# TABLE CONTENTS

TABLE CONTENTS ........................................................................................................... ii  
LIST OF FIGURES ......................................................................................................... i  
LIST OF TABLES ........................................................................................................... i  
ACRONYMS ...................................................................................................................... i  
ACKNOWLEDGEMENTS ................................................................................................. i  
PREFACE ......................................................................................................................... i  
FROM THE DESK OF THE CHIEF EXECUTIVE .............................................................. ii  
CHAPTER 1 ....................................................................................................................... 1  
INTRODUCTION ............................................................................................................ 1  
CHAPTER 2 ....................................................................................................................... 12  
HUMAN RESOURCE PERFORMANCE ......................................................................... 12  
CHAPTER 3 ....................................................................................................................... 23  
CLINICAL CARE SERVICES ......................................................................................... 23  
CHAPTER 4 ....................................................................................................................... 42  
QUALITY ASSURANCE UNIT ..................................................................................... 42  
CHAPTER 5 ....................................................................................................................... 44  
DOMESTIC SERVICES .................................................................................................. 44  
CHAPTER 6 ....................................................................................................................... 47  
TECHNICAL SERVICES ............................................................................................... 47  
CHAPTER 7 ....................................................................................................................... 49  
FINANCIAL PERFORMANCE ....................................................................................... 49  
CHAPTER 8 ....................................................................................................................... 54  
COLLABORATION AND SUPPORT ........................................................................... 54  
CHAPTER 9 ....................................................................................................................... 57  
DIRECTORATE OF INTERNAL MEDICINE ..................................................................... 57  
CHAPTER 10 .................................................................................................................... 64  
DIRECTORATE OF SURGERY ....................................................................................... 64  
CHAPTER 11 .................................................................................................................... 70  
DIRECTORATE OF CHILD HEALTH ............................................................................. 70  
CHAPTER 12 .................................................................................................................... 76
### LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Five-year trend of staff strength -KATH-2018</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>Category of staff by Professional Groups, KATH 2018</td>
<td>13</td>
</tr>
<tr>
<td>3</td>
<td>Age Group of Staff, KATH 2018</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>Separated Staff, KATH 2018</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>Discipline action, 2018</td>
<td>22</td>
</tr>
<tr>
<td>6</td>
<td>Service Utilization (2018 Targets and Actuals)</td>
<td>23</td>
</tr>
<tr>
<td>7</td>
<td>Trend in OPD Utilization by Directorates, KATH 2018</td>
<td>24</td>
</tr>
<tr>
<td>8</td>
<td>Trend in Aggregated OPD Service Utilization, KATH 2014-2018</td>
<td>25</td>
</tr>
<tr>
<td>9</td>
<td>Trend in In-patient service utilization, KATH 2014-2018</td>
<td>27</td>
</tr>
<tr>
<td>11</td>
<td>Trend in Recovery ward admissions, KATH 2014 -2018</td>
<td>30</td>
</tr>
<tr>
<td>12</td>
<td>Trend in ICU Admissions, KATH 2014 -2018</td>
<td>31</td>
</tr>
<tr>
<td>13</td>
<td>Trend in Total Mortality Rate, KATH (2014-2018)</td>
<td>32</td>
</tr>
<tr>
<td>14</td>
<td>Trend in Deliveries, KATH 2014-2018</td>
<td>33</td>
</tr>
<tr>
<td>15</td>
<td>Trend in Maternal Mortality Ratio per 100,000 live births, KATH (2014-</td>
<td>34</td>
</tr>
<tr>
<td>16</td>
<td>Top Ten Causes of Maternal Deaths, KATH 2018</td>
<td>35</td>
</tr>
<tr>
<td>17</td>
<td>Trend in Emergency Services Utilization (2014-2018) KATH</td>
<td>36</td>
</tr>
<tr>
<td>18</td>
<td>Trend in Investigations (2014-2018) KATH</td>
<td>37</td>
</tr>
<tr>
<td>19</td>
<td>Trend in Radiology (2014-2018), KATH</td>
<td>37</td>
</tr>
<tr>
<td>20</td>
<td>Age distribution of serviceable vehicles in 2018</td>
<td>46</td>
</tr>
<tr>
<td>21</td>
<td>Trend in Admissions, KATH (2014-2018) ...........................................</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Top Ten Causes of Admissions in the Medicine Directorate – KATH 2018</td>
<td>62</td>
</tr>
<tr>
<td>23</td>
<td>Trend in Mortality Rate (%) in the Medicine Directorate 2014-2018</td>
<td>62</td>
</tr>
<tr>
<td>26</td>
<td>OPD Clinics attendance in Directorate of Surgery, 2018</td>
<td>65</td>
</tr>
<tr>
<td>29</td>
<td>Trend in Admissions in the Directorate of Surgery (2014-2018)</td>
<td>66</td>
</tr>
<tr>
<td>30</td>
<td>Surgical Operations by Clinic in the Directorate of Surgery (2018)</td>
<td>68</td>
</tr>
<tr>
<td>32</td>
<td>Trend in Mortality Rates in Surgery Directorate (2014-2018)</td>
<td>69</td>
</tr>
<tr>
<td>33</td>
<td>Trend in OPD attendance, Child Health, 2014-2018</td>
<td>70</td>
</tr>
<tr>
<td>34</td>
<td>Trend in In-patient Service Utilization, Child Health Directorate (2014-2018)</td>
<td>72</td>
</tr>
<tr>
<td>35</td>
<td>Top Ten Causes of Admissions in the Child Health Directorate, 2018</td>
<td>73</td>
</tr>
<tr>
<td>36</td>
<td>Trend in Mortality Rates in Child Health Directorate from 2014-2018</td>
<td>74</td>
</tr>
<tr>
<td>37</td>
<td>Trend in Mortality Rates in Child Health Directorate from 2014 -2018</td>
<td>75</td>
</tr>
<tr>
<td>38</td>
<td>Distribution of out-patients in EENT Directorate by department</td>
<td>77</td>
</tr>
<tr>
<td>39</td>
<td>Trend in OPD service by clinics in EENT Directorate (2014-2018)</td>
<td>78</td>
</tr>
</tbody>
</table>
Figure 40: Trend in admissions in EENT Directorate (2014-2018) ............................................ 80
Figure 41: Surgical Operations in EENT Directorate (2017) .......................................................... 81
Figure 42: Trend in Surgical Operations in EENT Directorate (2014-2018) .................................. 82
Figure 43: Trend in Mortality Rate in EENT Directorate (2014-2018) .......................................... 83
Figure 44: Trend in OPD Attendance, Oral Health Directorate (2014-2018) .................................... 85
Figure 45: Trend in OPD procedures in Oral Health Directorate (2014-2018) ............................. 86
Figure 46: OPD Procedures by clinic at the Oral Health Directorate (2018) ................................. 87
Figure 47: Trend in Admission at the Oral Health Directorate (2018) ............................................ 87
Figure 48: Trend in Surgical Operations, Oral Health Directorate (2014-2018) ............................ 89
Figure 49: Trend in Pre-Operative Cases in Anaesthesia Directorate (2014-2018) ......................... 90
Figure 50: Trend of Critical Care Patients Managed in Anaesthesia Directorate (2014-2018) ...... 91
Figure 51: Trend in Anaesthesia Administration, Directorate of Anaesthesia and Intensive Care (2014-2018) ........................................................................................................... 92
Figure 52: Trend in Number of Post-operative Cases, Directorate of Anaesthesia and Intensive Care (2014-2018) .............................................................................................................. 93
Figure 53: Trend in mortality rate, ICU ward- Directorate of Anaesthesia and Intensive Care (2014-2018) ......................................................................................................................... 95
Figure 54: Trend in OPD Services in Obstetrics & Gynaecology Directorate (2014-2018) .......... 98
Figure 55: Trend of admissions in Obstetrics & Gynaecology Directorate (2014-2018) .............. 99
Figure 56: Trend in Deliveries in Obstetrics & Gynaecology Directorate (2014-2018) .............. 100
Figure 57: Distribution of Surgical Operations in Obstetrics & Gynaecology Directorates, 2018 ................................................................................................................................. 101
Figure 58: Trend in Surgeries in Obstetrics & Gynaecology Directorate (2014-2018) .............. 102
Figure 59: Family Planning Attendance, 2014-2018 ................................................................. 102
Figure 60: Family Planning Methods Utilization, 2018 ............................................................. 103
Figure 61: Trend in Mortality (Maternal and Non - Maternal), 2014-2018 ................................. 104
Figure 62: Trend in Maternal Mortality Rate (2014-2018) .......................................................... 105
Figure 63: Distribution of Maternal Deaths by time period in O & G Directorate (2018) ........... 107
Figure 64: OPD Services Utilization in Oncology Directorate (2018) ........................................ 108
Figure 65: Trend in OPD Attendance in Oncology Directorate (2014-2018) ............................ 109
Figure 66: Comparative Analysis of treatment given in Oncology Directorate (2014-2018) .... 110
Figure 67: Top ten Cancers treated, Directorate of Oncology (2018) .......................................... 111
Figure 68: Trend in OPD services (Primary and Specialist Care) in Family Medicine Directorate (2014-2018) .................................................................................................................... 113
Figure 69: Trend in admissions in Family Medicine Directorate, 2014-2018 .......................... 116
Figure 70: Trend of OPD services -Physiotherapy Unit, 2014-2018 ............................................. 120
Figure 71: Comparative Analysis of In-patient Services (Physiotherapy Unit), 2014-2018 ....... 121
Figure 72: Trend Analysis of Aggregated Laboratory services (2014-2018) .............................. 123
Figure 73: Trend in OPD Attendance in Trauma and Orthopaedics (2014-2018) ....................... 130
Figure 75: Comparative Analysis of Clubfoot Cases in Trauma and Orthopaedics Directorate, 2014-2018 ................................................................. 131
Figure 76: Trend in Admissions in Trauma and Orthopaedics Directorate, 2014-2018 ............ 132
Figure 77: Distribution of Major Surgical Operations in Trauma and Orthopaedics Directorate, 2018............................................................................................................. 133
Figure 78: Trend in Surgical Operations in Trauma and Orthopaedics Directorate (2014-2018) .................................................................................................................................. 134
Figure 79: Trend in Mortality Rate (%) in Trauma and Orthopaedics Directorate, 2014-2018 135
Figure 80: Categorization of Emergencies in Emergency Medicine Directorate (2018) ........ 138
Figure 81: Trend of Patients’ Attendance at Emergency Medicine, 2014-2018 ...................... 138
Figure 82: Percentage distribution of minor procedures in Emergency Medicine (2018) ...... 139
Figure 83: Donors screened vs. Blood collected in TMU, 2018 ............................................ 143
Figure 84: Blood collected in Transfusion Medicine Unit, 2018 ........................................ 144
Figure 85: Trend of Total Blood Donations in Transfusion Medicine Unit, 2018............... 144
Figure 86: Clinical Use of Whole Blood in Transfusion Medicine unit, 2018.................... 145
Figure 87: Clinical use of Concentrated Red Cells in Transfusion Medicine Unit, 2018 .... 146
Figure 88: Clinical Use of Fresh Frozen Plasma in Transfusion Medicine Unit, 2018........ 147
Figure 89: Clinical use of Platelets in Transfusion Medicine Unit, 2018......................... 148
Figure 90: Breakdown of Blood Discarded in Transfusion Medicine Unit, 2018.............. 148
Figure 91: Distribution of registered research protocols per directorate/unit, Jan-Jun 2018, n=413 ................................................................................................................................................ 156
Figure 92: Distribution of registered protocols per principal investigator -PI's Institution 2018 157
Figure 93: Distribution of call ins at the Drug Information Centre ................................. 161
Figure 94: Category of staff, Biostatistics Unit, 2018 ....................................................... 169
Figure 95: Biostatistics Unit- Distribution of staff in the directorates, 2018....................... 170
Figure 96: Age Distribution of Suspected Meningitis Cases, KATH, January-December 2018 .................................................................................................................................... Error! Bookmark not defined.
LIST OF TABLES
Table 1: Number of Doctors and Related Personnel per Directorate/Unit, 2018 ......................... 15
Table 2: Nurses and midwives by directorates, 2018 ............................................................... 16
Table 3: Pharmacists and Pharmacy Technicians by Directorates, 2018 ................................. 17
Table 4: Allied Health Staff per Cadre, 2018 ............................................................................ 18
Table 5: Staff Pursuing Further Studies per directorate, 2018 .................................................. 20
Table 6: Percentage of OPD Services Per Directorates (2018) .................................................. 25
Table 7: Top Ten Specialist OPD Attendance, KATH 2018 .................................................... 26
Table 8: Top Ten Causes of Admissions (KATH, 2018) .......................................................... 28
Table 9: Theatre Service Utilization, KATH, 2018 ................................................................. 29
Table 10: Top ten causes of death 2018 ..................................................................................... 32
Table 11: The distribution of number of vehicles and their conditions between 2014-2018 .... 44
Table 12: Infrastructural Development, 2018 ........................................................................ 59
Table 13: Internally Generated Fund (IGF) Revenue Categories, KATH 2018 ....................... 50
Table 14: The 2017 and 2018 Revenue Figures Compared ...................................................... 50
Table 15: Classification of IGF Revenue by Mode of Receipt .................................................... 51
Table 16: 2017 IGF Expenditure Budget Execution ................................................................ 52
Table 17: Collaboration and Support (2018) ............................................................................. 54
Table 18: Trend in OPD Services Utilization by Clinics .......................................................... 59
Table 19: Haemodialysis and Renal OPD ................................................................................ 60
Table 20: Trend in Admissions, KATH (2014-2018) .............................................................. 61
Table 21: Trend in OPD Sub-Specialty Clinics in Child Health (2013-2017) ......................... 71
Table 22: Expected and Actual outputs of Other Services in EENT in 2018 ......................... 78
Table 23: Top ten causes of OPD attendance, Eye Unit, 2018 .................................................. 79
Table 24: Top ten causes of admission, EENT Unit, 2018 ..................................................... 80
Table 25: Outreach Activities by ENT Department 2018 ......................................................... 83
Table 26: Top ten causes of Admission, Oral Health Directorate, 2018 ................................. 88
Table 27: Top ten causes of Admission, Oral Health Directorate, 2018 ................................. 94
Table 28: Trend in Obstetric services in Obstetrics & Gynaecology Directorate, 2014-2018 .... 100
Table 29: Top Ten Causes of Maternal Deaths in Obstetrics & Gynaecology, 2018 .......... 105
Table 30: Outreach activities, Oncology 2018 ......................................................................... 111
Table 31: Services by Family Medicine Directorate, 2015-2018 ............................................ 114
Table 32: Top Ten Conditions Seen in the OPD- Family Medicine Directorate, 2018 ........ 114
Table 33: Top Ten causes of OPD attendance in children (0-12years), Family Medicine Directorate .................................................................................................................. 115
Table 34: Bed State Statistics, Family Medicine Directorate, 2018 ....................................... 116
Table 35: Top ten causes of Admissions, Family Medicine Directorate ................................ 117
Table 36: Top Ten causes of Mortality, Family Medicine Ward, Family Medicine Directorate, 2018 .................................................................................................................. 118
Table 37: Summary of Activities of Physiotherapy Unit, 2018 .............................................. 119
<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>Achievements (Internal Audit)</td>
</tr>
<tr>
<td>39</td>
<td>5 Year Trend of Drug Availability (2014-2018)</td>
</tr>
<tr>
<td>40</td>
<td>5 Year Trend Analysis of National Competitive Tenders (NCTS)</td>
</tr>
<tr>
<td>41</td>
<td>National Competitive Tendering (NCT) activities for 2018</td>
</tr>
<tr>
<td>42</td>
<td>Donations received from Organizations and Individuals</td>
</tr>
<tr>
<td>43</td>
<td>Achievements (Social Welfare)</td>
</tr>
<tr>
<td>44</td>
<td>Social Issues Handling during 2018</td>
</tr>
<tr>
<td>45</td>
<td>Hardware Infrastructure (Equipment)</td>
</tr>
<tr>
<td>46</td>
<td>5 Year Trend Analysis of National Competitive Tenders (NCT) activities for 2018</td>
</tr>
<tr>
<td>47</td>
<td>National Competitive Tendering (NCT) activities for 2018</td>
</tr>
<tr>
<td>48</td>
<td>Donations received from Organizations and Individuals</td>
</tr>
<tr>
<td>49</td>
<td>Achievements (Social Welfare)</td>
</tr>
<tr>
<td>50</td>
<td>Social Issues Handling during 2018</td>
</tr>
<tr>
<td>51</td>
<td>Hardware Infrastructure (Equipment)</td>
</tr>
<tr>
<td>52</td>
<td>Total Data that was backed up (2018)</td>
</tr>
<tr>
<td>53</td>
<td>Equipment Repaired and Maintained</td>
</tr>
<tr>
<td>54</td>
<td>Summary of expected outputs and results Public Health (PH) Unit, 2018</td>
</tr>
<tr>
<td>55</td>
<td>Five-year trend in Early Infant Diagnosis (EID) at KATH PMTCT, 2014 - 2018</td>
</tr>
<tr>
<td>56</td>
<td>Categories of HIV Exposures among Clients Receiving PEP, KATH, Jan – Dec 2018</td>
</tr>
<tr>
<td>57</td>
<td>Categories of Clients Reporting at the HIV testing and Counselling (HTC), KATH, 2018</td>
</tr>
<tr>
<td>58</td>
<td>HIV Testing Performance Indicators, KATH, 2018</td>
</tr>
<tr>
<td>59</td>
<td>Health Promotion Activities and Collaborating Directorates, KATH, 2018</td>
</tr>
<tr>
<td>60</td>
<td>Type of crimes tackled by the Security Unit, 2018</td>
</tr>
</tbody>
</table>

*Note: Some links are not valid and are marked as Error! Bookmark not defined.*
**ACRONYMS**

**A&E:** Accident and Emergency

**ACESO:** Austere Environment Consortium for Enhanced Sepsis

**AAOS:** Academy of American Orthopaedic Surgeons

**AFP:** Acute Flaccid Paralysis

**ANC:** Antenatal Care

**C T Scan:** Computerized Tomography Scan

**CSSD:** Central Supply Sterilization Department

**CDC:** Centre for Disease Control

**CPR:** Cardiopulmonary Resuscitation

**CCTV:** Closed-Circuit Television

**CPD:** Continuous Professional Development

**CWC:** Child Welfare Clinic

**D.M:** Diabetes Miletus

**DPDM:** Diploma in Project Design and Management

**DISC:** Drug Information Service Centre

**DOVVSU:** Domestic Violence and Victim Support Unit

**DNS:** Domain Name System

**EENT:** Eye, Ear, Nose and Throat

**FFP:** Fresh Frozen Plasma

**FDA:** Food and Drug Authority

**GCP:** Ghana College of Physicians
GAAP: Ghana Access and Affordability Partnership Program

GCPS: Ghana College of Physicians and Surgeons

G.O.G: Government of Ghana

HAMS: Hospital Administrative Management System

HIV: Human Immuno Deficiency Virus

HCP: Himalayan Cataract Project

HCV: Hepatitis C Virus

HVO: Health Volunteers Overseas

IUD: Intrauterine Device/Copper T

ICT: Information Communication Technology

IGF: Internally Generated Funds

ICU: Intensive Care Unit

K.N.U.S.T: Kwame Nkrumah University of Science and Technology

KATH: Komfo Anokye Teaching Hospital

KCCR: Kumasi Centre for Collaborative Research

LMIC: Low- and Middle-Income Countries

LLIN: Long Lasting Insecticide Treated Nets

M.A.F: Maternal Accelerated Framework

MRI: Magnetic Resonance Imaging

MBU: Mother-Baby Unit

MCH: Maternal Child Health
MDGs: Millennium Development Goals
MOH: Ministry of Health
MMU: Medicines Management Unit
MU: Manufacturing Unit
NHIA: National Health Insurance Authority
NMRC: Naval Medical Research Centre
NCT: National Competitive Tendering
NCDs: Non-Communicable Diseases
NMIMR: Noguchi Memorial Institute for Medical Research
O.P.D: Out Patient Department
O&G: Obstetrics and Gynaecology
OPV: Oral Polio Vaccine
PICU: Paediatric Intensive Care Unit
PNC: Post Natal Care
PQ: Price Quotation
PMTCT: Preventive of Mother to Child Transmission
PEU: Pediatric Emergency Unit
QA: Quality Assurance
R&D: Research and Development
RCH: Reproductive and Child Health
S.M.S: School of Medical Sciences
**SOPD**: Specialist Out-Patient Department

**T.V**: Television

**TB**: Tuberculosis

**TMU**: Transfusion Medicine Unit

**U.S.A**: United State of America

**U.K**: United Kingdom

**U.N.D.P**: United Nations Development Programme

**VOP**: Vacation of Post

**VHF**: Viral Haemorrhagic Fever Syndrome

**WHO**: World Health Organization
ACKNOWLEDGEMENTS

The Management of KATH would want to express its special thanks to all staff of KATH for their commitment and contributions towards the moderate achievements recorded for the year.

Special gratitude goes to the Board of Directors, the Chief Executive and his Management Team members and all Heads of Departments and Units who supervised the achievements recorded in this report.

Again, we would like to thank all those who contributed in diverse ways towards the writing of this report.

Working Group

Mrs. Georgina Yeboah
(Dep. Dir. Human Resource Management Unit)
Mr. Evans Owusu Ansah
(Dep. Dir. Finance)
Dr. Emmanuel Kumah
(Dep. Dir. Planning, Monitoring and Evaluation Unit)
Dr. Ruth Owusu
(Head, Public Health Unit)
Mr. Emmanuel Sarpong
(Head, Biostatistics Unit)
Mr. Ato Quist
(Head Monitoring, Evaluation and Reporting, PME Unit)
Dr. Kathryn Spangenberg
(Head, Family Medicine Directorate)
Mr. Eric Anyimadu
(Head, Policy Planning, PME Unit)
Mr. Brian Koomson
(Head, Planning and Budgeting, PME Unit)
Mr. Samuel Ankomah
(Business Manager, Family Medicine Directorate)
Mr. Yaw Owusu
(Deputy Chief Public Health officer- Health Information)
Mr. Francis Essieh
(Biostatistics Technical Head, EENT)
Mr. Emmanuel Appiah Kubi
(Biostatistics Technical Head, Surgery and Trauma)
Ms. Ophelia Birago Williams
(Principal Administrative Manager, PME Unit)
Ms. Benedicta Attaa Boaduwaa
(Principal Administrative Manager, PME Unit)
Mr. Isaac Boakye
(Principal Research Officer, R & D Unit)
Mr. Bernard Arhin
(Principal Health Information Officer, R & D Unit)
Joshua Kuffour
(Head, Social Welfare Unit)
Dr. Joshua Appiah Arthur
(Public Health Specialist)
PREFACE

The 2018 Annual Performance Review of the Hospital was held on 28th March, 2019. The workshop was attended by representatives from Ghana Health Service, Korle-bu Teaching Hospital, Cape Coast Teaching Hospital, Tamale Teaching Hospital and Ministry of Health. The theme for the review programme “Setting the pace for quality tertiary healthcare delivery through transformational leadership”, was carefully chosen in line with the board’s new vision for the hospital.

The 2018 annual report provides a summary of what the individual Directorates /Units achieved during the year and performance trend over the last five years. The annual review followed and relied upon a number of priorities as contained in the Hospital’s 2015-2019 Strategic Plan document for which resources were committed to their implementation. These priorities included:

1. Quality health care delivery, leading to better health outcomes, especially in maternal and child health
2. Improve staff attitude
3. Human resource development and welfare
4. Improve resource mobilization
5. Intensify planned preventive maintenance activities
6. Provide outreach services
7. Strengthen collaboration with other institutions

These priority areas are aligned to the Hospital’s Strategic Objectives and the Health Sector Objectives 1, 2, 3, 4 and 5.

The report is divided into 4 sections: Section 1 deals with the introduction, Section 2 reviews the summary of overall performance trends, including financial performance, Section 3 gives an overview of Directorates/Units performances and Section 4 deals with the summary of achievements, challenges and focus for 2019.
FROM THE DESK OF THE CHIEF EXECUTIVE

The hospital’s performance in 2018 generally saw an improvement in most indicators compared to the preceding year. Heavy investments were made in the development of the manpower base of the hospital and acquisition of critical equipment using internally generated Funds (IGF) towards improving patient care. Among the equipment procured in the course of the year were power drills and accessories for the Trauma and Orthopaedics Directorate valued at GH₵180,000.00, a Haematology analyzer valued at GH₵490,000.00, ventilators for the Intensive Care Unit costing GH₵150,000.00, and GH₵300,000.00 worth of assorted equipment for the Physiotherapy Unit. Others include two top-grade ultrasound machines for the Radiology Directorate valued at GH₵193,000.00 and patient monitors worth GH₵250,000.00.

Work on the renovation and conversion of the former Consulting Room 10 into a Dental Suite was completed during the year under review at a cost of GH₵256,632.60. In addition, work on the construction of the 40-flat accommodation project for House Officers at the Bantama Staff Quarters progressed to 65% completion. Work on the over six-million U.S. dollar National Radiotherapy and Nuclear Medicine expansion project at the Oncology Directorate which stalled for almost four (4) years is nearing completion. Two state of the art oxygen plants with accessories were procured at a cost of 5.4 million Ghana Cedis (GH₵5.4m). When operational, the plant would save the Hospital the daily cost of GH₵12,000.00 it incurs on the purchase of medical oxygen from private sources.

The eHealth project has been deployed at the Family Medicine, the Eye, Ear, Nose and Throat (EENT), Oncology and Oral Health Directorates as well as the Psychiatry Unit of the hospital by the Lightwave Health Management System (LHIMS)

Currently, the KATH 24-Hour Pharmacy is recording on the average GH₵70,000.00 in sales weekly and the number of items stocked has outgrown its current space, with the approval of the Board, work has started on the construction of a GH₵512,000.00 structure at the A&E Centre.

In the area of clinical services, the hospital did not fare badly during the period under review. Family medicine (primary care) cases recorded an increase of 13.41% in out-patient cases registering 77,384 cases in 2018 as against 68,234 in 2017. Diagnostic services recorded 343,324 cases as against 318,181 cases in 2017 thus translating into an increase of 7.90%. 

Surgical operations recorded an increase of 6.31 percent with 18,666 cases performed for the year as against 17,558 cases in 2017 constituting an increase of 6.31%. Physiotherapy services registered 20,035 cases as against 18,073 in 2017 which is an increase of 10.85%. The Blood Bank collected 19,242 units as against 17,202 for the preceding year which is an increase of 11.86%.

Out-patient attendance at the various specialist clinic recorded 274,059 cases as against 273,927, cases in 2017 reflecting a marginal increase of 0.05%. In- patient admissions recorded 35,553 cases which is a 2.90% increase over the 34,552 cases in 2017.

However, radiotherapy services dropped from 8,247 cases to 8,045 in 2018 representing a marginal decrease of 2.45%. Total deliveries (births) also reduced from 8,438 cases in 2017 to 8,177 in the same period under review representing a decrease of 3.80%. Emergency attendance also dropped from 20,798 cases in 2017 to 20,097 cases in 2018 representing a decline of 3.37%.

The Hospital intends to work closely with the Ghana Health Service (GHS) and other stakeholders in improving the management of maternal health issues especially hemorrhage and hypertension-related diseases in pregnancies. This is because over 80% of such cases recorded at the hospital were referred from facilities, far and near.

The KATH Endowment Fund (KEF) was launched on Friday, 30th November 2018 as part of the Board’s strategy for mobilizing material and financial resources required for improving various facilities within the hospital which have not seen any comprehensive renovation, refurbishment or re-tooling comprehensive re-tooling since its construction in 1955.

I will like to commend the staff of the hospital for their diverse contributions for a good job done towards achieving the overall positive output for 2018.

Thank you.
CHAPTER 1
INTRODUCTION

Background

The Komfo Anokye Teaching Hospital was established in 1955 and became a teaching hospital for the training of medical students from Kwame Nkrumah University of Science and Technology (KNUST) in 1975. Currently, it is a centre for pre-service and postgraduate training in the health professions.

The Hospital has thirteen (13) clinical directorates, two (2) non-clinical directorates and eighteen (18) units. Each directorate/unit is managed by a management team who are responsible for the day-to-day management of the various Directorates/Units. Central management concentrates on strategic management and planning and provides support to the various directorates/units.

The catchment area of the hospital stretches beyond Ashanti Region to the middle and Northern sectors. The catchment population is estimated to be about 10 million people.

GOVERNANCE

• The Ghana Health Service and Teaching Hospitals Act 525, 1996 established autonomous Teaching Hospital Boards.

• The hospital is governed by a Board made up of four non-executive members (government appointees), six executive members and the two Deans of the School of Medical Sciences (SMS) and the Dental School of the KNUST.

• The hospital operates within the Ministry of Health’s Broad Policy Framework

• The Chief Executive is in charge of the day to day management of the hospital

Mandate

The hospital’s mandate as provided by Act 525 is in three areas as indicated below:

• Advanced Clinical Care
• Training
• Research

Vision

The vision of the hospital is to become a medical centre of excellence, offering clinical and non-clinical services of the highest quality.
Mission

The mission of the Hospital is to provide quality services to meet the needs and expectations of all its clients. This will be achieved through well-motivated and committed staff applying best practices and innovation.

Core Values

The hospital’s activities will be built on the following values;

- Client-focused
- Staff empowerment
- Continuous quality improvement
- Recognition of hard work and innovation
- Discipline
- Team work

Corporate Objectives

The corporate objectives which guided the actions of the hospital for the year 2018 were as follows:

- To provide specialist healthcare services
- To support training of undergraduate and postgraduate health professionals
- To conduct research into emerging health problems
- To support primary and secondary health

1. Ministry of Health Objectives Pursued in 2018

The Health Sector Medium Term Plan clearly spelt out the five policy objectives reproduced below:

- HO.1: Bridge equity gaps in access to health care and nutrition services and ensure sustainable financing arrangements that protect the poor
• HO. 2: Strengthen governance and improve efficiency and effectiveness of the health system
• HO.3: Improve access to quality maternal, neonatal, child and adolescent health services
• HO.4: Intensify prevention and control of communicable and non-communicable diseases and promote healthy lifestyle
• HO.5: Improve institutional care including mental health services

**Services Provided by Directorates**

The hospital provides services in all aspects of specialist care. This is in fulfilment of its mandate to provide advanced clinical care services to people in Ghana. A summary of services provided in the Hospital are summarized below

**Anaesthesia &Intensive Care**

- Management of emergencies including Cardiopulmonary Resuscitation (CPR).
- Anaesthetic services for surgical patients (pre-operative, intra-operative and post-operative care).
- Management of Acute and Chronic Pain

**Child Health**

- Cardiology
- Neurology
- Asthma Clinic
- Paediatric TB Clinic
- Renal Clinic
- Diabetic Clinic
- Paediatric Emergency
- Nephrology
• Gastrointestinal GIT
• Paediatric/Adolescent HIV Clinic
• Cleft Palate (collaboration with Directorate of Surgery)
• Neonatology
• Oncology/Haematology
• Critical Care
• Endocrinology
• Sickle Cell
• Malnutrition Clinic

Laboratory Services
• Pathology
• Biochemistry
• Microbiology
• Haematology
• Mortuary services

Radiology
• Computed Tomogram (CT)
• Magnetic Resonance Imaging (MRI)
• Ultrasound
• Plain X-ray
• Orthopantomogram (OPG)
• Radiology Interventions
• Fluoroscopy services
• Reports for radiological images
Domestics Services

- Sterilization services
- Catering Services
- Laundry services
- Transport Services

Emergency Medicine

- Emergency services
- Minor Procedures

Eye, Ear, Nose & Throat

- Ear, Nose and Throat Unit
  - Audiology/Hearing Assessment
  - Speech and therapy
  - Specialized Head and Neck
  - Surgical services
  - Syringing

- Eye Unit
  - Oculoplastic clinic
  - Glaucoma clinic
  - Retina clinic
  - External eye disease and cornea (external eye and cornea disease)
  - Paediatric ophthalmology and adult strabismus
  - Optical coherence tomography - OCT
  - Visual field testing- VFT
  - Refraction and low vision services
  - Investigations and imaging services
  - Production of spectacles
Family Medicine

- Primary Care
  - Adult Health
  - Child Health
  - Staff Clinic
  - Medical Examinations
  - Wound dressing, casualty & Minor Surgery

- Specialist Family Medicine
  - Chronic Care
  - Palliative Care
  - Asthma
  - Multidisciplinary Rehabilitation

- Triaging and Emergency Care
- In-patient Care (Family Medicine Ward)

- Physiotherapy
  - Clubfoot
  - Back Care
  - Cerebral Palsy
  - Outpatient Rehabilitation
  - Outpatient Electrotherapy
  - In-patient Rehabilitation
  - Cardiopulmonary Rehabilitation

Internal Medicine

- Cardiology
- Endocrinology
- Nephrology
- Neurology
- Gastroenterology
- Haematology
• Respiratory Medicine
• Infectious Diseases
• Rheumatology
• Dietherapy

Obstetrics and Gynaecology
• Foeto-maternal Medicine
• Gynaecologic-Oncology
• Urogynaecology
• General Obstetrics & Gynaecology
• Family Planning

Oncology
• Radiation
• Brachytherapy
• Chemotherapy

Oral Health
• Oral Diagnosis and Community Dentistry
• Oral/Maxillofacial Surgery
• Restorative Dentistry
• Orthodontics and Paedodontics

Surgery
• Paediatric Surgery
• Plastic and Reconstructive Surgery
• Urology
• Neurosurgery
• General Surgery
• Cardiothoracic and Vascular Surgery
• Breast Care Services

Technical Services
• Biomedical Engineering
• Mechanical Engineering Unit
• Electrical Engineering Unit
• Estates
• Environmental Health Services

Traumatology & Orthopaedics
• Trauma
• Orthopaedics
• Clubfoot
• Hand Surgery

Other Units
• Biostatistics
• Chaplaincy
• Finance
• General Administration
• Human Resource Management
• Internal Audit
• Information Communication Technology (ICT)
• Pharmacy
• Public Health
• Policy, Planning, Monitoring & Evaluation
• Public Relations
• Psychiatry
• Quality Assurance
• Research & Development
• Security
• Social Welfare
• Supply Chain Management
• Transfusion Medicine

Corporate Priorities For 2018
The hospital set the following priorities for the year 2018 which were drawn from the hospital’s 2015-2019 strategic plan and aligned with the Health Sector Medium Term Objectives 1, 2, 3, 4, and 5:

1. Quality health care delivery
2. Improved staff attitude
3. Human resource development and welfare
4. Improved resource mobilization
5. Strengthened collaboration with other institutions
6. Intensified planned preventive maintenance activities
7. Provision of outreach services

Priority Activities
The general hospital priority activities for 2018 were as follows

1. Continue efforts in providing support to district and regional hospitals in the northern sector of Ghana, by way of providing outreach services
2. Intensify planned preventive maintenance activities
3. Improve Management Information Systems especially completing the rollout of HAMS software
4. Support staff in sub-specialty training programme
5. Continue dialogue with National Health Insurance Authority to reduce the delays in the payment of claims and agree on realistic tariffs for services.
6. Continue with financial control measures to further increase IGF
7. Continue to improve performance monitoring
8. Continue to improve Quality Assurance
9. Continue with policies to widen the range of specialist services
10. Expansion of Oncology Centre to include a Nuclear Medicine Diagnostic and Treatment Unit
11. Procure requisite medical equipment, especially imaging equipment to improve service delivery
12. Conduct operational research into top ten emerging diseases
13. Improve the availability of medicines
14. Scale up cardiothoracic services
15. Improve planned preventive maintenance and transport facilities to support healthcare delivery
16. Continue efforts in securing the necessary funds for the completion of the Maternity and Children Block project.
17. Sustain activities to reduce mortalities (especially maternal and neonatal deaths) and improve general healthcare outcomes

**2018 Hospital Wide Expected Outputs**

For 2018, KATH was expected to achieve the following outputs

1. Specialist Out-patients seen; 253,912
2. General Out-patients seen; 76,200
3. In-patients/Admissions; 38,500
4. Surgical operations (major & minor); 20,615
5. Emergency cases; 33,850
6. Deliveries; 8,463
7. Physiotherapy services; 21,100
8. Diagnostic investigations; 328,105
9. Radiotherapy and Medical Radiotherapy treatment; 9,170 sessions
10. Blood screened; 21,000 units

11. Maternal death rate reduced by ≥ 10% of 2017 rate of 1207/100,000 live births

12. Neonatal mortality reduced by ≥ 10% of base rate of 134.69%

13. Conducting post-mortem on 100% of all maternal deaths with unconfirmed diagnosis.

14. Maternal death audit; 100% audited.

15. Neonatal death audit; 20% audited.

16. Outreach services; 20 district hospitals supported.

17. Patient satisfaction level improved from 69% in 2017 to ≥70%

18. NHIA claims rejection rate reduced from 5% to 3%

19. Total expenditure reduced by 2.5%
CHAPTER 2
HUMAN RESOURCE PERFORMANCE

The Hospital’s priority areas in human resource management in the year 2018 were to provide training and development opportunities for all staff; improve staff attitudes and staff welfare and uphold discipline.

Staff Strength Analysis

The total workforce of the Hospital decline from 4,065 in 2017 to 3,909 in the year 2018, depicting a decrease of 3.84%. This was made up of KATH staff – 3,541, house officers -153, residents from other institutions -149 and KNUST staff -66. Figure 1 shows a 5-year trend in staff strength of KATH staff only. There was a decrease in staff strength in 2015 but increase in 2016 and 2017. The year under review, recorded a drop-in staff strength due to no major recruitments for the period. This represents a decrease of 4.35% compared to the 2017 KATH staff strength.

![Figure 1: Five-year trend of staff strength, KATH, 2014-2018](image)

Category of staff by Professional Groups, KATH 2018
The breakdown per professional category is shown in Figure 2.

![Pie chart showing professional categories]

**Figure 2: Category of staff by Professional Groups, KATH 2018**

In Figure 2, 48.7% of the total staff were nurses and midwives, 9.5% doctors, 8.1% clinical support, 3.3% pharmacists and pharmacy technicians, 6.7% allied health staff, 15.7% non-clinical support staff, 2.4% administrative and 3.5% finance.

**Age Group of Staff**
The Hospital continued to have a vibrant workforce of 72.52% being in the age bracket of 20-29 years as shown in Figure 3

![Age Group of Staff, KATH 2018](image)

**Figure 3: Age Group of Staff, KATH 2018**

**Staff Strength Analysis of Doctors and Related Personnel**

In 2018, there was a total of 399 doctors in the hospital. This included 338 doctors from KATH and 61 from KNUST. Included in this number were 72 and 58 consultants and senior specialist in KATH and KNUST respectively. There were also 99 specialists in KATH and one (1) specialist from KNUST. There were 167 medical officers in KATH and two (2) medical officers from KNUST. The consultant/resident ratio in the hospital was 1:5. There was a total of 58 certified registered anaesthetists’ and Three (3) physician assistants.
<table>
<thead>
<tr>
<th>DIRECTORATE (UNITS)</th>
<th>CONSULTANT/SENIOR SPECIALIST</th>
<th>SPECIA LISTS</th>
<th>MEDICAL OFFICERS</th>
<th>KNUT TOTAL DOCTORS</th>
<th>REGISTERED CERTIFIED ANAESTHETIST</th>
<th>PHYSICIAN ASSISTANT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaesthesia &amp; Intensive Care</td>
<td>1</td>
<td>8</td>
<td>13</td>
<td>3</td>
<td>25</td>
<td>58</td>
</tr>
<tr>
<td>Child Health</td>
<td>7</td>
<td>14</td>
<td>20</td>
<td>9</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>Laboratory Service</td>
<td>1</td>
<td>3</td>
<td>9</td>
<td>4</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>Radiology</td>
<td>1</td>
<td>7</td>
<td>8</td>
<td>2</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>EENT</td>
<td>3</td>
<td>3</td>
<td>17</td>
<td>4</td>
<td>27</td>
<td>0</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>8</td>
<td>6</td>
<td>14</td>
<td>0</td>
<td>28</td>
<td>0</td>
</tr>
<tr>
<td>Family Medicine</td>
<td>2</td>
<td>7</td>
<td>22</td>
<td>0</td>
<td>31</td>
<td>0</td>
</tr>
<tr>
<td>Medicine</td>
<td>9</td>
<td>17</td>
<td>16</td>
<td>11</td>
<td>53</td>
<td>0</td>
</tr>
<tr>
<td>Obs/Gyn</td>
<td>13</td>
<td>7</td>
<td>9</td>
<td>12</td>
<td>41</td>
<td>0</td>
</tr>
<tr>
<td>Oncology</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>0</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>Oral Health</td>
<td>1</td>
<td>4</td>
<td>8</td>
<td>6</td>
<td>19</td>
<td>0</td>
</tr>
<tr>
<td>Surgery</td>
<td>17</td>
<td>11</td>
<td>8</td>
<td>8</td>
<td>44</td>
<td>0</td>
</tr>
<tr>
<td>Trauma &amp; Orthopaedics</td>
<td>6</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>1</td>
<td>2</td>
<td>9</td>
<td>1</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Public Health</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>
Staff Strength Analysis for Nurses and Midwives

In the year under review the total number of nurses/midwives stood at 1,724 which represents a 4.64% decrease compared to the 2017 total number of 1,804. This was due to the non-issuance of financial clearance for the recruitment of new nurses and midwives to replace those who left the service for various reasons. The doctor/nurse ratio was 1:5

Table 2: Distribution of Nurses and midwives by Directorates, KATH, 2018

<table>
<thead>
<tr>
<th>DIRECTORATE/UNITS</th>
<th>MIDWIVES</th>
<th>GENERAL NURSES</th>
<th>ENROLLED NURSES</th>
<th>COMMUNITY HEALTH NURSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaesthesia &amp; Intensive Care</td>
<td>0</td>
<td>100</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Child Health</td>
<td>37</td>
<td>160</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>Central Sterilization Services</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Department-CSSD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye Ear Nose Throat/EENT</td>
<td>1</td>
<td>78</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>0</td>
<td>180</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Family Medicine</td>
<td>0</td>
<td>40</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>Medicine</td>
<td>1</td>
<td>204</td>
<td>44</td>
<td>0</td>
</tr>
<tr>
<td>Obs/Gyn</td>
<td>302</td>
<td>23</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 3: Distribution of Pharmacists and Pharmacy Technicians by Directorates, KATH, 2018

<table>
<thead>
<tr>
<th>DIRECTORATES/UNITS</th>
<th>PHARMACIST</th>
<th>PHARMACY TECHNICIAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesthesia &amp; Intensive care</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Child Health</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>EENT</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Family Medicine</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Medicine</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Obs/Gyn</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Cadre</td>
<td>Number at post</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Biomedical Scientist</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>Biostatistics Officer</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Biostatistics Assistant</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Dental Technician/Technologist</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Dietician</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Field Technician</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Nutrition Officer</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Optical Technician</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Optometrist</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Staff Strength Analysis for Allied Health Professions**

In the year 2018 a total of 238 allied health professionals provided various services in the Hospital. This represents a decline of 2.86% in the staff strength of Allied Health professionals for 2018 when compared to the 2017 total number of 245.

**Table 4: Allied Health Staff per Cadre, KATH, 2018**
<table>
<thead>
<tr>
<th>Position</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiotherapist</td>
<td>15</td>
</tr>
<tr>
<td>Physiotherapy Assistant</td>
<td>16</td>
</tr>
<tr>
<td>Public Health Officer</td>
<td>5</td>
</tr>
<tr>
<td>Radiographer</td>
<td>14</td>
</tr>
<tr>
<td>Radiographer (Medical Physicist)</td>
<td>4</td>
</tr>
<tr>
<td>Radiographer (Therapy Radiographer)</td>
<td>4</td>
</tr>
<tr>
<td>Technical Assistant (Biostatistics)</td>
<td>18</td>
</tr>
<tr>
<td>Technical Assistant (X-Ray)</td>
<td>1</td>
</tr>
<tr>
<td>Technical Officer (Biostatistics)</td>
<td>6</td>
</tr>
<tr>
<td>Technical Officer (Disease Control)</td>
<td>2</td>
</tr>
<tr>
<td>Technical Officer (Health Promotion)</td>
<td>1</td>
</tr>
<tr>
<td>Technical Officer (Health Information)</td>
<td>35</td>
</tr>
<tr>
<td>Technical Officer (Laboratory)</td>
<td>20</td>
</tr>
<tr>
<td>Technical Officer (Nutrition)</td>
<td>2</td>
</tr>
<tr>
<td>Technical Officer (X-Ray)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>235</strong></td>
</tr>
</tbody>
</table>

**Separation**

The number of staff who left the Hospital through transfer, resignation, vacation of post (VOP), death, retirement or dismissal were 168. This represents an increase of 4.35% over the 2017 figure of 161 (See figure 4).
The hospital provided opportunities for 1,466 staff to undertake various training and development programmes in 2018. At total of 1,317 staff received in-service training whilst 149 staff benefitted from external training including were study leave with/without pay, part-time and sandwich programs as well as local and international conferences. The hospital spent an amount of GHC1,340,859.79 on training and development of staff.

**Table 5: Staff Pursuing Further Studies per Directorate, KATH, 2018**

<table>
<thead>
<tr>
<th>DIRECTORATE</th>
<th>DOCTOR</th>
<th>NURSE/MIDWIFE</th>
<th>ALLIED HEALTH</th>
<th>CERTIFIED REG ANAESTHETIST</th>
<th>PHARMACY/TECH</th>
<th>ADMIN &amp; FINANCE</th>
<th>SUPPORT</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaesthesia &amp; Intensive Care</td>
<td>5</td>
<td>4</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Department</td>
<td>2021</td>
<td>2020</td>
<td>2019</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>-------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biostatistics</td>
<td>2</td>
<td>3</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child Health</td>
<td>12</td>
<td></td>
<td></td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestics</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EENT</td>
<td>1</td>
<td></td>
<td>9</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Med</td>
<td>4</td>
<td>1</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Medicine</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finance</td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Admin</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human Resource</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratory Services</td>
<td>2</td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicine</td>
<td>1</td>
<td>9</td>
<td>2</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O&amp;G</td>
<td>2</td>
<td>17</td>
<td></td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oncology</td>
<td>3</td>
<td></td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral Health</td>
<td>2</td>
<td>3</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacy</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatry</td>
<td>2</td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Health</td>
<td>2</td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality assurance</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiology</td>
<td>2</td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply Chain</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgery</td>
<td>1</td>
<td>12</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical Service</td>
<td></td>
<td></td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfusion Med</td>
<td></td>
<td>2</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trauma &amp; Ortho</td>
<td>1</td>
<td>4</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Staff Welfare and Recognition programmes

In 2018 the hospital had seven (7) welfare packages for staff. They were Staff Medical Care Scheme, Funeral Grant, End of Year Benefit, Free Bus Services, Birthday Wishes (Cards), Occupational Health &Safety Policy and Employee Provident Fund.

Ninety-three (93) staff benefitted from the Staff Medical Care Scheme through reimbursements and one hundred and nineteen (119) were given waivers of MRI, CT Scan and Laboratory fees. The hospital spent a total amount of GHC93,472.02 on staff medical care.

Nine hundred and four (904) staff benefitted from Occupational Health and Safety interventions.

Discipline

In enforcing discipline in the hospital, 12 staff faced various disciplinary actions. One (1) staff was interdicted, five (5) warned, three (3) suspended and three (3) dismissed.

Figure 5: Summary of Disciplinary Action Taken Against Staff, KATH, 2018
CHAPTER 3

CLINICAL CARE SERVICES

This chapter presents a summary of the hospital’s clinical care performance in the year 2018. The following observable achievements made in out-patient services utilization, in-patient services, surgical operations performed, diagnostic services among others are classified below:

**HO4: Improve quality of health care services including mental health**

**Priority Activity 1: Increase the range of specialist services**

**2018 Service Targets and Actual Utilizations**

The achievements in 2018 were measured against the performance benchmarks set at the beginning of the year. The hospital’s actual performances as against targets at the end of the year 2018 are presented in the figure below.

![Figure 6: Service Utilization (2018 Targets and Actuals), KATH, 2018](image)

*In the figure above, it could be seen that most service areas could not achieve their (targets) except Specialist OPDs attendance, Primary Care service and Diagnostic Investigations that exceeded their targets.*
Outpatient Services (OPD)

The trend in the number of OPD attendance to the hospital over the last five years have been a mixed, with variations between years and specialties. This activity is the responsibility of the decentralized clinical directorates of the hospital. The analysis below is the aggregated records from the various clinical directorates. Family Medicine Directorate is in-charge of primary outpatient services, Family Medicine Specialist OPD services as well as physiotherapy services, whiles the other clinical directorates deal with all the other specialist OPD services.

Trend Analysis of OPD Utilization by Directorates, 2014-2018

In the last five years, attendance at the various clinical directorates did not follow a particular pattern. Most OPDs recorded increases in attendance in 2018, with the exception of Medicine, Surgery, O&G, Oncology and Psychiatry Directorates. Some Directorates also recorded decreases in their OPD attendances. Figure 5 shows performances across individual specialties.

Figure 7: Trend in OPD Service Utilization by Directorates, KATH 2018
Trend in Aggregated OPD Services Utilization

There was an increase in aggregated OPD service utilization during the year under review. The year 2018 recorded the highest OPD attendance since 2014 following a consistent rise in aggregated OPD attendance since 2015. Figure 8 below shows the trend in OPD performance in the Hospital for the last five years.

![Trend in Aggregated OPD Service Utilization, KATH 2014-2018](image)

Figure 8: Trend in Aggregated OPD Service Utilization, KATH 2014-2018

Table 6: Distribution of OPD attendance Per Directorate/ Unit (2018)

<table>
<thead>
<tr>
<th>DIRECTORATES/UNITS</th>
<th>ACTUALS</th>
<th>PERCENTAGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Medicine</td>
<td>84,912</td>
<td>24.2</td>
</tr>
<tr>
<td>Medicine</td>
<td>53,697</td>
<td>15.3</td>
</tr>
<tr>
<td>EENT</td>
<td>51,255</td>
<td>14.6</td>
</tr>
<tr>
<td>Obstetrics &amp; Gynaecology</td>
<td>34,089</td>
<td>9.7</td>
</tr>
<tr>
<td>Surgery</td>
<td>32,480</td>
<td>9.2</td>
</tr>
<tr>
<td>Child Health</td>
<td>21,823</td>
<td>6.2</td>
</tr>
<tr>
<td>Oral Health</td>
<td>21,278</td>
<td>6.0</td>
</tr>
</tbody>
</table>
From the table above, Family Medicine recorded the highest OPD Attendance in the year under review. The three lowest OPD Attendances were seen in Trauma, Psychiatry and Oncology Directorates. The total number of OPD cases seen per doctor is 1:604.

**Top Ten Specialist OPD Attendance, 2018**

Antenatal (ANC) and Post Natal Care (PNC) recorded the highest attendance among the top 10 Specialist OPDs. However, Gynaecology clinic within the same Directorate (O&G) recorded the lowest attendance among the top 10 clinics. The specialist to patient ratio (number of OPD cases seen per specialist doctor) was 1:1827. Table 7 below shows top ten Specialists OPD attendance recorded during the year 2018.

**Table 7: Top Ten Specialist OPD Attendance, KATH 2018**

<table>
<thead>
<tr>
<th>Ranks</th>
<th>Clinic</th>
<th>Total</th>
<th>% of Total Specialist OPD Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Anti-natal/post-natal</td>
<td>24,299</td>
<td>6.91</td>
</tr>
<tr>
<td>2</td>
<td>Oral Health</td>
<td>21,278</td>
<td>6.05</td>
</tr>
<tr>
<td>3</td>
<td>Eye</td>
<td>20,187</td>
<td>5.74</td>
</tr>
<tr>
<td>4</td>
<td>Physiotherapy</td>
<td>20,035</td>
<td>5.70</td>
</tr>
<tr>
<td>5</td>
<td>Ear Nose Throat (ENT)</td>
<td>16,748</td>
<td>4.77</td>
</tr>
<tr>
<td>6</td>
<td>CR1 (Medicine)</td>
<td>10,960</td>
<td>5.12</td>
</tr>
<tr>
<td>Ranks</td>
<td>Clinic</td>
<td>Total</td>
<td>% of Total Specialist OPD Attendance</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------------</td>
<td>-------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>Psychiatry</td>
<td>10,551</td>
<td>3.00%</td>
</tr>
<tr>
<td>8</td>
<td>HIV</td>
<td>10135</td>
<td>2.88</td>
</tr>
<tr>
<td>9</td>
<td>Trauma &amp; Orthopaedics</td>
<td>10093</td>
<td>2.87</td>
</tr>
<tr>
<td>10</td>
<td>Gynaecology</td>
<td>9790</td>
<td>2.78</td>
</tr>
</tbody>
</table>

**Admissions**

In 2018, total in-patient beds increased from 898 to 961. In addition to the 961 in-patient beds, there were also 55 emergency beds, ICU/CDU had 37, and special ward, 44, treatment/examination beds, 57 and recovery beds, 49, but the hospital bed capacity is 1,500. In 2018, a total number of 35,553 patients were admitted at the main wards indicating declining trend since 2017 but there was an increase in 2018. Percentage bed occupancy decreased from 75.64% in 2017 to 70.68% in 2018. The average length of stay on the wards remained the same as that of 2017 at 7 days per admission episode. The chart below, shows the trend in inpatient from 2014-2018.

![Trend in In-patient service utilization, KATH 2014-2018](image)

**Figure 9: Trend in In-patient service utilization, KATH 2014-2018**

**Top Ten Causes of Admissions, 2018**
Hypertension, premature birth (preterm) and diabetes were the leading causes of admission in the hospital. Cerebrovascular accident, malignant neoplasm and other heart diseases recorded the least causes of admissions among the top ten. Table 8, shows the top ten causes of admissions in the Hospital.

Table 8: Top Ten Causes of Admissions (KATH, 2018)

<table>
<thead>
<tr>
<th>Disease/Condition</th>
<th>Number of cases</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>2673</td>
<td>1</td>
</tr>
<tr>
<td>Preterm births</td>
<td>1687</td>
<td>2</td>
</tr>
<tr>
<td>Diabetes</td>
<td>859</td>
<td>3</td>
</tr>
<tr>
<td>Birth Asphyxia</td>
<td>780</td>
<td>4</td>
</tr>
<tr>
<td>Neonatal Jaundice</td>
<td>583</td>
<td>5</td>
</tr>
<tr>
<td>Neonatal Sepsis</td>
<td>576</td>
<td>6</td>
</tr>
<tr>
<td>Malaria</td>
<td>548</td>
<td>7</td>
</tr>
<tr>
<td>Cerebrovascular Accident</td>
<td>344</td>
<td>8</td>
</tr>
<tr>
<td>Malignant Neoplasm</td>
<td>341</td>
<td>9</td>
</tr>
<tr>
<td>Other Heart Diseases</td>
<td>337</td>
<td>10</td>
</tr>
</tbody>
</table>

Theatre Services Utilization

There are six (6) operating theatre blocks currently in the hospital, each with several operating rooms. These includes the Main Theatre, Polyclinic Theatre, A&E Theatre, O&G Special Ward, Eye Theatre, (NAKSA) Theatre.

The Main Theatre Block with 5 operating rooms performed a total of 3,011 cases in the year under review. Polyclinic Theatre with 2 operating rooms also performed a total of 869 cases. The A & E theatre which also have 4 operating rooms (and 5 operating tables) performed a total of 1,942 cases and A & E Special ward theatre also performed 231 cases. The Eye theatre with 3 operating rooms performed a total of 1,764 cases whereas the NAKSA Theatre (3 operating rooms) which replaced
the A1 Theatre also performed a total of 2,878 cases. The O&G special ward theatre (with 1 operating theatre) performed a total of 258 cases.

The Hospital also operates an Intensive Care Unit (ICU) at the Accident and Emergency Centre. A total of 130 critically ill patients were managed at the ICU during the year under review.

Table 9: Theatre Service Utilization, KATH, 2018

<table>
<thead>
<tr>
<th>Theatre</th>
<th>Total Cases done for the year</th>
<th>Average number of hours per case</th>
<th>Total hours for the year for all cases</th>
<th>Optimal Hours for the year</th>
<th>% Utilization 2017</th>
<th>% Utilization 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Theatre (5-op. rooms)</td>
<td>3011</td>
<td>2.5</td>
<td>8623</td>
<td>21,900</td>
<td>37.57</td>
<td>39.37</td>
</tr>
<tr>
<td>Poly Theatre (2-op. rooms)</td>
<td>869</td>
<td>1</td>
<td>869</td>
<td>8,760</td>
<td>10.30</td>
<td>9.92</td>
</tr>
<tr>
<td>A &amp; E Theatre (4- op. rooms)</td>
<td>1,942</td>
<td>2.5</td>
<td>5538</td>
<td>17,520</td>
<td>34.45</td>
<td>31.61</td>
</tr>
<tr>
<td>O &amp;G Special Ward Theatre.</td>
<td>231</td>
<td>1</td>
<td>258</td>
<td>4,380</td>
<td>6.64</td>
<td>5.89</td>
</tr>
<tr>
<td>NAKSA (2- op. rooms)</td>
<td>2878</td>
<td>1</td>
<td>3994</td>
<td>13,140</td>
<td>45.03</td>
<td>30.32</td>
</tr>
<tr>
<td>Eye Theatre (3- op. rooms)</td>
<td>1764</td>
<td>1</td>
<td>1764</td>
<td>13,140</td>
<td>10.09</td>
<td>13.42</td>
</tr>
</tbody>
</table>

Surgical operations during the year under review increased from 17,558 to 18,666 representing an increase of 6.31%.
Recovery wards and Intensive Care Unit

Admissions to the Recovery wards increased from 10,761 in 2017 to 11,643 in 2018 representing an increase of 7.58%.
Admissions to the ICU increased from 101 in 2017 to 259 in 2018. This represents a departure from the declining trend over the previous four years. Figure 12 below shows the trend ICU admissions in the hospital over five-years period.

![Figure 12: Trend in ICU Admissions, KATH 2014 -2018](image)

**HO 4: Improve quality of health care services including mental health**

**Priority Activity 2: Sustain activities aimed at reducing mortality, (especially maternal mortality) and improving general care outcomes**

**Improving Mortality Auditing and Quality Assurance Activities**

A number of interventions were put in place by Management to reduce mortality, especially maternal deaths. Notable among them is ensuing the full operation of the newly built Nana Afia Kobi Serwaa Ampem (NAKSA) Block. However in the history of the hospital, the highest ever maternal mortality rate was recorded in 2018. All deaths which occurring during the period were audited by Mortality Audit Committees of the Hospital.

To reduce neonatal deaths, the hospital intensified its neonatal mortality meetings in 2018 which contributed immensely to the decrease in neonatal death in 2018.

Details of these are discussed below.
Mortality

Mortality rate is one of the key measures of quality performance of hospitals. Management continues to identify factors associated with mortality and develop strategies that can be used to monitor performance in safety and quality of care in the hospital. Overall mortality reduced marginally from 2016 with the mortality rate from 2018 being the lowest over the past five years.

Figure 13: Trend in Total Mortality Rate, KATH (2014-2018)

Preterm birth/ Low Birth weight and Birth Asphyxia continue to be the leading causes of deaths in the Hospital, recording a total of 210 and 173 respectively. Both communicable and non-communicable disease causes are amongst the top 10 major causes of deaths seen in the Hospital, an evidence of the double burden of diseases for the country. Table 10 below ranks the top 10 major causes of mortality in KATH for 2018, compared to 2017

Table 10: Top ten causes of Mortality, KATH 2018

<table>
<thead>
<tr>
<th>DISEASE</th>
<th>NUMBER OF CASES</th>
<th>POSITION IN 2018</th>
<th>POSITION IN 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preterm/Low Birth Weight</td>
<td>210</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Birth Asphyxia</td>
<td>173</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Hypertension</td>
<td>139</td>
<td>3</td>
<td>ABSENT</td>
</tr>
<tr>
<td>Cerebrovascular Accident</td>
<td>126</td>
<td>4</td>
<td>ABSENT</td>
</tr>
<tr>
<td>HIV/RVI</td>
<td>106</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Disease of Kidney</td>
<td>85</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>------------------</td>
<td>----</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>83</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Other Heart Diseases</td>
<td>51</td>
<td>10</td>
<td>ABSENT</td>
</tr>
<tr>
<td>Respiratory Distress</td>
<td>68</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Diabetes Mellitus</td>
<td>85</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

**Deliveries**

The downward trend of deliveries since 2014 has become a major issue and Management is trying to find reasons. An obvious reason is the increased number of satellite hospitals around the Kumasi Metropolis offering the same or similar services. This year 2018 was not an exception to the downward trend. The total number of deliveries recorded in 2018 was 8117, a decrease of 3.80% compare to 2017. The figure below depicts the falling trend of supervised deliveries in the hospital from 2014 to 2018.

![Figure 14: Five-Year Trend in Deliveries, KATH 2014-2018](image)

**Maternal Mortality**

During the year under review, 123 maternal deaths were recorded. The major contributing factor to maternal deaths still remains the late referral of patients to the Hospital. Most of the referred cases came in very late, to the extent that little or nothing could be done for those patients. A total
of 77% of the maternal deaths during the year were cases referred from other facilities to the Hospital.

Maternal mortality ratio is one of the quality assessment benchmarks of the hospital’s performance. As shown in the chart below, maternal mortality ratio saw a decline from 2014 to 2016. The year under review recorded a maternal death ratio of 1,500 per 100,000 live births, an increase in comparison compared to 1,207 per 100,000 live births in 2017. A visual overview of this trend is indicated in the figure below.

![Figure 15: Five-Year Trend in Maternal Mortality Ratio (per 100,000 live births), KATH 2014-2018](image)

**Top Causes of Maternal Mortality**

In Figure 16 the top causes of maternal deaths in the hospital is represented
Figure 16: Top Ten Causes of Maternal Deaths, KATH 2018

Haemorrhage and Hypertension-related diseases were the leading causes of maternal death in the year 2018. Intracranial Haemorrhage and Congestive Heart Failure recorded the least death figures during the year under review.

To reduce neonatal deaths, the hospital intensified its neonatal mortality meetings in 2018 which contributed immensely to the decrease in neonatal deaths in 2018.

**HO4: Improve quality of health care services including mental health**

**Priority Activity 3: Continue to support emergency services**

**Emergency Service Utilization**

The Emergency Medicine Directorate and Paediatric Emergency Unit (PEU) of the Child Health Directorate are the two emergency areas of the hospital, with a total bed capacity of 55.

During the year under review, 23,116 emergencies were seen in the hospital representing a decrease of 3.53% compared to the 2017 performance of 23,962. Generally, emergency services utilization in the hospital has been declining since 2016. The figure below shows a five-year trend in emergency service utilization of the hospital.
Figure 17: Trend in Emergency Services Utilization (2014-2018) KATH

HO 4: Improve quality of health care services including mental health

Priority Activity 4: Continue the provision of advanced Investigations and Radiology Services

Diagnostic Investigation Services

The trend in diagnostic investigations for the last five years depicts a downward trend from 2014-2016 but there has been an upward trend since 2016. A total number of 280770 investigations were conducted during the year under review.

This represents 8.94% increase in 2018 compared to the 2017 year’s performance of 257735.
There was a decrease in output in Radiology (Xray, MRI, CT etc) services from 2014 with a marginal increase from 2016-2018. The year under review recorded 63435 Radiology services an increase of 1.98% over the 2017 performance of 62202.

Figure 18: Five-Year Trend in Diagnostic Investigations, KATH, (2014-2018)

Figure 19: Five-Year Trend in Radiology Services Provided, KATH 2014-2018
HO 4: Improve quality of health care services including mental health

Priority Activity 5: Conduct operational research into emerging diseases

The hospital’s main focus in this area is the implementation of the various research findings for organizational development. A number of research activities were completed with others still ongoing in the hospital in 2018.

Ongoing Research Activities

The following research activities by Directorates and Units were on-going during the period:

• Umbrella Protocol: An observational Study of Sepsis in Kumasi, Ghana. This study is being run under the subaward title “Austere Environment Consortium for Enhanced Sepsis Outcomes (ACESO)”.

• A multi-country randomized clinical trial to evaluate the impact of continuous Kangaroo Mother Care (KMC) initiated immediately after birth compared to KMC initiated after stabilization in newborns with birth weight 1.0 to <1.8 kg on their survival in low-resource settings– Study in Kumasi, Ghana

• A Randomized, Double-Blind, Parallel-Group, Multicenter, Phase III Study to Evaluate the Effect of Ticagrelor versus Placebo in Reducing the Rate of Vaso-Occlusive Crises in Paediatric Patients with Sickle Cell Disease (HESTIA3)


• Design and fabrication of a turn-table system. Dosimetry of a Cobalt-60 tomotherapy treatment.

• Radiobiological end point for Breast, Cervix and Prostate cases

• Pattern of Male Infertility in Kumasi, Ghana

• Investigation into Default of Surgical Appointments at Komfo Anokye Teaching Hospital

• Impact of patient feedback on health systems performance

• Clinical evaluation of restoration of non-caries cervical tooth surface loss lesion with tooth coloured restorative material among patients attending Komfo Anokye Teaching Hospital a three-month review

• KATH, WHO & MOH. – Congenital Rubella Surveillance (Child Health),

• KATH, WHO & MOH HIB PBMS Surveillance in Child Health
• KATH, WHO & MOH Rotavirus Surveillance in Child Health.
• The characteristics and outcomes of traumatic brain injuries in the Ashanti Region of Ghana
• Radiotherapy Incident Reporting and Learning System
• HIP Fracture Accelerated Surgical Treatment and Care Track
• HIV preventive practices and partner support and among HIV sero-discordant couples attending the KATH HIV clinic
• Acceptability of Pre-exposure prophylaxis (PrEP) among HIV sero-discordant couples
• Use of Preventive Health Services by KATH staff
• Analysis of Adult Nephrectomies at the KATH, Kumasi-Ghana
• Pharmacokinetics of anti-tuberculosis and antiretrovirals in children
• AFRO Meningitis Surveillance Study
• Minimum data set for Lymphedema stakeholders
• Cleft Palate and Genetics in African population

Operational Research
• Barriers to incident reporting as perceived by doctors, Nurses and Pharmacists at the Komfo Anokye Teaching Hospital, Kumasi
• Improving outcomes and reducing cost by modular training in infection control
• The use of smartphones in Anaesthesia practice
• Quality and Stability of in-house products
• Transfusion Transmission Malaria prevention by Marisol Whole blood in young children (<5y)
• Transfusion-associated Microchimerism (TA-Mc) in Female patients

Completed Research
• Pattern of antibiotic use in a Primary health centre in Ghana
• Antiretroviral treatment outcomes among adults in Ashanti Region
• Phone call medication adherence monitoring and its reliability for predicting Virologic outcomes in patients receiving HAART at KATH
• Anaesthesia Capacity in Ghana: A teaching hospital’s resources and the National Workforce and Education
• Incidence of ARDS in Intubated Patients at KATH.
• Barriers to Incident Reporting as Perceived by Doctors, Nurses and Pharmacists at the Komfo Anokye Teaching Hospital, Kumasi” in 2018.

Published
• Research into Quality and Stability of in- house products
• International Orthopaedic Multicentre Study in Fracture care

HO 4: Improve quality of Health care services including mental health

Priority Activity 6: Acquire requisite medical equipment to improve service delivery

The Hospital during the period under review acquired a new state of the art two oxygen plants with accessories. Additionally, the Hospital also acquired power drills and accessories, Haematology Analyzer, Ventilators, Ultrasound machines and patients monitors.

HO1: Bridge equity gaps in geographical access to health services

Priority Activity 7: Continue efforts in providing support to district and regional hospitals in the northern sector of Ghana, by way of providing outreach services

Komfo Anokye Teaching Hospital as a major tertiary care service provider has one of its key objectives as supporting primary and secondary services. In view of this, management aggressively pursued strategies and activities to achieve a higher impact in clinical outreach.

The Hospital sustained its collaborations with Ghana Health Service facilities in the northern regions of Ghana, to screen and perform surgeries and other procedures. The Ear Nose and Throat (ENT) Unit conducted four (4) major offsite outreaches during the year under review. These were in Techimantia, Kumasi Central Prisons, Manhyia Prisons and Kumasi Female Prisons. A total of 1,091 person were screened and out of which 255 were given treatment. The Eye Unit also screened 27,143 and performed 1,683 surgeries.

There was also a number of outreaches for cancer education and examination for communities and religious institutions by the Oncology Directorate. There was also a Breast Cancer Screening at
Luv FM’s Mothers’ Day Celebration which had 98 people screened and 2 suspicious cases referred for treatment in the Hospital.

The Annual Breast Cancer Awareness Walk include a screening activity which saw 191 women screened and 9 suspected cases referred for management.

The Oral Health Directorate also embarked on outreach and successfully screened 2,704 participants.

**HO.3: Improve efficiency in governance and management of the health system**

**Priority Activity 8: Continue to improve performance monitoring and promote financial accountability & controls.**

In the year under review, the Planning, Monitoring and Evaluation (PME) Unit of the Hospital carried out monitoring visits to the various directorates and units as the basis for monitoring the performance of the various directorates and units of the hospital. The purpose of the visit was to monitor the implementation of the 2018 approved programmes and plans at the Directorates and Units level. The Audit Unit also undertook financial and compliance monitoring visits to the various Directorates and Units.

During the period under review, the hospital witnessed a major intervention in its history through a comprehensive pilot and roll out of its computerization project in the quest to make all operations paperless. The e-Health Project as it is called has already been deployed at the Family Medicine, the Eye, Ear, Nose and Throat (EENT), Oncology and Oral Health Directorates and the Psychiatry Unit of the Hospital by the Lightwave Health Information Management System (LHIMS).

The e-Health system has already begun to impact positively on the operations of the Hospital though there are a few technical and teething challenges that are being sorted out by the implementing company. It has made it possible to detect financial leakages, track the performance of doctors and other staff members, reduced fraud through the detection of fake national health insurance cards and improved the integrity and management of patient clinical records at the hospital. Even though there are few teething problems with the roll-out of the system such as slow
internet speed and inadequate stock of computer sets, Management is determined to see to its successful deployment given its potential benefits to the hospital.

CHAPTER 4
QUALITY ASSURANCE UNIT

Quality Assurance (QA) in health care is a strategy for improving quality healthcare. QA was introduced in the Hospital as part of the restructuring process in the year 2000. The aim was to improve quality of services provided in the hospital with specific focus on patient satisfaction, standardized patient management and health safety issues.
In the year 2018, the QA Unit planned to improve infection prevention and control (IPC) in the hospital, improve customer care, patient safety as well as strengthen QA activities in all Directorates of the Hospital using data gathered through reports from surveys and actions from stakeholders.

2018 Achievements

Infection prevention & control

In the year under review, the hospital strengthened Infection Prevention and Control (IPC) activities. Surveys on hand hygiene compliance and waste management among staff were carried out at all service points in the hospital.

Health Care Waste Management

In the year under review, a total of 276 staff of the hospital were trained on Health Care Waste Management with support from the United National Development Program (UNDP).

Complaints Management and Audit

Feedback and complaints from patients were analysed to improve care within the Hospital. Other surveys conducted during the year under review include patient waiting time, hand hygiene audit and waste management.

Improving customer care

A Customer Satisfaction Survey was conducted during the year 2018. Major issues of concern centered on long waiting time, poor communication and poor staff attitudes. The unit liaised with the Family Medicine Directorate to organize a Customer Care workshop for some selected staff of the Hospital. In all about 160 staff were trained in good communication skill and customer care etiquette.
CHAPTER 5
DOMESTIC SERVICES

Domestic Services Directorate consist of four Units: Central Sterilization and Supplies Department (CSSD), Laundry, Catering, and Transport. The major capital activities carried out in the year under review included the purchase and installation of an automated timing dryer and three standing air condition machines for the Laundry Unit.

The Directorate again undertook several vehicle servicing and maintenance. The table below shows the number of vehicles and their conditions as at the end of 2018.

Table 12: The Distribution Motor Vehicles and their Service Conditions, KATH, 2014-2018
At the end of the year 2018, Komfo Anokye Teaching Hospital had 37 serviceable and 3 unserviceable vehicles in the year 2018. The age classifications of the 37 serviceable vehicles are shown in the chart below:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Vehicles/Tractors</td>
<td>42 (11 were auctioned)</td>
<td>33</td>
<td>33</td>
<td>40</td>
<td>37</td>
</tr>
<tr>
<td>Serviceable Vehicles</td>
<td>26</td>
<td>29</td>
<td>29</td>
<td>37</td>
<td>33</td>
</tr>
</tbody>
</table>
Figure 20: Age Distribution of Serviceable Vehicles, KATH, 2018

CSSD, CATERING AND LAUNDRY.

A total of 329,742 gauze and cotton wool packs were produced, sterilized and distributed to various service areas within the Hospital by CSSD. This figure represents 82.44% of the targeted 400,000 gauze and cotton wool packs set for the year.

The Catering Unit also prepared and served a total of 224,977 meals to in-patients. The Laundry Unit washed and distributed a total of 390,387 linen to the various operational areas of the hospital. This accounted for 78.07% of the targeted 500,000 servings of linen that was targeted for year.
The Technical Service Directorate focused on Planned Preventive Maintenance (PPM) and coordination of activities for projects in the hospital.

Infrastructural and Equipment Development

The Hospital carried out a number of infrastructural developments in the year 2018. Key among these were the renovation work at the former Consulting Room 10 and the old Dental Clinic, construction of fence walls at Akowuasan nurses’ blocks, Doctors’ flat, and Child Welfare Clinic (CWC), 24hour Pharmacy at the Accident & Emergency (A&E) among others.

The construction work at the Maternity & Children’s Block was halted due to lack of funds. The project is currently at 65% completion status. The details of the infrastructure developments in 2018 are presented in the below table

Table 12: KATH Infrastructural Development Project 2018

<table>
<thead>
<tr>
<th>PLANNED ACTIVITY</th>
<th>EXPECTED OUTPUT</th>
<th>ACHIEVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renovation work at former Consulting Room 10 and old Dental</td>
<td>100% completion</td>
<td>100% completion achieved</td>
</tr>
<tr>
<td>Construction of fence wall at Akowuasan Nurses blocks</td>
<td>100% completion</td>
<td>100% achieved</td>
</tr>
<tr>
<td>Reconstruction of collapsed fence wall at Doctors’ flat</td>
<td>100% completed</td>
<td>100% of work done</td>
</tr>
<tr>
<td>Expansion / Alteration works for Installation of LINAC Machine at KATH</td>
<td>100% completed</td>
<td>90% completed</td>
</tr>
<tr>
<td>Cladding/Painting of fence wall at A &amp; E (from SMS gate to HR)</td>
<td>100% completion</td>
<td>85% achieved</td>
</tr>
<tr>
<td>Chemical cleaning/ disinfecting of water reservoirs at KATH</td>
<td>100% completed</td>
<td>80% achieved</td>
</tr>
<tr>
<td>Renovation works (internal /external) at A&amp; E</td>
<td>80% completed</td>
<td>75% of work done</td>
</tr>
<tr>
<td>PLANNED ACTIVITY</td>
<td>EXPECTED OUTPUT</td>
<td>ACHIEVEMENT</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
<td>-------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Construction of Maternity &amp; Children’s Block</td>
<td>100% completion</td>
<td>65% achieved</td>
</tr>
<tr>
<td>Construction of 1Nr 47 flats Housemen block at Bantama Nurses Quarters</td>
<td>75% completed</td>
<td>52% of work done</td>
</tr>
<tr>
<td>Refurbishment of Hospital central sewer lines at Barracks</td>
<td>100% completion</td>
<td>30% achieved</td>
</tr>
<tr>
<td>Construction of Sickle Cell and Blood Centre at KATH</td>
<td>50% completion</td>
<td>20% of work done</td>
</tr>
<tr>
<td>Construction of fence wall at Child Welfare Clinic (CWC), Kumasi</td>
<td>75% completed</td>
<td>18% achieved</td>
</tr>
<tr>
<td>Construction of 24hour Pharmacy at Accident &amp; Emergency (A&amp;E)</td>
<td>50% completion</td>
<td>5% completed</td>
</tr>
</tbody>
</table>
CHAPTER 7
FINANCIAL PERFORMANCE

This chapter covers the general financial activities and financial performance of the Hospital during the 2018.

Sources of Funding

The main sources of funding of the Hospital, as a public-sector non-profit making organization are Internally Generated Funds (IGF), Government of Ghana Subventions (GOG) and Sector Budgetary Support (SBS).

Government of Ghana Subventions (GOG)

For some time now, the Government of Ghana (GOG) subvention to the Hospital has only been in the form of payment of salaries for mechanized employees.

The central government paid the salaries of workers through Controller & Accountant General. The total direct payment made as salaries of mechanized staff on Government payroll amounted to GHC116,756,458.45.

However, on other fund were received from central government for administration and other operational activities.

Internally Generated Funds (IGF)

The Internally Generated Funds (IGF) is revenue generated through service provision and other income-generating activities of the Hospital. A total of GHC69,590,563.41 was generated, mainly from services and the sale of consumables and drugs. These were used for the operational activities (goods and services) of the hospital.

The table below illustrates the broad categories in which the revenue was generated and also the percentages of budgeted figures achieved:
Table 13 Internally Generated Fund (IGF) Revenue Categories, KATH 2018

<table>
<thead>
<tr>
<th>ITEM</th>
<th>BUDGET (GH₵)</th>
<th>ACTUAL (GH₵)</th>
<th>% OF BUDGET ACHIEVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>51,262,324.28</td>
<td>57,546,630.12</td>
<td>112.26</td>
</tr>
<tr>
<td>Medicines (Drugs)</td>
<td>14,909,794.73</td>
<td>11,565,344.02</td>
<td>77.57</td>
</tr>
<tr>
<td>Others</td>
<td>1,164,400.00</td>
<td>478,589.27</td>
<td>41.10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>67,336,519.01</td>
<td>69,590,563.41</td>
<td>103.35</td>
</tr>
</tbody>
</table>

As indicated above, the total revenue generated exceeded the budgeted figure by 3.35%, representing an improvement of the actual performance over budget.

Table 14: Comparison of 2017 and 2018 Budget Figures, KATH

<table>
<thead>
<tr>
<th>ITEM</th>
<th>2017 (GH₵)</th>
<th>2018 (GH₵)</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>51,961,542.73</td>
<td>57,546,630.12</td>
<td><strong>10.75</strong></td>
</tr>
<tr>
<td>Medicines (Drugs)</td>
<td>10,649,180.83</td>
<td>11,565,344.02</td>
<td><strong>8.60</strong></td>
</tr>
<tr>
<td>Others</td>
<td>582,278.80</td>
<td>478,589.27</td>
<td><strong>-17.81</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>63,193,002.36</strong></td>
<td><strong>69,590,563.41</strong></td>
<td><strong>10.12</strong></td>
</tr>
</tbody>
</table>

The total revenue generated in 2018 exceeded that of 2017 by 10.12%. This means that the hospital performed better in 2018 compared to 2017, as 2018 figures for all broad revenue categories, except “Others” exceed those of 2017.

**IGF REVENUE BY MODE OF RECEIPT**

The 2018 IGF revenue is classified according to the mode of receipt, namely cash, insurance and others. Out of the total revenue of GH₵69,590,563.41 generated, GH₵66,801,304.43 was through cash, GH₵22,310,669.71 through Insurance and GH₵478,589.27 through other sources. These represent 27.82%, (-9.35%) and (-75.65%) respectively over the 2017 figures.
## TOTAL EXPENDITURE (GOG & IGF)

The Hospital incurred a total expenditure of GH₵185,648,248.78 in executing its activities. The amount was used for the compensation of employees, goods and services and the fixed assets. Out of the total expenditure incurred, GH₵116,756,458.45, representing 62.89% came from central government (GOG) in the form of payment of salaries of employees. The remaining GH₵68,891,790.33, representing 37.11% came from Internally Generated Funds (IGF) was basically used for the operational activities of the Hospital.

## EXPENDITURE (IGF)

In the year under review, total expenditure incurred under IGF amounted to GH₵68,891,790.33 against a budgeted figure of GH₵67,336,519.01, representing 103.35% of the actual budgeted expenditure. By economic classifications, GH₵11,472,722.08 was incurred under compensation of employees, GH₵54,253,960.69 under goods and services and GH₵3,165,107.56 was under fixed assets. The over spending in goods and services was largely due to expenditure on expendables, patient feeding and cleaning.
Table 16: 2018 IGF Expenditure Budget Executions, KATH

<table>
<thead>
<tr>
<th>ITEM</th>
<th>2017 (GHC)</th>
<th>2018 (GHC)</th>
<th>% CHANGE</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compensation</td>
<td>9,550,068.05</td>
<td>11,472,722.08</td>
<td>20.13%</td>
<td>16.65%</td>
</tr>
<tr>
<td>Goods &amp; Services</td>
<td>52,244,731.23</td>
<td>54,253,960.69</td>
<td>3.85%</td>
<td>78.75%</td>
</tr>
<tr>
<td>Assets</td>
<td>1,999,774.00</td>
<td>3,165,107.56</td>
<td>58.27%</td>
<td>4.59%</td>
</tr>
<tr>
<td>Total</td>
<td>63,794,573.28</td>
<td>68,891,790.33</td>
<td>7.99%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Greater portion of the 2018 IGF expenditure was incurred on goods and services, representing, approximately, 78.75% whilst 16.65% and 4.59% were incurred on compensation of employees and assets respectively.

On year by year performance, the 2018 figures for compensation of employee, goods & services and Assets exceeded the 2017 figures by 20.13%, 3.85% and 58.27% respectively.

The total IGF actual expenditure incurred in 2018 exceeded the budgeted figure for the same period by 2.31%.

**TEACHING HOSPITALS PERFORMANCE INDICATORS - FINANCIAL**

The Teaching Hospitals have agreed and established various performance indicators to help in the peer review exercise of the all the teaching hospitals.

The Hospital, during the year under review, recorded the following performance indicators in its finances.
Table 17: Teaching Hospital Performance Indicators, KATH, 2018

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>MEASUREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Submitted Insurance Claims Paid</td>
<td>28.20%</td>
</tr>
<tr>
<td>Debtors Days</td>
<td>262 Days</td>
</tr>
<tr>
<td>Creditors Days</td>
<td>131 Days</td>
</tr>
<tr>
<td>Proportion of IGF Spent on PPM</td>
<td>4.00%</td>
</tr>
<tr>
<td>% of IGF Spent on Compensation of Employees</td>
<td>16.00%</td>
</tr>
<tr>
<td>Ratio of Cash Revenue to NHIA Revenue</td>
<td>1.99 : 1</td>
</tr>
<tr>
<td>% of NHIA Claims Submitted on Time</td>
<td>100.00%</td>
</tr>
<tr>
<td>% of Insurance Claims Rejected or Queried</td>
<td>5.00%</td>
</tr>
</tbody>
</table>
The Hospital in its efforts to provide quality care to its clients collaborates with some organizations and receives support from certain benevolent individuals and organizations. During the year under review, the following were the organizations the hospital collaborated with:

**Table 18: Collaboration and Support with other Institutions, KATH, 2018**

<table>
<thead>
<tr>
<th>Institution</th>
<th>Nature of collaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guangdong Cardiovascular Institute, China</td>
<td>Open heart surgeries and pacemaker implantation</td>
</tr>
<tr>
<td>Cardio-start International, USA</td>
<td>Open heart surgeries and Pacemaker Implantation on adults.</td>
</tr>
<tr>
<td>Boston Children’s Hospital, USA (Harvard University)</td>
<td>Open heart surgeries for children</td>
</tr>
<tr>
<td>Moran Eye Centre, USA</td>
<td>Performed eye surgeries</td>
</tr>
<tr>
<td>University of Birmingham, Children Hospital, Alabama</td>
<td>Collaboration involving multiple directorates in building capacity for the treatment of complex deformities of the face and skull in children and adults</td>
</tr>
<tr>
<td>Aalst Cardiovascular Institute, Belgium</td>
<td>Open heart surgeries</td>
</tr>
<tr>
<td>Orbis International</td>
<td>Training support, research and paediatric eye care services.</td>
</tr>
<tr>
<td>International Voluntary Union of Urologists (IVU)</td>
<td>Training facilities and surgeries in hypospadias and hermaphrodites for doctors and nurses</td>
</tr>
<tr>
<td>Children Surgery International, USA</td>
<td>Training and surgeries for cleft lip and palate patients</td>
</tr>
<tr>
<td>Himalayan Cataract Project (HCP), USA</td>
<td>eye care services and training</td>
</tr>
<tr>
<td>Institution</td>
<td>Nature of collaboration</td>
</tr>
<tr>
<td>-------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>University of Michigan</td>
<td>Training of residents and nurses in emergency Medicine training of residents in family Medicine, Collaboration with Breast Cancer Research. Collaboration with Internal Medicine Cardiology</td>
</tr>
<tr>
<td>Georgia Southern University</td>
<td>Conversion of Paper-based Medical Records into Electronic format</td>
</tr>
<tr>
<td>John Hopkins University</td>
<td>GAAP Study</td>
</tr>
<tr>
<td>KATH, WHO &amp; MOH</td>
<td>Congenial Rubella Surveillance Programme</td>
</tr>
<tr>
<td>U. S Naval Medical Research Unit</td>
<td>Sepsis study</td>
</tr>
<tr>
<td>University of Utah</td>
<td>Collaborating with the KNUST/KATH in the areas of Medicine, Trauma, Eye and other disciplines</td>
</tr>
<tr>
<td>Health Volunteers Overseas (HVO), USA</td>
<td>Collaborated with Trauma &amp; Orthopaedics, Physiotherapy Unit to offer training and provision of equipment</td>
</tr>
<tr>
<td>SIGN Fracture Care international</td>
<td>Collaborated with Trauma and Orthopaedics Directorate in the area of training</td>
</tr>
<tr>
<td>RESTORE California, USA</td>
<td>Collaborated with surgery in the area of reconstructive surgeries</td>
</tr>
<tr>
<td>Interplast Education Team (USA)</td>
<td>plastic and reconstructive surgeries to patients in the Hospital</td>
</tr>
<tr>
<td>AO SEC Foundation</td>
<td>Collaborated with Trauma &amp; Orthopaedics Directorate in the training of non-operative and basic surgeries</td>
</tr>
<tr>
<td>Academy of American Orthopaedics Society (AAOS)</td>
<td>Collaborated with Trauma and Orthopaedics Directorate in the area of training</td>
</tr>
<tr>
<td>McGill University Health Center, Canada</td>
<td>Collaboration with internal medicine with TB Study</td>
</tr>
<tr>
<td>Institution</td>
<td>Nature of collaboration</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------</td>
</tr>
<tr>
<td>University of California, San Francisco (UCSF) Orthopaedics Department, USA</td>
<td>Collaborate with Trauma in the training of doctors</td>
</tr>
<tr>
<td>Institute of Global Orthopaedics and Traumatology (IGOT)/UCSF/OTI, USA</td>
<td>Collaborate with Trauma &amp; Orthopaedics in the training of residents and research</td>
</tr>
<tr>
<td>NCI-USA</td>
<td>Breast Cancer Study</td>
</tr>
<tr>
<td>Project Echo- Palliative Care Africa- The University Of Texas- MD Anderson Cancer Center</td>
<td>Collaborated with Family Medicine in building capacity in Palliative Care through monthly teleconference discussions</td>
</tr>
<tr>
<td>University of Ibadan, Nigeria</td>
<td>Collaborated with Internal Medicine in the area of Neurology</td>
</tr>
<tr>
<td>Parkinson’s Institute in Milan, Italy</td>
<td>Collaborated with Internal Medicine in the area of Neurology</td>
</tr>
<tr>
<td>University of Utah and Stanford, USA</td>
<td>Collaborated with Internal Medicine in the area of Neurology</td>
</tr>
<tr>
<td>University of Liverpool, South Tee’s Hospital, Middlesbrough, London UK</td>
<td>Collaborated with Internal Medicine in the area of infectious diseases</td>
</tr>
<tr>
<td>University of Loyola, Chicago, USA</td>
<td>Collaborated with Internal Medicine in the area of infectious diseases</td>
</tr>
<tr>
<td>St. Georges University of London, UK</td>
<td>Collaborated with Internal Medicine in the area of infectious diseases</td>
</tr>
<tr>
<td>Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR) &amp; KATH</td>
<td>Collaborated with Internal Medicine in the area of Cardiology</td>
</tr>
<tr>
<td>Palliative Care Works (PCW)-UK</td>
<td>Collaborated with Family Medicine in building capacity in Palliative Care through workshops</td>
</tr>
<tr>
<td>Medtronic Global Health Initiative</td>
<td>Collaborated with Internal Medicine in Cardiology</td>
</tr>
</tbody>
</table>
CHAPTER 9
DIRECTORATE OF INTERNAL MEDICINE

The Internal Medicine Directorate is one of the twelve (12) clinical directorates of KATH. Among the specialized clinics run by the directorate are; Hypertension, Asthma, Diabetes, HIV, Chest, Haematology, Neurology, Cardiology, Renal, Gastrointestinal, Rheumatology, Nephrology, Cardiology, Non- Diabetes Endocrine and Dermatology. The Directorate also runs daily Physician Specialist-General Out-Patient clinic at the Specialist Consulting Room 1(CR1).

Priority Activity 1: Increase the range of specialist services

During the year under review, the directorate made significant efforts to enhance its services. The use of appointment system was continued at all the Out-Patient Clinics. With the exception of Non-Diabetes Mellitus Endocrine Clinics all the clinics recorded increases in attendance.

Out- Patient Services

A total of 53,697 OPD cases were seen by the Directorate during the year under review. This represents 20.18% decrease in outpatient consultation compared to the 2017 performance. This reduction in OPD attendance for the Directorate was mainly due to the absence of the Psychiatry clinic which has been made an independent Unit sin the first quarter of 2018. General clinic (CR 1) recorded the highest OPD attendance of 10,960, followed by HIV (10,135) and Diabetes (9,293 clinics). The least OPD attendance of 761 and 385 were recorded by Non-DM Endocrine and Rheumatology clinics respectively. Figure 21 below shows the attendance per clinic during the year.
Trend in OPD Services Utilization by Clinics

Most of the clinics in the directorate recorded increase in attendance in 2018, with the exception of General Medicine, Diabetes and Hypertension clinic which recorded a decrease compared to the previous year’s performance. The decrease OPD attendance recorded in these three main clinics impacted total OPD attendance in the Directorate, resulting in over 25% decrease in total OPD attendances compared to 2017 figures. The table below shows the five-year trend in OPD utilization of specialist clinics from in the Directorate 2014-2018 (Table 18)
Table 19: Five-Year Trend in OPD Services Utilization by Clinics

<table>
<thead>
<tr>
<th>CLINIC</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Medicine</td>
<td>10,454</td>
<td>9,955</td>
<td>13,031</td>
<td>13283</td>
<td>10960</td>
</tr>
<tr>
<td>Diabetes Mellitus</td>
<td>11,003</td>
<td>10,729</td>
<td>12403</td>
<td>10706</td>
<td>9293</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>1,029</td>
<td>899</td>
<td>3608</td>
<td>9472</td>
<td>10135</td>
</tr>
<tr>
<td><strong>Psychiatry</strong></td>
<td>14,625</td>
<td>11,567</td>
<td>12224</td>
<td>12602</td>
<td>ABSENT</td>
</tr>
<tr>
<td>Hypertension</td>
<td>3,806</td>
<td>3,412</td>
<td>4880</td>
<td>4351</td>
<td>3773</td>
</tr>
<tr>
<td>Asthma</td>
<td>1,083</td>
<td>952</td>
<td>1064</td>
<td>1113</td>
<td>1275</td>
</tr>
<tr>
<td>Cardiology</td>
<td>3,968</td>
<td>3,499</td>
<td>3953</td>
<td>4338</td>
<td>4862</td>
</tr>
<tr>
<td>GIT</td>
<td>1,694</td>
<td>1,831</td>
<td>2002</td>
<td>2183</td>
<td>2599</td>
</tr>
<tr>
<td>Chest(TB)</td>
<td>749</td>
<td>849</td>
<td>946</td>
<td>1938</td>
<td>2657</td>
</tr>
<tr>
<td>Renal OPD</td>
<td>1,602</td>
<td>1,466</td>
<td>1927</td>
<td>2345</td>
<td>2709</td>
</tr>
<tr>
<td>Neurology</td>
<td>2,292</td>
<td>2,138</td>
<td>2392</td>
<td>3139</td>
<td>3468</td>
</tr>
<tr>
<td>Dermatology</td>
<td>941</td>
<td>928</td>
<td>748</td>
<td>789</td>
<td>820</td>
</tr>
<tr>
<td><strong>Haemodialysis</strong></td>
<td>278</td>
<td>163</td>
<td>407</td>
<td>324</td>
<td>ABSENT</td>
</tr>
<tr>
<td>Non.DM Endocrine</td>
<td>268</td>
<td>289</td>
<td>268</td>
<td>419</td>
<td>761</td>
</tr>
<tr>
<td>Rheumatology</td>
<td>146</td>
<td>170</td>
<td>209</td>
<td>274</td>
<td>385</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>53,660</td>
<td>48,948</td>
<td>60,062</td>
<td>67,276</td>
<td>53,697</td>
</tr>
</tbody>
</table>

**Psychiatry** used to be part of Internal Medicines but was decouple in 2018

**Haemodialysis** is a service

Trend in OPD Utilization 2014-2018

During the year under review, specialist OPD attendance saw a decrease as compared to 2017 performance. This represents a decrease of 25.29% compared to the 2017 performance of 67,276. This decline in OPD attendance is a result of the absence of the Psychiatry clinic which was decouple from the Directorate. The directorate recorded an increase in OPD attendance between 2016 and 2017. This information is shown in the Figure 20.
Dialysis Services

In the year 2018, a total of 2,034 dialysis sessions were performed for 347 patients. This represented an increase of 25.86% compared to the previous year’s performance of 1,616. For the past four years, Renal OPD clinic has recorded a consistent increase in attendance. A five-year performance breakdown for Renal Clinic is represented in the table below.

Table 20: Five Year Performance of Renal Clinic, KATH, 2014-2018

<table>
<thead>
<tr>
<th>Year</th>
<th>Haemodialysis</th>
<th>Renal clinic OPD Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of patients</td>
<td>No. of sessions</td>
</tr>
<tr>
<td>2014</td>
<td>278</td>
<td>1,514</td>
</tr>
<tr>
<td>2015</td>
<td>163</td>
<td>839</td>
</tr>
<tr>
<td>2016</td>
<td>407</td>
<td>2350</td>
</tr>
<tr>
<td>2017</td>
<td>324</td>
<td>1616</td>
</tr>
<tr>
<td>2018</td>
<td>347</td>
<td>2034</td>
</tr>
</tbody>
</table>

In-Patient Services

The directorate worked with seven (7) wards and a bed complement of 174. The average length of stay for the year remained at 10 days with percentage bed occupancy of 75.22.
Trend in Admissions 2014- 2018

Generally, there has been a declining trend in admissions since 2014. In 2018, admissions decreased by 12.44% as compared to 2017. The Figure below shows the trend of in-Patient admissions at the Directorate of Internal Medicine from 2014– 2018.

![Graph showing trend in admissions from 2014 to 2018](image)

**Figure 23: Five-Year Trend in In-Patient Admissions, Internal Medicine Directorate, KATH (2014-2018)**

In the year 2018, hypertensive, diabetes mellitus and cerebrovascular accidents, were the major causes of admissions. Figure 23, shows the top ten causes of admissions in the directorate.

![Bar chart showing top ten causes of admissions](image)
Priority Activity 2: Sustain activities aimed at reducing mortality, especially maternal mortality

Weekly clinical meetings and technical team heads meetings were held during the year as part of efforts to strengthen quality assurance activities. Standard protocols were enforced as part of quality assurance measures. Mortality rate decreased marginally from 23.7% to 23.31% during the year under review. Morality rate In the Directorate have generally remained stagnant hovering under 25%

Top Ten Causes of Death as a Proportion of Admissions

In 2018, kidney diseases were the leading cause of death in Internal Medicine with 41.05% of all those admitted dying. This is followed by CVA (36.45%), Pneumonia (34.57%) and TB (31.09%) Malignant Neoplasms (13.74%) recording the tenth place.

The chart below shows the summary of the top ten causes of deaths in the Directorate, as a proportion of the total admission for the condition
Priority Activity 4: Continue the provision of advanced diagnostic services

During the year under review a total of 2,114 diagnostics investigations were successfully carried out, representing an increase of 7.53% compared to the previous year’s performance of 1,966. There were increase in all the investigations carried out in the Directorate with the exception of Holter and Echocardiograph due to faulty machines. Figure 26, shows the various diagnostics investigations for the past five years.

Figure 26: Top 10 Causes of Mortality, Internal Medicine, KATH, 2018

Figure 27: Trend in Specialized Diagnostic Investigation Services, Internal Medicine, 2014-2018
CHAPTER 10
DIRECTORATE OF SURGERY

The Directorate of Surgery is mandated to provide specialist surgical care in the following areas:

- General Surgery
- Cardio Thoracic and Vascular Surgery
- Neurosurgery
- Urology
- Plastics, Reconstructive & Burns Surgery
- Paediatric Surgery
- Breast Care Services

Priority Activity 1: Increase the range of specialist services

In general, the directorate experienced an increase in almost all clinical indicators except for number of surgeries performed. The detailed performances by the various clinics are indicated below.

Out Patient Services

A total of 32,480 patients were seen by the various OPD clinics of the directorate. This represents 97.83% of the annual target set. Breast Care Clinic recorded the highest OPD attendance with 7615 visits representing 23.45% of all OPD attendance in the directorate. See figure below
Trend analysis of OPD attendance by Clinics 2014 - 2018

For the year under review, only General Surgery, Breast Care and Cardiothoracic clinics recorded increases in OPD attendance compared to 2017. The general trend in OPD attendance at the various sub-specialty clinics has been inconsistent since 2014 (See Figure 27).
Trend of OPD Attendance, 2014-2018

Overall, there has been an inconsistent trend in the OPD attendance for the Directorate since 2014. The year’s performance reflected a decrease of 784 (2.36%) compared to 2017. The figure below shows the trend of total OPD attendance from 2014 to 2018.

![Graph showing trend of OPD Attendance, Surgery, Directorate, 2014-2018](image)

**Figure 30: Trend of OPD Attendance, Surgery, Directorate, 2014-2018**

In-Patient Services

In 2018, the directorate recorded a total of 4,020 (78%) admissions representing 78% of its 2018 target of 5,100. There was a decline in admissions (5.23% decrease) compared to 2017’s performance of 4,242. The average length of stay per admission episode increased from 12 days in 2017 to 14 days in 2018. Total annual admission have generally not changed that much over the past five years.
Surgical Operations Conducted by Specialty

A total of 3,894 surgeries were performed by the directorate, representing 94.50% of the year’s target (4,000 cases). General Surgery recorded the highest percentage (43.58%) of all surgeries carried out in the directorate, with Cardiothoracic recording the least (1.52%). Figure 30 gives a graphical display of surgical operations by specialties in the directorate for 2018.

Total surgical operations performed has remained fairly constant over past five years with only marginal increases or decreases year on year. Over the past five years 2014 recorded the highest number of surgical operations at 4096 with 2017 recording 3644. Figure 31 shows the trend analysis in surgical operations (2014-2018)
Priority Activity 2: Sustain activities to reduce mortalities, especially maternal and neonatal deaths

In the year under review, the directorate carried out monthly mortality, morbidity and quality assurance meetings to strengthen mortality audits and quality assurance.

Trend in Mortality

Over the past five-years, mortality rate for the directorate has been inconsistent. Mortality rate declined from 6.49% in 2017 to 6.05% in 2018. Figure below shows the trend analysis in mortality rate for the directorate from 2014 to 2018.

Figure 34: Five-Year Trend in Annual Mortality Rates, Surgery Directorate 2014-2018

Priority Activity 13: Support training of staff

In the year 2018, four nurses were trained in sub-specialties, two staff were sponsored for international conferences, one management member attended training at GIMPA, one doctor was sponsored to train at the Ghana College of Physicians and Surgeons (GCPS) and two nurses were sponsored to pursue courses at the Ghana College of Nurses and Midwives. Additionally, three nurses were given training in their respective sub-specialties and three pharmacists were sponsored for further studies in in various sub-specialties.
CHAPTER 11
DIRECTORATE OF CHILD HEALTH

The Directorate provides specialist Out-Patient (general and sub-specialty), Emergency and In-Patient services for children.

Priority Activity 1: Increase the range of specialist services

Out-Patient Services

The Directorate runs general and other sub-specialty out-patient clinics at Consulting Room 10 including Asthma, TB, HIV, Renal, Cardiac, Sickle Cell, Cleft, Neuro/Epileptic, Endocrine (excluding Diabetes), Diabetes, Oncology/ Burkitt’s and Malnutrition. GIT clinic was introduce during the year 2018.

There has been a consistent increase in OPD attendance since 2016. In the year under review, there were 487 more cases seen as compared to 2017, representing an increase of 2.3%. Figure 33 shows the trend of OPD attendance, 2014-2018.

Figure 35: Trend in Total OPD Attendance, Child Health, 2014-2018
Trend in Sub-Specialty Out-Patient Utilization

The Directorate recorded a total of 5,255 patients at the general OPD, representing 24.08% of the overall OPD attendance at the directorate in 2018. The remaining 75.92% OPD attendance was recorded at the various sub-specialty clinics. The directorate achieved 73% and 88.3% of its expected output for general and sub-specialty OPD attendance respectively. Overall, the trend in OPD sub-specialty attendance since 2014 has been inconsistent. GIT Clinic was introduced in the year under review. The table below is a summary of OPD attendance by sub-specialty from 2014 to 2018.

Table 21: Five-Year Trend in OPD Attendance by Sub-Specialty Clinics in Child Health Directorate, 2014-2018

<table>
<thead>
<tr>
<th>Sub-specialty Clinics</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Percentage of 2018 OPD attendance (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sickle Cell</td>
<td>4,873</td>
<td>3,576</td>
<td>4,907</td>
<td>5,130</td>
<td>5,339</td>
<td>24.47</td>
</tr>
<tr>
<td>Paediatric HIV Clinic</td>
<td>1,864</td>
<td>1,742</td>
<td>1,606</td>
<td>1,772</td>
<td>2,018</td>
<td>9.25</td>
</tr>
<tr>
<td>Neurology/Epilepsy Clinic</td>
<td>1,894</td>
<td>1,730</td>
<td>1,545</td>
<td>1,851</td>
<td>2,008</td>
<td>9.20</td>
</tr>
<tr>
<td>Asthma Clinic</td>
<td>603</td>
<td>616</td>
<td>571</td>
<td>555</td>
<td>531</td>
<td>2.43</td>
</tr>
<tr>
<td>Oncology/Burkitts Lymphoma</td>
<td>924</td>
<td>996</td>
<td>835</td>
<td>1,055</td>
<td>1,252</td>
<td>5.74</td>
</tr>
<tr>
<td>Cardiology Clinic</td>
<td>957</td>
<td>989</td>
<td>1,156</td>
<td>1,342</td>
<td>1,232</td>
<td>5.65</td>
</tr>
<tr>
<td>Malnutrition Clinic</td>
<td>1,521</td>
<td>1,135</td>
<td>1,236</td>
<td>1,578</td>
<td>862</td>
<td>3.95</td>
</tr>
<tr>
<td>Cleft Palate</td>
<td>735</td>
<td>804</td>
<td>625</td>
<td>719</td>
<td>864</td>
<td>3.96</td>
</tr>
<tr>
<td>Renal</td>
<td>1,042</td>
<td>957</td>
<td>906</td>
<td>1,205</td>
<td>1,282</td>
<td>5.87</td>
</tr>
<tr>
<td>Endocrine</td>
<td>222</td>
<td>140</td>
<td>198</td>
<td>286</td>
<td>338</td>
<td>1.55</td>
</tr>
<tr>
<td>Diabetes</td>
<td>161</td>
<td>131</td>
<td>223</td>
<td>358</td>
<td>404</td>
<td>1.85</td>
</tr>
<tr>
<td>GIT</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>435</td>
<td>2.01</td>
</tr>
</tbody>
</table>
In-Patients

The Directorate has four in-patient wards.

- Ward C5 - Cardiology/Pulmonology/Endocrine
- Ward B4 - Malnutrition/Nephrology
- Ward B5 - Haematology/Oncology/Neurology
- Mother-Baby Unit (MBU) - Neonatology

Trend in Admissions and Deaths

In the year under review, 7,564 admissions were recorded in the four in-patient wards of the Directorate. The number of in-patients recorded in the directorate has over the past five years declined, except for a significant increase between 2017 and 2018 as shown in Figure 34.

![Five-Year Trend in In-patient Service Utilization, Child Health Directorate 2014-2018](image)

Top Ten (10) Causes of Admission

The major causes of admissions in 2018 were Preterm/Low Birth Weight, Birth Asphyxia, Neonatal Jaundice and Neonatal Sepsis and this accounted for 67.87% of the top ten causes of
admissions. The top four conditions for admission remained the same for 2017 and accounted for over two-thirds (67.87%) of all admissions recorded in the Directorate. Figure 36 illustrates the top 10 causes of admissions in the Child Health Directorate in 2018.

![Figure 37: Top Ten Causes of Admissions in the Child Health Directorate, 2018](image)

**Priority Activity 2: Sustain activities to reduce mortalities, especially maternal and neonatal deaths**

**Trend in Mortality Rate**

Generally, the trend in the in-patient death rate in the directorate has been falling since 2014, despite a marginal increase in 2016 compared with the 2015 figure. The five-year trend in the in-patient mortality rates in the Child Health Directorate is shown below.
Figure 38: Five-Year Trend in Mortality Rate (in-patient), in Child Health Directorate, 2014-2018

Top Ten Causes of Death

In 2018, Preterm/Low Birth Weight, Birth Asphyxia, Respiratory Distress and Pneumonia were the leading causes of death causing 81.74% out of top ten causes of mortalities recorded in the Directorate (see Figure 37). Preterm/Low Birth Weight and Birth Asphyxia accounted for nearly two-thirds of all deaths.
Figure 39: Top Ten Causes of Mortalities, Child Health Directorate, 2018

Priority Activity 3: Continue to support Emergency Services

Paediatric Emergency and Intensive Care Units

The directorate runs three (3) emergency and Intensive Care units:

- Paediatric Emergency Unit (PEU)
- Paediatric Intensive Care Unit (PICU)
- Mother-Baby Unit (MBU)

The Paediatric Emergency Unit of the Directorate recorded a total of 3,069 admissions, 2,856 discharges and 182 deaths. The Paediatric Intensive Care Unit which provides intensive care services for the Directorate also registered 158 admissions, 109 discharges and 51 deaths

Priority Activity 13: Support Training of Staff

The directorate trained one (1) doctor in Infectious Disease, one (1) doctor in MSc. Strategic Management and Leadership one (1) pharmacist in MSc/PHD Pharmacy, one (1) nurse trained as Associate Membership Pediatrics with the Ghana College of Nurses and Midwives three (3) nurses completed in BSc. General Nursing and one (1) nurse specialised in Critical Care Nursing.
CHAPTER 12

DIRECTORATE OF EENT

This directorate comprises two (2) distinct Units – ENT and the Eye - and mandated with the provision of specialist Eye, Ear, Nose and Throat medical services. The directorate also runs outreach services.
Priority Activity 1: Increase the range of specialist services

Out-Patient Services

In 2018, a total of 51,255 cases were seen. The Eye Centre recorded 34507 visits, representing 67.3% of all out-patients, with ENT recording the remaining 32.7%.

![Pie chart showing distribution of out-patient attendance in EENT Directorate by Unit](chart.png)

**Figure 40: Distribution of out-patients Attendance in EENT Directorate by Unit**

**Trend in OPD Utilization by Clinics 2014 -2018**

The Eye Centre has over the past five years recorded more out-patients than the ENT Department. Out-patient attendance at the ENT Unit declined from 2014 to 2016 but has been on the increase since 2017. Figure 39 gives the detailed trend in OPD attendance at the EENT Directorate from 2014 to 2018.
Other Services Provided at the Directorate

The various departments of the directorate also provided the following services in the year under review:

- Refraction
- Low Vision
- Visual Field Test (VFT)
- B Scan (Ophthalmic B Scan)
- Audiology / Hearing Assessment
- Speech Therapy
- Ear Syringing

The outputs for these various services for the year are summarized in the table below.

Table 22: outputs of Other Services provided by Units in EENT Directorate, KATH, 2018

<table>
<thead>
<tr>
<th>Services</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye</td>
<td>26553</td>
</tr>
<tr>
<td>ENT</td>
<td>15897</td>
</tr>
<tr>
<td>Eye</td>
<td>24614</td>
</tr>
<tr>
<td>ENT</td>
<td>14746</td>
</tr>
<tr>
<td>Eye</td>
<td>19618</td>
</tr>
<tr>
<td>ENT</td>
<td>14046</td>
</tr>
<tr>
<td>Eye</td>
<td>19723</td>
</tr>
<tr>
<td>ENT</td>
<td>15626</td>
</tr>
<tr>
<td>Eye</td>
<td>34507</td>
</tr>
<tr>
<td>ENT</td>
<td>16748</td>
</tr>
</tbody>
</table>
Sub-Specialty OPD Clinics - Eye Centre

In the year under review, Glaucoma, Cataract and Strabismus (Squint) maintained their positions as the leading cause of attendance at the Centre, with Glaucoma recording a significant increase in the number of cases over 2017. The top ten causes of OPD attendance at the Eye Centre for 2018 compared with 2017, is summarized in the table below.

Table 23: Top Ten Causes of OPD attendance, Eye Unit, 2017 and 2018

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Glaucoma</td>
<td>4830</td>
<td>Glaucoma</td>
<td>6025</td>
</tr>
<tr>
<td>2</td>
<td>Cataract</td>
<td>944</td>
<td>Cataract</td>
<td>1012</td>
</tr>
<tr>
<td>3</td>
<td>Strabismus (Squint/EX/ESO/LR/Rectus)</td>
<td>471</td>
<td>Strabismus (Squint/EX/ESO/LR/Rectus)</td>
<td>491</td>
</tr>
<tr>
<td>4</td>
<td>Diabetic Retinopathy</td>
<td>316</td>
<td>Pterygium</td>
<td>319</td>
</tr>
<tr>
<td>5</td>
<td>Pterygium</td>
<td>226</td>
<td>Diabetic Retinopathy</td>
<td>300</td>
</tr>
<tr>
<td>6</td>
<td>Sickle Cell Retinopathy</td>
<td>187</td>
<td>Sickle Cell Retinopathy</td>
<td>198</td>
</tr>
<tr>
<td>7</td>
<td>Orbital Tumor (Proptosis)</td>
<td>153</td>
<td>Age Related Macular Degeneration</td>
<td>195</td>
</tr>
</tbody>
</table>
In-Patient Services

The directorate admitted a total of 1568 patients in the year 2018. This represents 93.58% increase over the previous year. This significant in admissions was the outcome of a conscious effort by the Directorate management to intensify its in-patients service provision. The average length of stay decreased from 4 days in 2017 to 3 days in the year under review. The Directorate recorded 31.40% bed utilization over the period. The trend in total admissions recorded in the Directorate showed a sharp increase from 2017 as illustrated in Figure 41.

**Figure 42: Five-Year Trend of In-Patient Admissions, EENT Directorate, 2014-2018**

In 2018, admissions for small incision cataract surgery (SICS), Phacoemulsification for cataracts (Phaco), corneal injuries and Glaucoma were the leading causes of admission, contributing 74.09% of all Top 10 causes of admissions at the directorate. The table below summarizes the top ten common conditions for which patients were admitted in the EENT directorate.

**Table 24: Top Ten Causes of Admission, EENT Unit, 2018**

<table>
<thead>
<tr>
<th></th>
<th>Age related Macular Degeneration</th>
<th>125</th>
<th>Orbital Tumor (Proptosis)</th>
<th>171</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Amblyopia</td>
<td>111</td>
<td>Amblyopia</td>
<td>129</td>
</tr>
<tr>
<td>10</td>
<td>Keratocornus</td>
<td>110</td>
<td>Cornea Ulcer</td>
<td>115</td>
</tr>
<tr>
<td>No.</td>
<td>Disease</td>
<td>Number of cases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------------------------</td>
<td>-----------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Small Incision Cataract Surgery</td>
<td>734</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Phacoemulsification for cataracts</td>
<td>178</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Corneal injuries and related conditions</td>
<td>132</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Glaucoma</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Malignant Neoplasms</td>
<td>85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Pterygium</td>
<td>77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Hypertrophy of tonsils with hypertrophy of adenoids</td>
<td>72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Foreign Body in the Ear, Nose and Throat</td>
<td>61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Goitre</td>
<td>54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Retina conditions</td>
<td>51</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Surgical Operations**

The directorate performed a total of 2,342 surgeries over the period under review. The Eye Unit Department accounted for 75.32% of all surgical operations conducted in the Directorate in 2018. The figure below depicts surgical operations in EENT directorate for the period under review.

![Figure 43: Surgical Operations in EENT Directorate (2018)](image-url)
Trend in Surgical Operations

The number of surgeries conducted at the Eye and ENT Units have been inconsistent over the past five-year period. There were decreases in total number of surgeries performed in 2018 for both Eye and ENT Units. Figure 41 illustrates the trend in total surgical operations performed in the EENT Directorate since 2014.

![Figure 41: Trend in Total Surgical Operations, EENT Directorate, 2014-2018](image)

**Figure 44: Five-Year Trend in Total Surgeries Performed, EENT Directorate, 2014-2018**

Priority Activity 2: Sustain activities to reduce mortalities, especially maternal and neonatal deaths

The trend in mortality rate in the directorate has been decreasing since 2016. There was a decrease in mortality rate from 1.71% in 2017 to 0.91% in 2018 (see Figure 42).
Figure 45: Five-Year Trend in Mortality Rate in EENT Directorate, 2014-2018

Priority Activity 7: Support District and Regional Hospitals in the Northern Sector of Ghana by way of providing Outreach Services

In 2018, the directorate embarked on a number of outreaches programmes. A total of 1091 people were screened by the ENT Unit at various places and institutions visited. Table 24 below shows the areas visited and number of cases seen.

Table 25: Outreach Activities by ENT Department 2018

<table>
<thead>
<tr>
<th>Town/Location</th>
<th>Number Screened</th>
<th>Number Treated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kumasi Central Prisons</td>
<td>397</td>
<td>78</td>
</tr>
<tr>
<td>Kumasi Female Prisons</td>
<td>67</td>
<td>21</td>
</tr>
<tr>
<td>Manhyia Prisons</td>
<td>226</td>
<td>53</td>
</tr>
<tr>
<td>Techimantia</td>
<td>401</td>
<td>103</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1091</strong></td>
<td><strong>255</strong></td>
</tr>
</tbody>
</table>

During the same period, the Eye Unit performed 1,427 eye surgeries on their outreach visits.

Priority Activity 13: Support training of Staff

As part of staff capacity building efforts to improve service delivery at the directorate, the following training activities were achieved during 2018.
Four (4) Nurses from the Eye Unit were trained in the United States of America and Nepal.

One (1) Ophthalmologist was sponsored to participate in a 5 months retina surgery sub-specialisation training at the Tilganga Institute of Ophthalmology in Nepal.

Five (5) ENT Nurses were sponsored to participate in the 5th ENT Nurses’ Annual Conference and Scientific Session.

CHAPTER 13
DIRECTORATE OF ORAL HEALTH

The Oral Health Directorate provides both general and specialist care for diseases and ailments of the Oro-facial region. The directorate has four main sub-specialty areas:

- Oral Diagnosis & Community Dentistry
- Restorative Dentistry
- Orthodontic & Paedodontics
- Oral Maxillofacial Surgery

**Priority Activity 1: Increase the range of specialist services**

**Out-Patient Service (Attendance and Procedures)**

In 2018, a total of 21,278 representing 85.11% of the annual OPD attendance was recorded for the Directorate. The 2018 attendance is a 13.19% increase over the previous year’s attendance. Over the past five years, total attendance has seen a steady increase.

![Attendance Trend Graph](image)

*Figure 46: Five-Year Trend in Total OPD Attendance, Oral Health Directorate, 2014-2018*

Overall, a total of 22,684 outpatient procedures were performed, representing 81.01% of the annual target set of 28,000. Overall total annual OPD procedures performed has generally remained constant over the past five years with marginal decreases. See Figure 46.
Figure 47: Five-Year Trend in OPD Procedures Performed, Oral Health Directorate 2014-2018

Out-patients Procedures by Clinic

Out of the 22684 OPD procedures performed in the Directorate. Oral Diagnosis and Community Dentistry contributed 7400 (32.62%) of the total number followed by Oral Maxillofacial with 6621 procedures (29.19%). The pie chart in Figure 45 summaries the distribution of OPD procedures performed amongst sub-specialty areas in Directorate.
Figure 48: Distribution of OPD Procedures by Sub-Specialty, Oral Health Directorate 2018

In-Patient Services

The Directorate admitted a total 461 patients with 11 deaths recorded in 2018. The average length of stay was approximately 5 days. Total annual admissions steadily declined compared to 2017 (See Figure 48).

Figure 49: Trend in Admission at the Oral Health Directorate (2014-2018)
Top ten causes of admissions in 2018

Bilateral submandibular cellulitis/Ludwig’s angina was the leading cause of admissions in the year 2018. The top ten causes of admission constituted 76.57% of all admissions in the Directorate for the period. Table 27 indicates the top ten causes of admission for the year 2018.

Table 26: Top Ten causes of Admission, Oral Health Directorate, 2018

<table>
<thead>
<tr>
<th>No</th>
<th>Disease category</th>
<th>Number of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Bilateral submandibular cellulitis/Ludwig’s angina</td>
<td>78</td>
</tr>
<tr>
<td>2.</td>
<td>Orofacial fracture</td>
<td>45</td>
</tr>
<tr>
<td>3.</td>
<td>Cleft lip</td>
<td>36</td>
</tr>
<tr>
<td>4.</td>
<td>Cleft palate</td>
<td>32</td>
</tr>
<tr>
<td>5.</td>
<td>Cellulitis and abscess of mouth</td>
<td>31</td>
</tr>
<tr>
<td>6.</td>
<td>Ameloblastoma</td>
<td>30</td>
</tr>
<tr>
<td>7.</td>
<td>Malignant and parotid tumor</td>
<td>29</td>
</tr>
<tr>
<td>8.</td>
<td>Cellulitis of Face</td>
<td>27</td>
</tr>
<tr>
<td>9.</td>
<td>Cleft lip with cleft palate</td>
<td>23</td>
</tr>
<tr>
<td>10.</td>
<td>Developmental odontogenic cyst</td>
<td>22</td>
</tr>
</tbody>
</table>

Trend in Surgical Operations

A total of 710 surgeries were performed by the directorate in the year 2018 representing 78.89% of the expected output (900) and a reduction of 9.90% compared to 2017. There has been a sharp decline in surgeries since 2014 with exception of 2016. See Figure 49
Figure 50: Five Year Trend in Total Surgeries Operations, Oral Health Directorate 2014-2018

Priority Activity 5: Conduct operational research into emerging diseases

Two research activities are ongoing in the Directorate. These include a clinical evaluation of restoration of non-caries cervical tooth surface loss lesion with tooth coloured restorative material among patients attending Komfo Anokye Teaching Hospital and a study of cleft lip and palate deformities and genetics in African population.

Priority Activity 7

Support district and regional hospitals in the northern sector by providing outreach services

In 2018, the Directorate embarked on a number of outreach programs. A total of 3,788 persons representing 94.70% of the targeted 4000 people, were screened and those requiring further management for various oral issues were referred and managed appropriately.
CHAPTER 14
DIRECTORATE OF ANAESTHESIA AND INTENSIVE CARE

The Anaesthesia and Intensive Care directorate is responsible for the delivery of anaesthetic services for surgical patients through the provision of pre-operative, intra-operative and post-operative care services. The Directorate is also responsible for the management of the Theatre Recovery Wards and Intensive Care Units. Emergencies including cardiopulmonary resuscitation (CPR) as well as management of acute and chronic pain are also handled by the Directorate. The total staff strength of the Directorate in 2018 was 223.

Priority Activity 1: Increase the range of specialist services

Pre-Operative Clinic

In 2018, the Directorate targeted to have at least 90% of all elective surgical cases assessed. However, a total of 5,307 patients that booked for elective surgery were assessed at the pre-operative clinic representing 76.0% of the expected cases. Thus, the number of patients recorded in 2018 were 288 fewer than that of 2017.

The general trend for total pre-operative assessments conducted since 2014 has been fairly consistent with marginal variations as shown in Figure 50.

![Figure 51: Trend in Pre-Operative Cases in Directorate of Anaesthesia & Intensive Care (2014-2018)](image-url)
Intensive Care and Theatre Recovery Services

The Anaesthesia and Intensive Care Directorate provides services in the intensive care and theatre recovery units. The Hospital’s intensive Care Units are equipped with staff and special equipment to provide care for patients who are seriously ill or injured. The recovery wards are reserved to provide post-surgical or post-procedure care for patients who have had surgery or diagnostic procedures requiring anaesthesia or sedation.

Critical Care

A total of 259 critically ill patients with life-threatening conditions were managed in 2018. This represents 86.3% of the target of 300 set for the year. The trend of utilization of critical care service in the hospital has also been inconsistent over the five-year period with 2017 recording the least. (See Figure 51).

![Figure 52: Trend of Critical Care Patients Managed in Directorate of Anaesthesia & Intensive Care (2014-2018)]
Administration of Anaesthesia

In the year under review, 12,488 patients were administered with various forms of anaesthesia. This denotes 104.1% of the expected 12,000 patients to be anaesthetized. See Figure 52.

![Figure 53: Trend in Total Anaesthesia Administration, Directorate of Anaesthesia & Intensive Care (2014-2018)](image)

Post-operative Care

In 2018, a total of 11,643 patients received post-operative care representing 97.0% of the 12,000 cases estimated by the Directorate for 2018. However, the total achieved is an increase of 8.2% over the previous year’s performance. Figure 53 illustrate the inconsistent trend in post-operative care service utilization for the past five years.
Figure 54: Five-Year Trend in Post-operative Care Utilization, Anaesthesia Directorate, 2014-2018

Anaesthetic activities by Theatres

In 2018, NAKSA theatre recorded the highest (34.58%) of all anaesthetic procedures undertaken in the Hospital. Obstetrics and Gynaecology Special Ward Theatre recorded the least, representing 2.24%. For the year under review, the most common type of anaesthesia administered to patients was general anaesthesia which contributed 48.01% of all anaesthesia administered as shown in the table below.
Table 27: Top ten causes of Admission, Oral Health Directorate, 2018

<table>
<thead>
<tr>
<th>Theatres</th>
<th>General Anaesthesia</th>
<th>Spinal Anaesthesia</th>
<th>Regional Block</th>
<th>Local Anaesthesia</th>
<th>Total No. of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly Theatre</td>
<td>848</td>
<td>0</td>
<td>0</td>
<td>22</td>
<td>870</td>
</tr>
<tr>
<td>Main Theatre</td>
<td>2525</td>
<td>743</td>
<td>6</td>
<td>140</td>
<td>3,414</td>
</tr>
<tr>
<td>NAKSA Theatre</td>
<td>724</td>
<td>3,134</td>
<td>3</td>
<td>121</td>
<td>3,982</td>
</tr>
<tr>
<td>A&amp;E Theatre</td>
<td>1,028</td>
<td>926</td>
<td>187</td>
<td>77</td>
<td>1,228</td>
</tr>
<tr>
<td>Eye Theatre</td>
<td>394</td>
<td>0</td>
<td>0</td>
<td>1,368</td>
<td>1,762</td>
</tr>
<tr>
<td>O&amp;G Special Theatre</td>
<td>9</td>
<td>235</td>
<td>0</td>
<td>14</td>
<td>258</td>
</tr>
<tr>
<td>Total</td>
<td>5,528</td>
<td>5038</td>
<td>196</td>
<td>1,742</td>
<td>11,514</td>
</tr>
</tbody>
</table>

Priority Activity 2: Sustain activities to reduce mortalities, especially maternal and neonatal deaths

As parts of efforts to improve clinical care and patient outcomes, the directorate organized fifty-one (51) clinical and quality assurance meetings in the year under review. In addition to these, the directorate held twelve (12) mortality and critical incidents meetings.

Trend in Mortality Rate

Almost all mortalities recorded in the Directorate occur on the Intensive Care Units. The ICU’s recorded a total of 101 deaths for the year under review. There has been a consistent rise in the ICU annual mortality rate since 2014 except for a slight reduction in 2017. See Figure 54.
Figure 55: Five-Year Trend in Annual Mortality Rates, Intensive Care Units, Anaesthesia Directorate, 2014-2018

Priority Activity 13: Support training of Staff

In developing and strengthening its human resource capacities, the Directorate undertook the following activities;

➢ In service training was organized for newly posted Nurses to the Directorate.
➢ Refresher course was organized for Recovery Ward Nurses
➢ Three (3) Staff were sponsored for a Degree Program in Critical Care Nursing at Korle-Bu Teaching Hospital.

Additionally, the Directorate was maintained as a centre for training of Doctors in ultrasound guided nerve block by the Federation of Societies of Anaesthesiologists.
Priority Activity 14: Conduct Operational Research

The directorate conducted two (2) operational researches in the year under review as follows:

- Anaesthesia Capacity in Ghana: A teaching hospital’s resources and the national workforce and education
- The incidence of ARDS in intubated patients at KATH
CHAPTER 15
DIRECTORATE OF OBSTETRICS & GYNAECOLOGY

The Obstetrics and Gynaecology Directorate is mandated to provide high quality women’s health while conducting teaching, training and research. The directorate offers Out-patient services in Obstetrics and Gynaecology, Family Planning, and Neonatal Sickle Cell screening. Additionally, there are four labour wards in the directorate:

- A&E Special Ward
- A5 staff delivery
- High Dependency Unit
- NAKSA labour ward

There are three operating theatres for emergency and elective surgeries namely: NAKSA, A&E Special Ward theatres and the Gynaecology Theatre at the Main Theatre block. The Directorate also provides other services including ultrasound scans, foetal assessments, antenatal, postnatal, sexual and reproductive health counselling as well as pharmacy services.

Priority Activity 1: Increase the range of specialist services

Ultrasound Services

In 2018, the ultrasound centre of the Directorate performed 4,839 scans. Even though this was less than the figure for 2017, this 4,839 cases was more than was targeted, representing 20% over the target for 2018.

Cervical Screening, Laparoscopy and Colposcopy Services

A total of forty - one (41) patients received laparotomy procedures as against 64 patients in 2017. For the same period, two hundred and six (206) patients went through cervical screening and fifteen (15) for colposcopy procedures.
Out-Patient (OPD) Services

A total OPD attendance of 41,532 was recorded for the Directorate in 2018. This represents 98.88% of the expected output for the year. This comprises OPD attendance for CR8 and Family Planning Unit.

Trend Analysis of OPD Utilization

Generally, there has been a fluctuating trend in the OPD attendance for the directorate since 2014. The total attendance recorded for 2018 is the least annual figure over the past five years. (See Figure 55).

![Figure 56: Trend in OPD Service Utilization, O&G Directorate, 2014-2018](image)

In-patient Services

The directorate admitted 13,488 patients, representing 3.75% more admission than the year’s target of 13,000. The bed complement for the directorate was 170. The average turnover per bed was 79 patients, compared to 81 for the previous year and the turnover interval (in days) was 1.3. The average daily bed occupancy was 121 compared to 138 in the previous year.
Trend Analysis of In-patient services

Over the past five-year period (2014-2018), the Directorate has recorded a consistent decline in admissions with a marginal increase in 2018. Figure 56 details the trend of admissions in Obstetrics & Gynaecology Directorate (2014-2018)

![Figure 56: Trend of admissions in Obstetrics & Gynaecology Directorate (2014-2018)](image)

Figure 57: Trend of admissions in Obstetrics & Gynaecology Directorate (2014-2018)

Obstetrics Services

A total of 8,117 deliveries were recorded in the directorate in the year under review, representing 96.63% of the year’s target and a decrease of 3.80% compared to 2017’s performance. Total deliveries has consistently declined over the past five years with 2018 recording the lowest in the period. Over the same period, caesarean section rates have consistently been on the rise from 34% in 2014 to over 40% in 2018. A breakdown and comparison of obstetric performance for the past five years is presented in Table 29.
Table 28: Five-Year Trend in Obstetric services Statistic, O&G Directorate, 2014-2017

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total deliveries</td>
<td>10,031</td>
<td>9,653</td>
<td>9,653</td>
<td>8438</td>
<td>8117</td>
</tr>
<tr>
<td>Male</td>
<td>4,869</td>
<td>5,042</td>
<td>5,042</td>
<td>4411</td>
<td>4393</td>
</tr>
<tr>
<td>Female</td>
<td>4,707</td>
<td>4,993</td>
<td>4,993</td>
<td>4442</td>
<td>4144</td>
</tr>
<tr>
<td>Still Births</td>
<td>408</td>
<td>384</td>
<td>384</td>
<td>403</td>
<td>337</td>
</tr>
<tr>
<td>Live Births</td>
<td>9,168</td>
<td>9,651</td>
<td>9,651</td>
<td>8450</td>
<td>8200</td>
</tr>
<tr>
<td>Weights Over 2.5kg</td>
<td>6,525</td>
<td>6,571</td>
<td>6,571</td>
<td>5343</td>
<td>5521</td>
</tr>
<tr>
<td>Weights Below 2.5kg</td>
<td>3,051</td>
<td>3,464</td>
<td>3,464</td>
<td>3510</td>
<td>3016</td>
</tr>
<tr>
<td>Caesarean Section</td>
<td>3456</td>
<td>3357</td>
<td>3,357</td>
<td>3256</td>
<td>3271</td>
</tr>
<tr>
<td>Caesarean Section Rate</td>
<td>34.45%</td>
<td>34.78%</td>
<td>34.78%</td>
<td>38.59%</td>
<td>40.29%</td>
</tr>
</tbody>
</table>

Trend in Deliveries

Deliveries have declined consistently over the past five years (see Figure below).

Figure 58: Trend in Deliveries in Obstetrics & Gynaecology Directorate (2014-2018)
Surgical Operations

A total of 6158 surgical cases were conducted in the year 2018. This represents 87.97% of the year’s target and a decrease of 4.53% compared to 2017. The Directorate performed 4091 (66.43%) major and 2067 (33.57) minor surgeries.

![Distribution of Surgical Operations in Obstetrics & Gynaecology Directorates, 2018](image)

Figure 59: Distribution of Surgical Operations in Obstetrics & Gynaecology Directorates, 2018

Trend in Theatre Utilization

There has been a fluctuating trend in the number of major surgeries over the five-year period. However, minor surgeries recorded a continuous decline except for 2018 which recorded a slight increase (see Figure below).
Family Planning

In 2018, the Family Planning Unit recorded a total of 7,443 attendance. There has been generally an inconsistent trend in attendance over the past five years (see Figure below).

Figure 60: Trend in Major and Minor Surgeries, O&G Directorate, 2014-2018

Figure 61: Family Planning Attendance, Obstetrics & Gynaecology Directorate (2014-2018)
Family Planning Method Utilization

In 2018, the most commonly accessed family planning method was male condoms. Male condoms recorded a significantly high patronage in the year under review compared to the other family planning methods. (see Figure 61).

![Family Planning Method Utilization Chart]

**Figure 62: Utilisation of Family Planning Methods, Obstetrics & Gynaecology Directorate, 2018**

**Priority Activity 2: Sustain activities to reduce mortalities, especially maternal and neonatal deaths**

Twelve (12) monthly maternal mortality meetings were conducted and all the deaths that occurred within the period were audited.
**Trend analysis of Mortalities**

There has been an overall increasing trend in the number of death (maternal and non-maternal) recorded by the O&G Directorate over the past five years. The year under review recorded a steep increase in the total number of mortalities (See Figure below)

![Graph showing trend in total mortality](image)

**Figure 63: Trend in Total Mortality (Maternal and Non-Maternal), Obstetrics & Gynaecology Directorate, (2014-2018)**

**Trend in Maternal Death Ratio**

Even through maternal mortality ratio saw a decline from 2014 to 2016, there has been a steady rise since 2017. The year recorded a maternal mortality ratio of 1,500 per 100,000 live birth compared to 1,207 per 100,000 live births in 2017
Figure 64: Trend in Maternal Mortality Rate (2014-2018)

Top Ten Causes of Maternal Deaths

In the year under review, Haemorrhage and Hypertension-Related disease (Eclampsia/pre-Eclampsia) contributed 26.83% and 26.02% respectively to maternal mortalities in the Directorate. The Top three major causes of maternal death account for almost two-third (>62% of all maternal death)

Table 29: Causes of Maternal Deaths in Obstetrics & Gynaecology Directorate, 2018
<table>
<thead>
<tr>
<th>Disease Category</th>
<th>Number of Deaths</th>
<th>Proportion of Total Number of Maternal Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemorrhage</td>
<td>33</td>
<td>26.83</td>
</tr>
<tr>
<td>HPT-Related disease (Eclampsia/Pre-Eclampsia)</td>
<td>32</td>
<td>26.02</td>
</tr>
<tr>
<td>Sepsis</td>
<td>13</td>
<td>10.57</td>
</tr>
<tr>
<td>SCD Related</td>
<td>7</td>
<td>5.69</td>
</tr>
<tr>
<td>Liver Diseases</td>
<td>6</td>
<td>4.88</td>
</tr>
<tr>
<td>HIV related</td>
<td>4</td>
<td>3.25</td>
</tr>
<tr>
<td>Abortion-Related</td>
<td>4</td>
<td>3.25</td>
</tr>
<tr>
<td>Meningitis</td>
<td>3</td>
<td>2.44</td>
</tr>
<tr>
<td>HIV-Related</td>
<td>2</td>
<td>1.63</td>
</tr>
<tr>
<td>Disseminated Intravascular Coagulopathy (DIC)</td>
<td>2</td>
<td>1.63</td>
</tr>
<tr>
<td>Kidney Diseases</td>
<td>2</td>
<td>1.63</td>
</tr>
<tr>
<td>Others</td>
<td>15</td>
<td>12.20</td>
</tr>
</tbody>
</table>

**Maternal Deaths by Time after Admission**

The time of death for all maternal mortality recorded was assessed. About 41% of all maternal mortalities in the Directorate occurred within 24 hours of admission, Forty-three (43%) percent after 48- hours of admission with only 16% occurring between 24 and 48 hours.
Figure 65: Distribution of Maternal Deaths by Time of Occurrence after Admission: Obstetrics & Gynaecology Directorate, 2018

Priority Activity 13: Support training of Staff

Three (3) doctors and four midwives enrolled for fellowship training with their respective professional postgraduate colleges. Twelve doctors and sixty house officers were trained in basic ultrasound. Two nurses were trained in critical nursing and six midwives received training in perioperative nursing.
CHAPTER 16
ONCOLOGY DIRECTORATE

The directorate offers specialised care in the prevention and management of primary, secondary and tertiary cancer conditions. The directorate provides the following Specialist OPD Clinics:

- Radiation Oncology
- Medical Oncology
- Haematology
- Hepatitis

It also runs a multidisciplinary session for patients that require specialists from other disciplines.

The directorate provides the following treatments to patients:

- Chemotherapy
- Brachytherapy
- Radiotherapy

The Directorate has a Staff strength of 61.

**Priority Activity 1: Increase the range of specialist services**

**Out-Patient Services**

In 2018, a total of 9,832 outpatients were seen. This was 3.11% less than the previous year’s OPD attendance. Radiotherapy constituted 82% of the total out-patients seen in the year 2018. A total of 631 patients were seen at Multidisciplinary clinic. See Figure below.

![Pie Chart](image_url)

**Figure 66: OPD Services Utilization by Sub Specialty Clinic, Oncology Directorate 2018**
Trend in OPD Utilization 2014–2018

OPD attendance for the Directorate has witnessed a gradual increase since 2014 even though there was a slight decline in 2018 compared to 2017 (see Figure below).

![Trend in OPD Attendance in Oncology Directorate (2014-2018)](image)

**Figure 67: Trend in OPD Attendance in Oncology Directorate (2014-2018)**

Comparative Analysis of Treatment Options for Cancer Conditions

The Directorate offered the following treatment options over the period:

- Teletherapy sessions
- Chemotherapy sessions
- Brachytherapy sessions

In the period under review, the Directorate provided a total of 7,597 treatment sessions to patients. Teletherapy accounted for 68.57% of all the treatment sessions given by the directorate. The trend for Teletherapy treatment has been inconsistent over the past five years. The number of chemotherapy sessions showed 16.02% rise over the previous year. Brachytherapy contribution to the various treatment sessions in 2018 was 0.17%. See Figure below.
Figure 68: Comparative Analysis of treatment given in Oncology Directorate (2014-2018)

Top ten (10) Cancers by Site, 2018

In 2018, breast cancers constituted 41.49% of top 10 most common cancers recorded in the Hospital. The chart below gives details of the composition of all top ten cancer cases by site recorded in the directorate.
Priority Activity 7: Support district and regional hospitals in the northern sector of Ghana, by way of providing outreach services

The directorate organized a number of outreaches in the year under review. Table below gives details of the directorate’s outreach activities for 2018.

**Figure 69: Top ten Cancers treated, Oncology Directorate (2018)**

**Table 30: Outreach activities, Oncology Directorate 2018**

**Priority Activity 13: Support training of Staff**

<table>
<thead>
<tr>
<th>Place /Activity</th>
<th>Number Screened</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mothers’ Day Celebration- Luv FM (Breast cancer screening)</td>
<td>98 screened, 2 suspected cases detected</td>
</tr>
<tr>
<td>Annual Breast Cancer Awareness Walk</td>
<td>191 screened, 9 suspected cases detected.</td>
</tr>
<tr>
<td>Adom Mbrosa Cold Store (Breast Cancer screening)</td>
<td>110 fish sellers screened, 5 suspected cases detected.</td>
</tr>
</tbody>
</table>
Some staff were trained in the underlisted areas:

❖ Medico-Legal Issues in Health
❖ The Use of anticoagulant in the management of DVT
❖ Physical assessment (Zoladex Administration)
❖ Malignant Hematopoiesis (Leukemias)
❖ Lymphomas
❖ Treatment planning before radiotherapy
❖ Oncology Emergencies

For Residency programmes, three nurses enrolled at Ghana College of Nurses and Midwives and five doctors at the Ghana College of Physicians and Surgeons.
The Directorate provides a 24-hour specialized and primary care services and also offers specialized physical therapeutic care for outpatients and inpatients to promote and restore health. Services such as Palliative Care, Medical Examination, In-patient care, Staff Clinic, Chronic Care, Wound Dressing, Casualty procedures and minor surgeries are accessible at the directorate. The directorate also runs Multidisciplinary Rehabilitation and Specialist Family Medicine Clinics.

The total staff strength stood at 193 for 2018.

**Priority Activity 1: Increase the range of specialist services**

**Out-Patient Services (Primary and Specialist Care)**

A total of 84,912 OPD attendance was registered in the directorate in 2018. This comprises of 77,384 primary care visits (112% of primary care target) and 7,528 specialist care visits (89% of specialist care target) for the year.

**Trend Analysis in Total OPD Services (Primary and Specialist Care)**

Following an initial decline between 2014 and 2015, total OPD attendance has gradually increased since 2016 with 2018 recording a 12.3% increase over 2017 OPD attendance (see chart below)

![Figure 70: Trend in OPD services (Primary and Specialist Care) in Family Medicine Directorate (2014-2018)](chart)

**Other Services at Family Medicine Directorate**

Over the year, conducted 52 people accessed medical examination services representing 26% of the expected output for the year. For the same period, a total of 129 patients were given Palliative Care services in the Directorate. The Rehabilitation clinic was strengthened and saw 392 patients,
representing 57% over the set target. The table below provides details of other services offered by the directorate during 2018.

**Table 31: Other Services by Family Medicine Directorate, 2015-2018**

<table>
<thead>
<tr>
<th>Services</th>
<th>2015 Output</th>
<th>2016 Output</th>
<th>2017 Output</th>
<th>2018 Target</th>
<th>2018 Output</th>
<th>% of Target Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casualty procedures (Suturing/I&amp;D- Incision and drainage)</td>
<td>135</td>
<td>266</td>
<td>51</td>
<td>280</td>
<td>45</td>
<td>16.07%</td>
</tr>
<tr>
<td>Wound dressing clinic</td>
<td>13</td>
<td>1460</td>
<td>2,883</td>
<td>2,000</td>
<td>3,390</td>
<td>169.50%</td>
</tr>
<tr>
<td>Medical Examinations</td>
<td>376</td>
<td>336</td>
<td>346</td>
<td>200</td>
<td>52</td>
<td>26.00%</td>
</tr>
<tr>
<td>Palliative Care Services</td>
<td>28</td>
<td>155</td>
<td>84</td>
<td>150</td>
<td>129</td>
<td>86.00%</td>
</tr>
<tr>
<td>Rehabilitation Clinic</td>
<td>-</td>
<td>139</td>
<td>189</td>
<td>250</td>
<td>390</td>
<td>156.00%</td>
</tr>
</tbody>
</table>

**Top Ten OPD Conditions in Family Medicine Directorate, 2018**

The top 10 most common OPD diagnoses accounted for more than half (53.2%) of all OPD attendance seen for the year. Hypertension ranked highest for OPD attendance at the directorate, accounting for 39.29 % of OPD attendance attributable to the top 10 conditions seen.

**Table 32: Top Ten Conditions Seen in the Adult OPD- Family Medicine Directorate, 2018**

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Number of attendance</th>
<th>Proportion of total OPD Attendance (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Hypertension</td>
<td>17,752</td>
<td>39.29</td>
</tr>
<tr>
<td>2 Diabetes Mellitus</td>
<td>5,507</td>
<td>12.19</td>
</tr>
<tr>
<td>Rank</td>
<td>Diagnosis</td>
<td>Number Of Cases/Episodes</td>
</tr>
<tr>
<td>------</td>
<td>---------------------------------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Upper Respiratory/Respiratory Tract Infection (URTI/RTI)</td>
<td>2,133</td>
</tr>
<tr>
<td>2</td>
<td>Malaria</td>
<td>1,441</td>
</tr>
<tr>
<td>3</td>
<td>Gastroenteritis/Diarrhoea</td>
<td>653</td>
</tr>
<tr>
<td>4</td>
<td>Sepsis</td>
<td>627</td>
</tr>
<tr>
<td>5</td>
<td>Urinary Tract Infection (UTI)</td>
<td>482</td>
</tr>
<tr>
<td>6</td>
<td>Dermatitis</td>
<td>303</td>
</tr>
<tr>
<td>7</td>
<td>Anaemia</td>
<td>284</td>
</tr>
<tr>
<td>8</td>
<td>Conjunctivitis</td>
<td>274</td>
</tr>
</tbody>
</table>

Amongst children, the commonest causes of OPD attendance were Upper Respiratory Tract Infection followed by Malaria. The top two commonest diagnoses (UTI and Malaria) accounted for over 54% of the total attendance attributable to the top 10 common causes of OPD attendance for children.

Table 33: Top Ten causes of OPD attendance in children (0-12 years), Family Medicine Directorate, 2018
Trend in Admissions

The general trend in in-patient admissions has been on the decline even though the total admissions for 2018 was only marginally less than 2017.

**Figure 71: Trend in admissions in Family Medicine Directorate, 2014-2018**

The Family Medicine Ward has a bed compliment of 22. In 2018, the average length of stay for in-patients was 3 days and the mortality rate was 3.23%. Further in-patient statistics is presented in the table below.

**Table 34: Bed State Statistics, Family Medicine Directorate, 2018**
<table>
<thead>
<tr>
<th>BED STATE CHARACTERISTICS</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BED COMPLEMENT</td>
<td>22</td>
</tr>
<tr>
<td>ADMISSIONS</td>
<td>1588</td>
</tr>
<tr>
<td>DISCHARGES</td>
<td>1380</td>
</tr>
<tr>
<td>DEATHS</td>
<td>46</td>
</tr>
<tr>
<td>MORTALITY RATE (%)</td>
<td>3.23</td>
</tr>
<tr>
<td>PATIENT DAYS</td>
<td>4408</td>
</tr>
<tr>
<td>AVERAGE DAILY BED OCCUPANCY</td>
<td>12.08</td>
</tr>
<tr>
<td>AVERAGE LENGTH OF STAY</td>
<td>3.09</td>
</tr>
<tr>
<td>TURN OVER INTERVAL (DAY)</td>
<td>2.54</td>
</tr>
<tr>
<td>TURN OVER PER BED</td>
<td>64.82</td>
</tr>
</tbody>
</table>

The Directorate operates the Family Medicine Ward which typically only offers adult in-patient services. During 2018, the top causes of admissions in the Family Medicine Directorate were hypertension and diabetes, followed by sickle cell anaemia and malaria as a show in the table below.

**Table 35: Top ten causes of Admissions, Family Medicine Directorate**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Diagnosis</th>
<th>Number of Cases/Episodes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hypertension</td>
<td>317</td>
</tr>
<tr>
<td>2</td>
<td>Diabetes Mellitus</td>
<td>230</td>
</tr>
<tr>
<td>3</td>
<td>Sickle Cell</td>
<td>151</td>
</tr>
<tr>
<td>4</td>
<td>Malaria</td>
<td>121</td>
</tr>
<tr>
<td>5</td>
<td>Anaemia</td>
<td>75</td>
</tr>
<tr>
<td>6</td>
<td>Gastroenteritis/Diarrhoea</td>
<td>56</td>
</tr>
</tbody>
</table>
For the year under review, a total of 46 mortalities were recorded. The most common cause of mortality was Sepsis followed by Chronic Kidney Disease and Hepatic Encephalopathy. The top ten causes of in-patients mortality at the Family Medicine Directorate is presented below.

**Table 36: Top Ten causes of Mortality, Family Medicine Ward, Family Medicine Directorate, 2018**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Diagnosis</th>
<th>Number of Cases/ Episodes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sepsis</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Chronic Kidney Disease</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Hepatic Encephalopathy</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>HIV and HIV-Related Complication</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Malignancy (Breast, Gastric, Haematological)</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Severe Anaemia</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>Gastroenteritis</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>Severe Pneumonia</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Heart Failure</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>Severe Hypertension</td>
<td>1</td>
</tr>
</tbody>
</table>

Over the past three years, in-patient mortality rate at the Directorate have seen an increase. Mortality rate for the year 2018 was 2.9 representing a 76% increase over 2017, This could be in part due to mortality from palliative care patients who are primarily nursed to be comfortable and face death in a dignified manner. Additionally, congestion at other areas of the Hospital means that there has been increasing complexity in the types of cases that have to be handled at the Family Medicine Ward, suggesting the need to improve infrastructure and equipment to ensure better patient outcomes at the ward.
**Physiotherapy Unit**

The unit offers care in physical therapeutic care for out-patients and in-patients to promote and restore health. In, 2018, the Unit engaged the services of an occupational therapist to provide a more comprehensive care. Services offered include: OPD Rehabilitation, Clubfoot, Cardiopulmonary Rehabilitation, OPD Electrotherapy, Cerebral Palsy, Back Care, Child Health, Gymnasium and Hand Therapy. Table 32 gives a summary of the various planned activities, targets and performance of the unit in 2018.

**Table 37: Summary of Activities of Physiotherapy Unit, Family Medicine Directorate 2018**

<table>
<thead>
<tr>
<th>Planned activities</th>
<th>Target</th>
<th>Performance</th>
<th>% target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment and Rehabilitation of inpatient and OPD cases</td>
<td>1,550 new in-patients 6500 old in-patients assessed and rehabilitated 2,100 new OPD cases to be seen 19,000 old OPD cases to be seen</td>
<td>1,151 new in-patients seen 4,724 old in-patients assessed and rehabilitated 1,760 new OPD cases seen 15,936 old OPD cases seen</td>
<td>74% 73% 84% 84%</td>
</tr>
<tr>
<td>Provide services for Children with Clubfoot</td>
<td>120 new clubfoot patients to be evaluated and managed. 1,400 Clubfoot weekly attendance to be evaluated and managed</td>
<td>165 New Clubfoot patients evaluated and managed 1,415 weekly clubfoot attendance and managed</td>
<td>138% 101%</td>
</tr>
</tbody>
</table>

**Trend of Physiotherapy Outpatient services 2014 - 2018**
In 2018, the unit recorded decreases in both new and old OPD cases. The general trend in attendance of old OPD cases has generally been declining. Following an initial dip in 2016 however, the total annual attendance has remained relatively constant. On the other hand, total attendance recorded for new OPD cases has been fairly consistent over the 5-year period (see Figure 71).

**Figure 72: Trend of OPD services -Physiotherapy Unit, Family Medicine Directorate 2014-2018**

**Trend in- Patient Services at the Physiotherapy Unit**

In patient services include rehabilitation of patients with acute and chronic conditions such as stroke, fractures, cancers and any patient who has reduced mobility/function admitted to any ward and has been referred for assessment. Management focuses on preventing complications, reducing discomfort and pain and restoring health through physical rehabilitation. The unit conducted 5,875 in-patient visits, comprising 4,724 and 1,151 old and new visits respectively in 2018. Over the past five-years, the trend for new in-patient referred to the Unit recorded its highest value in 2017 but declined slightly in 2018. The trend for in-patient visits for old cases recorded its lowest value in 2016, as illustrated in the chart below.
Figure 73: Comparative Analysis of In-patient Service Utilization, (Physiotherapy Unit), Family Medicine Directorate 2014-2018

Priority Activity 13: Support training of Staff

The following were the training programs and conferences attended during the year 2018:

- Customer Care Workshop for all staff of the directorate.
- Occupational Health and Safety workshop.
- Posture and Back pain Workshop
- LHIMS training for selected staff of the directorate.
- One fellowship and eight membership candidate their training and passed their exit examinations in Family Medicine
The Laboratory Services Directorate is one of the newly created clinical directorates which was decoupled from the Diagnostics Directorate is made up of the following major departments:

- Microbiology
- Biochemistry
- Haematology
- Pathology

The directorate is mandated to undertake all laboratory investigations and mortuary services within the Hospital.

**Priority Activity 4: Continue the provision of advanced diagnostic services**

During the year under review, the directorate planned to further scale up diagnostic services. To achieve this priority, some of the major inputs at the Directorate included Providing Refrigerated centrifuge and Developing comprehensive standard operational procedures for all units

**Trend Analysis of Aggregated Laboratory Services**

In 2018, the directorate carried out 284,030 laboratory tests. This represents a decrease of 11.22% compared to the 2017 performance. However, the Directorate achieved 75.95% more than its planned target of 161,422 for the year. The trend in the various laboratory services in the Hospital has been on a decline over the past five years. Figure 73 below shows the performance of the various laboratory services.
Figure 74: Trend Analysis of Aggregated Laboratory services, Laboratory Services Directorate, 2014-2018

Trend Analysis of Various types of laboratory Services

Generally, services such as Biochemistry, Haematology, Bacteriology and Serology have experienced some upward trend in recent years whilst Parasitology and Histopathology services remained stagnant or even declined. Over the past five years, Biochemistry and Haematology services have continued to form the bulk of total laboratory services rendered in KATH. The chart below details a breakdown of the various laboratory services over the past five years.
Figure 75: Comparative Analysis of Laboratory performance by departments, 2014-2018

Pathology Services

In 2018, the directorate provided the following pathological services.

![Pathology Services Chart]

Figure 76: Pathology Services: Laboratory Services Directorate, 2018
Priority Activity 13: Support training of Staff

In 2018, Six (6) resident doctors were admitted for training in Pathology. One (1) Biomedical scientist was also trained in lab (Toxicology).
CHAPTER 19
RADIOLOGY DIRECTORATE

INTRODUCTION
The Radiology Directorate was previously part of the Diagnostics Directorate but became an independent Directorate in 2018. The Directorate aims to offer prompt, efficient and advanced quality radiology services to clients in KATH and beyond.

The main services offered by the Directorate include:

➢ Computed Tomogram (CT)
➢ Magnetic Resonance Imaging (MRI)
➢ Ultrasound
➢ Plain X-ray
➢ Orthopantomogram (OPG)
➢ Radiological Interventions
➢ Fluoroscopy services
➢ Radiology reports

Priority Activity 4: Continue the provision of advanced diagnostic services

During the 2018, the Directorate rendered a total of 51,318 radiological services against the period target of 51,669, representing a 99.32% achievement of annual target set for 2018. Following a general decline in radiology services between 2014 and 2016, the annual aggregated services have seen a gradual increase since 2017. The 2018 figure of 51,318 represent a 4.2% increment over 2017 figures See graphical representation below.
When disaggregated, X-Ray, MRI and Fluoroscopy services did not fully achieve their set targets, whilst targets for CT, Ultrasound and Radiology Reports were achieved or exceeded.

Following a general decline in radiology services between 2014 and 2016, the aggregated services have seen a gradual increase since 2017. The 2018 figure of 51,318 services represents a 4.2% increment over 2017 figures. (see chart below)
Priority Activity 14: Conduct Operational Research

For the year 2048, staff of the Directorate continued to expend themselves on operational research to improve services and for professional advancement. The achievements of the Directorate in this regard are summarized below.

- 3 individual publications done
- One research ongoing
- 3 research topics at proposal level
- 5 research topics identified for development into a proposal
CHAPTER 20

TRAUMA AND ORTHOPAEDICS DIRECTORATE

This Trauma and Orthopaedics Directorate is mandated to provide specialist Out-Patient services, Surgical Operative services, In-Patient services and minor procedures (POP services) in Trauma and Orthopaedics.

Priority Activity 1: Increase the range of specialist services

During the year under review, the directorate management team, planned to improve on their existing services.


During the year under review the Directorate recorded a total OPD attendance of 11,491. This comprises cases seen in CR9 and Clubfoot cases. This represents an increase of 16.75% compared to the 2017 performance. The year’s performance also represented a 20.96% increase of the targeted output of 9,500 set for the period. The Directorate has seen a consistent decline in the OPD performance since 2014 but recorded a sharp increase for the year under review. This is shown in the figure below.
Trend of clubfoot cases (2014-2018)

During the year 2018, a total of 1,545 club foot cases were recorded. This comprises of 1,398 continuing (old) cases and 147 new cases. The total number of cases seen represents an increase of 15.82% compared to the previous year’s performance. The number of continuing cases and new cases increased by 15.52% and 18.55% respectively, compared to their 2017 performance. The performance of the clubfoot clinic over the past five years is illustrated in the chart below.

Figure 79: Trend in OPD Attendance, Trauma and Orthopaedics, 2014-2018
In-Patient Services

For 2018, the Directorate operated with a total bed complement of 90. Average length of stay for the year under review was 22 days. Percentage Bed occupancy recorded a decreased from 79.51% to 75.44%. A total of 1200 admissions were recorded which represented a decrease of 5.96% compared to the previous year’s performance of 1,276.

Trend Analysis of In-patient Admissions 2014 – 2018

Over the past five years, total annual in-patient admissions have recorded a gradual with a slight increase recoded in 2016. The year under review recorded a marginal decrease over 2017.
Figure 81: Trend in Admissions in Trauma and Orthopaedics Directorate, 2014-2018

The figure above shows a five-year trend analysis of admissions at the directorate. The figure shows an inconsistent trend over the last five years. The performance for the year under review decreased.

**Surgical Operations**

In 2018, the directorate performed a total of 1,414 major surgeries. This comprised of 911 elective surgeries, 287 emergencies, 195 paediatric trauma and 21 hand surgeries. The pie chart below presents a breakdown of the distribution major surgeries performed during the year.
Figure 82: Distribution of Major Surgical Operations in Trauma and Orthopaedics Directorate, 2018

Trend in Surgical Operations

The trend in surgical operations for the past five (5) years is shown in Figure 77 below. There has been a general declining trend in the total number of surgeries performed in the Directorate annually, even though 2018 registered a marginal increase of 6.8% over 2017 performance.
Figure 83: Five-Year Trend in Surgical Operations in Trauma and Orthopaedics Directorate, 2014-2018

Priority Activity 2: Sustain activities aimed at reducing mortality

The Directorate continued its routine mortality audit during the year under review. The mortality rate for the Directorate has been inconsistent with marked fluctuations, year to year. Over the past five-year period, the year under review recorded the highest mortality of 1.89%.
Priority Activity 13: Support training of Staff

During the year under review, the directorate continued to collaborate with AO Alliance Foundation, American Association of Orthopaedics Surgeons’ (AAOS), Health Volunteers Overseas (HVO), SIGN Fracture Care International, University of Utah Orthopaedic Department, EGOT/UCSF, and the University of California Orthopaedics Department to train staff at the directorate.

Four (4) Trauma/Orthopaedic doctors and eight (8) nurses are currently undergoing training. Two (2) training programs, non-operative and basic operative surgeries, were organized for doctors, nurses, physiotherapists and physician assistants at the regional, district and other government health institutions. The training was organized in collaboration with AO Alliance Foundation. Five (5) international conferences were attended by staff of the Directorate in Canada, USA, UAE, and Switzerland. One hundred and seventy-three (173) staff out of a targeted number of 181 were trained in nine different areas.
CHAPTER 21
EMERGENCY MEDICINE DIRECTORATE

The directorate provides a 24-hour emergency medicine services and has its mandate in the following four areas:

- Emergency care
Training

Research

Support Primary and Secondary Health institutions and national disaster/emergency assignments

The directorate operates with the following working units:

- Triage/Screening room; Red, Orange and Yellow zones
- Clinical Decision Units – Male, Female and Paediatrics.
- Minor procedure room

**Priority Activity 3: Continue to support emergency services**

During the year 2018, a total of 18,865 emergencies were recorded which represent 4.81% more than the target of 18,000. Patients continue to stay beyond the 24-hour limit in the emergency unit due to shortage of patient beds at the main wards. This has continued to result in congestion at the main emergency floor of the Directorate.

The Directorate recorded 10,319 medical emergencies as compared to 6,061 Trauma/surgical emergencies.
Trend in Emergency Services Utilization, 2014-2018

Emergency service utilization have seen a consistent decline over the last five (5) years. In 2018, there was a further reduction of 9.29% compared to the previous year’s performance. Trend in patients’ attendance at Emergency Medicine for the past five years is shown in the figure below.

Minor Procedures in 2018

In the year 2018, a total of 2,428 minor procedures were successfully carried out at the directorate. Out of these, the commonest procedure was suturing (51.89%), whilst biopsies recorded the least (1.52%). The chart below shows the distribution of the various minor procedures performed for the year.
Figure 87: Distribution of minor procedures in Emergency Medicine (2018)

Priority Activity 13: Support training of Staff

During the year under review, one hundred and eighty-four (184) nurses were trained in recognition and assessment of critically ill patients, communication skills, taking up and handing over. Nine (9) medical residents were also trained in Emergency Ultrasound.

CHAPTER 22

PSYCHIATRY UNIT

The Psychiatry Unit is one of the new Units that was created in 2018. It was separated from the Medicine Directorate. Among the sub-specialty/consultation services run by the Unit are: Addiction Psychiatry, Child and Adolescent Psychiatry, Forensic Psychiatry, Community Mental Health and Outreach, Liaison Psychiatry, Clinical Psychiatry & Counselling, Geriatric, Neuro Psychiatry, Emergency Psychiatry, Electro Convulsive Therapy (ECT) and Child Abuse. The Unit has a total staff strength of Fifty-Three (53).
**Priority Activity 1: Increase the range of specialist services**

The Unit made significant effort to enhance its services in 2018. Appointment system was used at all the Out-Patient Clinics.

**Out-Patient Service**

In 2018, a total of 10,551 OPD cases were seen by the Unit. This represents 16.28% decrease in outpatient consultation compared to the 2017 performance of 12,602. This is illustrated in the figure below.

![Figure 88: OPD Service Utilisation by Psychiatry Unit, KATH (2018)](image-url)

**Top Ten OPD Attendance at Psychiatry**
Figure 89: Top Ten OPD Attendance, Psychiatry Unit, KATH, 2018

During the year under review, Schizophrenia, Bipolar Affective Disorder (BAD), Depression were the major causes of admissions. Figure, shows the top ten causes of attendance at Psychiatry.

In-Patient Services

The Unit has a Bed compliment of 11 and the average length of stay was 10 with a percentage bed occupancy of 62.67. Turn over interval was 8.65 and Turn over per bed was 20. The average length of stay reduced from 17 days to 10 days during the year under review.

The Unit admitted 231 patients during the year under review. This represents 92.40% achievement compared to the target of 250 set for the year 2018.
Top Ten Causes of Admissions, Psychiatry, 2018

Figure 90: Top Ten Admissions, Psychiatry Unit, 2018

In 2018, Schizoaffective Disorder, Bipolar Affective Disorder and Psychosis were the major causes of admissions. Figure, shows the top ten causes of admissions in the Unit.
CHAPTER 23

TRANSFUSION MEDICINE UNIT

The Transfusion Medicine Unit (TMU) has the mandate to provide safe blood and blood components for clinical use in KATH and other health care facilities within the catchment area of the Hospital.

Blood Donors Screened and Blood Collected

The Transfusion Medicine Unit screened 20,747 donors in the year 2018 which represents 9.51% increase compared to the 2017 performance. A total of 19,424 units of whole blood were collected as against 17,202 units in 2017. This represents an increase of 12.92% compared to the previous year’s performance. The general trend for numbers screened and units collected has been on the increase over the past five years (Chart below)

![Donors screened vs. Blood collected, Transfusion Medicine Unit 2018](chart.png)

Voluntary Donors contributed 79% of the total blood collected while Replacement Donors contributed 21% in the year 2018. Voluntary blood donations is the major contributor to the total blood collected by the Unit. In 2018, both voluntary and replacement donations increased by over 11% compared to 2017 performance.
Figure 92: Blood collected in Transfusion Medicine Unit, 2018

Voluntary, 15186, 79%
Replacement, 4056, 21%

Figure 93: Total Blood Donations in Transfusion Medicine Unit, 2014 - 2018
Clinical Use of Blood

Whole Blood

The major single user of whole blood during the year under review was Obstetrics and Gynaecology Directorate (24%), followed by the Accident & Emergency Centre (23%), other hospitals (20%), Surgery (16%), Child Health (8%), Internal Medicine (6%) and Oncology and Dialysis (3%). This is represented in the chart below.

![Diagram showing the distribution of clinical use of whole blood by directorate.](chart.png)

**Figure 94: Distribution of Clinical Use of Whole Blood by Directorate, Transfusion Medicine Unit, 2018**

Concentrated Red Cells

During the year 2018, a total of 5,395 units of Concentrated Red Cells were used. This represents an increase of 7.73% compared to the 2017 usage. The Child Health Directorate led in the clinical use of Concentrated Red Cells (21%), followed by A&E Centre (17), other hospitals (13%), Internal Medicine (13%), Surgery, Oncology and Dialysis (12% each) and O&G (11%), as represented in the pie chart below.
Figure 95: Distribution of Clinical use of Concentrated Red Cells (CRC) by Directorate, Transfusion Medicine Unit, 2018

**Fresh Frozen Plasma**

Three thousand and forty-five (3,045) units of Fresh Frozen Plasma were used during the year under review. The Directorate of Obstetrics and Gynaecology continued to be the lead user (44%) of Fresh Frozen Plasma (FFP) followed by Surgery (19%), Accident and Emergency Centre (17%), Child Health (10%) other hospitals and Internal Medicine (8% each) in that order (See Chart below).
Clinical use of Platelets

With regards to clinical use of platelets during the year under review, the highest user was the Directorate of Child Health (67%). The Accident and Emergency Centre used (11%), Obstetrics and Gynaecology (8%), Internal Medicine (6%), Oncology and Dialysis (5%), Surgery (2%) and other hospitals (1%).

Figure 96: Distribution of Clinical Use of Fresh Frozen Plasma (FFP) by Directorate, Transfusion Medicine Unit, 2018
Discarded Blood

During the year under review, the total blood units discarded was 573. Expired units consisted about 48% of all discarded units whilst infected units (Syphilis, HIV, HCV, HBV, etc) formed 43%. The chart below presents a breakdown of blood units discarded at the TMU in 2018.
Capacity Building in Blood Transfusion

The Transfusion Medicine Unit trained a total of 251 staff in “Acute Complications of Transfusion”, “How Do We Make Blood Safer for Patients” and “Ethical Aspects of Blood Donation and Transfusion” during the year under review. All staff of the Unit received training in Standards for Practice of Blood Transfusion.

As part of activities to mark the World Blood Donor Day celebration, the Unit also organized symposia for eight senior high schools.
CHAPTER 24
INTERNAL AUDIT UNIT

The Internal Audit Unit is established by the Ghana Health Service and Teaching Hospitals’ Act, ACT 525 of 1996 and Internal Audit Agency Act, ACT 658 of 2003 which makes it mandatory for KATH to have an Internal Auditor (Internal Audit Unit). The unit’s activities are regulated by Internal Audit Agency Act, Regulations from Internal Audit Agency, as well as Internal Audit Standards.

Internal Audit – An Assurance/ Advisory Service

The unit provides reasonable assurance to Management on the financial, non-financial and other aspects of the Hospital’s activities that can be independently reviewed.

The Internal Audit Unit embarks on the following activities:

- Designs programmes that would detect fraud
- Gathers evidence to support claims
- Makes recommendations, then follow-up on approved and previous recommendations

The unit focuses on internal controls, compliance with policy, regulations and laws; value for money and Risk Assessment.

The scope of Internal Audit Unit

This includes:

- Examination and evaluation of internal controls
- Review of risk management procedures
- Review of risk assessment methodologies
- Review of management and financial information systems
- Review of means of safeguarding assets
- Review of accounting records and financial information
- Testing of transactions and functioning of specific internal controls
### Table 38: Planned Activities and Achievements, Internal Audit Unit, KATH, 2018

<table>
<thead>
<tr>
<th>Planned Activities</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue Management:</strong></td>
<td>Review of revenue generation process (folder management)</td>
</tr>
<tr>
<td><strong>Task:</strong></td>
<td>Review of on-site revenue collection.</td>
</tr>
<tr>
<td>Revenue Management Audit</td>
<td>Other revenue-related investigations</td>
</tr>
<tr>
<td><strong>Stores Verification</strong></td>
<td>Sample award letters and other procurement related documents were reviewed</td>
</tr>
<tr>
<td><strong>Task:</strong></td>
<td>SRAs were reviewed.</td>
</tr>
<tr>
<td>Review of sample contract award letters</td>
<td>Physically inspected items purchased or donated to KATH</td>
</tr>
<tr>
<td>Verification of SRA</td>
<td></td>
</tr>
<tr>
<td>Physical inspection of deliveries to stores</td>
<td></td>
</tr>
<tr>
<td><strong>Payments Related Audits:</strong></td>
<td>Payments Worked on Includes;</td>
</tr>
<tr>
<td><strong>Task:</strong></td>
<td>Daily pre-audit of all payments</td>
</tr>
<tr>
<td>Petty cash</td>
<td>IGF Staff salaries and statutory deductions on monthly basis</td>
</tr>
<tr>
<td>IGF Staff Confirmation</td>
<td>Maintenance, Fuel and Responsibility Allowance</td>
</tr>
<tr>
<td>Other payments</td>
<td></td>
</tr>
<tr>
<td><strong>Stock And Other Assignments</strong></td>
<td>Stock count in all stores done</td>
</tr>
<tr>
<td><strong>Task:</strong></td>
<td>Routine Confirmation of Inventory.</td>
</tr>
<tr>
<td>Stock count in all KATH Stores</td>
<td></td>
</tr>
<tr>
<td>Other Special functions and Hospital-wide Assignments:</td>
<td></td>
</tr>
<tr>
<td><strong>Other Confirmations:</strong></td>
<td>Investigations on issues referred from management</td>
</tr>
<tr>
<td></td>
<td>Different assignments handled as follows:</td>
</tr>
<tr>
<td></td>
<td>- Confirmation and stoppage of salaries/separation system controls</td>
</tr>
<tr>
<td>Planned Activities</td>
<td>Output</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Follow up on documents on payments to provide assurance on risk management</td>
<td></td>
</tr>
<tr>
<td>Review of examination gloves</td>
<td></td>
</tr>
</tbody>
</table>

**Planned Audit**

**Task:**

**Thirteen (13) Thrust areas identified by Risk Assessment audited**

- MCKATH Audit
- Review of Risk Management and governance
- Stores Audit
- Oncology Pharmacies Audit
- Audit of Board of Survey
- Review of Air ticket
- Review of Human resources policies and practices
- Payroll audit
- Audit of equipment
- System review Audit at Family Medicine
- Bed Utilization
- Catering unit audit
- Transport Audit
- Followed up on human resource audit
- Sectional Pharmacy Audit
- Fire Assessment Audit
- Security Audit
- Stock take report
- Planned Preventive Maintenance audit
- Payment management audit
- Medical Oxygen related issues
- Mortuary audit
CHAPTER 25

RESEARCH AND DEVELOPMENT UNIT

The Research and Development (R&D) Unit was established in 2006 in line with one of the core mandates of a teaching hospital to conduct research. It has a mission “to develop a focused research and development strategy which prioritizes support for RESEARCH and in those areas which are consistent with the DEVELOPMENT of clinical and non-clinical services”; and a vision “to provide evidence-based knowledge that will contribute to the improvement of clinical and non-clinical services in KATH”.

The mandate of the Unit is to:

• develop and sustain the research capacity of the hospital,
• coordinate and monitor research activities going on in the hospital,
• provide evidence-based knowledge that will contribute to the improvement of clinical and non-clinical services in KATH,
• promote critical review and publication of research work, and
• Attract research partnerships to KATH.

Staff Strength

As at December 2018, the total staff strength of the Research and Development Unit was six, comprising of Deputy Director for Research and Development (R&D), a Principal Health Research Officer, a Medical Officer, a Neurologist (retired in December 2018), a Principal Technical Officer, and an Administrative Manager. A new Deputy Director for the Unit was appointed in August 2018. The Medical Director has oversight responsibility of the R&D Unit.

The Unit planned and prioritised the following activities for the year 2018:

• Operational Research (OR) at KATH
• Development and sustenance of research capacity of KATH
• Streamlining research at KATH
• Promoting both local and international research Collaborations
Priority Activity 1: Conduct an Operational Research at KATH

In an effort to provide evidenced-based recommendations to Hospital management, Research and Development Unit (RDU) commenced an operational research “Barriers to incident reporting as perceived by doctors, nurses and pharmacists at the Komfo Anokye Teaching Hospital, Kumasi” in 2018.

A total of 331 health care professionals comprising 117 doctors (35.5%), 111 nurses/midwives, (33.5%), 102 pharmacist/pharmacy technicians (30.8%), and one (1) nurse anaesthetist (0.3%) were interviewed regarding their awareness and use of the current incident reporting system at the hospital. The interviewed asked questions on average time since the last reported incident, years of practice, reporting practices as well as perceived barriers to incidents reporting at the Komfo Anokye Teaching Hospital. Data collection was successfully completed during the year under review. As at the time of this report, the data was being cleaned for analysis and findings will be shared with Management to improve practice.

Priority Activity 2: Develop and sustain the research capacity of KATH

R&D Unit in collaboration with the Ghana Food and Drugs Authority (FDA) conducted clinical trials sensitization workshop for stakeholders at KATH to appreciate standards in relation to the conduct of clinical trials in Ghana. A total of 44 staff members from various Directorate and Units of the Hospital attended the workshop.

The Unit coordinated the Diploma in Project Design and Management (DPDM), which is now a collaboration between the Ghana College of Physicians & Surgeon, the Kwame Nkrumah University of Science & Technology and the Komfo Anokye Teaching Hospital. The first batch of participants under the new collaboration were enrolled during the year under review. Proposal writing workshop for this cohort of participants were held on December 3-6, 2018.

Priority Activity 3: Streamline research at KATH

All research work carried out at KATH for the year of 2018 were registered into a database; a total of 413 research projects were registered over the period. The number of registered protocols should be interpreted with caution as they do not necessarily mean they were carried out at the Directorate/Unit level.
Two hundred and eleven, 211 (51.1%) out of the 413 registered protocol in the year under review were registered by principal investigators from the Kwame Nkrumah University of Science & Technology, Kumasi. “Others” are mainly research protocols/proposals received from other institutions apart from KATH/KNUST and this includes foreign protocols. The distribution of the registered research projects per institution are detailed in chart below. The R&D registration guidelines were also amended during the year under review.
Figure 99: Distribution of registered research protocols by Directorate/Unit, 2018
Priority Activity 3: Promote both Local and International Research Collaborations

R&D Unit collaborated with the under listed international institutions during the period under review:

- KATH, United States Naval Medical Research Centre in Frederick, Maryland (NMRC-F) research study titled “Umbrella Protocol: An observational Study of Sepsis” under the sub-award title “Austere Environment Consortium for Enhanced Sepsis Outcomes (ACESO)”. A total of 204 cases were recruited during the first phase of the project at the Directorate of Emergency Medicine of the Accident and Emergency Unit of the hospital. Phase 2 of the project was yet to start as at the time of writing this report.
• A multi-country randomized clinical trial to evaluate the impact of continuous Kangaroo Mother Care (KMC) initiated immediately after birth compared to KMC initiated after stabilization in new-borns with birth weight 1.0 to <1.8 kg on their survival in low-resource settings. This Study is still ongoing at the Mother and Baby Unit of the Directorate of Child Health.

• A Randomized, Double-Blind, Parallel-Group, Multicentre, Phase III Study to Evaluate the Effect of Ticagrelor versus Placebo in Reducing the Rate of Vaso-Occlusive Crises in Paediatric Patients with Sickle Cell Disease (HESTIA3). The study is still ongoing at the Sickle Cell Unit of the Directorate of Child Health.

• Sickle Cell Disease (SCD) in Sub-Saharan Africa (SSA) Collaborative Consortium Project Protocol conducted under the auspices of the Sickle Cell Pan-African Research Consortium (SPARCO). The study is still ongoing at the Sickle Cell Unit of the Directorate of Child Health.
CHAPTER 26
PHARMACY UNIT

Introduction

Pharmacy Unit is mandated to provide patient-centered, outcome-oriented quality pharmaceutical services to patients & other clients. These services are provided through activities of the various sub-units under the main Pharmacy Unit. They include:

- Specialist OPD Pharmacy (SOPD),
- Medicines Management Unit (MMU),
- Drug Information Service Centre (DISC),
- Drug Manufacturing
- Pharmacy Accounts.
- Ward Pharmacy Practice
- KATH 24-Hours Pharmacy

In 2018, the Pharmacy Unit focused on answering Drug Information queries, strengthening Pharmacovigilance services, improving collaboration with clinical teams, expanding medicines storage facilities, improving drug availability and revenue generation, continuous development of human resource, staff welfare and conducting of research among others.

Five (5) Year Trend of Drug Availability at the Pharmacy Unit

Providing quality medicines for our patients and non-clients is a primary mandate for the Pharmacy Unit. General and Emergency drug availability within the Unit and the Hospital as a whole improved tremendously in 2018. Thus, general drug availability increased from 41% in 2017 to 62% whilst emergency drug availability increased from 83% to 92%. The trend in medicines availability for the past five years is presented in the table below.
Table 39: Five-Year Trend of Drug Availability, KATH, 2014-2018

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Drug Availability</td>
<td>62.0%</td>
<td>56.0%</td>
<td>50.7%</td>
<td>41.0%</td>
<td>62.0%</td>
</tr>
<tr>
<td>Emergency Drug Availability</td>
<td>85%</td>
<td>83%</td>
<td>84%</td>
<td>83%</td>
<td>92%</td>
</tr>
</tbody>
</table>

Specialist OPD Pharmacy (SOPD)
Total prescriptions attended to at the specialist OPD Pharmacy were 86,750 an increase of 28.35% over the 2017 figure of 67,586.

Drug Manufacturing
The Aseptic/Manufacturing Unit continues to provide the hospital with about 70 different preparations most of which cannot be obtained from the open market. Formula are continuously being developed for new products. The Unit prepared 65,937 extemporaneous and sterile products. These products were patronised by other hospitals such as Korle-Bu Teaching Hospital and Kumasi South Hospital (the regional hospital) amongst others.

Drug Information Service Centre
During the year, the Drug Information Centre (DI) documented 180 drug information consults out of which 159, representing 88% of the total consults were answered. Sixty-two (62) of these calls were from within the Hospital (KATH) whilst the remaining came from private/community facilities and other hospitals. Most of the enquiries (consult) at the Drug Information (DI) Unit emanated from pharmacists (97), followed by enquiries from doctors (21) with other professionals constituting the rest.

The unit submitted 39 Adverse Drug Reaction (ADR) forms to the Food and Drug Authority (FDA) during the year.
Figure 101: Distribution of Origin of Consults - Drug Information Centre, Pharmacy Unit, 2018
CHAPTER 27
SUPPLY CHAIN MANAGEMENT UNIT

The Supply Chain Management Unit (SCMU) has been in operation for eighteen (18) years, since its establishment in the latter part of the year 2001. The unit was established as part of the central Management’s strategy of:

- Achieving value for money (VFM)
- Economy and transparency in the use of public funds
- Ensuring continuous availability of goods and services.
- Enhancing the operations of the hospital healthcare delivery.

The Unit handles the procurement of goods & services (i.e. Consulting, Non-consulting and Technical Services) for the hospital and is also responsible for Procurement Planning, Administration and Management, Contract Award & Management, Maintenance of Procurement database among others. The Supply Chain Management Unit is rated by the Public Procurement Authority (PPA) as Excellent in the practice of Supply Chain Management in Ghana.

ACHIEVEMENTS
During the year under review, the SCMU chalked the following achievements:

1. Ten (10) National Competitive Tenders (NCTs) were conducted for procurement of non-medicine consumables, medical equipment, works, services etc. to ensure uninterrupted flow of medicines, consumables and services to support healthcare delivery.
2. Evaluation of NCT for pharmaceutical products was completed and contracts awarded.
3. Six (6) sole-source applications were approved by PPA for supply of surgical instruments for ENT Directorate, Endoscopy for Diagnostics Directorate, Dialysis Consumables, Laboratory Reagents, Power Drill for Trauma & Orthopaedics and replacement of CT Scan Tubes.
4. The Planned Board of Survey was begun and is still on-going.
5. The Unit intensified its sample evaluation and delivery inspection system to ensure quality of consumables delivered. Under this system, all items delivered which did not conform to specifications were rejected and returned to the suppliers.
6. Three (3) monitoring exercises were conducted at various wards and user points to ensure optimal utilization of consumables, end user satisfaction, improved record keeping and complaints management.

7. For every item that was procured, the prices were compared with market prices/Public Procurement Authority price list and NHIS prices in case of medicines.

8. Due to identification of cheaper sources of supply of CT Films (computed tomography films) and gauze roll, costs incurred in procuring these consumables were reduced.

9. The Hospital received donations from some organizations and individuals. The clearing of some of these items were facilitated by the unit through our clearing agent- Ghana Supply Company Limited.

10. The SCMU, on behalf of the Hospital has been adjudged winners of the following awards at the National Procurement Awards organized by (CIPS) in collaboration with (GIPS):

   - Excellence in Procurement & Supply Chain of the Year (Healthcare/Pharmaceutical)
   - Public Procurement & Supply Chain Team of the Year (Gold)
   - Best in Public Procurement & Supply Chain Compliance (Silver)

11. Training was conducted for all Deputy Directors for Nursing Services (DDNS) and PNO’s on stores procedures and management.

12. Completion of tender processes and award of contract for the supply and installation of Oxygen Plant. Installation of new plant is ongoing.

**Five Year Trend Analysis**

A summary and comparison of key activities of the SCMU over the past five years is presented in the table below

<table>
<thead>
<tr>
<th>#</th>
<th>Service delivery</th>
<th>Achievement 2014</th>
<th>Achievement 2015</th>
<th>Achievement 2016</th>
<th>Achievement 2017</th>
<th>Achievement 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Conduct of tender</td>
<td>9 NCTs conducted</td>
<td>6 NCTs conducted</td>
<td>9 NCTS Conducted</td>
<td>5 NCTS Conducted</td>
<td>10 NCTS Conducted</td>
</tr>
</tbody>
</table>

Table 40: Trend Analysis of Key Achievements, SCMU, 2014-2018
National Competitive Tendering (NCT) activities for 2018 are summarized below

**Table 41: Summary of National Competitive Tendering (NCT) Activities, SCMU, 2018**

<table>
<thead>
<tr>
<th>#</th>
<th>ACTIVITY</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>National Competitive Tendering (NCT) for the supply of Non-Medicine Consumables</td>
<td>Tender completed and contract awarded</td>
</tr>
<tr>
<td>2</td>
<td>National Competitive Tendering for the Supply, Installation and Commissioning of Oxygen Plant</td>
<td>Tender awarded and installation ongoing</td>
</tr>
<tr>
<td>3</td>
<td>National Competitive Tendering (NCT) for the supply and installation of Dental Laboratory Equipment &amp; Consumables, Chemicals, Patient Monitor and ECG Machine</td>
<td>Completed and contracts awarded and delivered.</td>
</tr>
<tr>
<td>4</td>
<td>National Competitive Tendering (NCT) for the supply and installation of Medical Equipment for NAKSA Block</td>
<td>Tender completed and contract awarded</td>
</tr>
<tr>
<td>5</td>
<td>National Competitive Tendering (NCT) for the supply and installation of Exchange of Surgical Instrument for ENT Directorate</td>
<td>Letter of credit issued, awaiting and delivery and installation</td>
</tr>
<tr>
<td>6</td>
<td>National Competitive Tendering (NCT) for the construction of new pharmacy building near Accident &amp; Emergency Centre</td>
<td>Completed and contract awarded. Contactor on site</td>
</tr>
<tr>
<td></td>
<td>National Competitive Tendering (NCT) for the Renovation works at Accident and Emergency Centre (Internal &amp; External)</td>
<td>Completed and contract awarded</td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td></td>
<td>National Competitive Tendering for external solicitors as retainers</td>
<td>Completed and contract awarded</td>
</tr>
<tr>
<td></td>
<td>National Competitive Tendering (NCT) for the Construction of fence wall at Danyame No.24 and security post at Danyame Guest House, Construction of fence wall Danyame No.9</td>
<td>Completed and contract awarded</td>
</tr>
</tbody>
</table>

**Sole Source and Restrictive Tendering Approvals Obtained From PPA**

The Unit successfully sought for approval of six (6) single-sourced procurement from the Public Procurement Authority for the following:

1. Supply of Surgical Instruments for ENT Directorate,
2. Endoscopy for Diagnostics Directorate,
3. Dialysis Consumables,
4. Laboratory Reagents,
5. Power Drill for Trauma & Orthopaedics
6. Replacement of CT Scan Tubes

**Total Lead Times for Procurement Processes**

For the year under review, varying lead times were achieved for various activities. Lead times vary depending on the procurement method used and whether or not there is existing supplier/contractor for the particular good or service under consideration.
Table 42: Total Lead Times for Procurement Processes, SCMU, 2018

<table>
<thead>
<tr>
<th>Procurement Method</th>
<th>Requisition &amp; Approval</th>
<th>Request for specifications</th>
<th>Tendering</th>
<th>Sample testing/ reviews</th>
<th>Evaluation</th>
<th>Contract award</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretended</td>
<td>3 days</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3 days</td>
<td>6</td>
</tr>
<tr>
<td>PQ</td>
<td>3 days</td>
<td>7 days</td>
<td>10 days</td>
<td>5 days</td>
<td>5 days</td>
<td>3 days</td>
<td>33</td>
</tr>
<tr>
<td>NCT for equipment</td>
<td>3 days</td>
<td>14 days</td>
<td>30 days</td>
<td>5 days</td>
<td>5 days</td>
<td>3 days</td>
<td>60</td>
</tr>
<tr>
<td>NCT for other consumables</td>
<td>3 days</td>
<td>-</td>
<td>30 days</td>
<td>30 days</td>
<td>14 days</td>
<td>7 days</td>
<td>81</td>
</tr>
</tbody>
</table>

Ward Stock Monitoring 2018 Report

As part of measures to bring efficiency in the use of consumable items in the hospital, a monitoring team was constituted to conduct ward stock monitoring on the use of consumable items at the various wards. Three (3) monitoring visits were conducted for the year. The monitoring exercise was conducted at the following Directorates of the Hospital:

- O&G Directorate
- Child Health Directorate
- Medicine Directorate
- Surgery Directorate
- Family Medicine Directorate
- Oncology Directorate
- Trauma & Orthopedic Directorate
Major findings from the stock monitoring visits are summarized in the table below

Table 43: Findings and Recommendations from Ward Stock Monitoring Visits, SCMU, 2018

<table>
<thead>
<tr>
<th>#</th>
<th>MAJOR FINDINGS</th>
<th>RECOMMENDATIONS/ WAY FORWARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>There has been an improvement in record keeping of consumables received from stores.</td>
<td>It is recommended that Nurse Managers/Business Managers should continuously remind ward in-charges to keep proper documentation on items received from stores.</td>
</tr>
<tr>
<td>2</td>
<td>The issue of overstocking of consumables received from stores has also reduced.</td>
<td>It is also recommended the ward in-charges and users continuously ensure optimal utilization of consumables. Nurse managers should check ward stock ledger before approving requisitions</td>
</tr>
<tr>
<td>3</td>
<td>Most beds in the wards were with no bed sheets</td>
<td>Ward in-charges were advised to use the bed sheets of patients instead of hoarding them for examinations and inspections.</td>
</tr>
</tbody>
</table>

STORES AND DISTRIBUTION UNIT

The Hospital received donations from a number of local and international organizations and individuals throughout the year. A list of all donors to the Hospital is provided below.

Donations received from individual Organizations and Individuals

- Life Care Technology
- Latex Foam Rubber Product Ltd
- World Health Organisation
- Managing Director of Western Pharmacy
- Orbis International
- Mangel Klicks Company Ltd
- Mrs Chrysoline Prah
- New MBU Ward Items Left There
• Lansah Chemist Limited
• Medicem Ghana Ltd
• Italy Embassy, Accra
• Mr. Amooba
• Madam Lucy Taylor
• Dr. Amankwah
• Radiometer Medicals Aps (Scan Health Systems Ltd)
• Mrs Chrysolite Prah
• Lion’s Club
• Korea Foundation Inter.
• Codix Health Care Ltd
• Mponua Kwaow Ventures
• Madam Abena Pomaa
• Madam Hajia Sakina Darko Kyirapim
• Ministry of Health
• Dr Kanu Okike
• Reality Ghana
• Prefos Ltd
• Radiating Hope
• 4th and 5th Medical Students
• Mrs. Rebecca Akufo Addo (First Lady)
• University College London
• University of Florida Emergency Machine
• Late Coach Afrane’s Children
CHAPTER 28
BIOSTATISTICS UNIT

The unit is responsible for the collection and management of health records in the Hospital through paper and electronic means. The core mandate of the Unit for the year under review is outlined in these five (5) thematic areas:

- Register patients into the Hospital system
- Issue cards and folders to patients in the Hospital
- Keep patients’ records in the hospital
- Compile and analyze both clinical and administrative data in the Hospital
- Undertake research activities

During the year under review, the total workforce for the Unit was seventy-five (75). This comprised of four (4) Biostatistics Officers, three (3) Public Health officers thirty-five (35) Technical Officers, nine (9) Biostatistics Assistant, seventeen (17) Technical Assistant and ten (10) other staff. (See chart below)

**Figure 102: Category of staff, Biostatistics Unit, 2018**

Staff of the unit are distributed to the various Directorates of the Hospital and are supervised by the management team of the respective Directorates. There are Biostatistics Officers in almost all the Directorates as sectional heads, who are responsible for the day-to-day administration of the
Unit in the various Directorates. The Head of the unit is responsible for providing and equipping all staff in the Unit with technical and administrative guidance for their respective duties. This is usually done through on-the-job training, in-house and external training workshops, and conferences.

**Figure 103: Distribution of staff in the Directorates, Biostatistics Unit, 2018**

**Support to research**

As the main repository of all clinical and administrative data in the hospital, the Unit was much involved in most research activities within the Hospital. The unit provided in the form of data collection, data compilation, analysis and interpretation to both researchers from within and outside the Hospital during the year under review.

**Achievements**

- Scanning of patient’s case notes into an electronic database is still on-going in the Unit. This will help deal with the storage challenge posed by archiving old patient folders.
• Extension of Hospital Administration and Management Software (HAMS) to some selected wards
• Collaborated in the introduction of the Light Wave Health Information Management Systems (LHIMS) to improve health care delivery in KATH
CHAPTER 29

SOCIAL WELFARE UNIT

The Social Welfare Unit provides psychosocial support to patients and health workers in the hospital. The Unit works in close collaboration with the Social Welfare Department in Kumasi to help improve the overall health and wellbeing of patients.

Achievements

For the year 2018, the Social Welfare Unit planned to continue to provide psychological support for patients and staff as required. A summary of major achievements of the Unit for 2018 are summarized in the table below

Table 44: Planned Activities and Achievements, Social Welfare Unit, 2018

<table>
<thead>
<tr>
<th>PLANNED ACTIVITIES</th>
<th>EXPECTED OUTPUT</th>
<th>ACHIEVEMENTS</th>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct social investigations into the background of patients</td>
<td>Background information of 3,000 patients acquired</td>
<td>2,830 social investigations conducted</td>
<td>Out of this total, 1,989 were counselled, 649 were reunited with their family and 20 were sent to residential homes for children. 10 were referred to the Domestic Violence and Victim Support Unit (DOVVSU) 1 case was referred to Anti Human Trafficking Unit under the Ghana Police Service</td>
</tr>
</tbody>
</table>
161 patients were given financial support.

<table>
<thead>
<tr>
<th></th>
<th>Provide patient counselling services</th>
<th>2,500 patients expected to be counselled</th>
<th>2,125 patients counselled</th>
<th>1,575 patients counselled on the importance of NHIS.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 patients counseled on substance abuse</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>96 patients counselled on Burns and other domestic accidents</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>153 Patients and relatives educated on Sexual and reproductive health</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>186 patients counselled on handling Disability/Deformities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>103 patients counselled on Nutrition</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Solicit for financial and</th>
<th>To secure funds for 50 needy patients</th>
<th>The hospital received donations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Activity Description</td>
<td>Expected Outcome</td>
<td>Actual Outcome</td>
</tr>
<tr>
<td>-----</td>
<td>---------------------</td>
<td>------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>4</td>
<td>Organize monthly case conferences and monthly staff meetings</td>
<td>12 case conferences and 12 monthly meetings expected to be held</td>
<td>8 case conferences and 8 monthly meetings held</td>
</tr>
<tr>
<td>5</td>
<td>Provide training to students</td>
<td>70 students to be trained</td>
<td>55 students trained</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>35 students from KNUST, 12 from the University of Ghana, 8 from other institutions were trained.</td>
</tr>
<tr>
<td>6</td>
<td>Provide help to abandoned babies</td>
<td>20 babies expected to be helped</td>
<td>21 babies provided with shelter, care and protection</td>
</tr>
</tbody>
</table>
Write social enquiry reports to management

<table>
<thead>
<tr>
<th>No.</th>
<th>SOCIAL ISSUE</th>
<th>OUTPUT</th>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Difficulty in the payment of medical bills</td>
<td>1,025 patients</td>
<td>Waiver-96 patients</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Payment by Installment-346 patients</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Full Payment-34 patients</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Supported by donations-66 patients</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Supported by relations-483 patients</td>
</tr>
<tr>
<td>2</td>
<td>Inability to afford drugs and diagnostic services</td>
<td>29 patients</td>
<td>4 patients supported by donations</td>
</tr>
</tbody>
</table>

Approval secured from management to discharge patients leading to reduced length of stay

Approval secured for patients to be admitted at approved residential homes for children

The table below summarizes some of the social issues handled by the Unit in 2018 and the outcomes.

Table 45: Common Social Issues Handled, Social Welfare Unit, KATH, 2018
2 patients received waiver for diagnostic services
23 patients supported by relatives and district assemblies

| 3 | Abandoned/neglected by family members | 29 patients | 21 patients were sent to residential homes for children
6 were reunited with their families
2 were sent to the central Destitute Infirmary |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Victims of sexual and physical assault</td>
<td>29 patients</td>
<td>Counselling provided to victims. Victims referred to DOVVSU and also HIV counselling Unit for HIV testing and counselling</td>
</tr>
<tr>
<td>5</td>
<td>Victims of burns and other domestic accidents</td>
<td>96 patients</td>
<td>Patients and relatives were counselled</td>
</tr>
<tr>
<td>6</td>
<td>Teenage pregnancy</td>
<td>32 patients</td>
<td>Patients were counselled on their sexual and reproductive health as well as on family planning and encourage to continue ANC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-------------------------</td>
<td>-------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>Substance abuse victims</td>
<td>12 patients</td>
<td>Patients were counselled and linked to care</td>
</tr>
<tr>
<td>8</td>
<td>Terminally ill patients</td>
<td>87 patients</td>
<td>Patients were reassured and counselled</td>
</tr>
<tr>
<td>9</td>
<td>Discharge against medical advice</td>
<td>3 patients</td>
<td>Parents were counselled and treatment provided in the interest of the patients who were minors</td>
</tr>
<tr>
<td>10</td>
<td>Persons with physical deformities/disabilities</td>
<td>186 patients</td>
<td>Patients and relatives were counselled.</td>
</tr>
</tbody>
</table>
CHAPTER 30
INFORMATION COMMUNICATION TECHNOLOGY (ICT) UNIT

Introduction

The Information Communication Technology (ICT) Unit focuses on the use of technology to achieve Hospital goals such as measuring patient outcomes, operating efficiently, cutting costs, educating students, and supporting research. The Unit has two sections namely Hardware support and Networking and Software. The vision of the Unit is to maximize the potential for information communication technology to achieve strategic goals of KATH

For 2018, the full complement of hardware at the disposal of the ICT Unit for its operations included 5 servers, 402 workstations, 15 Laptops, 204 UPS units, 152 printers and 12 scanners.

Networking and software Sectional Achievements

System Security

In 2018, the unit upgraded and installed security and anti-vulnerable software on KATH network systems. Scheduled daily scan and monitoring of the security and vulnerability software were done. A total of 213 network attacks were resolved. The unit also undertook an upgrade of the firewall system. The license of the Kaspersky Antivirus software was renewed for two (2) years during the period under review.

System and Data Backup

The following table indicates the size of various types of data that were backed up during the period under review

Table 46: Total Data backups, ICT Unit, 2018

<table>
<thead>
<tr>
<th>DATA TYPE</th>
<th>DATA SIZE (GB)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

178
### System Software

There were 59,254 software updates installed on various Microsoft Operating Systems used in the Hospital. This represents 65.69% increase compared to the 2017 performance. There were 47 routine works on the Windows servers. About 96% of all reported IT problems were fixed.

### Status of HAMS Software

- There was a reconfiguration of the Hospital Administration Management Software (HAMS) database to meet paperless implementation at the in-patient service points.
- There was a full system upgrade with additional features for implementation at all service areas.
- 156 user accounts were created during the period, bringing to a total of 1878 user accounts so far created.
- Three (3) general maintenance works were performed on the system.
- Seventy-four (74) routine works were done on the system and 48 user related problems resolved.
- The system was reconfigured to meet NHIA E-Claims eligibility criteria.
- System was also reconfigured to separate Primary care from Specialist care.
- System was reconfigured for the implementation of NHIA Claim Check Code (CCC) generation.

### Networking

The following are the computer network engineering activities performed and achieved during 2018.

- Internet Services:
• Internet Service Provider is Ecoband Limited with a speed of 20MB
• Eight (8) general and specific maintenance activities were carried out on the internet service to ensure its availability and reliability.

• Network Monitoring:
  • The local Domain Name server (DNS) was reconfigured on three (3) occasions to accommodate the change in the IP structure following the expansion of the Hospital’s network to include the new NAKSA block and the introduction of the eHealth Project.
  • 11 Active Directory-related problems were resolved.
  • 5465 network scans were performed using vulnerability security software.

• Website
  ➢ The restructuring of the KATH website is ongoing
  ➢ Procurement and installation of Content Management System was done
  ➢ Content upload on the restructured KATH website is ongoing

• Network Engineering
  • Installation of fibre optic cable to connect the MRI Centre, NAKSA Block and the New Mortuary to the existing KATH local area network
  • Expansion of network connectivity at Radiology offices at A block
  • A total of 256 network points added to the existing network
  • One hundred and ninety-two (192) Minor network related issues resolved
Hardware Support

Repairs and Maintenance on ICT Equipment

During the year, the Hardware Support section undertook repair and maintenance on various faulty IT equipment reported throughout the Hospital. The most commonly reported faulty equipment were system units followed by uninterrupted power supply (UPS) units. The table below gives a breakdown of equipment repaired or maintained.

Table 47: Equipment Repaired and Maintained, ICT Unit, 2018

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>System unit</td>
<td>68</td>
</tr>
<tr>
<td>Monitor</td>
<td>15</td>
</tr>
<tr>
<td>Printer</td>
<td>26</td>
</tr>
<tr>
<td>UPS</td>
<td>58</td>
</tr>
<tr>
<td>Network Switch</td>
<td>13</td>
</tr>
<tr>
<td>Laptop</td>
<td>15</td>
</tr>
</tbody>
</table>

Other Achievements

E-HEALTH Project (Lightwave Health Information Management System-LHIMS)

Lightwave eHealth Solutions (Consultant) was contracted by the Ministry of Health to implement the eHealth Project at KATH. The feasibility and needs assessment were done by the consultant and approval was given by the Ministry of Health for the project to be implemented.

The following are the works done so far:

- Installation of wireless LAN at KATH campus (About 105 Access Points and 5 Radios)
- Installation of 2 servers (i.e. Application server and Database server)
- Supply of 100 Samsung tablets and 50 desktop computers
- Joint application development done in April
- Configuration and customization of application is almost complete
- Trainer of Trainers (ToT) Workshop was done for about 400 staff from various disciplines and Directorates in April and May 2018.
- User Acceptance Testing Workshop was done in July 2018.
• Piloting of the system at Family Medicine Directorate was done in November 2018
• Live implementation at Family Medicine started in December 2018.

Current state of implementation

About 700 staff from the following Directorates and Units have been trained and some are currently using the LHIMS to give care to patients.

• Family Medicine
• Oncology
• EENT
• Physiotherapy
• Psychiatry
• Oral Health
• Biostatistics (All OPD areas)
• Health Insurance Unit.
• Finance (Revenue officers)
• Pharmacy Units (DEENT, Family Medicine, Eye and Specialist OPD)

Ghana Integrated Financial Management Information System (GIFMIS)

The ICT Unit during the period under review undertook the reinstallation and configuration of the Ghana Integrated Financial Management Information System (GIFMIS) at all service areas of the Hospital mandated to use GIFMIS.

Biometric Attendance System

• 15 Biometric attendance devices have been procured for the implementation of biometric clock-in system.
• Sensitization of staff for smooth implementation of the system was done
• Piloting of the system at EENT and Oncology is currently ongoing
• Configuration of system for registration of staff has been completed
• Staff registration is currently ongoing

Cash Pharmacy

A pharmacy management software (Pharmacy Master) was installed at the newly established Cash Pharmacy.
Expansion and Management of CCTV System

Close Circuit Television (CCTV) is managed by the ICT Unit at the following locations

- Specialist OPD Pharmacy
- Family Medicine Pharmacy
- Accident and Emergency

New installation of CCTV at the following locations during the year under review

- NAKSA block
- Special Ward (A&E)
- Cash Pharmacy
- Expansion of CCTV areas at General Administration

Training for Staff

During the year under review, the following training activities were conducted by the Unit:

- 159 staff were trained in the use of HAMS software
- 73 staff were trained on the use of the KATH e-mailing system
CHAPTER 31
PUBLIC HEALTH UNIT

INTRODUCTION

The Public Health Unit, under the Medical Director’s Office, has the mandate to protect and promote the health of staff and clients accessing services in the Hospital. The Unit carries out activities within all areas of the Hospital and also in the Kumasi Metropolis. The Unit collaborates with other agencies under the Ministry of Health to protect and promote the health of the general population within the poorly defined catchment area of the hospital, but usually limited to the Kumasi Metropolis.

The specific objectives of the unit are:

- To develop, maintain and report on health data sets in KATH
- To disseminate information on public health issues to staff and clients of the Hospital
- To prevent and manage outbreaks and control the spread of disease
- To protect against environmental hazards
- To protect and promote the health of staff and clients of the hospital
- To develop and adapt public health policies and guidelines for use within the Hospital
- To conduct research and teaching on issues of public health importance

The Unit currently has the following sub-units:

- Disease Control and Surveillance
- Occupational Health and Preventive Medicine,
- Public Health Nursing
- Public Health Research.

Each sub-unit has a head and they are responsible for the day-to-day running of activities in the sub-unit. The Sub-unit heads together with the Head of the Unit and Administrative Manager constitute the Management Team of the Unit. The unit has a staff strength of 53.
Staff of the unit provide services throughout the hospital including services in other directorates, namely:

**Obstetrics and Gynaecology Directorate**

A1 New-born immunization services, Prevention of Mother to Child Transmission of HIV services (PMTCT) at the Antenatal Clinic (ANC) and Family Planning Unit.

**Directorate of Child Health**

Paediatric HIV clinic and other Specialist clinics (Asthma and Sickle Cell Clinics).

**Directorate of Medicine**

Tuberculosis (TB) clinic and HIV clinic

**Directorate of Surgery**

Breast Clinic.

**Expected Outputs and Results**

The table below contains summary achievements of the various sub-units and sections of the Unit over the year 2018

**Table 48: Summary of Planned Activities and Achievements, Public Health Unit, 2018**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Expected output</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct surveillance for diseases of PH importance</td>
<td>Data on diseases of PH importance collected</td>
<td>Data on all diseases of PH importance compiled.</td>
</tr>
<tr>
<td></td>
<td>Weekly notification of Regional Surveillance Team</td>
<td>52 Weekly notification to Regional Surveillance team done</td>
</tr>
<tr>
<td>Conduct mortality surveillance</td>
<td>Daily surveillance on deaths in KATH</td>
<td>Done</td>
</tr>
<tr>
<td>Task</td>
<td>Action</td>
<td>Outcome</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Analysis of deaths in KATH</td>
<td>Done</td>
<td></td>
</tr>
<tr>
<td>Conduct bi-monthly surveillance meetings</td>
<td>Hold six (6) bi-monthly meetings</td>
<td>6 meetings held</td>
</tr>
<tr>
<td>Investigate all disease outbreaks and collaborate with all stakeholders to institute preventive and control measures</td>
<td>Investigation of all potential and confirmed outbreaks</td>
<td>Suspected Cases of epidemic prone diseases investigated: All suspected cases of meningitis, AFP, measles, VHF cases were investigated and notified. 4 cases of Rabies, 3 AFP, 2 suspected measles and 1 suspected VHF were investigated and notified.</td>
</tr>
<tr>
<td>Conduct laboratory surveillance</td>
<td>Information on infectious diseases from the laboratories</td>
<td>Lab information on suspected cases of meningitis, malaria, Hepatitis B and Pneumonia obtained</td>
</tr>
<tr>
<td>Provide HIV counselling (before and after HIV test)</td>
<td>Provision of information on HIV and disclosure of results</td>
<td>2552 counselled pre-test, 2530 counselled post-test</td>
</tr>
<tr>
<td>Conduct daily HIV testing at the CT laboratory</td>
<td>Number of Blood samples tested for HIV</td>
<td>2546 clients tested. 861 (33.73 %) confirmed positive</td>
</tr>
<tr>
<td>Service</td>
<td>Description</td>
<td>Details</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Link HIV positive patients to clinical care</td>
<td>All HIV positive persons informed on clinical care services and linked to an ART Centre</td>
<td>851 clients linked to ART Centres at KATH Tafo Govt Hospital, Suntreso Govt Hosp, Manhyia Hospital, Kumasi South Hospital, KNUST Hospital and a few other ART Centres according to clients’ choice.</td>
</tr>
</tbody>
</table>
| Conduct Immunization for children under five years of age | To provide immunization for all children under 5 presented at the MCH | 8347 given BCG  
2163 given OPV3  
2163 given PENTA3  
2168 given PCV3  
2089 given M/R  
2120 Yellow Fever |
| Conduct immunization services for pregnant women | Provide Tetanus-Diphtheria for all eligible pregnant women | A total of 1584 doses given |
| Provide growth monitoring and nutrition counselling for children 0 – 59 months of age | Assess growth of all children 0 -59 months reporting to the MCH clinic  
Identify and refer all malnourished children | 4184 children were seen at the MCH clinic for 29,369 episodes of growth monitoring.  
28 children (0.68%) severely underweight & 33 (0.79%) obese, identified and referred to the Pediatricians/Paediatric Nutritionists. |
<p>| Provide Hepatitis B immunization services for clinical staff | 200 staff vaccinated | 776 vaccinated |
| Provide Post-Exposure Prophylaxis for HIV exposed health workers and sexually-assaulted victims | All affected staff and individuals given PEP | All health workers and individuals reporting exposures (113 in number) were given HIV PEP. Out of these, 79 were KATH staff |</p>
<table>
<thead>
<tr>
<th>Task</th>
<th>Documentation</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carry out occupational Health surveillance and report on Occupational Health indicators</td>
<td>Documentation of staff reporting with needle-stick injuries, other occupational injuries and facilitate the provision of interventions</td>
<td>Proportion of staff who were incapacitated or died from occupational injuries = 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proportion of Staff reporting needle-stick injuries: 70/3451 = 2.0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proportion of staff who received occupational health interventions: 904/3451 = 26.2%</td>
</tr>
<tr>
<td>Conduct daily health promotion sessions at designated clinics and units in KATH</td>
<td>120 Daily health promotion sessions held</td>
<td>Total of 240 health education sessions held at Chronic Care Clinic, Physiotherapy Unit, Eye Centre, Specialist OPD, Breast Care Centre, ENT, Chest Clinic and Dialysis Centre</td>
</tr>
<tr>
<td></td>
<td></td>
<td>249 Health education sessions were conducted at the MCH clinic of the unit</td>
</tr>
</tbody>
</table>
Disease Control and Surveillance Sub-Unit

Non-communicable diseases (NCD’s) Surveillance

Hypertension

A total of seven hundred and eighty-three (783) new cases of hypertension were reported in 2018. Four hundred and ninety-three (63.0%) cases were recorded at Family Medicine, 210 (26.8%) at Internal Medicine, 61 (7.8%) at Obstetrics and Gynaecology and 19 (2.4%) at Child Health. More than half (503; 64.2%) were females, with females forming the majority in each age group except for 0-9-year age group. This trend is likely due to the prompt health seeking behaviour of women compared to their male counterparts.

Diabetes

A total of 648 new cases of diabetes were recorded during the period under review. The Family Medicine Directorate recorded 139 (21.4%) new cases, Internal Medicine recorded 484 (74.7%), Child Health recorded 9 (1.4%) and O&G recorded 16 (2.5%) cases. More than half (416; 64.2%) of the cases were females. Similar to the trend seen for incident cases of Hypertension over the year, females accounted for the majority of cases in all age groups (chart below).

Diabetes and hypertension co-morbidity were recorded in 97 clients during the year 2018.

Figure 104: Age and Sex Distributions of new Diabetes cases at KATH, 2018
Childhood Malnutrition

One hundred and five (105) cases of malnutrition were recorded at the Child Health Directorate during the period under review. More than half (59; 56.2%) of the cases were males. Sixteen (16) deaths due to malnutrition were recorded during the period under review with a case fatality rate of 15.2%.

Figure 105: Age distribution of Childhood Malnutrition cases and deaths in KATH, 2018

Road Traffic Injuries (RTI’s)

A total of 936 RTI victims were attended to during the period under review. Majority of the victims (731; 78.1%) were males. There were 92 mortalities attributable to RTI’s recorded in KATH for the year 2018. Most of the victims (619; 66.1%) were aged between 20 to 49 years. November had the highest number of cases, Data on RTI’s are summarized in the charts below.
Figure 106: Age Distribution of RTI cases at KATH, 2018

Figure 107: Monthly trend of RTI cases in KATH, 2018
Communicable Diseases Surveillance

Pneumonia in children under 5 years of age

Five hundred and thirty (530) cases of pneumonia in children under 5 years with 22 (CFR=4.2%) deaths were recorded during the period under review. A little over half (294; 55.5%) of the cases were males. Four hundred and eighteen (78.9%) cases were admitted at the Child Health Directorate and 112 (21.1%) seen at the Family Medicine Directorate. Children under 12 months accounted for more than half (327; 61.7%) of cases. There was an increase in cases of pneumonia in children under-5s in the year 2018 at KATH compared to 2016 and 2017. (See charts below)

Figure 108: Age distribution of Pneumonia cases and deaths in children under-5 years at KATH, 2018
Figure 109: Three-year trend analysis of pneumonia cases in Children under -5, KATH, 2016-2018

Diarrhoea with dehydration in children under 5 years

In the year 2018, thirty-seven (37) cases of diarrhoea with dehydration in children under 5 years were recorded with one death. A peak attendance for diarrhoea in Children<5 was recorded in the month of March, 2018. More males (n=22; 59.5%) than females (40.5%) were affected. Overall the number of cases of diarrhoea with dehydration in children under 5 seen annually has been declining over the past 3 years. (See charts below)
Figure 110: Age distribution of diarrhoea with dehydration cases in children under 5 years, KATH, 2018.

Figure 111: Monthly distribution of diarrhoea with dehydration cases in children under 5 years, KATH, 2018.
Figure 112: Three-year trend of Diarrhoea in children under 5 years, KATH, 2016-2018

**Diarrhoea with blood**

Twenty-nine (29) cases of diarrhoea with blood with 2 deaths were reported during the period under review. A little over half 15 (51.7%) of the cases were females. Thirteen (13) of the cases were seen at the Family Medicine OPD, 10 at the Paediatric Emergency Unit and 6 at Internal Medicine.

**Viral hepatitis**

A total of two hundred and fifty (255) new cases of viral hepatitis were reported in the year 2018. A little over half of the cases 146(57.3%) were males. One hundred and thirty-four (52.5%) were seen at Internal Medicine Directorate, 55(21.6%) at the Family Medicine, 64(25.1%) at O&G and 2(0.8%) at the Child Health Directorate.

Hepatitis B was the most common viral hepatitis accounting for 237(92.9 %) out of 255 new cases diagnosed. The 20 to 49-year age group had the highest number of viral hepatitis cases, accounting for close to 80% of all new cases and over 80% of all deaths due to viral hepatitis.

There was a sharp increase in the number of viral hepatitis cases in 2017 compared to 2016 followed by a slight decline in the number of cases in 2018. The sharp increase may be due to increased reporting and an increased capture of cases seen by the Public Health surveillance system.
Malaria in children under 5 years

A total of 274 cases of malaria in children under 5 years with 10 deaths (CFR=3.6%) reported during the period under review. In terms of distribution by gender, 157 (57.3%) were males and 117(42.7%) were females. Seventy-four (27.0%) of the cases were managed at the Family Medicine OPD whilst 200 (73.0%) were admitted at the Paediatric Emergency Unit. The peak periods of reporting were in the months of July and August.
For the year 2018, a total of 8,983 requests for microscopic malaria parasite examination were made out of which 419 (4.7%) were confirmed for malaria. Out of these positive cases, 76 (18.1%) occurred in children under five. When grouped according to gender, 202 cases (48.2%) occurred in males and 217 cases (51.8%) in females.

April and June recorded the highest number of requests with the highest numbers of confirmed malaria cases (See Charts below)

Routine reporting of plasmodium species seen was done for all 419 cases positive for malaria. Three hundred and seventy-one (371) cases, representing 88.5 %, showed *Plasmodium falciparum* with 5 *plasmodium malariae* identified. Gametocytes were recorded in seventeen (17) cases and pigments identified in twenty-six (26) cases.

**Figure 115: Monthly trend of malaria cases in children under 5 years, KATH, 2018**

**Malaria Laboratory Surveillance**

For the year 2018, a total of 8,983 requests for microscopic malaria parasite examination were made out of which 419 (4.7%) were confirmed for malaria. Out of these positive cases, 76 (18.1%) occurred in children under five. When grouped according to gender, 202 cases (48.2%) occurred in males and 217 cases (51.8%) in females.

April and June recorded the highest number of requests with the highest numbers of confirmed malaria cases (See Charts below)

Routine reporting of plasmodium species seen was done for all 419 cases positive for malaria. Three hundred and seventy-one (371) cases, representing 88.5 %, showed *Plasmodium falciparum* with 5 *plasmodium malariae* identified. Gametocytes were recorded in seventeen (17) cases and pigments identified in twenty-six (26) cases.
Figure 113: Malaria Parasite examination requests and positive cases recorded per month, KATH, 2018.

Viral hemorrhagic Fever syndrome (VHF)

A single case of suspected viral hemorrhagic fever syndrome was recorded during the period under review. A 34-year old health worker from Ankaase reported at the Accident and Emergency Unit with headache, nausea and vomiting, diarrhoea and difficulty swallowing. Blood sample taken to Noguchi Memorial Institute for Medical Research (NMIMR) tested negative for Ebola, Marburg, Lassa fever, Zika, Dengue fever and Yellow fever viruses.

Rabies

Four cases of suspected rabies were reported in the period under review including a 4-year old boy from Atonsu, a 45-year-old man from Tanoso, a 46-year-old man from Amanfrom and an 80-year-old woman from Anwomaso, all in the Ashanti Region, with a history of dog bite. All the cases died on admission.
Measles

There were two suspected measles cases reported in the year 2018. A one-year old boy from Santasi Apire and a 2-year old boy from Bantama, both in the Kumasi Metropolis. Both cases were seen in October at the Family Medicine Directorate. Blood samples of these patients were taken and sent to the National Public Health Reference Laboratory (NPHRL) for investigation, but the results were negative.

Acute Flaccid Paralysis (AFP)

There were three cases of AFP reported during the period under review. A 3-year old girl from Efia Nkwanta, a 5-year old boy from Asankragwa all in the Western Region and an 8 year old from Anwomaso in the Oforikrom Municipality, Ashanti Region. These cases were seen at the Child Health Directorate. Stool samples were taken and sent to Noguchi Memorial Institute within 72 hours of presentation for investigations. All cases tested negative for polio viruses. The Public Health Unit in collaboration with Ghana Health Service conducted the mandatory 60-day follow-up on all three AFP cases, with only one case having evidence of residual paralysis.

Tuberculosis

A total of 403 cases of TB, including both adults and children, were registered at the Chest Clinic for the year 2018. This represents a slight increase over the 380 cases recorded in 2017 and may be through increased efforts at case detection and referral. Males accounted for a little over half of cases 242 (60.0%) whilst children less than 15 years accounted for approximately 20% (n= 82) of all cases.

The majority of cases were of the pulmonary type of TB, with new smear negative (n=125) and new smear positive (n=83) cases comprising a large proportion. Extra-pulmonary TB (EPTB) cases comprised almost a third of all TB cases seen (n=121, 30%).
Figure 114: Categories of TB cases seen at KATH, 2018

**TB and HIV co-infection**

In 2018, 35 known People Living with HIV (PLHIV) reported with TB.

A total of 368 TB patients were counselled for HIV testing out of which 177 (48.1%) consented to be tested. A total of 60 (33.9%) of the TB patients consenting tested positive for HIV and were enrolled onto HIV management and follow up.

**Meningitis**

Three hundred and thirty-six (336) suspected new cases were reported in 2018, with approximately 72 % (n= 244) aged 10 years and below. More than half of the cases (201; 59.82%) were males. Child Health Directorate reported majority of suspected meningitis cases (n= 262; 77.98%). A total of 267 cases had meningitis recorded as primary diagnosis, whilst the remaining had ‘meningitis’ recorded as secondary diagnosis or differential diagnosis. Lumbar puncture was performed for 63 out of 336 cases, giving a LP-rate of 18.73 %. Given epidemic potential of some forms of meningitis, the low LP rate for diagnosed cases of meningitis represents a source for epidemic preparedness planning.
The monthly trend of reported meningitis cases showed that the highest number of suspected cases were recorded in January. There was sharp drop in suspected cases in February after which there was a steady increase in suspected cases till it peaked again in August and started declining again to the end of the year. This does not clearly fit the pattern of the known meningitis period for the country but may be explained by the fact that the Hospital is not situated within the Meningitis Belt and also sees cases from varied locations around the country. The chart below demonstrates the monthly trend of meningitis cases seen across the Hospital.

**Figure 115: Age Distribution of Suspected Meningitis Cases, KATH, 2018**
MATERNAL AND CHILD HEALTH (MCH) PREVENTIVE SERVICES

As part of efforts to improve the quality of maternal and new-born care in the hospital, the Reproductive and Child Health section of the Public Health Unit is committed to ensuring that children receive all required vaccines in the Expanded Programme on Immunization (EPI) as well as Tetanus-Diphtheria (Tdip) vaccination for pregnant women and vaccination for other exposed persons as indicated. The MCH also monitors the weight of children from 6 weeks to 5 years and engages mothers/guardians in counselling.

Health Education

In 2018, at total of 249 daily health education sessions were conducted. The topics treated included Importance of Child Welfare Clinic (CWC), Respiratory Tract Infections, Tuberculosis, Malaria and Diarrheal diseases, Hygiene, Home Accidents, Cervical cancer and Safe Motherhood. Clients were also educated on the importance of family planning and the various methods available. Clients who expressed interest in family planning were counselled and subsequently referred to
the Family Planning Unit. Mothers were also encouraged to avail themselves for cervical cancer screening and vaccination available at the Family Planning Unit.

**Immunizations**

Comparing the number of children vaccinated in 2017 to the present year (2018), there has been no significant changes in the overall trend. Generally, the trend continues to show a decrease in the numbers of children receiving the 2nd and 3rd doses of the pentavalent, PCV and measles vaccines (See Fig below). Inactivated Polio Vaccination (IPV) was officially started in June 2018 which explains the relatively lower number of doses administered. The table below gives a summary of the vaccines in the Expanded Program on Immunization (EPI) and the number of children vaccinated.

**Table 49: Total number of children receiving various vaccines under EPI, KATH, 2015 - 2018**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Total Administered Full Year, 2015</th>
<th>Total Administered Full Year, 2016</th>
<th>Total Administered Full Year, 2017</th>
<th>Total Administered Full Year, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Children vaccinated with BCG</td>
<td>10,190</td>
<td>8,848</td>
<td>8040</td>
<td>8347</td>
</tr>
<tr>
<td>Number of Children vaccinated with OPV 0</td>
<td>10,179</td>
<td>9141</td>
<td>7142</td>
<td>8098</td>
</tr>
<tr>
<td>Number of Children vaccinated with OPV 1</td>
<td>3651</td>
<td>3196</td>
<td>2840</td>
<td>2837</td>
</tr>
<tr>
<td>Number of Children vaccinated with OPV 2</td>
<td>3264</td>
<td>2555</td>
<td>2173</td>
<td>2145</td>
</tr>
<tr>
<td>Vaccination Schedule</td>
<td>Number of Children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPV 3</td>
<td>3076</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Penta 1</td>
<td>3691</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Penta 2</td>
<td>3386</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Penta 3</td>
<td>3090</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCV - 1</td>
<td>3686</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCV – 2</td>
<td>3388</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCV - 3</td>
<td>3111</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotavirus - 1</td>
<td>3651</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotavirus - 2</td>
<td>3241</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yellow Fever</td>
<td>2954</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2416</td>
<td>2173</td>
<td>2163</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3196</td>
<td>3388</td>
<td>2838</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2555</td>
<td>2182</td>
<td>2145</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2477</td>
<td>2034</td>
<td>2163</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3021</td>
<td>3394</td>
<td>2843</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2560</td>
<td>2184</td>
<td>2149</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2420</td>
<td>2037</td>
<td>2168</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3196</td>
<td>3101</td>
<td>2837</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2555</td>
<td>2182</td>
<td>2145</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2116</td>
<td>2432</td>
<td>2120</td>
<td></td>
</tr>
<tr>
<td>Vaccination Type</td>
<td>Total Vaccinated</td>
<td>2018</td>
<td>2019</td>
<td>2020</td>
</tr>
<tr>
<td>------------------</td>
<td>------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Measles – Rubella</td>
<td>3221</td>
<td>2445</td>
<td>2316</td>
<td>2089</td>
</tr>
<tr>
<td>Measles – 2</td>
<td>2189</td>
<td>1501</td>
<td>2203</td>
<td>1654</td>
</tr>
<tr>
<td>Meningitis A</td>
<td>-</td>
<td>290*</td>
<td>2203</td>
<td>2039</td>
</tr>
<tr>
<td>IPV</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1307*</td>
</tr>
</tbody>
</table>

*Figure 117: Number of children receiving selected Vaccines, 2018*
Vitamin A Supplementation and Long-Lasting Insecticide Treated Nets (LLIN) Distribution

A total of 5090 episodes of vitamin A were administered in the period under review.

The MCH, as part of efforts to prevent malaria in children under five distributes Long Lasting Insecticide Treated Nets (LLITN) to children who receive measles booster (given at 1 ½ years). In all, a total of 1675 LLINs were distributed in the year under review, 19.64% more than the quantity distributed in 2017.

Growth Monitoring

In 2018, a total of 4184 children were presented for growth monitoring, with 29,369 weighing episodes performed. Sex distribution of the children seen were approximately the same (Females: 50.19% and Males: 49.81%). Over 95% of the children had normal weight gain progression. Sixty-one (61) children (1.5%) identified to be severely malnourished were promptly referred to the paediatric malnutrition clinic. This consisted of 28 children (0.68%) severely underweight & 33 (0.79%) who were obese.

Parents of other children who were found to be mildly underweight or overweight were personally counselled and supported.

Tetanus-Diphtheria (T-Dip)

The MCH also offers Tetanus-Diphtheria vaccination primarily for pregnant women attending Ante-natal clinic at O&G Specialist Consulting Room 8. A total of 1584 episodes of T-Dip vaccination for pregnant women were recorded in 2018 with the majority of recipients receiving their first-ever dose (33.83%) or their second-ever dose (25.19%).

Prevention of Mother to Child Transmission of HIV (PMTCT)

The role of the PMTCT interventional programme in the reduction of the overall prevalence of HIV cannot be over emphasized. The programme since its inception in KATH has continued to save infants born to HIV infected mothers.

ANC Registrants
During the year under review, total of 1047 new ANC registrants were recorded at the KATH ANC (O&G Consulting Room 8). The most frequent occurring age group was 30-34 years with 403 (38.5%) registrants.

**HIV Testing and Counselling**

According to the PMTCT protocols, testing and counselling for HIV is done for a mother twice in each pregnancy. Therefore the number of testing episodes is usually more than actual number of mothers taking the test.

In the year 2018, a total of 2134 HIV tests were done. Out of this, 994 were first tests whiles 1140 were second tests. However, the actual number of mothers who went through the test were 2063.

**Trends in PMTCT Testing and Results**

More mothers were tested in 2018 compared to the preceding two years. There has been a steady decline in the proportion of mothers testing positive since 2014 except for 2017 when there was a slight increase. A representation of the five-year trend of mothers tested for HIV and the corresponding positives is shown in the chart below.

![Five-Year Trend in HIV Testing and Positive Results](image)

**Figure 118: Five-Year Trend in HIV Testing and Positive Results, KATH PMTCT, 2014 - 2018.**
Mothers on Anti-Retroviral Therapy (ARV’s)

In accordance with the WHO Treat-All Policy, all 32 mothers who tested positive at PMTCT were put on ARVs, as well as 62 mothers who were referrals from other facilities, bringing the total number of mothers put on treatment to 94. Out of this number, 82 were put on treatment during pregnancy (Antenatal) and 12 after delivery (Postnatal). In addition, there were 33 mothers who were already on ARVs before becoming pregnant (Prenatal). The pie chart below shows the categorization of HIV positive mothers on ARVs in 2018.

Figure 119: Categorisation of HIV Mothers Put on ARVs, KATH PMTCT, 2018

Trend Analysis of HIV Mothers on ARVs

The earlier a positive mother is put on ARVs the greater the likelihood that an exposed baby will be prevented from contacting HIV. When a mother is diagnosed and put on treatment only after delivery, the risk of transmission to the baby is relatively high because viral suppression is low or non-existent. The cases of mothers who receive ARVs only in the postnatal period are usually referrals found at the labour wards and who did not attend ANC at KATH. The number of mothers put on treatment after delivery in 2018 was 12, representing more than 50% reduction compared to 2017 (25 cases). While the total numbers of mothers initiated on ARVs over the past four years have consistently increased, except for 2018, the number of mothers in each of the categories has
been inconsistent from year to year. A four-year trend of mothers put on ARVs at the PMTCT section is displayed in the chart below.

![Graph showing four-year trend of mothers put on ARVs at PMTCT KATH, 2015-2018]

**Figure 120: Four-Year Trend HIV Mothers Initiated on ARVs, PMTCT KATH, 2015-2018**

**HIV Early Infant Diagnosis**

Total number of samples taken for PCR was 137; however, 101 results were received from the laboratory. Out of the 101 results received, 7(6.9%) tested positive. This represents a decline in the number and proportion of children testing positive in 2018 compared to 15(13.5%) positive for 2017.

The table below illustrates a five-year trend of infants screened and the corresponding positives. There has been an increasing trend from 2014 to 2017 but a decrease occurred in 2018.
Table 50: Five-year trend in Early Infant Diagnosis (EID) at KATH PMTCT, 2014 - 2018

<table>
<thead>
<tr>
<th>Year</th>
<th>No. screened</th>
<th>No. positive</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>142</td>
<td>4</td>
<td>2.8</td>
</tr>
<tr>
<td>2015</td>
<td>146</td>
<td>6</td>
<td>4.1</td>
</tr>
<tr>
<td>2016</td>
<td>165</td>
<td>11</td>
<td>6.7</td>
</tr>
<tr>
<td>2017</td>
<td>111</td>
<td>15</td>
<td>13.5</td>
</tr>
<tr>
<td>2018</td>
<td>101</td>
<td>7</td>
<td>6.9</td>
</tr>
</tbody>
</table>

Occupational Health and Preventive Medicine Sub Unit

The major occupational health surveillance and occupational health Indicators for KATH for the year 2018 are as follows

1. Proportion of staff who were incapacitated or died from occupational injuries = 0
2. Proportion of Staff reporting needle-stick injuries: 70/3451 = 2.0%
3. Proportion of staff who received occupational health interventions: 904/3451 = 26.2%

Post Exposure Prophylaxis (PEP) of HIV

For the year 2018, a total of 113 exposures with HIV risks were recorded. This includes all reported exposures to KATH staff as well as non-KATH staff.

Injury with hollow needle, which represents high risk exposure to HIV, continues to have the highest occurrence (50 cases; 44% of all exposures).

The table below details the breakdown of exposures for clients receiving PEP in KATH in 2018.

Table 51: Categories of HIV Exposures among Clients Receiving PEP, KATH, 2018

<table>
<thead>
<tr>
<th>Type of exposure</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Splash of body fluids on non-intact skin</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>
Mucocutaneous splash (e.g. splash on face, eye, mouth etc) & 15 & 13 \\
Injury with solid needle & 20 & 18 \\
Superficial injury & 7 & 6 \\
Injury with hollow needle & 50 & 44 \\
Deep extensive injury & 6 & 5 \\
Rape and defilement & 10 & 9 \\
**Total** & **113** & **100**

When disaggregated by professional group, nurses (registered nurses, midwives) accounted for the largest proportion of persons exposed through various injuries and events at the workplace. This is likely due to the fact that they form the largest proportion of the workforce. The table below details the breakdown of occupational categories affected.

**Table 52: Distribution of Occupational Groups with Infection Exposures, KATH, 2018**

<table>
<thead>
<tr>
<th>Occupational groups</th>
<th>Number</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctors</td>
<td>27</td>
<td>26.2</td>
</tr>
<tr>
<td>Nurses</td>
<td>45</td>
<td>43.7</td>
</tr>
<tr>
<td>Other staff</td>
<td>13</td>
<td>12.6</td>
</tr>
<tr>
<td>Non-health staff</td>
<td>18</td>
<td>17.5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>103</strong>*</td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

* Excludes 10 cases of rape and defilement. Includes health workers from other facilities.

**HIV Testing and Counselling (HTC)**

In 2018, a total of 2552 clients reported at the KATH HTC section of the Public Health Unit with females constituting a majority (1,478; 58%). The majority of patients were aged between 20 to 49 years, with a mean age of 35 years.
A large major proportion (n=1404:54.94%) of the clients who visited the HTC Centre were referred by a clinician because they had signs and symptoms suggestive of HIV. Clients who came on account of post-exposure were about 2% (n=47).

Table 53: Categories of Clients Reporting at the HTC, KATH, 2018

<table>
<thead>
<tr>
<th>Type of clients</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requested by a clinician (A/D)</td>
<td>1402</td>
<td>54.94</td>
</tr>
<tr>
<td>Walk-in (A/W)</td>
<td>722</td>
<td>28.29</td>
</tr>
<tr>
<td>Confirmation of a positive result (CP/P)</td>
<td>377</td>
<td>14.77</td>
</tr>
<tr>
<td>Post Exposure prophylaxis (PEP)</td>
<td>47</td>
<td>1.84</td>
</tr>
<tr>
<td>ANC &amp; Confirmation of a positive result</td>
<td>2</td>
<td>0.08</td>
</tr>
<tr>
<td>Rape/Defilements (CD)</td>
<td>2</td>
<td>0.08</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2552</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

Source: HTC Data, January to December, 2018

During the period under review, 2552 clients received pre-test counselling with 2546 (99.76%) agreeing to test. Out of those tested, 861 (33.73%) tested positive. Of all clients testing positive, the majority were females (n= 621: 72%). This could be explained by the fact that a majority of clients seen at the HTC were also females (58%). The 30 to 49 age group accounted for over half of all positive cases with the 30-39-year group singularly having the highest prevalence. This appears to follow the national trend which has the highest prevalence in the 30-49 age group. Additionally, the higher rates could also be explained by the higher numbers of clients being in those age groups.

Table 54: HIV Testing Performance Indicators, KATH, 2018

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>Annual, 2018</th>
<th>Percentage (%)</th>
</tr>
</thead>
</table>

A total of 2530 (99.37%) out of 2546 clients who tested received post-test counselling. Sixteen clients were lost between testing and post-test counselling mainly due to the fact that the waiting area is outside the testing and counselling rooms and clients sometimes leave before test results are available under the pretext of having to do other tests within the Hospital. The numbers of clients lost between testing and post-test counselling continues to reduce due to mechanisms put in place. However, a more permanent solution needs to be installed to ensure that no client is lost to post-test counselling.

Eight hundred and fifty-one (851) clients who tested positive were referred to various Antiretroviral (ART) centres based on their convenience and choice. About half of the patients seen at the HTC (430, 50.5%) opted to access ARV care at the KATH HIV Clinic.

**Health Promotion Activities**

Health Promotion activities aims at improving good health and preventing diseases among individuals and groups by influencing the beliefs, attitudes and behaviour of clients.

Health Education (HE) at KATH concentrates more on health sensitization at designated sites where patients and relatives are targeted to increase their awareness and foster behaviour change towards improved health.

In the year under review, health promotion sessions were carried out at service centres across all clinical service directorates and units.

**Activities in KATH**

A total of 270 Health Education/Promotion sessions were conducted during 2018, reaching a total number of 19,170 persons within the Hospital. Twenty-one (21) out of the 270 were collaborative
activities with other Units/Directorates and 9 out of 270 were radio health education activities at Silver F.M 98.3 MHz, following a commitment by the radio station to provide a platform for health promotion activities of the Unit.

Most Health Promotion/Education activities took place at various Units/Directorate including Eye Clinic, Specialist OPD, ANC, Diabetes Centre, Chest Clinic, ENT, Eye Centre, Physiotherapy, Breast Care Centre, Family Medicine OPD, MCH and Chronic Care Clinic (Family Medicine). The table below outlines the collaborative health promotion activities carried out with other Directorates/Units.

**Table 55: Health Promotion Activities and Collaborating Directorates, KATH, 2018**

<table>
<thead>
<tr>
<th>DATE</th>
<th>DIRECTORATE/UNIT</th>
<th>TOPIC</th>
<th>VENUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-02-2018</td>
<td>Eye</td>
<td>Glaucoma</td>
<td>Family Medicine OPD</td>
</tr>
<tr>
<td>23-03-2018</td>
<td>Eye</td>
<td>Eye Disorder</td>
<td>Family Medicine OPD</td>
</tr>
<tr>
<td>06-02-2018</td>
<td>Psychiatry</td>
<td>Clinical Depression</td>
<td>Family Medicine OPD</td>
</tr>
<tr>
<td>22-02-2018</td>
<td>Psychiatry</td>
<td>Anxiety Disorder</td>
<td>Family Medicine OPD</td>
</tr>
<tr>
<td>14-03-2018</td>
<td>Psychiatry</td>
<td>Schizophrenia</td>
<td>Family Medicine OPD</td>
</tr>
<tr>
<td>16-03-2018</td>
<td>Psychiatry</td>
<td>Dementia (Memory Loss)</td>
<td>Family Medicine OPD</td>
</tr>
<tr>
<td>26-03-2018</td>
<td>Psychiatry</td>
<td>Substance Abuse</td>
<td>Family Medicine OPD</td>
</tr>
<tr>
<td>12-06-2018</td>
<td>Psychiatry</td>
<td>Bipolar Disorder</td>
<td>Family Medicine OPD</td>
</tr>
<tr>
<td>23-02-2018</td>
<td>Dental</td>
<td>Tooth Decay</td>
<td>Family Medicine OPD</td>
</tr>
<tr>
<td>28-02-2018</td>
<td>Dental</td>
<td>Bad Breath</td>
<td>Radio</td>
</tr>
<tr>
<td>13-03-2018</td>
<td>Dental</td>
<td>Gum Disease</td>
<td>Family Medicine OPD</td>
</tr>
<tr>
<td>11-04-2018</td>
<td>Dental</td>
<td>Mouth Sores</td>
<td>Family Medicine OPD</td>
</tr>
<tr>
<td>18-04-2018</td>
<td>Dental</td>
<td>Tooth Erosion</td>
<td>Family Medicine OPD</td>
</tr>
<tr>
<td>02-05-2018</td>
<td>Dental</td>
<td>Tooth Sensitivity</td>
<td>Family Medicine OPD</td>
</tr>
<tr>
<td>14-06-2018</td>
<td>Dental</td>
<td>Unattractive Smile</td>
<td>Family Medicine OPD</td>
</tr>
<tr>
<td>DATE</td>
<td>DIRECTORATE/UNIT</td>
<td>TOPIC</td>
<td>VENUE</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------</td>
<td>------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>20-06-2018</td>
<td>Dental</td>
<td>Dentine Hypersensitivity</td>
<td>Family Medicine OPD</td>
</tr>
<tr>
<td>27-06-2018</td>
<td>Dental</td>
<td>Tooth Decay</td>
<td>Family Medicine OPD</td>
</tr>
<tr>
<td>21-02-2018</td>
<td>Dietetics</td>
<td>Diet</td>
<td>Radio (Silver F.M 98.3 MHz)</td>
</tr>
<tr>
<td>14-02-2018</td>
<td>O&amp;G</td>
<td>Healthy and Safe Motherhood</td>
<td>Radio (Silver F.M 98.3 MHz)</td>
</tr>
<tr>
<td>28-03-2018</td>
<td>Breast Care Centre</td>
<td>Breast Cancer</td>
<td>Radio (Silver F.M 98.3 MHz)</td>
</tr>
<tr>
<td>19-06-2018</td>
<td>Sickle Cell Clinic</td>
<td>Know your Status</td>
<td>Family Medicine OPD</td>
</tr>
</tbody>
</table>

**Priority Activity 5: Conduct operational research into emerging diseases**

The Public Health Unit begun the process of conducting an operational research into supportive practices amongst sero-discordant couples seeking care at the KATH HIV Clinic. The proposal development was completed during the year, pending ethics application and approval. In addition, the Unit continued to collaborate with other Directorates/Unit and staff conducting research to further research mandate of the Hospital.

**Priority Activity 13: Support Training of Staff**

The Unit was involved in a number of training activities across the Hospital. Three training seminars in topics of public health concern were organised for Family Medicine residents. A total of 45 residents, senior residents, specialists and medical officers benefitted from these trainings.

The Unit also coordinated a training workshop on the newly introduced Combined Maternal and Child Health Record Book (CMCHRFB) for selected midwives and public health nurses from O&G and Child Health Directorates as well as Public Health Unit.

Over the year, the Unit participated in numerous orientation sessions organised by the In-Service Training Unit for various categories of newly-recruited staff.

One doctor from the Unit successfully completed the Membership programme at the Ghana College of Physicians and Surgeons. Six (6) Community Health Nurses also completed Diploma in Community Health Nursing.
CHALLENGES AND MITIGATION PLAN

<table>
<thead>
<tr>
<th>CHALLENGE</th>
<th>MITIGATION PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate space for staff and client activities</td>
<td>Maximize use of space available</td>
</tr>
<tr>
<td>Inadequate number of staff with adequate training in Occupational Health, Research and Data Management</td>
<td>Training in these areas included in 2019 Plan of work (POW) and Budget</td>
</tr>
<tr>
<td>Lack of advanced statistical software for data analysis</td>
<td>Provision made in 2019 budget for STATA software.</td>
</tr>
<tr>
<td>Inadequate number of staff to expand services</td>
<td>Requested for Nation Builders Corps-NABCO personnel to be trained to supplement numbers</td>
</tr>
<tr>
<td>Breakdown of refrigerator at the BCG administration room (Ward A1) hampering efficient immunization of newborns</td>
<td>Provision of new fridge made in the 2019 Budget</td>
</tr>
<tr>
<td>Clients lost in the stream of service provision (HIV testing and counselling) because of separation of testing, counselling and waiting areas.</td>
<td>Staff to accompany clients to the waiting area of the testing and counselling rooms and frequently check that they are seated. In the long-term, adequate space will be needed to allow counselling, testing and waiting areas within a single space but with enough privacy for clients.</td>
</tr>
</tbody>
</table>
Old desktop computers at HTC, PMTCT, MCH hampering efficient data management | Provision of new desktop computers to facilitate data management and analysis using advanced statistical software.

CHAPTER 32
SECURITY UNIT

Introduction
The Security Unit is mandated to provide safety and security for staff, patient, visitors and properties of KATH. The vision of the unit is to become a professional security services provider comparable to international standards and the mission is to provide excellent safety and security services for personnel and property in a hospital setting.

Personnel Deployment
Strategic deployment methods based on level of risk assessed for various locations were adopted due to inadequacy of the guard force and the spread-out nature of facilities within Hospital.

Out-Sourced Security
Due to the inadequacy of the Hospital’s guard force, two private companies, Mabot Security Services Company Limited and First Watch Security Services, were contracted to complement the efforts of the Security Unit.

Cases Recorded and Tackled
The Security Unit recorded and tackled 66 cases in the year 2018 which is an increase over 2017 and 2016 figures. The cases dealt with included the following:

- Fraud
- Theft
- Absconding Patient
- Intrusion of Privacy
- Fire
- Flooding of offices
• Assault/Violence
• Road Traffic Incidents
• Rescue/Safety Management
• Impersonation
• Misuse of Hospital Property
• Others

Most of the cases recorded during the year were conclusively resolved while others are on-going with some requiring further follow ups and continuous vigilance. The chart below shows the trend of most common security incidents from 2014-2018. Overall incidents of theft are on the decline whilst patient absconding, personal assault and vehicular incidents are increasing.

Figure 121: Five-Year Trend of Security Incidents, KATH, 2014-2018
The rise in the trend of some incidents have necessitated the introduction of additional security measures to unveil incidents that would otherwise have stayed hidden. Security guards have been put on high alert to avert all such threats as they unfold. The general staff continued to play vigilant roles by reporting cases and suspicious activities, made possible by enhanced security policies and measures put in place in spite of the many challenges faced over the period. The initiative taken to regularly register patient-relatives on the premises of the Hospital to ensure that criminals and illegitimate persons do not mingle with legitimate ones (those who really have patients on the wards but come from remote places and their presence is required by doctors) has also contributed immensely to the reduction of crimes in the hospital. The KATH Police Station has continued to play a major role in dealing with some crimes decisively, apart from serving as a deterrent.
CHAPTER 33

CHALLENGES AND MITIGATION STRATEGIES

- **High Institutional Maternal and Neonatal Mortality**
  - ✓ Undertake outreach and public support programmes
  - ✓ Improve communication systems between KATH and peripheral institutions
  - ✓ Provide specialist support to peripheral institutions
  - ✓ Completion of the 42-year old Maternity and Children Complex

- **Inadequate and ageing infrastructure, vehicles and equipment such as: diagnostic equipment, Cobalt machine, Laundry and CSSD equipment and associated high maintenance costs**
  - ✓ Continue discussions with MOH for replacement of obsolete equipment and machinery (Radiology, Oncology, Laundry, CSSD).
  - ✓ Acquire more vehicles to ensure effective running of the Hospital’s operations
  - ✓ Look for donor support in the area of equipment and renovation of buildings through the KATH Endowment Fund (KEF)
  - ✓ Intensify planned preventive maintenance activities

- **Poor Staff attitude towards work**
  - ✓ Training programmes to improve customer care and staff attitude

- **Accommodation for House officers and Residents**
  - ✓ Completion of new housemen’s flats at Bantama

- **Delays in the payment of health insurance claims/ unrealistic tariffs/ withheld NHIS claims**
  - ✓ Continue dialogue with NHIA for tariff review and claims processing.
  - ✓ The LHMIS software to be extended to all service points to reduce the rate of rejected bills and improve submission time.
• **Late referrals of patients or presentation of cases at advanced state**

Increase awareness in early attendance and referral by:

✓ Intensifying collaborative outreach with peripheral institutions, social and religious bodies

✓ Improving communication systems between KATH and peripheral institutions

• **Increasing number of paupers**

✓ Identify institutions and individuals to support patients who are not able to pay their bills

✓ Identify potential paupers early to schedule reasonable payment plans

• **Inadequate staffing in some critical area – Pharmacists, Clinical Psychologists, Occupational Therapists**

✓ Continuous discussion with Ministry of Health for financial clearance to recruit staff
SUMMARY ACTIVITIES/ PRIORITIES FOR THE YEAR 2019

• Continue efforts in providing support to district and regional hospitals in the northern sector of Ghana, by way of providing outreach services
• Intensify planned preventive maintenance activities
• Improve management information systems especially completing the rollout of LHIMS software
• Support staff in sub-specialty training programmes
• Continue dialogue with NHIA to reduce the delays in the payment of claims and provide realistic tariffs.
• Continue with the financial control measures to further increase IGF
• Continue to improve performance monitoring
• Continue to improve Quality Assurance
• Continue with policies to widen the range of specialist services
• Expansion of Oncology Centre to include Nuclear Medicine Treatment and Diagnostic Unit
• Procure requisite medical equipment, especially imaging equipment to improve service delivery
• Conduct operational research into top ten emerging diseases
• Improve the availability of medicines
• Scale up cardiothoracic services
• Improve planned preventive maintenance of transport facilities to support healthcare delivery
• Continue efforts in securing the necessary funds for the completion of 42-year old children and maternity block
• Sustain activities to reduce mortalities (especially maternal and neonatal deaths) and improve general care outcomes
• Seek public support for the KATH Endowment Fund