GH¢1,913,120 in 2020 to GH¢1,171,139.00 in 2021. In the same line, the total expenditure decreased by 48.3% from GH¢989,433.68 in 2020 to GH¢511,953.60 in 2021 (The decrease in revenue for 2021 was as a result of the faulty CT-Scan machine in the early part of the year). <ul style="list-style-type: none"> • Services provided under the Hospital's Sick Staff Policy at the imagine sub-BMC for 2021 stands at GH¢ 27,906.00
CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING
5.1 Improve on Research:
Laboratory Department
The Pathology department conducted and published one (1) operational research <ul style="list-style-type: none"> • Case Reports in Obstetrics and Gynaecology: Prenatal Diagnosis of skeletal dysplasia and review of the literature. Volume 2021, Article ID 9940063, 5 pages https://doi.org/10.1155/2021/9940063 Publication website-Hindawi
The laboratory department conducted three (3) researches <ul style="list-style-type: none"> • Prevalence Of Human T-cell Lymphotropic Virus Among Blood Donors in Three (3) Regions of Ghana: A Comparative Study • Blood Transfusion in Obstetrics; The Perception of Pregnant Women in The Cape Coast Metropolis • Development Of a Laboratory Quality Management System for The Cape Coast Teaching Hospital to Enhance Amr Detection and Surveillance Capacity
The laboratory department also partnered with KHRC and NMIMR in undertaking the MVPE program and HINI surveillance respectively.

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
Haematology department improved on documentation and data collection
IMAGING SUB-BMC
The imaging department conducted one (1) research <ul style="list-style-type: none"> • Uterine Fibroid Characteristics and Complications in Early Pregnancy Ultrasound Scan; A Retrospective Analytical Study at RAAJ Specialist Scan
5.2 Improve on Teaching and Learning:
Laboratory Department
The laboratory department participated in EQA for TB, Malaria, HIV
The pathology department saw 417 medical students rotating through the department.
The Haematology department continued teaching sessions during ward rounds and in the laboratory (examination of slides)
The microbiology department partnered with KHRC and NMIMR in undertaking the MVPE program and HINI surveillance respectively.
Microbiology department organised monthly scientific presentation on selected topics
Facilitation of seminars/workshops by laboratory staff
There were regular laboratory meetings, presentations and continuous professional education.
Staff at the laboratory benefited from training programmes (IPC, QMS, TB, Malaria, Phlebotomy, etc.).
The haematology department resumed Wednesday morning meetings
The haematology unit continued to offer teaching sessions during ward rounds and in the laboratory (through the examination of slides)
IMAGING SUB-BMC
17 people including residents, radiographers and sonographers were trained
CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS
Laboratory Department
The Laboratory department provided GeneXpert and Viral Load & EID for lower-level facilities.
Some laboratory staff served as Regional OTSS and EQA supervisors
IMAGING SUB-BMC
Provided imaging services to lower-level facilities.

9.3 TREND OF DIAGNOSTIC INVESTIGATIONS

Over the past two years (2020 and 2021) the hospital recorded a continuous decline in the total laboratory investigations carried out by the institution. In 2020, the reduction was by 17.1% (from 291,677 in 2019 to 241,858 in 2020) and in 2021, it declined further by 25.40% (from 241,858 in 2020 to 180,415 in 2021). Similarly, the total radiology investigation carried out declined in 2021 by 13.12% (from 23,697 in 2020 to 20,587 in 2021). On the other hand, the total number of laboratory clients increased in 2021 by 0.39% (from 55,652 in 2020 to 55,871 in 2021), the total radiology clients dropped by 17.48% (from 21,792 in 2020 to 17,983 in 2021). Generally, the laboratory and radiology services utilization in 2021 declined compared to 2020. Further, the pathology department also recorded a significant increment in the total number of autopsies performed in 2021 by 36.7% (from 166 in 2020 to 227 in 2021). 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

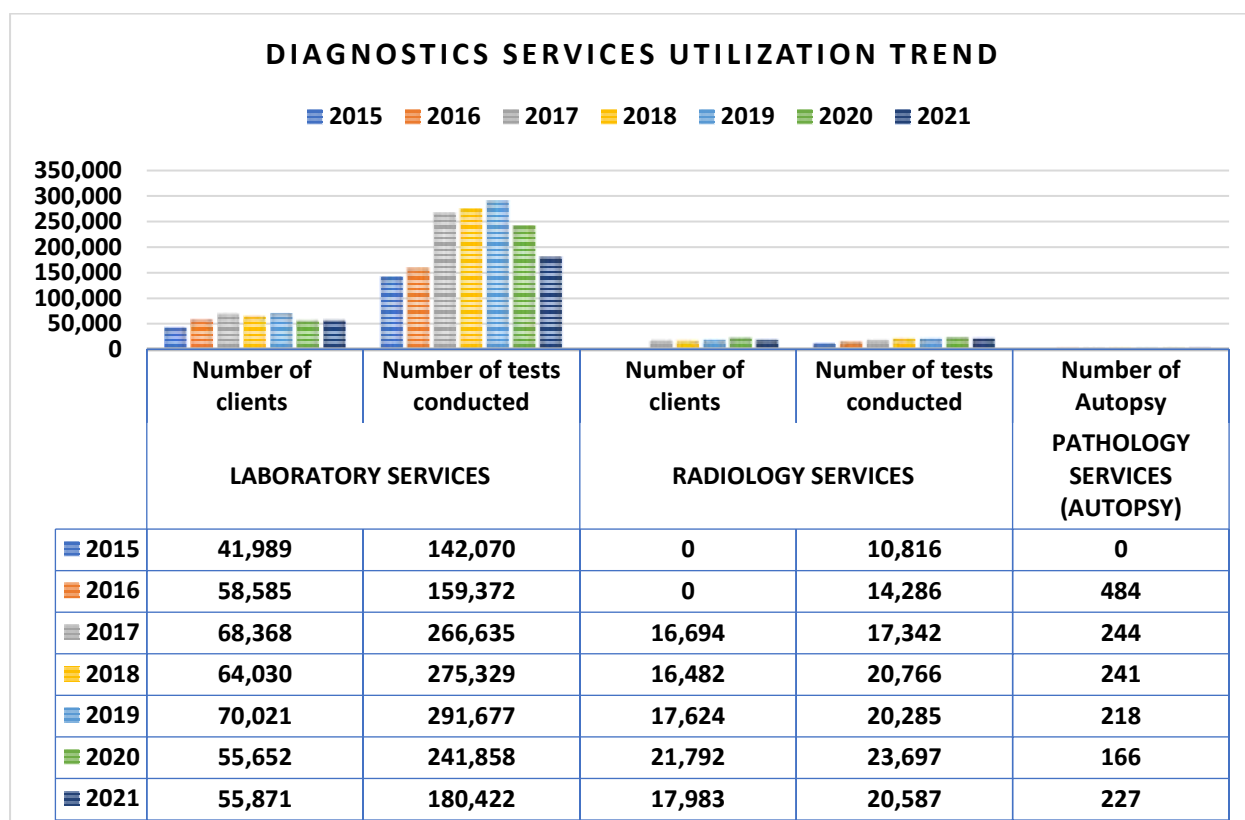


Table 9.3. 1: Diagnostics Services Trend

INDICATOR	2015	2016	2017	2018	2019	2020	2021	REMARKS
LABORATORY SERVICES								
Number of clients	41,989	58,585	68,368	64,030	70,021	55,652	55,871	0.39% incr
Number of tests conducted	142,070	159,372	266,635	275,329	291,677	241,858	180,422	25.40% decr
RADIOLOGY SERVICES								
Number of clients	-	-	16,694	16,482	17,624	21,792	17,983	17.48% decr
Number of tests conducted	10,816	14,286	17,342	20,766	20,285	23,697	20,587	13.12% decr
PATHOLOGY SERVICES (AUTOPSY)								
Number of Autopsy	-	484	244	241	218	166	227	36.7% incr

Table 9.3. 2: Performance under THs KPI

KEY INDICATORS	2018	2019	2020	2021	REMARKS	TARGET	MEASUREMENT
Utilization of Laboratory services	78%	62.5% (decr)	260.3%	221.30%	39% decr	THs = 60%	Total laboratory Investigations / Total Lab request * 100
Total laboratory Investigations	275,329	291,677	241,858	180,415	25.40% decr		-
Total Lab request	59,478	61,900	92,907	73,953	20.40% decr		-

KEY INDICATORS	2018	2019	2020	2021	REMARKS	TARGET	MEASUREMENT
Number of laboratory Client	64,030	70,021	55,652	55,871	0.39% incr		-
Utilization Radiological services	79.4%	86.9% (increase)	530.7%	87%	443.7% decr	THs = 60%	Total Radiological Investigations / Total Radio. request * 100
Total Radiological Investigations	20,766 (27.1% incr)	20,285 (2.3% decr)	23,697	20,587	13.12% decr		-
Total Radio. request	16,482 (1.3% decr.)	17,624 (6.9% incr.)	4,465	17,983	302.75% incr		-
Number of radiology client	18,535 (20.3% incr)	17,624 (4.9% decr)	21,792	17,983	17.50 decr		

9.4 LABORATORY SERVICES

In 2021, the hospital recorded a general decline in laboratory investigations by 25.40% (from 241,858 in 2020 to 180,415 in 2021). Out of the 55,871 clients seen, 45.41% (25369) were in-patients, whereas 54.59% (30,502) were out-patient clients. Despite the general decline in the number of tests conducted, some investigations went up. Microbiology-Parasitology recorded an increase of 44.92% (from 9,403 in 2020 to 13,627 in 2021), whilst Microbiology – Bacteriology went up by 116.60% (from 5,735 in 2020 to 12,422 in 2021). However, some of the lab. Investigations conducted declined in 2021 compared to 2020. For instance, Liver Function Test, Kidney Function Test, and Lipid Profile investigations dropped in 2021, by 77%, 44.55%, and 70.10% respectively.

Further, CCTH in September 2020 commenced the testing of some of the Covid-19 samples from suspected cases in the hospital. In 2021, the hospital's testing site conducted a total of 2,749 Covid-19 tests, out of which, 40.34% (1109) were confirmed positive. Figure 9.4.1 to figure 9.4.9 and table 9.4.1 to table 9.4.12 provides detailed trend analysis of the type of laboratory investigations performed at the hospital.

Figure 9.4. 1: Laboratory Department Client Distribution Trend

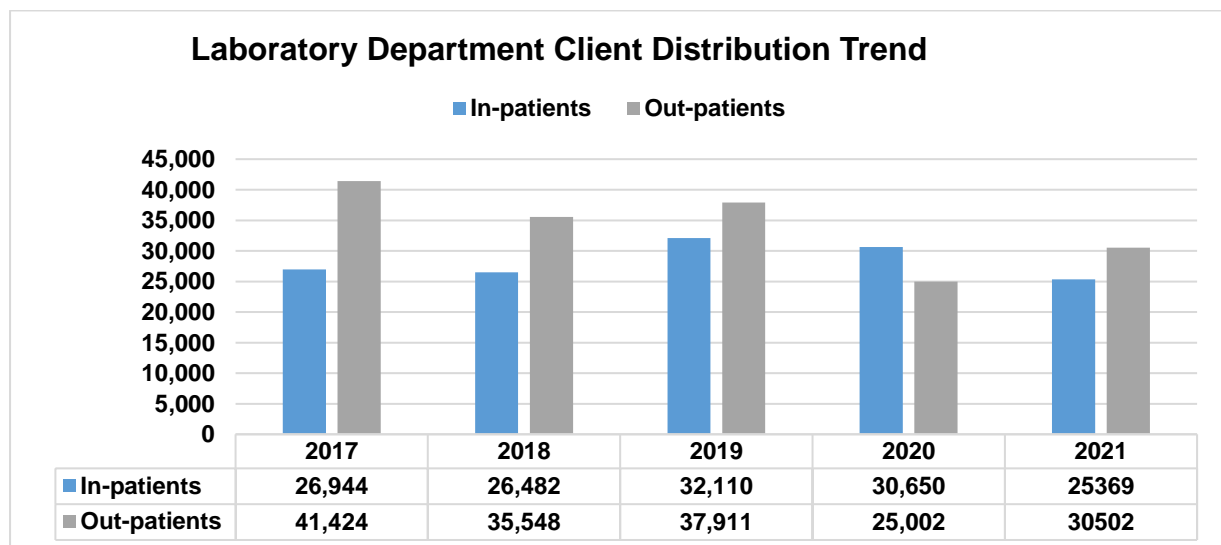


Table 9.4. 1: Laboratory Department Client Distribution Trend

TYPE OF CLIENTS	2017	2018	2019	2020	2021	REMARKS
In-patients	26,944	26,482	32,110	30,650	25,369	17.23% decr
Out-patients	41,424	35,548	37,911	25,002	30,502	21.99% incr

Figure 9.4. 2: Proportion of Laboratory Clients in 2021

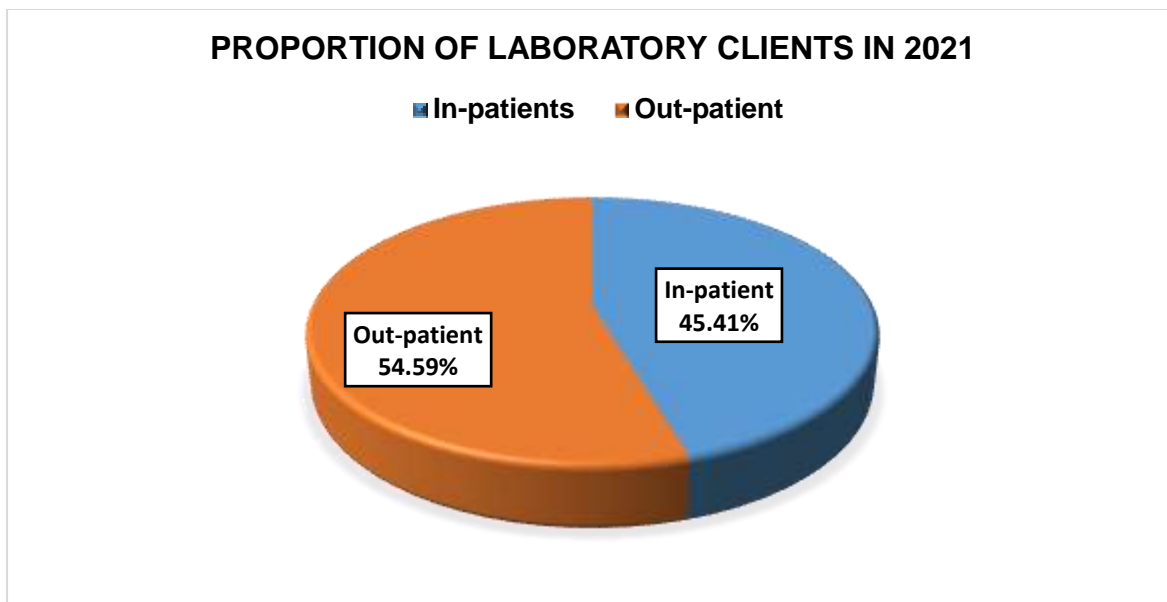


Figure 9.4. 3: Biochemistry Profile Trend

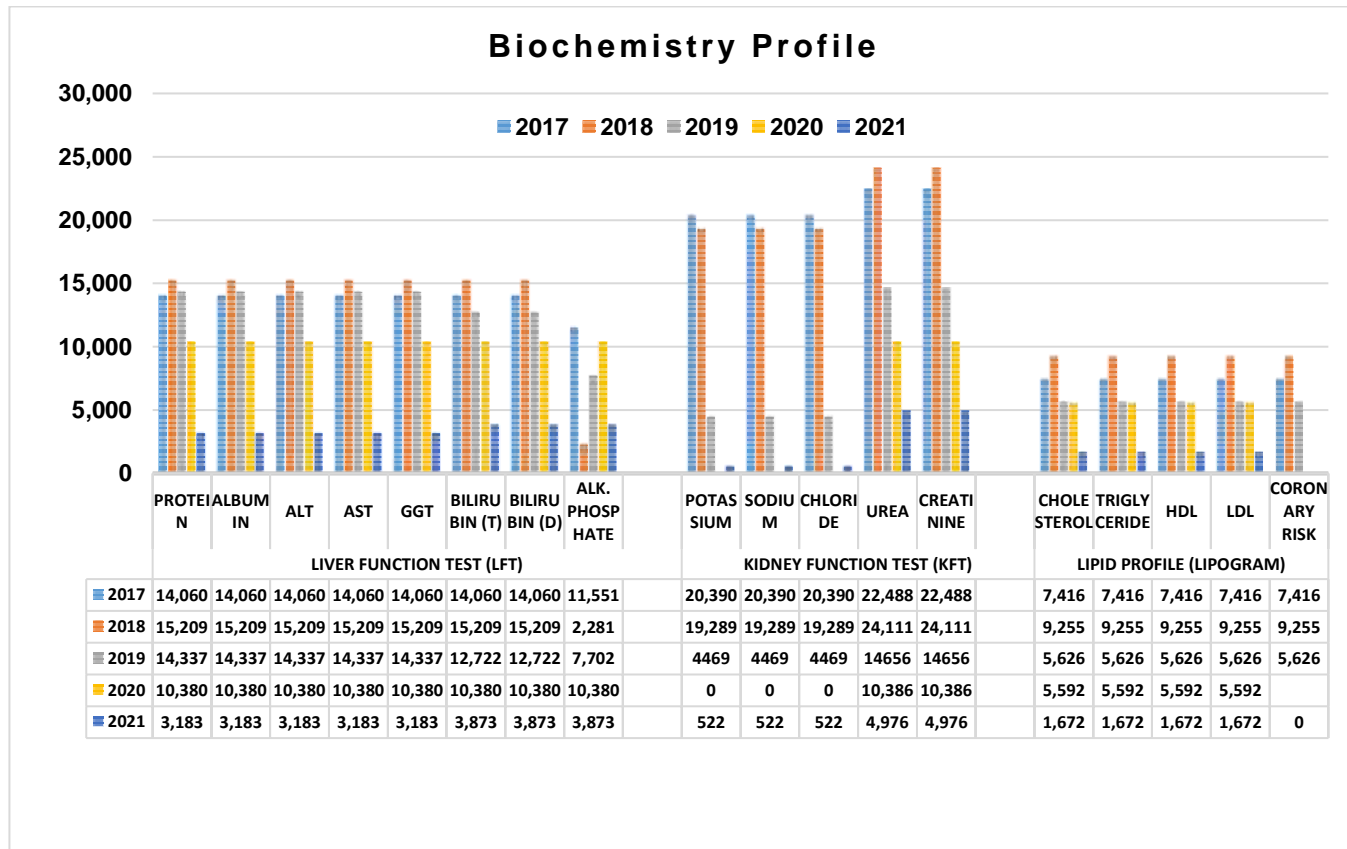


Table 9.4. 2: Biochemistry Profile Trend

INVESTIGATION	2017	2018	2019	2020	2021	REMARKS
LIVER FUNCTION TEST (LFT)						
PROTEIN	14,060	15,209	14,337	10,380	3,183	69.33% decr
ALBUMIN	14,060	15,209	14,337	10,380	3,183	69.33% decr
ALT	14,060	15,209	14,337	10,380	3,183	69.33% decr
AST	14,060	15,209	14,337	10,380	3,183	69.33% decr
GGT	14,060	15,209	14,337	10,380	3,183	69.33% decr
BILIRUBIN (T)	14,060	15,209	12,722	10,380	3,873	62.68% decr
BILIRUBIN (D)	14,060	15,209	12,722	10,380	3,873	62.68% decr
ALK. PHOSPHATE	11,551	2,281	7,702	10,380	3,873	62.68% decr
TOTAL	109,971	108,744	104,831	83,040	19,098	77% decr
KIDNEY FUNCTION TEST (KFT)						
POTASSIUM	20,390	19,289	4469	-	522	-
SODIUM	20,390	19,289	4469	-	522	-
CHLORIDE	20,390	19,289	4469	-	522	-
UREA	22,488	24,111	14656	10,386	4,976	52.0% decr
CREATININE	22,488	24,111	14656	10,386	4,976	52.0% decr
TOTAL	106,146	106,089	42,719	20,772	11,518	44.55% decr
LIPID PROFILE (LIPOGRAM)						
CHOLESTEROL	7,416	9,255	5,626	5,592	1,672	70.10% decr
TRIGLYCERIDE	7,416	9,255	5,626	5,592	1,672	70.10% decr
HDL	7,416	9,255	5,626	5,592	1,672	70.10% decr
LDL	7,416	9,255	5,626	5,592	1,672	70.10% decr
CORONARY RISK	7,416	9,255	5,626	-	-	-
TOTAL	37,080	46,275	28,130	22,368	6688	70.10% decr

Figure 9.4. 4: Biochemistry Investigation Trend

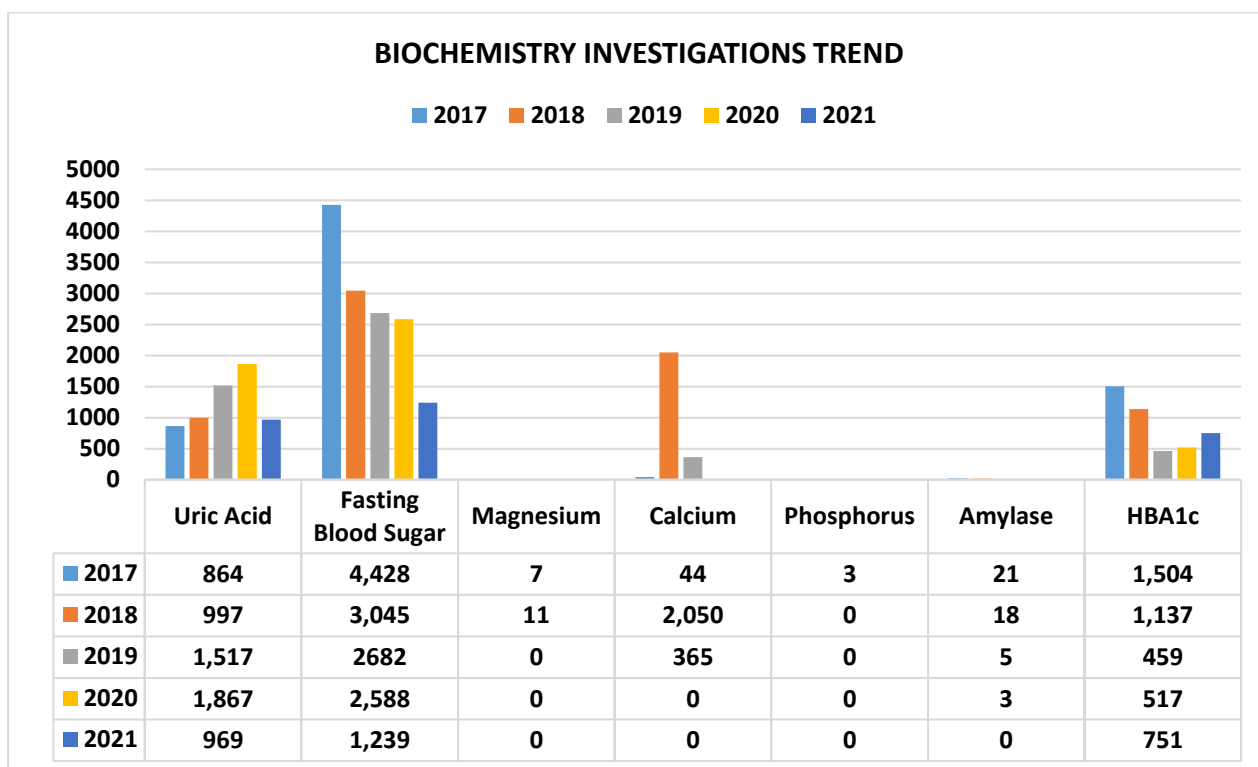


Table 9.4. 3: Biochemistry Investigation Trend -Thyroid & Cardiac Profile

Test	2019	2020	2021	Remarks
FT3	57	220	54	75.45% decr
FT4	57	218	53	75.68% decr
TSH	78	311	46	85.21% decr
T3	0	0	0	-
T4	0	0	0	-
CK-MB	15	39	20	48.71% decr
Troponin I	17	77	37	51.94% decr
Troponin THs	17	74	33	55.40% decr
Total	241	939	243	74.12% decr

Table 9.4. 4: Biochemistry Investigation Trend - Fertility Markers

Test	2019	2020	2021	Remarks
FSH	10	74	32	56.75% decr
Prolactin	11	77	46	40.25% decr
Progesterone	5	16	12	25% decr
Testosterone	10	44	17	61.36% decr
Estradiol (E2)	5	18	18	-
β-HCG (Quantitative)	7	67	5	92.53% decr
LH	-	67	18	73.13% decr
Total	48	363	148	59.23% decr

Table 9.4. 5: Biochemistry Investigation Trend - Tumour & Infectious Markers

Test	2019	2020	2021	Remarks
T-PSA	147	607	17	97.20% decr
F-PSA	1	0	0	-
CEA	3	7	0	-
AFP	9	30	1	96.66% decr
CA 125	8	32	20	37.50% decr
CA 15.3	0	0	0	-
HBsAg (Confirmatory)	0	0	14	-
HBsAg (Quantification)	0	1	0	-
HCV (Confirmatory)	1	0	8	-
HIV (Confirmatory)	1	0	17	-
Total	170	677	77	88.63% decr

Figure 9.4. 5: Microbiology – Parasitology and Bacteriology Investigations Trend

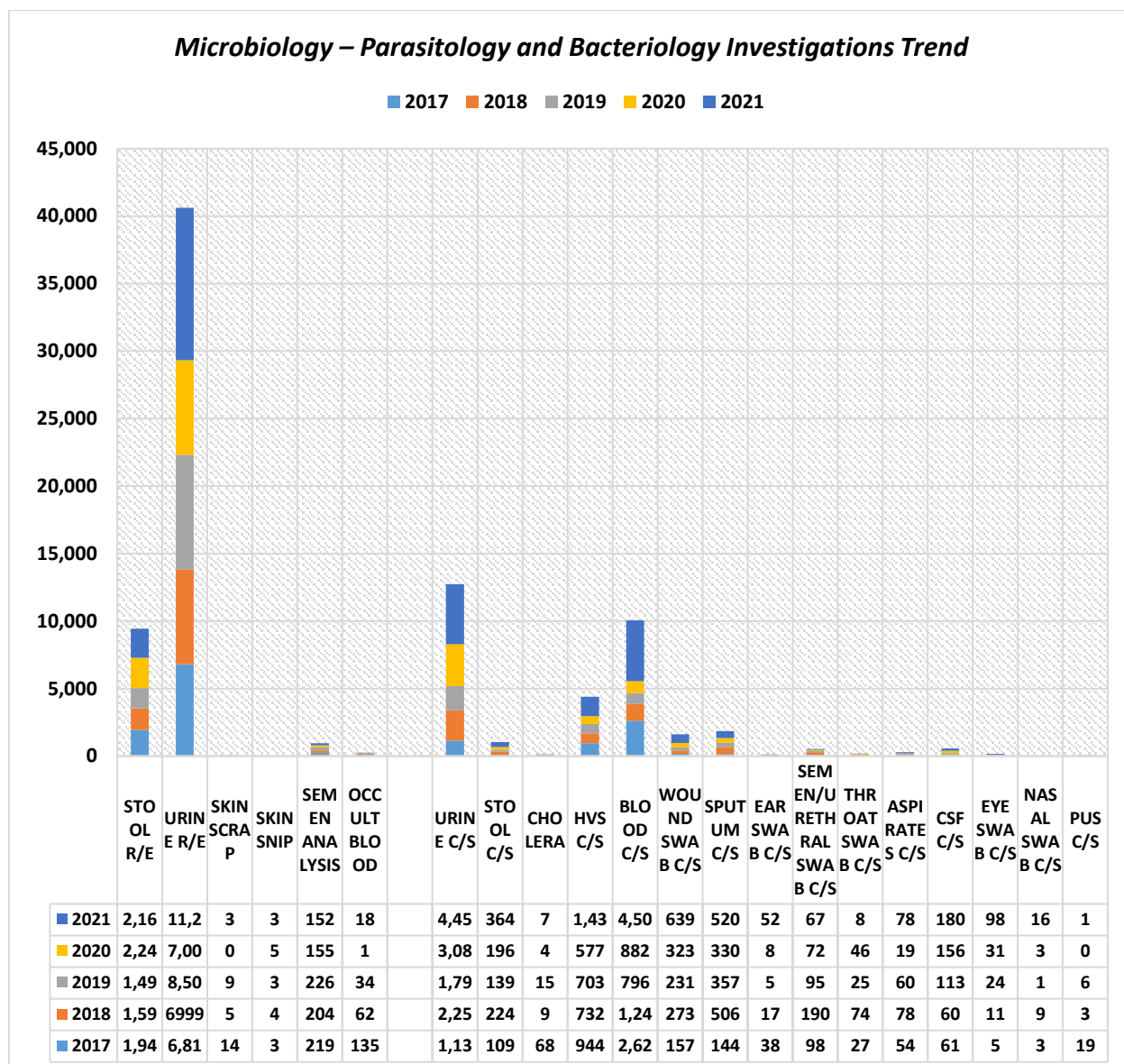


Table 9.4. 6: Microbiology – Parasitology and Bacteriology Trend

INVESTIGATION	2017	2018	2019	2020	2021	REMARKS
PARASITOLOGY						
STOOL R/E	1,945	1,596	1,491	2,241	2,161	3.56% decr
URINE R/E	6,818	6999	8,504	7,001	11,290	61.26% incr
SKIN SCRAP	14	5	9	0	3	-
SKIN SNIP	3	4	3	5	3	40% decr
SEMEN ANALYSIS	219	204	226	155	152	
OCCULT BLOOD	135	62	34	1	18	1700% incr
TOTAL	9,134	8,870	10,267	9,403	13,627	44.92% incr
BACTERIOLOGY						
URINE C/S	1,139	2,258	1,797	3,088	4,452	44.17% incr
STOOL C/S	109	224	139	196	364	85.71% incr
CHOLERA	68	9	15	4	7	75% incr
HVS C/S	944	732	703	577	1,433	148.35% incr

INVESTIGATION	2017	2018	2019	2020	2021	REMARKS
BLOOD C/S	2,622	1,246	796	882	4,507	410.99% incr
WOUND SWAB C/S	157	273	231	323	639	97.83% incr
SPUTUM C/S	144	506	357	330	520	57.57% incr
EAR SWAB C/S	38	17	5	8	52	550% incr
SEMEN/URETHRAL SWAB C/S	98	190	95	72	67	6.94% decr
THROAT SWAB C/S	27	74	25	46	8	82.60 decr
ASPIRATES C/S	54	78	60	19	78	310.52% incr
CSF C/S	61	60	113	156	180	15.38% decr
EYE SWAB C/S	5	11	24	31	98	216.12% incr
NASAL SWAB C/S	3	9	1	3	16	433.33% incr
PUS C/S	19	3	6	0	1	-
TOTAL	5,488	5,690	4,367	5,735	12,422	116.60% incr

Table 9.4. 7: Microbiology – Bacteriology Trend

INVESTIGATION	2016	2017	2018	2019	2020	2021	REMARKS
AFB (MICROSCOPY)	842	1,194	1,586	1,024	276	322	16.67% incr
GeneXpert (MTB/Rif)	365	1,133	1,750	2,470	2131 (233)	2515 (300)	18.02% incr
TB CULTURE (DR, DST)	16	32	71	218	71	0	-
H1N1 (INFLUENZA)	18	256	89	-	-	69 (4)	-
TOTAL	1,241	2,615	3,496	3,712	2,478	2,837	14.49% incr

Figure 9.4. 6: Microbiology – Bacteriology Trend

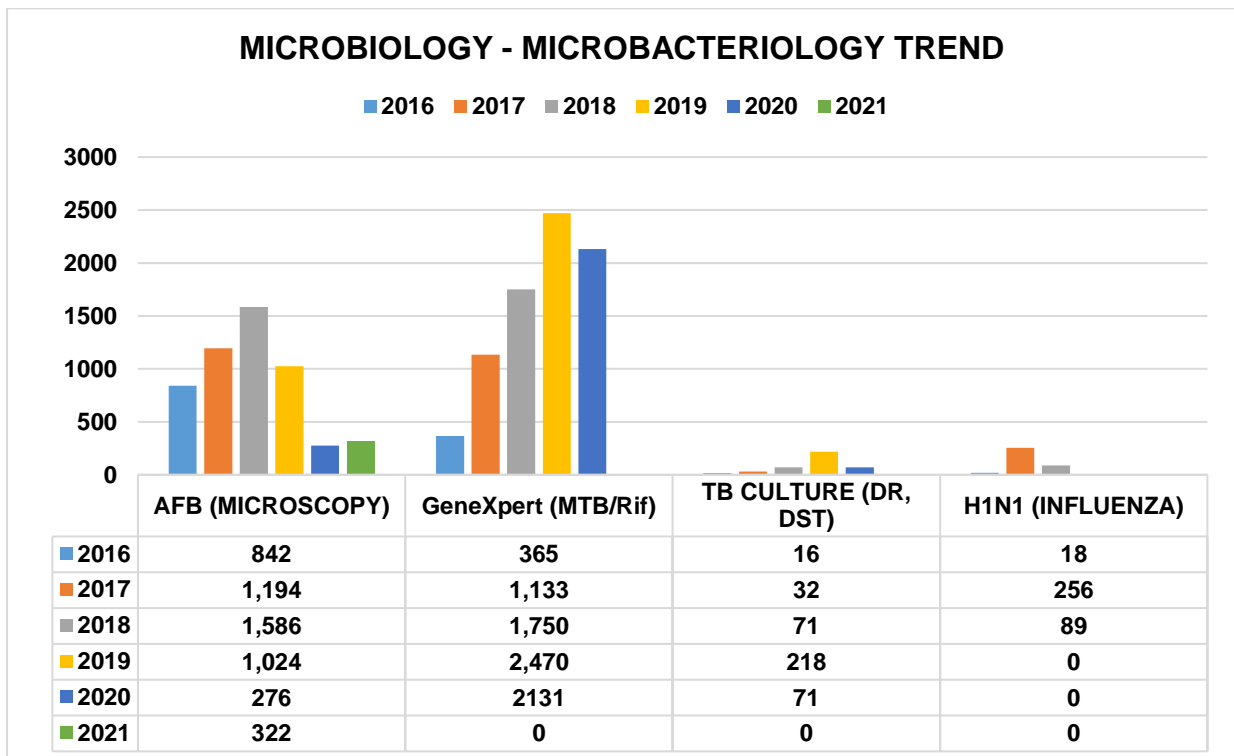


Figure 9.4. 7: Trend of Outcome of TB Culture (Mycobacteriology for TB)

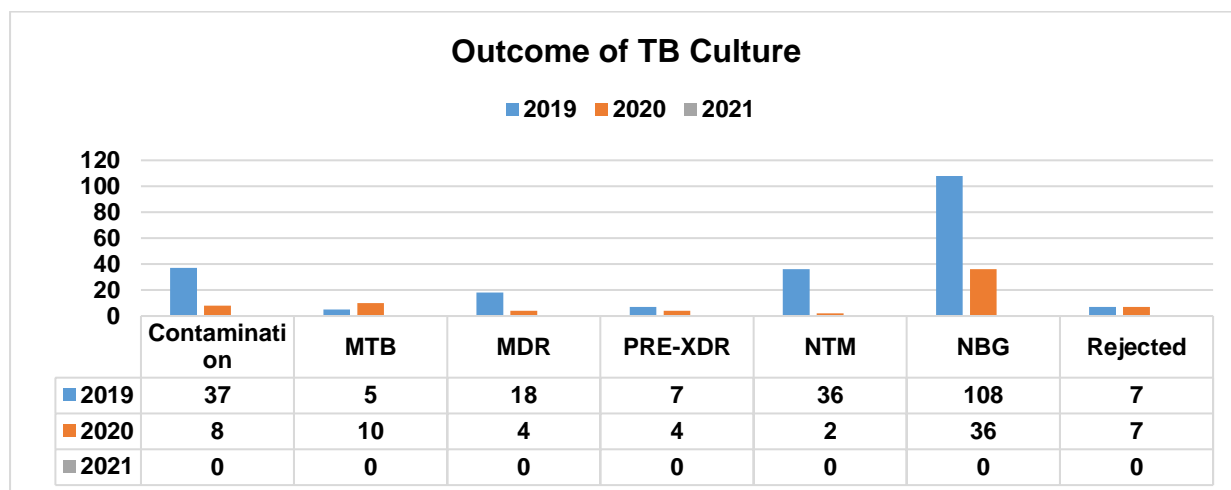


Table 9.4. 8: Trend of Outcome of TB Culture (Mycobacteriology for TB)

OUTCOME	2019	2020	2021	REMARKS
Contamination	37	8	0	
MTB	5	10	0	
MDR	18	4	0	
PRE-XDR	7	4	0	
NTM	36	2	0	
NBG	108	36	0	
Rejected	7	7	0	
Total Cases	218	71	0	

Figure 9.4. 8: Microbiology – Serology Trend

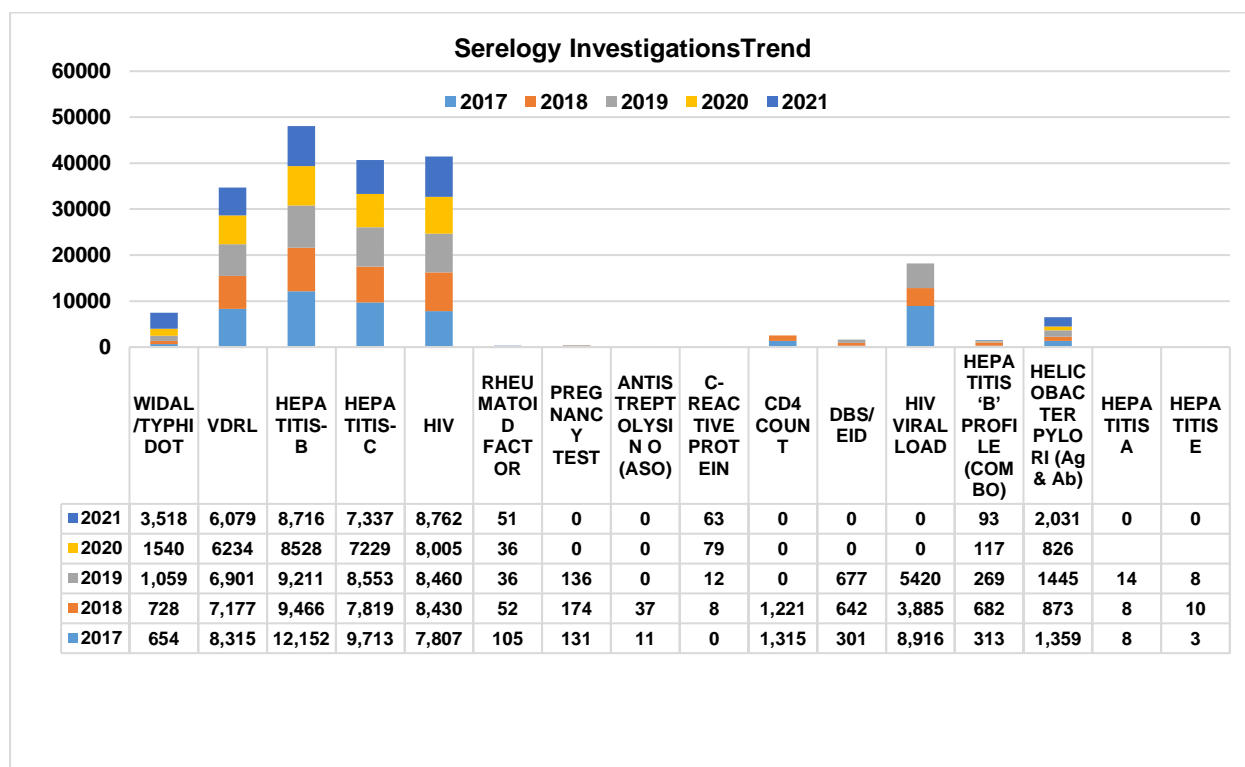


Table 9.4. 9: Microbiology – Serology Trend

INVESTIGATION	2017	2018	2019	2020	2021	REMARKS
WIDAL/TYPHIDOT	654	728	1,059	1540	3,518	128.44% incr
VDRL	8,315	7,177	6,901	6234	6,079	2.49% decr
HEPATITIS-B	12,152	9,466	9,211	8528	8,716	2.20% incr
HEPATITIS-C	9,713	7,819	8,553	7229	7,337	1.49% incr
HIV	7,807	8,430	8,460	8,005	8,762	9.46% incr
RHEUMATOID FACTOR	105	52	36	36	51	41.67% incr
PREGNANCY TEST	131	174	136	-	-	-
ANTISTREPTOLYSIN O (ASO)	11	37	0	-	0	-
C-REACTIVE PROTEIN	0	8	12	79	63	20.25% decr
CD4 COUNT	1,315	1,221	0	-	-	-
DBS/ EID	301	642	677	-	633 (36)	-
HIV VIRAL LOAD	8,916	3,885	5420	-	2807 (1880)	-
HEPATITIS 'B' PROFILE (COMBO)	313	682	269	117	93	20.51% decr
HELICOBACTER PYLORI (Ag & Ab)	1,359	873	1445	826	2,031	145.88% incr
HEPATITIS A	8	8	14		0	-
HEPATITIS E	3	10	8		0	-

Table 9.4. 10: Serology & Immunology - ELISA Test

ELISA TEST	2019	2020	2021	REMARKS
HBsAg	70	2,688	3,453	28.46%
HCV Antibody	70	2,688	3,453	28.46%
HIV Antigen/Antibody	71	2,688	3,453	28.46%
Syphilis Antibody	73	2,688	3,453	28.46%

Table 9.4. 11: Microbiology – Virology/SARS-CoV-2 – Summary of Performance

2020		2021	
Indicator	Number	Indicator	Number
Grand Total number of Cases	530	Grand Total number of Cases	3,468
Grand Total number of Positives	107	Grand Total number of Positives	1,198
Grand Total number of Negatives	423	Grand Total number of Negatives	2,270
Test Positivity Rate (%)	20.189%	Test Positivity Rate (%)	34.544%

Figure 9.4. 9: Haematology Investigation Trend

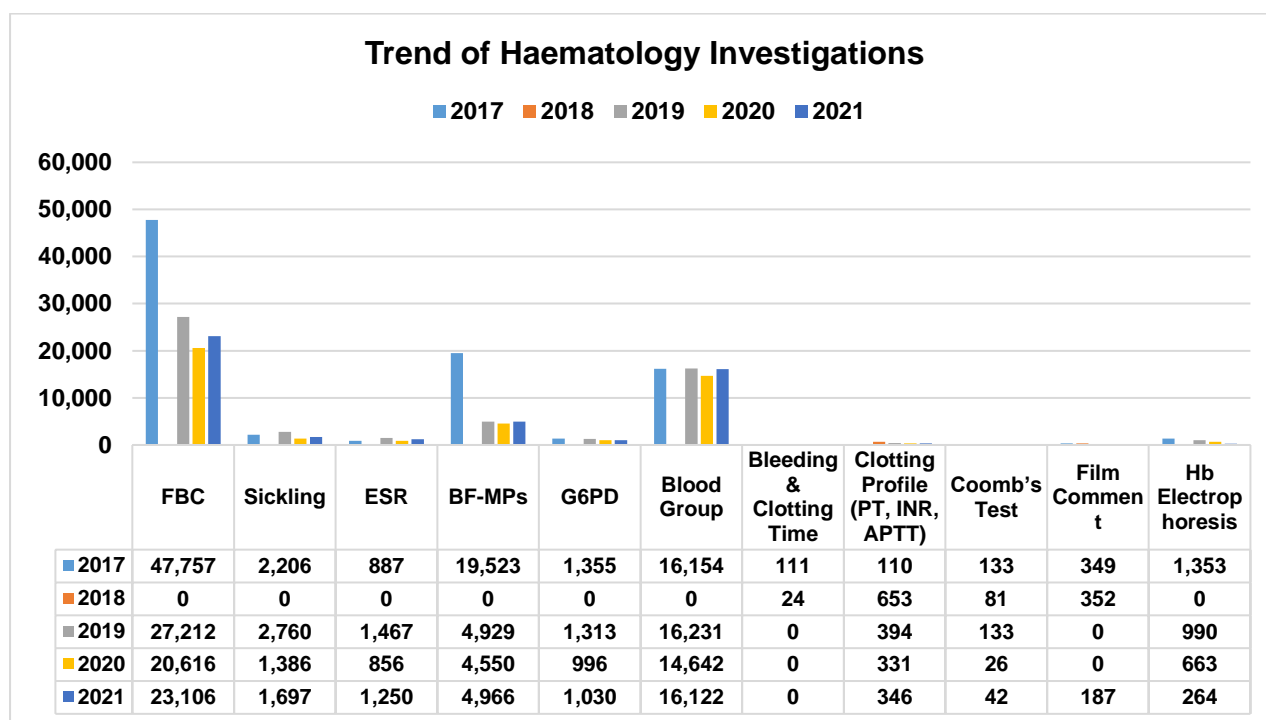


Table 9.4. 12: Haematology Investigation Trend

TEST	2017	2018	2019	2020	2021	REMARKS
FBC	47,757	43,506	27,212	20,616	23,106	12.08% incr
Sickling	2,206	1,610	2,760	1,386	1,697	22.44% incr
ESR	887	1,094	1,467	856	1,250	46.03% incr
BF-MPs	19,523	15,122	4,929	4,550	4,966	9.14% incr
G6PD	1,355	1,253	1,313	996	1,030	3.41% incr
Blood Group	16,154	15,943	16,231	14,642	16,122	10.11% incr
Bleeding & Clotting Time	111	24	-	-	-	-
Clotting Profile (PT, INR, APTT)	110	653	394	331	346	4.53% incr
Coomb's Test	133	81	133	26	42	61.54% incr
Film Comment	349	352	0	-	187	-
Hb Electrophoresis	1,353	1,163	990	663	264	60.18% decr

9.5 LABORATORY SAMPLES REFERRED OUTSIDE CCTH

The hospital collaborates yearly 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 2021, only H1N1 (Influenza) and some of the Covid-19 samples were referred out as detailed in table 9.5.1 below.

Table 9.5. 1: Laboratory Samples Referred to Outside Facilities

TESTS	2016	2017	2018	2019	2020	2021	REMARKS
TB CULTURE (DR, DST)	10	4	13	-	-	-	-
TB CULTURE (LPA)	-	-	9	-	-	-	-
H1N1 (INFLUENZA)	18	256	89	215	18	69	283.33% incr
RUBELLA	8	7	4	0	-	0	-
BURULI ULCER	-	3 (1)	0	0	-	0	-

TESTS	2016	2017	2018	2019	2020	2021	REMARKS
HIVL	-	-	-	559	3184	0	-
EID	-	-	-	73	489	0	-
COVID-19 SAMPLES	-	-	-	-	2,631	2749	

9.6 BLOOD TRANSFUSION & BLOOD DONATION

Transfusion of blood and blood product remains essential live saving treatment. Over the past years, there has been general demand of blood to improve the survival chances of many patients in critical state. In 2021, the total number of whole blood cross-matched decreased by 3.37% (from 4,271 in 2020 to 4,127 in 2021), whereas the total number of whole blood transfused increased by 1.69% (from 3,905 in 2020 to 3,971 in 2021). Although the Obstetrics & Gynaecology ward received the highest proportion (16.97%) of the whole blood transfused in 2021, it recorded a drop of 7.42% in 2021 (from 728 in 2020 to 674 in 2021). COVID-19 Treatment Centre received the least amount (0.43%) of whole blood issued by the hospital's blood bank. Also, the total number of fresh frozen plasma issued increased by 18.94 (from 834 in 2020 to 992 in 2021). 24.40% (242) of FFP was issued to the Obstetrics & Gynaecology ward, 22.38% (222) was issued to the obstetric emergency unit (ETAT) with the least (0.10%) sent to the Executive Suite.

Furthermore, the hospital over the years have recorded a general decline in blood donations. Blood replacement/pre-deposit, Blood donations from Mobile blood donations session as well as blood donated by clients from ANC declined in 2021 by 15.19%, 16.81% and 53.85% respectively. However, blood donated by walk-in clients went up in 2021 by 18.18% (from 110 in 2020 to 130 in 2021). In all, 242 pints of blood were discarded, due to reasons such as, TTIs, clotting, expiration, transfusion reaction, 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

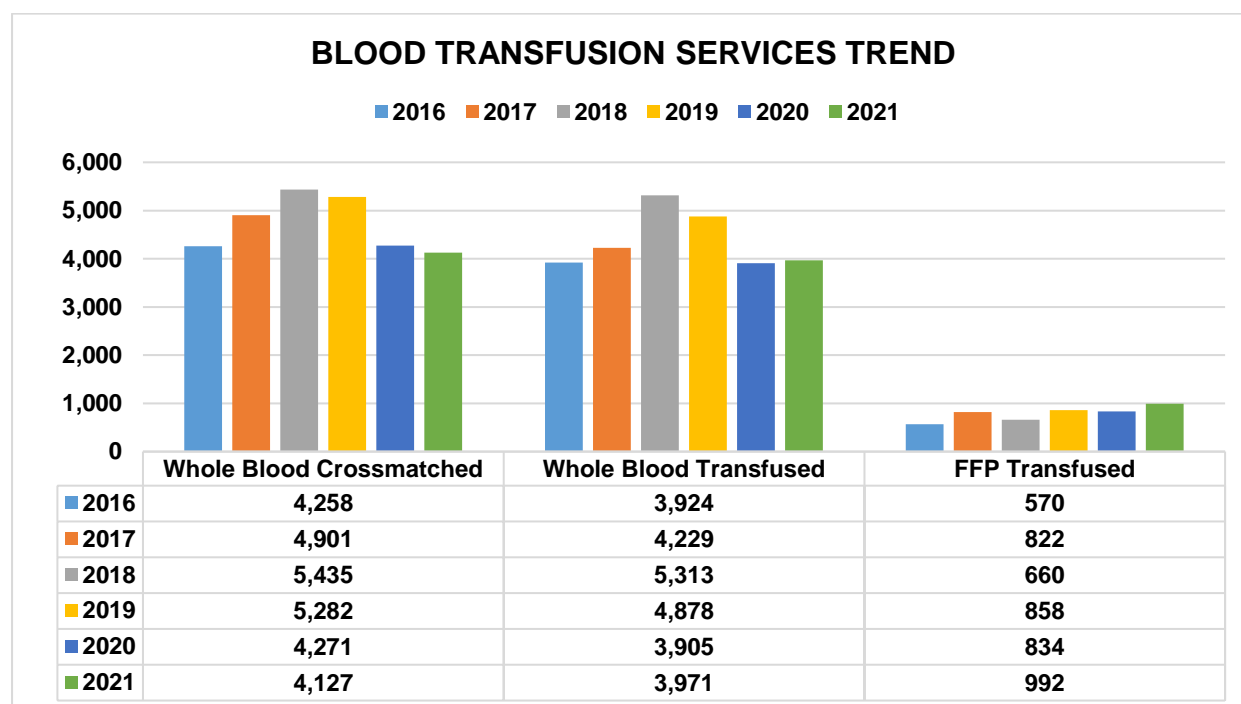


Table 9.6. 1 Trend in Blood Transfusion

INDICATOR	2016	2017	2018	2019	2020	2021	% Diff.
Whole Blood Crossmatched	4,258	4,901	5,435	5,282	4,271	4,127	3.37%decr
Whole Blood Transfused	3,924	4,229	5,313	4,878	3,905	3,971	1.69% incr
FFP Transfused	570	822	660	858	834	992	18.94% incr

Figure 9.6. 2: Blood Donation Trend

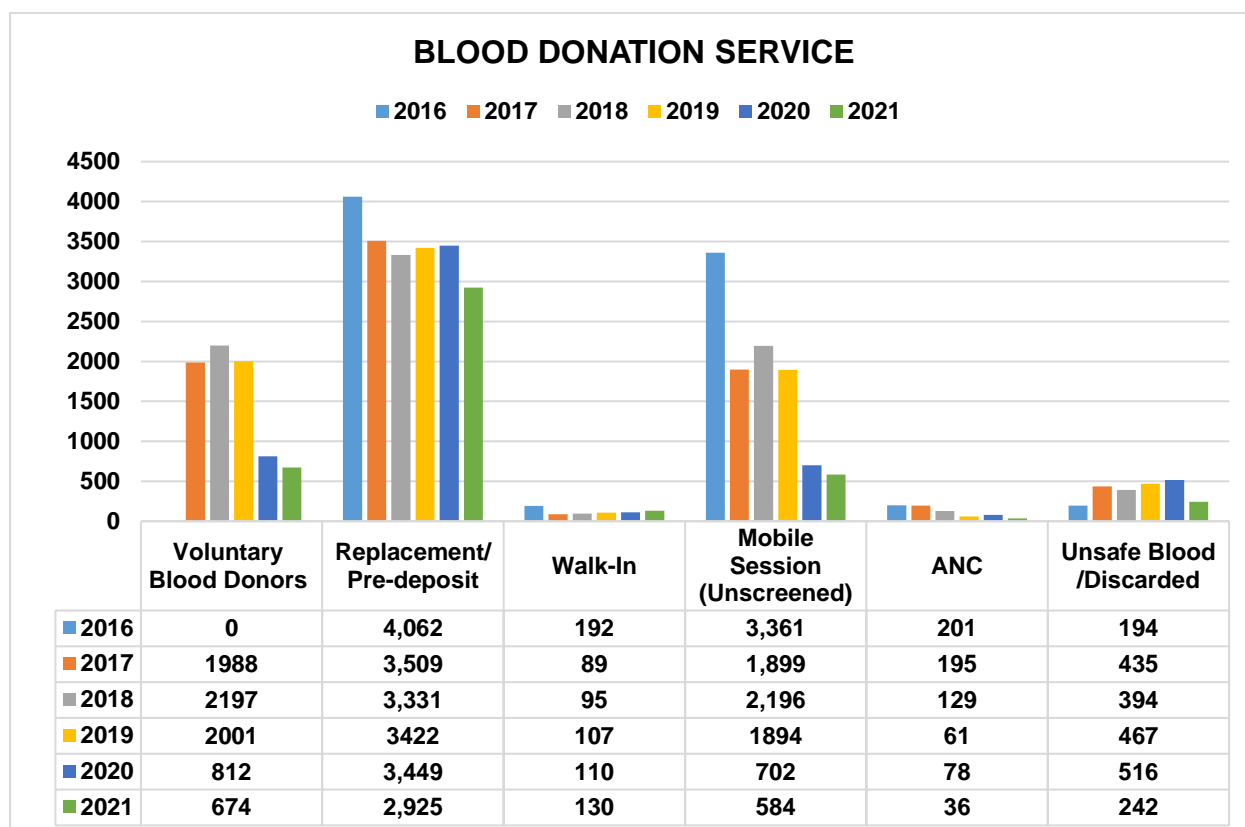


Table 9.6. 2: Blood Donation Trend

GROUPS	QUANTITY OBTAINED						% Diff.
	2016	2017	2018	2019	2020	2021	
Voluntary Blood Donors	-	1988	2197	2001	812	674	17% decr
Replacement/Pre-deposit	4,062	3,509	3,331	3,422	3,449	2,925	15.19%, decr
Walk-In	192	89	95	107	110	130	18.18% incr
Mobile Session (Unscreened)	3,361	1,899	2,196	1,894	702	584	16.81% decr
ANC	201	195	129	61	78	36	53.85% decr

GROUPS	QUANTITY OBTAINED						% Diff.
	2016	2017	2018	2019	2020	2021	
Unsafe Blood /Discarded	194	435	394	467	516	242	53.10% decr

Table 9.6. 3: Trend of Blood and Blood Products Transfused to Various Wards

Ward	Whole Blood Issued				FFP			
	2019	2020	2021	Remarks	2019	2020	2021	Remarks
Accident & Emergency	635	282	379	34.40% incr	36	15	47	Incr
Female Medical	341	276	251	9.06% decr	23	19	61	incr
Female Surgical	410	415	502	20.96% incr	12	14	36	Incr
Male Medical	331	391	236	39.64% decr	10	8	15	incr
Male Surgical	578	499	630	26.25 incr	18	62	72	Incr
Neonatal Intensive Care Unit	128	85	138	65.29% incr	28	3	51	incr
Paediatric Ward	338	334	327	2.10% decr		26		
Intensive Care Unit	139	143	97	32.17% decr	69	61	62	incr
Delivery Suite	209	116	116	sustained	117	80	117	incr
Obstetrics & Gynaecology	826	728	674	7.42% decr	272	303	242	decr
ETAT	235	158	197	24.68% incr	239	125	222	incr
Dialysis	197	153	207	35.29% incr	0	0	0	sustained
Executive Suite	20	22	27	22.73% incr	0	2	1	decr
Ward Not Indicated	283	185	61	67.03% decr	14	77	17	decr
Out-Stations	168	92	67	27.17% decr	20	39	29	decr
COVID-19 Treatment Centre	-	26	17	34.62% decr	-	0	0	sustained
Total	4,876	3,905	3,971	1.69% incr	858	834	992	incr

Table 9.6. 4: Reasons for Discarding Blood

2020	2021
REASONS FOR DISCARDING BLOOD	REASONS FOR DISCARDING BLOOD
1. TTIs	1. TTIs
2. Clotted	2. Clotted
3. Under or over bled	3. Under
4. Expired	4. Expired
5. Transfusion reaction	5. Incomplete blood transfusion
6. Haemolysed	6. Haemolysed
7. Polycythaemia	7. Polycythaemia
8. Presence of visible protein & lipid particles (cloudy plasma)	8. Presence of visible protein & lipid particles (cloudy plasma)

9.7. HAEMATOLOGY SERVICES

The Haematology department since 2020 recorded decline in its clinic attendance. In 2021, the Haematology OPD clinic attendance significant reduced by 52.27% (from 396 in 2020 to 189 in 2021). Similarly, the number of Haematology cases admitted declined by 41% (from 17 in 2020 to 10 in 2021) whilst the Haematology related mortalities also dropped by 50% (from 10 in 2020 to 5 in 2021). On the other hand, sickle cell cases seen went up by 89.13% in 2021 (from 46 in 2020 to 87 in 2021). Chronic Lymphocytic Leukaemia (11), Hodgkin lymphoma (10), Chronic Myeloid Leukaemia (7) were the leading conditions among the top 6 cases managed by the Haematology department in 2021. Figures 9.7.1 to figure 9.7.2 and tables 9.7.1 to table 9.7.3 below shows detailed analysis below.

Figure 9.7. 1: Haematology Clinic OPD Attendance

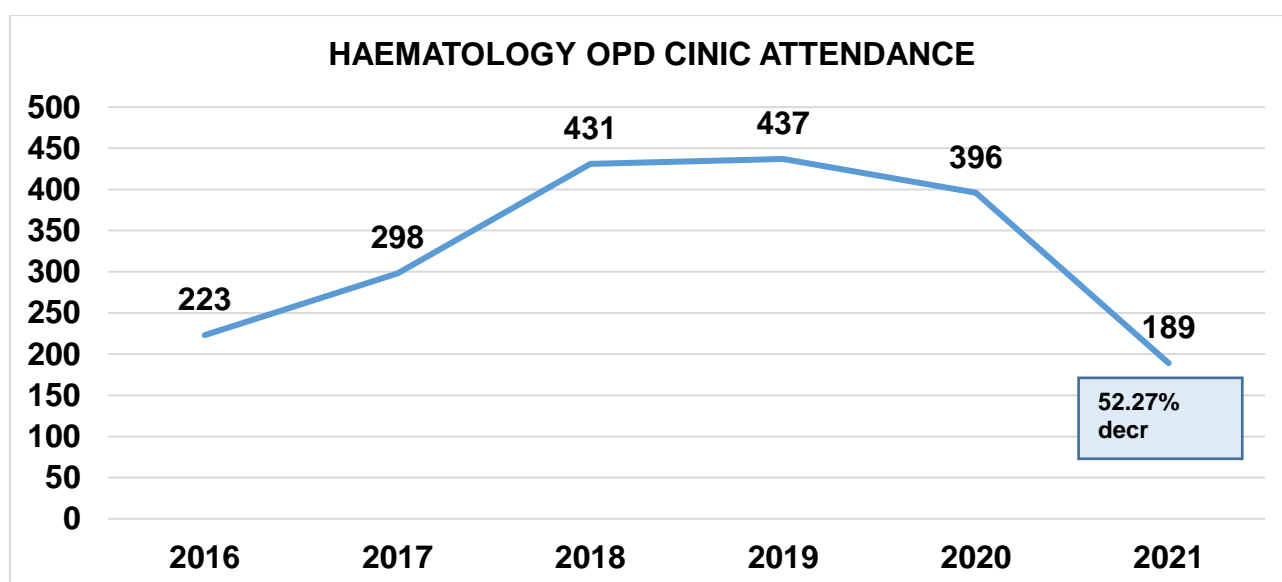


Table 9.7. 1: Haematology Clinic OPD Attendance

CLINICS	2016	2017	2018	2019	2020	2021	REMARKS
Haematology	223	298	431	437	396	189	52.27% decr

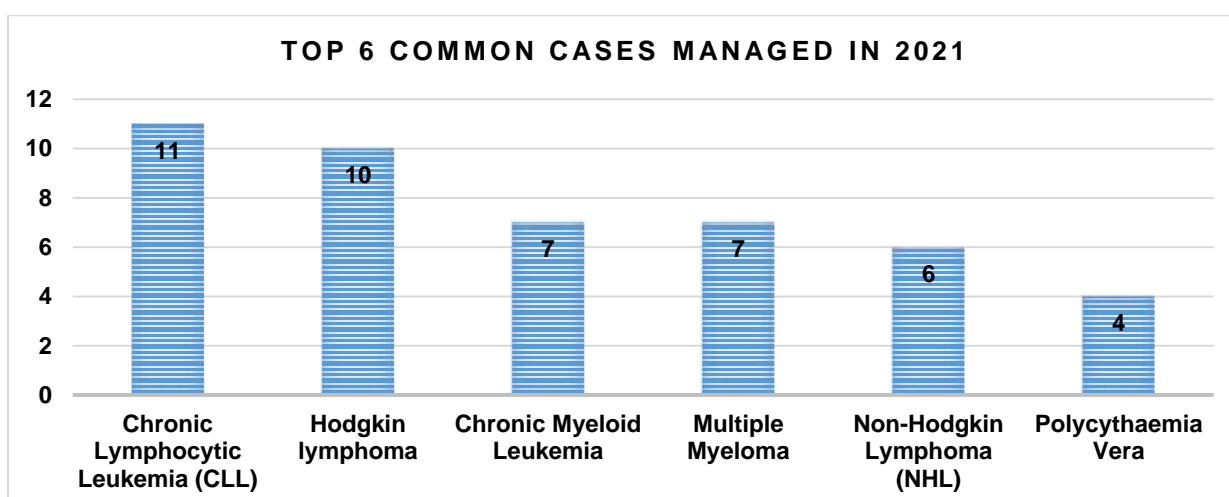
Table 9.7. 2: Trend of Haematology Service Utilization

INDICATOR	2019	2020	2021	REMARKS
No. of Bone marrow Aspirates	13	31	5	84% decr
No. of remissions	11	6	2	67% decr
No. of mortalities	5	10	5	50% decr
No. of relapse Patients	2	3	1	67% decr
No. of Admissions	23	17	10	41% decr
Sickle cell	65	46	87	89.13% incr
Haematology	78	69	102	48% incr

Table 9.7. 3: Top 6 Common Haematology Cases Managed

2020		2021	
CONDITION	NO	CONDITION	NO
Chronic Myeloid Leukaemia	20	Chronic Lymphocytic Leukaemia (CLL)	11
Chronic Lymphocytic Leukaemia (CLL)	10	Hodgkin lymphoma	10
Non-Hodgkin Lymphoma (NHL)	9	Chronic Myeloid Leukaemia	7
Multiple Myeloma	7	Multiple Myeloma	7
Polycythaemia Vera	5	Non-Hodgkin Lymphoma (NHL)	6
Hodgkin lymphoma	2	Polycythaemia Vera	4

Figure 9.7. 2: Top 6 Common Cases Managed in 2021



9.8 RADIOLOGICAL SERVICES

The hospital recorded a decline of 13.12% in the total radiology investigations conducted in 2021 (from 23,697 in 2020 to in 20,587 2021) as well as a reduction of 17.48% in the number of radiology clients seen in the same year (from 21,792 in 2020 to 17,983 in 2021). The highest radiology investigations conducted in 2021 was recorded in the month of January, where as in 2020, it was in the month of October. X-ray (60.05%) investigations constituted the highest proportion of the radiology service utilized, followed by ultrasound (34.16%) and CT- Scan (3.50%) respectively, with the least being interventional radiology investigations in the year under review. The hospital's CT Scan broke down in the first quarter of 2021, resulting in a significant reduction of 85.68% in the CT Scan service utilization from 3,220 investigations conducted in 2020 to 461 investigations conducted in 2021. Detailed analysis is provided in figure 9.8.1 to figure 9.8.4 and table 9.8.1 to table 9.8.4 below.

Figure 9.8. 1: Radiology Service Utilization Trend

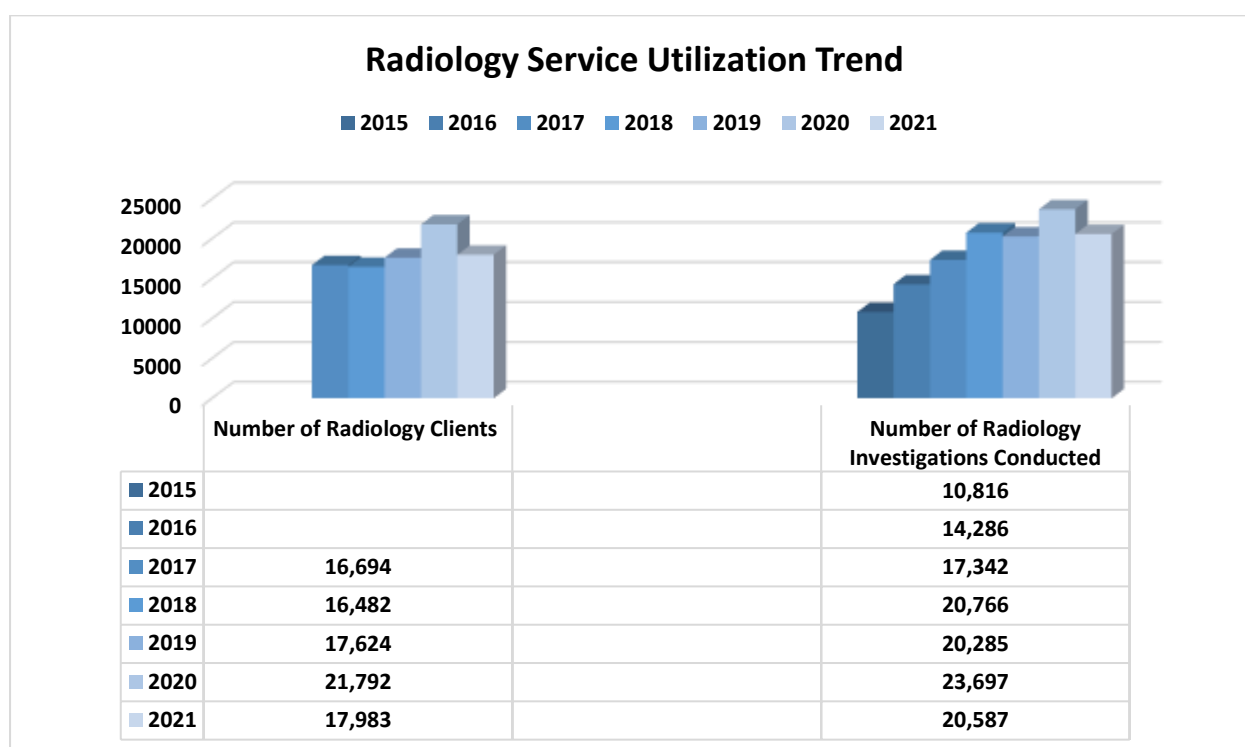


Table 9.8. 1: Trend of Total Radiology Investigations and Clients

INDICATOR	2015	2016	2017	2018	2019	2020	2021	REMARKS
Number of clients	-	-	16,694	16,482	17,624	21,792	17,983	17.48% decr
Number of tests conducted	10,816	14,286	17,342	20,766	20,285	23,697	20,587	13.12% decr

Figure 9.8. 2: Category of Radiology Investigations

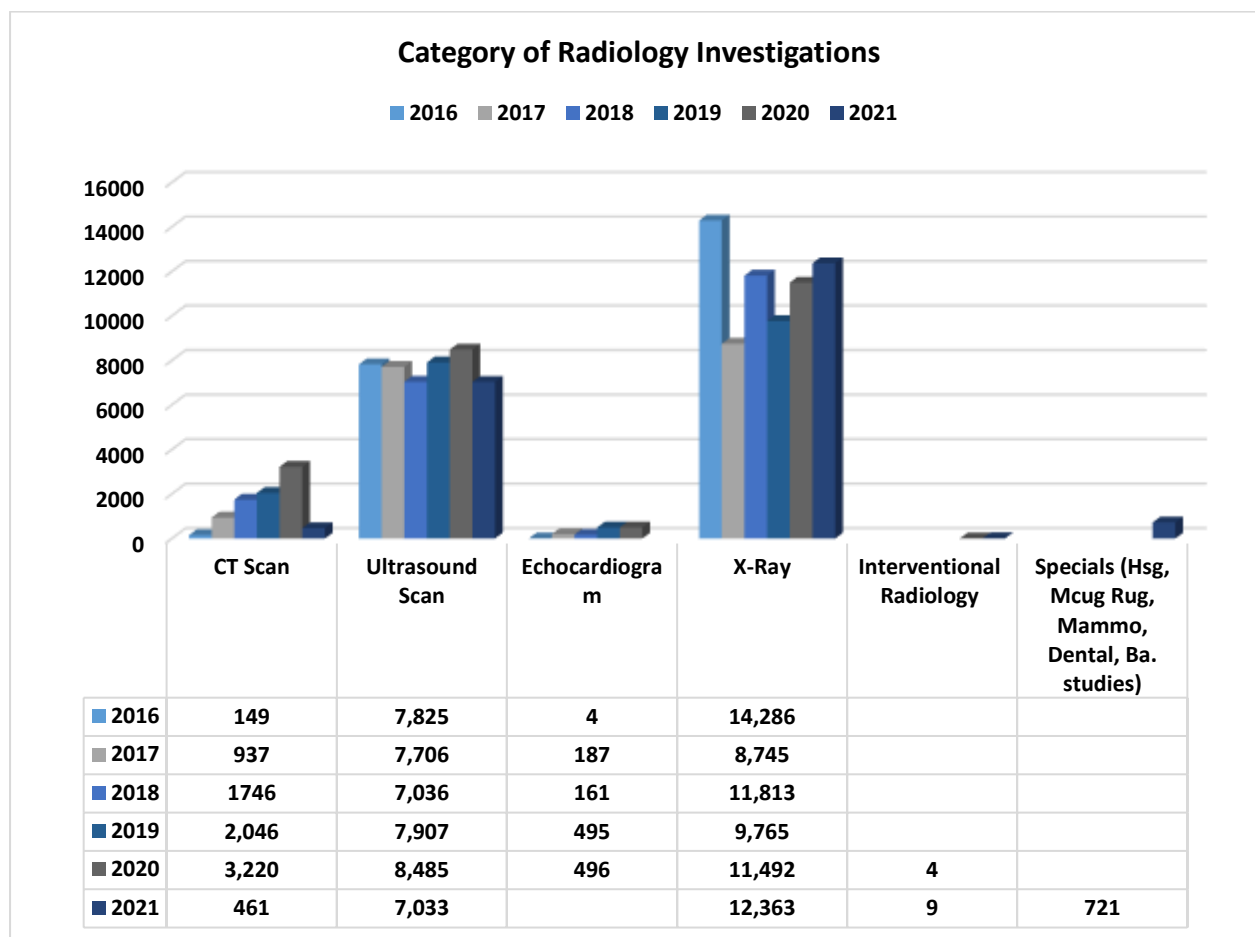


Table 9.8. 3: Category of Radiology Investigations

RADIOLOGY SERVICES	2016	2017	2018	2019	2020	2021	REMARKS
CT Scan	149	937	1746	2,046	3,220	461	85.68% decr
Ultrasound Scan	7,825	7,706	7,036	7,907	8,485	7,033	17.11% decr
Echocardiogram	4	187	161	495	496		
X-Ray	14,286	8,745	11,813	9,765	11,492	12,363	7.58% incr
Interventional Radiology	-	-	-	-	4	9	125% incr
Specials (Hsg, Mcug Rug, Mammo, Dental, Ba. studies)	-	-	-	-	-	721	

Figure 9.8. 3: Monthly Trend of Radiology Investigations in 2021

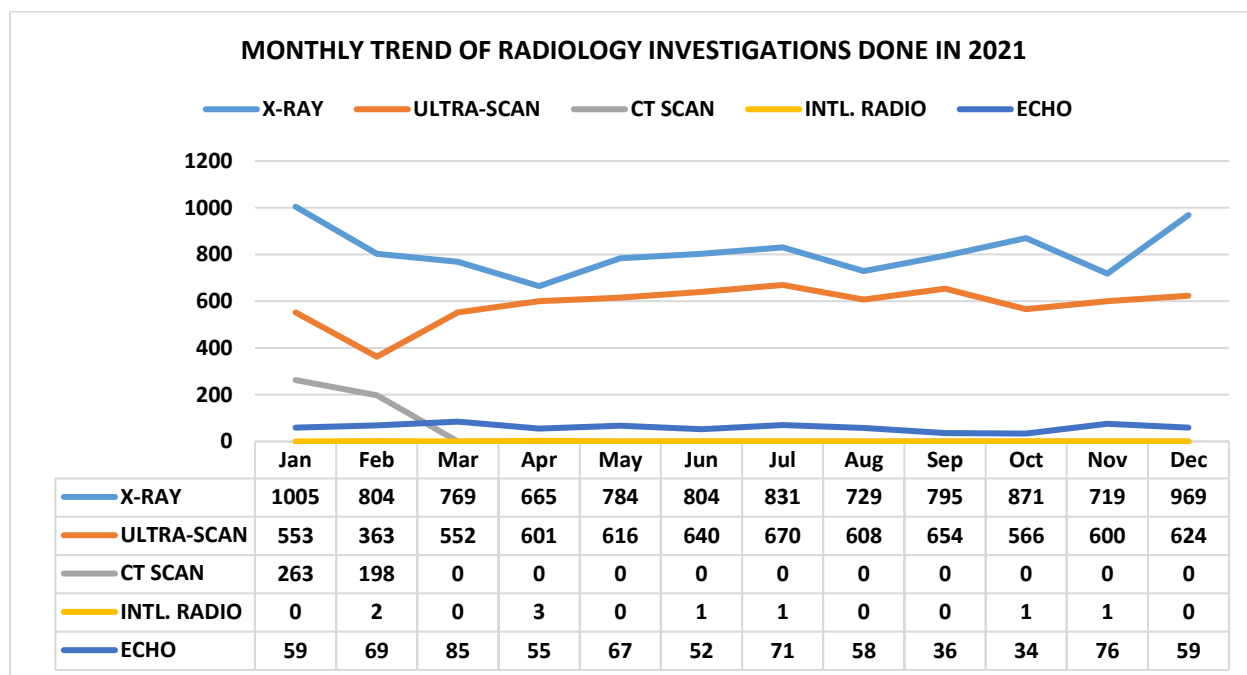


Table 9.8. 2: Table Monthly Trend of Radiology Investigations

Month	2020						2021					
	X-Ray	Ultra-Scan	CT. Scan	Intl. Radio	Echo	Total	X-Ray	Ultra-Scan	CT. Scan	Intl. Radio	Echo	Total
Jan	1,247	936	228	1	52	2,463	1262	556	263	0	59	2,140
Feb	1,238	877	224	1	48	2,387	1059	363	198	2	69	1,691
Mar	851	734	216	0	25	1,826	956	563	-	0	85	1,604
Apr	629	536	188	1	26	1,380	864	563	-	3	55	1,485
May	406	469	226	1	25	1,128	1062	601	-	0	67	1,730
Jun	662	575	221	0	30	1,488	1081	617	-	1	52	1,751
Jul	646	545	284	0	38	1,513	1072	641	-	1	71	1,785
Aug	887	652	214	0	40	1,793	971	671	-	0	58	1,700
Sep	1233	655	372	0	34	2,294	978	619	-	0	36	1,633
Oct	1387	901	348	0	47	2,683	982	575	-	1	34	1,592
Nov	1200	765	356	0	63	2,384	967	648	-	1	76	1,692
Dec	1105	841	344	0	68	2,358	1109	616	-	0	59	1,784
Total	11,492	8,485	3,220	4	496	23,697	12,363	7,033	461	9	721	20,587

Figure 9.8. 4: Monthly Trend of Radiology Clients in 2021

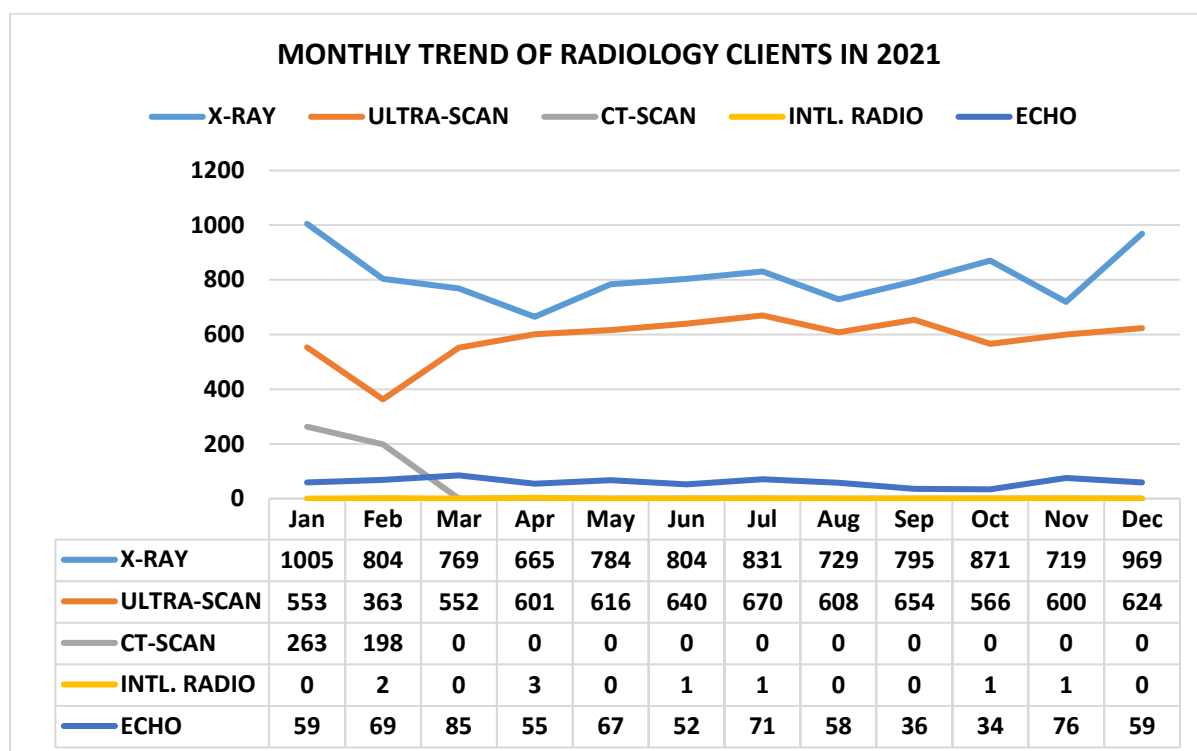


Table 9.8. 3: Monthly Trend of Radiology Clients

Month	2020						2021					
	X-Ray	Ultra-Scan	CT. Scan	Intl. Radio	Echo	Total	X-Ray	Ultra-Scan	CT. Scan	Intl. Radio	Echo	Total
Jan	1247	936	228	1	52	2,463	1005	553	263	0	59	1,880
Feb	1238	877	224	1	48	2,387	804	363	198	2	69	1,436
Mar	851	734	216	0	25	1,826	769	552	0	0	85	1,406
Apr	629	536	188	1	26	1,380	665	601	0	3	55	1,324
May	406	469	226	1	25	1,128	784	616	0	0	67	1,467
Jun	662	575	221	0	30	1,488	804	640	0	1	52	1,497
Jul	646	545	284	0	38	1,513	831	670	0	1	71	1,573
Aug	887	652	214	0	40	1,793	729	608	0	0	58	1,395
Sep	1,233	655	372	0	34	2,294	795	654	0	0	36	1,485
Oct	1,387	901	348	0	47	2,683	871	566	0	1	34	1,472
Nov	1,200	765	356	0	63	2,384	719	600	0	1	76	1,396
Dec	1,105	841	344	0	68	2,358	969	624	0	0	59	1,652
Total	11,492	8,485	3,220	4	496	23,697	9745	7047	461	9	721	17,983

9.9 PATHOLOGY SERVICES

Generally, the number of bodies stored by the hospital's pathology department went up by 6% in 2021 (954 in 2020 to 993 in 2021), whereas the number of embalment done dropped by 5.3% (from 561 in 2020 to 540 in 2021). Also, in 2021, the number of autopsies performed increased significantly by 36.7% (from 166 in 2020 to 227 in 2021) whilst the number of general bodies handled went up by 20.18% (from 773 in 2020 to 929 in 2021). Additionally, the total number of cases received from the wards decreased by 1.12% (from 981 in 2020 to 970 in 2021). Out of the total cases received from the wards, 468 were from the Accident and Emergency department, with the least of 37 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 provides detailed trend analysis below.

Figure 9.9. 1: Five-Year Trend Analysis of Pathological Services

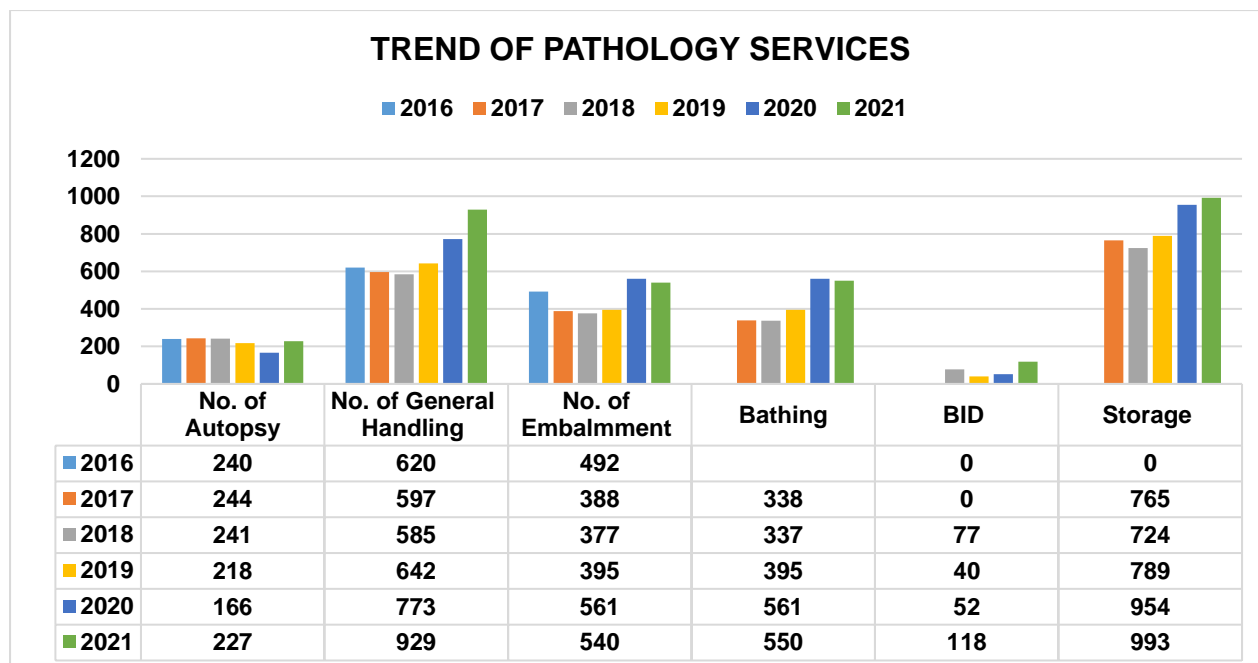


Table 9.9. 1: Trend of Pathology Services

INDICATOR	2016	2017	2018	2019	2020	2021	REMARKS
No. of Autopsy	240	244	241	218	166	227	36.7% incr.
No. of General Handling	620	597	585	642	773	929	20.18% incr.
No. of Embalment	492	388	377	395	561	540	5.3% decr.
Bathing		338	337	395	561	550	2% decr
BID	-	-	77	40	52	118	126.9% incr.
Body Storage	-	765	724	789	954	993	6% incr.

Figure 9.9. 2: Pathology Cases Received from the Wards

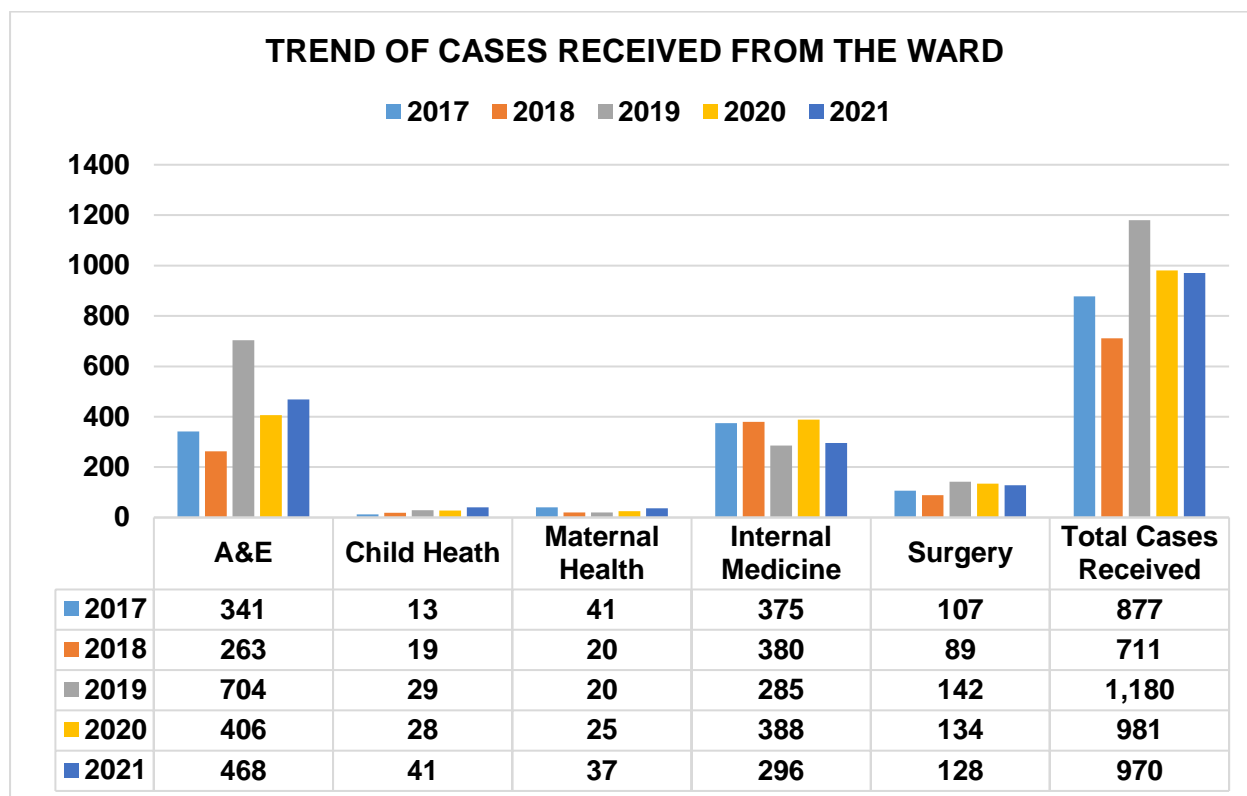


Table 9.9. 2: Pathology Cases Received from the Wards

WARD	2017	2018	2019	2020	2021	REMARKS
A&E	341	263	704	406	468	15.3% incr
Child Heath	13	19	29	28	41	46.4% incr
Maternal Health	41	20	20	25	37	48% incr
Internal Medicine	375	380	285	388	296	23.7% decr
Surgery	107	89	142	134	128	4.5% decr
Total Cases Received	877	711	1,180	981	970	1% decr

CHAPTER TEN

MATERNAL HEALTH SUB-BMC

10.1 INTRODUCTION

The Obstetrics & Gynaecology (OBGY) Sub-BMC is a comprehensive clinical department that provides investigative, treatment and emergency services for a whole range of Obstetric and Gynaecological conditions backed by research. The Sub-BMC covers; O & G Ward, Delivery Suite, Delivery Suite Theatre and Recovery Ward, Antenatal & Postnatal Clinics (ANC & PNC) and Gynaecological Clinic. The Sub-BMC is manned by a management team made up 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: 2021 Annual Performance of Maternal Health Sub-BMC Against CCTH Strategic Objectives

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
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	2021 Target	Remarks
Percentage of maternal admissions due to external referrals decreased	-	49%	41.4%	27.2%	21.2%	23%	THs = 60%	1.9% incr
Nurse and Midwife admission ratio	1:21	1:20	1:20	1:16	1:13	1:13	THs = 1:25	
Total deliveries	2,904	3,055	3,160	3,027	2,883	3,055	CCTH = 5% incr	5.97% incr
Delivery to midwife ratio (all midwives at the institution)	29:1	29:1	30:1	20:1	18:1	15:1	THs = 20:1	Decr
Caesarean section rate	38.1%	35.9%	46.8%	41.2%	53.3%	51.4%	TH = 40%	1.9% decr
Introduced 3 additional specialised services <ul style="list-style-type: none"> • Reproductive Endocrinology and Fertility Services • Gynae. Oncology Services 								
CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.								
Actual Performance Trend								
	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	Target	Remarks % Diff.
Low birth rate	16.2%	13%	13.5%	16.1%	16.8%	19.4%	THs = 12%	Incr
Stillbirth rate (/1000LB)	54	35	37	42	31	42	THs = 15	Incr
Total Fresh Still birth	86	53	29	39	38	43	-	11.6% incr
Total Macerated Still Birth	71	54	89	87	52	85	-	63.5% incr
Institutional Maternal mortality ratio (/100,000LB)	149	1335	860	925	903	1,050	THs = 300	Incr

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
Number of institutional maternal deaths	41	41	27	28	26	32	CCTH = 50% Decr	23.1% incr
Partograph use rate	-	-	40.8%	46.12%	48.7%	48.5%	THs = 60%	Decr
Maternal mortalities audited, and recommendations being implemented								
85% perinatal mortalities audited, and recommendations being implemented								
2 health promotion and education activities undertaken in 2 Communities								
Established Nurses and Midwives mortality audit in addition to team based and Sub-BMC wide audits								
60 staff trained in BLS, ACLS, ETAT and Emergency readiness								
CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE								
Acquired 5 ACs, 2 fridges, 1 Television, wall fans etc.								
Painted internal walls of all Units Under Sub-BMC; O & G Ward, Delivery Suite, Delivery Suite Theatre & Recovery, ANC and ETAT								
Refurbished and equipped doctors and nurses to create a conducive environment.								
Tiled senior doctors and anaesthetists' rooms to improve working environment								
Repaired most faults and damages through Imprest and SIL								
Partitioned 5 consulting rooms and ETAT Detention room								
Changed curtains into blinds at all Units and consulting rooms								
Renovated 2nd and 3rd stage rooms at Delivery Suite								
Renovated D/S Theatre In-Charge's office								
Set up ETAT Nurses Station Reception								
Created Store under Stair case at ETAT								
Equipment Staff Pantries at O & G, Delivery Suite, and ETAT								
CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM								
4.1: Governance Related Performance								
Orientation conducted for all new staff posted to the Sub-BMC								
Acquired phones for critical areas to form a communication group for prompt response to emergency calls.								
Held 12 Sub-BMC meetings								
Conducted 3 Sub-BMC Peer Reviews among the units within the maternal health sub-BMC								
4.2: Human Resource Related Performance								
Actual Performance Trend								
	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	Target	Remarks % Diff.
Doctor to Nurse and midwife ratio	6:1	5:1	4:1	5:1	5:1	7:1	-	Incr
Delivery to midwife ratio (i.e., all midwives at the institution)	-	1:29	1:30	1:20	1:18	1:15	-	Decr
Delivery to midwife ratio (i.e., productivity of the midwives at only the delivery suite)	-	1:62	1:77	1:75	70:1	46:1	-	Decr
-								
4.3: Finance related performance								
The sub-BMC started billing for CTG services								
CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING								
5.1 Improve on Research:								
Research Conducted by Staff in 2021;								
Authors(S)	Research Topic				Publication link		Department	
Agbeno EK, Osarfo J, Ashong J, Anane Fenin B, Okai E, Ofori AA, et al. (2021)	Determinants of preterm survival in a tertiary hospital in Ghana: A ten-year review.				PLoS ONE 16(1): e0246005. https://doi.org/10.1371/journal.pone.0246005			
5.2 Improve on Teaching and Learning:								
Organized in-service training for nurses and midwives on customer care/quality assurance/professional ethics								

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
Thirty-two (32) undergraduate medical students passed through the sub-BMC for training.
Seven (7) midwives received approval postgraduate training
CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS
Provided mentorship support to Twifo Praso and Salt Pond Hospitals
Organised One (1) joint Zonal OBGYN specialists EMONC training

10.3 MATERNAL HEALTH OPD SERVICES UTILIZATION

The maternal health services utilization fluctuated over the past seven years. Also, Covid-19 pandemic caused a significant decline in the maternal health OPD attendance in 2020, however, in 2021, the situation improved and resulted in a 25.13% increment in attendance from 12,136 in 2020 to 15,186 in 2021, although cannot be compared to the 17,068-attendance recorded in 2019 when there was no Covid-19 pandemic.

Generally, the OBGY services utilization improved in 2021 compared to 2020. For instance, the antenatal clinic attendance went up by 20.49% (from 7,717 in 2020 to 9,298 in 2021), whilst the post-natal clinic attendance increased by 35.05% (from 1,866 in 2020 to 2,520 in 2021). Interestingly, the number of Obstetrics and Gynaecology emergency cases seen in 2021 went up significantly by 194.67% (from 1,866 in 2020 to 5,858 in 2021). 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

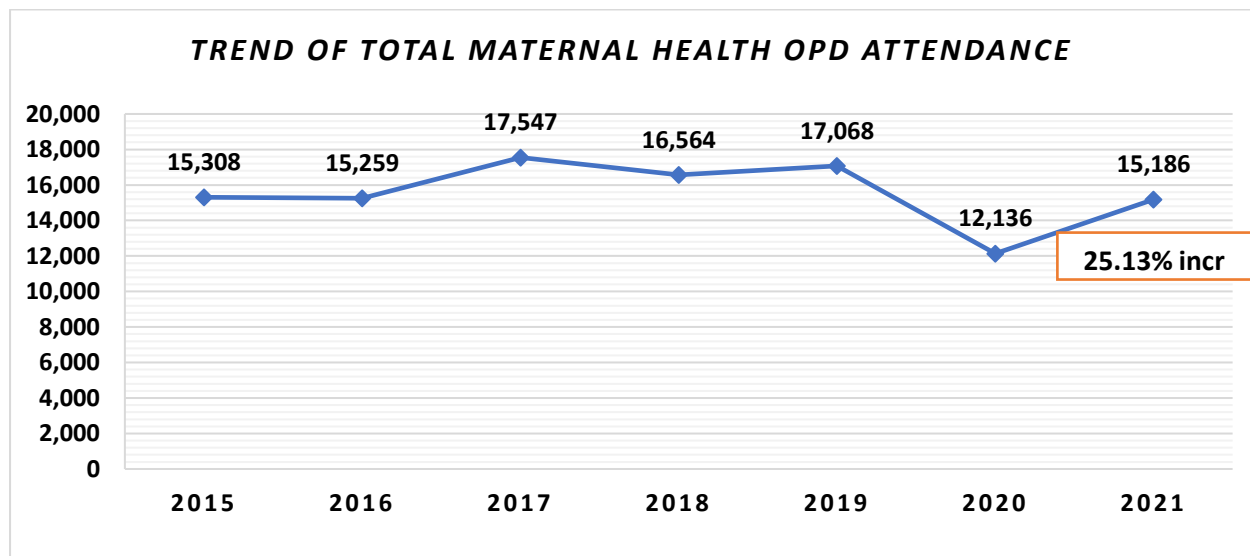


Figure 10.3. 2: Maternal Health OPD Services Utilization

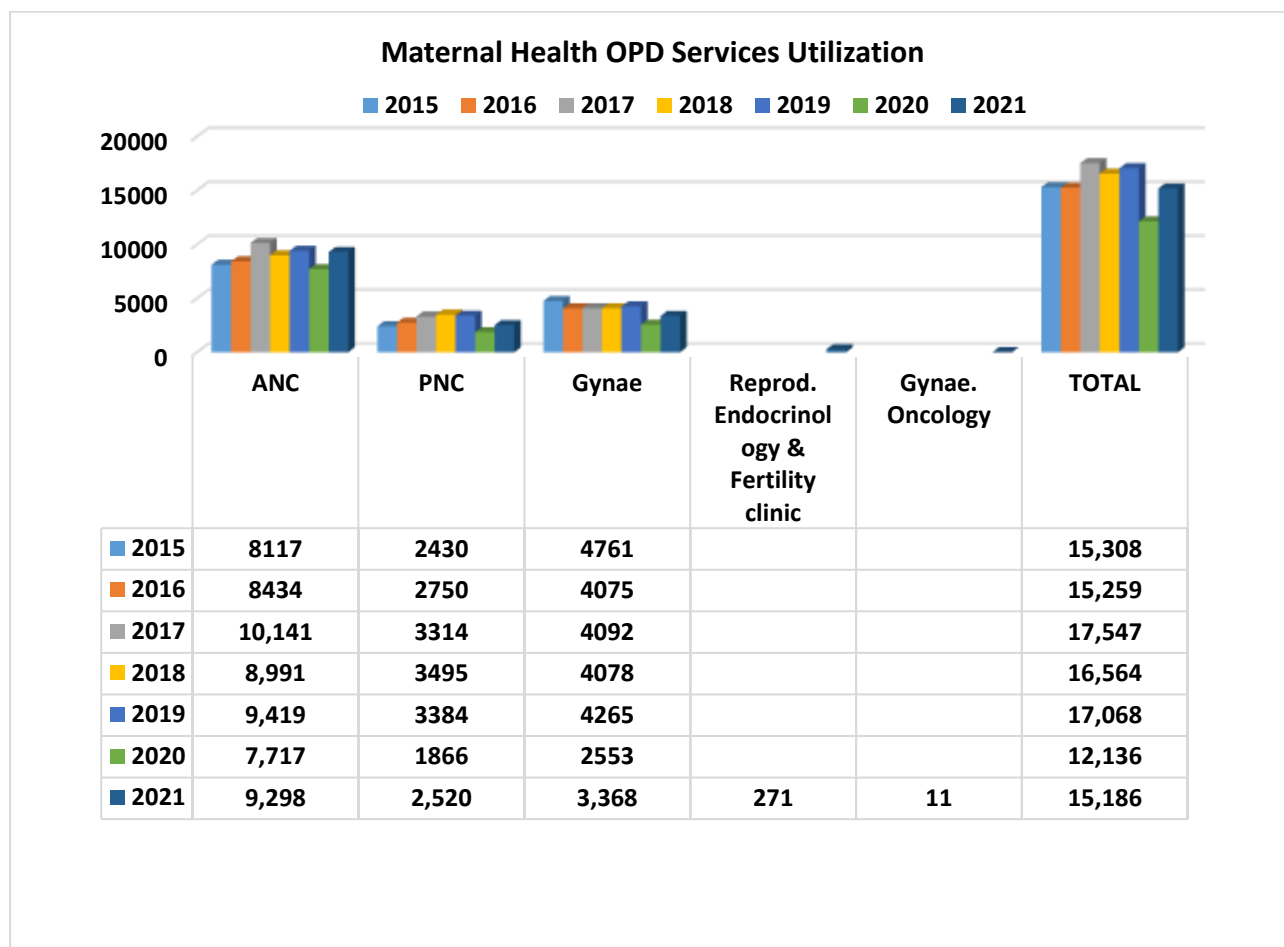


Table 10.3. 1: OPD Attendant for Maternal Health

CLINIC	2015	2016	2017	2018	2019	2020	2021	REMARKS
ANC	8117	8434	10,141	8,991	9,419	7,717	9,298	20.49% incr
PNC	2430	2750	3,314	3,495	3,384	1,866	2,520	35.05% incr
Gynae	4761	4075	4,092	4,078	4,265	2,553	3,368	31.92% incr
Reproductive Endocrinology and Fertility clinic	-	-	-	-	-	-	271	
Gynae. Oncology	-	-	-	-	-	-	11	
TOTAL	15,308	15,259	17,547	16,564	17,068	12,136	15,186	25.13% incr

10.4 IN-PATIENT STATISTICAL PERFORMANCE

The Maternal Health Sub-BMC's total admissions increased in 2021 over the previous year. The hospital in 2021 recorded 2.9% increment in the total maternal health admissions with a rise in the average length of stay from 4.0 in 2020 to 4.2 in 2021. Also, the percentage of maternal admission due to external referrals increased from 21.2% in 2020 to 26% in 2021, whilst the percentage bed occupancy also reduced marginally from 71.8% in 2020 to 71% in 2021. Detailed trend analysis is provided in table 10.4.1 below.

Table 10.4. 1: Maternal In-Patient Statistics

Indicator	2016	2017	2018	2019	2020	2021	Remarks	Target	Measurement
Admission	1713	1799	1963	2033	2000	2,058	2.9% incr		
Percentage of maternal admissions due to external referrals decreased	-	49%	41.4%	27.2%	21.2%	26%	incr	60%	No. of Maternal admissions due to referrals / Total Maternal admissions
Discharges	2475	2653	2744	2541	2559	2,730	6.68% incr		
Trans-In	1364	1484	1473	1009	983	1,157	17.70% incr		
Trans-Out	598	635	682	617	389	460	18.25% incr		
Average Daily Occupancy	33	29	28.6	31.0	32.4	32	1.23% decr		
% Bed Occupancy	73.3%	65.2%	63.5%	68.8%	71.8%	71%	decr		
Average Length of Stay	4.8 days	4.0 days	3.8 days	4.5 days	4.0 days	4.2 days	incr		

10.5 TOP 10 OBSTETRIC CONDITIONS

Eclampsia (161), Hypertensive Disorders of Pregnancy (73), Gestational diabetes (65) were the top three Obstetric conditions recorded in 2021, forming 30.09%, 13.64% and 12.14% of the cases seen respectively. UTI in Cyesis (64) which placed 2nd in 2020 ranked 4th in 2021 representing 11.96% of the total obstetric cases seen. On the other hand, Preterm Labour (21) and Hyperemesis Gravidarum (20) were the least among the top 10 obstetric conditions constituting 3.92% and 3.74% respectively. Table 10.5.1 below provides a four-year trend of the top ten obstetric conditions seen at the hospital.

Table 10.5. 1: Top 10 Obstetric Conditions

2017		2018		2019		2020		2021	
CONDITION	%	CONDITION	%	CONDITION	%	CONDITION	%	CONDITION	%
Hypertensive Disorders of Pregnancy	5.3%	Hypertensive Disorders of Pregnancy	22.5%	UTI in Cyesis	16.2% (54)	Hypertensive Disorders of Pregnancy	16.84% (82)	Eclampsia	161 (30.09%)
Postdatism	3.4%	PROM / PPROM	4.6%	Prolonged Pregnancy / Post term	12.5% (42)	UTI In Cyesis	14.78% (72)	Hypertensive Disorders of Pregnancy	73 (13.64%)
Latent Phase of Labor	2.1%	Gestational Dm / Dm In Pregnancy	4.6%	PROM / PPROM	12.28% (41)	Gestational DM / DM In Pregnancy	12.94% (63)	Gestational diabetes	65 (12.14%)

2017		2018		2019		2020		2021	
CONDITION	%	CONDITION	%	CONDITION	%	CONDITION	%	CONDITION	%
UTI In CYESIS	1.6%	Prolonged Pregnancy / Post term	3.6%	Anaemia in Pregnancy -	11.68% (39)	intrauterine fetal death (IUFD)	11.91% (58)	UTI in Cyesis	64 (11.96%)
Severe Anaemia / Anaemia	1.5%	UTI In CYESIS	2.7%	Gestational Dm / Dm In Pregnancy	10.49% (35)	Postdatism	10.47% (51)	Abortion	51 (9.53%)
Malaria in CYESIS	1.1%	PPH	2.6%	Hypertensive Disorders of Pregnancy	9.58% (32)	PROM	8.42% (41)	Malaria in Pregnancy	32 (5.98%)
PROM	1.1%	Anaemia in Pregnancy	2.2%	Pre – Term Labor – 30	8.98% (30)	Abnormal uterine bleeding (AUB)	7.6% (37)	Abnormal Uterine Bleeding	26 (4.86%)
PPH	0.8%	Pre – Term Labor	2.2%	PPH - 24 (7.19%)	7.19% (24)	Eclampsia	6.16% (30)	Anaemia in Pregnancy	22 (4.11%)
IUFD	0.6%	IUFD	1.9%	Hyperemesis Gravidarum	6.29% (21)	PPH	5.54% (27)	Preterm Labour	21 (3.92%)
APH	0.5%	Hyperemesis Gravidarum	1.6%	IUFD	4.79% (16)	Malaria in Pregnancy –	5.34% (26)	Hyperemesis Gravidarum	20 (3.74%)

10.6 MATERNAL HEALTH - KEY PERFORMANCE INDICATORS

In 2021, the total deliveries conducted in the hospital increased by 5.9% (from 2,883 in 2020 to 3,550 in 2021) and the total number of babies delivered also went up by 6.6% (from 2,793 in 2020 to 3,176 in 2021). Spontaneous vaginal delivery, assisted vaginal delivery and caesarean sections, remains the three main forms of deliveries performed. In 2021, caesarean section rate decreased from 53.3% in 2020 to 51.4% in 2021, whilst the number of caesarean section's performed also increased by 3.49% (from 1520 in 2020 to 1,573 in 2021). The cases managed with patograph reduced marginally from 48.7% in 2020 to 48.5% in 2021, and the hospital was not able to meet the target of 60% set for the Teaching Hospitals. Overall, Antenatal Clinic attendance also increased by 20.49 (from 7717 in 2020 to 9,298 in 2021) and new ANC registrants increased by 0.92% (from 761 in 2020 to 768 in 2021).

Also, still birth remains high, and a concern to the hospital. In 2021, still birth rate increased from 31/1000LB in 2020 to 42/1000LB 2021. The total number of still birth increased by 42.22% (from 90 in 2020 to 128 in 2021). Overall, the total macerated still birth and total fresh still birth increased by 63.46% and 13.16% respectively. In order to improve the situation, targeted strategies need to be implemented by the hospital with the support of stakeholders. Detailed trend analysis is illustrated 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

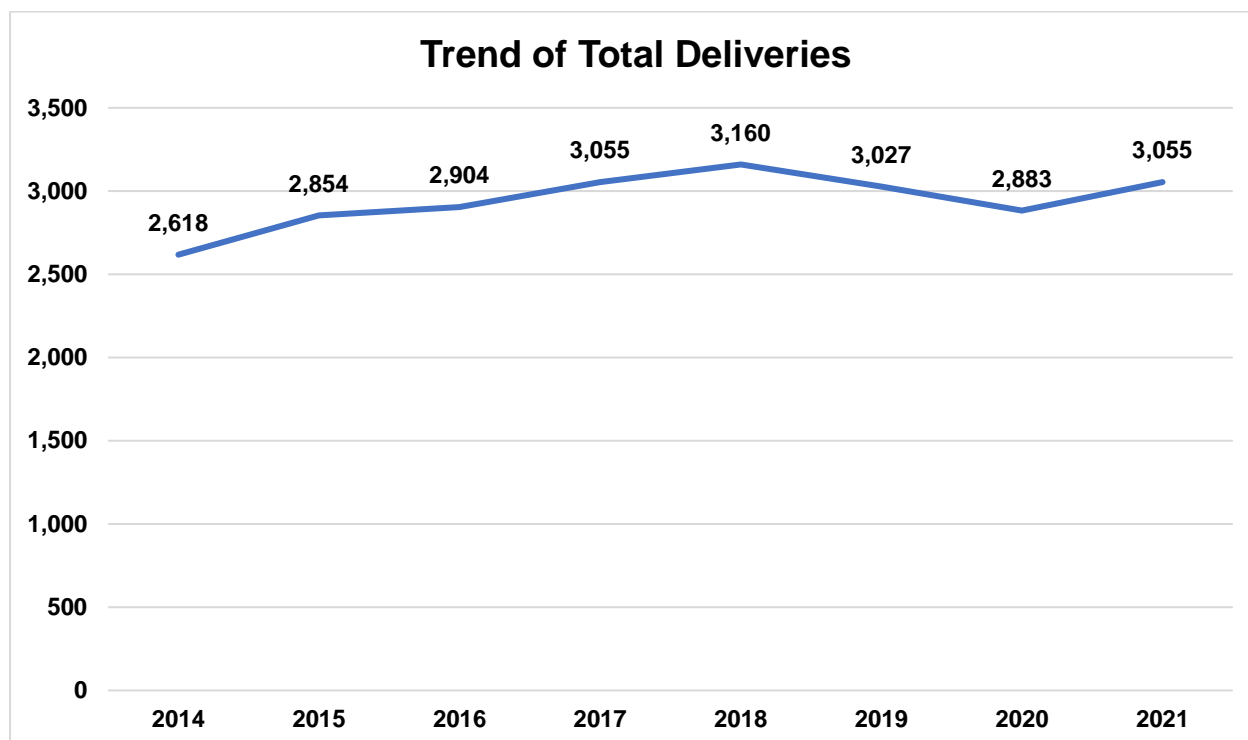


Figure 10.6. 2: Trend Analysis of Forms of Delivery

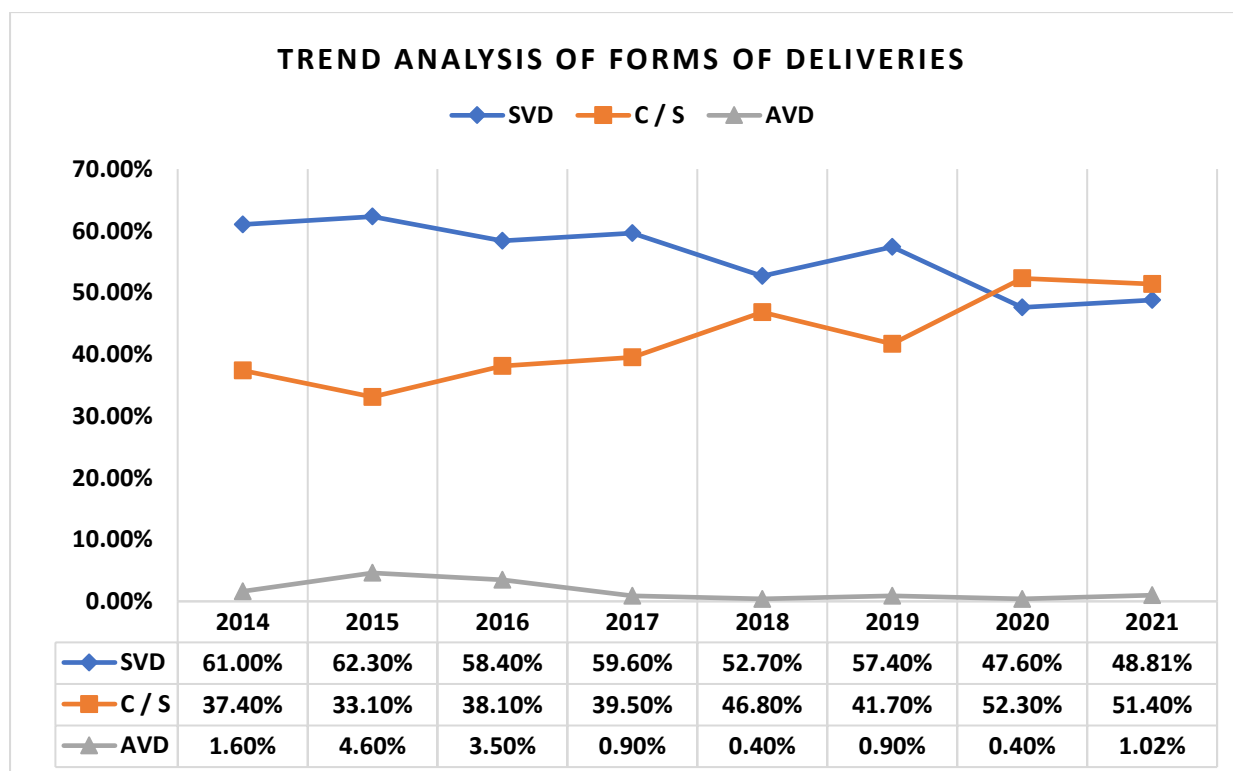


Figure 10.6. 3: Maternal Health Key Performance Indicators - Category A

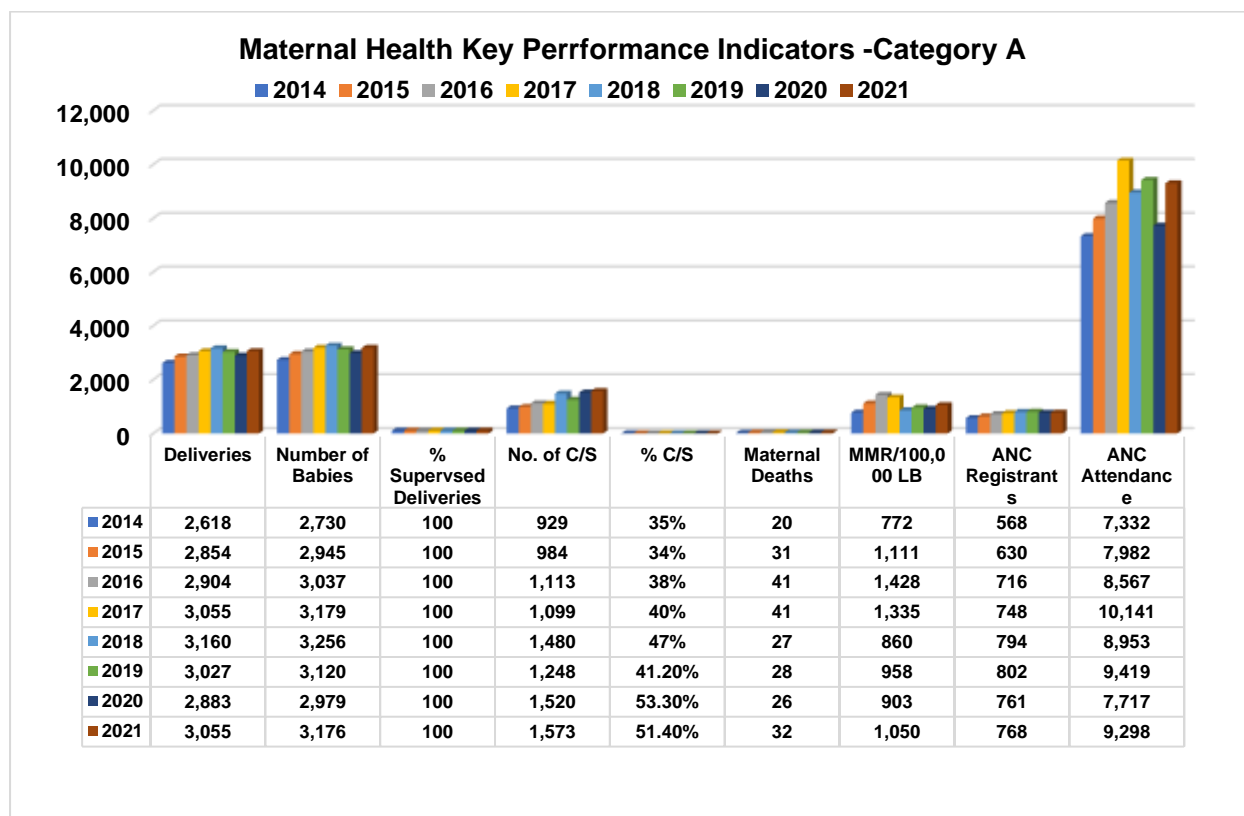


Figure 10.6. 4: Maternal Health Key Performance Indicators - Category B

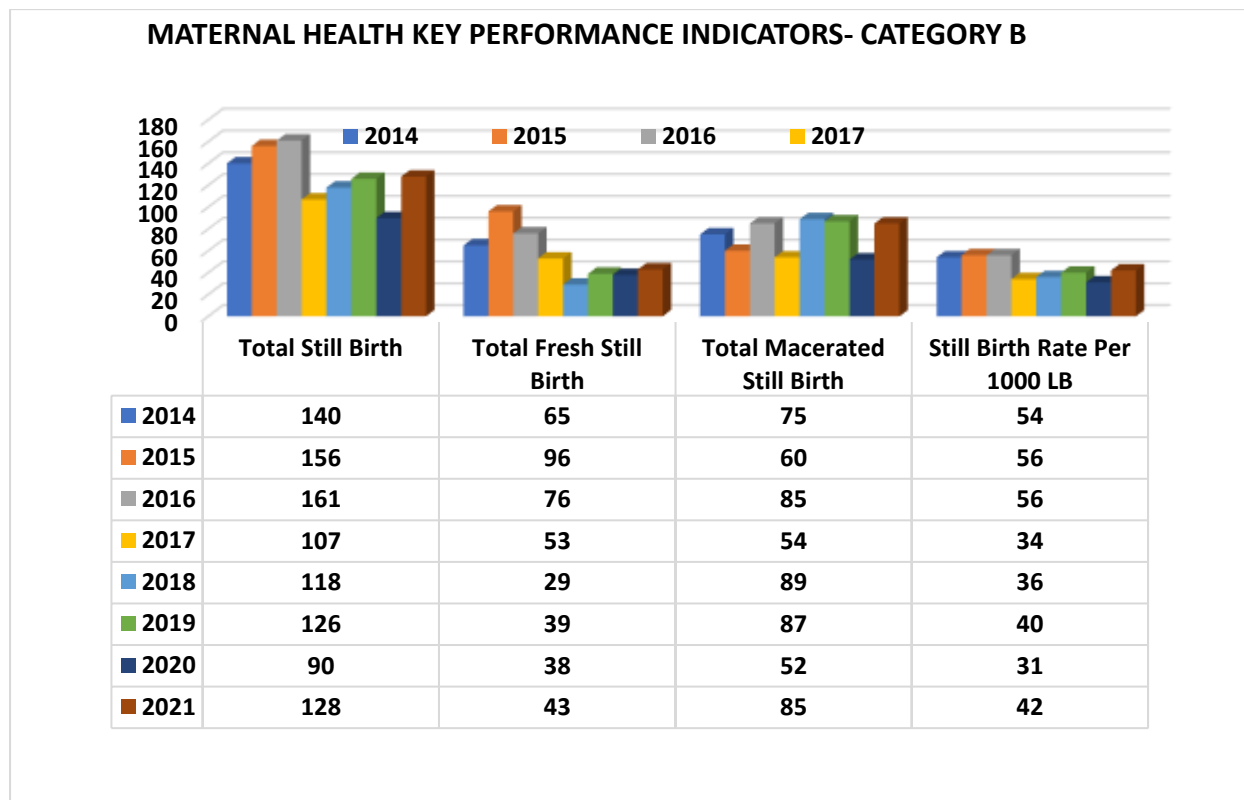


Figure 10.6. 5: Maternal Health Key Performance Indicators – Category C

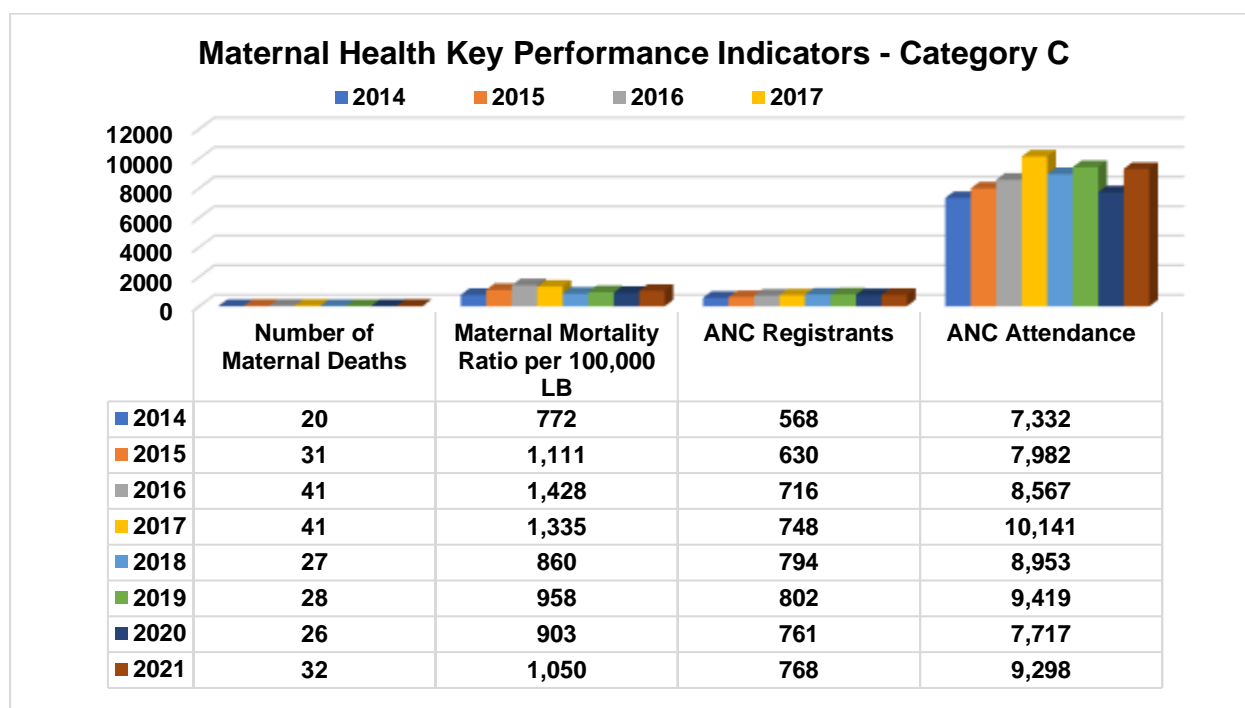


Table 10.6. 1: Maternal Health Key Performance Indicators

INDICATORS	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS	TARGET	MEASUREMENT
Deliveries	2,618	2,854	2,904	3,055	3,160	3,027	2,883	3,055	5.9% incr	CCTH = 5% Incr	Total No. of Deliveries undertaken
Number of Babies	2,730	2,945	3,037	3,179	3,256	3,120	2,979	3,176	6.6% incr	-	-
Live births	2,590	2,789	2,870	3,072	3,138	2994	2,793	3,048	9.13% incr	CCTH = 5% Incr	-
Low birth Weight Rate			16.2%	13%	13.5%	16.1%	16.8%	19.4%	2.6% incr	THs = 12%	Total no. of babies < 2.5kg/ Total live births *100
Total Still Birth	140	156	161	107	118	126	90	128	42.22% incr	-	-
Total Fresh Still Birth	65	96	76	53	29	39	38	43	13.16% incr		-
Total Macerated Still Birth	75	60	85	54	89	87	52	85	63.46% incr		-
Still Birth Rate Per 1,00LB	54	56	56	34	36	40	31	42	35.48% incr	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	sustained	-	-
Number of Caesarean Section	929	984	1,113	1,099	1,480	1,248	1,520	1,573	3.49% incr	-	

INDICATORS	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS	TARGET	MEASUREMENT
% Caesarean Section	35%	34%	38%	40%	47%	41.2%	53.3%	51.4%	1.9% decr	THs = 40%	-
Partograph use rate	-	-	-	-	40.8%	46.12%	48.7%	48.5%	0.2% decr	THs = 60%	Deliveries done with use or support of Partograph / Total deliveries * 100
Maternal Deaths	20	31	41	41	27	28	26	32	23.08% incr	-	-
Maternal Mortality Ratio Per 100,000 Live Births	772	1,111	1,428	1,335	860	958	903	1,050	16.28% incr	THs = 300	No of maternal deaths / total live births * 100 000
ANC Registrants	568	630	716	748	794	802	761	768	0.92% incr	CCTH = 10% Incr	-
ANC Attendance	7,332	7,982	8,567	10,141	8,953	9,419	7,717	9,298	20.49% incr	-	-
Couple year protection	-	-	2,777.6	1,507	1,521.6	1,562.5	1,891	820.15	decr	THs = 2,500	Total No. of Commodities dispensed / CYP factor

10.7 TOP 10 GYNAECOLOGY CONDITIONS

Leiomyoma of uterus (Uterine fibrosis) since 2018 continue to rank first among the top ten gynaecology conditions seen in the hospital. In 2021, Uterine Fibroids (51) formed 30.54% of the total gynae cases seen, followed by Ectopic Pregnancy (49) which constituted 29.34%, while Endometritis (21) constituted 12.57%. Also, Uterovaginal Prolapse (2) and Ovarian Torsion (1) were the least ranked amongst the top 10 gynaecology cases seen in 2021, constituting 1.20% and 0.60% respectively. Table 10.7.1 below provides details of the top ten gynae conditions recorded in the hospital.

Table 10.7. 1: Top 10 Gynaecology Conditions

2018		2019		2020		2021	
CONDITIONS	NO. OF CASES	CONDITIONS	NO. OF CASES	CONDITIONS	NO. OF CASES	CONDITIONS	NO. OF CASES
Uterine Fibroids	863	Uterine Fibroids	151 (30.2%)	Uterine Fibroids	48 (41.7%)	Leiomyoma of uterus (Uterine Fibroids)	51 (30.54%)
Pelvic Inflammatory Disease	503	Ectopic Pregnancy	80 (16%)	Abnormal uterine and vaginal bleeding	21 (18.26%)	Ectopic Pregnancy	49 (29.34%)
Infertility	281	Abnormal uterine and vaginal bleeding	62 (12.4%)	Ectopic Pregnancy	15 (13.04%)	Endometritis	21 (12.57%)
Ovarian cyst	239	Threatened abortion	57 (11.4%)	Cervical Cancer	8 (6.96%)	Pelvic Inflammatory disease	15 (8.98%)
Ectopic Pregnancy	207	Incomplete abortion	50 (10%)	Pelvic Inflammatory Disease	7 (6.09%)	Ovarian cyst	13 (7.7.8%)

2018		2019		2020		2021	
CONDITIONS	NO. OF CASES	CONDITIONS	NO. OF CASES	CONDITIONS	NO. OF CASES	CONDITIONS	NO. OF CASES
Abnormal uterine and vaginal bleeding	169	Pelvic Inflammatory Disease	36 (7.2%)	Threatened abortion	7 (6.09%)	Molar pregnancy	7 (4.19%)
Threatened abortion	146	Missed abortion	34 (6.8%)	Ovarian Cysts	5 (4.35%)	Endometrial hyperplasia	4 (2.40%)
Incomplete abortion	128	Ovarian Tumours	18 (3.6%)	Uterovaginal prolapse	2 (1.74%)	Cervical cancer	4 (2.40%)
Missed abortion	92	Uterovaginal prolapse	12 (2.4%)	Ovarian tension	1 (0.87%)	Uterovaginal Prolapse	2 (1.20%)
Uterovaginal prolapse	77			Molar Pregnancy	1 (0.87%)	Ovarian Torsion	1 (0.60%)

10.8 OBS & GYNAE SURGERIES PERFORMED

In 2021, the total number of major obstetric surgeries performed went up by 2.70% (from 1,632 in 2020 to 1,676 in 2021). Caesarean section remains the leading major obstetric surgeries conducted since 2016, constituting 87.23%% (1,462) of the surgeries performed in 2021. Among the Laparotomies performed in 2021, ectopic pregnancy related surgeries dropped in 2021 by 23.68% (from 76 in 2020 to 58 in 2021), whilst Ovarian Cyst went up by 70% (from 10 in 2020 to 17 in 2021) and other exploratory laparotomies performed increased by 28.57% (from 21 in 2020 to 27 in 2021).

In the same light, total major gynaecology related surgeries performed in 2021 declined by 16.87% (from 87 in 2020 to 73 in 2021). The number of myomectomies performed went up by 9.09% (from 44 in 2020 to 48 in 2021) whereas, the Total Abdominal Hysterectomy (TAH) dropped by 31.03% (from 29 in 2020 to 20 in 2021). Table 10.8.1 below provides detailed analysis.

Table 10.8. 1: Major Obs. & Gynae Surgeries Performed in the hospital

TYPE OF OPERATIONS	2016	2017	2018	2019	2020	2021	Remarks
MAJOR OBSTETRIC RELATED SURGERIES							
Caesarean Section	1,014	1,194	1,261	1,264	1,520	1,462	3.82% decr
Hysterectomy	5	14	6	3	3	7	133.33% incr
Sterilization	1	0	23	-	-	0	
Laparotomy for; Ectopic	44	76	65	72	76	58	23.68% decr
Ovarian Cyst	2	1	18	-	10	17	70% incr
Exploratory	10	19	24	30	21	27	28.57% incr
Others	12	0	7	-	-	84	
Total Major Obstetric Operations	1,088	1,304	1,404	1,423	1,632	1,676	2.70% incr
MAJOR GYNAE SURGERIES							
Myomectomy	119	67	69	66	44	48	9.09% incr
Total Abdominal Hysterectomy (TAH)	35	51	50	53	29	20	31.03% decr
Vaginal Hysterectomy	14	11	4	5	6	0	

TYPE OF OPERATIONS	2016	2017	2018	2019	2020	2021	Remarks
Cervical cerclage	4	3	2	7	5	5	sustained
Fistula repair	-	-	-	1	3	-	
Total	172	132	125	132	87	73	16.87% decr

10.9 MATERNAL MORTALITY

The hospital continues to record high maternal mortality which remains a major concern for the institution. In 2021, the maternal mortality ratio increased from 1,050/100,000LB in 2021, compared to 903/100,000LB in 2020. The number of maternal deaths went up by 23.08% (from 26 in 2020 to 32 in 2021). It is evident that targeted strategies need to be implemented to improve the chances of survival of the clients. Further, in 2021, the total number of maternal deaths recorded in less than 48 hours decreased by 5.7% (from 57.7% in 2020 to 52% in 2021) and maternal deaths in 48hours and above increased by 6.1% (from 42.3 in 2020 to 48.4 in 2021). Figures 10.9.1 and figure 10.9.2 and table 10.9.1 below provide detailed trend analysis.

Figure 10.9. 1: Trend in Maternal Mortality Ratio / 100,000 Live Births

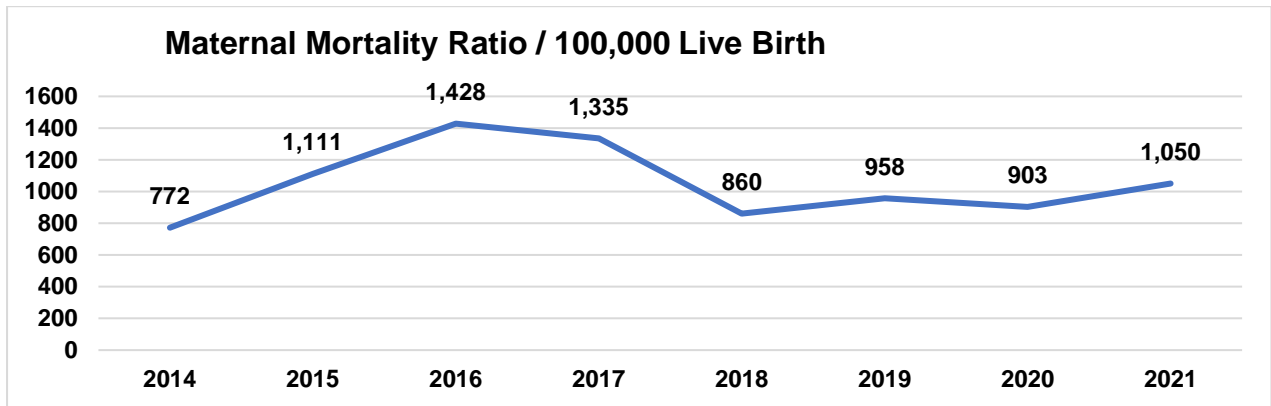


Figure 10.9. 2: Trend of Maternal Mortality Death

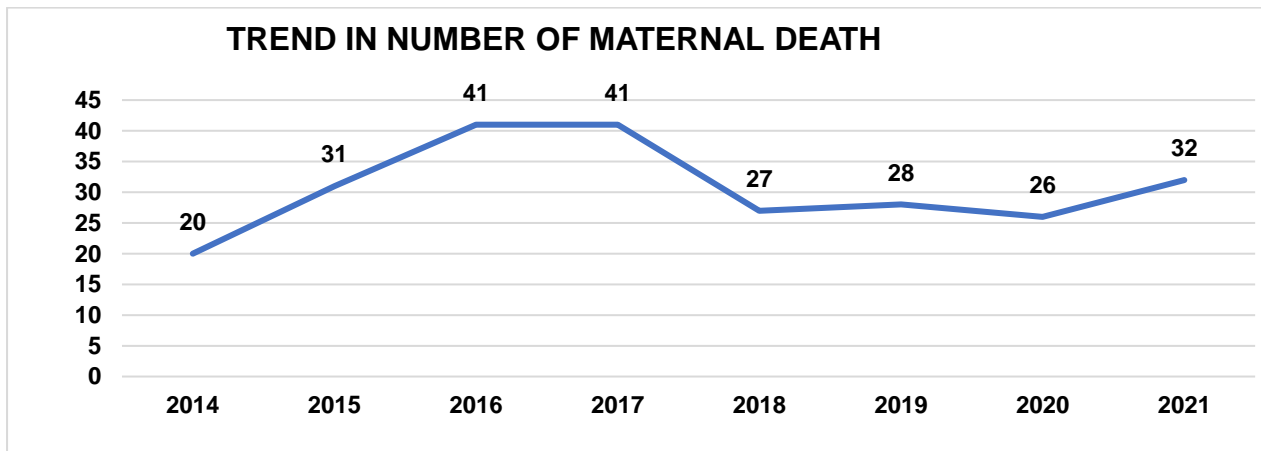


Table 10.9. 1: Duration of Maternal Deaths

Indicator	2019	2020	2021	REMARKS
Duration				
Deaths in less than 48 hrs. (<48 Hours)	58.6%	57.7%	52%	5,7% decr
Deaths in 48hrs/more (≥ 48 Hours)	41.4%	42.3%	48.4%	6.1% incr
Source of Patients				
Referred cases that died	89.7%	92.3%	24%	68,3% decr
Non-referred cases that died	10.3%	3.8%	9%	5.2% incr

10.10 TOP CAUSES OF MATERNAL MORTALITY

In 2021, Eclampsia (13) ranked 1st among the causes of maternal mortality constituting 40.6% followed by Sickle cell (5) which recorded 15.6% and the Acute Renal Failure (5) which constituted 15.6% of the total causes of maternal mortality. Also, Anaemia in Pregnancy (2) which constituted 6.25% and pneumonia (2) which also recorded 6.25% were the least causes of maternal death in 2021. Table 10.10.1 below provides trend of the causes of maternal deaths.

Table 10.10. 1: Top Causes of Maternal Mortality

2017		2018		2019		2020		2021	
Condition	%	Condition	%	Condition	%	Condition	%	Condition	%
Haemorrhage	34.1%	Pulmonary Embolism	33.3%	Haemorrhage / Severe Anaemia	39.29% (11)	Haemorrhage / Severe Anaemia	11 (42.3%)	Eclampsia	13 (40.6%)
Hypertensive Disorders of Pregnancy	29.3%	Haemorrhage	29.63%	Hypertensive Disorders of Pregnancy	32.14% (9)	Hypertensive Disorders of Pregnancy	9 (34.6%)	Sickle Cell	5 (15.6%)
Sepsis	22.0%	Hypertensive Disorders of Pregnancy	29.63%	Sepsis	17.86% (5)	Sepsis	5 (19.2%)	Acute Renal Failure	5(15.6%)
Others	14.6%	Sudden Cardiac Death (Pm Diagnosis)	7.6%	Pulmonary Embolism	7.14% (2)	Pulmonary Embolism	2 (7.7%)	Anaemia in Pregnancy	2 (6.25%)
				Sudden Cardiac Death (Pm Diagnosis)	3.57% (1)	Sudden Cardiac Death (PM Diagnosis)	1 (3.8%)	pneumonia	2 (6.25%)

10.11 REFERRAL FACILITIES OF THE MATERNAL DEATHS

A total of 32 maternal deaths were recorded in 2021, out of which 24% (24) were cases referred from peripheral facilities. Capacity building at the primary and secondary level facilities is cardinal to the reduction of mortalities especially, considering the leading causes of maternal mortalities. The ability of the medical team to refer patients timely

is as important as the prompt attention the patients ought to receive on arrival. There is the need for commitment by all stakeholders with 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

2018		2019		2020		2021	
INSTITUTION	NO	INSTITUTION	NO	INSTITUTION	NO	INSTITUTION	NO
Saltpond Municipal Hospital	3	Mercy Women's Clinic – Mankessim	3	St. Luke's Catholic Hospital, Apam	2	Saltpond Municipal Hospital	3
Mercy Women's Clinic - Mankessim	3	Winneba Trauma and Specialist Centre	3	Abura Dunkwa Hospital	2	Kissi Health Centre	2
Effia Nkwanta Regional Hospital, Takoradi	2	Cape Coast Metropolitan Hospital	3	Ankaful Leprosarium Hospital	3	Adisadel Hospital	2
Our Lady of Grace Hospital, Asikuma	2	Saltpond Municipal Hospital	2	Elmina Health Centre	1	Cape Coast Metro	3
Adisadel Urban Health Centre, Cape Coast	1	UCC Hospital	2	UCC	1	ST. Francis X'avier	2
Abura Dunkwa District Hospital	1	Moree Health centre	2	Mercy Womens Centre	4	Ankaful Psychiatric Hospital	1
Apinto Government Hospital, Takoradi	1	Ewim Polyclinic	1	Kissi Health Centre	1	Gomoa Fetteh	1
Baiden Ghartey Memorial Hospital, Cape Coast	1	Elmina Urban Health Center	1	Efutu Health Centre	1	Winneba Trauma	1
Essikado Government Hospital, Takoradi	1	Atobiase Community Clinic	1	Saltpond Polyclinic	2	Mother & Child Clinic	1
Fynba Clinic	1	St. Luke's Catholic Hospital, Apam	1	Nyame Tease	1	Moree Hospital	1
Moree Health Centre	1	St. Francis X'avier	1	Jukwa Health Centre	1	U.C.C Hospital	1
Nagel Memorial Adventist	1	Ankaful	1	Twifo Praso	2	Ankaful General Hospital	1
Oda Government Hospital, Akim - Oda	1	CCTH	4	Tarkwa Municipal Hospital	1	Abrem Agona	1
Sanford World Clinic, Cape Coast	1	Unknown facilities	3	CCTH	2	Komenda	1
Swedru Government Hospital	1	-				ST. Luke, Apam	1
UCC Hospital	1	-				Twifo Praso	1
UQ Hospital	1	-					

2018		2019		2020		2021	
INSTITUTION	NO	INSTITUTION	NO	INSTITUTION	NO	INSTITUTION	NO
Winneba Trauma and Specialist Centre	1	-					
TOTAL (REFERRALS)	24	TOTAL (REFERRALS)	24	TOTAL (REFERRALS)	24	TOTAL (REFERRALS)	24
CCTH cases	3	CCTH cases	4	CCTH cases	2	CCTH cases	8
GRAND TOTAL	27	GRAND TOTAL	28	GRAND TOTAL	26	GRAND TOTAL	32

CHAPTER ELEVEN

CHILD HEALTH SUB-BMC

11.1 BACKGROUND

Child health sub-BMC was inaugurated on the 20th of July 2016. Children up to the age of 16 years are admitted for various paediatric services, such as, surgical, Orthopaedics, Eye, ENT as well as medical cases. The sub-BMC also has a Special Care Baby Unit (NICU) which serves as a referral Centre for new-borns in Central, Western Regions and parts of Ashanti. The Management team of the Sub-BMC comprises the Head, the DDNS, Business Manager, Accountant, and a Pharmacist.

11.2 CHILD HEALTH SUB-BMC'S 2021 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES

Table 11.2. 1: Child Health Sub-BMC's 2021 Annual Performance Against CCTH Strategic Objectives

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
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	2021 Target	Remarks
Percentage of neonatal admissions due to external referrals	-	28%	26.1%	27.2%	25.5%	15%	THs = 30%	Decr
Improved neonatal services (2 nurses being sponsored by the hospital for neonatal nursing specialist training)								
Neonatal specialist clinic attendance increased by 260% from 247 in 2020 to 890 in 2021								
Paediatric sub-Specialty clinic attendance increased by 57.1%, from 1,121 in 2020 to 1,176 in 2021								
CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.								
Actual Performance Trend								
	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	Target	Remarks % Diff.
Institutional infant mortality rate (/1000LB)	82	65	69	91	89	88	THs = 15	Decr
Number of Infant deaths	236	201	216	272	284	267	-	6% decr
Institutional neonatal mortality rate (/1000)	72	59	63	80	81	78	TH = 25	Decr
Number of institutional neonatal deaths	207	180	197	239	233	239	-	2.6% incr
Under-five mortality rate (/1000LB)	87	71	77	101	106	95	-	Decr
Institutional under-five mortality	250	219	242	301	307	290	-	5.5% decr
Conducted radio and TV talk shows during the following World Health Days; <ul style="list-style-type: none"> • Cancer • Jaundice • Breastfeeding • Prematurity day 								
Provided educational talks and videos at the OPD								
In-service training: <ul style="list-style-type: none"> • 2 ETAT and neonatal resuscitation training sessions • Clinical teachings were done online as well as in-person 								

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
<ul style="list-style-type: none"> 1 customer service training held
CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE
<p>Oxygen piping at the ward and NICU</p> <ul style="list-style-type: none"> 4 ports at the HDU 2 ports at NICU
<p>Acquired the following equipment;</p> <ul style="list-style-type: none"> 2 Infant incubators 1 Bilimeter 1 Infusion pump 1 Hisense TV 32' 1 Nebulizer set 4 Oxygen concentrators 1 Haemoglobinometer 2 Radiant warmers
CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM
4.1: Governance Related Performance
Four (4) sub-BMC meetings organized
One (1) staff durbar organized
4.2: Human Resource Related Performance
Two (2) medical officers were sent for specialist training
Three (3) specialists sent for subspecialty/fellowship training
<p>Eleven (11) nurses went for training.</p> <ul style="list-style-type: none"> Oncology nursing – 2 Haematology – 1 Neonatal Membership - 3 Paediatric membership – 3 Paediatric Associate – 1 Critical Care - 1
<p>Following staff returned from school:</p> <ul style="list-style-type: none"> Three (3) Nurses returned from school; <ul style="list-style-type: none"> iii. Paediatric membership – 1 iv. Paediatric oncology – 2 One (1) Paediatric specialist doctor returned
4.3: Finance related performance
The sub-BMC 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:
<p>Conducted three (3) researches of which two were published and one (1) is ongoing.</p> <p>Published;</p> <ul style="list-style-type: none"> Agbeno EK, Osarfo J, Ashong J, Anane Fenin B, Okai E, Ofori AA, et al. (2021) Determinants of preterm survival in a tertiary hospital in Ghana: A ten-year review. PLoS ONE 16(1): e0246005. https://doi.org/10.1371/journal.pone.0246005 Kwadwo Apeadu Danso et al. Pfeiffer syndrome type 3 with FGR2 c.1052C>G (p. Ser351Cys) variant in West Africa: a case report. Pan African Medical Journal. 2021;40(136). https://www.panafrican-med-journal.com/content/article/40/136/full/ <p>Ongoing;</p> <ul style="list-style-type: none"> Acute Paediatric Critical Illness in A Resource –Limited Setting: A Novel Point Prevalence 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
Provided Telephone Feedback to peripheral facilities on referred cases sent

11.3 CHILD HEALTH OPD SERVICES UTILIZATION

In 2021, there was a huge increase of 54% (from 6003 in 2020 to 9244 in 2021) in general Paediatrics Clinic attendance. However, the total Paediatric Specialist clinic attendance dropped by 25.49% (from 1169 in 2020 to 871 in 2021). Paediatrics Renal clinic attendance decreased by 47% (from 216 in 2020 to 115 in 2021), whilst Paediatrics Cardio clinic attendance went down by 3% (from 60 in 2020 to 58 in 2021). NICU Follow-Ups increased from 247 in 2020 to 890 in 2021. Figure 11.3.1 to figure 11.3.3 and table 11.3.1 provides detailed analysis below.

Figure 11.3. 1: Eight-year Trend of Paediatrics OPD Attendance

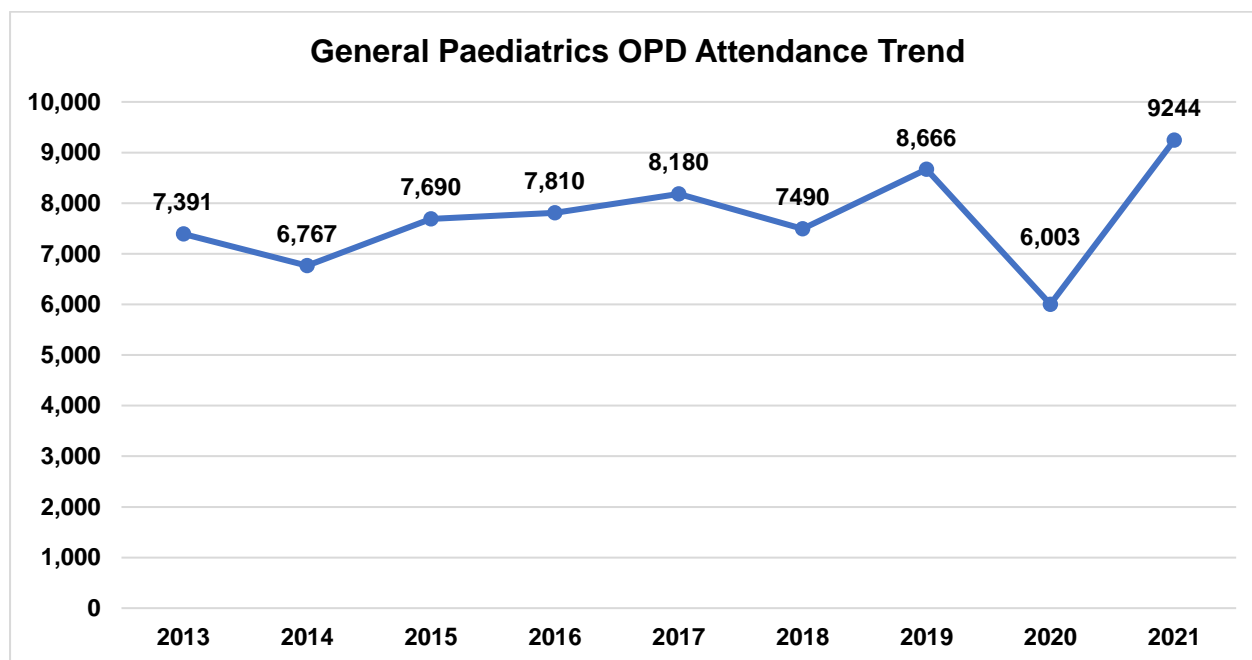


Figure 11.3. 2: Trend of Total Pediatric Specialist Clinic OPD Attendance

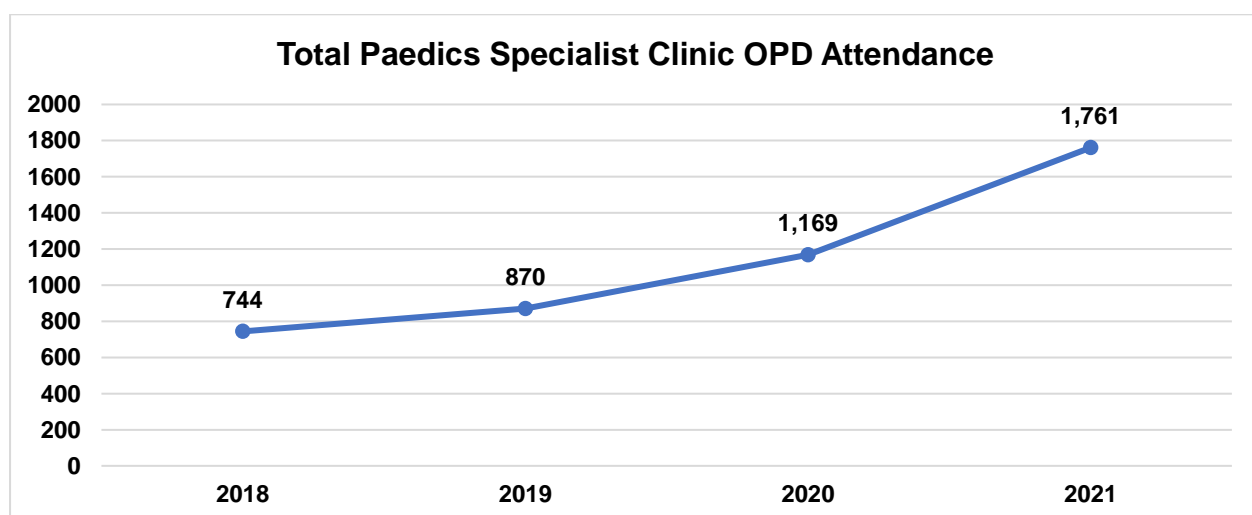


Figure 11.3. 3: Trend of Paediatric OPD Attendance per Speciality

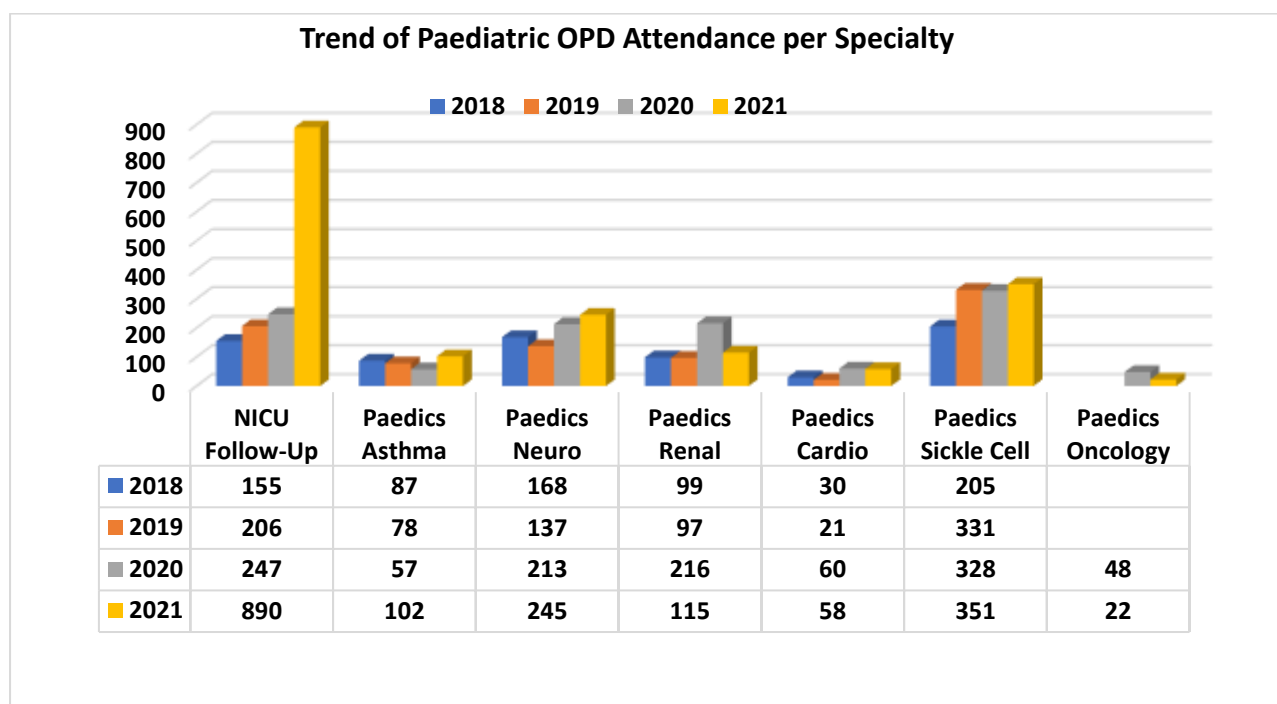


Table 11.3. 1: Child health OPD Clinic Attendance Trend

CLINICS	2013	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS
General Paediatrics Clinic	7,391	6,767	7,690	7,810	8,180	7490	8,666	6,003	9244	54% incr
<i>Paediatric Specialist Clinic</i>										
NICU Follow-Up	-	-	-	-	-	155	206	247	890	260.3% incr
Paedics Asthma	-	-	-	-	-	87	78	57	102	78.9% incr
Paedics Neuro	-	-	-	-	-	168	137	213	245	15% incr
Paedics Renal	-	-	-	-	-	99	97	216	115	47% decr
Paedics Cardio	-	-	-	-	-	30	21	60	58	3% decr
Paediatrics - Sickle Cell clinic	-	-	-	-	-	205	331	328	351	7% incr
Paediatrics Oncology	-	-	-	-	-	-	-	48	22	54.2% decr
Total Paediatric Specialist Clinic Attendance						744	870	1,169	1,783	25.49% decr

11.4 CHILD HEALTH ADMISSIONS

The total number of admissions at the Paediatric ward in 2021 went up by 15.2% (from 1,708 in 2020 to 1,968 in 2021), whilst the total number of admissions at NICU reduced by 9.8% (from 1,001 in 2020 to 903 in 2021). Also, the percentage of neonatal admissions due to external referrals dropped significantly from 25.5% in 2020 to 15% in 2021. The average length of stay at the Paediatric ward reduced from 6.1 in 2020

to 5.9 in 2021, whilst the average length of stay at the NICU equally reduced from 7 in 2020 to 3.4 in 2021. Further, the percentage bed occupancy rate at the Paediatric ward went up from 63.1% in 2020 to 69% in 2021, whereas the percentage bed occupancy at the NICU also went up from 75.3% in 2020 to 80.6% in 2021. The death rate at the Paediatric ward decreased from 6.1% in 2020 to 5.7% in 2021 and death rate at NICU also reduced from 24.2% in 2020 to 23.6% in 2021. Detailed trend analysis is provided in tables 11.4.1 to table 11.4.2 and figure 11.4.1 below.

Table 11.4. 1: Trend of Child Health In-patients Performance Analysis – Paediatric Ward

INDICATOR	2016	2017	2018	2019	2020	2021	REMARKS
Admissions	1,779	1,825	1,742	1,833	1,708	1968	15.2% incr
Discharges	-	1,839	1,765	1,791	1,512	1940	28.3% incr
Average Daily	29	28	27	32	30.4	33	10% incr
% Bed Occupancy	61.2	59.1	62.7	67.2	63.1	69	9% incr
Average Length of Stay (Days)	5.9	5.4	5.3	6.2	6.1	5.9	3.3% decr
Number of Deaths	106	80	88	119	99	117	18.2% incr
Death Rate (%)	5.7	4.1	4.7	6.2	6.1	5.7	0.4% decr

Table 11.4. 2: Trend of Child Health In-patients Performance Analysis – NICU Ward

Indicator	2016	2017	2018	2019	2020	2021	Remarks	Target	Measurement
Admissions	670	780	890	1,068	1,001	903	9.8% decr	-	-
Percentage of neonatal admissions due to external referrals	-	28%	26.1%	27.2%	25.5%	15%	37.5% decr	30%	No. of Neonatal admissions due to referrals / Total neonatal admissions
Discharges	-	557	617	802	702	649	7.5% decr	-	
Average Daily	12	13	16	20	18.1	19	5% decr	-	
% Bed Occupancy	50.1	53.2	65.5	83.3	75.3	80.6	7% incr	-	
Average Length of Stay	6.8	6.5	7.2	7.2	7	3.4	52.8% decr	-	
Number of Deaths	179	155	176	218	227	201	10.3% decr	-	
Death Rate	26.8	19.8	19.7	20.5	24.2	23.6	2.2% decr	-	

11.5 TOP 10 CAUSES OF CHILD HEALTH ADMISSION

In 2021, Sepsis was recorded as the leading cause of child admissions, resulting in the admission of 414 children, followed by Jaundice (340) and Asphyxia (273). The number of admissions due to Asphyxia increased by 3.02% (from 265 in 2020 to 273 in 2021). Although Low birth weight was ranked fifth in 2021, it decreased by 16.46% (from 164 in 2020 to 137 in 2021). Sickle Cell (67) and Anaemia (60) were the least ranked amongst the causes of Child Health admission. Figure 11.4.1 and table 11.4.1 provide detailed analysis below.

Figure 11.5. 1: Top 10 Causes of Child Health Admission in 2021

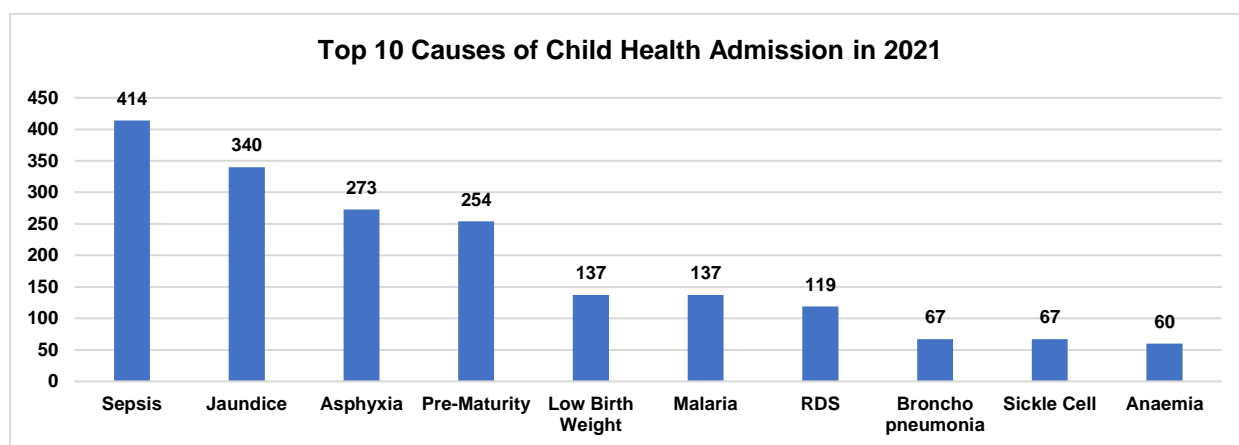


Table 11.5. 1: Top 10 Causes of Child Admission

2018		2019		2020		2021	
CONDITION	NO.	CONDITION	NO.	CONDITION	NO	CONDITION	NO
Jaundice	392	Asphyxia	328	Jaundice	378	Sepsis	414
Pre-Maturity	293	Pre-Maturity	277	Sepsis	353	Jaundice	340
Neonatal Sepsis	275	Jaundice	262	Pre-Maturity	302	Asphyxia	273
Bronchopneumonia	251	Bronchopneumonia	181	Asphyxia	265	Pre-Maturity	254
Neonatal Asphyxia	215	Sepsis	159	Malaria	196	Low Birth Weight	137
Malaria	153	Malaria	125	Low birth weight	164	Malaria	137
Anaemia	96	Hernia	62	Pneumonia	122	RDS	119
Hernia	64	Malnutrition	59	Malnutrition	90	Broncho pneumonia	67
Sickle cell crisis	64	Anaemia	50	Fracture	79	Sickle Cell	67
Tonsillitis	56	Sickle Cell	41	Sickle cell	75	Anaemia	60

11.6 CHILD MORTALITIES

The hospital's performance under child health mortality indicators remains unacceptably high since 2014, and of great concern to the institution. In 2021, the total number of neonatal deaths increased by 2.6% (233 in 2020 to 239 in 2021), whilst the neonatal mortality rate reduced marginally from 81/1000LB in 2020 to 78/1000LB in 2021. Evidently, the hospital was not able to achieve the neonatal mortality rate target of 25/1000LB set for Teaching Hospitals in Ghana. In the same light, the infant death decreased by 6% (from 284 in 2020 to 267 in 2021), whilst the infant mortality rate went down marginally from 89/1000LB in 2020 to 88/1000LB in 2021, which means the Teaching Hospitals' target of 15/1000LB was not met. Similarly, the hospital's under-five mortality rate decreased from 106/1000LB in 2020 to 95/1000LB in 2021, whereas, the total number of under-five deaths decreased by 5.5% (from 307 in 2020 to 290 in 2021). Figure 11.6.1 and table 11.6.1 provides detailed trend analysis below.

Figure 11.6. 1: Trend Analysis of Child Mortality

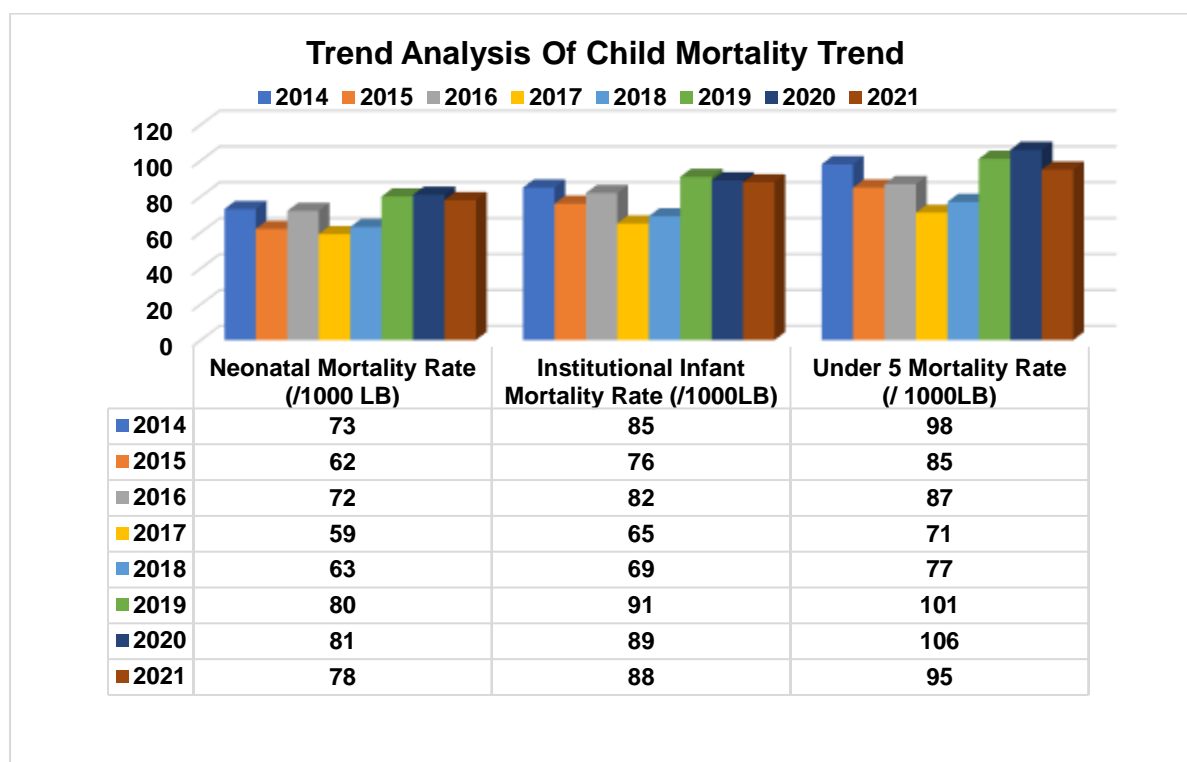


Table 11.6. 1: Trend Analysis of Child Mortality

INDICATORS	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS	TARGET
Neonatal Deaths	189	173	207	180	197	239	233	239	2.6% incr	-
Neonatal Mortality Rate (/1000LB)	73	62	72	59	63	80	81	78	decr	THs = 25/1000LB
Infant Deaths	221	213	236	201	216	272	284	267	6% decr	-
Institutional Infant mortality rate (/1000LB)	85	76	82	65	69	91	89	88	decr	THs = 15/1000LB
Infants Admissions- Institutional	1,286	1,172	1,352	1,442	1,697	1660	1,357	1734	27.8% incr	-
Number Of < 5 Deaths	254	237	250	219	242	301	307	290	5.5% decr	-
Under 5 Mortality Rate (/1000 LB)	98	85	87	71	77	101	106	95	decr	-

11.7 NEONATAL DEATH'S AUDITED

Auditing of deaths is cardinal in the identification of the root cause of the mortalities and to prescribe ways of preventing such occurrences. It is in this light that the hospital put in measures to ensure all deaths are audited, especially the neonatal deaths. In 2019, the Child Health department improved on the number of the neonatal deaths audited from 95% in 2018 to 99.05% in 2019, but the percentage of neonatal deaths

audited in 2020 declined significantly to 88% in 2020. A situation that could be partly attributed to the restrictions placed on social gathering as a precautionary measure to limit the corona virus infection among staff. However, in 2021, the situation improved again as the percentage of neonatal deaths audited was 100% (from 88% in 2020 to 100% in 2021). Nevertheless, the hospital needs to continue to implement targeted interventions to improve the neonatal mortality rate in the institution. Table 11.7.1 provides the percentage of deaths audited from 2018 to 2021 below.

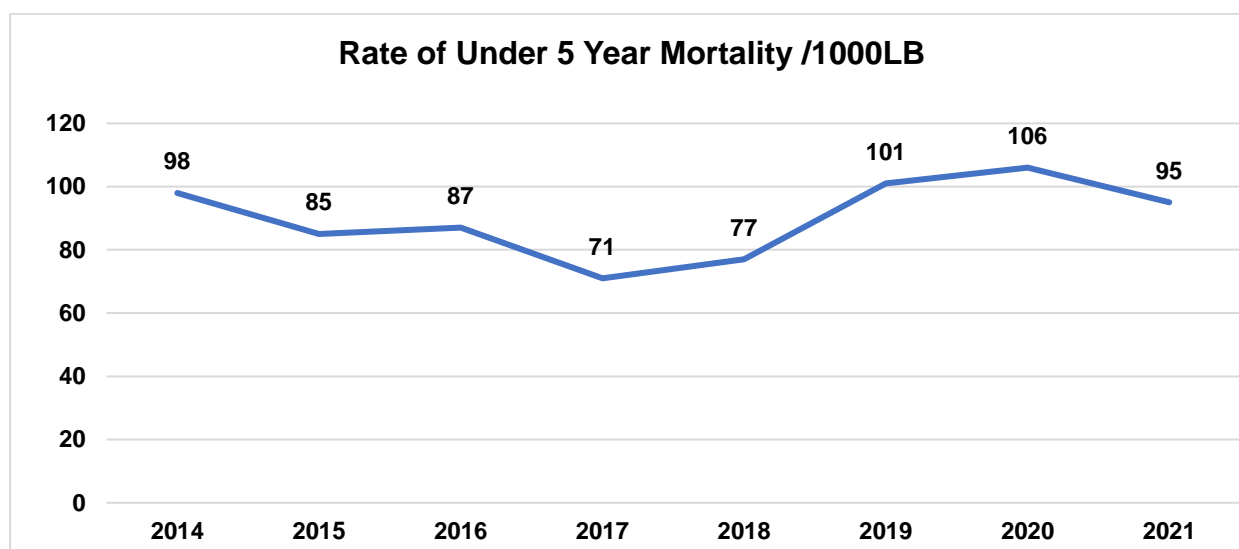
Table 11.7. 1: Trend of neonatal deaths audited from 2018 to 2021

INDICATORS	2018	2019	2020	2021	REMARKS
percentage to neonatal deaths audited	95%	99.05%	88%	100%	13.6%incr

11.8 CHILDREN UNDER FIVE MORTALITY

The hospital's under-five mortality rate has been fluctuating over the past eight years. In 2021, the total number of under-five deaths decreased by 5.5% (from 307 in 2020 to 290 in 2021), whilst the under-five mortality rate reduced from 106/1000LB in 2020 to 95/1000LB in 2021. Additional measures need to be put in place to sustain the gains and to also improve the outcome further. Figure 11.8.1 below provides detailed trend analysis.

Figure 11.8. 1: Rate of Under 5 Year Mortality /1000LB



11.9 TOP TEN CAUSES OF UNDER 5 MORTALITY

In 2021, Respiratory Distress Syndrome [(RDS) (70)] was ranked as the top leading cause of under-five mortality and it constituted 24.1% of the total under-five deaths, followed by Asphyxia (60) and Sepsis (38) which constituted 20.7% and 13.1% of the total under-five deaths in 2021 respectively. Also, Broncho Pneumonia (5) and Congenital Heart Disease (5) conditions were the least conditions ranked amongst the top ten causes of under-five mortality with each constituting 1.7% of the total causes of under-five mortality. Figures 11.9.1 to figure 11.9.2 and table 11.9.1 provides trend analysis below.

Figure 11.9. 1: Top Ten Causes of Under 5 Mortality in 2021

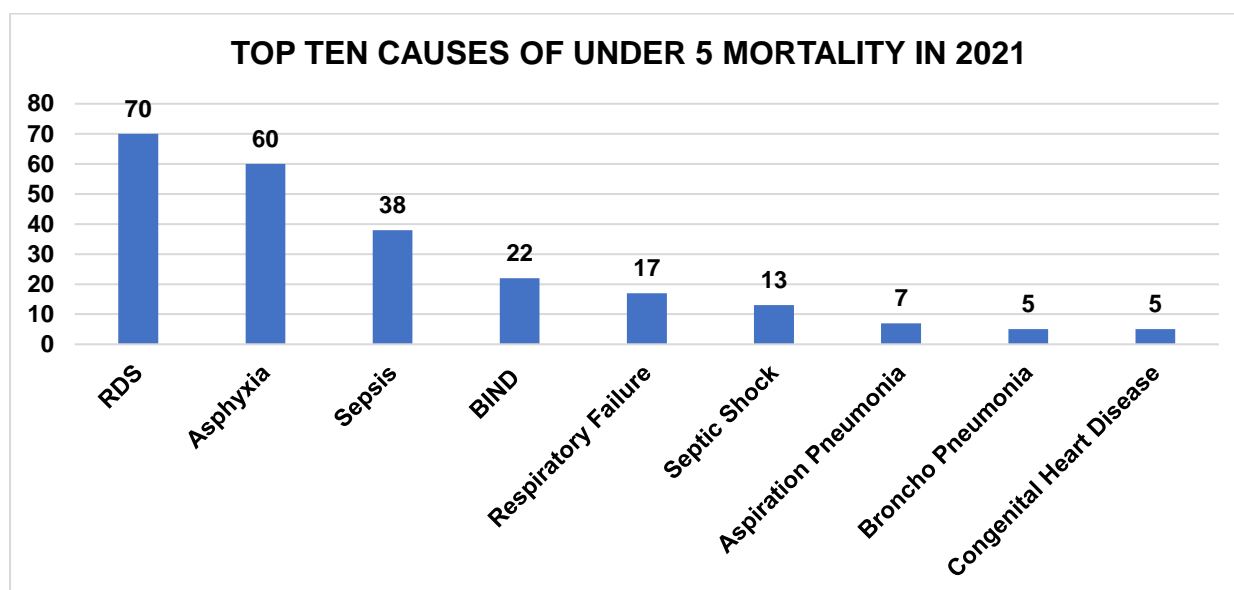


Figure 11.9. 2: Case Specific Rate for Top Ten Under 5 Mortality in 2021

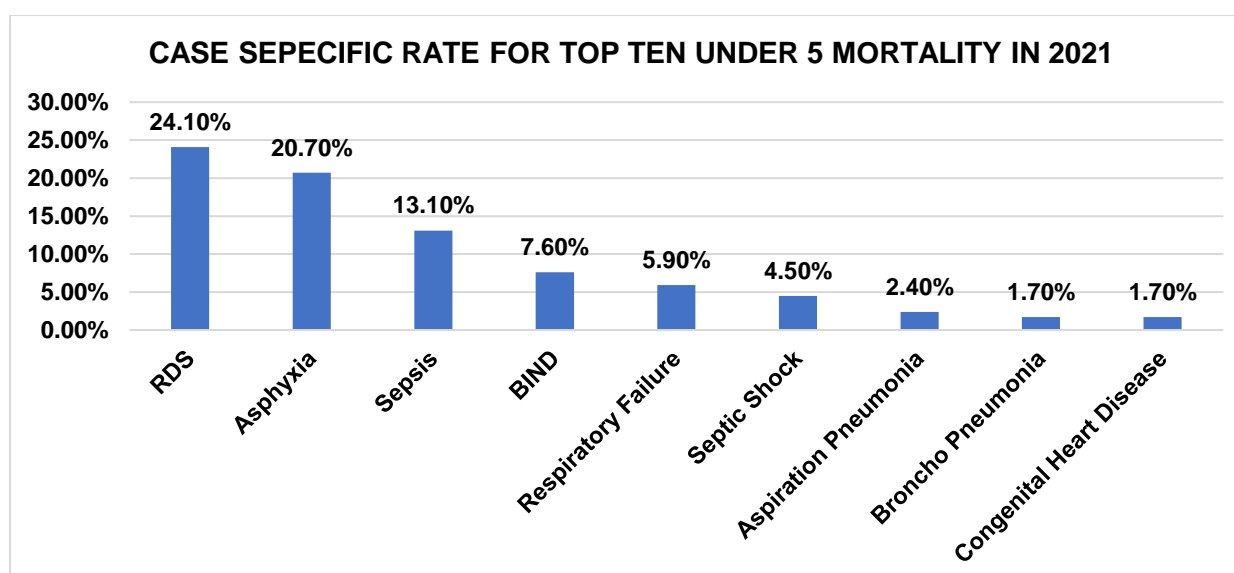


Table 11.9. 1: Comparative Analysis of Top Ten Causes of Under 5 Mortality

2018		2019		2020		2021	
CONDITION	NO. OF CASES	CONDITION	NO. (%)	CONDITION	NO. (%)	CONDITION	NO. (%)
Pre-maturity	71	Asphyxia	78 (22.4%)	Pre-maturity	84 (27%)	RDS	70 (24.1%)
Asphyxia birth (neonatal)	47	Pre-maturity	70 (20.1%)	Asphyxia	55 (18%)	Asphyxia	60 (20.7%)
Neonatal Jaundice	31	Sepsis	32 (9.2%)	Sepsis	49 (16%)	Sepsis	38 (13.1%)
Neonatal Sepsis	22	Neonatal Jaundice	30 (8.6%)	HIE	20 (7%)	BIND	22 (7.6%)
Malnutrition	7	Respiratory Failure	25 (7.2%)	Respiratory Distress	19 (6%)	Respiratory Failure	17 (5.9%)
Bronchopneumonia	6	Bronchopneumonia	23 (6.6%)	Jaundice	15 (5%)	Septic Shock	13 (4.5%)
Meningitis	6	Encephalopathy	13 (3.7%)	Congenital Heart Disease	8 (3%)	Aspiration Pneumonia	7 (2.4%)

2018		2019			2020		2021
CONDITION	NO. OF CASES	CONDITION	NO. (%)	CONDITION	NO. (%)	CONDITION	NO. (%)
Anaemia	5	Respiratory Distress	12 (3.4%)	Kernicterus	8 (3%)	Broncho Pneumonia	5 (1.7%)
Burns	2	Malnutrition	11 (3.2%)	Aspiration	6 (2%)	Congenital Heart Disease	5 (1.7%)

CHAPTER TWELVE

INTERNAL MEDICINE SUB-BMC

12.1 INTRODUCTION

The Internal Medicine Sub BMC is a medical specialty dealing with the prevention, diagnosis, and treatment of medical conditions. The department has a total bed complement of 97. Male Medical ward, Female Medical Ward, Dialysis and Executive suite 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 2021 Annual Performance Against CCTH Strategic Objectives

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY
Range of specialized medical services augmented with the appointment through appointment of Oncologists, Cardiologist, Gastroenterologist and Nephrologist (however, there is general delays with UCC recruitment of local specialists)
Inpatients' services improved due the availability of ECG services <ul style="list-style-type: none"> • Improved diagnosis and management of MI and arrhythmias
CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.
Improved diagnosis and management of MI and arrhythmias
Organised two training workshops for 60 staff (nurses and doctors) on advance life support/basic support (ALS/BLS)
Monitored the stock and re-stocking of emergency trays monthly and ensured 100% availability of emergency drugs
Public screened for kidney disease and awareness created on kidney disease
All staff re-trained in infection control measures
CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE
Procured the following medical equipment; <ul style="list-style-type: none"> • ECG machines • Dialysis machine • Nebulizers • 2 crash carts for emergency medicines • Defibrillator
Acquired additional computers to increase access points for LHIMS
Replacement of new mosquito proof nets Male & Female medical wards
Replacement of 9 new hand washing sinks
Painting of Male and Female Medical wards
Replacement of broken louvre blades Male & Female Medical wards
Replaced two faulty side ward air conditioners with new ones
Replaced two faulty wall heaters with new ones
Received office items including; <ul style="list-style-type: none"> • 2 desk top computers • 2 printers • 2 metal lockers • 2 office desks • 1 three in one sofa • 1 projector • Book shelf from Lancet Laboratories
CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM
4.1: Governance Related Performance

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
Ten (10) Sub BMC Meetings held
4.2: Human Resource Related Performance
Full time Business Manager at posted to the sub-BMC
4.3: Finance related performance
Put in place an authentication system for billing before payment
Periodic financial reports made available Sub-BMC Staff
Notice posted on vantage points insisting patients to demand receipt upon payment of bills.
Organised refresher training on billing procedure to Sub-BMC Billing Clerks
CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING
5.1 Improve on Research:
Three (3) collaborative research projects ongoing
5.2 Improve on Teaching and Learning:
GCPS/WACP candidates prepared for membership exams <ul style="list-style-type: none"> • Residency training continued with the start of two new residents • Two (2) specialist physicians graduating.
Six (6) Nurses were on study leave; <ul style="list-style-type: none"> • Critical care nursing - 2 • Nephrology - 1 • Oncology - 1 • Critical care - 2
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 years recorded fluctuating performance under Internal Medicine. The overall total Internal Medicine specialist OPD attendance dropped by 9.43% (from 39,416 in 2020 to 35,701 in 2021). Despite the general decline, some of the specialties recorded significant increase in the clinic attendance. For instance, the Oncology clinic attendance went up significantly by 195.16% (from 62 in 2020 to 183 in 2021) whilst endocrinology and Dermatology clinics attendance went up by 89.7% (from 97 in 2020 to 184 in 2021) and 30.88% (from 353 in 2020 to 462 in 2021) respectively. Also, the Renal clinic attendance went up by 9.3% (from 919 in 2020 to 1,005 in 2021). A lot of the clinics also recorded significant decline in attendance. Significant among them is the Sickle Cell clinic attendance which dropped by 54.79% (from 595 in 2020 to 269 in 2021). The Asthma clinic also recorded a decline in the attendance by 23.57% (from 819 in 2020 to 626 in 2021). Detailed trend analysis is provided in figure 12.3.1 and table 12.3.1 below.

Figure 12.3. 1: Trend Analysis of Total OPD Attendance

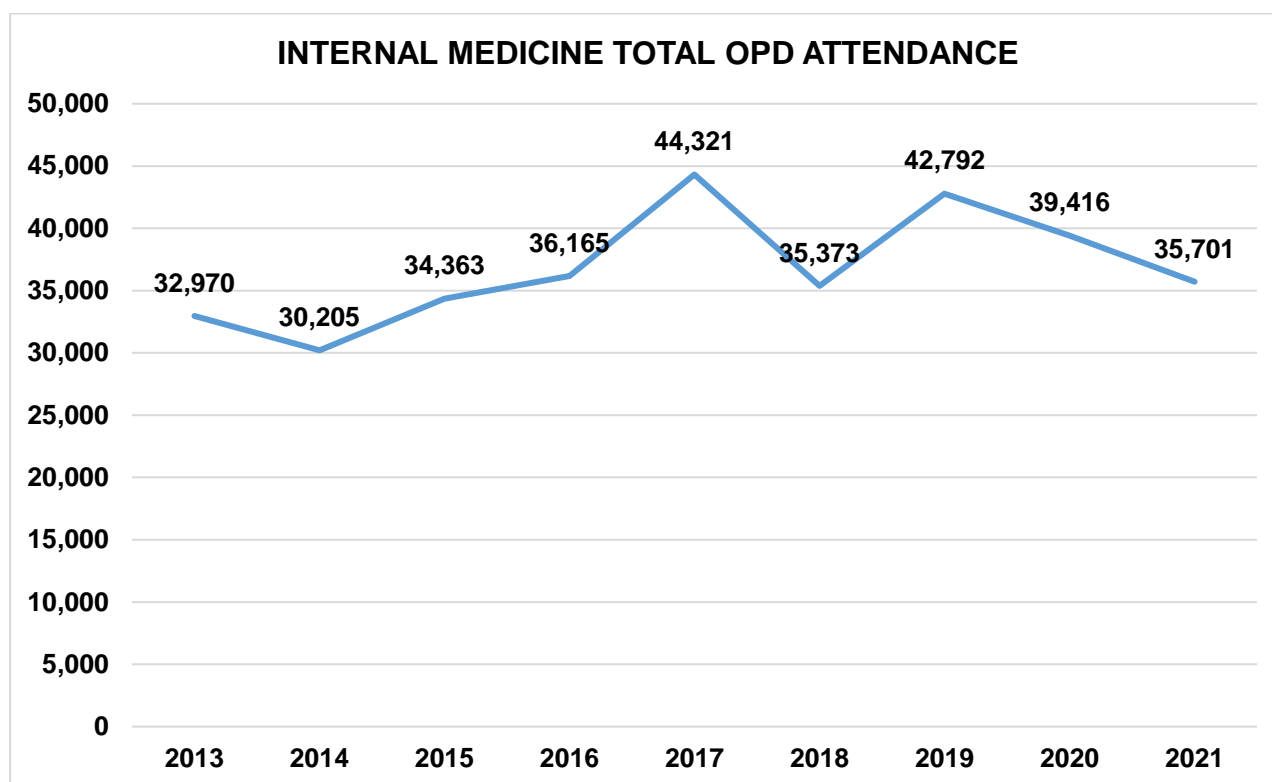


Table 12.3. 1: Internal Medicine OPD Services from 2013 to 2021.

CLINICS	2013	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS
General Medical	18,421	18,239	16,617	16,232	21,060	17,184	18,142	17,385	19,055	9.6% incr
Dermatology	224	324	357	330	359	315	45	353	462	30.88% incr
Asthma	491	357	297	511	787	1,036	1,005	819	626	23.57% decr
Sickle Cell	151	179	235	454	650	567	423	595	269	54.79% decr
Gastroenterology	183	315	359	560	690	620	749	662	694	4.83% incr
Cardiology	546	506	516	1,590	2,153	2,104	2,583	2,558	2718	6.25% incr
Diabetes	11,332	9,135	9,201	9,309	9,966	10,636	11,304	8,965	9356	4.3% incr
Hepatitis B	1,622	1,114	794	940	1,059	1179	1,212	850	775	8.82% decr
TB CLINIC	-	36	35	42	39	131 (42 - CCTH Clients)	361 (31 CCTH Clients)	292	271	7.2% decr
HIV CLINIC	-	-	5,895	5,377	6,068	-	4,913	5,337	4,057	24% decr
Adolescent Clinic	-	-	57	126	218	171	178	126	130	3.2% incr
Endocrinology	-	-	-	82	125	111	106	97	184	89.7% incr
Haematology	-	-	-	223	298	431	437	396	427	7.8% incr
Renal Clinic	-	-	-	389	849	888	1,334	919	1005	9.3% incr
Oncology Clinic	-	-	-	-	-	-	-	62	183	195.16% incr
Total Attendance	32,970	30,205	34,363	36,165	44,321	35,373	42,792	39,416	35,701	9.43% decr

12.4 INTERNAL MEDICINE IN-PATIENT PERFORMANCE

In 2021, the Hospital recorded a decline in the total number of admissions at the Internal Medicine sub-BMC by 15.48% (from 2,073 in 2020 to 1,752 in 2021). Also, the total admission at the male and female medical wards reduced by 18.9% and 6.4% respectively, whilst the executive ward recorded an increment of 63.6% in its 2021

admission (from 55 in 2020 to 90 in 2021). Further, the highest average length of stay of 7.8 was recorded at the executive ward whilst the least of 6.4 was recorded at the female medical ward in 2021. In the same light, the highest death rate of 20.3% was recorded at male medical ward, whilst the least death rate of 4% was recorded at the executive ward. 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.

Figure 12.4. 1: Trend of Total In-Patient Service Utilization at Internal Medicine

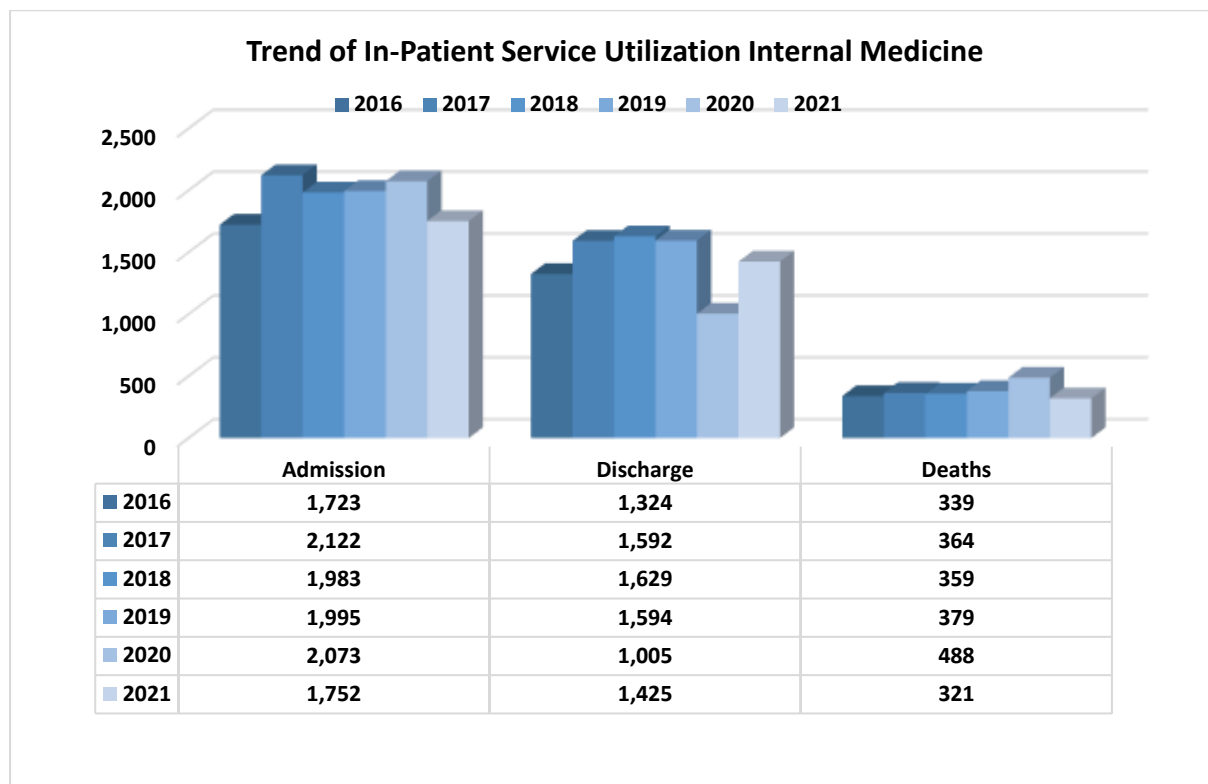


Table 12.4. 1: Trend of Total In-Patient Service Utilization at Internal Medicine

INDICATOR	2016	2017	2018	2019	2020	2021	REMARKS
Admissions	1,723	2,122	1,983	1,995	2,073	1,752	15.48% decr
Discharge	1,324	1,592	1,629	1,594	1,005	1,425	41.8% incr
Deaths	339	364	359	379	488	321	34.2% decr

Figure 12.4. 2: Admissions by Wards at the Internal Medicine Sub-BMC

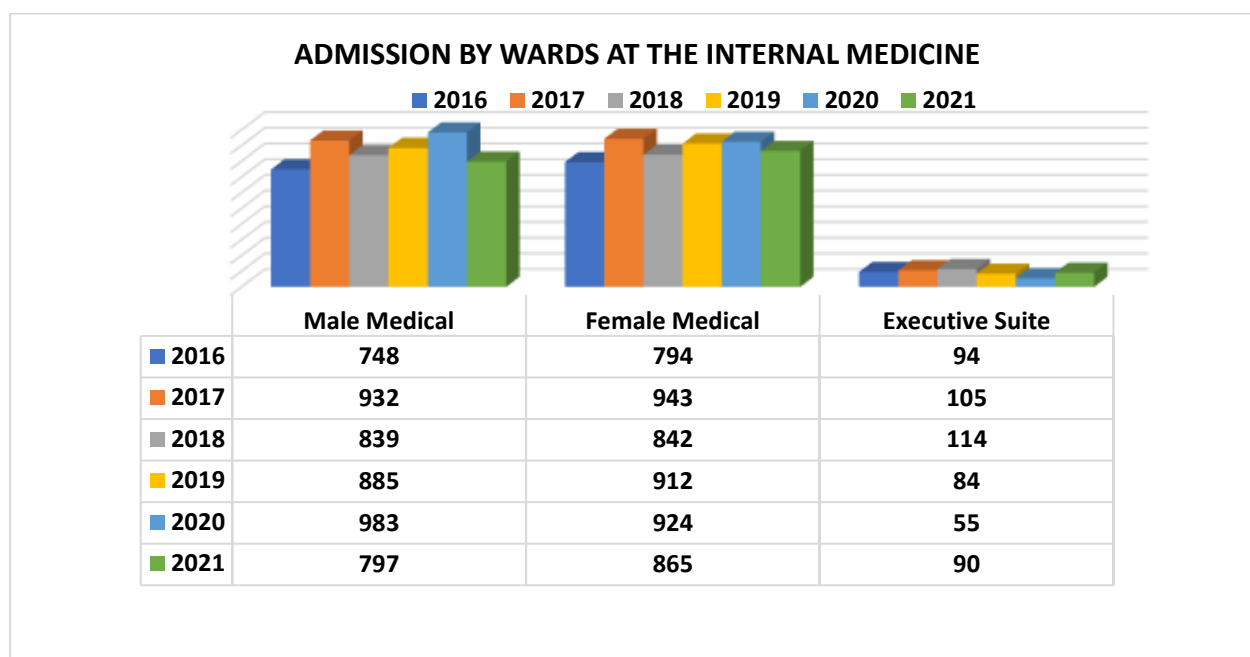


Table 12.4. 2: Admissions by Wards at the Internal Medicine

WARD	2016	2017	2018	2019	2020	2021	REMARKS
Male Medical	748	932	839	885	983	797	18.9% decr
Female Medical	794	943	842	912	924	865	6.4% decr
Executive Suite	94	105	114	84	55	90	63.6% incr
TOTAL	1,723	2,122	1,983	1,995	2,073	1,752	15.48% decr

Table 12.4. 3: Internal Medicine’s In-Patient Utilization

WARD	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
	Average Daily Occupancy					% Bed Occupancy					Average Length of Stay				
Male Medical	15	16	16	17	15	34.3%	37.2%	36.9%	50.2%	34.1%	5.8	7	6.5	6.2	6.6
Female Medical	16	14	16	17	15	37.5%	33.1%	33.1%	40%	35.6%	7.8	6.1	6.5	6.6	6.4
Executive Suite	2	2	2	3	2	57.0%	64.4%	64.4%	58.4%	70.8%	6.1	5	10.3	6.5	7.8

12.4.1 TOP TEN CAUSES OF ADMISSION AT INTERNAL MEDICINE.

Non-communicable diseases continue to account for the leading cause of admission at the Internal Medicine sub-BMC. In 2021, Pneumonia (170) was ranked first among the top ten common conditions admitted, followed by Stroke (164) and Diabetes Mellitus (106). Although Kidney Disease was ranked 4th in the 2021 top ten causes of admission at Internal Medicine, it reduced significantly by 54.98% (from 191 in 2020 to 82 in 2021). Sepsis (56) and Sickle Cell crisis (56) were the least among the top ten causes of admission at the Internal Medicine. Detailed analysis is provided in figure 12.4.1.1 and table 12.4.1.1 below.

Figure 12.4.1. 1: Trend of Top Ten Causes of Admission at The Internal Medicine

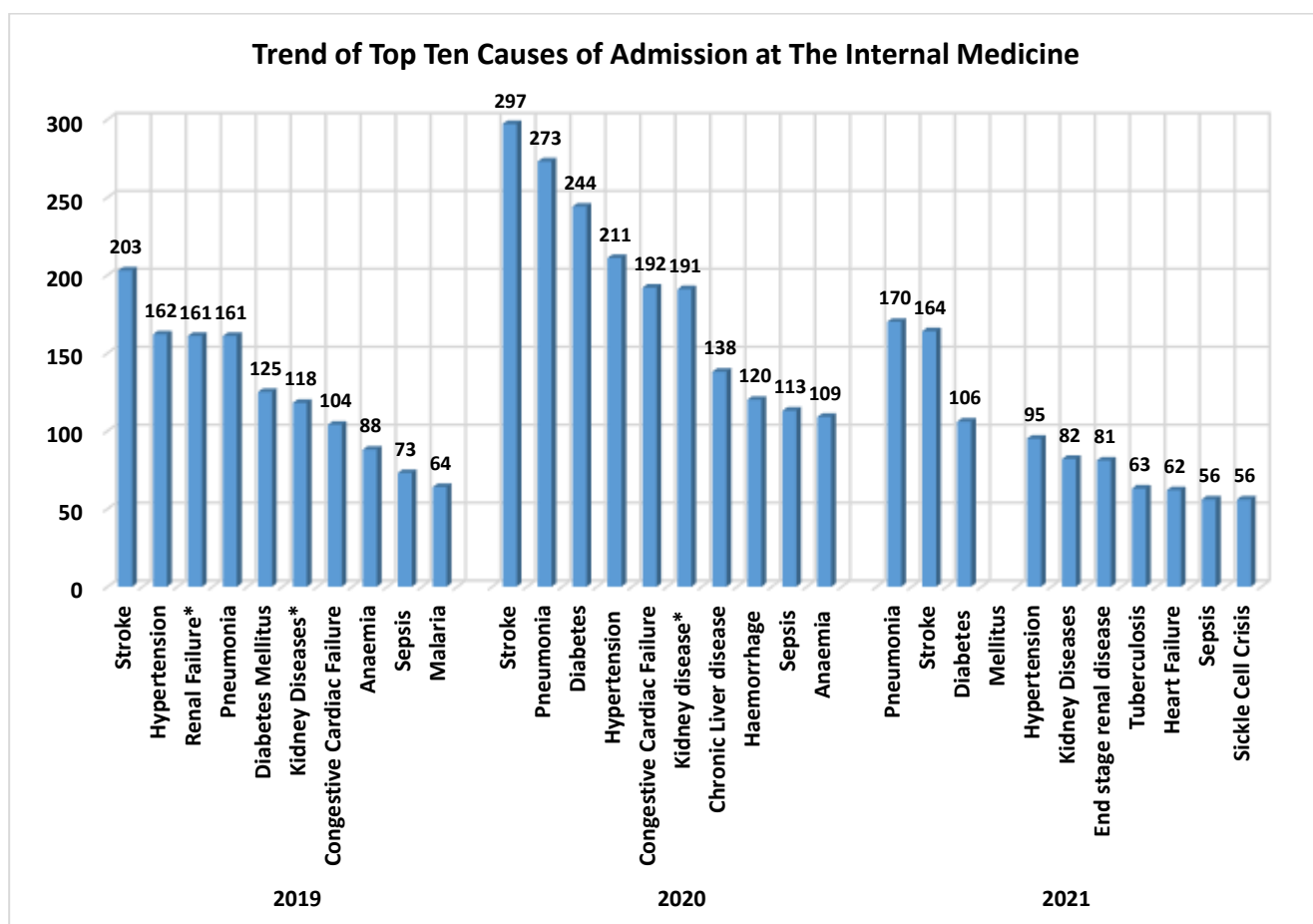


Table 12.4.1. 1: Top Ten Causes of Admission at Internal Medicine

2019		2020		2021	
CONDITION	NUMBER	CONDITION	NUMBER	CONDITION	NUMBER
Stroke	203	Stroke	297	Pneumonia	170
Hypertension	162	Pneumonia	273	Stroke	164
Renal Failure	161	Diabetes	244	Diabetes Mellitus	106
Pneumonia	161	Hypertension	211	Hypertension	95
Diabetes Mellitus	125	Congestive Cardiac Failure	192	Kidney Diseases	82
Kidney Diseases	118	Kidney disease	191	End stage renal disease	81
Congestive Cardiac Failure	104	Chronic Liver disease	138	Tuberculosis	63
Anaemia	88	Haemorrhage	120	Heart Failure	62
Sepsis	73	Sepsis	113	Sepsis	56
Malaria	64	Anaemia	109	Sickle Cell Crisis	56

12.4.2 MORTALITY TREND AT INTERNAL MEDICINE SUB-BMC

The Hospital recorded a drop in the total number of deaths at the internal medicine sub-BMC in 2021 by 22.46% (from 414 in 2020 to 321 in 2021). Generally, the male and female medical wards recorded a reduction in the total number of deaths in 2021 compared to the 2020. The male medical ward recorded the highest death rate of 20.3% in 2021 which is a marginal reduction over the previous year (21.0% in 2020). Executive ward recorded the least death rate of 4% in 2021, which is an increment over the 1.4% that was recorded in 2020. The female medical ward on the other hand, recorded a decrease of 38.1% in the total number of deaths in 2021 (from 202 in 2020 to 152 in 2021) (from 74 in 2020 to 63 in 2021). 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

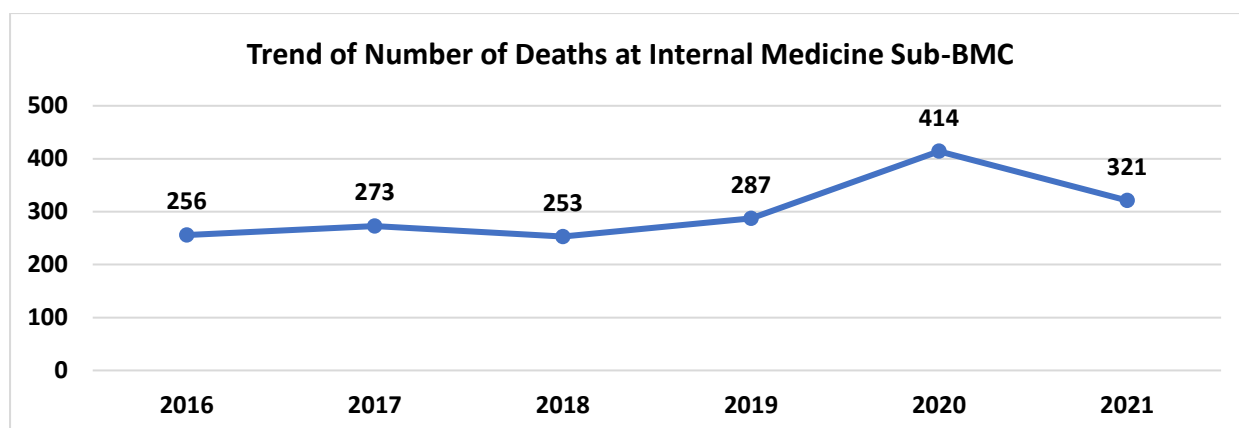


Figure 12.4.2. 2: Mortality Rates Trend Per Wards at the Internal Medicine

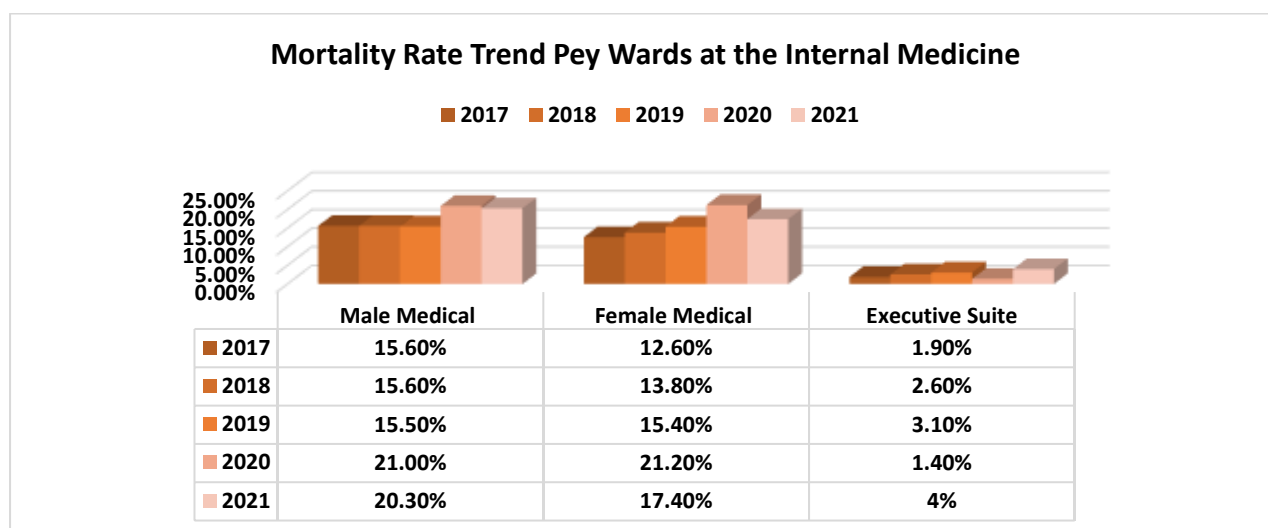


Table 12.4.2. 1: Mortality Trend Per Ward at Internal Medicine Sub-BMC

WARD	2017	2018	2019	2020	2021	REMARKS	2017	2018	2019	2020	2021
	Death						Death Rate				
Male Medical	148	134	140	211	165	21.8% decr	15.6%	15.6%	15.5%	21.0%	20.3%
Female Medical	123	116	144	202	152	38.1% decr	12.6%	13.8%	15.4%	21.2%	17.4%
Executive Suite	2	3	3	1	4	300% incr	1.9%	2.6%	3.1%	1.4%	4%
Total	273	253	287	414	321	22.46% decr	-	-	-	-	-

12.4.3 TOP TEN CAUSES OF DEATH AT INTERNAL MEDICINE

Respiratory Distress (51) was the leading cause of death recorded in 2021 at Internal Medicine, followed by CVA (33) and Kidney Disease (27). Encephalopathy and Injury were the least ranked among the top ten causes of death recorded at Internal Medicine with 12 deaths each. Detailed trend analysis provided in figure 12.4.3.1 and table 12.4.3.1 below.

Figure 12.4.3. 1: Top Ten Causes of Death At The Internal Medicine For 2021

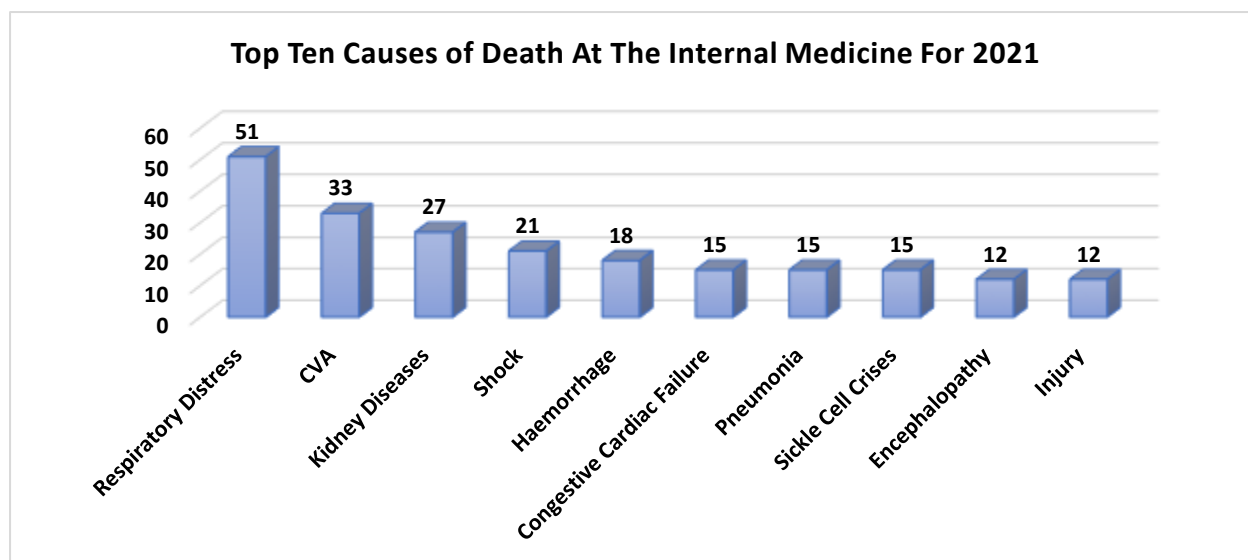


Table 12.4.3. 1: Top Ten Causes of Death At The Internal Medicine

CONDITION	2020	CONDITION	2021
CVA	67	Respiratory Distress	51
Chronic Liver Disease	54	CVA	33
Congestive Cardiac Failure	45	Kidney Diseases	27
Sepsis	42	Shock	21
Kidney Diseases	34	Haemorrhage	18
AIDS/HIV	27	Congestive Cardiac Failure	15
Pneumonia	24	Pneumonia	15
Haemorrhage	23	Sickle Cell Crises	15
Diabetes	16	Encephalopathy	12
Hypertension	14	Injury	12

CHAPTER THIRTEEN

CRITICAL CARE AND ANAESTHESIA SUB-BMC

13.1 INTRODUCTION

The Critical Care and Anaesthesia sub-BMC was inaugurated on 23rd of September 2020. It was previously managed indirectly by surgical sub-BMC (recovery wards) and Medical sub-BMC (ICU). The critical care and anaesthesia 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. It comprises medical (ICU) and theatre recoveries (surgical suite & delivery suite recoveries). The sub-BMC has a bed capacity of 15. 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.

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 2021 Annual Performance Against CCTH Strategic Objectives

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY
Some advanced anaesthesia techniques started, e.g., Epidural Anaesthesia/analgesia, TIVA
Conducted Specialist-led perioperative consults and reviews
Advocated for increment of quota for CCN and CRA
CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.
Conducted Specialist-led perioperative consults and reviews
A morbidity and mortality audit committee were set up
Enhanced quality of care by introducing modern standards e.g., bear huggers, infusomats, syringe pumps, revised monitoring charts were introduced
Developed 3 protocols and guidelines for practice <ul style="list-style-type: none"> ○ Guideline for the practice of Anaesthesia ○ ICU Management Protocol (Adopted from KBTH) ○ Protocol for ICU Admission
Introduced standard procedures like epidural anaesthesia/ analgesia, ultrasound to guide procedure
Organized in-service training for all staff on BLS/ACLS/ATLS, etc
CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE
The department received the following equipment; <ul style="list-style-type: none"> • Mobile x-ray machine • 1 transport ventilator • ABG machine • ECG machine • Defibrillator and AEDs • 1 infusion pump • 3 sire ventilators for the ICU

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
Liaised with other Sub-BMCs to identify designated areas for HDU
Renovated the theatre recoveries <ul style="list-style-type: none"> • Tiling • Repair of sink/cabinet
CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM
4.1: Governance Related Performance
The department organised ten (10) management meetings
Appraised all the Sub-BMC staff
Worked together with Management to meet the requirement for the appointment of Sub-BMC management team
Established a fully functional Specialist Clinic
4.2: Human Resource Related Performance
Trained House Officers, Medical Officer and Residency rotation in Anaesthesiology and Critical Care
Five (5) nurses gained admission to pursue various specialist courses
4.3: Finance related performance
Collaborated with Pharmacy directorate to streamline the costing of Anaesthesia drugs
CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING
5.1 Improve on Research:
ANAESTHESIA & CRITICAL CARE SUB-BMC
A research desk was set up
Commenced three researches in emerging Anaesthesiology and Critical Care medicine
5.2 Improve on Teaching and Learning:
Applied and prepared for accreditation for housemanship, Diploma in Anaesthesia (GCPS, WACS), and residency training in Anaesthesiology
Trained CRAs, CCNs
Established seminars, clinical audits on BLS/ ACLS/ ATLS drills
CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS
-

13.3 ANAESTHESIA OPD SERVICES UTILISATION

The hospital's anaesthesia services have improved over the years. The service utilization is largely dependent on the surgical cases from other specialties. The anaesthesia service utilization was impacted negatively in 2020 due to the temporarily suspension of elective surgeries in the hospital because of the COVID-19 pandemic, thereby affecting clinic attendance, reducing attendance from 894 in 2019 to 480 in 2020. However, in 2021, the situation improved significantly recording 117% (from 480 in 2020 to 1,042 in 2021). Detailed trend analysis is provided in figure 13.3.1 and table 13.3.1 below.

Figure 13.3. 1: Anaesthesia OPD Service Utilisation

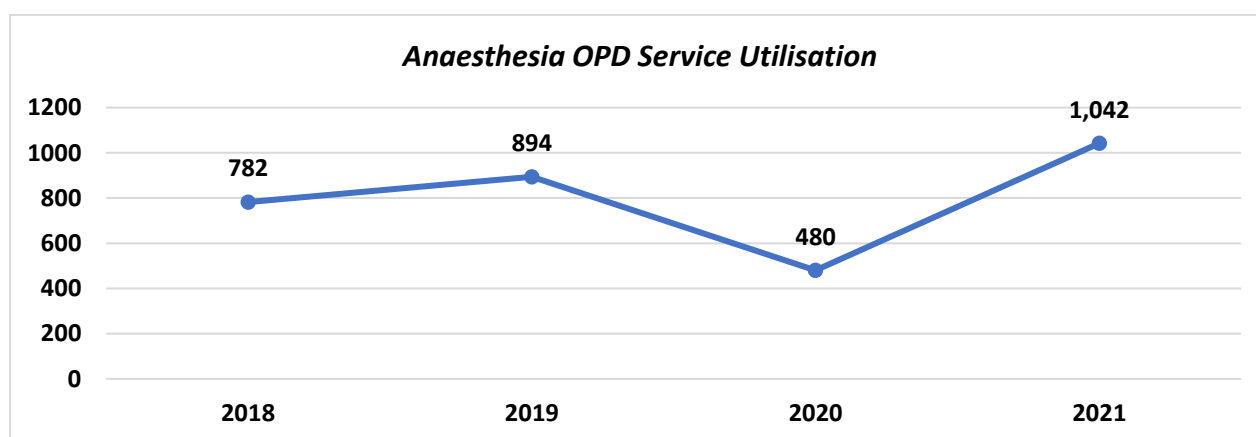


Table 13.3. 1: Anaesthesia OPD Service Utilisation

CLINIC	2018	2019	2020	2021	REMARKS
ANAESTHESIA CLINIC	782	894	480	1,042	117% incr

13.4 CRITICAL CARE AND ANAESTHESIA IN-PATIENT PERFORMANCE

Critical care service is important in a tertiary health institution, to improve the survival chances of patients in critical state, who requires specialist care, medications and advanced medical equipment to survive. Over the past four years, the number of patients admitted to the intensive care unit has seen a continuous decline from 126 cases admitted in 2018 to 79 cases in 2021. This is partly because, the hospital in addition to putting measures in place to improve the capacity of the ICU, it has also set up HDUs (High Dependency Units) at some of the other clinical sub-BMC wards with staff trained to provide minimum critical care services, to take the pressure off the main ICU and allow for an efficient and effective critical care services at the ICU. Hence, the further significant reduction in the ICU admission by 28.8% (from 111 in 2020 to 79 in 2021). However, the ICU is expected to provide assistance to the HDUs set up on the wards.

The ICU’s average length of stay reduced from 6.5 in 2020 to 6.3 in 2021 whilst the average daily occupancy rate reduced from 2.9 in 2020 to 2 in 2021. Also, the ICU recorded a steady decline in total number of deaths and death rate between 2018 to 2020. However, in 2021, the total death reduced by 14.8% (from 74 in 2020 to 63 in 2021). Similarly, the death rate declined from 54.6% in 2018 to 45.10% in 2020. However, in 2021 the death rate went up to 47.4% compared to the previous year. 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)

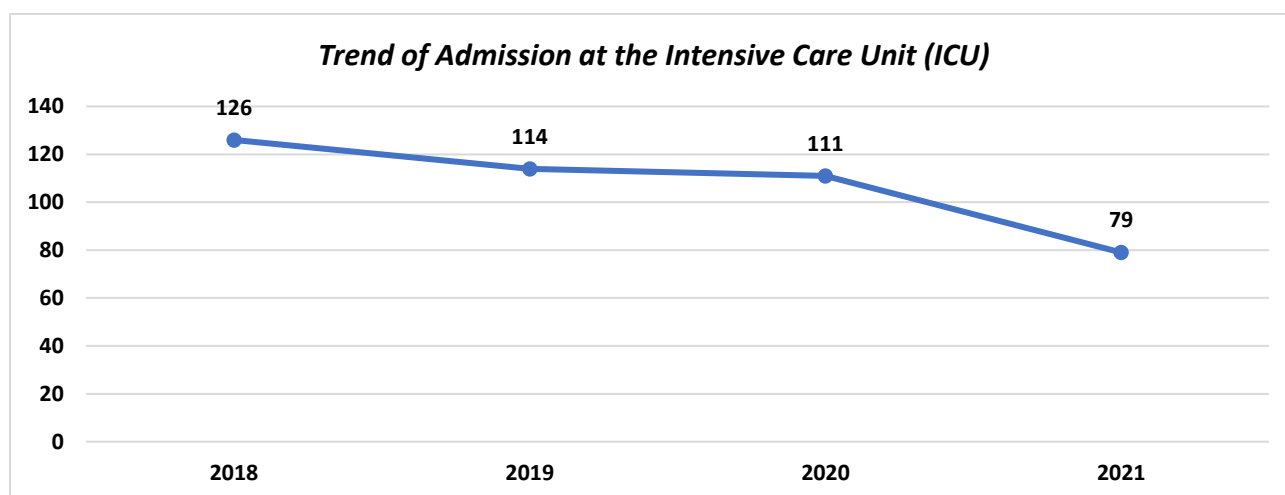


Figure 13.4. 2: Trend of In-Patient Service Utilization at Intensive Care Unit

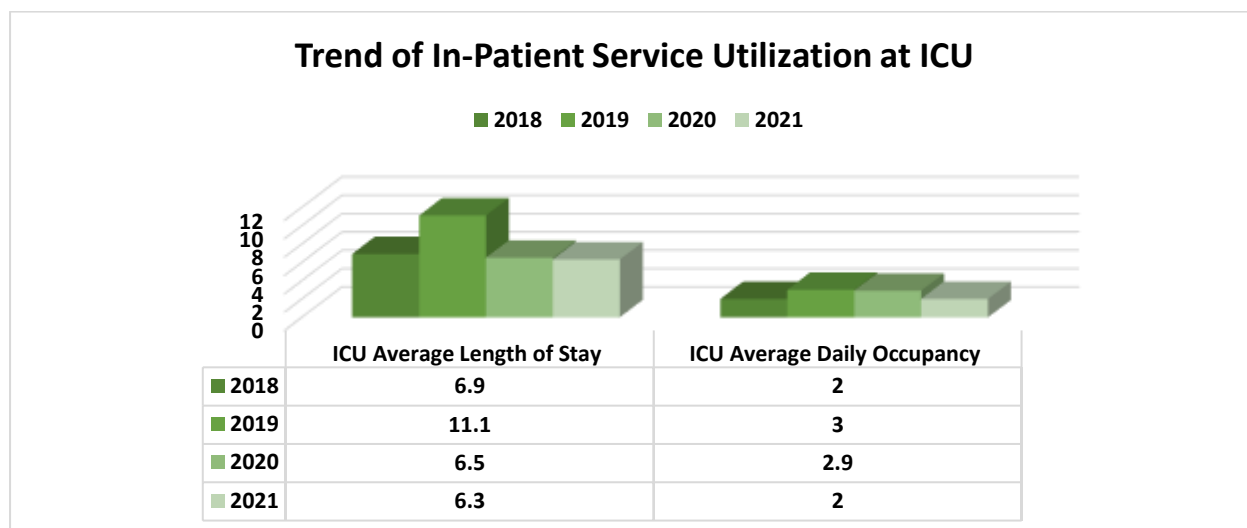


Figure 13.4. 3: Trend Analysis of ICU Death Rate

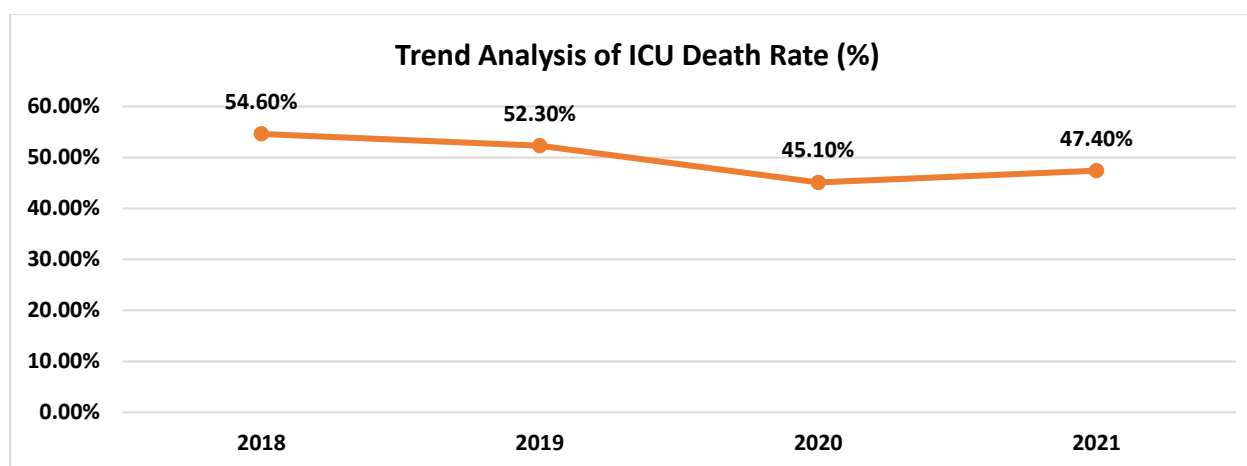


Table 13.4. 1: Critical Care Unit (ICU) In-patient Service Utilization

KPI	2018	2019	2020	2021	REMARKS
Admission	126	114	111	79	28.8% decr
Discharge	9	6	10	12	20% Incr
Average length of stay	6.9	11.1	6.5	6.3	3.1% decr
Average daily occupancy	2	3	2.9	2.0	3.1% decr
% bed occupancy	36.2	49.5	58.4	38.0	35.0% decr
Deaths	106	92	74	63	14.8% decr
Death rate	54.6	52.3	45.1	47.4	5.1% Incr

CHAPTER FOURTEEN

SURGICAL SUB-BMC

14.1 BACKGROUND

The surgical Sub-BMC has a bed complement of Seventy-Seven (77) and comprises male and female surgical wards, general operating theatres. The Surgical Sub-BMC's mandate is to provide specialist surgical services, outreach and a supporting role to the rest of the surgical services within its catchment area and beyond, as well as support clinical teaching/training and research. It is composed of General Surgery, Orthopaedics, Uro-surgery, Neurosurgery, Plastic & Reconstructive Surgery, Ear Nose and Throat (ENT), Ophthalmology, Dental and Maxillofacial surgery, Theatre and Anaesthesia. 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.

14.2 SURGICAL SUB-BMC'S 2021 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES

Table 14.2. 1: Surgical Sub-BMC's 2021 Annual Performance Against CCTH Strategic Objectives

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
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	2021 Target	Remarks
Total surgical operations	3,650	3,853	3,728	4,815	3,883	5,961	CCTH = 10% Incr	16.7% decr
Surgery to Surgeon ratio	152:1	154:1	133:1	127:1	108:1	199:1	THs = 250:1	Incr
Reduced the number of elective surgeries cancellations by 90%								
Pre-operative anaesthesia sessions were expanded to the wards								
CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.								
Actual Performance Trend								
	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	Target	Remarks % Diff.
xxvii. Theatre Death Rate	-	0.4%	0.3%	0.6%	0.1%	0.4%	THs = 0.5%	Incr
xxviii. Surgical site infection rate	-	-	-	0.27	12.61 %	-	THs = 5%	-
Three (3) in-service training were organised for staff on BLS, COVID 19 protocols, patient rollers etc)								
100% compliance with Surgical safety checklist used before, during and after every surgical procedure (whether minor/major or elective/emergency)								
Two emergency trays were stocked up and protocols were developed for its use								
Surgical services were streamlined through implementation of the surgical pack system.								
Management protocols for breast, colorectal and prostate cancers were developed								
CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE								
The Sub-BMC acquired the following equipment to enhance service delivery								
<ul style="list-style-type: none"> • 6 oxygen flowmeters • 2 suction machines • 3 patient rollers • Pad for diathermy machine • 2 ceiling fans • 2 Air Conditioners 								

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
The department received from the hospital; <ul style="list-style-type: none"> • 100 pieces of bedsheets • 60 scrubs • 2 BP apparatus • 1 UV light • 3 Air Conditioners • 2 suction machines • 2 wall flowmeters • 2 pulse oximeters
All broken/missing wall tiles at Surgical Suite, Female and Male wards were replaced
Theatre ceiling fungus was treated and repainted
Theatre reception area was re-modernised and furnished
Installed a water reservoir for use at both male and female surgical wards
CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM
4.1: Governance Related Performance
Four (4) management meetings were organised
Units' meetings were held at least once a week
Two AO Alliance training on management of fracture was organised
4.2: Human Resource Related Performance
About 90% of staff appraised
Two (2) doctors gained admission to pursue further studies
Eight (8) nurses gained admission to pursue various specialized courses
4.3: Finance related performance
Payment for surgical services were streamlined through implementation of the surgical pack system
All indiscriminate payments were harmonised into a single payment point at the Sub BMC office and officially receipted
CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING
5.1 Improve on Research:
The department also conducted the following departmental researches; <ul style="list-style-type: none"> • An Audit of six years' Gastrointestinal Endoscopy at a Single Referral Centre in The Central Region, Ghana • Liquid Biopsy for Detection of Actionable Genomic Mutations in Women of African Descent with Advanced Breast Cancer (Amber-01 Study) • Genomic Mutations in Women of African Descent with Advanced Breast Cancer (Amber-01 Study)
5.2 Improve on Teaching and Learning:
Forty-two (42) clinical meetings organised
Refresher teaching on operating room protocols for O.R staff was organized
Eight (8) foreign medical students did their rotation at the Sub-BMC
Twenty- five (25) physician assistants from various universities did their clerkship at the Sub-BMC
Six (6) PON students came for internship and clinicals
Nursing students from various NTCs did clinicals at the sub-BMC
CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS
-

14.3 OUTPATIENT SURGICAL SERVICES UTILIZATION

The total surgical OPD services utilization saw a steady increase over the years. However, it fluctuated since 2018 with a significant deep in 2020 due to the COVID-19 pandemic. A situation that began to improve in 2021, with the department recording a rise in the overall total surgical OPD attendance by 10.6% (from 8,662 in 2020 to 9,542 in 2021).

In 2020, the COVID-19 pandemic impacted negatively on Surgical OPD services utilization, resulting in significant drop in the clinic attendance of 5 surgical sub-specialty clinics (General Surgery, Orthopaedics, Uro-Surgery, Neuro-Surgery, Plastic

Surgery, out of the 6 surgical sub-specialty OPD clinics (including Colorectal clinic). However, in 2021, the situation improved and out of the six surgical sub specialty OPD services, only Uro-surgical clinic recorded a reduction of 37.62% in attendance in 2021 (from 4,880 in 2020 to 3,044 in 2021). General surgery clinic attendance went up significantly by 80.09% (from 1,356 in 2020 to 2,442 in 2021) whilst the Orthopaedics and plastics surgery clinics attendance increased by 89.23% and 81.13% in 2021 respectively. Detailed analysis is illustrated in figure 14.3.1 to figure 14.3.2 and table 14.3.1 below.

Figure 14.3. 1: Trend in Total Surgical OPD Attendance

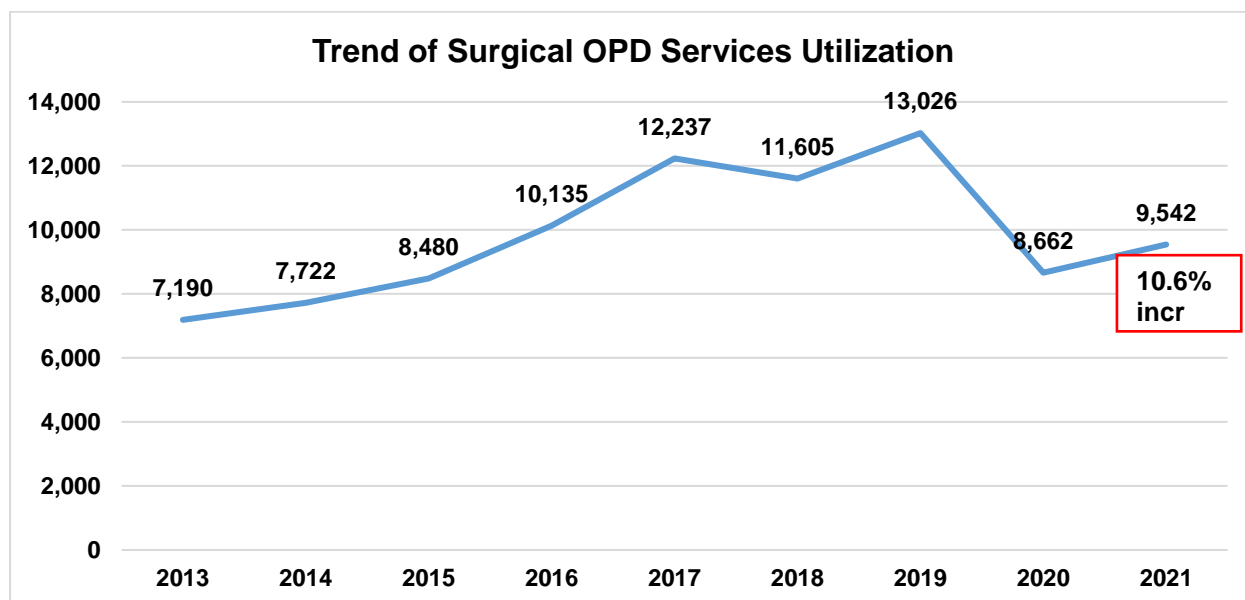


Figure 14.3. 2: Trend in Surgical OPD Attendance by Specialties

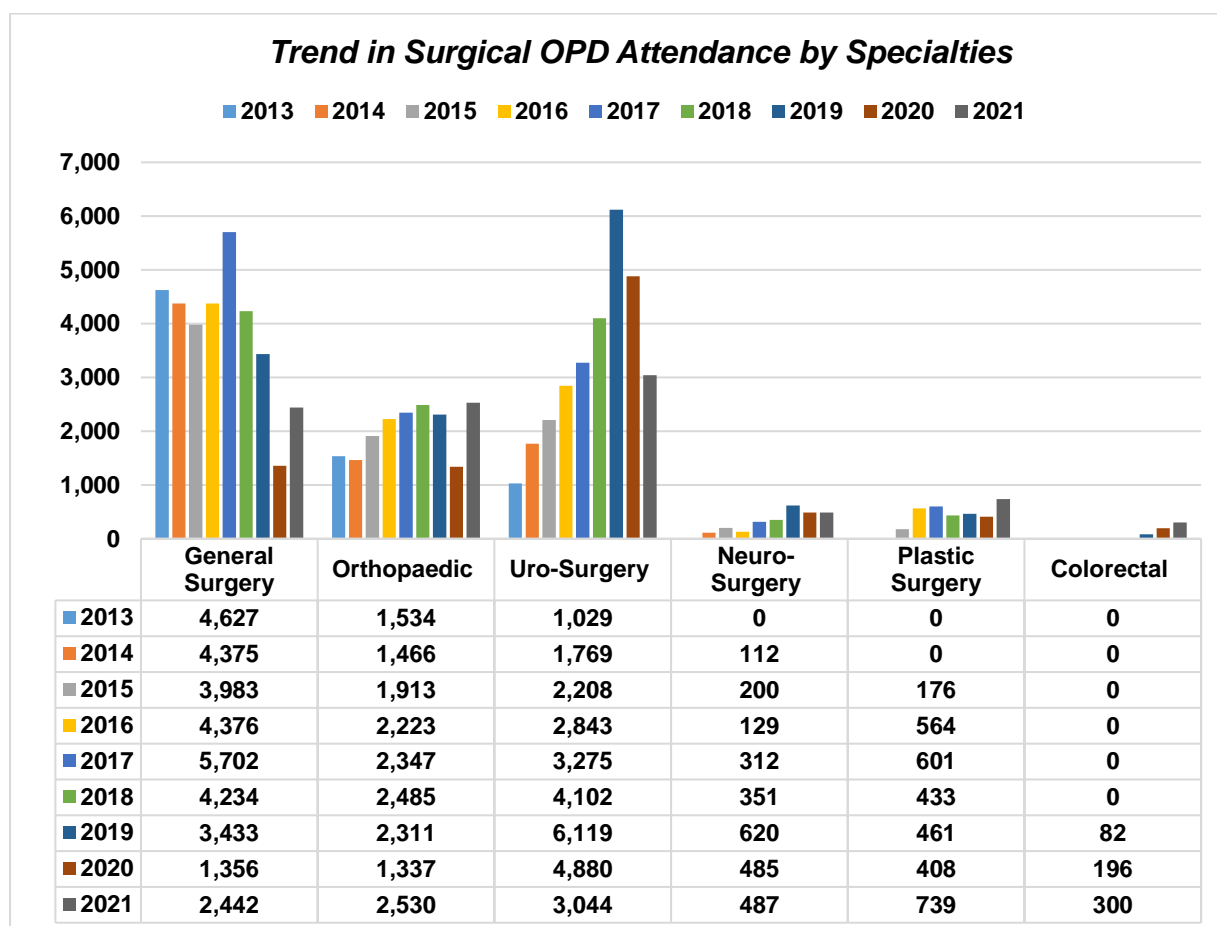


Table 14.3. 1: Trend in Surgical OPD Attendance by Specialties

CLINICS	2013	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS
General Surgery	4,627	4,375	3,983	4,376	5,702	4,234	3,433	1,356	2,442	80.09% incr
Orthopaedics	1,534	1,466	1,913	2,223	2,347	2,485	2,311	1,337	2,530	89.23% incr
Uro-Surgery	1,029	1,769	2,208	2,843	3,275	4,102	6,119	4,880	3,044	37.62% decr
Neuro-Surgery	-	112	200	129	312	351	620	485	487	0.41% incr
Plastic Surgery	-	-	176	564	601	433	461	408	739	81.13% incr
Colorectal	-	-	-	-	-	-	82	196	300	53.06% incr
Total	7,190	7,722	8,480	10,135	12,237	11,605	13,026	8,662	9,542	10.16% incr

14.4 SURGICAL STATISTICAL PERFORMANCE – INPATIENT

The surgical department recorded a continuous reduction in the total admissions over the past three years and in 2021, the number of admissions went down marginally by 0.98% (from 2,141 in 2020 to 2,120 in 2021). Similarly, total surgical deaths recorded in 2021 reduced by 19.50% (from 159 in 2020 to 128 in 2021). Theatre deaths remained at 2 compared to the previous year. However, the total recovery wards death went up by 33.33% (from 12 in 2020 to 16 in 2021). Detailed analysis is provided in figure 14.4.1 and table 14.4.1 below.

Figure 14.4. 1: Surgical In-Patient Services Utilization

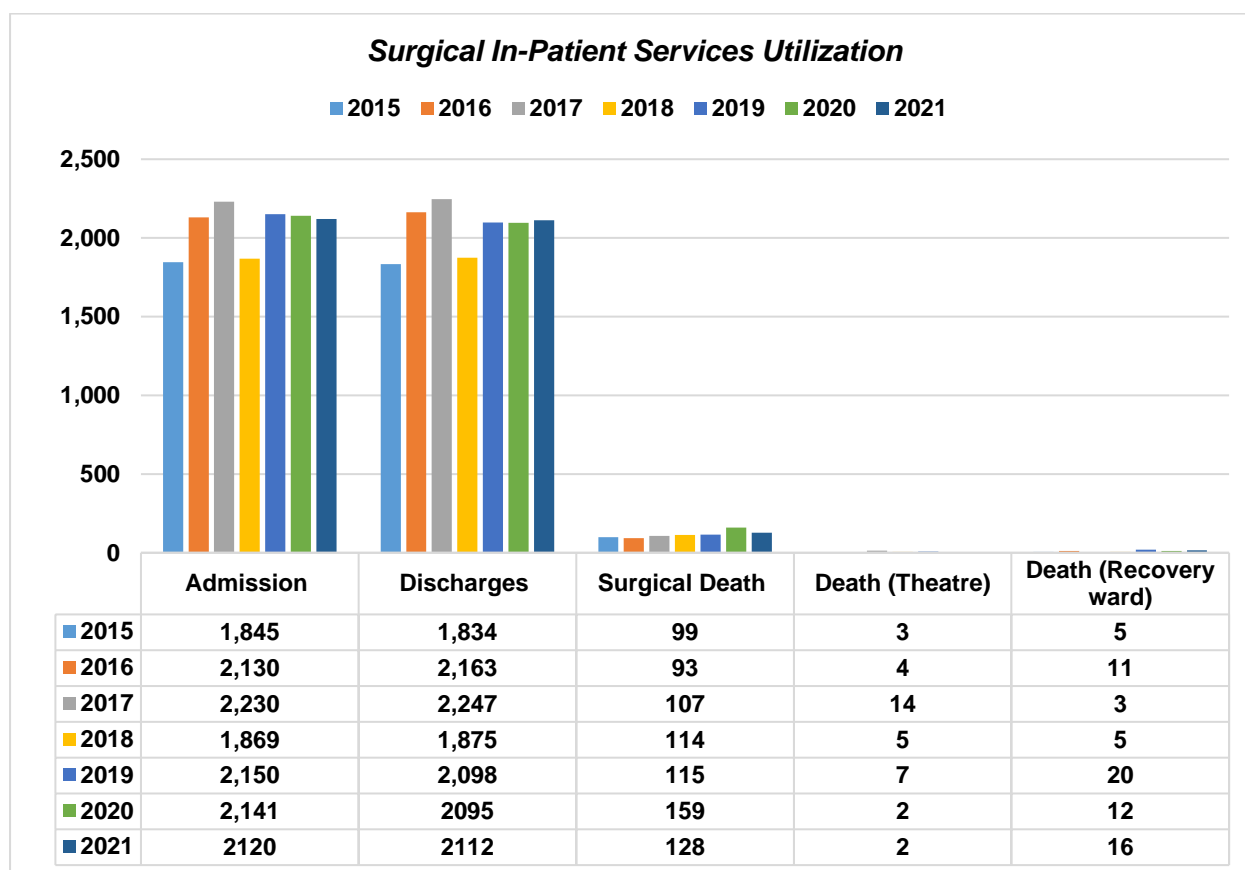


Table 14.4. 1: Surgical In-Patient Services Utilization

INDICATOR	2015	2016	2017	2018	2019	2020	2021	REMARKS
Admission	1,845	2,130	2,230	1,869	2,150	2,141	2120	0.98% decr
Discharges	1,834	2,163	2,247	1,875	2,098	2095	2112	0.81% incr
Surgical Death (MSW + FSW+ Surgical Suite + Recovery Ward + ICU surgical cases + Paedics surgical cases)	99	93	107	114	115	159	128	19.50% decr
Death (Theatre)	3	4	14	5	7	2	2	-
Death (Recovery ward)	5	11	3	5	20	12	16	33.33% incr

14.4.1 TOP TEN CAUSES OF SURGICAL ADMISSIONS

In 2021, Hernia was the leading condition among the top ten causes of surgical admissions in 2021, with 240 cases recorded. This is followed by Malignant Neoplasm (220), Fracture (216) and Benign neoplasm (130) with Haemorrhage being at the 10th position, with 52 cases. Detailed trend analysis is provided in figure 14.4.1.1 and table 14.4.1.1 below.

Figure 14.4.1. 1: Top Ten Causes of Surgical Admissions in 2021

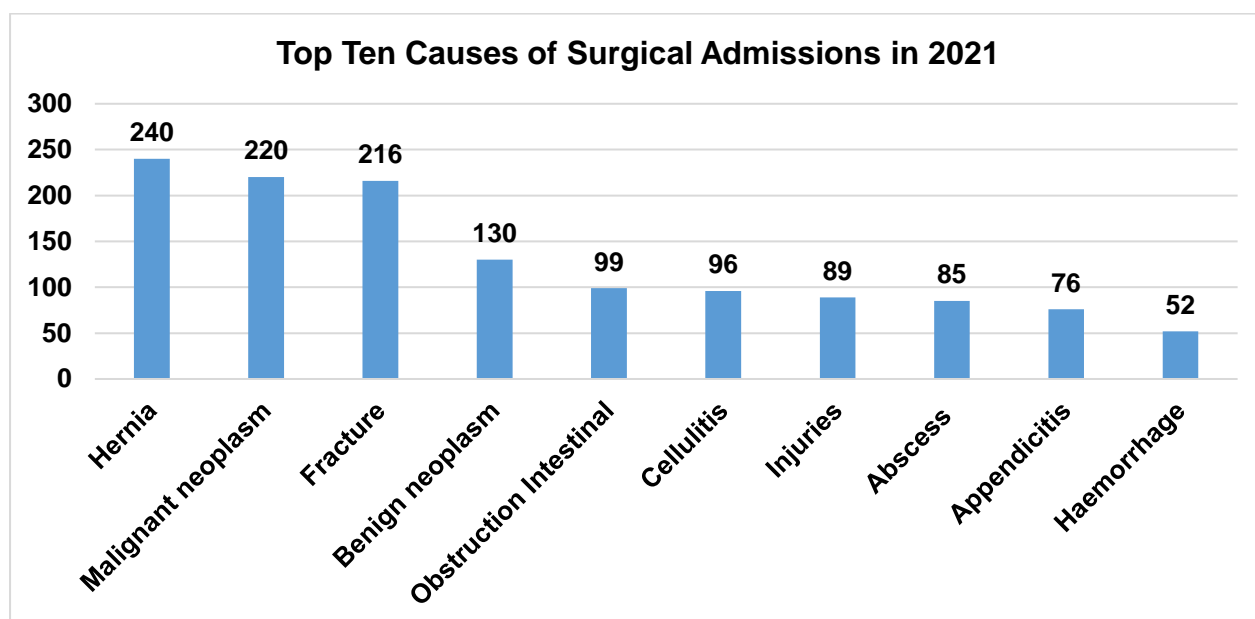


Table 14.4.1. 1: Top Ten Causes of Surgical Admissions

2017		2018		2019		2020		2021	
Condition	No. Of Cases	Condition	No. Of Cases	Condition	No. Of Cases	Condition	No. Of Cases	Condition	No. Of Cases
Hernia Reducible	387	Hernia	316	Hernia	349	Fractures	375	Hernia	240
Injury	172	Fracture	173	Laparotomy	145	Hernia	266	Malignant neoplasm	220
Breast Cancer	155	Bleeding Prostrate	152	Appendectomy	119	Bleeding Prostrate	206	Fracture	216
Fracture	135	Intestinal Obstruction	107	Fractures	221	Cellulitis	146	Benign neoplasm	130
Cellulitis	131	Injury	106	Intestinal Obstruction	90	Breast Cancer	129	Obstruction Intestinal	99
Bleeding Prostrate	127	Cellulitis	105	Neurosurgeries	85	Intestinal Obstruction	119	Cellulitis	96
Intestinal Obstruction	123	Breast Cancer	102	Plastic Surgeries	82	Injury	109	Injuries	89
Appendicitis	118	Appendicitis	95	Superficial Tumours	69	Appendicitis	87	Abscess	85
Gangrene	96	Gangrene	76	Thyroidectomy	41	Acute Abdomen	62	Appendicitis	76
Goitre	68	Goitre	42	Orchiectomy	37	Neurosurgery	10	Haemorrhage	52

14.5 SURGERIES PERFORMED PER SURGICAL SUB-SPECIALTY

The hospital recorded a significant drop in surgical operations performed in 2020, from 4,815 in 2020 to 3,883 in 2021, due to the COVID-19 pandemic. However, in 2021, the situation improved, and the total surgeries conducted went up by 21.71% (from 3,883 in 2020 to 4726 in 2021). The surgery to surgeon ratio also went up from 108:1 in 2020 to 197:1 in 2021. Also, except for neurosurgical cases that reduced in 2021

by 3.30% (from 91 in 2020 to 88 in 2021), the remaining surgical sub-specialty cases went up in 2021.

General surgeries performed increased significantly by 37.54% (from 690 in 2020 to 949 in 2021), whilst Uro-surgeries performed went up by 16.90% (from 219 in 2020 to 256 in 2021). Figure 14.5.1 to figure 14.5.2 and table 14.5.1 to table 14.5.3 shows detailed trend analysis below.

Figure 14.5. 1: Trend Analysis of total Surgeries Performed

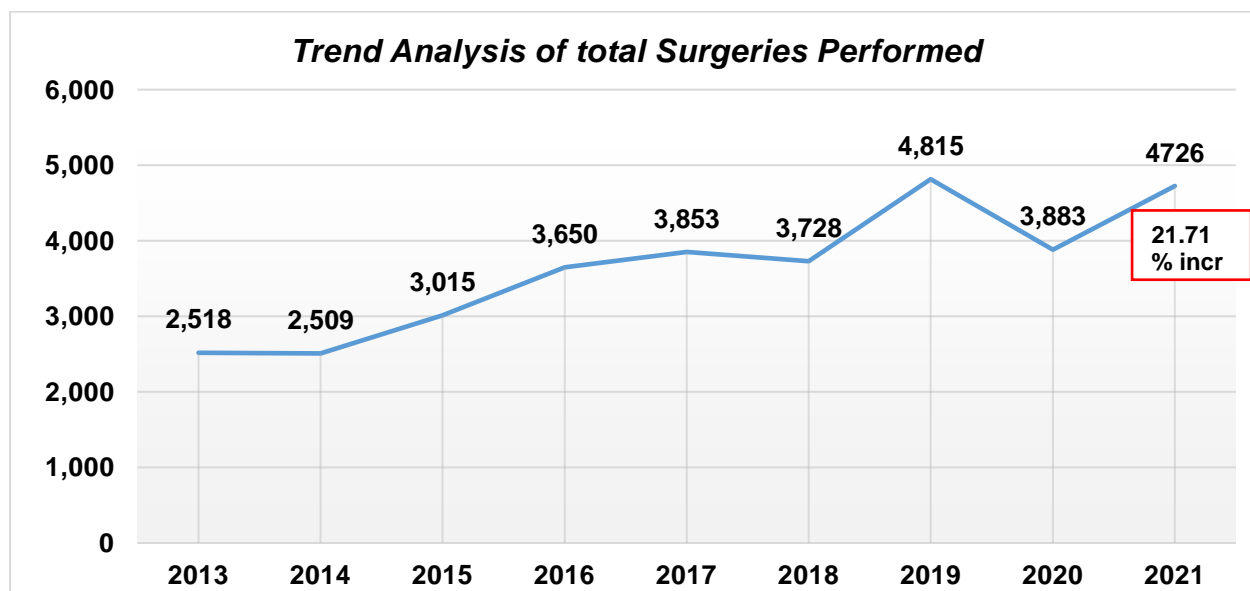


Table 14.5. 1: Trend Analysis of Total Surgeries Performed

INDICATOR	2013	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS	TARGET
Total Surgeries Performed	2,518	2,509	3,015	3,650	3,853	3,728	4,815	3,883	4726	21.71% incr	CCTH = 10% Incr

Table 14.5. 2: Surgical Service Performance under THs KPI

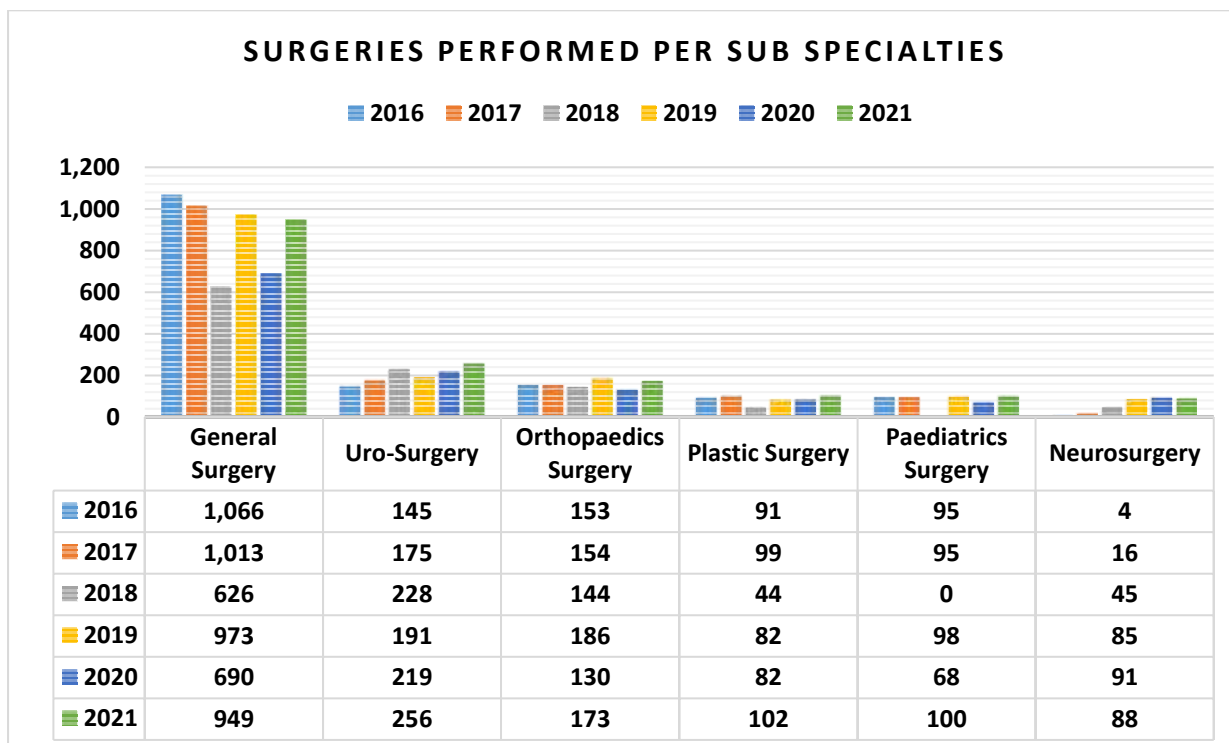
KEY INDICATORS	2016	2017	2018	2019	2020	2021	REMARKS	TARGET	MEASUREMENT
Surgical site infection rates	-	-	-	0.27%	12.61% Falcon	-		THs = 5%	Total infected wounds / Total Surgeries * 100
Surgery - Surgeon Ratio	152:1	154:1	133:1	127:1	108:1	197:1	incr	THs = 250:1	Total no. of surgeries performed/ total no. of Surgeons

Table 14.5. 3: Surgeries Performed per Surgical Sub-Specialty

SURGICAL SPECIALTY	2016	2017	2018	2019	2020	2021	REMARKS
General Surgery	1,066	1,013	626	973	690	949	37.54% incr
Uro-Surgery	145	175	228	191	219	256	16.90% incr
Orthopaedics Surgery	153	154	144	186	130	173	33.08% incr

SURGICAL SPECIALTY	2016	2017	2018	2019	2020	2021	REMARKS
Plastic Surgery	91	99	44	82	82	102	24.39% incr
Paediatrics Surgery	95	95	-	98	68	100	47.06% incr
Neurosurgery	4	16	45	85	91	88	3.30% decr

Figure 14.5. 2: Surgeries Performed Per Surgical Sub-Specialty



14.5.1 TOP TEN CAUSES OF SURGICAL PROCEDURES

In 2021, Caesarean section was the leading surgery among the top ten surgical procedures performed in the hospital, and it constituted 30.94% (1462) of the total surgeries performed. This is followed by Eye surgery which accounted for 23.70% (1120) and Hernia (reducible) which constituted 5.08% (240) of the total surgeries performed. ENT surgeries remained the at the 6th ranked surgeries performed in 2020 and 2021 and constituted 2.26% (107) of the total surgeries performed. The least among the top ten surgeries performed in 2021 was Neurosurgeries (88) and Intestinal Obstruction (75) which constituted 1.86% and 1.59% respectively as detailed in table 14.5.1.1 below.

Table 14.5.1. 1: Top 10 Surgical Operations

2019			2020			2021		
Type of case	No.	%	Type of case	No.	%	Type of case	No.	%
Hernia Reducible	350	7.7	Ophthalmic surgeries	428	11%	Caesarean Section	1462	30.94%
ENT Operations	174	3.8	Urological conditions	219	5.6%	Eye Surgeries	1120	23.70%
Laparotomy for Exploratory	145	3.2	Hernia Reducible	209	5.4%	Hernia Reducible	240	5.08%

2019			2020			2021		
Type of case	No.	%	Type of case	No.	%	Type of case	No.	%
Appendectomy	139	3.0	Laparotomy for Exploratory	133	3.4%	Laparotomy for Exploratory	198	4.19%
Neurosurgeries	84	1.8	Orthopaedic surgeries	130	3.3%	Appendectomy	107	2.26%
Plastic Surgeries	82	1.7	ENT	109	2.8%	ENT Operations	107	2.26%
Removal of Superficial	74	1.6	Neurosurgeries	91	2.3%	Plastics Surgeries	102	2.16%
Operation on Fractures	70	1.5	Intestinal Obstruction	90	2.3%	Operation on Fractures	99	2.09%
Maxillofacial Cases	66	1.4	Operation on Fractures	90	2.3%	Neurosurgeries	88	1.86%
Amputation leg	47	1.0	Plastic Surgeries	82	2.1%	Intestinal Obstruction	75	1.59%
Thyroidectomy	41	0.9	Appendectomy	75	1.9%			

CHAPTER FIFTEEN

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

15.1 INTRODUCTION

The DEENT is a new Sub-BMC that 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 2021 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 2021 Annual Performance against CCTH Strategic Objectives

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
CCTH OBJECTIVE 1: INCREASE ACCESS TO SPECIALIST SERVICE DELIVERY
Collaborated with Himalayan Cataract Project to conduct eye screening for 18,103 people and performed 2,083 eye surgeries under the project.
Collaborated with Operation-Smile Ghana to provide free Cleft lip and palate (29 surgeries)
Introduced new Orthodontist specialized services with 25 cases seen
Provided 3,718 DEENT surgical services
CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.
Successful collaborative surgeries were done
Developed (1) Eye clinic/service guideline and (6) protocols- <ul style="list-style-type: none"> • Sterilization • Disinfection • Medio legal Issue • Medical Emergency • Serial Extraction • Hand washing protocols
Celebrated World Sight and Autism Day
Sub-BMC Clinical workshop organized on (Sick Staff Policy, Cavernous Sinus Thrombosis, Autism Spectrum Disorder.
CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE
DEENT PRA used to provide equipment such as Air conditions and TV in the clinical areas
All Dental consulting and procedure rooms renovated with 3 new dental chairs
CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM
4.1: Governance Related Performance
Ophthalmology Unit was privilege to receive the CEO's award of excellence outstanding entity category
The sub-BMC management members benefited from the management and leadership training organised by the hospital
Liaised with other Sub-BMCs to organize training for staff on communication disorders in children.
Orientation given to new staff nurses posted to the SUB BMC
4.2: Human Resource Related Performance
Appraised 44 staff

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
The following staffs were posted to the department <ul style="list-style-type: none"> • Nurses - 5 <ul style="list-style-type: none"> ○ Eye - 2, ○ ENT - 2 ○ Dental - 1 • Dental Assistance - 3 • Ophthalmology <ul style="list-style-type: none"> ○ Opticians - 5 ○ Dr. Optometrist - 5
4.3: Finance related performance
Improved hospital's revenue through the Himalayan Cataract Project carried out in the course of 2021
CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING
5.1 Improve on Research:
-
5.2 Improve on Teaching and Learning:
Training of ENT Nurse on ENT Oncology for 3 months in India
Trained and supervised 199 medical, nursing, optometry & dental students on clinical practice
One SSN completed ophthalmic specialized training and joined the unit in May 2021.
Conducted eight (8) clinical presentations
Conducted CPDS under DEENT related topics
Training of ENT Nurse on ENT Oncology for 3 months in India
CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS
The eye department undertook outreach program in 5 districts namely; KEEA, Gomoa East, Assikuma Odobeng Abtrakwa, AEA, Wassa Amenfi East District to screen clients for cataract surgery
The eye department organised outreach services and coordination with 20,415 cases seen
The eye department organised one (1) specialist outreach at European Hospital with 21 cataract surgeries and 7 pterygiums

15.3 DEENT OPD SERVICES UTILIZATION

The DEENT OPD services utilization fluctuated over the past four years with a significant deep in 2020 due to the COVID-19 pandemic. However, in 2021 the situation improved, and the attendance went up by 10.4% (from 19,330 in 2020 to 21,347 in 2021). The Eye OPD clinic attendance increased significantly by 28.23% in 2021 (from 8,451 in 2020 to 10,837 in 2021). Similarly, the Dental & Maxillofacial and Speech Therapy clinics recorded 5.5% and 99.52% increment in OPD attendance respectively, whilst ENT interestingly recorded a reduction OPD attendance by 6.93% (from 6,004 in 2020 to 5,588 in 2021).

Total DEENT related cases referred into the hospital in 2021 went up by 20.63% (from 504 in 2020 to 608 in 2021), whilst the cases referred out increased by 53.30% (from 86 in 2020 to 137 in 2021). Also, the facility with the highest cases referred-in to CCTH in 2021 is Takoradi Hospital, with 37 cases referred. Similarly, out of the 122 cases referred out, Korle-Bu Teaching Hospital was sent the highest number of cases, which is a total of 74 cases. 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

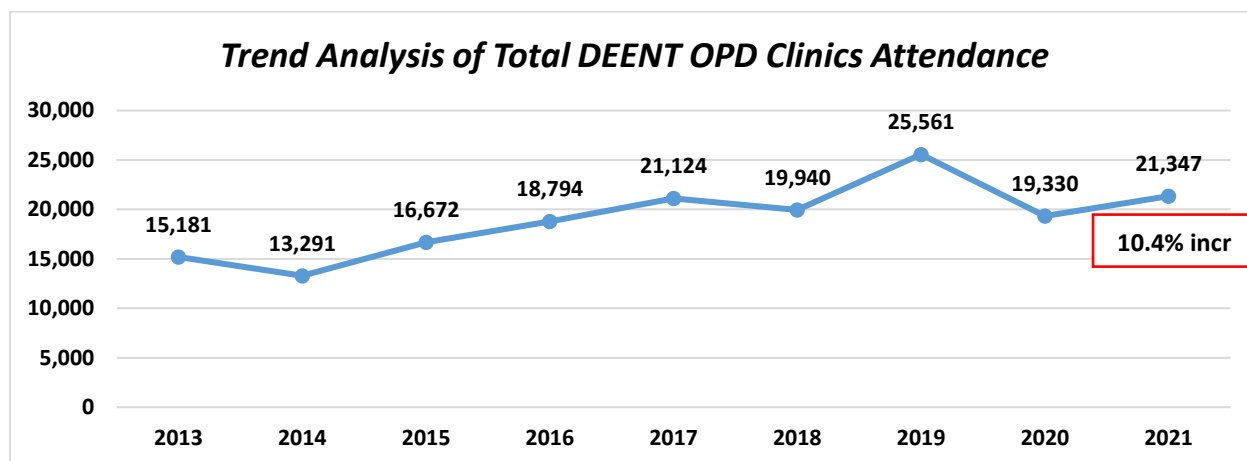


Figure 15.3. 2: Trend Analysis of Total DEENT OPD Attendance Per Specialty

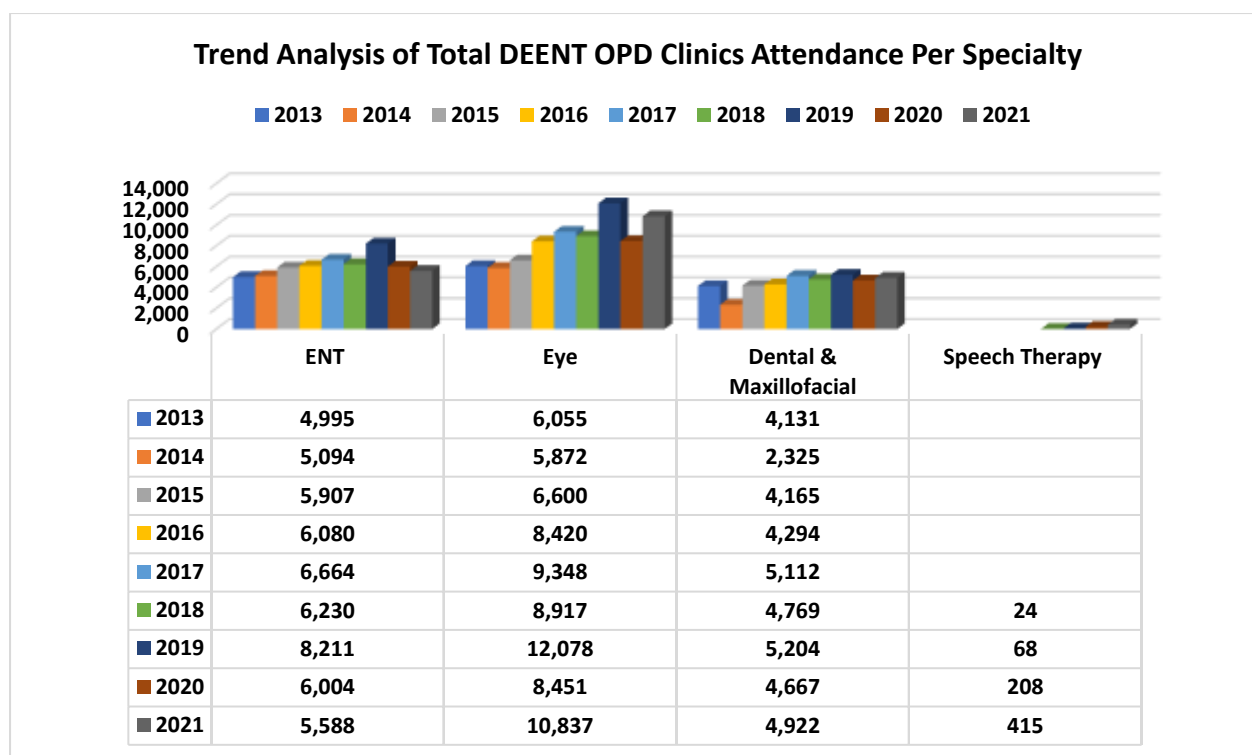


Table 15.3. 1: Trend Analysis of Total DEENT OPD Attendance Per Specialty

CLINICS	2013	2014	2015	2016	2017	2018	2019	2020	2021	REMARKS
ENT	4,995	5,094	5,907	6,080	6,664	6,230	8,211	6,004	5,588	6.93% decr
Eye	6,055	5,872	6,600	8,420	9,348	8,917	12,078	8,451	10,837	28.23% incr
Dental & Maxillofacial	4,131	2,325	4,165	4,294	5,112	4,769	5,204	4,667	4,922	5.5% incr
Speech Therapy	-	-	-	-	-	24	68	208	415	99.52% incr
Total Attendance	15,181	13,291	16,672	18,794	21,124	19,940	25,561	19,330	21,347	10.4% incr

Figure 15.3. 3: Trend Analysis of DEENT Referrals Per Specialty

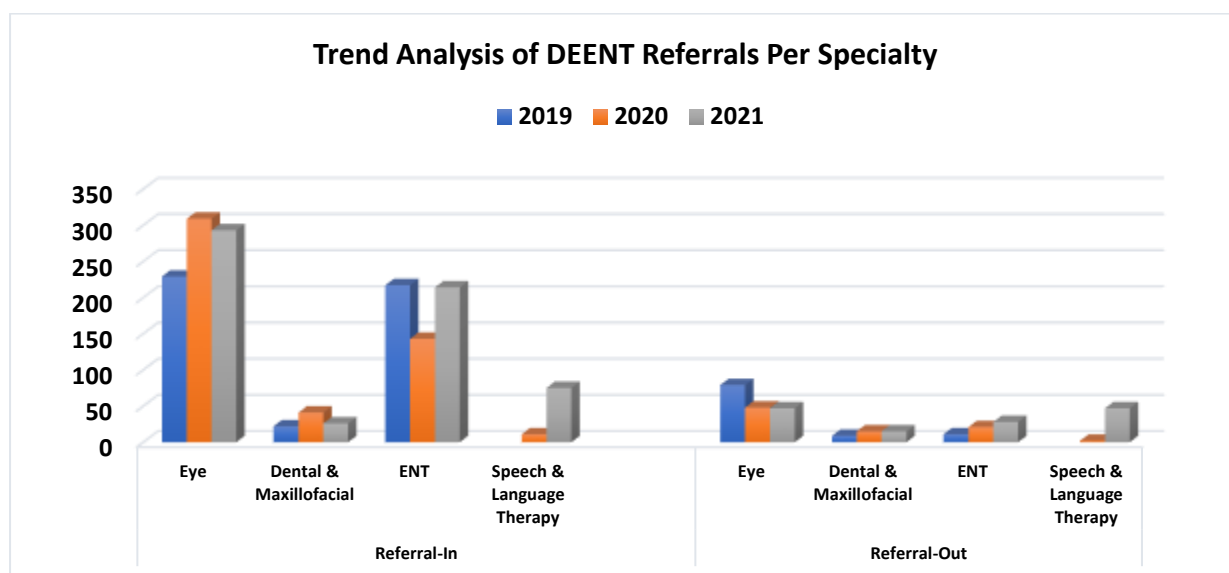


Table 15.3. 2: Trend Analysis of DEENT Referrals Per Specialty

CLINIC	2019	2020	2021	REMARKS
REFERRAL IN				
Eye	229	309	293	5.18% decr
Dental & Maxillofacial	22	41	26	36.59% decr
ENT	217	143	214	40.65% incr
Speech & Language Therapy	-	11	75	581.82% incr
Total	468	504	608	20.63% incr
REFERRAL -OUT				
Eye	79	48	47	2.08% decr
Dental & Maxillofacial	9	15	15	sustained
ENT	11	21	28	33.33% incr
Speech & Language Therapy	-	2	47	2,250% incr
Total	99	86	137	53.30% incr

Table 15.3. 3: Analysis of DEENT Referrals Per Facility in 2021

Top Ten Cases Referred-In		Cases Referred Out	
Name of Hospital	No.	Name of Hospital	No.
Takoradi Hospital	37	KBTH	74
UCC Hospital	26	KATH	7
Our Lady of Grace	19	St Barnabas	3
Efia Nkwanta	16	Efia Nkwanta	2
Essikuma Hospital	15	Others	36
Ankaful leprosarium	14		
Swedru Hospital	12		

Top Ten Cases Referred-In		Cases Referred Out	
Name of Hospital	No.	Name of Hospital	No.
Tarkwa Municipal hospital	12		
Ewim	11		
Trauma Specialist Hospital	10		
Others	436		
TOTAL	608	TOTAL	122

15.4 TOP TEN DEENT OPD CONDITIONS SEEN

Conjunctivitis (All forms) was the highest among the top 10 Eye conditions seen in 2021 with 736 cases, followed by Refractive Error with 606 cases. In the same light, the Dental & Maxillofacial clinic recorded Apical Periodontitis as the leading condition with 1,115 cases seen in 2021, followed by Plaque induced gingivitis (530 cases). Also, ENT clinic also recorded Otitis Media as the leading condition among the top ten ENT OPD conditions seen with 911 cases, followed by Impacted wax (851 cases), whilst the Speech Therapy clinic recorded Language Delay Disorder as the highest condition seen in 2021 with 234 cases, followed by Autism Spectrum Disorder (ASD) with 82 cases. Table 15.4.1 to table 15.4.4 below provides details of the top ten DEENT OPD conditions seen per specialty in 2021.

Table 15.4. 1: Top Ten Eye Conditions Seen

2019		2020		2021	
Condition	No. Of Cases	Condition	No. Of Cases	Condition	No. Of Cases
Glaucoma	2,266	All Forms of Conjunctivitis	629	All Forms of Conjunctivitis	736
All Forms of Conjunctivitis	1,922	Glaucoma	548	Refractive Error	606
Cataract	1,191	Cataract	418	Cataract	544
Refractive Error	948	Refractive Error	392	Glaucoma	346
Pterygium	327	Pterygium	187	Pterygium	211
Lid abnormalities	151	Ocular Trauma	132	Trauma	144
Normal Eyes	99	Lid abnormalities	101	Retinopathies	113
Cornea Ulcer	96	Normal Eyes	59	Lid Abnormalities	103
Trauma	88	Cornea Ulcer	50	Cornea Ulcer	31
Others	5,256	Others	1327	Ocular Tumour	26

Table 15.4. 2: Top Ten Dental & Maxillofacial Conditions Seen

2019		2020		2021	
Condition	No. Of Cases	Condition	No. Of Cases	Condition	No. Of Cases
Apical Periodontitis	1,074	Apical Periodontitis	1,010	Apical Periodontitis	1,115
Plaque induced gingivitis	550	Plaque induced gingivitis	444	Plaque Induced Gingivitis	530

2019		2020		2021	
Condition	No. Of Cases	Condition	No. Of Cases	Condition	No. Of Cases
Irreversible Pulpitis	545	Irreversible Pulpitis	354	Developmental Lesion	268
Reversible Pulpitis	462	Dentoalveolar abscess	255	Reversible Pulpitis	171
Dentoalveolar abscess	198	Reversible Pulpitis	253	Fractured Tooth	171
Fractured Tooth	152	Fractured Tooth	160	Dentoalveolar Abscess	110
Periapical abscess	136	Periapical abscess	93	Displaced Tooth	95
Fractured Jaw	92	Fractured Jaw	87	Periapical Abscess	63
Pericoronitis	78	Pericoronitis	80	Fractured Jaw	59
Avulsion	61	Avulsion	64	Irreversible Pulpitis	59

Table 15.4. 3: Top Ten ENT Conditions Seen

2019		2020		2021	
Condition	No. Of Cases	Condition	No. Of Cases	Condition	No. Of Cases
Otitis Media	1,281	Otitis Media	1,089	Otitis Media	911
Impacted wax	930	Impacted wax	802	Impacted wax	851
Tonsillitis/Pharyngitis	900	Otitis Externa	542	Otitis Externa-	736
Otitis Externa	831	Sinusitis	525	Tonsillitis/Pharyngitis	621
Sinusitis	795	Tonsillitis/Pharyngitis	518	Sinusitis	571
Allergies	795	Allergies/ Rhinitis	367	Allergies/Rhinitis	534
Adenoids Hypertrophy	644	Adenoids Hypertrophy	205	Adenoids Hypertrophy	288
Otomycosis	242	Otomycosis	157	Otomycosis	83
Epistaxis	139	Hearing Loss	76	Hearing Loss	112
Hearing Loss	130	Epistaxis	47	Epistaxis	58

Table 15.4. 4: Top Ten Speech & Language Therapy Conditions Seen

2019		2020		2021	
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	25	Speech Disorder	30	Autism Spectrum Disorder (ASD)	82
Articulation Disorder	14	Aphasia	29	Aphasia	42
Aphasia	12	Autism Spectrum Disorder (ASD)	28	Speech Disorders	37
Stammering	8	Stammering	9	Dysphonia	10
Dysarthria	6	Dysarthria	6	Stammering	4
Dysphonia	4	Dysphonia	2	Laryngectomy	1

2019		2020		2021	
Condition	No. Of Cases	Condition	No. Of Cases	Condition	No. Of Cases
Others	4	Others	7	Others	4

15.5 DEENT ADMISSIONS

In 2021, the DEENT admitted a total of 314 which constituted a 22.17% increase, compared to the previous year (from 257 in 2020 to 314 in 2021). Over the past five years, the number of patients admitted per specialty kept fluctuating. The number of admissions by the Eye department decreased in 2021 by 10.66% (from 122 in 2020 to 109 in 2021), whilst the patients admitted by the Dental & Maxillofacial department went up significantly by 43.75% (from 48 in 2020 to 69 in 2021). Also, the total cases admitted by ENT department equally went up significantly by 56.32% (from 87 in 2020 to 136 in 2021). 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

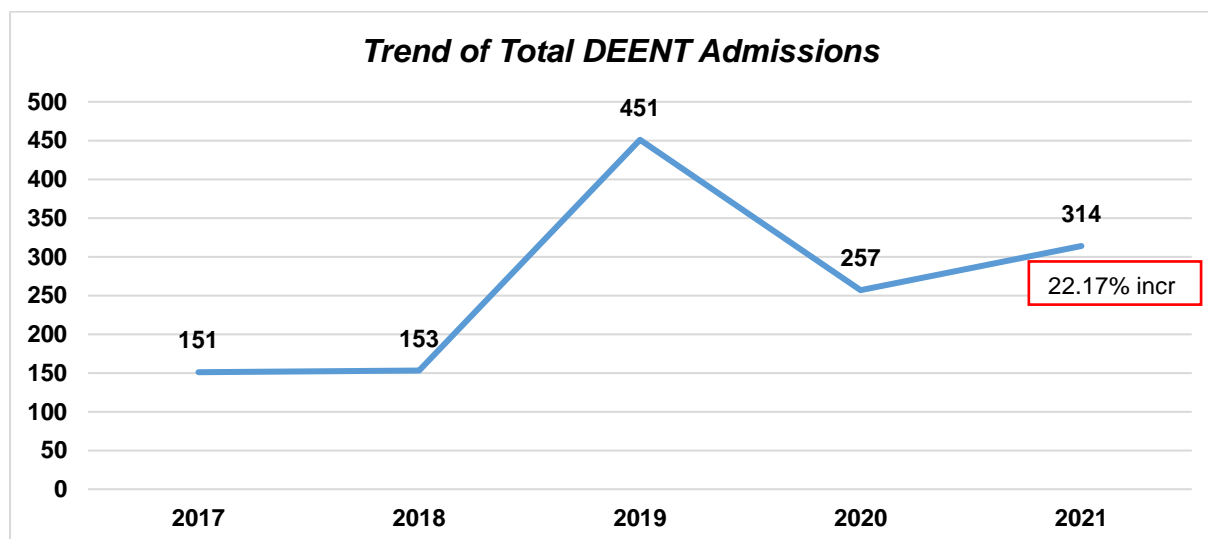


Figure 15.5. 2: Trend of DEENT Admissions by Specialty

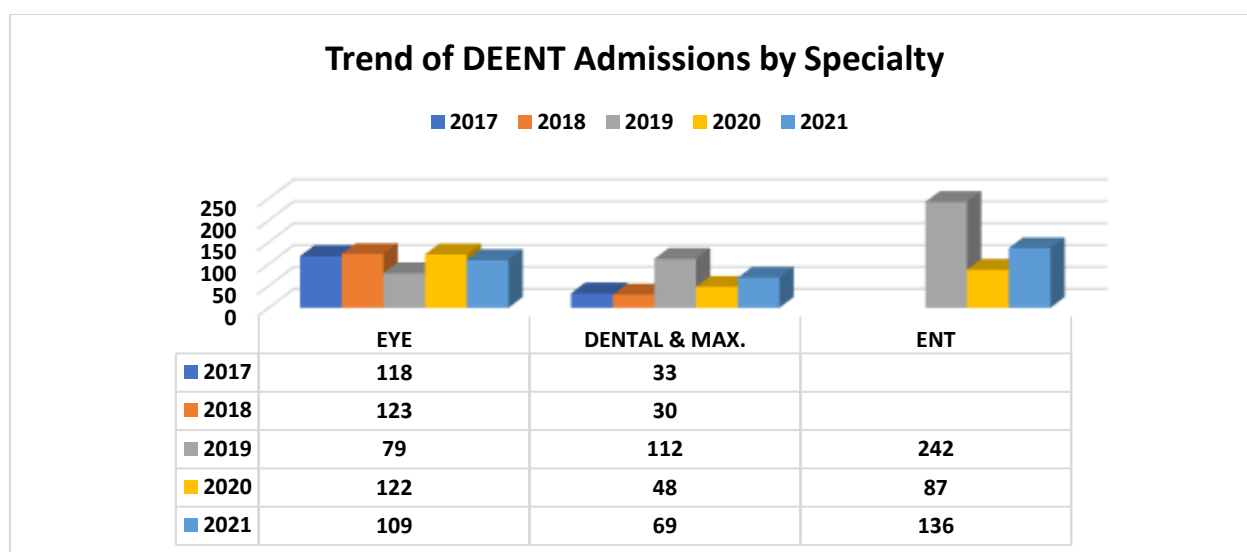


Table 15.5. 1: Trend of DEENT Admissions by Specialty

DEPARTMENT	2017	2018	2019	2020	2021	REMARKS
EYE	118	123	79	122	109	10.66% decr
DENTAL & MAX.	33	30	112	48	69	43.75% incr
ENT	-	-	242	87	136	56.32% incr
TOTAL	151	153	451	257	314	22.17% incr

15.6 SURGERIES PERFORMED BY DEENT SUB-BMC

The total number of surgeries performed by the DEENT sub-BMC since 2017 kept fluctuating. In 2020, the total surgeries performed by the department dropped significantly by 44.8% (from 2,901 in 2019 to 1,600 in 2020), partly due to the impact of the COVID-19 pandemic. However, in 2021, the total surgeries performed by the department went up significantly by 132.38% (from 1,600 in 2020 to 3,718 in 2021). Also, the total major surgeries increased by 284.66% (from 626 in 2020 to 2,408 in 2021), whilst the minor surgeries performed went up by 34.80% (from 974 in 2020 to 1,313 in 2021).

Further, procedures performed by the Eye department includes Refractions, Automated visual field assessment as well as Binocular vision assessment. The total number of refractive procedures performed increased by 24.33% (from 596 in 2020 to 741 in 2021), whilst the total number of automated visual field assessment performed dropped by 34.83% (from 89 in 2020 to 58 in 2021). 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

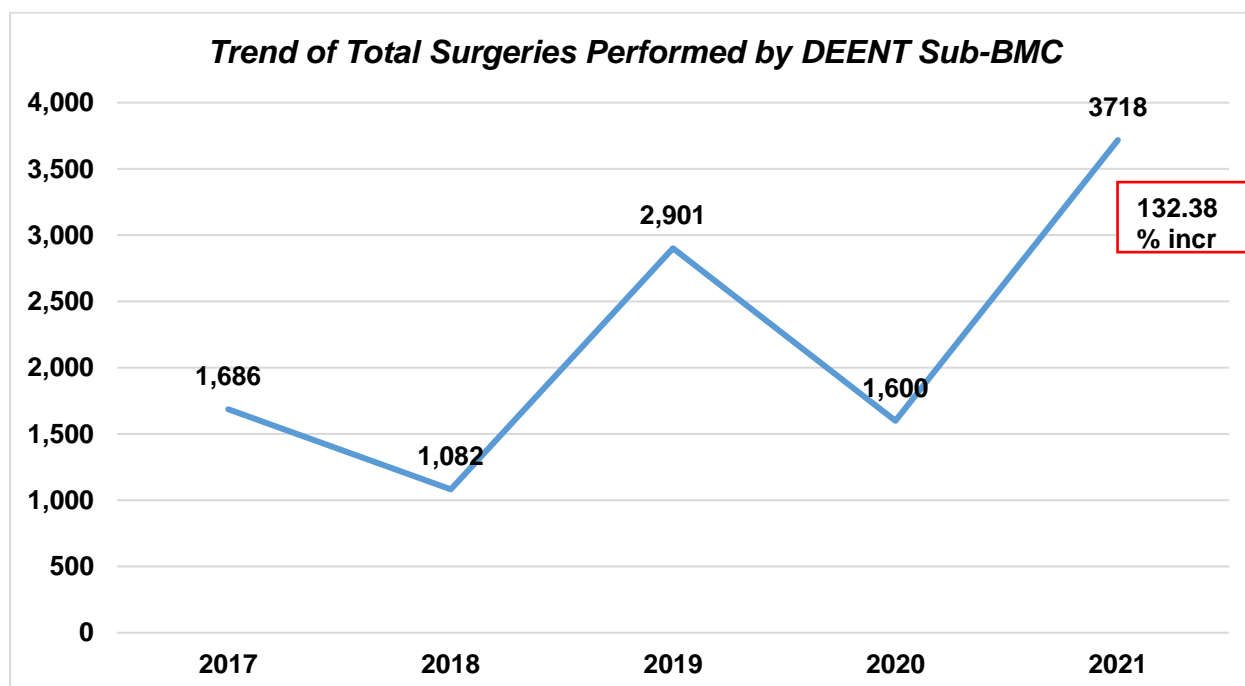


Figure 15.6. 2: Total DEENT Surgeries Performed by Specialty

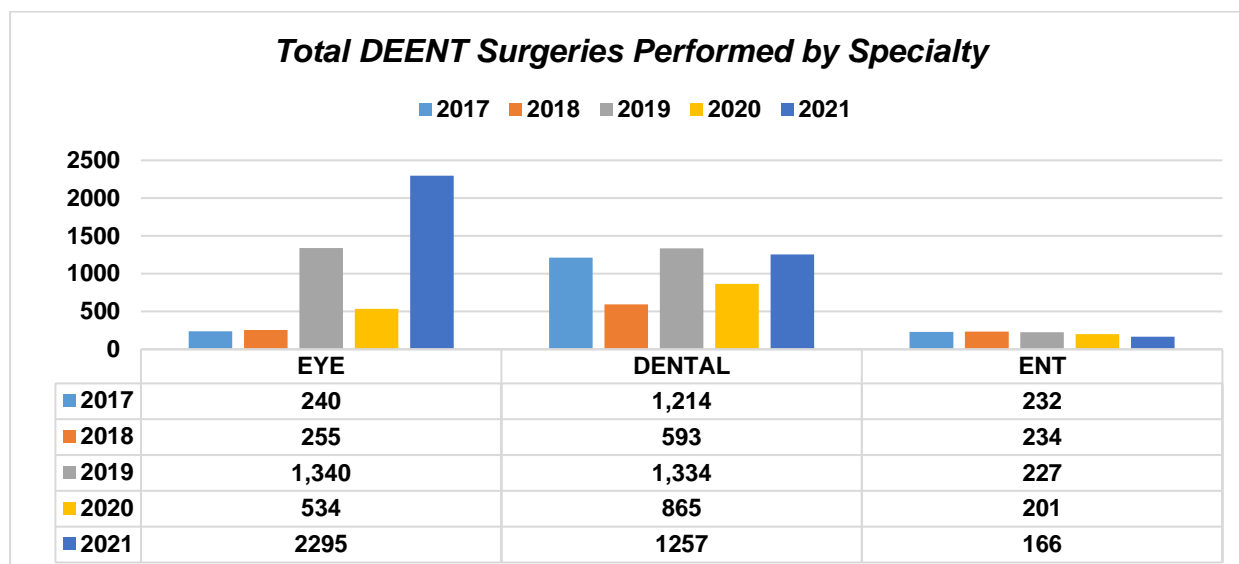


Table 15.6. 1: Total DEENT Surgeries Performed by Specialty

DEENT SPECIALTY	2017	2018	2019	2020	2021	REMARKS
EYE	240	255	1,340	534	2,295	329.78% incr
DENTAL	1,214	593	1,334	865	1,257	45.32% incr
ENT	232	234	227	201	166	17.41% decr
TOTAL	1,686	1,082	2,901	1,600	3,718	132.38% incr

Figure 15.6. 3: Major and Minor Surgeries Performed by DEENT Specialty

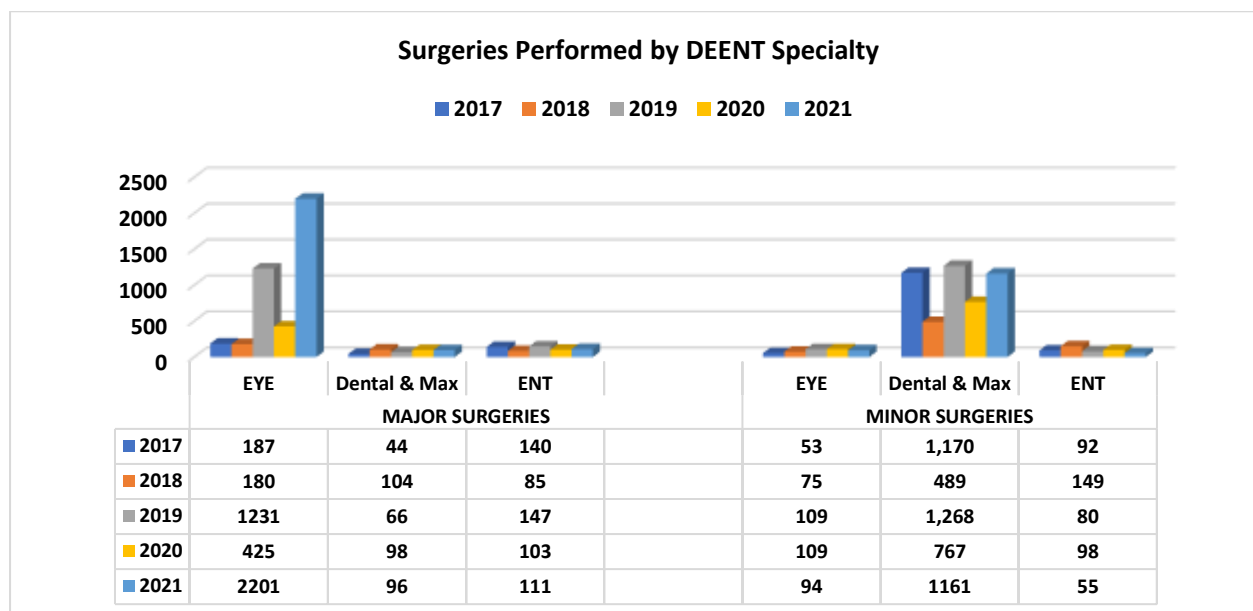


Table 15.6. 2: Surgeries Performed by DEENT Specialty

DEENT SPECIALTY	2017	2018	2019	2020	2021	REMARKS
MAJOR SURGERIES						
EYE	187	180	1231	425	2201	417.88% incr
ORAL	44	104	66	98	96	2.04% decr
ENT	140	85	147	103	111	7.77% incr
TOTAL	371	369	1,444	626	2408	284.66% incr
MINOR SURGERIES						
EYE	53	75	109	109	94	13.76% decr
ORAL	1,170	489	1,268	767	1161	51.37% incr
ENT	92	149	80	98	55	43.88% decr
TOTAL	1,315	713	1,457	974	1313	34.80% incr

Table 15.6. 3: Other Eye Procedures Performed

PROCEDURE	2017	2018	2019	2020	2021	REMARKS
Refractions	1,098	2,182	1,559	596	741	24.33% incr
Automated visual field Assessment	8	-	10	89	58	34.83% decr
Binocular vision Assessment	1	-	-	1	120	incr

15.7 PERFORMANCE FROM OUTREACH PROGRAMME

The DEENT department has over the years performed intensified its outreach services through international collaborations. These outreaches are planned yearly to various selected communities, schools, corporate organizations and peripheral health facilities within the Region and beyond. In 2021, DEENT sub-BMC improved its visit to communities from 102 in 2020 to 398 in 2021. Thereby, increasing the number of beneficiaries from 6,872 in 2020 to 40,830 in 2021. 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	REMARKS
Community Outreaches				
Total Communities Visited	159	102	398	
Number of Beneficiaries	12,756 • Eye Unit = 10,791 • ENT Unit = 1,381 • Dental Unit = 584	6872 • Sub-BMC Level = 719 • Eye Unit = 4,982 • ENT Unit = 1,171 • Dental Unit = -	40,830 • Sub-BMC Level = 20,415 • Eye Unit = 19,098 • ENT Unit = 641 • Dental Unit = 676	
School Outreaches				
Number of Schools visited	8	8	3	
Number of Beneficiaries	495	1,142	1,271	
Surgical Outreaches to Facilities				
Number of Health Facilities Visited for Surgical Support	4	-	1	
Number of beneficiaries	86	-	28	
Outreaches to Organizations				

INDICATOR	2019	2020	2021	REMARKS
Number of Organizations visited	-	-	4	
Number of beneficiaries	-	-	540	

Table 15.7. 2: DEENT Outreach Activities in 2021

EYE UNIT		ENT		DEENT SUB-BMC	
Community/ School	No. of Clients Screened	Community/ School	No. of Clients Screened	Community/ School	No. of Clients Screened
Gomoa East	3507	Nkanfoa	317	Trinity Baptist School	516
Twifo Atti Morkwa	2356	Assin Kushea	145	Living Hope Academy	506
Mfantsiman Municipality	2132	Twifo Praso	64	AME Zion	249
Assikuma Odobeng Abakwa	2126	Assin Achieano	57	Total =	1,271
Ekumsi	1847	Assin akweboamdah	35		
AEA	1796	Jubwe Park	23		
Wassa Amenfi East	1634				
KEEA	885				
Wassa Amenfi East	651				
Nkanfwoa	504				

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
• Some aspects of Post Natal Services	

16.2 PUBLIC HEALTH UNIT'S 2021 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES

Table 16.2. 1: Public Health Unit's 2021 Annual Performance Against CCTH Strategic Objectives

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
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	2021 Target	Remarks
Couple year protection	2,277.6	1507	1,521.6	1,562.5	1,891.2	820.15	CCTH = 5% incr TH = 2,500	56.6% decr
Conducted 12 outreach activities to communities								
Conducted specialist health education via TV, Radio, OPD and Focus client education on the ward								
CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.								
COVID-19 Response outcome in 2021: <ul style="list-style-type: none"> • 284 number of CCTH Staff tested positive for COVID-19. • Total of 1,109 COVID-19 positive cases were recorded. • 67 (6%) COVID-19 related deaths were recorded. • 1042 (94%) recoveries/discharges were recorded. • Recorded 100% recovery rate of the 284 CCTH Staff who tested positive for Covid-19 in 2021. • Active Case as at the end of 2021 = 0 								
Introduced SARS-CoV-2 testing (NB: CCTH Lab started conducting PCR test (Covid-19 test) on 24th September 2020 and the hospital received a new PCR machine in January 2021)								
Continued to provide daily (every evening) Covid-19 data (situational) update to the hospital management members, HODs of sub-BMCs and Unit as well as to the general staff.								
Administered COVID-19 vaccines to 6,947 people <ul style="list-style-type: none"> AstraZeneca = 6,475 <ul style="list-style-type: none"> • First Dose = 4,250 • Second Dose = 2,225 Moderna = 472 <ul style="list-style-type: none"> • First Dose = 336 • Second Dose = 136 								

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE
Johnson and Johnson = 335
Trained all unit staff on customer care
Total of 1,109 COVID-19 positive cases were recorded and out of this, 1,042 (94%) recovered/discharged and 67 (6%) related deaths.
431 communities visited with 21,871 people screened. <ul style="list-style-type: none"> • Cataract = 387 • Hernia = 2 • Blood Donation = 16 • Diabetes = 3 • Maternal Health Issues = 2 • General screening = 21
151 women screened for Cervical Cancer
Recorded 96 new registrants for Adolescent Clinic
11,453 people screened for TB out of which 486 tested positive.
CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE
-
CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM
4.1: Governance Related Performance
Held 32 weekly management meetings
4.2: Human Resource Related Performance
Conducted 30 (83%) timely routine appraisals for staff
Organized a zoom leadership seminar for 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:
Carry out 12 bi-weekly presentation
Continued to orient and trained ten (10) nurses on rotation
CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS
Collaborated with other sub-BMCs to conduct outreach programmes with 431 communities benefiting

16.3 IMMUNIZATION TREND (EPI)

Immunization is one of the essential ways of preventing certain medical conditions that may lead to disability or mortality. Despite the fluctuating performance over the years, the hospital recorded a significant general decline in immunizations. For instance, the total number of people immunized in 2021, reduced by 19.37% (from 17,225 in 2020 to 13,888 in 2021). Also, Yellow Fever immunization dropped by 34.81% (from 270 in 2020 to 176 in 2021), whilst BCG immunization decreased by 24.73% (from 3,271 in 2020 to 2,462 in 2021). On the other hand, immunization of Vitamin 'A' (100,000 IU) went up significant by 30.70% (from 215 in 2020 to 281 in 2021). 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

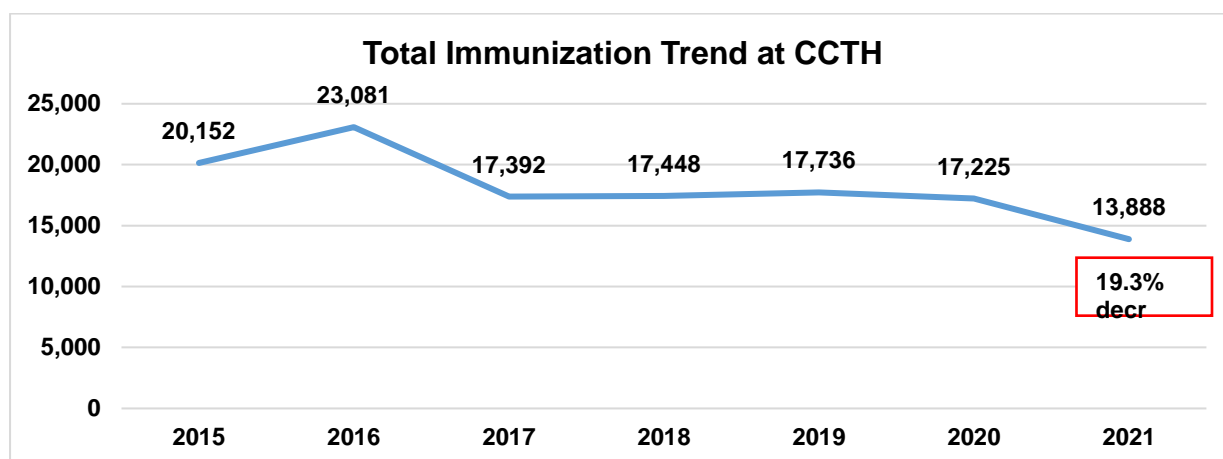


Table 16.3. 1: Total Immunization Trend at CCTH

VACCINES	2015	2016	2017	2018	2019	2020	2021	REMARKS
BCG	3,326	3,565	3,190	3,000	3,182	3,271	2,462	24.73% decr
Polio	4,509	5,088	4,514	5,122	5,398	5,003	3,853	22.99% decr
Pentavalent (1-3)	1,686	2,496	1,881	2,121	2,198	1,745	1,418	18.74% decr
Rota Virus Vaccine (ROTA 1&2)	1,414	1,226	1,596	1,780	1,844	1,409	1,122	20.37% decr
MCV	1,686	2,496	-	-	-	-	-	-
Yellow Fever	241	332	263	182	283	270	176	34.81% decr
MMR	31	20	-	-	-	-	-	-
TD1/TD2	13,02	962	-	-	1004	734	623	15.12% decr
Vitamin 'A' 100,000 IU	371	332	251	245	181	215	281	30.70% incr
Vitamin 'A' 200,000 IU	819	1496	364	301	296	368	343	6.79% decr
Maternal VIT A	1,132	1,224	1,426	678	-	-	-	-
Pneumococcal Vaccine	1,686	1,842	1,879	2,121	2189	1,745	1,418	18.74% decr
M.R. 1	241	256	258	175	283	270	179	33.70% decr
M.R 2	161	164	218	119	-	185	143	22.70% decr
Tetanus Pregnant	1,302	1,307	1,032	1,202	1,250	734	718	2.18% decr
Tetanus Non-Pregnant	245	275	333	275	422	410	158	61.46% decr
Inactivated Polio Vaccine (IPV)	-	-	-	-	354	336	296	11.90% decr

VACCINES	2015	2016	2017	2018	2019	2020	2021	REMARKS
RTSS (Malaria Vaccine)	-	-	-	-	261	496	560	12.90% incr
LLIN	-	-	-	-	132	185	138	25.41% decr
Total	20,152	23,081	17,392	17,448	17,736	17,225	13,888	19.37% decr

16.4: CHILD WELFARE SERVICES

One of the most important activities undertaken by the public health department is the child welfare clinic for the under-five children. The trend of new registrants and clinic attendants fluctuated over the past years. In 2021, the total number of new registrants went up by 6.92% (from 722 in 2020 to 772 in 2021), whilst the total number of attendants also increased by 3.49% (from 4243 in 2020 to 4391 in 2021). Also, the new registrants within the age range of 24 and 59 months decreased by 13.92% (from 79 in 2020 to 68 in 2021), whereas attendance within the same age range of 24 and 59 months dropped by 12.08% (from 265 in 2020 to 297 in 2021). 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	REMARKS
NEW REGISTRANTS BY AGE						
0-11	190	286	278	510	548	7.45% incr
12-23	107	86	47	133	156	17.29% incr
24-59	22	10	12	79	68	13.92% decr
Total	319	382	337	722	772	6.92% incr
ATTENDANT BY AGE						
0-11	3064	3032	2681	3209	3346	4.27% incr
12-23	655	786	469	769	748	2.73% decr
24-59	129	155	146	265	297	12.08% incr
Total	3848	3973	3296	4243	4391	3.49% incr

16.5 INTEGRATED DISEASE SURVEILLANCE AND RESPONSE

The public health department as part of its mandate undertake regular surveillance of diseases of public health concern. This is to ensure early detection and management in order to prevent an outbreak. In 2021, a total of 4,085 suspected cases of COVID-19 were detected and tested, out of which 1,542 tested positive. The number of Meningitis cases confirmed in 2021 reduced from 9 in 2020 to 2 in 2021. Also, one (1) case of Human Rabies was confirmed in 2021 out of the 2 cases suspected, after no case was detected in a long while. Further, the hospital has not detected any Cholera case since 2019. Also, there was no case of Neonatal TT detected in 2021, as compared to the 3 cases confirmed in 2020. Detailed information provided in table 16.5.1 below.

Table 16.5. 1: Surveillance Activities

Condition	Number Suspected					Number Investigated					Lab Confirmed				
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Covid-19	-	-	-	2607	4,085	-	-	-	2607	4,085	-	-	-	447	1,542
Measles	3	3	0	0	0	3	3	0	0	0	0	0	0	0	0
Yellow Fever	1	4	2	0	0	1	4	2	0	0	0	0	0	0	0
Meningitis	3	6	15	20	23	3	0	15	20	23	0	0	0	9	2
Cholera	2	4	0	0	0	2	4	0	0	0	0	1	0	0	0
Neonatal TT.	0	2	0	3	0	0	2	0	3	0	0	2	0	3	0
AFP	1	5	1	1	2	1	5	1	1	0	1	0	0	0	0
Human Rabies	2	0	1	1	2	2	0	1	1	2	0	0	0	0	1
Acute Haemorrhagic Fevers	0	2	3	0	0	0	2	3	0	0	0	0	0	0	0

16.6 INFLUENZA SENTINEL SURVEY

As a sentinel site for influenza, samples from suspected clients have over the years been sent to Noguchi Memorial Institute for testing. In 2021, the total RTI recorded increased by 52.34% (from 1,475 in 2020 to 2,247 in 2021). The total number of influenza-like samples sent for testing went up from 10 in 2020 to 26 in 2021, out of which, 5 cases were confirmed positive. Also, out of the total of 13,074 RTI cases admitted 36 samples were sent for testing with 3 cases confirmed positive in 2021 as compared to zero case admission in 2020. Table 16.6.1 below shows the trend analysis of the influenza cases detected and the outcome over the past six years.

Table 16.6. 1: Influenza Sentinel Survey

INDICATOR	2016	2017	2018	2019	2020	2021	REMARKS
INFLUENZA LIKE ILLNESS							
RTI	100	2025	2163	1897	1475	2,247	52.34% incr
Samples Sent	18	187	86	215	10	26	160% incr
Positive Cases	0	10	4	19	0	5	incr
SEVERE ACUTE RESPIRATORY INFECTION (SARI)							
RTI Admitted	0	76	9	10	0	13,074	incr
Samples Sent	0	24	2	10	0	36	Incr
Positive Cases	0	1	0	0	0	3	incr

16.7 REPRODUCTIVE AND CHILD HEALTH SERVICES

In 2021, the total number of supervised deliveries recorded went up by 5.97% (from 2,883 in 2020 to 3,055 in 2021). The total number of babies vaccinated with BCG reduced marginally by 1.65% (from 3,271 in 2020 to 3,217 in 2021). In the same light, the post-natal registrants equally decreased by 0.82% (from 3,181 in 2020 to 3,155 in 2021). On the other hand, Maternal death went up significantly by 23.08% (from 26 in 2020 to 32 in 2021). Further, the total number of low birth weight (<2.5kg) and number of still birth weight equally went up by 17.97% and 43.82% in 2021 respectively as detailed in table 16.7.1 below.

Table 16.7. 1: Reproductive and Child Health Services

INDICATOR	2017	2018	2019	2020	2021	REMARKS
Supervised Deliveries	3,055	3,160	3,027	2,883	3,055	5.97% incr
Number of BCG vaccination	3,190	3,000	3,182	3,271	3,217	1.65% decr

INDICATOR	2017	2018	2019	2020	2021	REMARKS
Number of Post-natal Registrants	1,612	1,454	3,398	3,181	3,155	0.82% decr
Number of Still Birth	107	118	126	89	128	43.82% incr
Number of Maternal Deaths	41	27	28	26	32	23.08% incr
Number of Low Birth Weight (<2.5KG)	385	423	481	512	604	17.97% incr

16.8 FAMILY PLANNING

The family planning acceptor rate fluctuated over the past years with a significant deep in 2020. However, the family planning acceptor rate situation improved in 2021 by 63.58% (from 1,414 in 2020 to 2,313 in 2021). While male condom patronage by clients went up significantly by 285.87% (from 184 in 2020 to 710 in 2021), whereas the female condom remained zero among female clients over the past years. Vasectomy service utilization has also not been patronized since 2019.

Implanon patronage increased by 361.90% (from 21 in 2020 to 97 2021) whilst Depo Provera patronage increased by 289.87% (from 79 in 2020 to 308 in 2021). On the other hand, Cycle Beads usage by clients went down by 85% (from 20 in 2020 to 3 in 2021), whereas, Micro N patronage reduced by 77.78% (from 18 in 2020 to 4 in 2021). 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

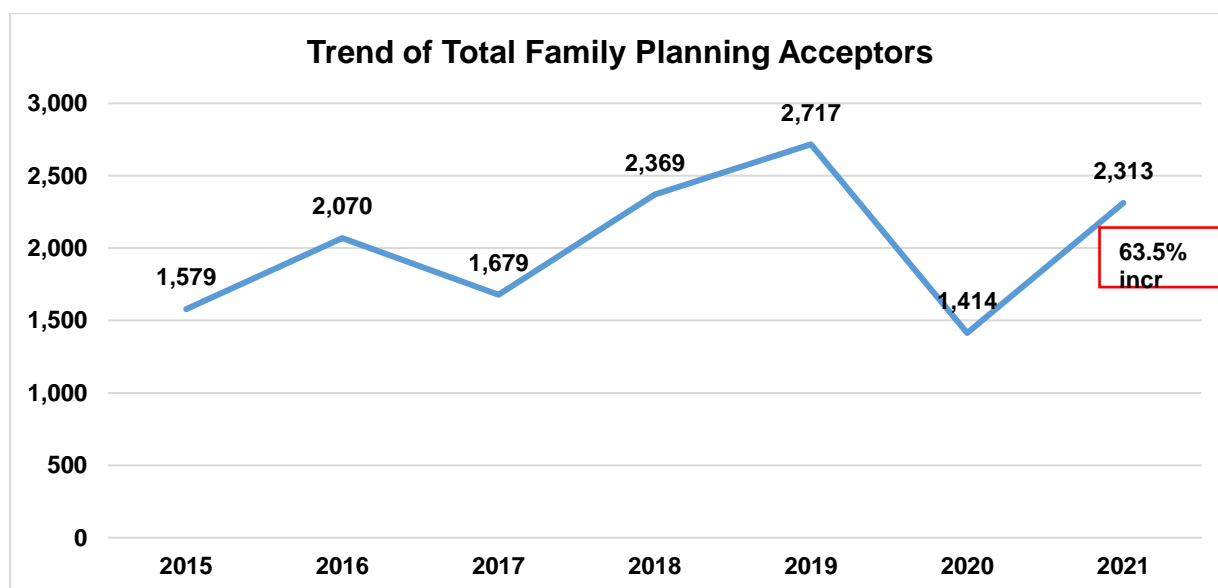


Table 16.8. 1: Family Planning Acceptors by Commodity

Acceptors	2015	2016	2017	2018	2019	2020	2021	Remarks
Condom M	105	258	94	266	118	184	710	285.87% incr
Condom F	16	12	0	0	0	0	0	
Copper T	15	29	14	39	45	8	27	237.5% incr
Depo Provera	130	297	89	231	299	79	308	289.87% incr
Jadelle	29	45	41	92	111	20	24	20% incr
Implanon	11	131	45	82	132	21	97	361.90% incr
Cycle Beads	0	0	0	32	20	20	3	85% decr
Micro G	17	37	22	18	104	34	67	97.06% incr

Acceptors	2015	2016	2017	2018	2019	2020	2021	Remarks
Micro N	9	12	5	40	154	18	4	77.78% decr
Lus	-	7	0	0	0	0	0	sustained
Mini Lap/BTL	72	98	103	94	98	81	57	
VASECTOMY	1	0	0	3	0	0	0	
Norigynon	17	6	10	21	55	25	34	36% incr
Emergency Contraceptives (Postinor)	0	0	0	0	-	-	0	-
LAM	1157	1138	1256	1454	1581	924	982	6.28% incr
Total	1,579	2,070	1,679	2,369	2,717	1,414	2,313	63.58% incr

The hospital recorded a decline in couple year protection over the past three years. The couple year protection in 2021 dropped from 1,891.2 in 2020 to 820.15 in 2021. The short-term C.Y.P reduced by 18.52% (from 528.2 in 2020 to 430.4 in 2021), whilst the long-term C.Y.P also decreased from 1,363 in 2020 to 389.75 in 2021. 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

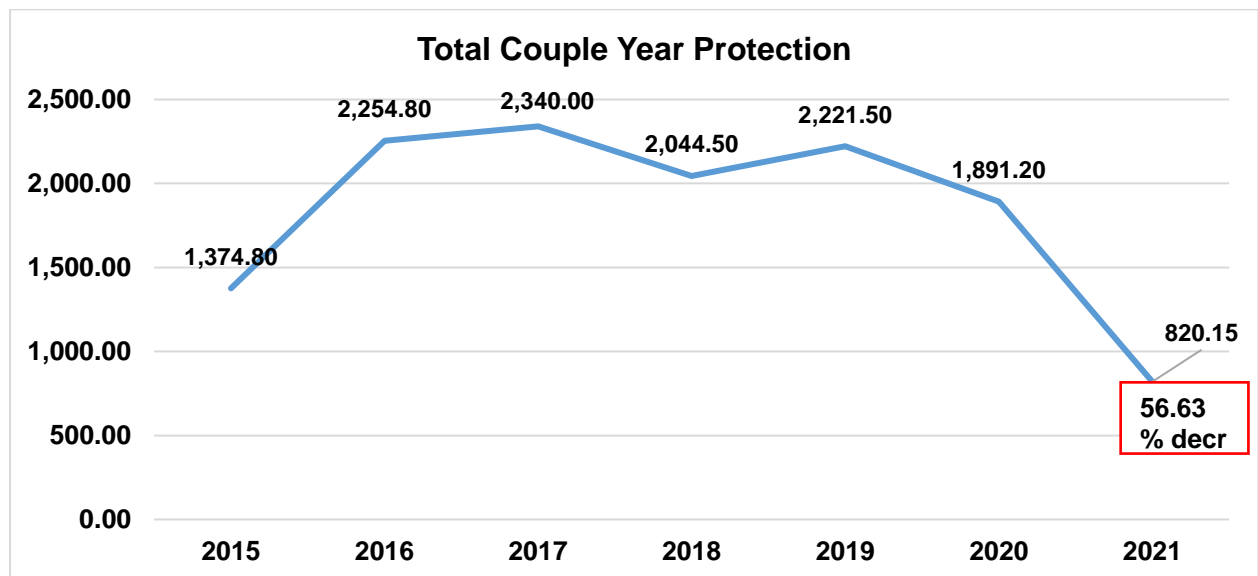


Figure 16.8. 3: Trend of Couple Year Protection

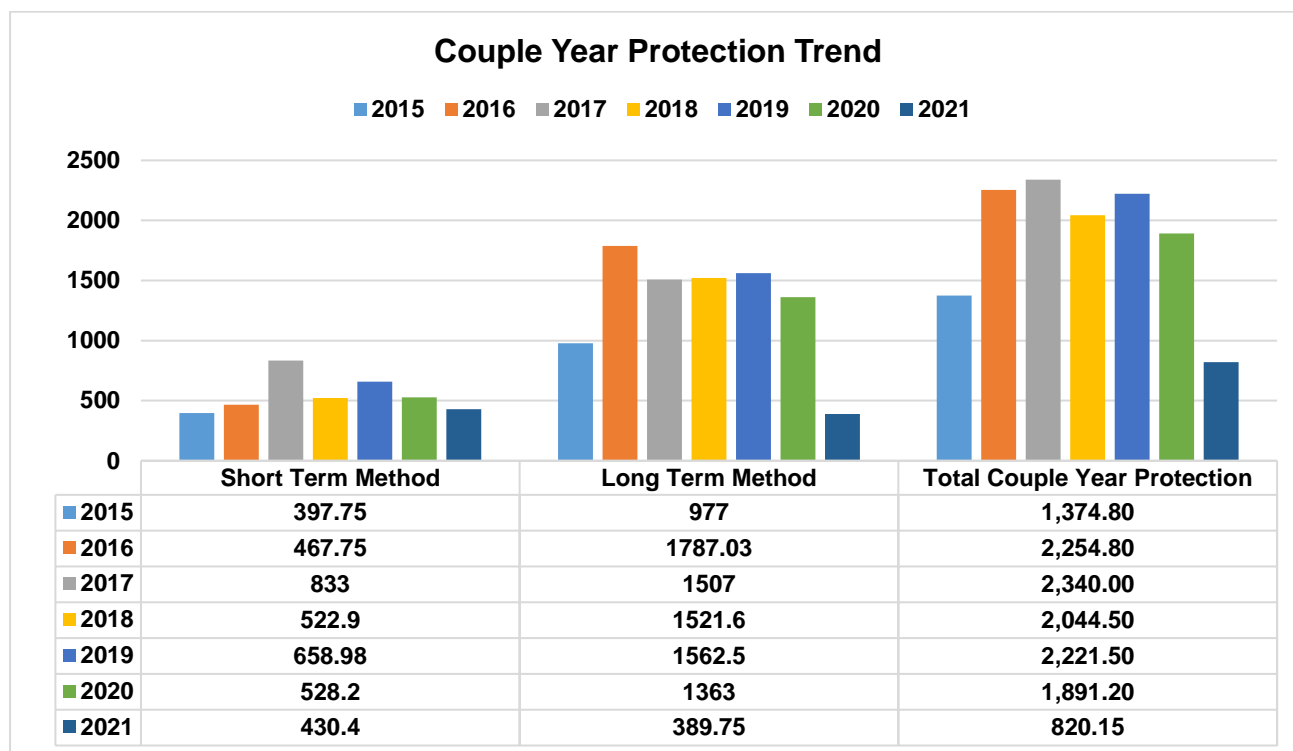


Table 16.8. 2: Trend of Family Planning Acceptor and CYP

COMMODITY	2015	2016	2017	2018	2019	2020	2021	REMARKS
	C.Y. P	C.Y. P	C.Y. P	C.Y.P	C.Y.P	C.Y.P	C.Y.P	
SHORT TERM								
PILL	12.2	15.4	12.7	23.61	76.38	32.5	13.2	59.38% decr
CONDOM	26.3	37.9	57.3	39.9	84.5	134.4	85.0	36.76% decr
LAM	289.25	284.5	628.0	363.5	395.25	231.0	245.5	6.28% incr
DEPO	67.75	125.75	132.0	92.75	97.75	125.0	82.5	34% decr
CYCLE BEADS	0	0	0	13.5	30.0	11.5	1.5	86.96% decr
NORIGYNON	2.25	1.5	3.0	3.2	5.1	5.3	2.7	49.06% decr
TOTAL	397.75	467.75	833.0	522.9	658.98	528.2	430.4	18.52% decr
LONG TERM								
JADELLE	101.5	150.53	178.5	217.0	192.5	164.5	63.0	61.70%decr
IMPLANON	27.5	467.5	132.5	169.6	185	152.5	225	47.54% decr
COPPER - T	56	91	63	87.5	77	143.5	87.5	39.02% decr
C/S BTL	792	1078	1133	1034	1078	891.0	14.25	98.40 decr
TOTAL	977	1787.03	1507	1,521.6	1,562.5	1,363	389.75	71.40 decr
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	56.63% decr

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, etc.

In 2021, a total number of health talk activity carried out at the hospitals' OPD reduced by 33.06% (from 366 in 2020 to 245 in 2021). The radio health talk went up by 54.81% compared to the previous year (from 104 in 2020 to 161 in 2021). TV health program carried out also increased by 95.56% (from 45 in 2020 to 88 in 2021). The community outreach activity equally went up from 49 in 2020 to 429 in 2021, whilst school health talks increased from 3 in 2020 to 9 in 2021, as detailed in table 16.9.1 below.

Table 16.9. 1: Health Promotion Activities

ACTIVITIES	FREQUENCY					REMARKS
	2017	2018	2019	2020	2021	
OPD Health Talk	144	147	217	366	245	33.06% decr
Radio Discussion	36	64	93	104	161	54.81 incr
TV Discussion	0	41	54	45	88	95.56% incr
Community Outreach	0	6	159	49	429	775.51% incr
School Health Talks	24	32	24	3	9	200% incr
Focus Client Education	226	502	1293	280	197	29.64% decr

16.10 HIV / AIDS CLINIC

Regular HIV screening is conducted among clients and their significant others for early detection and management and prevention of the spread. In 2021, the total number of people screened for HIV went up significantly by 700.20% compared to the previous year (from 507 in 2020 to 4057 in 2021) with a positivity rate of 5.5% (225) in 2021. Also, total number of clients screened for TB went up from 95 in 2020 to 225 in 2021. In the same light, out of the 34 exposed babies tested for HIV, 1 was confirmed positive. 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	Remarks
Total People Screened for HIV	1951	1718	1202	3159	507	4057	700.20% incr
No. HIV Positives	176	188	167	243	95	225	136.84% incr
HIV Positivity Rate	9.02%	10.94%	13.89%	7.7%	18.7%	5.5%	13.2% decr
No. of HIV positive clients placed on treatment	176	188	167	215	95	225	136.84% incr
TB Screening	176	188	167	243	95	225	136.84% incr
Early Infant Diagnosis for HIV							
Number of Exposed Babies Tested	41	26	59	43	37	34	8.11% decr
Number of Babies with results positive for HIV	0	3	2	1	1	1	
Positivity Rate %	-	11.5%	3.4%	2.3	2.7%	2.9%	0.2% decr

16.11 PREVENTION OF MOTHER TO CHILD TRANSMISSION (PMTCT) PROGRAMME

CCTH over the years has been putting in measures through the public health and obstetrics departments to prevent the spread of mother to child viral infection. In 2021, total number of ANC new registrants increased by 0.92% (from 761 in 2020 to 768 in 2021) and were all counselled and screened for HIV. Out of the total screened, none (zero) tested positive. Also, total number of babies on ARVs in 2021 was 42 as detailed in table 16.11.1 below.

Table 16.11. 1: Pregnant Mother to Child Transmission (PMTCT)

INDICATORS	2015	2016	2017	2018	2019	2020	2021	REMARKS
Number of ANC Registrants	565	716	748	794	802	761	768	0.92% incr
Number Tested & Received Post-test Counselling	595	716	748	794	802	761	768	0.92% incr
Percentage (%) of Clients Tested	584 (98.2%)	716 (100%)	748 (100%)	100%	100%	100%	100%	
Number Positive	20	4	8	4	4	4	0	
Number Positive at 34wks	0	0	2	0	0	1	0	
Number Given ARVs	36	6	16	4	4	5	0	
Number of Babies on ARVs	20	15	20	-	-	-	42	
Number of EID Tested	58	48	69	59	43	37	34	8.11% decr
Number of EID Positive (6wks -18mths)	3	4	10	2	1	1	1	
Given ARVs as Prophylaxis	16	-	-	-	43	37	42	13.51% incr

16.12 POST EXPOSURE PROPHYLAXIS

Generally, people become traumatized when exposed to HIV especially due to the stigma that is associated with it. Thus, it takes courage for one to report 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. The number of people exposed to HIV over the years kept fluctuating. In 2021, the number of people who reported exposure decreased by 13.33% (from 30 in 2020 to 26 in 2021). Out of the 26 people, 21 were at very low risk, 2 were at low risk whilst 3 were at high risk. However, none of them tested positive for HIV. Detailed trend analysis is provided in table 16.12.1.

Table 16.12. 1: Post Exposure Prophylaxis

INDICATORS	2016	2017	2018	2019	2020	2021	REMARKS
Number of Cases Reported	27	24	18	19	30	26	13.33% decr
Number at Very Low Risk	7	1	0	7	4	21	425% incr
Number at Low Risk	6	2	15	7	9	2	77.78% decr
Number at High Risk	15	21	3	5	17	3	83.35% decr

INDICATORS	2016	2017	2018	2019	2020	2021	REMARKS
				(2 Rape)			
Number who Tested Positive	0	0	0	0	0	0	sustained

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. The total number of normal TB cases detected in 2021 increased by 27.83% (from 115 in 2020 to 147 in 2021), whereas no MDR was detected in 2021. Total TB cases referred to other DOT centres went up in 2021 by 39.51% (from 81 in 2020 to 113 in 2021). 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	REMARKS
Total Normal Cases Detected	137	154	214	115	147	27.83% incr
MDR Cases	0	5 (4+1PXDR)	3 (2+1PXDR)	1	0	
Total Referred	96	102	161	81	113	39.51% incr
Total Registered	39	45	28	34	26	23.53% decr

Table 16.13. 2: Yearly Cohort Analysis of Registered Cases

CATEGORY OF CASES	2017	2018	2019	2020	2021	Remarks
New Smear positive	4	11	11	18	14	22.22% decr
Smear negative	23	16	16	8	3	62.5% decr
Extra Pulmonary	8	12	1	6	3	50% decr
Relapse	0	0	0	0	4	
Return after Defaulter	1	2	0	0	0	
TTT after failure	0	0	0	0	3	
Other previously	1	1	0	1	0	-
Total cases	37	45	28	34	27	20.59% decr
Outcomes						
Cured	5	4	9	-	-	-
Treatment completed	25	26	16	-	-	-
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

CASES		PERFORMANCE					REMARKS
	GENDER	2017	2018	2019	2020	2021	
Adult	Males	59	43	75	47	70	48.94% incr
	Females	29	40	53	23	39	69.57% incr
Paediatrics	Males	5	12	21	4	2	50% decr
	Females	6	7	12	7	2	71.43% decr
Total		99	102	161	81	113	39.51% incr

Table 16.13. 4: Audiometric Assessment for TB Management

CLASSIFICATION	2019	2020	2021	Remarks
Normal Hearing	8	2	52	incr
Mild Hearing Loss	15	3	1	decr
Moderate Hearing Loss	6	0	5	
Severe – Profound Hearing Loss	15	0	0	
Total	44	5	58	incr

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 2021 PERFORMANCE AGAINST CCTH STRATEGIC OBJECTIVES

Table 17.2. 1: Pharmacy Directorate's 2021 Annual Performance against CCTH Strategic Objectives

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
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	2021 Target	Remarks
% Tracer Drug Availability	84.8%	96.1%	96.1%	88.5%	84.62 %	95%	CCTH = 100% TH = 90%	Incr
Prescription to pharmacy ratio	13,491:1	13,511:1	16,097:1	8,288:1	9425:1	6,422	TH = 12000:1	Decr
Percentage antibiotic prescribed	13.5%	15.2%	18.4%	16.18 %	17.1%	11.6%	TH = 35%	Decr
Percentage Injectable	1.6%	1.8%	6.3%	5.8%	24.2%	1.6%	TH = 10%	Decr
Utilization of Pharmaceutical Care interventions	-	79.2%	97.3%	99%	11.5%	21.2%	TH = 30%	Incr
Forty-seven (47) queries received and addressed at the newly created Drug Information Centre								
Pharmacovigilance week celebrated with 73 ADR reports received								
CCTH-Roche collaboration in Oncology Services launched								
CCTH OBJECTIVE 2: IMPROVE QUALITY OF HEALTH CARE DELIVERY.								
Commenced 12 hourly shift for in-Patient Pharmacy with 20,600 clients attended to.								
Introduced discharge counselling with 607 patients counselled								
Emergency drugs were monitored (28 rounds done)								
Revised tracer medicines list for CCTH from 52 to 160								
95% availability of tracer medicines								
Streamlined medicines inclusion/exclusion into hospital's medicines formulary by developing and operationalizing medicines addition/exclusion form								
Streamline supply chain process for award of contracts and payment of suppliers by developing an SOP								
Pharmacovigilance monitoring was conducted on all the wards and recorded 36 rounds								
Initiated the processes to have Insurance cover for Pharmacy stores								
CCTH OBJECTIVE 3: IMPROVE INFRASTRUCTURE AND EQUIPMENT BASE FOR THE DELIVERY OF QUALITY SERVICE								
New Pharmacy Store constructed and operationalized								
New cold room constructed and operationalized								
New Oncology Pharmacy operationalised								
CCTH OBJECTIVE 4: STRENGTHEN GOVERNANCE SYSTEM								
4.1: Governance Related Performance								
Eleven (11) monthly managers meeting were organised								
Performance management workshop organized for all staff (53 attended)								
4.2: Human Resource Related Performance								
Actual Performance Trend								

2021 ANNUAL OUTCOME AND OUTPUT PERFORMANCE								
	2016 Annual	2017 Annual	2018 Annual	2019 Annual	2020 Annual	2021 Annual	Target	Remarks % Diff.
Doctor to pharmacist ratio	10.3:1	12.6:1	15.1:1	8.5:1	9:1	6.4:1	THs =10:1	Decr
Prescription to pharmacy ratio	13,491:1	13,511:1	16,097:1	8,288:1	9,425:1	6,422:1	THs = 12000:1	Decr
Appointed ten (10) Pharmacy Managers								
Appointed nine (9) sub-BMC pharmacists								
Three (3) pharmacists enrolled in Ghana College of Pharmacists residency programme								
Eight (8) new Staff were appointed								
100% Staff were appraised								
4.3: Finance related performance								
-								
CCTH OBJECTIVE 5: IMPROVE HEALTH RESEARCH, TEACHING AND EXCELLENCE IN LEARNING								
5.1 Improve on Research:								
Conducted 2 researches;								
<ul style="list-style-type: none"> Assessing the Prevalence and Drivers of Over-The-Counter Sales of Antibiotics Among Community Pharmacies and Over the Counter Medicine Sellers in Ghana to Develop Mitigatory Behaviour Change Interventions to Tackle Amr: A Mixed-Methods Study. Pharmacovigilance in Cape Coast Teaching Hospital (CCTH): Knowledge, Attitude and Practices of Healthcare Professionals 								
5.2 Improve on Teaching and Learning:								
Two (2) in-service training done with KNUST and UCC for preceptors								
Five (5) preceptors were appointed at UCC, UHAS and Ghana College of Pharmacists								
All twenty-five (25) pharmacists at the department attended the 2021 virtual AGM in September 2021								
Fifty-two (52) staff participated in training on Drug Information in September								
Thirty-two (32) clinical presentations/meetings organised which saw thirteen 13 Case Presentation organised								
MOU signed with KNUST for the training of Pharm D students and with UHAS ongoing								
CCTH OBJECTIVE 6: INTENSIFY SUPPORT TO THE LOWER LEVEL OF CARE AND SERVICE DELIVERY POINTS								
The department provided mentorship support at five (5) peripheral facilities;								
<ul style="list-style-type: none"> Komenda Health Centre, Moree Health Centre, Elmina Health Centre, Anomabo Health Centre and Winneba Government Hospital 								

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 recorded a reduction in the percentage of antibiotics prescribed from 17.13% in 2020 to 11.58% in 2021, whilst percentage of generic medicines prescribed reduced from 97.25% in 2020 to 92.60 in 2021. Also, percentage of tracer drug availability improved from 84.62% in 2020 to 95% in 2021. The percentage of injectable prescribed in 2021 dropped tremendously from 24.16% in 2020 to 1.61% in

2021. Average consulting time also reduced from 21.9minutes in 2020 to 16.12minutes in 2021. Average dispensing communication time went up marginally from 69.51 seconds in 2020 to 70.20 seconds in 2021. Furthermore, percentage of medicines prescribed from EDL reduced from 93.88%in 2020 to 85.85% in 2021. 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	2016	2017	2018	2019	2020	2021	Remarks	Target
Average consulting time	13.2 mins	14.1 mins	15.7 mins	-	21.9 mins	16.12	decr	-
Av dispensing communication time	60.2 secs	61.5	99.2 secs	75 sec	69.51 sec	70.20 Sec	incr	-
Average waiting time	-	-	30.6 mins	30.8 mins	11.9 mins	24.45 mins	incr	-
% Generic medicine prescribed	81.9	94.2	84	-	97.25	92.60%	decr	-
% Antibiotics prescribed	13.8%	15.2%	18.4%	16.18 %	17.13%	11.58%	decr	TH = 35%
% of injectable prescribed	1.6%	1.8%	6.3%	5.8%	24.16%	1.61%	decr	TH = 10%
% of medicines prescribed from EDL	98.2%	98.4%	90.3 %	-	93.88%	85.85%	decr	-
% of medicines adequately labelled	75.9%	78.6%	89.5%	89.9 %	89%	86%	decr	-
% with knowledge of correct dosage regimen	90.1%	92.3%	88.9%	77.9 %	83.75%	79.25%	decr	-

Table 17.3.1. 2: RUM Survey Result - Dispensing Indicators

RUM Patient Care Indicators	2016	2017	2018	2019	2020	2021	Remarks	Target
Av dispensing comm time	60.2 secs	61.5	99.2 secs	75 sec	69.51 sec	70.20 Sec	incr	
Av waiting time	-	-	30.6 mins	30.8mins	11.9 mins	24.45 mins	incr	
% Of tracer drug availability	84.7%	96.2%	96.1%	88.50%	84.62%	95%	incr	CCTH = 100% TH = 90%
% Of medicines adequately labelled	75.9%	78.6%	89.5%	89.9%	89%	86%	decr	
% With knowledge of correct dosage regimen	90.1%	92.3%	88.9%	77.9%	83.75%	79.25%	decr	

17.4 TREND PERFORMANCE OF PHARMACY DEPARTMENT

In 2021, the tracer drug availability increased from 84.62% in 2020 to 95% in 2021. Total number of prescriptions served reduced by 5.36% (from 169,655 in 2020 to

160,563 in 2021), whilst the prescriptions to pharmacists' ratio reduced from 9425:1 in 2020 to 6422:1 in 2021. Also, the percentage of medicines adequately labelled reduced from 89% in 2020 to 86% in 2021. Further, the pharmacists to prescriptions ratio decreased from 9425:1 in 2020 to 6422:1 in 2021.

Out of the pharmacy outlets in the hospital, the 24hour pharmacy recorded the highest prescriptions served to clients with a marginal increase of 0.72% in 2021 (from 62,548 in 2020 to 62,996 in 2021), and the prescriptions served at the Accident and Emergency pharmacy reduced by 50.02% in 2021 (from 52,548 in 2020 to 26,265 in 2021). The prescriptions served at the Outpatient (main) pharmacy went up by 14.60% (from 18,916 in 2020 to 21,677 in 2021), and prescriptions served at the Outpatient Annex increased by 28.37% in 2021 (from 17,431 in 2020 to 22,377 in 2021). On the other hand, the prescriptions served at the in-patient/ward pharmacy outlet went up significantly by 72.15% in 2021 (from 11,966 in 2020 to 20,600 in 2021). Utilization of pharmaceutical care interventions went up in 2021 from 11.52% in 2020 to 21.2% in 2021. 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	2016	2017	2018	2019	2020	2021	Remarks
% Tracer Medicines Availability	84.78%	96.15%	96.1%	88.5%	84.62%	95%	incr
Clinical Pharmacy Practice on Wards	70%	90%	90%	90%	90%	90%	
No of Drug Bulletins issued	6	6	6	2	4	4	
No of Students trained	18	41	30	13	11	106	863.64% incr
Total number of prescriptions served	-	109,557	144,882	149,294	169,655	160,563	5.36% decr
No of Researches conducted	2	2	2	1	2	2	
Prescriptions to Pharmacists ratio	-	13,694:1	16,097:1	8,288:1	9425:1	6422:1	decr

Table 17.4. 2: Four-Year Trend of Prescriptions Served By Various Pharmacy Outlets

PRESCRIPTIONS SERVED	2018	2019	2020	2021	REMARKS
Out-Patient Dept. (OPD) Main	25,344	26,944	18,916	21,677	14.60% incr
Out-Patient Dept. (OPD) Annex	18,804	21,895	17,431	22,377	28.37% incr
Accident & Emergency	31,152	33,964	52,548	26,265	50.02% decr
In-Patient/Ward Pharmacy	8,584	8,539	11,966	20,600	72.15% incr
24hour Pharmacy	36,872	57,952	62,548	62,996	0.72% incr
Oncology suite	-	-	314	264	15.92% decr
TB Clinic	-	-	456	663	45.39% incr
ART Clinic	-	-	6,276	5721	8.84% decr
Total	120,756	149,294	169,655	160,563	5.36% decr

Table 17.4. 3: Pharmaceutical Services Performance under THs KPI

KPI	2016	2017	2018	2019	2020	2021	REMARKS	TARGET	MEASUREMENT
Tracer Drug availability	84.78%	96.15%	96.10%	88.5%	84.62	95%	12.27 % incr	CCTH = 100% TH = 90%	Medicines available / Total medicines in the tracer medicines list * 100
Prescriptions - Pharmacist Ratio	13,491:1	13,511:1	16,097:1	8,288:1	9425:1	6422:1	decr	TH = 12000:1	Total no. of prescriptions served / total no. of pharmacists
Percentage antibiotic prescribed	13.5%	15.2%	18.4%	16.2%	17.13	11.58 %	32.40 % decr	TH = 35%	Total number of antibiotic / Total of medicines on a prescription * 100
Percentage injectable prescribed	1.6%	1.8%	6.3%	5.8%	24.16	1.61%	93.34 % decr	TH = 10%	Total number of injectable / Total of medicines on a prescription * 100
Utilization of pharmaceutical care interventions	-	79.2%	97.3% (18.1% incr)	99% (1.7% incr)	11.52 %	21.2%	84.03 % incr	TH = 30%	No. of interventions / no. of cases seen * 100
Proportion of ward round inputs by clinical pharmacist utilized	-	-	80%	-	89.29 %	100%	11.99 % increase		Number of clinical pharmacist inputs utilized / Total number of inputs

17.5 ANTI-RETRO VIRAL THERAPY (ART)

In 2021, the total number of HIV clients served with ART decreased by 8.84% (from 6,276 in 2020 to 5,721 in 2021). Similarly, the average number of clients seen per month also decreased by 8.80% (from 523 in 2020 to 477 in 2021). The number of children below 14 years put on ARV drugs in 2021 by 76.92% (from 13 in 2020 to 3 in 2021). Also, the number of HIV exposed babies given prophylaxis decreased by 1.52% (from 66 in 2020 to 65 in 2021). 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	REMARKS
Attendance (Total no. of Clients)	5,520	6,276	5721	8.84% Decr
Av. number of Client Seen per month	460	523	477	8.80% decr
New Adults	84	81	77	4.94% decr

INDICATOR	2019	2020	2021	REMARKS
Males	22	20	26	30.00% incr
Females	62	61	51	16.39% decr
No. of Children below 14yrs put AVR drugs	6	13	3	76.92% decr
Males	2	6	1	83.33% decr
Females	4	7	2	71.43% decr
No. of HIV exposed babies given prophylaxis	55	66	65	1.52% decr
No. of post exposure prophylaxis	43	47 (42 CCTH cases)	39	17.02% 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	Proposal submitted to Organisations and the Ministry of Health for support
Inadequate space for Clinical Services (Inadequate Infrastructure)	Proposal submitted to Organisations and the Ministry of Health for support
Delay in NHIS reimbursement	Continuous dialogue with NHIA
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, Oxygen Plants, etc).

18.2 CONCLUSION

During the year under review, the hospital recorded significant improvement in services utilization, projects implementation, human resource numbers, finance, etc amidst the effects of the COVID-19 pandemic..

The total human resource increased by 14.5% in 2021. The OPD clinics attendance went up significantly by 21.1% in 2021. Total Specialist Outpatient clinics attendance also increased by 15.1%. Out of the 1,108 COVID-19 cases directly managed in 2021, the hospital recorded a recovery rate of 94% (1042). Also, the proportion of CCH staff who tested positive for COVID-19 was 13.4% in 2021 (against the total hospital staff of 2,051 in 2021), with 100% recovery rate among staff.

Notwithstanding, numerous challenges were faced by the during the year. Key among these include, absence of Neonatal and Paediatric Intensive Care Units which is a contributing factor to the high neonatal death and infant mortality rates; Infrastructural and equipment challenges impeding growth in specialist services provision and high attrition of the hospital's trained specialist to the other Agencies, derailing Management strategy on expanding specialist services.

However, Management is committed to continue to improve on the situation and would therefore need the support of all stakeholders in this endeavour.