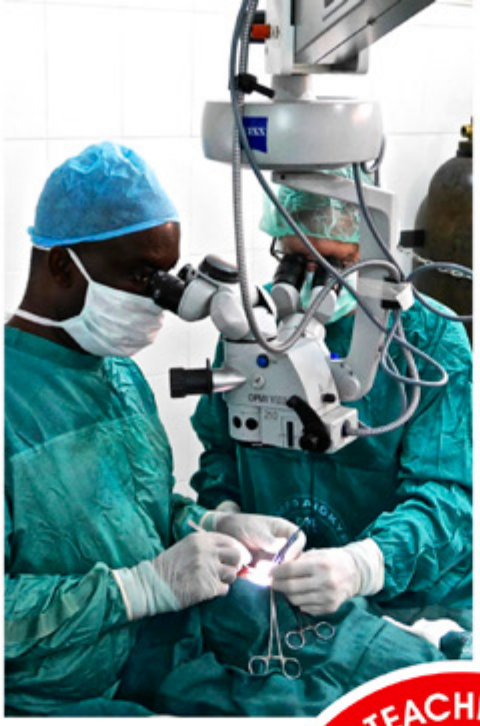


KOMFO ANOKYE TEACHING HOSPITAL, KUMASI

KATH

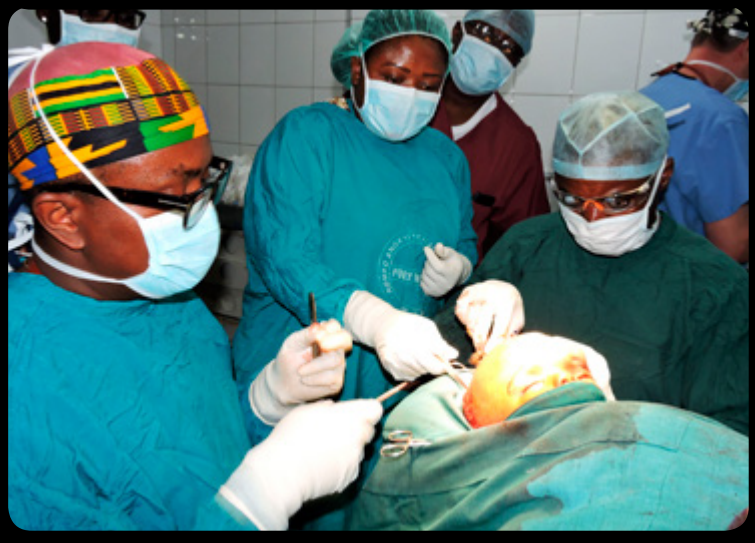
A CENTRE OF EXCELLENCE

ANNUAL REPORT 2017

ANNUAL REPORT 2017

KOMFO ANOKYE TEACHING HOSPITAL
KUMASI

A Center of Excellence



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Book Cover/Layout: Bright Amoako-Attah

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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

CT 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 Immune Deficiency Virus

HCP: Himalayan Cataract Project

HCV: Hepatitis C Virus

HVO: Health Volunteers Overseas

IUD: Intrauterine Device/Copper T0-

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: Nogochi 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: Paediatric 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

ACKNOWLEGDEMENTS

The Management of KATH would want to expresses 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.

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PREFACE

The 2017 Annual Performance Review of the Hospital was held on 7th March, 2018. The workshop was attended by representatives from Ghana Health Service, Cape Coast Teaching Hospital, Tamale Teaching Hospital and Ministry of Health.

The 2017 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. Improved staff attitude
3. Human resource development and welfare
4. Improved 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 2017 annual 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 2018.

SECTIONS OF THE REPORT

SECTION 1
Introduction

SECTION 2
Performance trends

SECTION 3
Overview of Directorates'/ Units' performances

SECTION 4
Achievements, challenges and focus for 2018

FROM THE DESK OF THE CHIEF EXECUTIVE

The period under review was extremely difficult. The operational environment was plagued with frequent breakdown of life saving equipment like Ventilators, Anaesthetic Machines, Computer Tomography Scan (CT scan) machine and the ballooning prices of medical consumables and supplies which crippled operations in the Hospital.

Despite these challenges, some of the Directorates and Units performed above levels achieved over the same period last year; thanks to the resilience and commitment of our staff.

During the period under review, Specialist O.P.D attendance recorded 269,753 cases as against 261,083 cases in 2016 thus translating into an increase of 3.40%. Diagnostics Services recorded 318,181 cases as against 263,347 cases in 2016 representing an increase of 20.82%. Family Medicine (Primary Care) cases recorded 68,234 cases as against 62,638 in 2016 translating into an increase of 8.93%. Physiotherapy Services recorded 18,073 cases as against 17,418 in 2016 translating into a marginal increase of 3.76%. Radiotherapy Therapy services recorded 8,247 cases as against 6,697 in the same period in 2016 indicating an increase of 23.14%. Blood collected was 17,202 as against 16,734 for 2016 showing a marginal increase of 2.80%.

However, Surgical Operations dropped from 17,928 to 17,558 in 2017 translating into a marginal decrease of 2.06%. Emergency Cases dropped from 17,804 in 2016 to 16,818 translating into a decrease of 5.54%. Ward Admissions dropped from 35,699 cases in 2016 to 34,552 in 2017 cases depicting a decrease of 3.21%. Deliveries dropped from 8,884 in 2016 to 8,438 translating into negative 5.02%.

In a related development, Maternal Death rate increased from 1020.52 per 100,000 live Births to 1207.10 per 100,000 live births whilst Neonatal Death rate also increased from 134.69 per 1000 birth in 2016 to 141.18 per 1000 birth in 2017. This in spite of the interventions such as Maternal Accelerated Framework (MAF) programme that was executed within the Millennium Development Goal (MDG) to curb the high maternal and neonatal mortality rate, the figures were a bit high for the year under review.

The timely completion of the New Maternity, Mother and Baby Unit and the Paediatric Intensive Care Unit (PICU) project spearheaded by Her Excellency Mrs. Rebecca Akufo-Addo, the First Lady of the Republic of Ghana with the support of Her Excellency Hajia Samira Bawumia, the Second Lady, His Royal Majesty Otumfuo Osei Tutu II and Wife Lady Julia Osei Tutu Boateng, is expected to improve clinical outcomes and the consequent reduction in maternal and neonatal mortality in the Hospital.

This project was made possible by a documentary produced by the award-winning Journalist with the Multimedia Group, Seth Kwame Boateng, which pricked the conscience of Ghanaians leading to two successful fund raising drives in Accra and Kumasi respectively.

Several infrastructural developments were undertaken at both official and residential buildings of the hospital. Notably amongst them were the ongoing construction of a 40 Flats Houseman block at Bantama Nurses Quarters estimated at GH¢407,285.90, which is 20% completed. Also, drilling and mechanization of borehole at Asuoyeboah SSNIT Flat Block 10 was completed at a cost of GH¢27,550.00. Tilling of concrete roof of the main Block D was also completed at a cost of GH¢93,052.00.

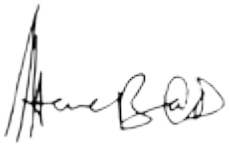
Renovation works at some selected residential apartments of the hospital at Danyame were undertaken at a cost of GH¢57,406.96. Renovation works at the main Theatre was also completed at a cost of GH¢121,619.95. Renovation work at the former Consulting Room 10 and old Dental was completed at a cost of GH¢18,019.59.

Management is vigorously expediting the process to secure the necessary approval from the Ministry of Health for the procurement of a bigger Oxygen Plant to replace the obsolete 20 year old Oxygen plant. Amongst the equipment procured were OPG with Lateral Cephalometric X-Ray, Dental chairs, Ultrasound machine and an Exchange of surgical instrument for ENT Unit worth (Euros) 14,692.12

Management, with support of the Board, initiated an award programme to honour individuals and corporate organizations who have undertaken advocacy, fundraising and other resource mobilization drives that have significantly contributed to the development of the Hospital over the years.

The following were the names of the initial awardees: Dr. Seth Lartey, Head of Eye Unit, Dr. Kwodwo Eyeson of Dialysis Unit, Dr. Ernest Kwarko, Specialist Obstetrician Gynaecologist, Dr. John Adabie-Appiah Paediatric Intensivist, Dr. Michael Amoah, Paediatric Surgeon, Dr. Richard Selormey, Maxillofacial Surgeon, Dr. Rockefeller Oteng, Lead Clinician Emergency

DR. OHENEBA OWUSU-DANSO
Chief Executive Officer



Medicine Directorate, Mrs. Marina Assabil Deputy Director of Nursing Services in-charge of Main Theatre and Kate Boamah, Nursing Officer at Emergency Medicine Directorate.

To enhance the human resource capacity, the Hospital incurred a cost of GH¢2,479,699.55 on staff pursing different programmes and specialties in Ghana and beyond as well as those who were sponsored to attend conferences.

The Hospital's ability to survive and deliver on its mandate will therefore to a large extent depend on how well we treat our patients, reduce waste and optimize our revenues.

Finally, may I commend again, the Board, Staff Members and the various professional groups for their continued support throughout the year. My humble appeal to you all is to help and work assiduously to restore the negative values recorded.

Thank you.

INTRODUCTION

1

In 1952, the need to construct a new Hospital to cater for the fast increasing population in Kumasi and therefore the Ashanti region arose. In 1954/55 the new hospital complex was completed and named the Kumasi Central Hospital.

The name of the hospital was later changed to the Komfo Anokye Hospital in honour and memory of the powerful and legendary fetish priest, Komfo Anokye and became a teaching hospital for the training of medical students from the Kwame Nkrumah University of Science and Technology (KNUST) in 1975. Komfo Anokye Teaching Hospital is one of the training centres for postgraduate training for the Ghana College of Physicians and Surgeons and the West African Colleges of Physicians and Surgeons.

Currently, the hospital has twelve (12) clinical Directorates, two (2) non-clinical Directorates and seventeen (17) supporting units. Each of the Directorates and Units have their own management teams responsible for the day to day operations of each Directorate and Unit. This leaves Central Management to concentrates on strategic management of the Hospital and provides support to the various Directorates and Units.

The Hospital receives patients from and beyond the Ashanti region, including some parts of the Eastern, Central, Western, Brong Ahafo, and the three northern regions, with an estimated population of over ten 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 Broad Policy Framework
- The Chief Executive is in charge of the day to day management of the Hospital

MISSION

Our 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 standards comparable to any international standards.

MISSION

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

CORE VALUES

All the activities of the hospital will be built on the following values;

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

CORPORATE OBJECTIVES

The corporate objectives which will guide the actions of the hospital for the year 2017 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

HEALTH SECTOR OBJECTIVES PURSUED IN 2017

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

In fulfilment of its mandate of providing advanced clinical care services to people in Ghana, the Hospital provides services in all aspects of specialist care. The following are the summary of services provided in the Hospital.

Anaesthesia & Intensive Care

- Intensive care
- Anaesthesia
- Pain medicine

Child Health

- Cardiology
- Neurology
- Respiratory Medicine
- Paediatric Emergency
- Nephrology
- Gastroenterology
- Infectious Diseases
- Neonatology
- Oncology/Haematology
- Critical Care
- Endocrinology
- Sickle Cell
- Malnutrition

Diagnostics

- Pathology
- Chemical pathology
- Radiology /Imaging
- Microbiology
- Haematology

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
- Ophthalmology
- Occuloplastic
- Glaucoma
- Retina
- External eye disease and cornea
- Paediatric ophthalmology and adult strabismus
- Neuro-ophthalmology
- Refraction and low vision services
- Investigations and imaging services

Family Medicine

- Chronic Care
- Palliative Care
- Rehabilitation medicine
- Medical Examinations
- Wound care
- Minor procedures
- Physiotherapy

Medicine

- Cardiology
- Endocrinology
- Nephrology
- Neurology
- Gastroenterology
- Haematology
- Respiratory Medicine
- Psychiatry
- Infectious Diseases
- Geriatrics
- 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

Technical Services

- Biomedical Engineering
- Plants and Machinery
- Estates
- Environmental Health Services

Traumatology & Orthopaedics

- Trauma
- Orthopaedics
- Hand Surgery

Other Supporting Units

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

CORPORATE PRIORITIES FOR 2017

Drawing from the Hospital's 2015-2019 Strategic Plan which is aligned to the Health Sector Medium Term Objectives 1, 2, 3, 4, and 5, the Hospital set the following priorities for the year 2017.

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

PRIORITY ACTIVITIES

The general Hospital priority activities for 2017 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 Insurance Authority to reduce the delays in the payment of claims and provide realistic tariff.
6. Continue with the 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 Nuclear Medicine Treatment and Diagnostic 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 care outcomes

2017 HOSPITAL-WIDE EXPECTED OUTPUTS

The following were the expected outputs for 2017;

1. Specialist Out-patients seen; 244,754
2. General Out-patients seen; 76,680
3. Inpatients/Admissions; 41,300 recorded.
4. Surgical operations (major & Minor); 24,795 performed.
5. Emergency cases; 23,660 recorded.
6. Deliveries; 9600 supervised.
7. Physiotherapy services; 20,000 patients seen.
8. Diagnostic investigations; 324,166 conducted.
9. Radiotherapy and Medical Radiotherapy treatment; 7,288 sessions.
10. Blood screened 21000 screened.
11. Maternal death rate reduced by ≥ 10% of 2016 rate of 1020.52/100,000 live births
12. Neonatal mortality reduced by ≥ 10% of base rate of 134.69%
13. Maternal deaths on unconfirmed diagnosis; 100% post-mortem conducted on.
14. Maternal death audit; 100% audited.
15. Neonatal death audit; 20% audited.
16. Outreach services; 25 district hospitals supported.
17. Patient satisfaction level improved from 58% in 2016 to ≥60%
18. NHIA claims rejection rate reduced to 3% from 5% in 2016
19. Total expenditure reduced by 2.5%

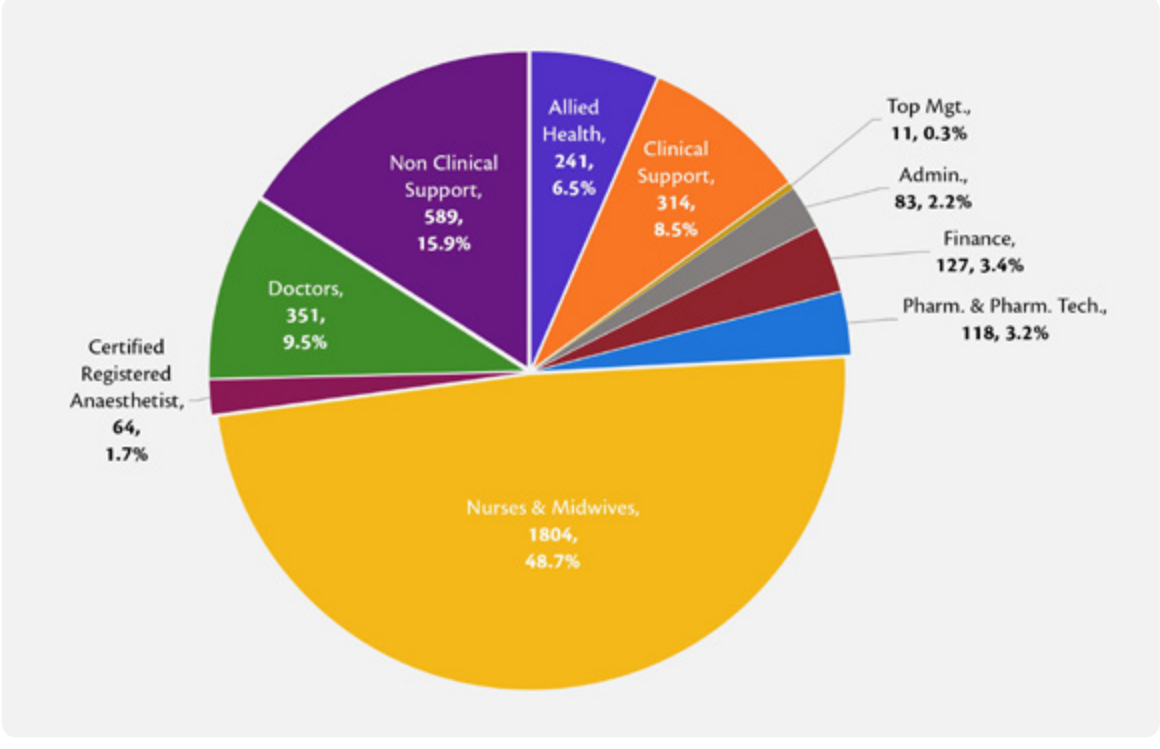
2 HUMAN RESOURCE PERFORMANCE

Providing training and development opportunities for all staff; improvement in staff attitudes and staff welfare; and upholding discipline were the Hospital's priority areas in Human Resource Management in the year 2017.

STAFF STRENGTH ANALYSIS

The total workforce in the year 2017 was 4,065. This was made up of KATH Staff – 3,702, House Officers -162, Residents from other institutions -138 and KNUST Staff - 63. There was an increase of 4.37% in the total workforce compared to the 2016 figure of 3,895. The breakdown per professional category is shown in Figure 1

FIGURE 1: CATEGORY OF STAFF BY PROFESSIONAL GROUPS, KATH 2017



In Figure 1, 48.7% of the total staff were Nurses and Midwives, 9.5% Doctors, 8.5% Clinical Support, 3.2% Pharmacists and Pharmacy Technicians, 6.5% Allied Health Staff, 15.9% Non-clinical Support Staff, 2.2% Administrative and 3.4% Finance.

AGE GROUP OF STAFF

The age analysis of staff in the year 2017 shows that the Hospital has a vibrant workforce with 73.6% of its workforce in the age bracket of 20-39.

STAFF STRENGTH ANALYSIS FOR DOCTORS

There was a total number of 351 KATH doctors in 2017. They comprised 65 Consultants and Senior Specialist (18.52%), 97 Specialists (27.64%) and 189 Medical Officers (53.85%). There were also 59 doctors from the KNUST/SMS who provided service at the Hospital in 2017.

There was a total of 64 Certified Registered Anaesthetists and 3 Physician Assistants (Dental).

FIGURE 2: AGE GROUP OF STAFF, KATH 2017

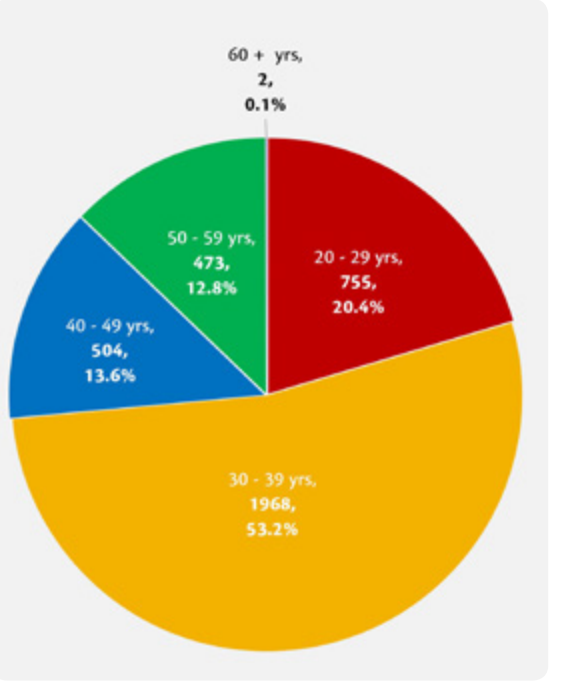


TABLE 1: NUMBER OF DOCTORS AND RELATED PERSONNEL PER DIRECTORATE/UNIT, 2017

DIRECTORATE/UNIT	CONSULTANTS/ SENIOR SPECIALISTS	SPECIALISTS	MEDICAL OFFICERS	KNUST DOCTORS	TOTAL	PHYSICIAN ASSISTANTS
Anaesthesia & Intensive Care	1	8	11	3	23	56
Child Health	6	16	26	9	57	0
Diagnostics	2	6	24	8	40	0
EENT	4	3	14	5	26	1
Emergency Medicine	1	13	12	0	26	1
Family Medicine	2	6	23	0	31	0
Medicine	9	15	29	9	62	1
Obs/Gyn	13	6	13	13	45	0
Oncology	1	1	8	0	10	0
Oral Health	3	2	10	5	20	2
Public Health	0	2	1	0	3	0
Research & Development	0	1	1	0	2	0
Surgery	16	13	11	6	46	1
Transfusion Medicine	1	0	2	0	3	0
Trauma & Orthopaedics	6	5	4	1	16	2
TOTAL	**65**	**97**	**189**	**59**	**410**	**64**

STAFF STRENGTH ANALYSIS FOR NURSES AND MIDWIVES

The total number of Nurses/Midwives in the year 2017 was 1,804 which was a 14.61% increase over the 2016 total number of 1,574. This was due to the issuance of financial clearance for the recruitment of newly-qualified nurses and midwives.

TABLE 2: NURSES AND MIDWIVES BY DIRECTORATES, 2017

DIRECTORATE	MIDWIVES	PROFESSIONAL NURSES	ENROLLED NURSES	COMMUNITY HEALTH NURSES
Anaesthesia &Intensive Care	1	102	9	0
Child Health	37	169	18	0
CSSD	0	2	0	0
Diagnostics	0	1	3	0
EENT	2	81	9	0
Emergency Medicine	1	189	23	0
Family Medicine	0	39	28	0
Human Resource	0	1	0	0
Medicine	1	199	51	0
Obstetrics & Gynaecology	317	26	4	0
Oncology	0	26	0	0
Oral Health	0	37	5	0
Public Health	2	7	0	24
Quality Assurance	0	1	0	0
Surgery	2	181	51	0
Transfusion Medicine	0	6	1	0
Trauma & Orthopaedics	4	89	32	0
TOTAL	**366**	**1173**	**241**	**24**

STAFF STRENGTH ANALYSIS FOR PHARMACISTS AND PHARMACY TECHNICIANS

During the year under review, the Hospital had 60 Pharmacist and 57 Pharmacy Technicians working in the various directorates and units.

TABLE 3: PHARMACISTS AND PHARMACY TECHNICIANS BY DIRECTORATES, 2017

DIRECTORATE	PHARMACISTS	PHARMACY TECHNICIANS
Anaesthesia & Intensive Care	2	1
Child Health	6	5
EENT	4	4
Emergency Medicine	5	6
Family Medicine	7	9
Medicine	11	5
Obstetrics & Gynaecology	5	7
Oncology	2	1
Oral Health	1	0
Medicines Management	2	0
Manufacturing	1	4
Specialist OPD	4	9
Drug Information	1	0
Surgery	5	4
New Cash Sales	4	1
Health Insurance	0	1
TOTAL	**60**	**57**

STAFF STRENGTH ANALYSIS FOR ALLIED HEALTH PROFESSIONS

A total number of 245 Allied Health professionals provided services in their various fields in the hospital in 2017 representing 26.84% increase compared to the 2016 total number of 19.

TABLE 4: ALLIED HEALTH STAFF PER CADRE, 2017

CADRE	NUMBER AT POST
Biomedical Scientist	59
Biostatistics Officer	4
Dental Prosthesis Technologists/ Technician	3
Dietician	2
Field Technician	3
Medical Physicist	4
Nutrition Officer	5
Optical Technician	2
Optometrist	3
Physiotherapist	18
Physiotherapy Assistant	16
Public Health Officer`	3
Radiographer	11
Technical Officer (X-ray)	3
Technical Officer (Radiotherapy)	1
Technical Assistant (X-ray)	1
Technical Officer - Biostatistics/ Health Information	42
Technical Officer – Health Promotion	1
Technical Officer - Nutrition	2
Technical Officer – X-ray	3
Technical Officer (Lab)	11
Technical Officer -Disease Control	4
Technical/Biostatistics Assistant	28
Technical Officer (Medical Laboratory)	11
Therapy Radiographer	3
Ultrasonographer	1
TOTAL	**241**

SEPARATION

A total of 161 staff left the Hospital through transfer, resignation, vacation of post (VOP), death, retirement and dismissal representing a decrease of 6.41% compared to the 2016 figure of 172.

STAFF TRAINING AND DEVELOPMENT

In 2017, a total of 1,782 staff had the opportunity to undertake various training and development programmes as part of the Hospital's human resource management priorities. Of the number, 1,478 staff were given in-service training and 304 staff (fresh and continuing) were also given the opportunity to further their studies on study leave with/without pay, part-time, sandwich and online basis. The Hospital spent an amount of GHC2,479,699.00 on training and development of staff.

FIGURE 3: SEPARATED STAFF

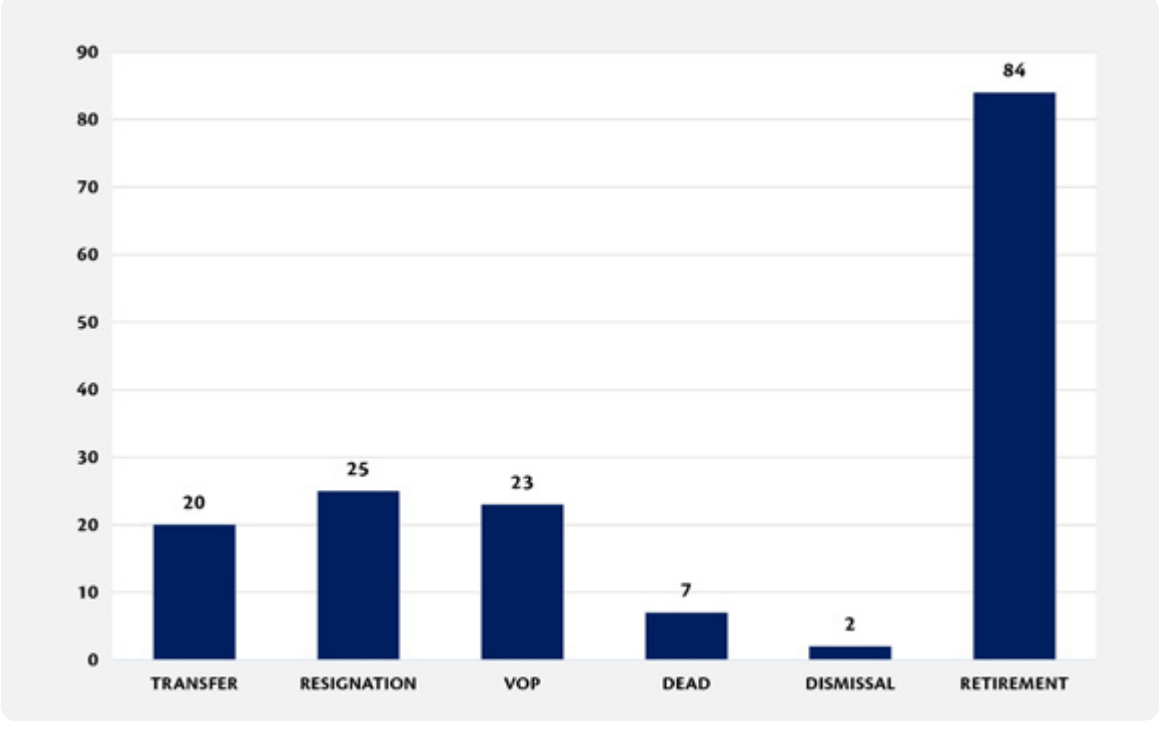


TABLE 5: STAFF PURSUING FURTHER STUDIES PER DIRECTORATE, 2017

DIRECTORATE	DOCTORS	NURSE/ MIDWIVES	ALLIED HEALTH	PHYSICIAN ASSISTANT	PHARMACY/ TECH	ADMIN	SUPPORT	TOTAL
Transfusion Med	2		1			1		**4**
Trauma & Ortho	2	5						**7**
Oncology	4	4						**8**
Quality assurance			1					**1**
Surgery	8	14					2	**24**
Emergency Med	5	19					4	**28**

EENT	11	7	1					**19**
Medicine	9	21						**30**
Anesthesia	4	10		4			1	**19**
Child Health	21	11	1		3			**36**
Diagnostics	10		10			1	2	**23**
O&G	10	39			2		1	**52**
Public Health	1	3	1					**5**
Domestics							2	**2**
Biostatistics			6					**6**
Supply Chain						2		**2**
Family Medicine	12	3	1					**16**
Technical Service							1	**1**
Oral Health	7	1	1				3	**12**
Human Resource						1		**1**
General Office						1		**1**
Security							1	**1**
Finance							2	**2**
Planning						2		**2**
Psychiatry	1							**1**
Pharmacy							1	**1**
TOTAL	**107**	**137**	**23**	**4**	**5**	**8**	**20**	**304**

STAFF WELFARE AND RECOGNITION PROGRAMMES

In the year 2017, ninety-nine (99) staff benefited from the Hospital's Medical Care Scheme. The Hospital spent a total amount of GHC70, 982.61 on reimbursement and GHC39, 000.00 on diagnostic waivers (such as MRI and CT scan investigations) to staff. Christmas packages were given to staff during the year under review. Free bus services were provided for staff on selected routes to facilitate early reporting to work.

Ninety (90) Staff retiring from 2025 to 2028 were also given training to prepare them for their retirement.

3 CLINICAL CARE SERVICES

This chapter presents a summary of the Hospital's clinical care performance in the year 2017. The following observable achievements made in out-patient services utilization, in-patient services, surgical operations performed, diagnostic services among others are classified below:

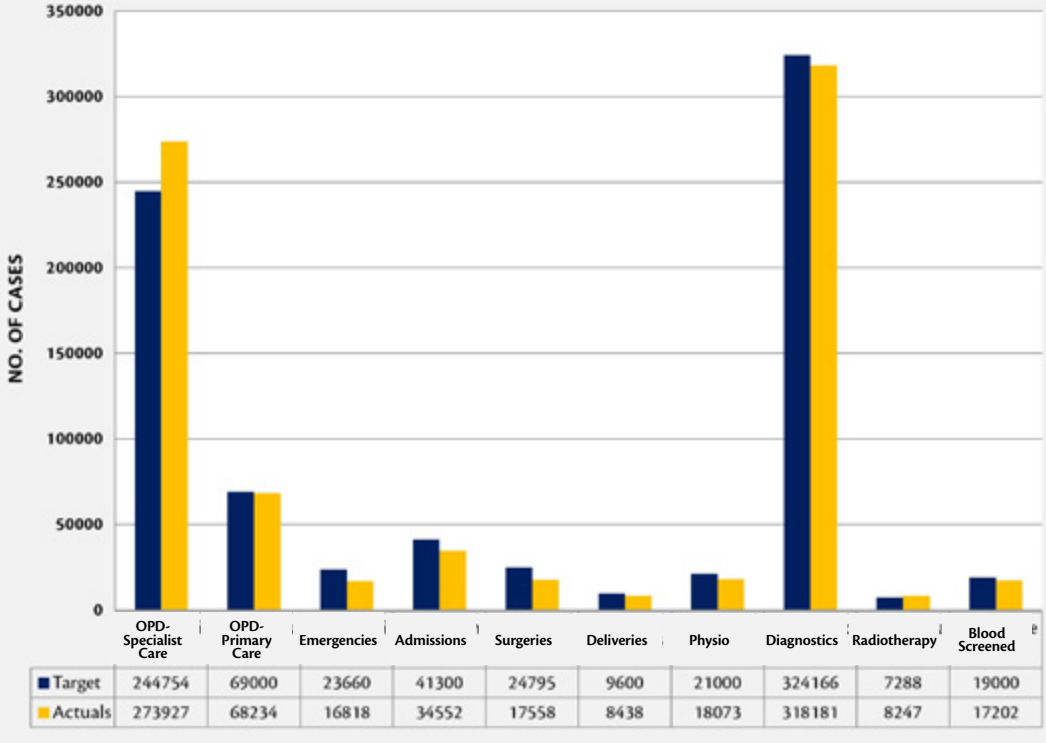
HO4: IMPROVE QUALITY OF HEALTH CARE SERVICES INCLUDING MENTAL HEALTH

Priority Activity 1: Increase the range of specialist services

2017 Service Targets and Actual Utilizations

The achievements in 2017 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 2017 are presented in the figure below.

FIGURE 4: SERVICE UTILIZATION (2017 TARGETS AND ACTUALS)



	OPD-Specialist Care	OPD-Primary Care	Emergencies	Admissions	Surgeries	Deliveries	Physio	Diagnostics	Radiotherapy	Blood Screened
Target	244754	69000	23660	41300	24795	9600	21000	324166	7288	19000
Actuals	273927	68234	16818	34552	17558	8438	18073	318181	8247	17202

From figure above, all service areas could not achieve their targets with the exception of specialist OPDs and Radiotherapy that exceeded their targets.

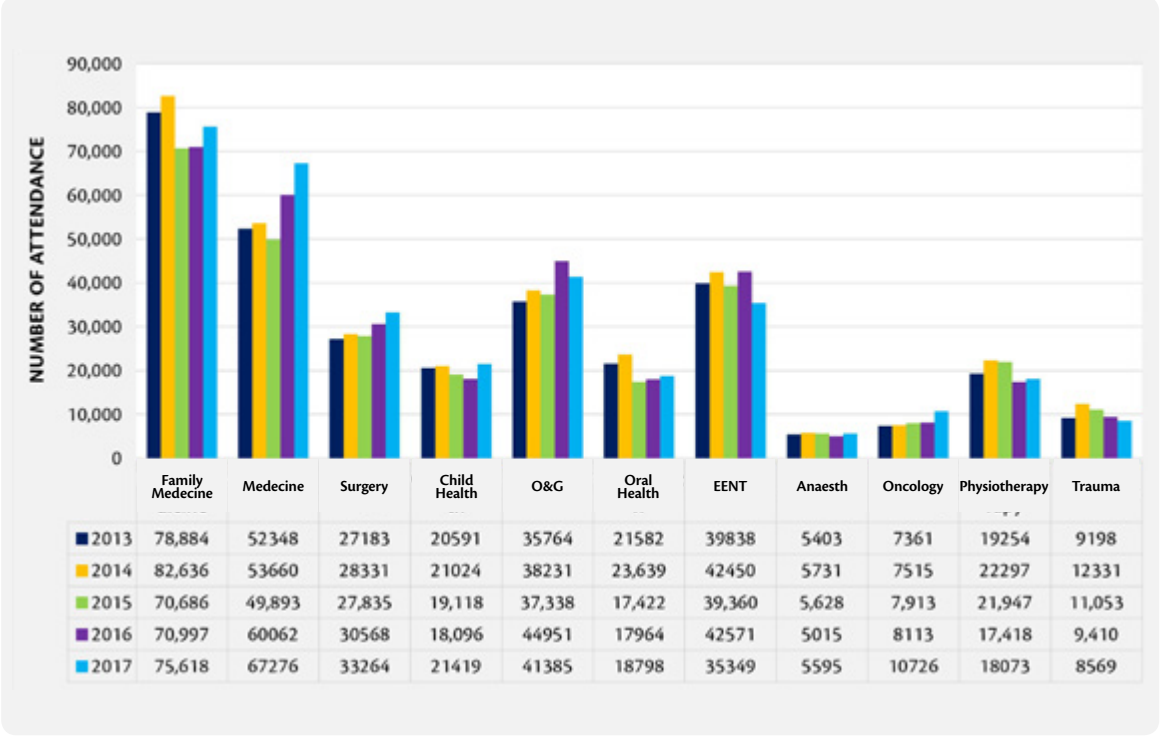
Outpatient Services

The number of OPD visits to the hospital over the last five years was generally 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 directorates. Family Medicine Directorate is in-charge of general outpatient services as well as physiotherapy services, whiles the other clinical directorates deal with specialist services.

Trend Analysis of OPD Utilization by Directorates

Attendance at the various clinical directorates over the last five years does not follow a particular pattern. All OPDs recorded increases in attendance in 2017, with the exception of O&G, Trauma and EENT Directorates that recorded decreases in their OPD attendances. Figure 5 shows performances across individual specialties.

FIGURE 5: TREND IN OPD SERVICE UTILIZATION, KATH 2017

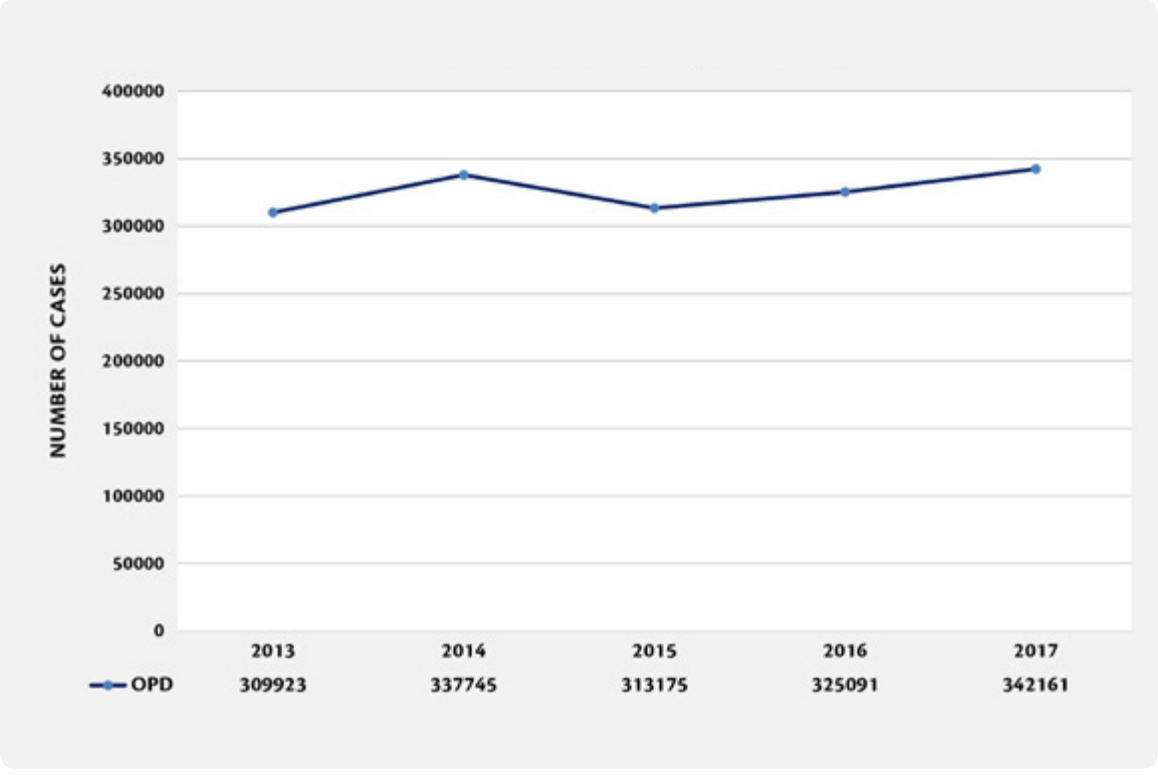


	Family Medecine	Medecine	Surgery	Child Health	O&G	Oral Health	EENT	Anaesth	Oncology	Physiotherapy	Trauma
2013	78,884	52348	27183	20591	35764	21582	39838	5403	7361	19254	9198
2014	82,636	53660	28331	21024	38231	23,639	42450	5731	7515	22297	12331
2015	70,686	49,893	27,835	19,118	37,338	17,422	39,360	5,628	7,913	21,947	11,053
2016	70,997	60062	30568	18,096	44951	17964	42571	5015	8113	17,418	9,410
2017	75,618	67276	33264	21419	41385	18798	35349	5595	10726	18073	8569

Trend in Aggregated OPD Services Utilization

Aggregated OPD service utilisation in the Hospital increased in 2017. The year 2014 recorded the highest OPD attendance whilst 2013 recorded the lowest attendance in the last five years. Figure 6 below, indicates the trend in OPD performance in the hospital for the last five years.

FIGURE 6: TREND IN AGGREGATED OPD SERVICE UTILISATION, KATH 2017



Top Ten Specialist OPD Attendance

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. Table 6 below shows top ten specialists OPD attendance recorded during the year 2017.

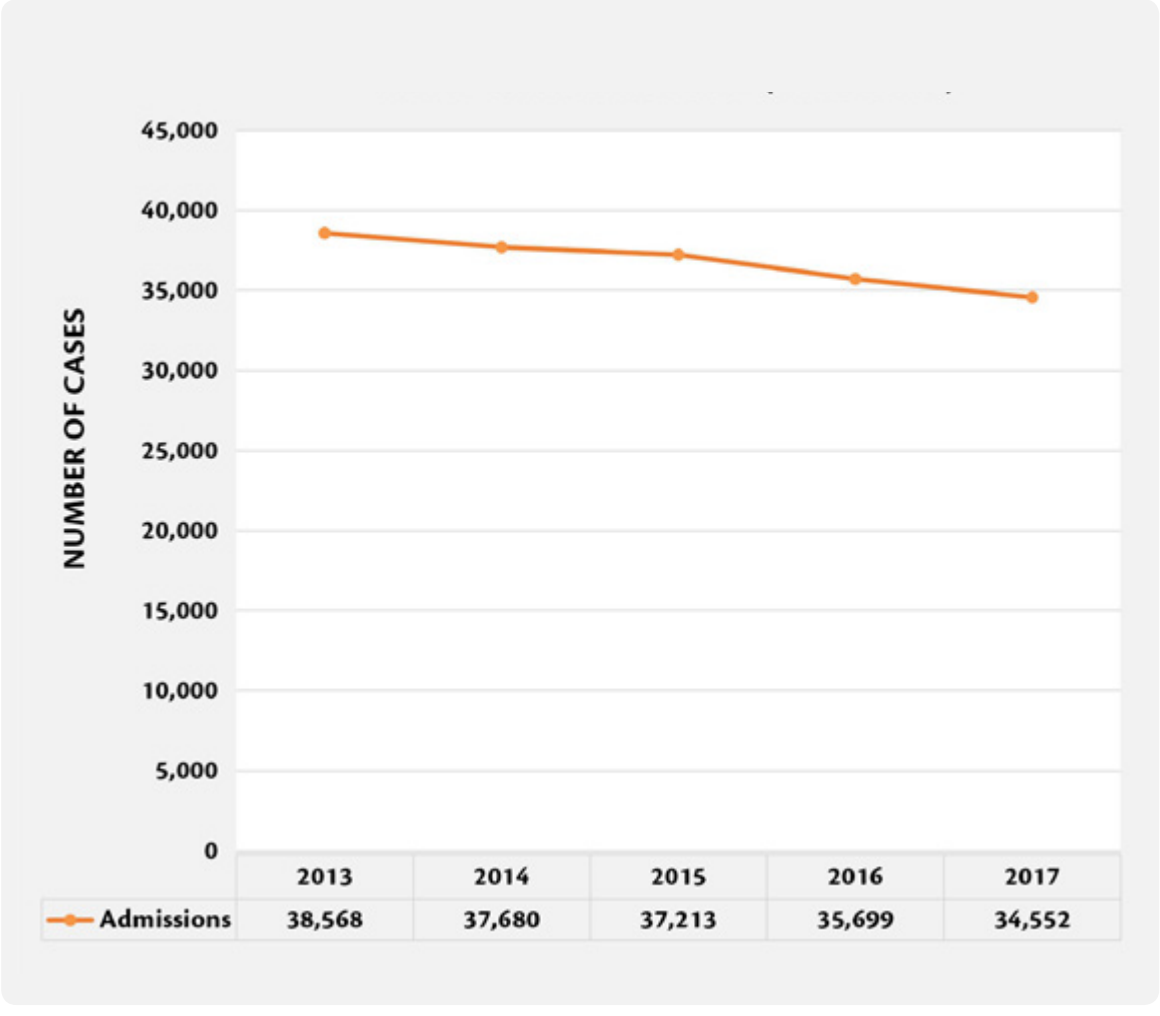
TABLE 6: TOP TEN SPECIALIST OPD ATTENDANCE, KATH 2017

RANKS	CLINIC	TOTAL	% OF TOTAL SPECIALIST ATTENDANCE
1	**O&G (ANC & PNC)**	23,973	8.75%
2	**EYE (General-Cases)**	19,723	7.20%
3	**Oral Health**	18,798	6.86%
4	**Physiotherapy**	18,073	6.60%
5	**ENT General**	15,626	5.70%
6	**Internal Medicine (Medicine)**	13,283	4.85%
7	**Psychiatry (Mental Health)**	12,602	4.60%
8	**Diabetes (Medicine)**	10,706	3.91%
9	**HIV**	9,472	3.46%
10	**Gynaecology**	8,700	3.18%

Admissions

There was an increase in-patient beds from 880 to 898. In addition to the 898 in-patient beds, there were also emergency beds, 147, ICU/CDU, 48, special ward, 61, treatment/examination beds, 57 and recovery beds, 35, increasing the total bed capacity in the hospital to 1,246. A total of 35,699 patients were admitted at the main wards indicating declining trend since 2013. Percentage bed occupancy decreased from 82.13% in 2016 to 75.54% in 2017. Average length of stay on the wards also decreased to 7 days in 2017 from 8 days in 2016. Figure 7, shows the trend from 2013-2017.

FIGURE 7: TREND IN IN-PATIENT SERVICE UTILIZATION, KATH 2013- 2017



Top Ten Causes of Admissions

Preterm/Low Birth Weight continued to be the leading cause of admission in the Hospital, followed by Eclampsia / Pre-Eclampsia and Hypertension-Related Complications, Renal Failure, Birth Asphyxia, and Diabetes recorded the least causes of admissions among the top ten. Table 7, shows the top ten causes of admissions in the Hospital.

TABLE 7: TOP TEN CAUSES OF ADMISSIONS (KATH, 2017)

DISEASE	TOTAL 2015	RANK 2015	RANK 2014
Preterm/LBW	1008	1	1
Eclampsia/ Pre-Eclampsia	870	2	2
Hypertension Related	582	3	9
Neonatal Jaundice	577	4	5
Neonatal Sepsis	575	5	4
Cerebrovascular Accident	570	6	-
Abortions	451	7	8
Diabetes	406	8	7
Birth Asphyxia	387	9	6
Renal Failure	381	10	-

Theatre Services Utilization

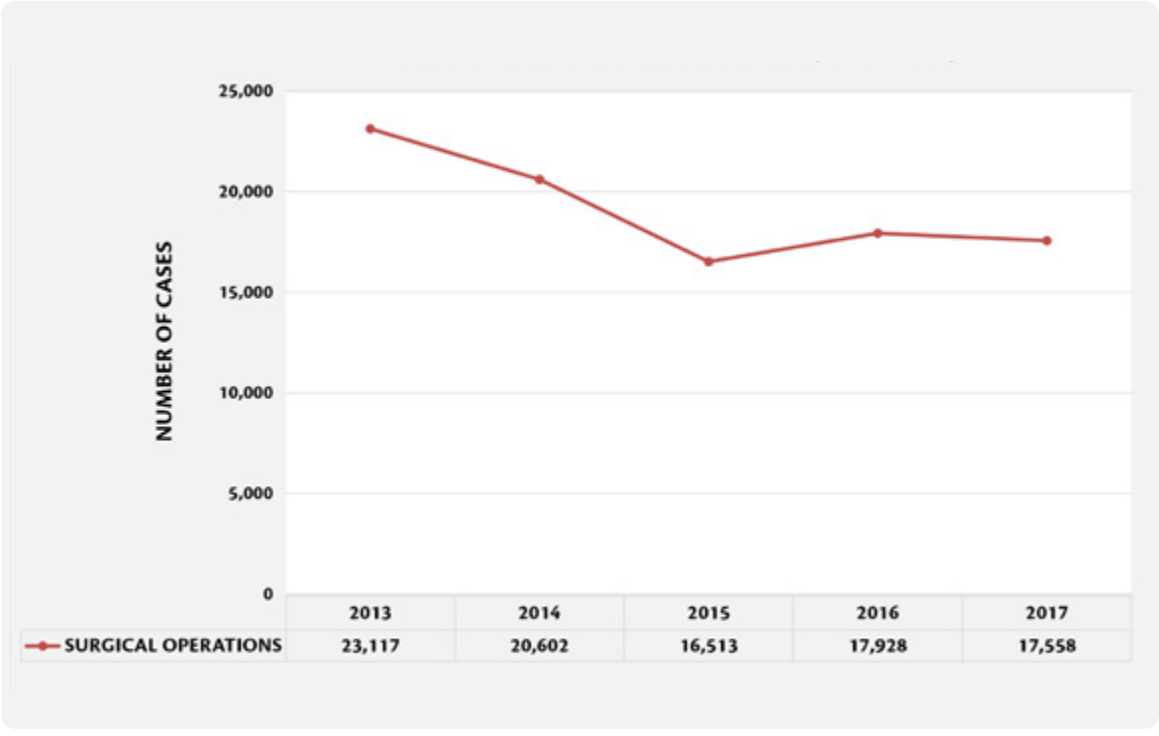
In 2017, the Hospital had Six (6) operating theatres with eighteen (18) operating rooms. Main Theatre (5 operating rooms) performed a total of 3,292 cases, at the A1 Theatre (2 operating rooms), a total of 3,945 cases were done, Poly Theatre (2 operating rooms) performed a total of 902 cases, the A&E theatre (4 operating rooms) performed a total of 2,414 cases and the O & G special ward theatre at the A & E also performed 291 cases. The Eye Centre theatre (3 operating rooms) also performed a total of 1,327 cases in 2017. With the exception of the Main and Eye theatres, all the operating theatres registered a decline in their utilisations. This information is represented in Table 8.

TABLE 8: THEATRE SERVICE UTILIZATION, KATH, 2017

THEATRE	TOTAL CASES DONE FOR THE YEAR	AVERAGE NUMBER OF HOURS PER CASE	TOTAL HOURS FOR THE YEAR FOR ALL CASES	OPTIMAL HOURS FOR THE YEAR	% UTILIZATION 2016	% UTILIZATION 2017
Main Theatre (5-op. rooms)	**3,292**	**2.5**	**8,230**	**21,900**	**35.9**	**37.57**
Poly Theatre (2-op. rooms)	**902**	**1**	**902**	**8,760**	**10.81**	**10.30**
A&E Theatre (4 – op. rooms)	**2,414**	**2.5**	**6,035**	**17,520**	**36.3**	**34.45**
A&E Special Ward Theatre.	**291**	**1**	**291**	**4,380**	**6.8**	**6.64**
A1 Theatre (2 – op. rooms)	**3,945**	**1**	**3,945**	**8,760**	**48.88**	**45.03**
Eye Theatre (3 – op. rooms)	**1,327**	**1**	**1,327**	**13,140**	**8.74**	**10.09**

GENERALLY, surgical operations reduced in the Hospital in 2017. A total of 17,558 surgeries were done during the period; representing a shortfall of 2.06% over the 2016 figure. With the exception of 2016, surgical operations have been declining since 2013.

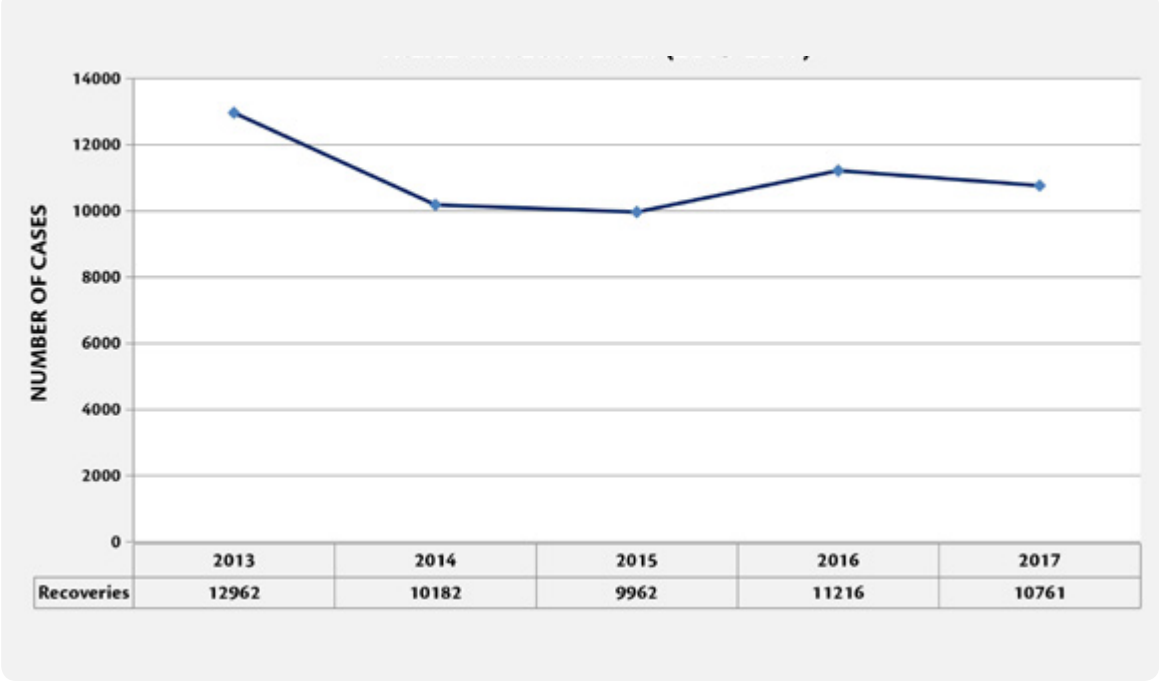
FIGURE 8: TREND IN SURGICAL OPERATIONS PERFORMED, KATH 2017



Critical Care and Recoveries

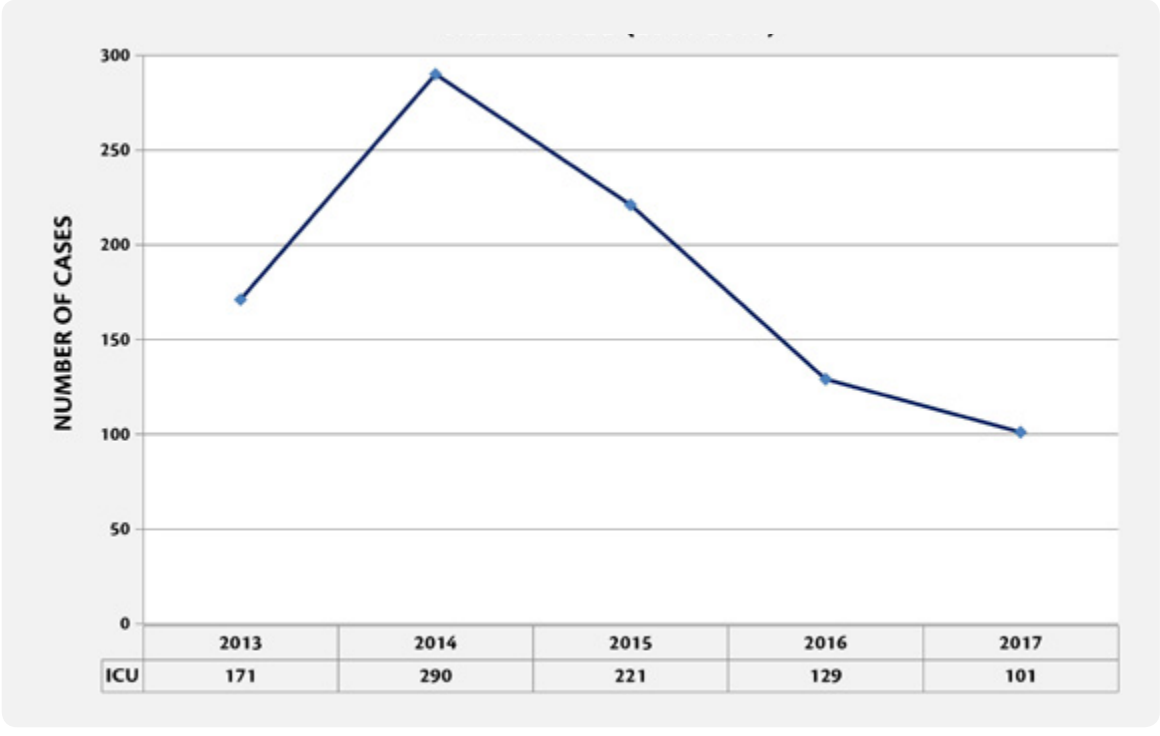
Recovery and Intensive Care Wards in the Hospital admitted 10,761 patients in 2017. Admissions to these wards have been fluctuating since 2013. This information is presented in figures 9 and 10.

FIGURE 9: TREND IN RECOVERY WARD ADMISSIONS, KATH 2013 -2017



Admissions to the ICU declined from 129 in 2016 to 101 in 2017. This represents a decrease of 21.71% compared to the previous year's performance of 129. With the exception of 2014, admissions into the ICU has been declining over the 5 year period. Figure 10 below shows the trend in ICU admissions in the hospital over a five year period.

FIGURE 10: TREND IN ICU ADMISSIONS, KATH 2013 -2017



	2013	2014	2015	2016	2017
ICU	171	290	221	129	101

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

During the year under review, a number of interventions were put in place by management to reduce mortality, especially maternal deaths. Among other things, all deaths which occurred during the period were audited by Mortality Audit Committees of the hospital. During the period, there were three (3) training sessions on uro-gynaecology that were organized by visiting teams from USA and Canada.

To reduce neonatal deaths, the hospital intensified its neonatal mortality meetings. The Hospital provided Neonatal support visits to six (6) facilities in Kumasi during the year under review. Telephonic consults were also provided to peripheries.

Again Educational and Radio/TV programmes on child health and maternal issues were organized in order to reduce mortality.

Details of these are discussed below.

Mortality

Mortality ratio 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.

FIGURE 11: TREND IN TOTAL MORTALITY RATE, KATH (2013-2017)

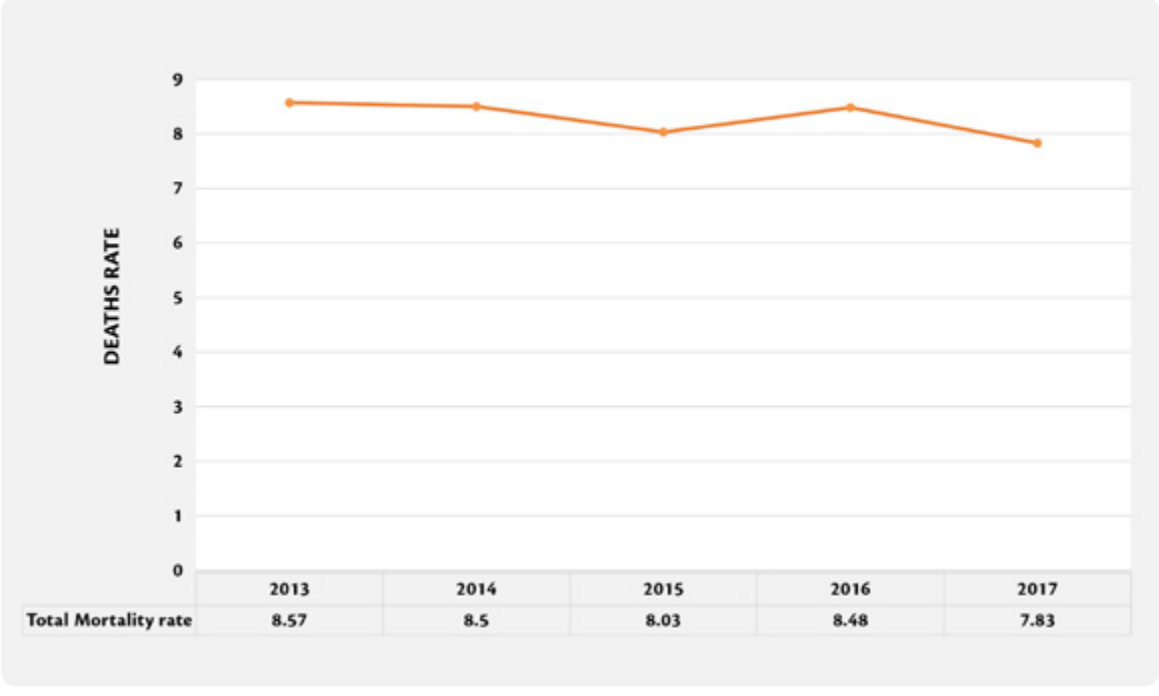


TABLE 9: TOP TEN CAUSES OF DEATH 2017

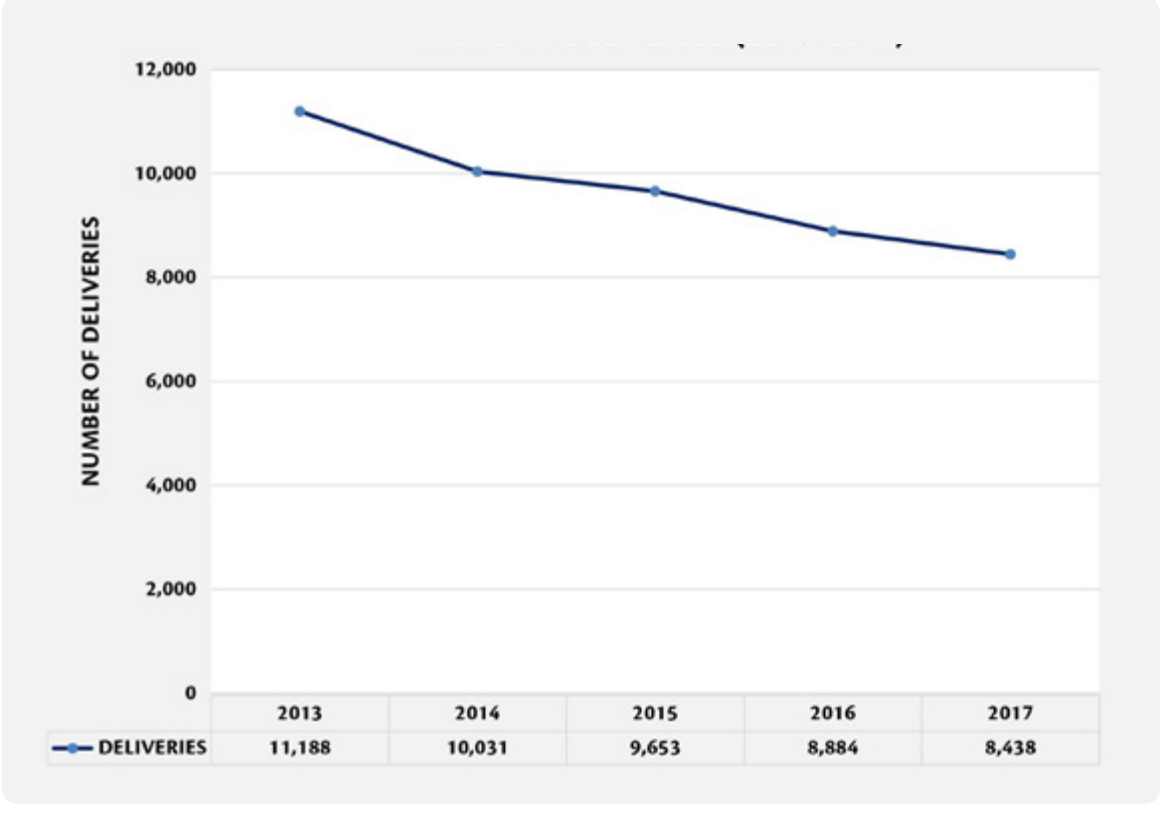
DISEASE	TOTALS IN 2017	POSITION IN 2017	POSITION IN 2016
Preterm/Low Birth Weight	264	1	1
Birth Asphyxia	163	2	3
Viral Disease	107	3	4
Renal Failure	99	4	-
Disease of Liver	85	5	6
Tuberculosis	83	6	-
Diabetes Mellitus	75	7	7
Respiratory Distress	70	8	10
Neonatal Jaundice	60	9	8
Neonatal Sepsis	41	10	9

Preterm/Low Birth weight and Birth Asphyxia were the leading cause of death which recorded a total of 264 and 163 respectively. Neonatal Sepsis was the least cause of death among the top ten causes of death during the year under review.

Supervised Delivery

Amidst the challenge of inadequate space for skilled delivery services, the hospital managed to supervise 8,438 deliveries representing a decrease of 12.10% compared to the target set for the year. There was also a decrease of 5.05% in the number of deliveries recorded as compared to the previous year's performance of 8,884. The figure below depicts the falling trend of supervised deliveries in the hospital from 2013 to 2017.

FIGURE 12: TREND IN DELIVERIES, KATH 2013-2017

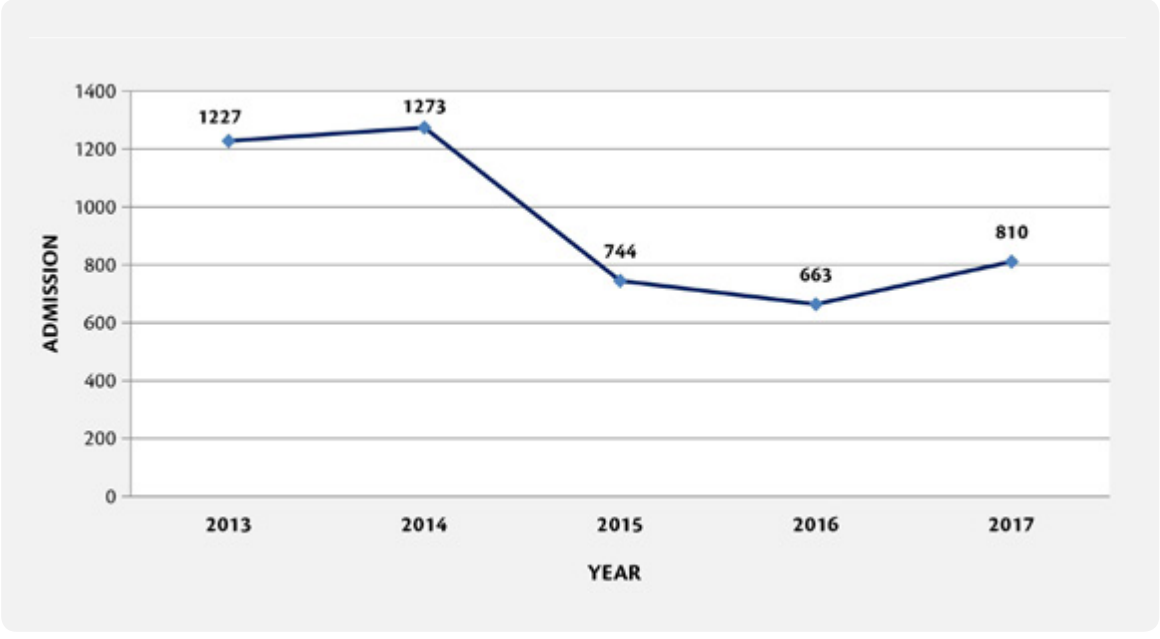


Maternal Mortality

In 2017, 102 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. 63% of the maternal deaths during the year were cases that were referred from other facilities to the hospital.

Maternal mortality rate is one of the quality assessment benchmarks of a Hospital's performance. From the figure below, maternal mortality rate saw a consistent decline from 2013 to 2016. The year under review recorded an increase from 1,020 per 100,000 live births to 1,207 per 100,000 live births. A visual overview of this trend is indicated in the figure below.

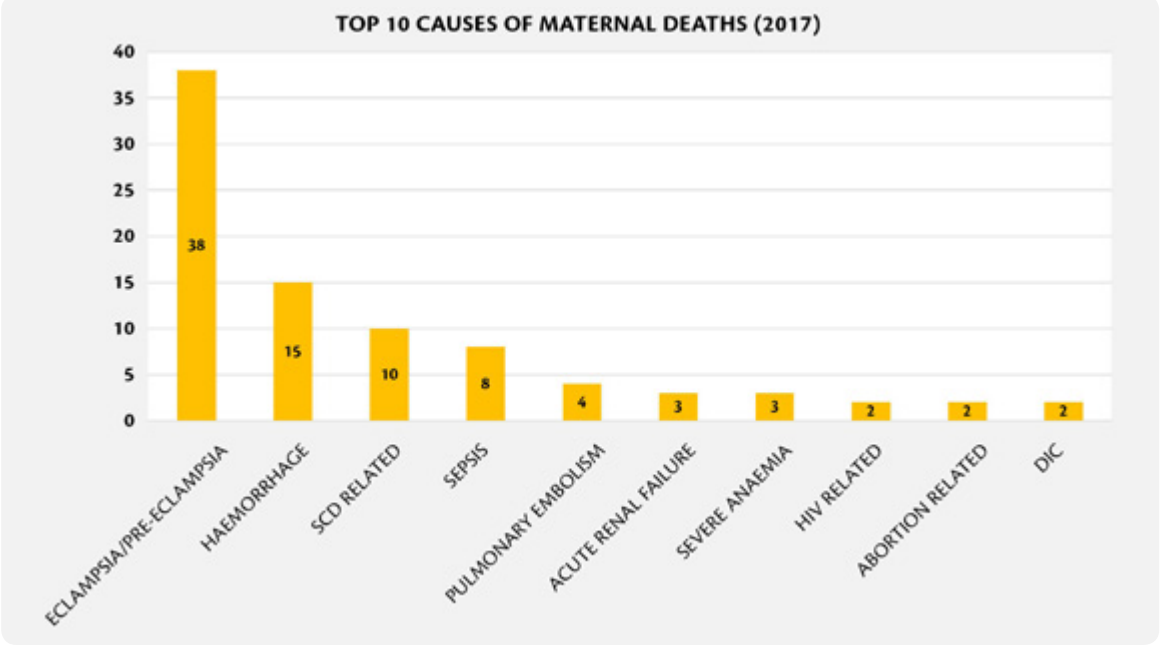
FIGURE 13: TREND IN MATERNAL MORTALITY RATE PER 100,000 LIVE BIRTHS, KATH (2013-2017)



Top Ten Causes of Maternal Mortality

Figure 14 shows the top ten causes of maternal deaths in the hospital.

FIGURE 14: TOP TEN CAUSES OF MATERNAL DEATHS, KATH 2017



Hypertension-related diseases (Eclampsia /Pre-Eclampsia) and Haemorrhage were the leading causes of maternal death in the hospital for the year 2017. This has been the trend in the hospital for the last few years. Abortion-related and DIC recorded the least death figures in the year 2017 with regards to the top ten causes of maternal deaths.

HO4: IMPROVE QUALITY OF HEALTH CARE SERVICES INCLUDING MENTAL HEALTH

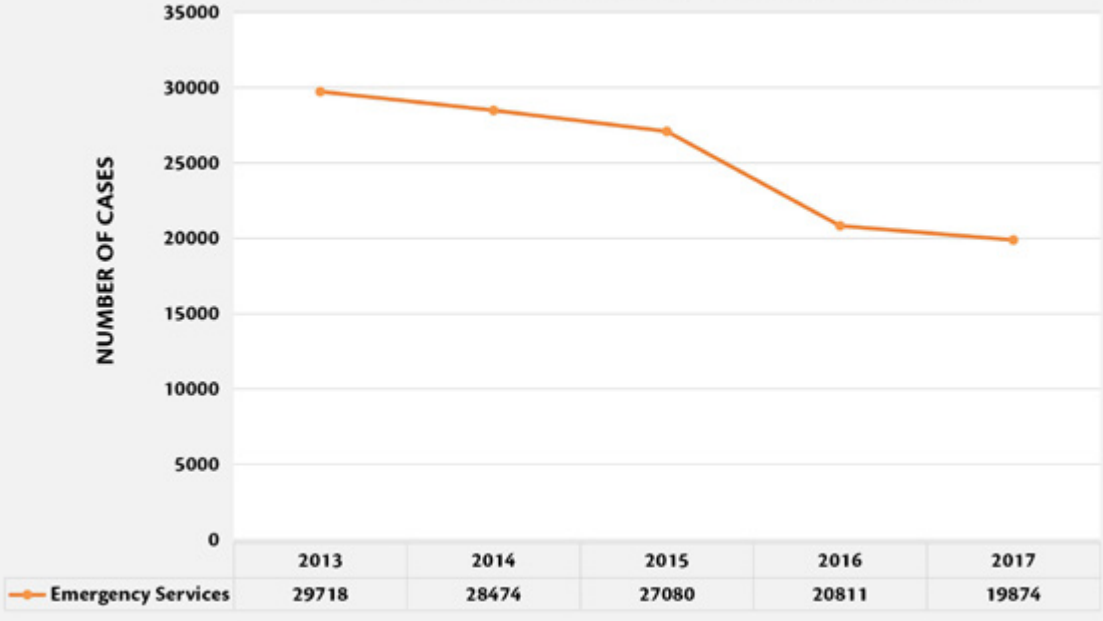
Priority Activity 3: Continue To Support Emergency Services

Emergency Service Utilisation

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 84. In the year 2017, 19,874 emergencies were seen in the hospital representing a decrease of 4.50% compared to the 2016 performance of 20,811. Generally, emergency services utilisation in the hospital has been declining since 2013. The figure below shows a five-year trend in emergency service utilization of the hospital.

In the year 2017, twenty-six (26) nurses were trained in emergency management of soft tissue injury, management of meningitis, administration of oxygen, management of emergency cases and dengue fever. Again, twenty (20) residents were trained in emergency ultrasound and one hundred and eighty two (182) nurses were also trained in recognition and assessment of critically ill patients.

FIGURE 15: TREND IN EMERGENCY SERVICES UTILIZATION (2013-2017) KATH



HO 4: IMPROVE QUALITY OF HEALTH CARE SERVICES INCLUDING MENTAL HEALTH

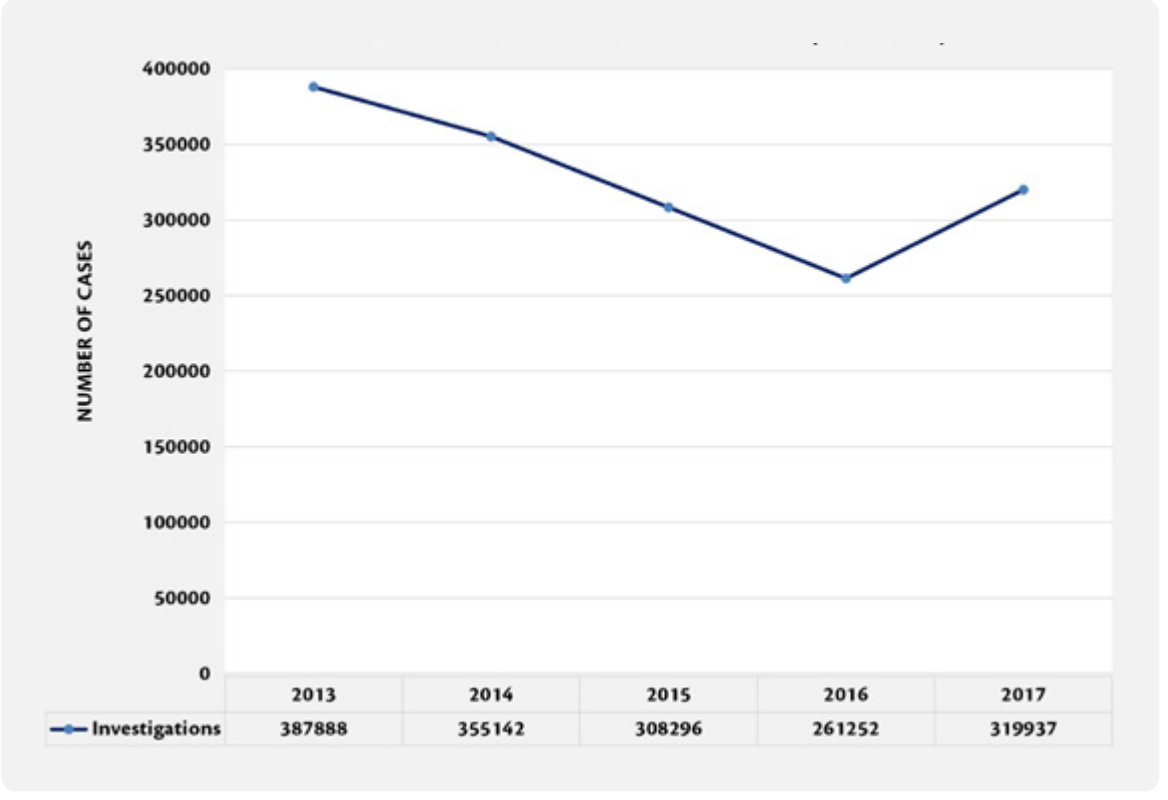
Priority Activity 4: Continue the provision of advanced diagnostic services

Diagnostics Services

The trend in diagnostic investigation for the last five years has been inconsistent. There was a consistent decline in output from 2014-2016. The number of diagnostic investigations conducted during the year under review was 319,937.

The actual performance for the year fell short of the target of 324,166 set for the year 2017. This represents 1.30% decrease. There was also a decrease of 21.49% compared to the previous year's performance of 263,347.

FIGURE 16: TREND IN DIAGNOSTIC INVESTIGATIONS (2013-2017) KATH



Diagnostic investigations for the last five years have seen a consistent decline in output except the year 2017 which recorded an increase of 20.82%. The number of diagnostic investigations conducted in the year 2017 was 319,937.

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 organisational development. A number of research activities were completed and published with others still ongoing in the Hospital in 2017.

Ongoing Research Activities

The following research activities by directorates were on-going during the period:

- 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
- Study of breast cancer subtypes
- The Komfo Anokye Teaching Hospital (KATH), Kumasi, Ghana in collaboration with the United States Naval Medical Research Centre in Frederick, Maryland (NMRC-F) is running the research study titled "Umbrella Protocol: An observational Study of Sepsis" under the subaward title "Austere Environment Consortium for Enhanced Sepsis Outcomes (ACESO)". Recruitment and data collection is ongoing.
- KATH, WHO & Ministry of Health. Congenital Rubella Surveillance Programme. The collaboration which began in August 2016 has so far registered 43 suspected cases as at June 2017. Stakeholders meeting to scale-up the surveillance activities was held in May 2017 in Accra. Data collection is ongoing.

- KATH John Hopkins multicenter study on "The Effects of Differential Pricing and Health Systems Strengthening activities on the management of Type II Diabetes Mellitus, Hypertension and Cancer in Ghana" (GAAP Study) has ended active recruitment and follow-up. However, data cleaning is currently ongoing at all the pilot facilities.
- KATH, University of Michigan Collaboration on "Profiling the characteristics and outcomes for all injury related patients in a tertiary hospital in Ghana". R&D unit providing data management support for the registry.
- KATH-University of Utah Division of Public Health study on "The Use of a Multiple Micronutrient Supplement in Women of Reproductive Age Study at the Barekese sub-district of Atwima Nwabiagya District" (MMS Study) has ended. The study closeout and dissemination of findings ongoing.
- KATH, WHO/AFRO Paediatric Enteropathogen diarrhoeal Surveillance study. Patients from this study are recruited from the South Suntreso Government Hospital and Ejisu Government Hospital. Data Collection still ongoing.
- KATH, WHO/AFRO Paediatric Invasive Bacterial Disease Surveillance. Patients from this study are recruited from the Child Health Directorate of KATH; R&D supports through data collection and management. Surveillance still ongoing.
- KATH, Noguchi Memorial Institute for Medical Research, Centre for Disease Control (CDC) and Prevention, USA- Intussusception Study. Data is being collected from the Child Health Directorate.
- KATH, Seattle Children's Hospital Research Foundation, PATH study on "A randomized crossover Trial of the Nifty Feeding cup and medicine in preterm who have difficulty breastfeeding (The feeding cup study)" which begun in April 2017 ongoing.
- Medical conditions reported in the Dental Clinic
- Incidental detection of a unilateral invested and impacted mandibular third molar; unusual case report with review of the literature

Published Research

The following research works were published during the year 2017:

- Utilization of Drug Information Services at KATH: Outcome of sensitization intervention.
- Owusu-Ofori A., Owusu-Ofori S, Bates I. Global challenges of malaria risk; perspectives from transfusion transmitted malaria. ISBT Sci Series 2017;12(1):68–72 doi.org/ 10.1111/voxs.12318
- Owusu-Ofori S, Allain J-P, Owusu-Ofori A. Prevention of transfusion-transmitted malaria. ISBT Sci Series 2017; 12(1): 161-167. doi.org/10.1111/voxs.12338
- Sarkodie F, Hassall O, Owusu-Dabo E, Owusu-Ofori S, Bates I, Bygbjerg IC, Owusu-Ofori A, Harritshøj LH, Ullum H. Improving the screening of blood donors with syphilis rapid diagnostic test (RDT) and rapid plasma reagin (RPR) in low- and middle-income countries (LMIC). Transfus Med. 2017 Feb; 27(1):52-59. doi: 10.1111/tme.12363
- Owusu-Ofori AK, Owusu-Ofori SP, Bates I. Detection of adverse events of transfusion in a teaching hospital in Ghana. Transfus Med. 2017 Jan 31. doi: 10.1111/tme.12392. PMID: 28139022
- Maaroufi A, Vince A, Himatt SM et al. Historical epidemiology of hepatitis C virus in select countries –Volume 4. J Viral Hepat 2017; 24(10049):8-24 doi: 10.1111/jvh.12762
- Francis Adjei Osei, Daniel Ansong, Kofi Boateng, Collins Frimpong, Nicholas

Karikari Mensah, Alfred Kwame Owusu. Investigating epidemic prone diseases: knowledge and practices of clinical health staff in Ghana. African Journal of Current Medical Research. Vol1, No1(2017)

- Dennis Odai Laryea, Ruth Owusu Ofori, Joshua Arthur, Ebenezer Opambour Agyeman, Kathryn Spangenberg. Human Rabies in Ghana: A Growing Public Health Concern. African Journal of Current Medical Research. Vol 1 No1 (2017)
- Thyroid Cancers
- Sacroccygeal Teratoma
- Cleft lip and palate
- Buruli ulcer
- Gastrointestinal Stromal Tumor
- Contractures
- Inguinal hernia
- Knowledge of Breast Cancer Among Females Nurses at Komfo Anokye Teaching Hospital
- Breast Cancer and African Ancestry
- Burns

Completed Research

The following research works were completed during the year 2017:

- Ghana Breast Study yet to be published
- Anaesthesia Capacity in Ghana: A Teaching Hospital's Resources and the National Workforce and Education
- The Incidence of ARDS in Intubated Patients at KATH.
- Patient Engagement in Improving Primary Care.
- Human Bite: A six year review of oro-facial human bites at the Komfo Anokye Teaching Hospital
- Medical Condition Reported in the Dental Clinic
- Incidental Detection of a Unilateral Infected and Impacted Mandibular Third Molar; Unusual Case Report with Review of the Literature.

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 is vigorously expediting the process of procuring a new oxygen plant to replace the obsolete oxygen plant which is crippling operations in the hospital. Management of hospital is also about to also launch an endowment fund to solicit support from the public to retool the ageing equipment in the hospital.

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

As a major tertiary healthcare service provider, supporting primary and secondary services has been one of our key objectives. In 2017, management aggressively pursued strategies and activities to achieve a higher impact in clinical outreach.

The hospital continued its collaborations with Ghana Health Service Institutions in the Northern sector of Ghana, to screen and perform surgeries and other procedures. The Eye Unit conducted Six (6) major offsite outreaches during the year under review. They were Krobo-Odumase,

Keta 1, Techiman, Atebie, Keta 2 and Donkorkrom. There were 1,525 outreach surgeries performed during the period under review.

There was also cancer education and examination for communities and religious institutions by the Oncology Directorate. There were outreaches at Patasi Methodist Church, Kumasi Secondary Technical School, Patasi SDA Church, and Suntreso SDA Church to screen women for breast and cervical cancers. A total of Three hundred and thirty-one (331) people were screened during the outreach.

The Oral Health Directorate also embarked on outreach with 2,704 patients screened.

Neonatal support services and Telephonic consults were rendered by the hospital to the peripheral facilities in Kumasi. There were several Child and Maternal Health education programmes on radio and TV.

The Hospital continues to provide support by way of outreach to adopted facilities within its catchment areas under the MAF programme.

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.

During the period under review the Planning, Monitoring and Evaluation Unit of the hospital relied on the weekly reports of the various Directorates and Units as the basis for monitoring the performance of the various directorates and units of the hospital. The purpose was to monitor the implementation of the 2017 approved programmes and plans of these directorates and units. The Audit Unit also undertook financial and compliance monitoring visits to the various directorates and units.

QUALITY ASSURANCE UNIT

4

Quality Assurance (QA) in health care was identified as a strategy for improving quality healthcare nationwide in the mid 90's.

QA was therefore introduced as part of the Hospital's restructuring in the year 2000 with the aim to improve the quality of services provided at the hospital with focus on patient satisfaction, standardized patient management and health safety issues.

In the year under review, the unit planned activities were to improve infection prevention and control (IPC) in the Hospital, improve customer care, patient safety as well as strengthen QA in all directorates of the hospital through reports from surveys and action from stakeholders.

2017 ACHIEVEMENTS

Infection Prevention & Control

In 2017, the Hospital strengthened its Infection Prevention and Control (IPC) activities. In this regard, surveys in respect of hand hygiene compliance and waste management among staff were carried out at all service points in the hospital. In addition to this, 19 IPC workshops aimed at improving compliance and eight focal committee meetings were held during the year.

Patient Safety

Regarding patient safety, a total of 247 and 276 staff of the Hospital were trained on patient safety and skills development respectively. In the year under review, UNDP also trained 64 staff on healthcare waste management. Three hundred and ninety-two (392) safe surgery checklist were also used during the year.

Complaints Management and Audit

The unit conducted a number surveys in the year and this included patient waiting time, hand hygiene audit, waste management, and staff canteen services audit.

Improving Customer Care

Client Satisfaction surveys were done at all the service points in the Hospital in 2017. Issues of concern in customer care at the Hospital in the year under review centered on poor communication, long waiting time particularly at the radiology, Pharmacy, Bio-statistics/ Records Unit and poor staff attitudes.

5 DOMESTIC SERVICES

Domestic Services Directorate is made up of four (4) units, namely; CSSD, Laundry, Catering, and Transport. In the year 2017, the Directorate carried out several activities including the purchase and installation of a new electronic dryer machine for the Laundry Unit and the renovation of the Hospital's main kitchen

Some of the major activities which were carried out during the year include vehicle servicing, preparation and supply of sterilised packs and provision of catering services.

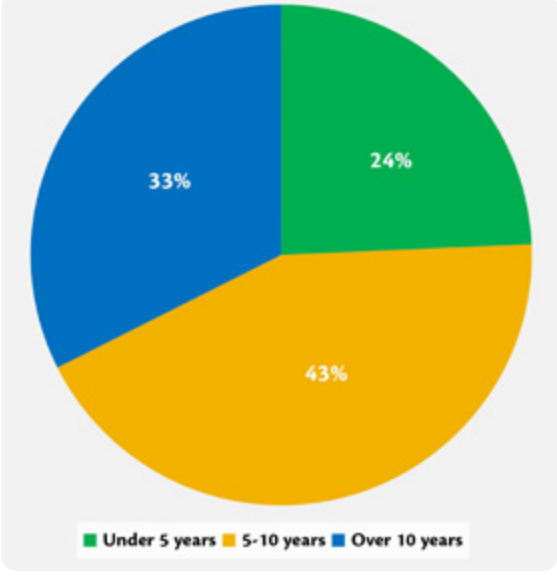
TABLE 10: NUMBER, CONDITION AND OPERATIONAL COST OF AVAILABLE VEHICLES, 2013-2017

ACTIVITY INDICATOR	2013 ACTUAL	2014 ACTUAL	2015 ACTUAL	2016 ACTUAL	2017 ACTUAL
Number of Vehicles/ Tractors	42	42 (11 were auctioned)	33	33	40
Serviceable Vehicles	30	26	29	29	37

There were a total of 40 vehicles and tractors as at end of the year 2017. Out of this number, 3 vehicles were classified unserviceable. The age classifications of the 37 serviceable vehicles were as follows:

Twelve (12) vehicles representing 33% were under 5 years, 16 vehicles also representing 43% were between 5-10 years and 9 vehicles (24%) were above 10 years. This is shown in the figure 17:

FIGURE 17: AGE OF VEHICLES, 2017



CSSD, CATERING AND LAUNDRY

A total of 341,334 gauze and cotton wool packs were produced, sterilized and distributed to various service areas within the Hospital by CSSD. This figure represents a decrease of 30.61% compared to the previous year's figure of 491,887.

The Catering Unit also prepared and served a total of 327,645 meals to in-patients. This represents 8.51% increase over the previous year's performance.

The Laundry unit washed and distributed a total of 450,333 linen to the various operational areas of the hospital. This figure represents a decrease of 15.67% compared to the previous year's performance.

6 TECHNICAL SERVICES

The Technical Service Directorate focused on Planned Preventive Maintenance (PPM) and coordination of activities for projects in the hospital.

INFRASTRUCTURAL AND EQUIPMENT DEVELOPMENT

Infrastructural developments that were carried out in the year 2017 focused on renovation work at former Consulting Room 10 and the old Dental Clinic, construction of 1Nr 40 flats at Bantama nurses' quarters, drilling and mechanisation of borehole at Asuoyeboa Block 10 SSNIT flat, construction of fence wall at Akowuasan nurses' blocks, CWC, Danyame bungalows number 2 & 3, Neem avenue bungalow number 14 among others. In the year under review KMA halted the fence wall construction work at the CWC following complaints by the CWC and this accounted for the 5% of work that was achieved. The details of the infrastructure developments in 2017 are presented in table 11 below.

TABLE 11: INFRASTRUCTURAL DEVELOPMENT, 2017

PLANNED ACTIVITY	EXPECTED OUTPUT	ACHIEVEMENT
Renovation work at former consulting room 10 and old Dental Clinic	100% completion	100% completion achieved
Construction of 1Nr 40 flats at Bantama nurses' quarters	30% completed	20% of work done
Drilling and mechanisation of borehole at Asuoyeboa SSNIT flat, Blk 10	100% completion	100% achieved
Construction of fence wall at Akowuasan nurses' blocks	100% completion	65% achieved
Construction of fence wall at CWC	75% completed	5% achieved
Construction of fence wall at Danyame, bungalow No. 2	100%	100% of work done
Construction of fence wall at Danyame, bungalow No. 3	100%	100%
Construction of fence wall at Neem avenue, bungalow No. 14	100%	100%
External renovation works at Main Theatre.	100%	100%
Tiling of concrete roof of Main block D.	100%	100%
Construction of Maternity & Children's Block	100%	65%
Reactivation and completion of Office block / Complex	50%	Discussion on going to reactive the project.
Expansion / Alteration works for Installation of LINAC Machine at KATH	100%	85%

FINANCIAL PERFOMANCE

7

The chapter covers the general financial activities and the resultant financial performance of the Hospital during the 2017.

SOURCES OF FUNDING

The main sources of funding of the hospital for the year under review were Internally Generated Funds (IGF), Government of Ghana Subventions (GOG) and Sector Budgetary Support (SBS).

Government of Ghana Subventions (GOG)

The central government paid the salaries of workers through Controller & Accountant General. These were in the form of direct payments to staff and it amounted to GHC93, 790,087.84.

However, when it comes to administration and other operational activities, no funds were received from the central government.

Internally Generated Funds (IGF)

The Internally Generated Funds (IGF) is revenue generated internally in the hospital. A total of GHC63, 193,002.36 was generated, mainly from 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 12: INTERNALLY GENERATED FUND (IGF) REVENUE CATEGORIES, KATH 2017

ITEM	BUDGET (GH¢)	ACTUAL (GH¢)	% OF BUDGET ACHIEVED
Service	44,730,105.77	51,961,542.73	116.17
Medicines (Drugs)	12,197,224.93	10,649,180.83	87.31
Others	1,217,320.00	582,278.80	47.83
Total	**58,144,650.70**	**63,193,002.36**	**108.68**

As indicated above, the total revenue generated exceeded the budgeted figure by 8.68%, representing an improvement of the actual performance over budget.

TABLE 13: THE 2016 AND 2017 REVENUE FIGURES COMPARED

ITEM	2016 (GHC)	2017 (GHC)	% CHANGE
Service	45,264,058.09	51,961,542.73	14.80%
Medicines (Drugs)	9,270,228.15	10,649,180.83	14.88%
Others	331,140.13	582,278.80	75.84%
TOTAL	**54,865,426.37**	**63,193,002.36**	**15.18%**

The total revenue generated in 2017 exceeded that of 2016 by 15.18%. This means that the hospital performed better in 2017 than 2016, as 2017 figures for all broad revenue categories exceed those of 2016.

IGF REVENUE BY MODE OF RECEIPT

The 2017 IGF revenue is classified according to the mode of receipt, namely cash, insurance and others. The total revenue of GH¢63, 193,002.36 generated, GH¢36, 614,475.13 was through cash, GH¢24, 612,666.28 through Insurance and GH¢1, 965,860.95 through other sources. These represent 24.55%, 1.16% and 72.77% respectively over the 2016 figures.

TABLE 14: CLASSIFICATION OF IGF REVENUE BY MODE OF RECEIPT

MODE OF RECEIPT	2016 (GH¢)	2017 (GH¢)	% CHANGE	% OF TOTAL
Cash	29,397,757.11	36,614,475.13	**24.55%**	**57.94%**
NHIS	24,329,847.88	24,612,666.28	**1.16%**	**38.95%**
Others	1,137,821.38	1,965,860.95	**72.77%**	**3.11%**
TOTAL	**54,865,426.37**	**63,193,002.36**	**15.18%**	**100%**

TOTAL EXPENDITURE (GOG & IGF)

In the execution of it activities during 2017, the hospital incurred total expenditure of GH¢157, 584,661.12. The amount was used for the compensation of employees, goods and services and the fixed assets.

Out of the total expenditure incurred, GH¢93, 790,087.84, representing 59.52% came from central government (GOG) in the form of payment of salaries of employees. The remaining GH¢63,794,573.28, representing 40.48% came from Internally Generated Funds (IGF) and it was used basically for the operational activities of the hospital.

EXPENDITURE (IGF)

In the year under review, total expenditure incurred under IGF amounted to GH¢63,794,573.28 against a budgeted figure of GH¢58,144,650.70, representing 9.72% of the actual over the budgeted expenditure. By economic classifications, GH¢9,550,068.05 was incurred under compensation of employees, GH¢52, 244,731.23 under goods and services and GH¢1, 999,774.00 was under fixed assets. The over spending in goods and services were contributed greatly by expendables, patient feeding and cleaning.

TABLE 15: 2017 IGF EXPENDITURE BUDGET EXECUTION

ITEM	2016 (GHC)	2017 (GHC)	% CHANGE	% OF TOTAL
Compensation	8,765,062.24	9,550,068.05	8.96%	14.97%
Goods & Services	43,648,128.06	52,244,731.23	19.70%	81.90%
Assets	3,798,534.51	1,999,774.00	-47.35%	3.13%
TOTAL	**56,211,724.81**	**63,794,573.28**	**10.86%**	**100%**

Greater portion of the 2017 IGF expenditure was incurred on goods and services, representing, approximately, 82% whilst 15% and 3% were incurred on compensation of employees and assets respectively.

On year by year performance, the 2017 figures for compensation of employee and goods and services exceeded the 2016 figures by 8.96% and 19.70% respectively. However, spending on assets in 2017 was less than the 2016 figure by 47.35%.

The total IGF actual expenditure incurred in 2017 exceeded the budgeted figure for the same period by 9.72%.

8 COLLABORATION AND SUPPORT

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 that the hospital collaborated with:

TABLE 16: COLLABORATION AND SUPPORT

INSTITUTION	NATURE OF COLLABORATION
Guangdong Cardiovascular Institute, China	Open heart surgeries and pacemaker implantation
Cardio-start International, USA	Open heart surgeries and Implantation on adults.
Boston Children's Hospital, USA (Harvard University)	Open heart surgeries for children
Aalst Cardiovascular Institute, Belgium	Open heart surgeries
Orbis International	Training support, research and paediatric eye care services.
International Voluntary Union of Urologists (IVU)	Training facilities and surgeries in hypospadias and hermaphrodites for Doctors and Nurses
Children Surgery International, USA	Training and surgeries to cleft lips and palate patients
Himalayan Cataract Project (HCP), USA	Eye care services and training
University of Michigan	Training of residents and Nurses in Emergency medicine also collaboration with Breast Cancer Research Eye.
Georgia Southern University	Conversion of Paper-based Medical Records into Electronic format
John Hopkins University & KATH	GAAP Study
KATH, WHO & MOH	Congenial Rubella Surveillance Programme

U. S Naval Medical Research Unit & KATH	Sepsis study
Health Volunteers Overseas (HVO), USA	Collaborated with Trauma & Orthopaedics to offer training and provision of equipment
SIGN fracture care international	Collaborated with Trauma and Orthopaedics Directorate in the area of training
RESTORE California, USA	Collaborated with surgery in the area of reconstructive surgeries
Interplast Education Team (USA)	offer plastic and reconstructive surgeries to patients in the hospital
AO SEC Foundation	Collaborated with Trauma & Orthopaedics Directorate in the training of non-operative and basic surgeries
Academy of American Orthopaedics Society (AAOS)	Collaborated with Trauma and Orthopaedics Directorate in the area of training
McGill University Health Center, Canada & KATH Medicine directorate	TB Study
University of California, San Francisco (UCSF) Orthopaedics Department, USA	Collaborate with Trauma in the training of doctors
Institute of Global Orthopaedics and Traumatology (IGOT)/UCSF/OTI, USA	Collaborate with Trauma & Orthopaedics in the training of residents and research
NCI-USA & KATH	Breast Cancer Study
Project Echo- Palliative Care Africa- The University Of Texas- MD Anderson Cancer Center	Collaborated with Family Medicine in building capacity in Palliative Care through monthly teleconference discussions

9 DIRECTORATE OF MEDICINE

The 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, Psychiatry, Gastrointestinal, Rheumatology, Nephrology, Cardiology and Dermatology.

The directorate also runs a daily Physician Specialist-General Out-Patient clinic at the Specialist Consulting Room 1 (CR1).

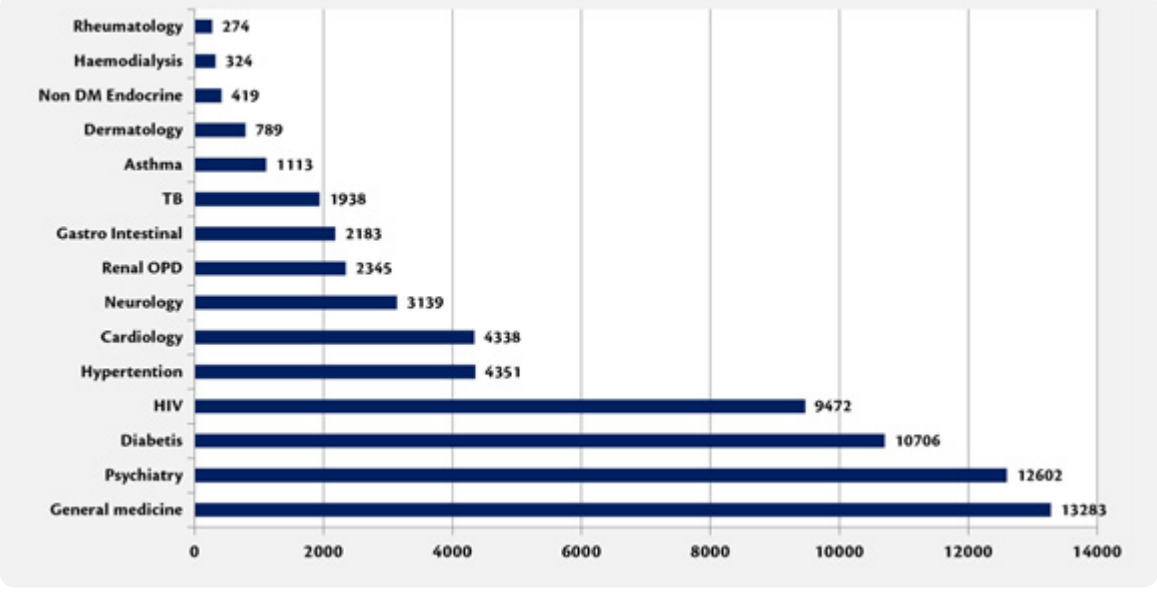
PRIORITY ACTIVITY 1: INCREASE THE RANGE OF SPECIALIST SERVICES

The Directorate made significant effort to enhance its services during the year under review. The use of appointment system was continued at all the Out-Patient Clinics. All the clinics recorded increases in attendance with the exception of Non- Diabetes Mellitus (DM) Endocrine Clinic and Haemodialysis which recorded decreases compared to their previous year's performance.

OUT- PATIENT SERVICES

During the year under review, a total of 67,276 OPD cases were seen by the directorate. This represents 12.0% increase in outpatient consultation compared to the 2015 performance. From Figure 19, General clinic (CR 1) recorded the highest OPD attendance of 13,283, followed by Psychiatry (12,602) and Diabetes clinic (10,602). Haemodialysis and Rheumatology Clinics recorded the least OPD attendance of 324 and 274 respectively. The attendance per clinic during the year is shown in Figure 18.

FIGURE 18: OPD SERVICE UTILISATION BY CLINICS IN MEDICINE DIRECTORATE, KATH (2017)



Trend in OPD Services Utilization by Clinics

From Table 17, HIV clinic attendance increased significantly during the year under review and this was as a result of the reintroduction of the HIV clinic and the Treat-All policy. Most of the clinics in the directorate saw increases in their attendance during the year under review. The table below shows the trend in OPD utilization of specialist clinics from 2013-2017 (Table 17)

TABLE 17: TREND IN OPD SERVICES UTILIZATION BY CLINICS

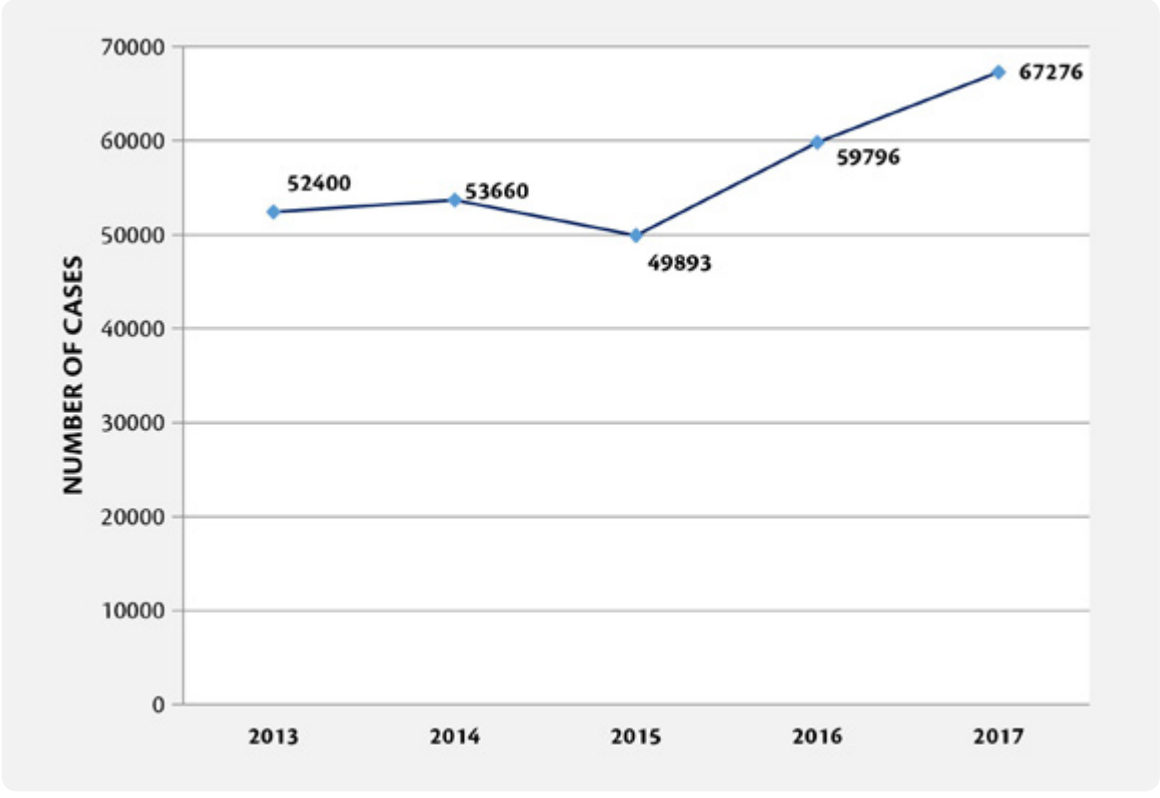
CLINIC	2013	2014	2015	2016	2017
General Medicine	8,913	10,454	9,955	13,031	13283
Diabetes Mellitus	11,612	11,003	10,729	12403	10706
HIV/AIDS	3,096	1,029	899	3608	9472
Psychiatry	12,543	14,625	11,567	12224	12602
Hypertension	4,088	3,806	3,412	4880	4351
Asthma	1,140	1,083	952	1064	1113
Cardiology	3,358	3,968	3,499	3953	4338
GIT	1,887	1,694	1,831	2002	2183
Chest(TB)	445	749	849	946	1938
Renal OPD	1,274	1,602	1,466	1927	2345
Neurology	2,144	2,292	2,138	2392	3139
Dermatology	996	941	928	748	789
Respiratory	197	-	-	-	-
Haemodialysis	538	278	163	407	324
Non.DM Endocrine	298	268	289	268	419
Rheumatology	120	146	170	209	274
Totals	**52,400**	**53,660**	**48,948**	**60,062**	

Hepatitis Clinic run by the Directorate of Medicine at Oncology also recorded 270 cases representing 12.0% increase compared to the 2016 performance of 241 cases.

Trend in OPD Utilization 2013-2017

Specialist out-patients seen at the directorate increased in 2017. This represented an increase of 12.51% compared to the 2016 performance of 59,796. This information is shown in the Figure 19.

FIGURE 19: TREND OF OPD ATTENDANCE IN MEDICINE DIRECTORATE, KATH 2013-2017



Dialysis Services

During the year 2017, Dialysis services decreased from 407 to 324 representing a 20.39% decrease compared to the 2016 performance. A total of 1,616 dialysis sessions were performed. This represented a decrease of 31.23% compared to the previous year's performance of 2,350. There was an increase in the Renal OPD cases recorded for the year 2017 1927 to 2,345). Table 18 presents the breakdown of sessions rendered for the past five years.

TABLE 18: HAEMODIALYSIS AND RENAL OPD

YEAR	HAEMODIALYSIS		RENAL CLINIC
	NO. OF PATIENTS	NO. OF SESSIONS	
2013	538	1,683	1,274
2014	278	1,514	1,602
2015	163	839	1,466
2016	407	2350	1,927
2017	324	1616	2345

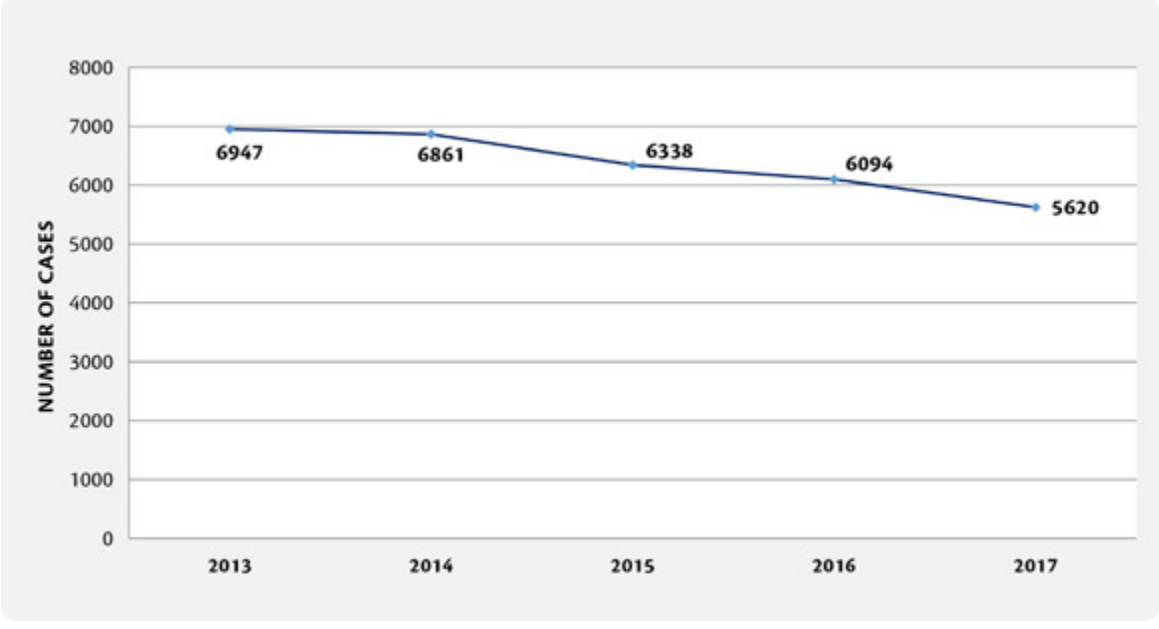
In-Patient Services

The Directorate operated with seven (7) wards and a bed complement of 184. The turnover per bed for the year was 28.9 with bed occupancy of 79.6%. The average length of stay remained at 10 days.

Trend in Admissions 2013 – 2017

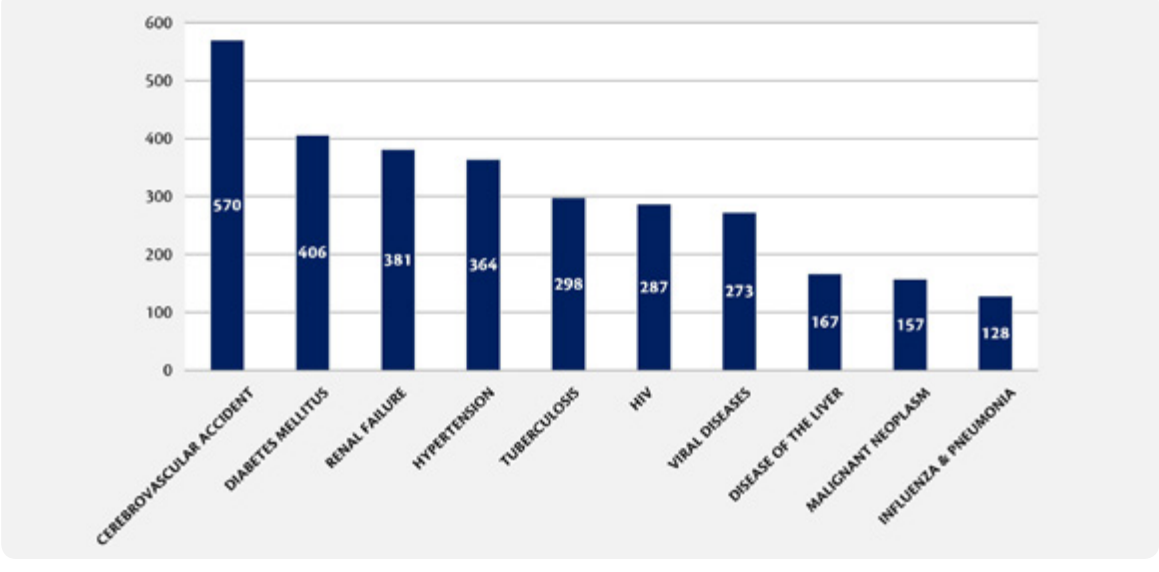
The trend in admissions has been decreasing since 2014. During the year 2017, there was a further decrease of 7.8% in admissions as compared to the 2016 admission recorded. Figure 20, indicates the trend of In-Patient Services at the Directorate of Medicine from 2013– 2017.

FIGURE 20: TREND IN ADMISSIONS, KATH (2013-2017)



During the year under review, Cerebrovascular accidents, Diabetes Mellitus, Renal failure and Hypertension were the major causes of admissions. Figure 21, shows the top ten causes of admissions in the Directorate

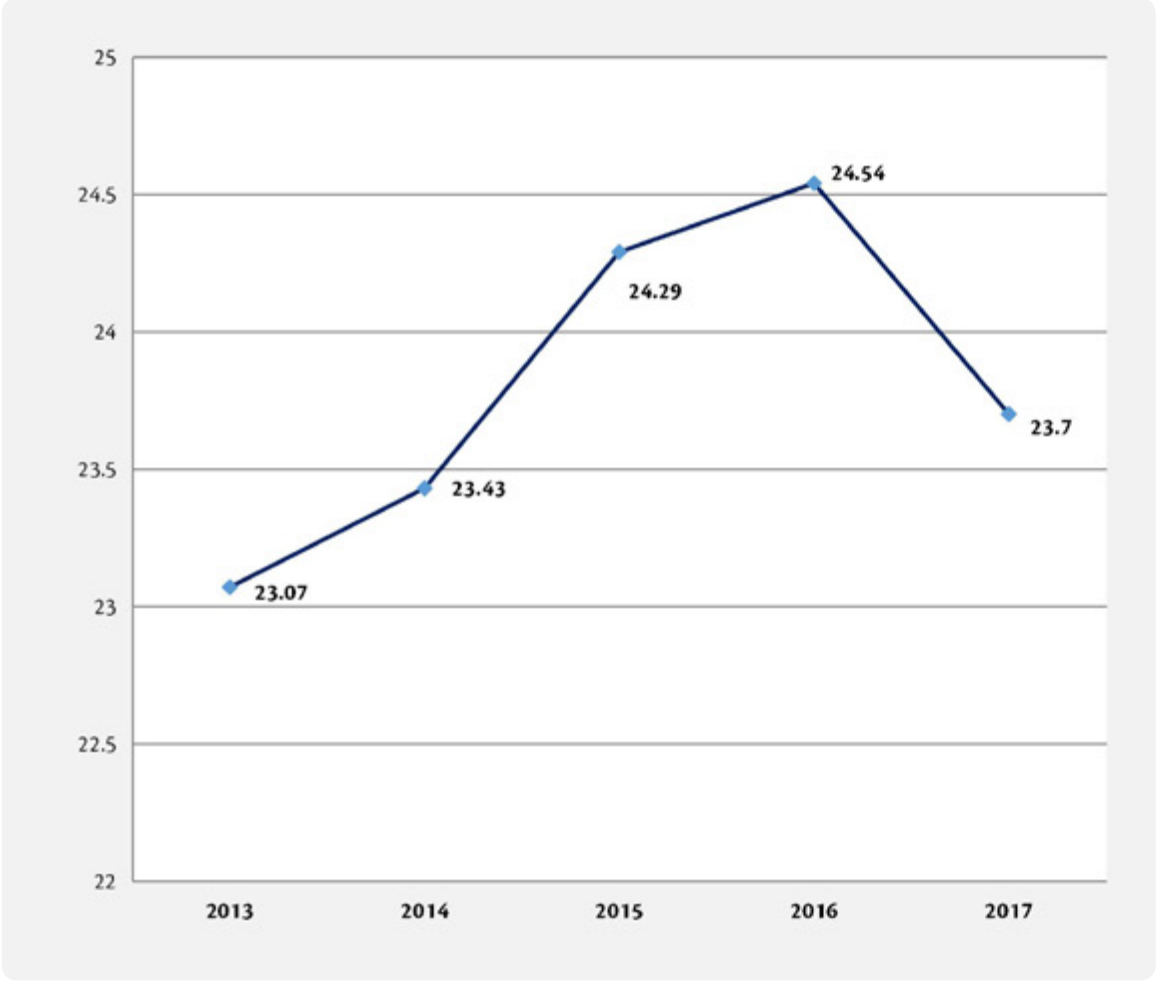
FIGURE 21: TOP TEN CAUSES OF ADMISSIONS IN THE MEDICINE DIRECTORATE – KATH 2017



PRIORITY ACTIVITY 2: SUSTAIN ACTIVITIES AIMED AT REDUCING MORTALITY, ESPECIALLY MATERNAL MORTALITY

Weekly clinical meetings and technical heads team 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. During the year under review, mortality rate decreased from 24.5% to 23.7%.

FIGURE 22: TREND IN MORTALITY RATE (%) IN THE MEDICINE DIRECTORATE 2013-2017

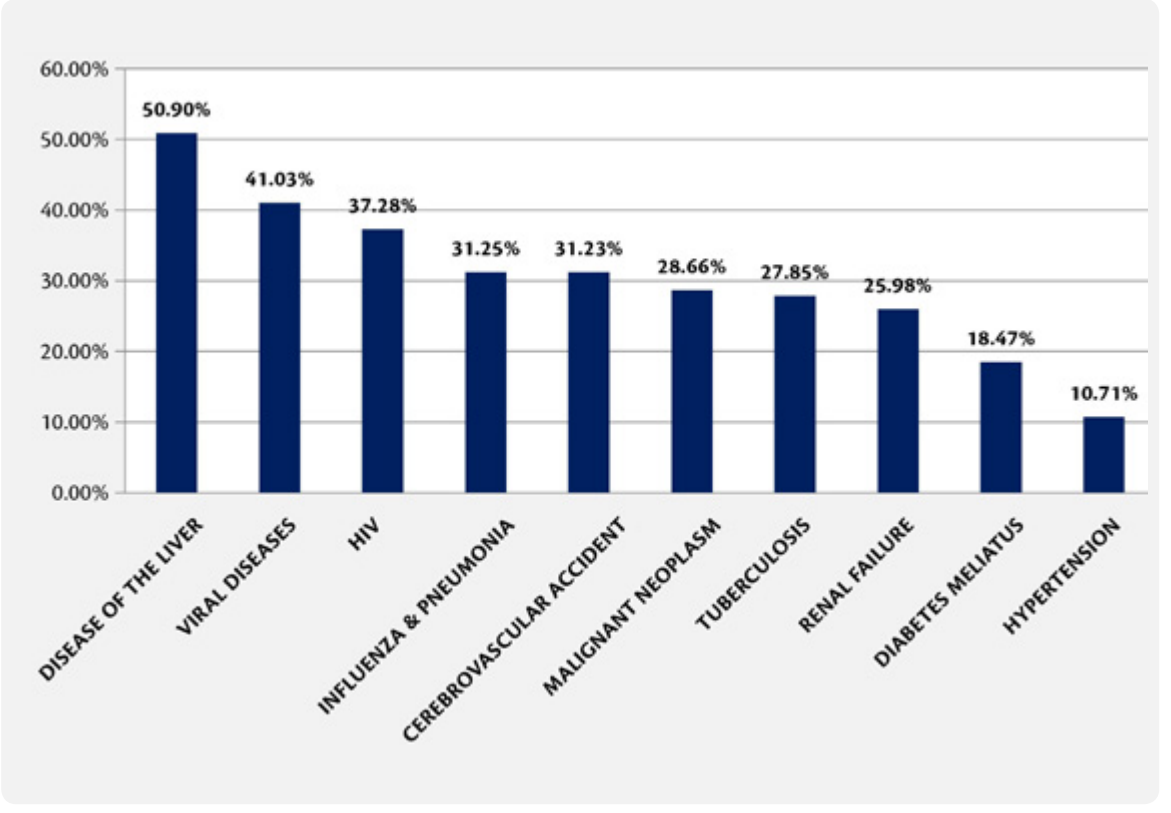


Mortality rate in the Directorate increased consistently from 2014 to 2016 but decreased during the year under review. The highest death rate of 24.54% in the last five years was recorded in 2016.

Top Ten Proportion of Death as a Percentage of Admissions Causes of Deaths

A summary of the top ten proportions of Deaths as a Percentage of admissions in 2017 is shown below.

FIGURE 23: TOP TEN CAUSES OF DEATHS IN THE MEDICINE DIRECTORATE, (2013 – 2017)

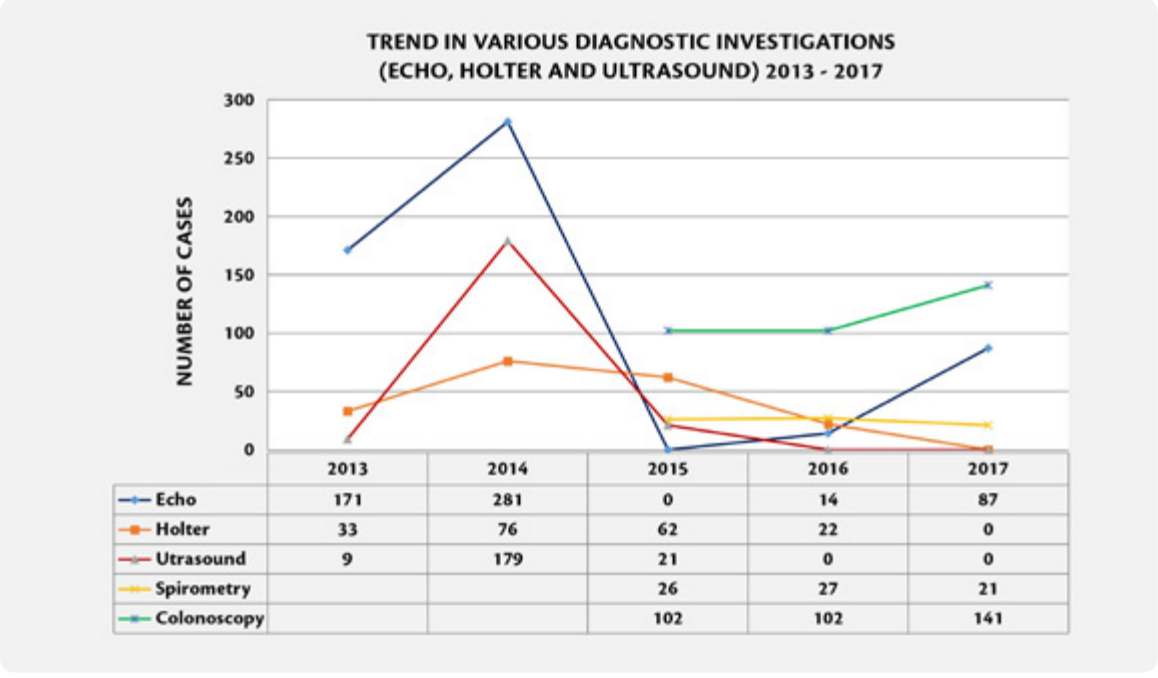


The leading cause of death in the directorate in 2017 was Disease of the liver with 50.90% of those admitted dying, followed by Viral diseases (41.03%) with Hypertension (10.71%) recording the least proportions of deaths to admissions.

PRIORITY ACTIVITY 4: CONTINUE THE PROVISION OF ADVANCED DIAGNOSTIC SERVICES

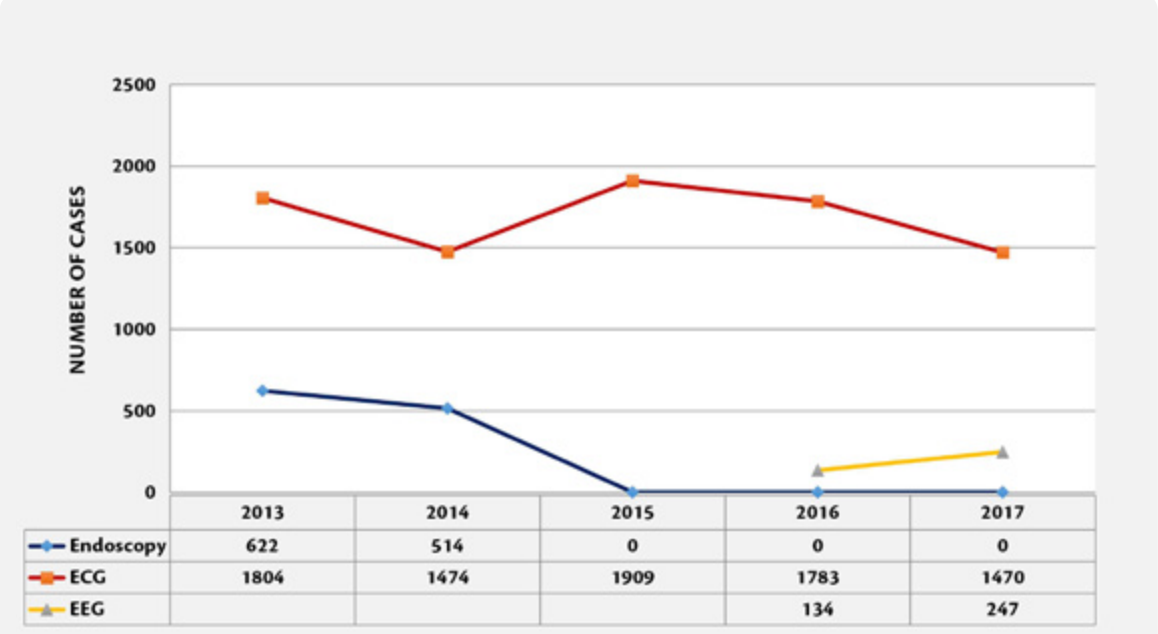
A total of 1,966 diagnostics investigations were successfully carried out during the year under review. This represented a decrease of 7.3% compared to the previous year's performance of 2,120. Figure 24, shows the various diagnostics investigations for the past five years.

FIGURE 24: TREND IN VARIOUS DIAGNOSTIC INVESTIGATIONS IN MEDICINE DIRECTORATE (2013-2017)



	2013	2014	2015	2016	2017
Echo	171	281	0	14	87
Holter	33	76	62	22	0
Utrasound	9	179	21	0	0
Spirometry			26	27	21
Colonoscopy			102	102	141

FIGURE 25: TREND IN ENDOSCOPY AND ECG INVESTIGATIONS IN MEDICINE DIRECTORATE (2013-2017)



	2013	2014	2015	2016	2017
Endoscopy	622	514	0	0	0
ECG	1804	1474	1909	1783	1470
EEG				134	247

Generally, the performance for the last five years has been mixed. There were increases in most of the investigations carried out during the year under review with the exception of Spirometry and ECG which recorded decreases.

There were no investigations done for Holter and ultrasound during the year under review due to faulty of the machines.

DIRECTORATE OF SURGERY

10

The Directorate of Surgery offers specialist surgical care in the following areas;

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

The directorate also runs a clinic for breast related diseases and conditions.

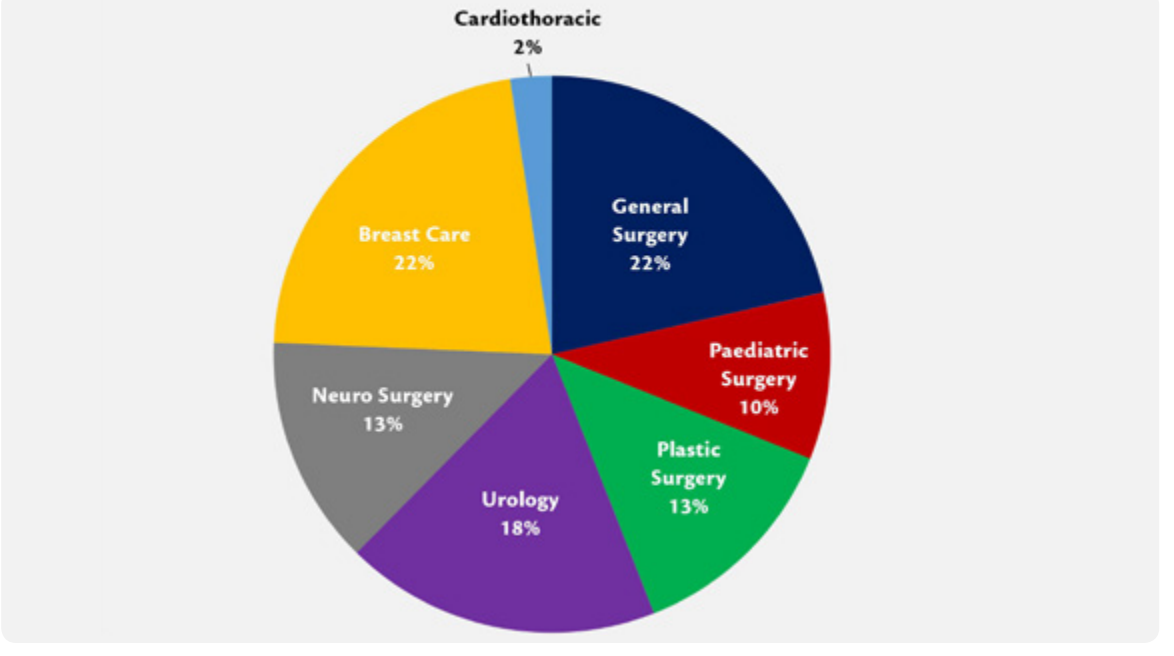
PRIORITY ACTIVITY 1: INCREASE THE RANGE OF SPECIALIST SERVICES

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

Out Patient Services

The Directorate recorded a total of 33,264 patients at its various OPD clinics. This represented a reduction of 144 cases when compared to the year's target of 33,120. In the same year, the Breast Care clinic recorded the highest OPD attendance of 7293 representing 21.92% of all OPD attendance in the Directorate as shown in Figure 26.

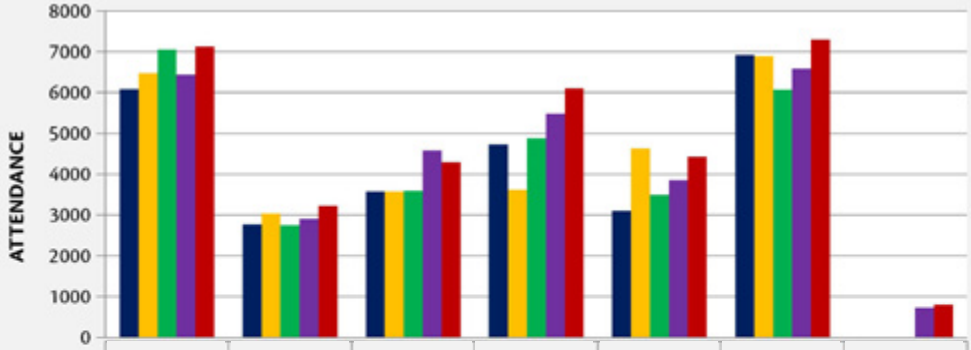
FIGURE 26: OPD CLINICS IN THE DIRECTORATE OF SURGERY, 2017



TREND ANALYSIS OF OPD UTILIZATION BY CLINICS 2013 - 2017

In 2017, all the Clinics recorded increases in outpatient attendance except for Plastic Surgery. (Figure 27)

FIGURE 27: TREND IN OPD ATTENDANCE BY CLINICS IN THE DIRECTORATE OF SURGERY (2013-2017)



	General Surgery	Paediatric Surgery	Plastic Surgery	Urology	Neuro Surgery	Breast Care	Cardiothoracic
2013	6082	2773	3571	4733	3099	6925	
2014	6478	3036	3576	3617	4631	6893	
2015	7055	2752	3588	4883	3485	6072	
2016	6439	2905	4578	5484	3850	6583	729
2017	7125	3224	4294	6103	4424	7293	801

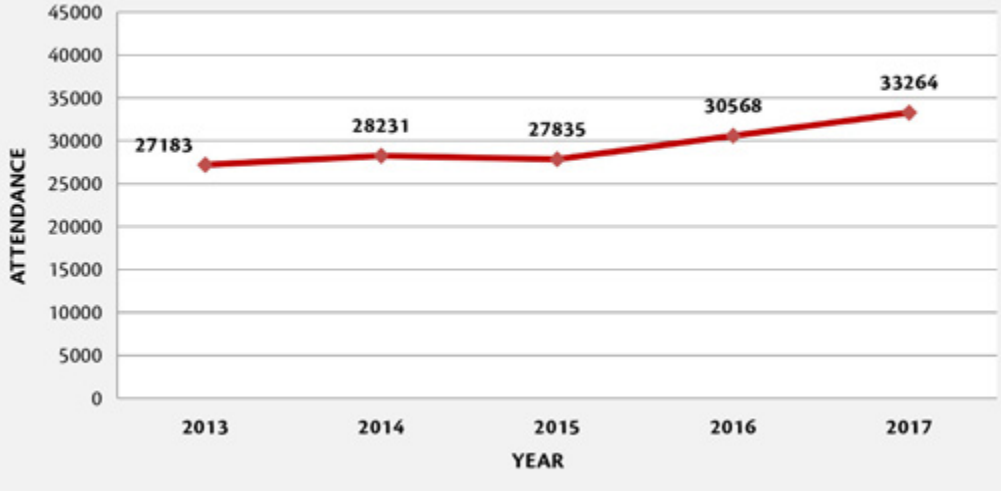
TREND OF OPD ATTENDANCE, 2013-2017

Generally, OPD attendance has seen a consistent rise over the past five years except 2015. The year 2017 performance exceeded the previous year's performance by 8.82%. Figure 28 gives a trend analysis of the total OPD attendance over the past five years.

IN-PATIENT SERVICES

A total of 4,242 admissions were recorded in the directorate in the year 2017. This performance exceeded the previous year's by 5.3%. The average length of stay dropped from 14 days in 2016 to 12 days in 2017.

FIGURE 28: TREND OF TOTAL OPD ATTENDANCE IN THE DIRECTORATE OF SURGERY (2013-2017)



TREND IN ADMISSIONS

The trend in the Directorate's admissions over the past five years has been inconsistent. However, there has been a consistent rise in the number of admissions since 2015. Figure 29 shows the trend in admissions in the Directorate of Surgery.

SURGICAL OPERATIONS CONDUCTED BY SPECIALTY

The Directorate undertook a total of 3,644 surgeries. This depicts a 94.5% of the year's target (4,000 cases). General Surgery contributed to 44% of all surgeries carried out in the directorate with Cardiothoracic surgery making up 1%. Figure 30 gives a graphical display of surgical operations by specialties in the Directorate for 2017.

FIGURE 29: TREND IN ADMISSIONS IN THE DIRECTORATE OF SURGERY (2013-2017)

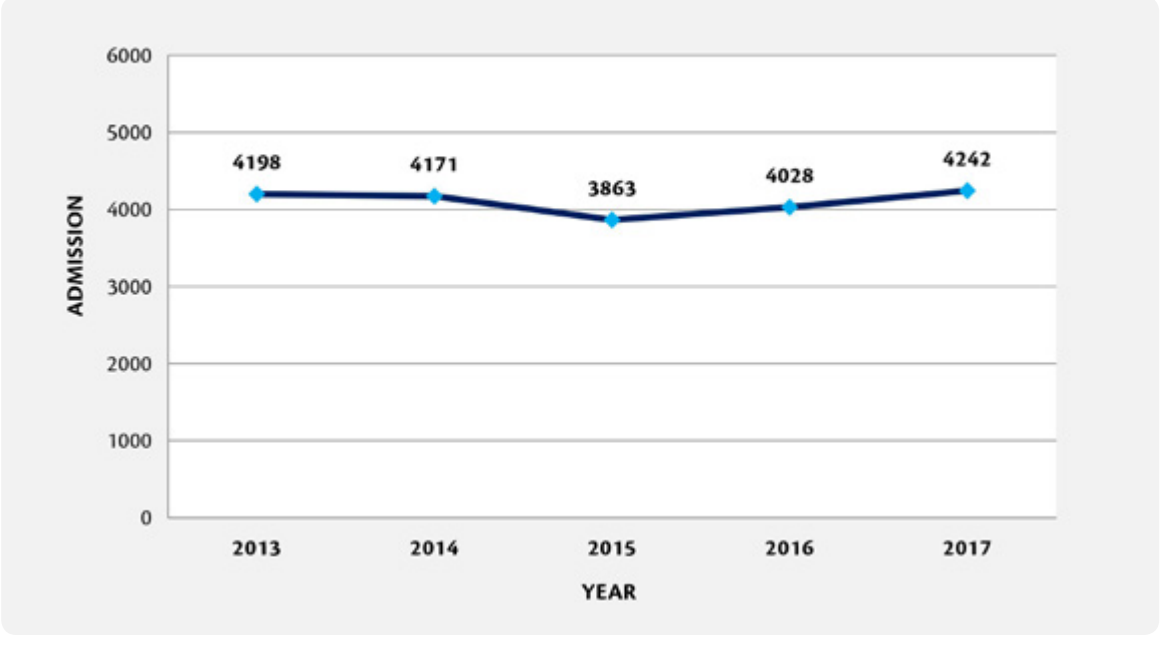
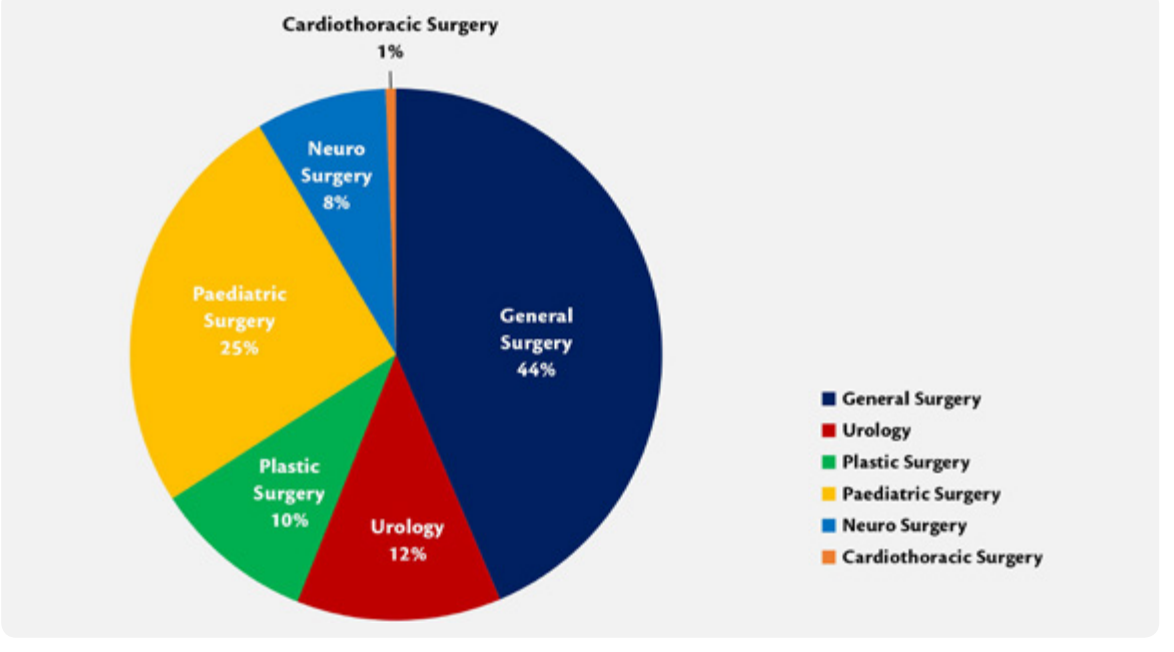


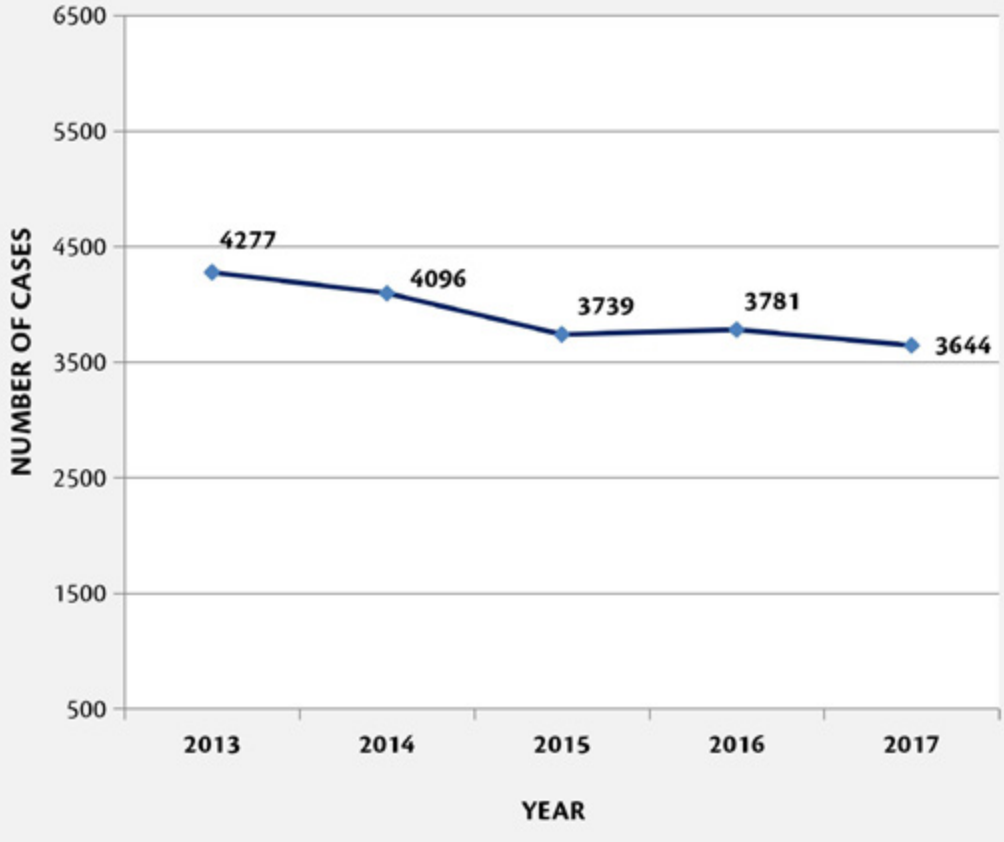
FIGURE 30: SURGICAL OPERATIONS BY CLINIC IN THE DIRECTORATE OF SURGERY (2017)



TREND ANALYSIS OF SURGICAL OPERATIONS (2013-2017)

Over the past five years, the Directorate has recorded a consistent decline in the number of surgical operations except for 2016 which record a marginal rise of 1.1% in surgeries conducted when compared to 2015. Figure 31 shows the trend analysis of surgical operations (2013-2017).

FIGURE 31: TREND IN SURGICAL OPERATIONS IN SURGERY DIRECTORATE (2013-2017)



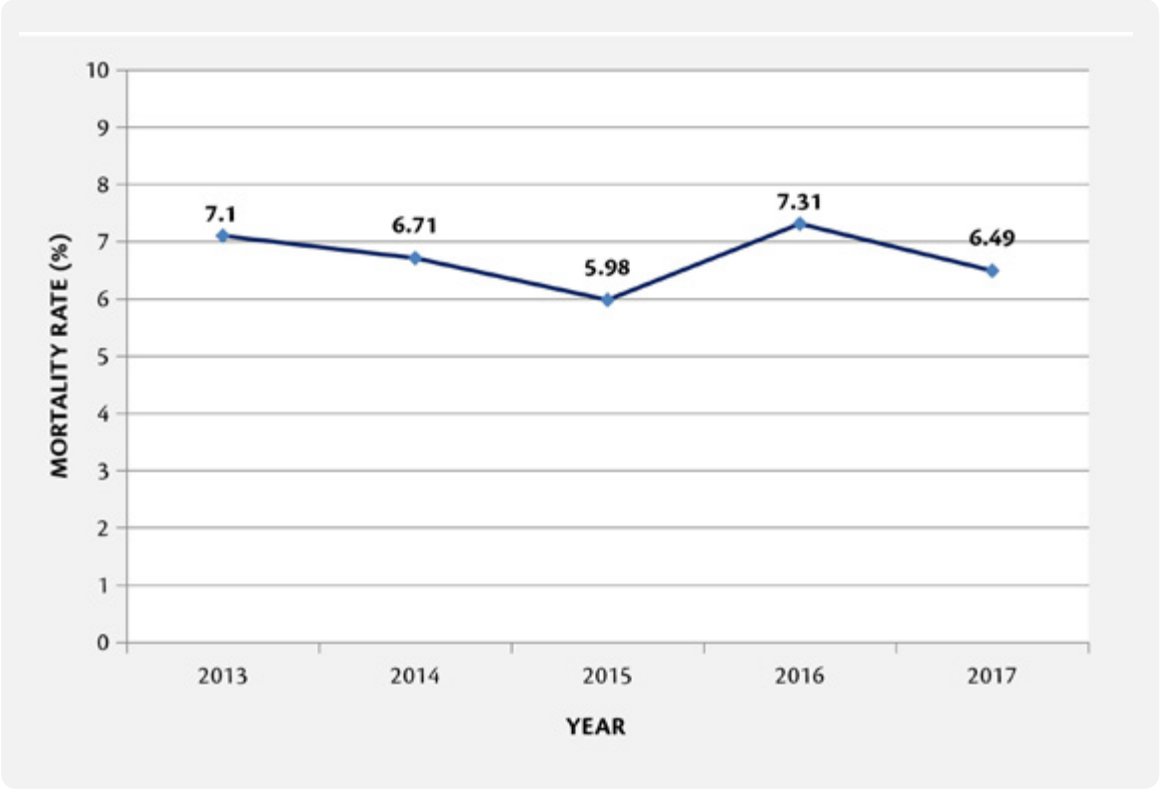
PRIORITY ACTIVITY 2: SUSTAIN ACTIVITIES TO REDUCE MORTALITIES, ESPECIALLY MATERNAL AND NEONATAL DEATHS

The Directorate carried out monthly mortality, morbidity and quality assurance meetings during the year under review to strengthen mortality audits and quality assurance.

Trend in Mortality

Mortality rate for the Directorate has been fluctuating over the past five-years. In the year under review mortality rate declined from 7.31% in 2016 to 6.49%. Figure 32 shows the trend analysis in mortalities in the Directorate of Surgery from 2013 to 2017.

FIGURE 32: TREND IN MORTALITY RATES IN SURGERY DIRECTORATE (2013-2017)



PRIORITY ACTIVITY 13: SUPPORT TRAINING OF STAFF

The directorate made conscious efforts to improve the quality of clinical care in the year under review. Two nurses were trained in sub-specialties, one management member attended training at GIMPA, twenty-five orderlies were trained on sanitation and three pharmacists were sponsored in sub-specialties.

11

DIRECTORATE OF CHILD HEALTH

The Directorate offers specialist Out-Patient (general and sub-specialty), Emergency and In-Patient services to children

PRIORITY ACTIVITY 1: INCREASE THE RANGE OF SPECIALIST SERVICES

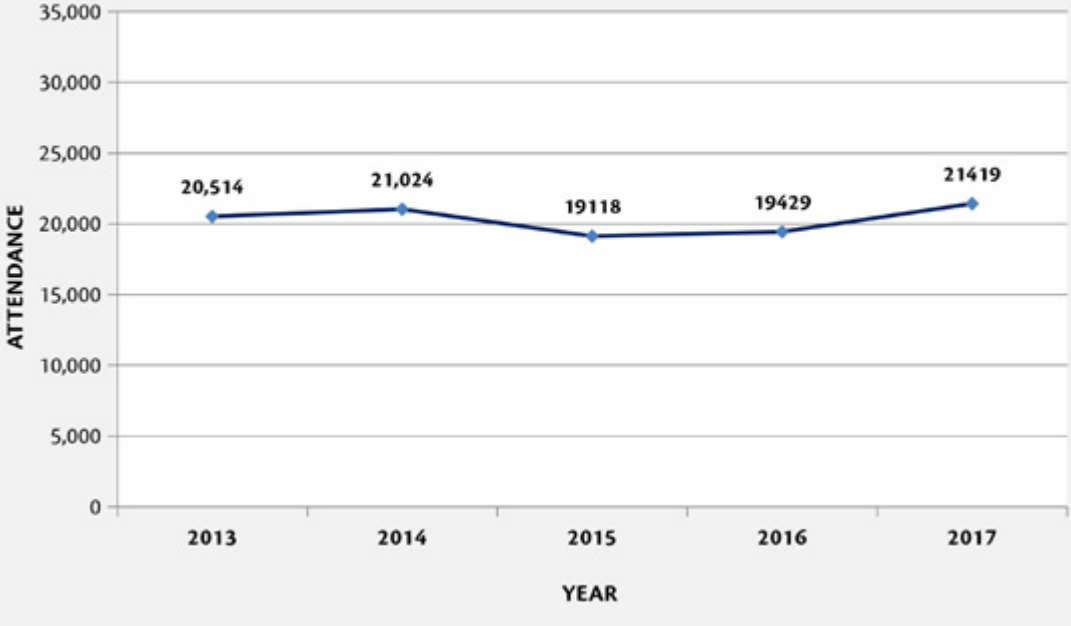
In 2017, the directorate continued with its outlined interventions aimed at providing efficient and innovative response to child health care.

OUT-PATIENT SERVICES

The directorate runs General and Sub-specialty Out-Patient clinics at Consulting Room 10. The Sub-specialty clinics are as follows: Asthma, TB, HIV, Renal, Cardiac, Sickle Cell, Cleft, Neuro/ Epileptic, Endocrine (excluding Diabetes), Diabetes, Oncology/ Burkitts and Malnutrition.

The directorate saw a total of 21,419 out-patients during the period under review. The overall OPD attendance in the directorate has fluctuated between 2013 and 2017. In the year under review, there were 1,990 more cases seen as compared to 2016, representing an increase of 10.24%. Figure 33 shows the trend of OPD attendance, 2013-2017.

FIGURE 33: TREND IN OPD ATTENDANCE, CHILD HEALTH, 2013-2017



TREND IN SUB-SPECIALTY OUT-PATIENT UTILIZATION

The Directorate recorded a total of 5,388 patients at the general OPD, representing 25.37% of the overall OPD attendance for the Directorate in 2017. The remaining 74.63% OPD attendance was recorded at the Sub-specialty clinics. The Directorate achieved 70.89% and 96.74% of its expected output for general and sub-specialty OPD attendance respectively. Overall, the trend in OPD sub-specialty attendance since 2013 has been inconsistent. See Table 19 for the analysis of sub-specialty OPD attendance, 2013-2017.

TABLE 19: TREND IN OPD SUB-SPECIALTY CLINICS IN CHILD HEALTH (2013-2017)

SUB-SPECIALIST CLINICS	2013	2014	2015	2016	2017	2017 OPD ATTENDANCE (%)
Sickle cell	5,547	4,873	3,576	4,907	5,130	32.36
Paediatric HIV Clinic	1,784	1,864	1,742	1,606	1,772	11.18
Neurology/Epilepsy Clinic	1,576	1,894	1,730	1,545	1,851	11.68
Asthma Clinic	570	603	616	571	555	3.50
Oncology/Burkitts lymphoma	709	924	996	835	1,055	6.66
Cardiology Clinic	1,110	957	989	1,156	1,342	8.47
Malnutrition Clinic	1,110	1,521	1,135	1,236	1,578	9.96
Cleft Palate	1,000	735	804	625	719	4.54
Renal	972	1,042	957	906	1,205	7.60
Endocrine	150	222	140	198	286	1.80
Diabetes	-	161	131	223	358	2.26

A new sub-specialty clinic that was introduced in the year 2017 is the Adolescent HIV, which recorded 180 patients.

IN-PATIENTS

The Directorate has four 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, the Directorate recorded 7,060 admissions. The number of in-patients recorded in the directorate has over the past five years declined except for a marginal increase in 2014 as shown in Figure 34.

TOP TEN (10) CAUSES OF ADMISSIONS

Preterm/Low Birth Weight, Neonatal Sepsis, Neonatal Jaundice and Birth Asphyxia were the major causes of admissions in 2017 and contributed to 68.01% of the top ten cause of admission. The top four conditions for admission were the same for 2016. Figure 35 illustrates the top 10 causes of admissions in the Child Health Directorate in 2017.

FIGURE 34: TREND IN IN-PATIENT SERVICE UTILIZATION, CHILD HEALTH DIRECTORATE (2013-2017)

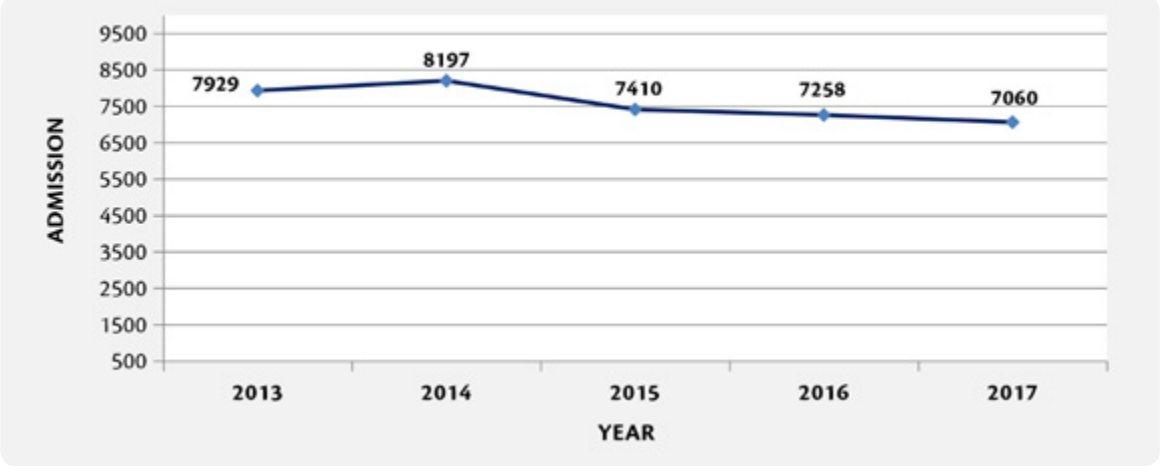
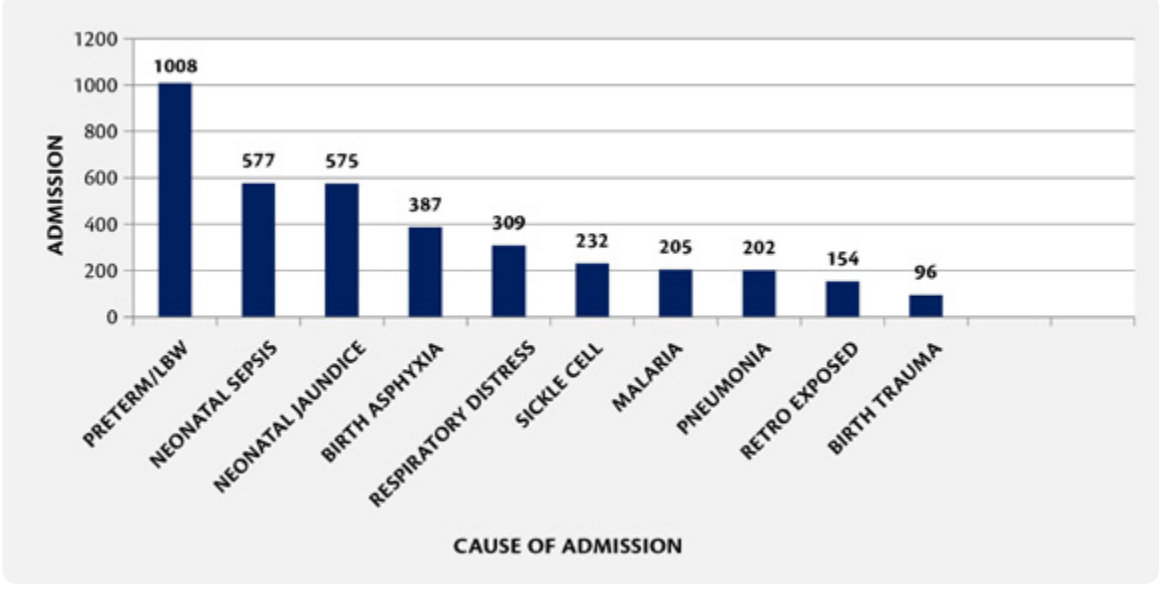


FIGURE 35: TOP TEN CAUSES OF ADMISSIONS IN THE CHILD HEALTH DIRECTORATE, 2017

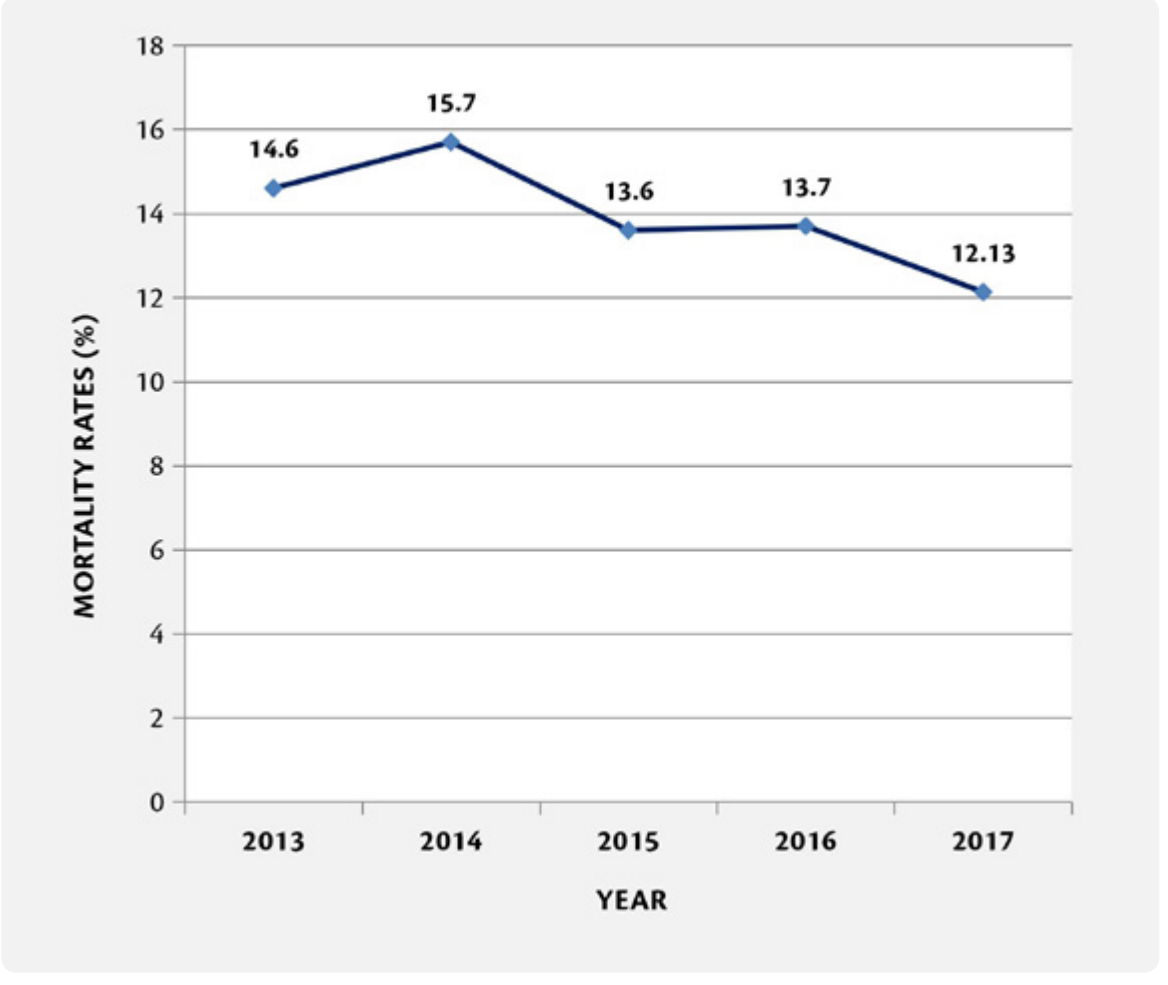


PRIORITY ACTIVITY 2: SUSTAIN ACTIVITIES TO REDUCE MORTALITIES, ESPECIALLY MATERNAL AND NEONATAL DEATHS

Trend in Mortality Rate

Generally, the trend in the death rate in the directorate has been falling since 2013 except for 2014 for the five-year period, despite the fact that there was a marginal increase of 0.1% in 2016 compare with the 2015 figure. The five-year trend in mortality rates in Child Health Directorate is shown in Figure 36.

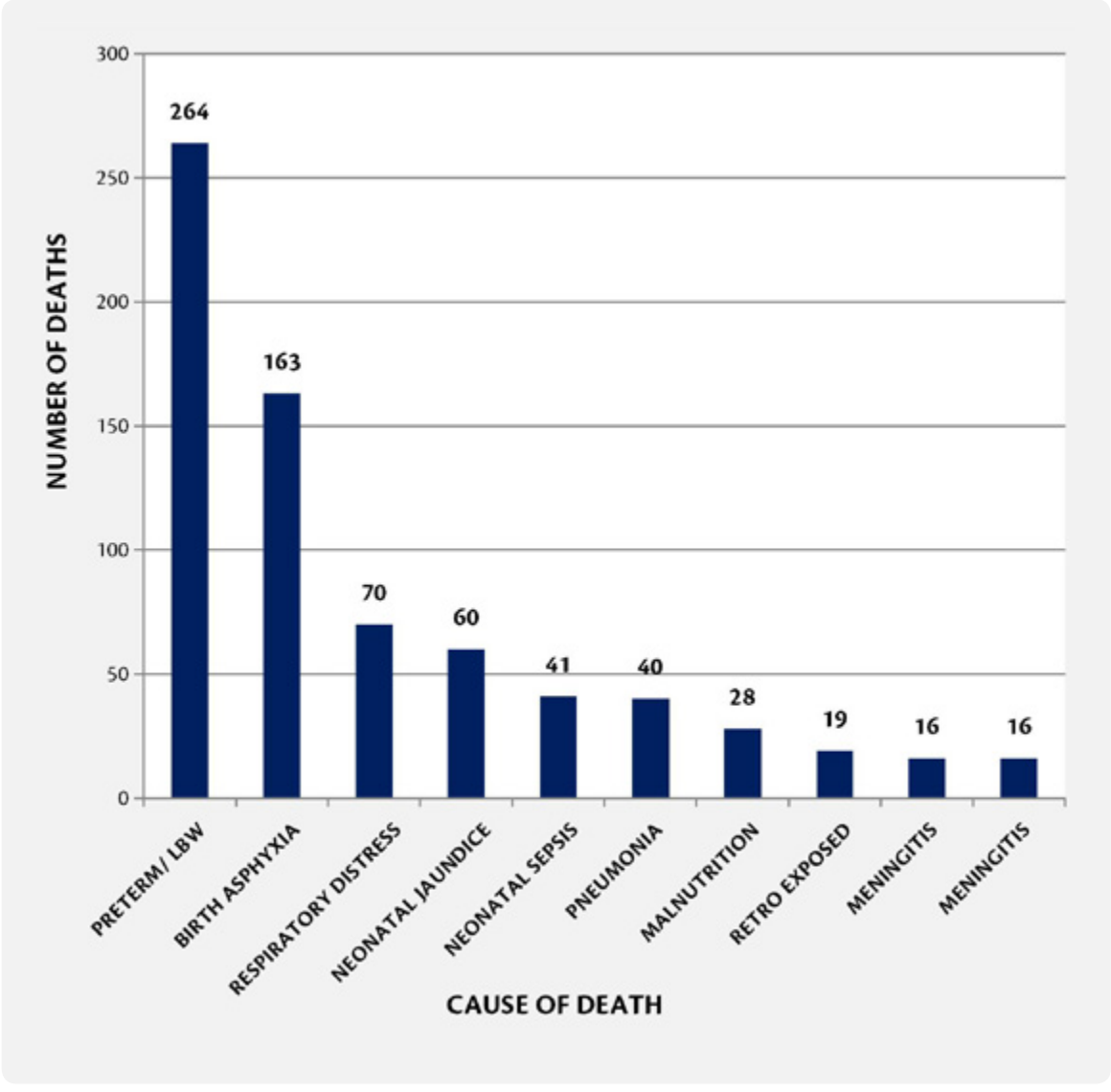
FIGURE 36: TREND IN MORTALITY RATES IN CHILD HEALTH DIRECTORATE FROM 2013 -2017



TOP TEN CAUSE OF DEATHS

In 2017, Preterm/Low Birth Weight, Birth Asphyxia, respiratory distress and Neonatal jaundice were the leading causes of death and constituted 77.68% of all Top 10 causes of death in the directorate (see Figure 37).

FIGURE 37: TREND IN MORTALITY RATES IN CHILD HEALTH DIRECTORATE FROM 2013 -2017



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)

A total of 2,881 patients were seen at the emergency units with a death rate of 28.49%.

PRIORITY ACTIVITY 13: SUPPORT TRAINING OF STAFF

The Directorate trained one (1) doctor in Haematology Oncology, two (2) in Neurology and one in Neonatology during the period under review. In the same period, two (2) nurses were trained in Nutrition and one nurse each in Nephrology, Emergency Nursing and Child Psychology.One hundred and fifty (150) doctors and nurses attended various conferences during the year under review. Two (2) nurses were pursuing training in critical care with emphasis on neonates in 2015. In addition to this, two (2) doctors were pursuing training in Neonatology.

DIRECTORATE OF EENT

12

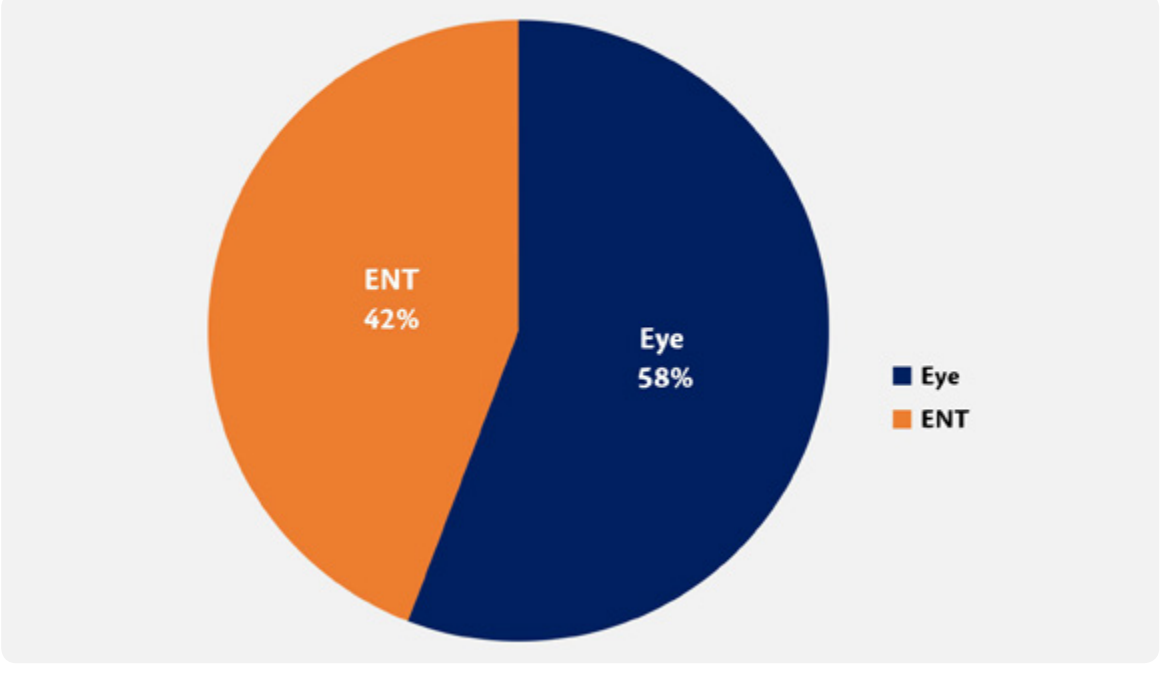
This Directorate comprises two (2) distinct departments – ENT and the Eye Centre and mandated with the provision of specialist Eye, Ear, Nose and Throat medical services. The Directorate also runs outreach services.

PRIORITY ACTIVITY 1: INCREASE THE RANGE OF SPECIALIST SERVICES

Out -Patient Services

In 2017, a total of 35,349 cases were seen. The Eye Centre recorded 55.80% of all out-patients for 2017. Fig 38 gives the proportion of cases seen by the respective departments.

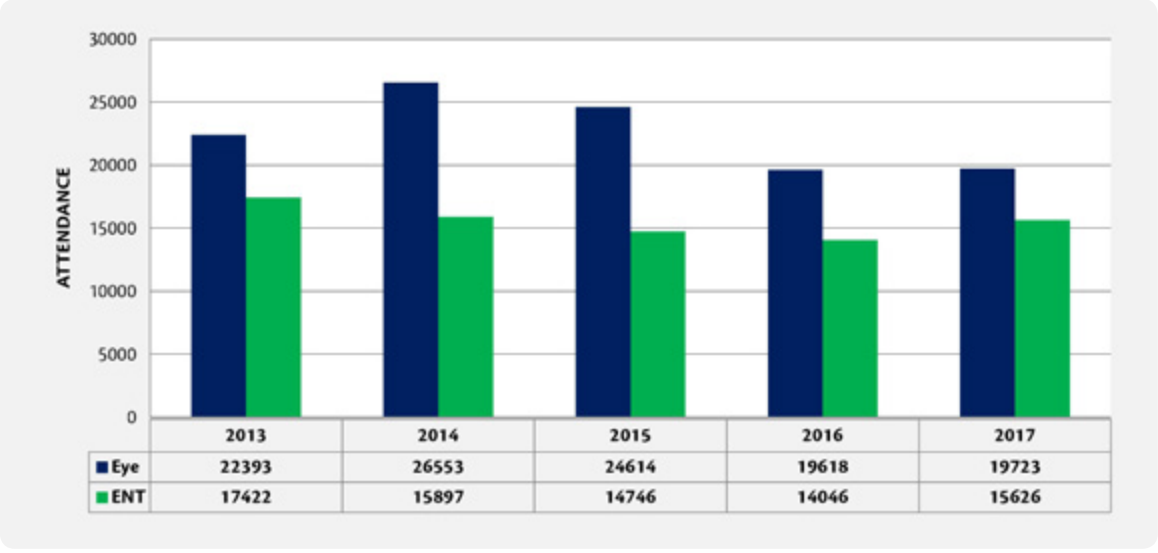
FIGURE 38: DISTRIBUTION OF OUT-PATIENTS IN EENT DIRECTORATE BY DEPARTMENT



Trend in OPD Utilization by Clinics 2013 -2017

The Eye Centre has consistently recorded more out-patients than ENT over the past five years. However, out-patient attendance at the ENT department has seen a consistent decline over the same period except 2017. Figure 39 gives the detailed trend in OPD attendance at the directorate from 2013 to 2017.

FIGURE 39: TREND IN OPD SERVICE BY CLINICS IN EENT DIRECTORATE (2013-2017)



Other Services

The directorate provided the following services in the year under review:

- Refraction
- Low Vision
- Visual Field Test
- Audiology / Hearing Assessment
- Speech Therapy
- Other Procedures

The outputs for the various services are as shown in Table 20.

TABLE 20: EXPECTED AND ACTUAL OUTPUTS OF OTHER SERVICES IN EENT IN 2017

SERVICES	EXPECTED OUTPUT	ACTUAL OUTPUT
Audiology	1,200	1001
Speech	400	230
Refraction	7,500	4831
Provision of spectacles		1006
Low Vision	200	105
Visual Field Test	400	778
OCT		182
B-scan		144
Syringing	2,000	2,326

OPD CLINICS- EYE CENTRE

The Eye Centre ran a number of sub-specialty clinics in the year under review. Table 21 gives a description of the top ten causes of OPD attendance for 2017. Glaucoma was the most frequent condition seen.

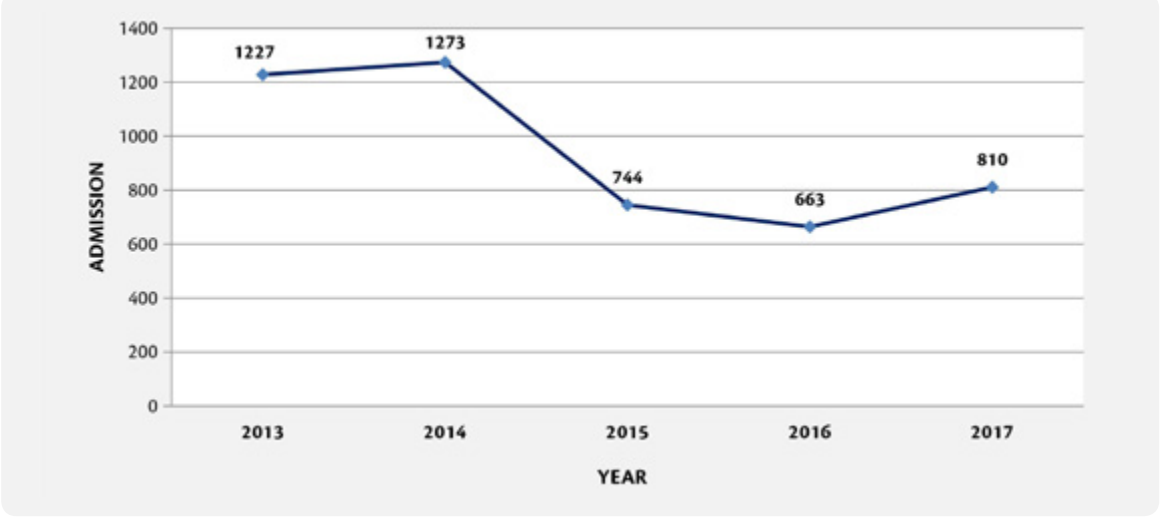
IN-PATIENT SERVICES

In 2017, a total of 810 patients were admitted in the Directorate. This represents 22.17 % increase compared to 2016. The average length of stay increased from 3 days in 2016 to 4 days for the same period. Over the period, the directorate recorded 18.73% in its bed utilization. The trend in total admissions recorded in the directorate has been inconsistent over the five-year period as illustrated in Figure 40.

TABLE 21: TOP TEN CAUSES OF OPD ATTENDANCE, EYE UNIT, 2017

	DIAGNOSIS	ATTENDANCE
1	Glaucoma	4830
2	Cataract	944
3	Squint/EX/ESO/LR/Rectus	471
4	Diabetic Retinopathy	316
5	Pterygium	226
6	Sickle Cell Retinopathy	187
7	Orbital Tumor (Proptosis)	153
8	Age related Macular Degeneration	125
9	Amblyopia	111
10	Keratocornus	110

FIGURE 40: TREND IN ADMISSIONS IN EENT DIRECTORATE (2013-2017)



In 2017, cataract, hypertrophy of tonsils with hypertrophy of adenoids, foreign body in esophageal tract and hypertrophy of adenoids and were the leading causes of admission, contributing 59.62% of all Top 10 causes of admission.

Table 22 below gives details of the ten causes of admission in the directorate for 2017.

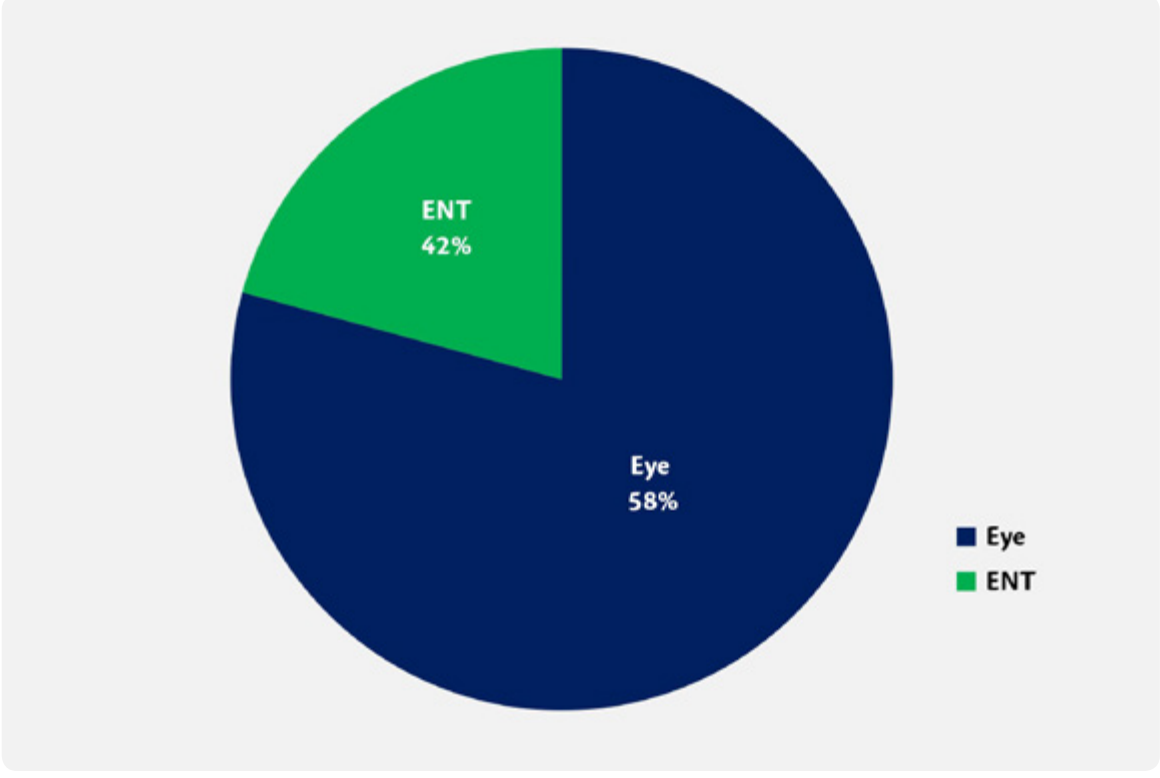
TABLE 22: TOP TEN CAUSES OF ADMISSION, EENT UNIT, 2017

NO.	DISEASE	NUMBER OF CASES
1	Cataract	78
2	Hypertrophy of tonsil with hypertrophy of adenoids	77
3	Foreign body in esophageal tract	53
4	Hypertrophy of adenoids	46
5	Corneal perforation	33
6	Glaucoma	32
7	Nasal/nasopharyngeal tumor	29
8	Goitre	28
9	Orbital cellulitis	26
10	Tonsilitis	24

SURGICAL OPERATIONS

The Directorate performed a total of 4818 surgeries for the year under review. Eye surgical operations accounted for 79.23% of all surgeries conducted in 2017 with the reminder for ENT. Figure 41, depicts surgical operations in EENT Directorate.

FIGURE 41: SURGICAL OPERATIONS IN EENT DIRECTORATE (2017)



TREND IN SURGICAL OPERATIONS

The trends in the number of surgeries conducted at the Eye Centre and ENT have been inconsistent over the five-year period. There were increases in surgeries done in 2017 for both Eye and ENT. Figure 42 illustrates a detailed trend in surgical operations in the EENT Directorate since 2013.

PRIORITY ACTIVITY 2: SUSTAIN ACTIVITIES TO REDUCE MORTALITIES, ESPECIALLY MATERNAL AND NEONATAL DEATHS

The trend in mortality rate in the Directorate has fluctuated since 2013. The year under review saw a sharp decline from a figure of 4.21% in 2016 to 1.71% in 2017 (see Figure 43). This reason for this decline could be attributable to the type of cases that were managed and the time they were presented to the hospital.

FIGURE 42: TREND IN SURGICAL OPERATIONS IN EENT DIRECTORATE (2013-2017)

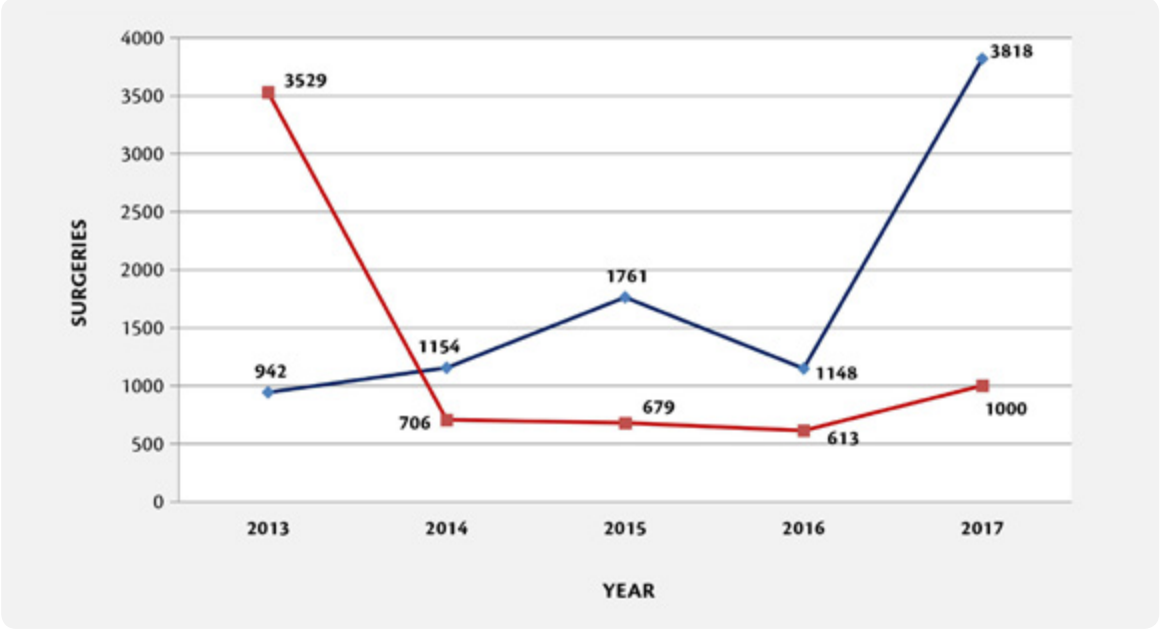
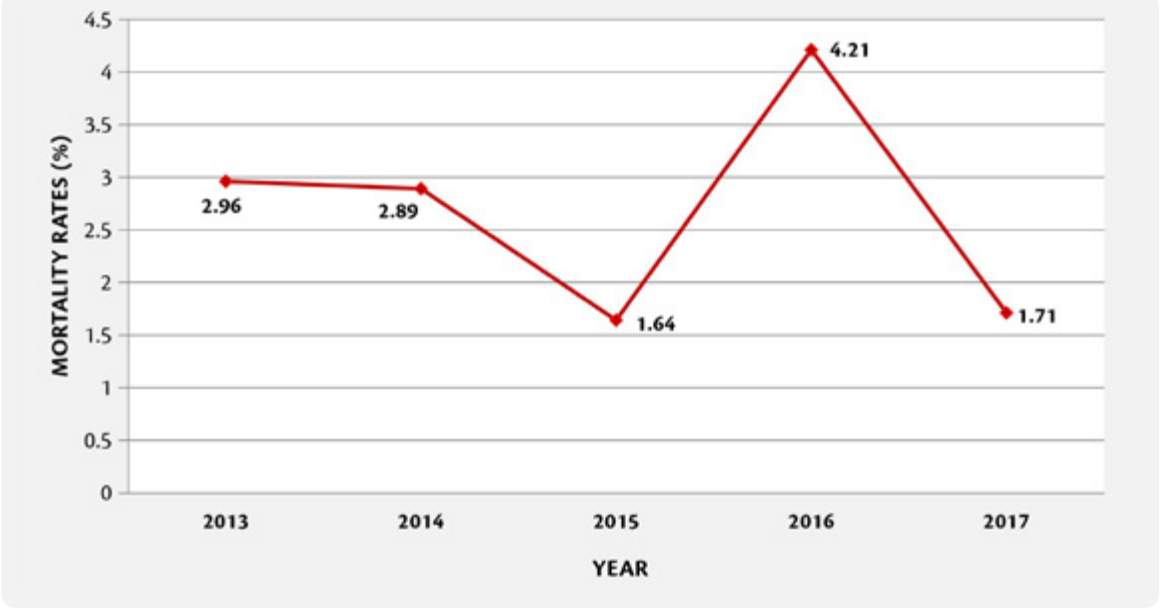


FIGURE 43: TREND IN MORTALITY RATE IN EENT DIRECTORATE (2013-2017)



PRIORITY ACTIVITY 7: SUPPORT DISTRICT AND REGIONAL HOSPITALS IN THE NORTHERN SECTOR OF GHANA BY WAY OF PROVIDING OUTREACH SERVICES

In 2017, the Directorate embarked on a number of outreach programmes. A total of 19,342 people were screened by Staff of the Eye Department at various places and institutions visited. Out of this number, 1,525 were referred for further treatment. Table 23 below shows the areas visited and number of cases seen.

TABLE 23: OUTREACH ACTIVITIES BY EYE DEPARTMENT 2017

TOWN	NUMBER SCREENED	NUMBER OPERATED
Somanya (Atua Hospital)	2941	146
Keta 1	3309	338
Techiman (Holy Family	4174	231
Kwahu (Atibie Hospital)	2667	212
Keta 2	3973	444
Donkorkrom	2278	154
TOTAL	**19,342**	**1,525**

PRIORITY ACTIVITY 13: SUPPORT TRAINING OF STAFF

In order to improve service delivery at the directorate, the following activities were carried out.

Two (2) theatre nurses were sponsored by Himalayan Cataract Project (HCP) to attend a three - week program in Theatre Nursing at John A. Moran Eye Center, Utah, USA.

Three (3) ENT Doctors successfully attended a functional Endoscopic Sinus Surgery workshop in Michigan USA

Some ENT Nurses were sponsored to attend Nurses conferences

DIRECTORATE OF ORAL HEALTH

13

The Oral Health directorate is mandated to provide general and specialist care for diseases and ailments of the Oro-facial region.

The Directorate offers the under listed specialist services:

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

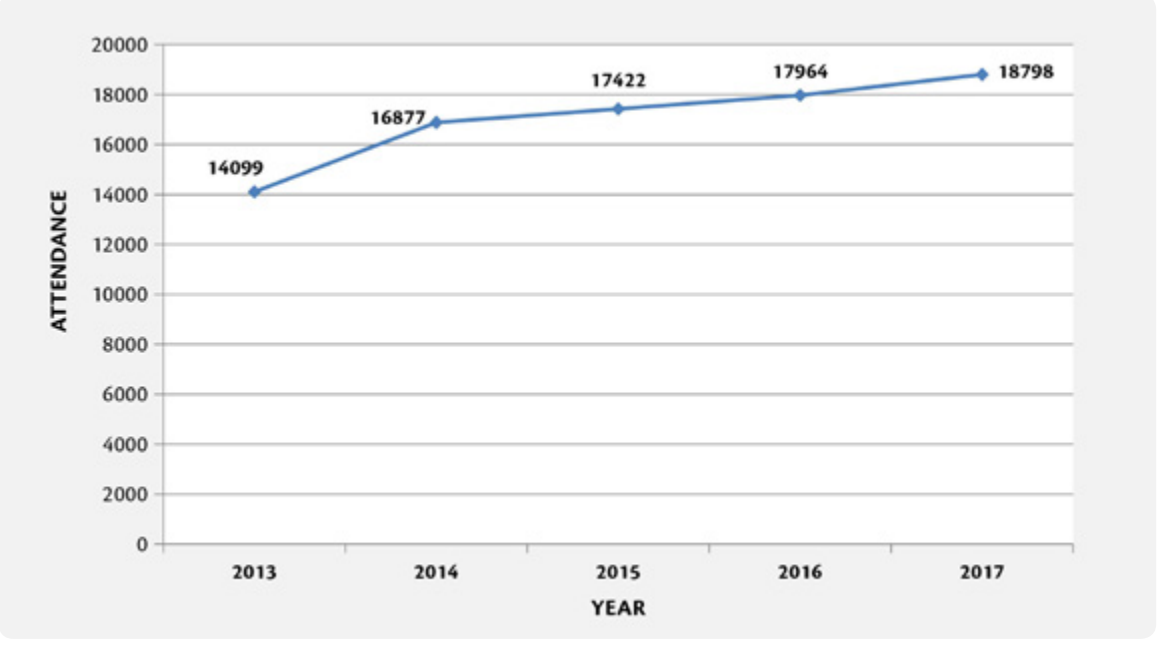
PRIORITY ACTIVITY 1: INCREASE THE RANGE OF SPECIALIST SERVICES

The Directorate experienced an increase in clinical indicators like OPD attendance and surgical operations and a slight decrease in the number of OPD procedures.

Out-Patient Service (Attendance and Procedures)

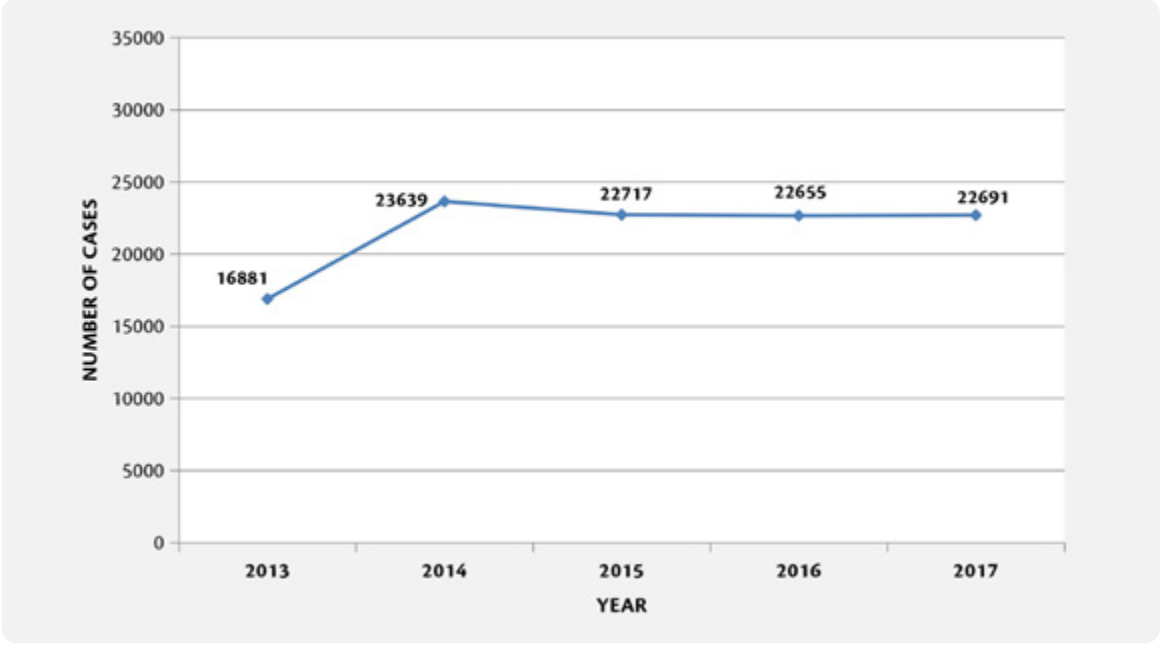
At the Out-patients Department of the Directorate, a total of 18,798 patients were registered in the year under review. This represents 75.19% of the target (25,000) for the year and 4.64% increase over 2016 attendance. Figure 44 shows a five-year trend in OPD attendance from 2013 to 2017.

FIGURE 44: TREND IN OPD ATTENDANCE, ORAL HEALTH DIRECTORATE (2013-2017)



In all a total of 22,691procedures, this represents 81.04% of a target of 28,000 and a marginal increase of 0.16 % over the 2016 performance.

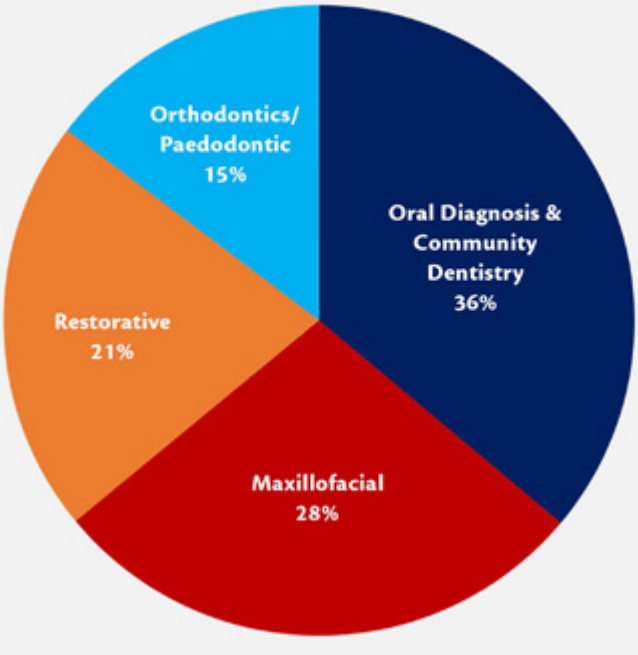
FIGURE 45: TREND IN OPD PROCEDURES IN ORAL HEALTH DIRECTORATE (2013-2017)



OUT-PATIENTS PROCEDURES BY CLINIC

Oral Diagnosis and Community Dentistry recorded 8,194 procedures representing 38% of all OPD procedures for 2017 and the highest across the various sub-specialty clinics. Figure 46 shows OPD procedures by clinics at the Oral Health Directorate for 2017.

FIGURE 46: OPD PROCEDURES BY CLINIC AT THE ORAL HEALTH DIRECTORATE (2017)



IN- PATIENT SERVICES

A total of 488 admissions, 475 discharges and 12 deaths were recorded in 2017. With respect to admissions, the directorate achieved 69.71% of its target (700). The average length of stay reduced from 6 days in 2016 to 5 days for the year under review.

TOP TEN CAUSES OF ADMISSIONS IN 2017

The most frequent causes of admission were cleft lip and cleft palate, accounting for 7.58% and 7.38 % of admissions respectively. The top ten causes of admission constituted 44.88% of all admissions in the directorate for the period. Table 24 shows the top ten causes of admission for the year under review.

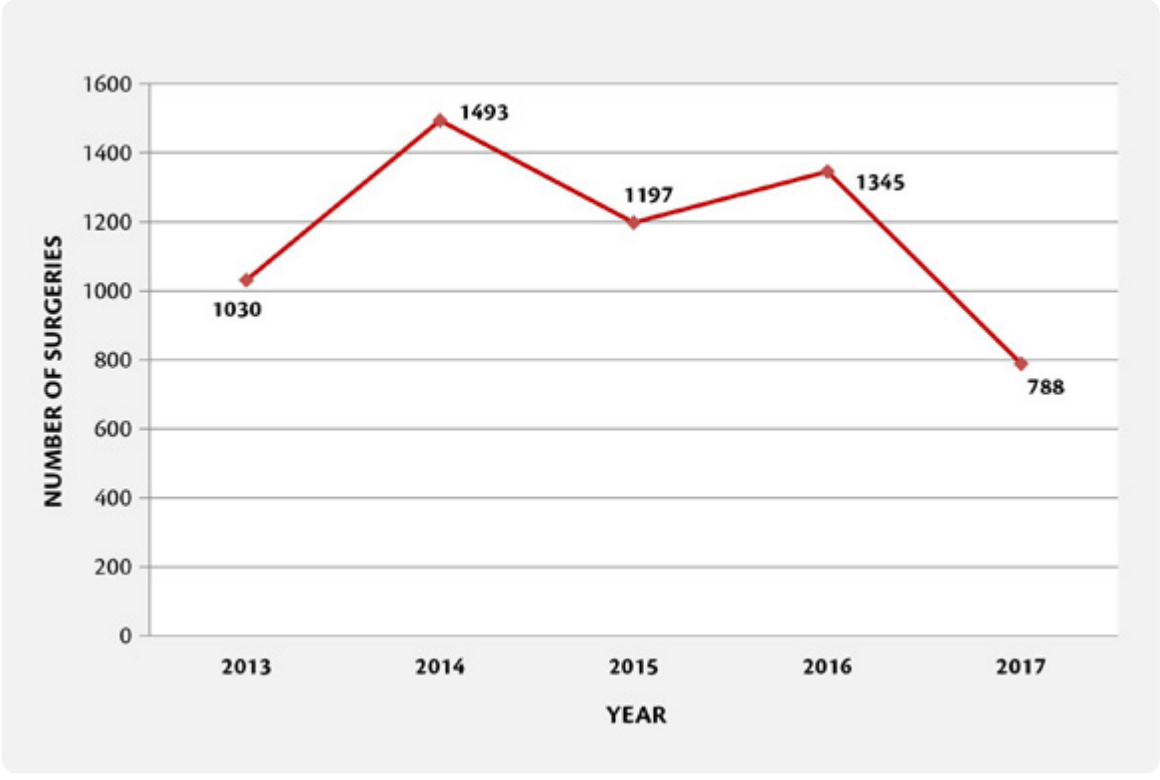
TABLE 24: TOP TEN CAUSES OF ADMISSION, ORAL HEALTH DIRECTORATE, 2017

NO	DISEASE CATEGORY	NUMBER OF CASES	PROPORTION OF TOTAL NUMBER ADMISSIONS (%)
1	Cleft palate	37	7.58
2	Cleft lip	36	7.38
3	Cellulitis and abscess of mouth	35	7.17
4	Ameloblastoma	28	5.73
5	Fracture of skull and facial bones, part unspecified	25	5.12
6	Parotid/parathyroid tumour	17	3.48
7	Cellulitus of the face	11	2.25
8	Fracture of molar and maxillary bones	10	2.04
8	Cleft lip with palate	10	2.04
8	Maxillary tumour	10	2.04

TREND IN SURGICAL OPERATIONS

The Directorate performed a total of 788 surgeries for the year under review. This represents 43.78% of the expected output (1,800) and a decline of 41.41% when compared to 2016. The surgical procedures comprised of 467 OPD surgical procedures and 321 theatre cases. Figure 47 shows the five-year trend in surgical operations from 2013 to 2017.

FIGURE 47: TREND IN SURGICAL OPERATIONS, ORAL HEALTH DIRECTORATE (2013-2017)



PRIORITY ACTIVITY 5: CONDUCT OPERATIONAL RESEARCH INTO EMERGING DISEASES

The Directorate carried out four research activities. This included Human Bite: A six-year review of oro-facial human bites at the Komfo Anokye Teaching Hospital; Medical conditions reported in the Dental Clinic and Incidental detection of a unilateral invested and impacted mandibular third molar; unusual case report with review of the literature. A study on 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 is on-going.

PRIORITY ACTIVITY 13: SUPPORT TRAINING OF STAFF

The Directorate achieved the following with respect to staff capacity building in 2017.

- Continuous Professional Development programme on basic dentistry was organised for some nurses
- Five medical officers passed their primaries and have started the membership program
- Three residents passed their membership (1 KATH staff)

PRIORITY ACTIVITY 7: SUPPORT DISTRICT AND REGIONAL HOSPITALS IN THE NORTHERN SECTOR OF PROVIDING OUTREACH SERVICES

The Directorate undertook a number of outreach programmes in the year 2017. In all, a total of 2704 pupils were screened, representing 55.56 % of the expected output of 4000.

DIRECTORATE OF ANAESTHESIA AND INTENSIVE CARE

14

The Anaesthesia and Intensive Care Directorate is in charge of the delivery of anaesthetic services for surgical patients.

The services of the Directorate include pre-operative, intra-operative and post-operative care. The Directorate is 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 handled by the directorate.

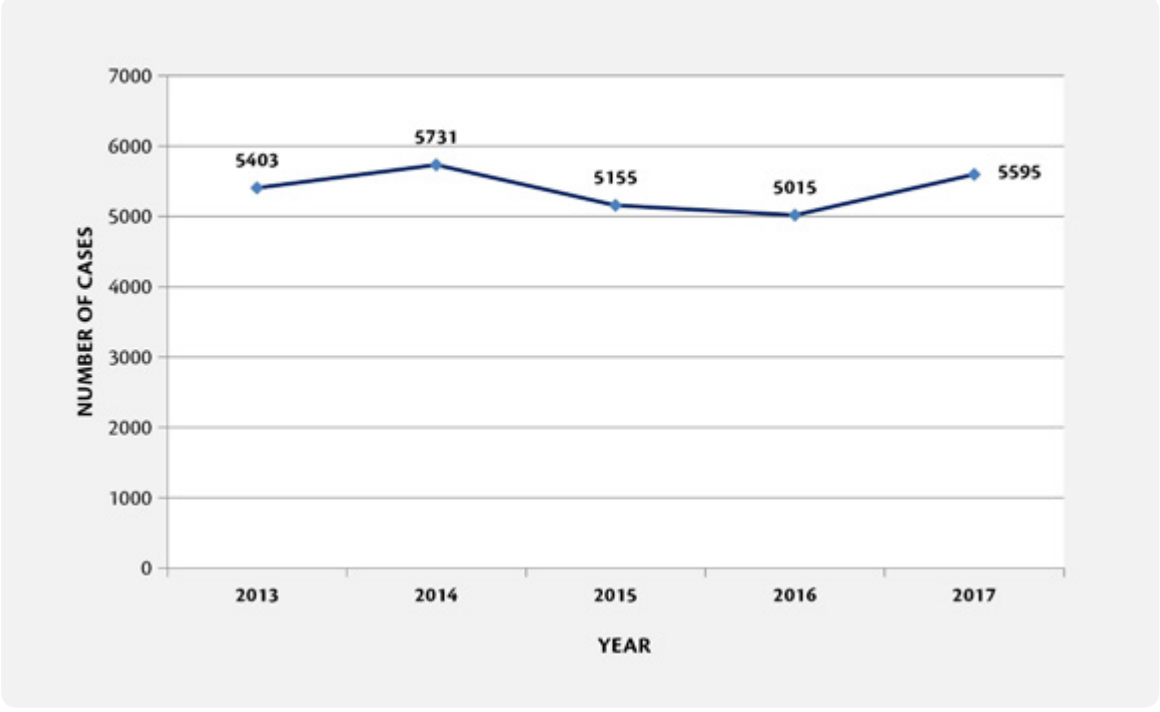
PRIORITY ACTIVITY 1: INCREASE THE RANGE OF SPECIALIST SERVICES

Pre-Operative Clinic

The directorate in 2017 was expected to have at least 95% of all elective surgical cases assessed. However, a total of 5,595 patients that booked for elective surgery were assessed at the pre-operative clinic representing 92.0% of the expected cases. Thus, the number of patients recorded in 2017 was 580 more than that of 2016.

Over the five-year period the trend for pre-operative assessment has been inconsistent as indicated in Figure 48.

FIGURE 48: TREND IN PRE-OPERATIVE CASES IN ANAESTHESIA DIRECTORATE (2013-2017)



Intensive Care and Theatre Recovery Services

Both the intensive care and theatre recovery services in the Hospital are rendered by the Anaesthesia and Intensive Care Directorate. The intensive care unit is a section of the directorate where special medical equipment and services are provided for patients who are seriously ill or injured. Patients who have had surgery or diagnostic procedures requiring anaesthesia or sedation are taken to the recovery wards to safely regain consciousness from anaesthesia and receive appropriate post-operative care.

Critical Care

In 2017, a total of 101 critically ill patients with life-threatening conditions were managed. This represents 44.88% of the target of 225 set for the year. The trend of critical care service in the Hospital has also been inconsistent over the five-year period with the year under review recording the least. (See figure 49).

Administration of Anaesthesia

During 2017, patients were administered with various forms of anaesthesia. A total of 13,097 patients were under local/regional and general anaesthesia or sedation. This denotes 109.2 % of the expected 12,000 patients to be anaesthetized, representing 7.24% more cases compared to 2016. Again, an inconsistent trend is noted with regards to the administration of anaesthesia, as indicated in Figure 50.

FIGURE 49: TREND OF CRITICAL CARE PATIENTS MANAGED IN ANAESTHESIA DIRECTORATE (2013-2017)

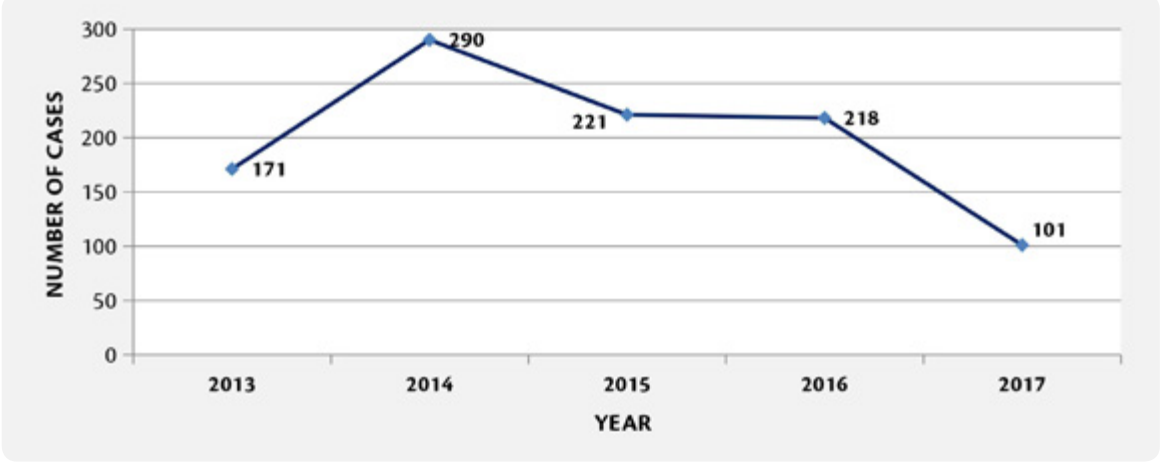
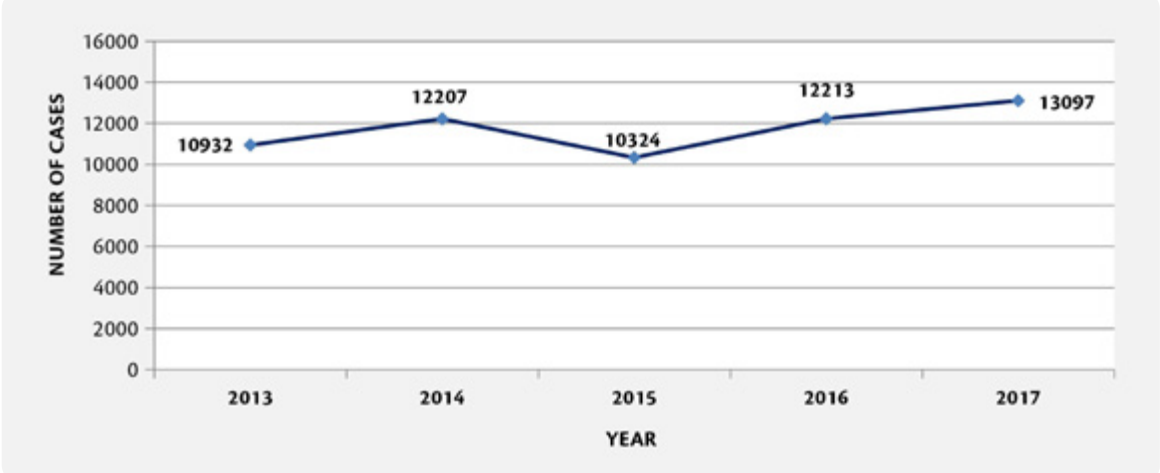


FIGURE 50: TREND IN ANAESTHESIA ADMINISTRATION, DIRECTORATE OF ANAESTHESIA AND INTENSIVE CARE (2013-2017)



POST-OPERATIVE CARE

A total of 10,761 patients received post-operative care during the year 2017 representing 82.78% of the 13,000 projected cases to be managed by the Directorate. This indicates a decrease of 4.23% compared to the previous year performance.

The trend of post-operative care in Figure 51 depicts a decline in patient numbers from 2013 to 2015. There was however an increase in 2016 but a decrease in 2017.

ANAESTHETIC ACTIVITIES BY THEATRES

In 2017, A1 theatre recorded the highest percentage of anaesthetic procedures undertaken in the hospital (30.37%). Special Ward Theatre recorded the least, representing 2.27%. The most common type of anaesthesia administered to patients in the year under review was General Anaesthesia which denoted 46.72% of all anaesthesia administered as indicated in Table 25.

FIGURE 51: TREND IN NUMBER OF POST-OPERATIVE CASES, DIRECTORATE OF ANAESTHESIA AND INTENSIVE CARE (2013-2017)

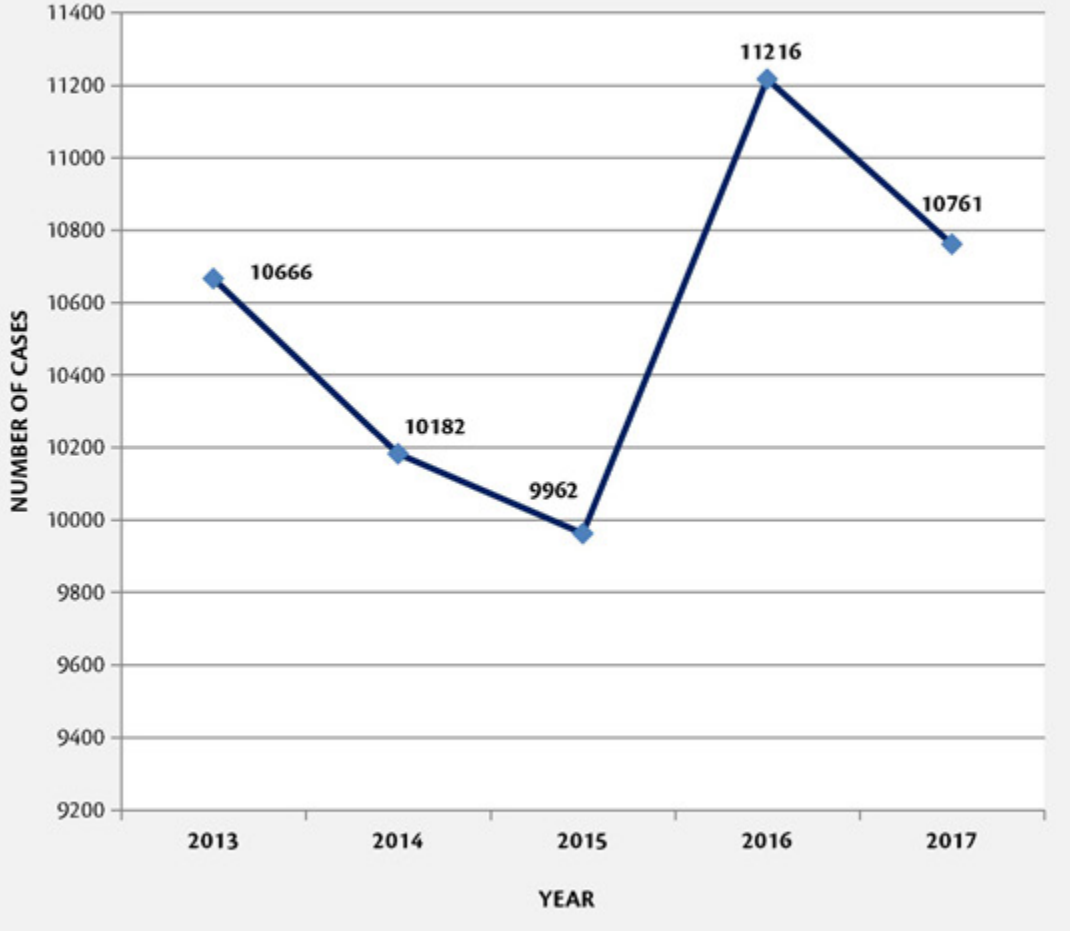


TABLE 25: TYPES OF ANAESTHESIA BY THEATRE. DIRECTORATE OF ANAESTHESIA AND INTENSIVE CARE, 2017

THEATRES	GENERAL ANAESTHESIA	SPINAL ANAESTHESIA	INFILTRATION	REGIONAL BLOCK	LOCAL ANAESTHESIA	TOTAL NO. OF CASES
Poly Theatre	967	0	0	0	0	967
Main Theatre	2,661	734	119	3	0	3,517
A1 Theatre	726	3,248	3	0	0	3,977
A&E Theatre	1,141	999	68	149	0	2,357
Eye Theatre	602	0	0	0	1,380	1,982
O&G Special Theatre	22	275	0	0	0	297
TOTAL	**6,119**	**5,256**	**190**	**152**	**1,380**	**13,097**

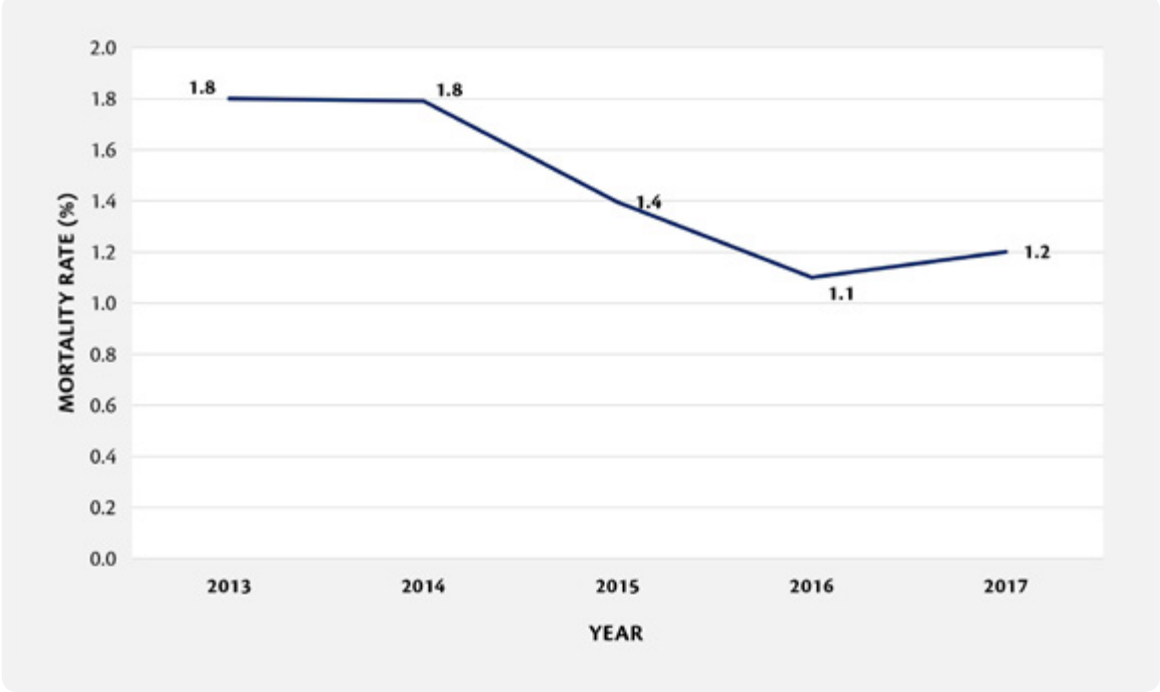
PRIORITY ACTIVITY 2: SUSTAIN ACTIVITIES TO REDUCE MORTALITIES, ESPECIALLY MATERNAL AND NEONATAL DEATHS

The Directorate organized fifty-two (52) 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

The directorate recorded a total of 101 deaths in its two main units; the recovery wards and the Intensive care units in the year under review. The directorate, with the exception of 2017 recorded a consistent decline in mortality rate as indicated in Figure 52 below

FIGURE 52: TREND IN MORTALITY RATE, DIRECTORATE OF ANAESTHESIA AND INTENSIVE CARE (2013-2017)



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 employed Nurses
- Refresher course was organized for Recovery Ward Nurses
- The hospital has been maintained as a centre for training of Doctors in ultrasound guided nerve block by the Federation of Societies of Anaesthesiologist.
- Three (3) Staff were sponsored for a Degree Program in Critical Care Nursing at Korle-Bu Teaching Hospital.

PRIORITY ACTIVITY 14: CONDUCT OPERATIONAL RESEARCH

The directorate conducted two (2) researches:

- Anaesthesia Capacity in Ghana: A teaching hospital's resources and the national workforce and education
- The incidence of ARDS in intubated patients at KATH.

15 DIRECTORATE OF OBSTETRICS & GYNAECOLOGY

The Directorate of Obstetrics and Gynaecology was established to provide high quality maternal health care in a user-friendly environment while conducting teaching, training and research.

The directorate runs Out-patient sections in Family Planning, Obstetrics and Gynaecology services and neonatal sickle cell screening. There are four labour wards in the directorate;

- A1 general labour ward
- A&E Special Ward
- A5 staff delivery
- High Dependency Unit

The directorate also has four operating theatres for emergency and elective surgeries; A1 Theatre and A&E special ward theatres are dedicated for mainly emergency surgeries. The rest are for elective and minor surgeries. Again, the directorate provides ultrasound scans, foetal assessments, and antenatal, postnatal, sexual and reproductive health counselling as well as pharmacy services.

PRIORITY ACTIVITY 1: INCREASE THE RANGE OF SPECIALIST SERVICES

Ultrasound Services

In the year under review, the ultrasound centre of the directorate recorded 5,680 cases as against 3,692 in the year 2016. The centre has the capacity to scale up services to generate more revenue if it is provided with all the necessary support. This assertion is true to the extent that cases and respective revenues have been increasing over the years due to the initiatives introduced by the directorate.

Cervical Screening, Laparoscopy and Colposcopy Services

During the period under review, sixty-four (64) patients received laparotomy procedures. Four hundred and four (404) patients went through cervical screening tests. Out of that number twenty-eight were given colposcopy procedures.

Foetal Assessment Centre

The centre was able to monitor One thousand, one hundred and sixteen (1116) foetuses in 2017. This service provided to clients enhanced mothers and foetus management. The Directorate Management Team has Plans of scaling up this service to improve client care and revenue generation in the ensuing year.

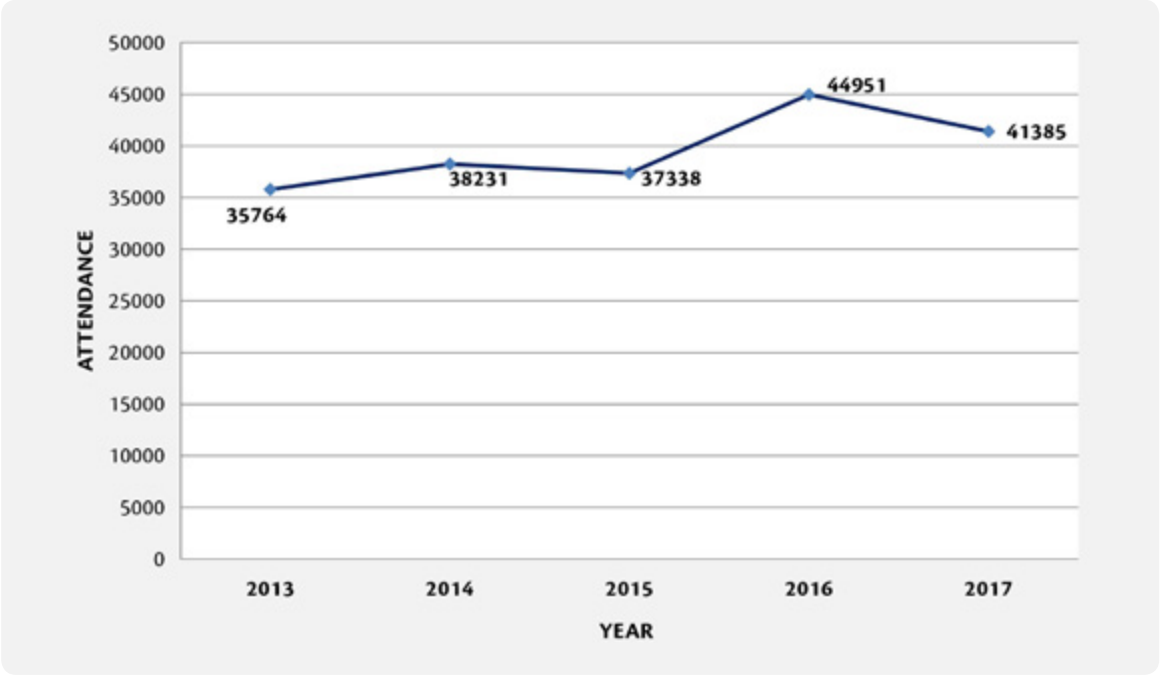
Out-Patient (OPD) Services

The OPD clinics of the directorate (Consulting room 8 and Family Planning) recorded a total of 41, 385 in 2017. This represents 11.3% over the projected target for the year under review.

TREND ANALYSIS OF OPD UTILIZATION

The OPD attendance showed an inconsistent pattern from 2013 to 2017 (See Figure 53).

FIGURE 53: TREND IN OPD SERVICES IN OBSTETRICS & GYNAECOLOGY DIRECTORATE (2013-2017)



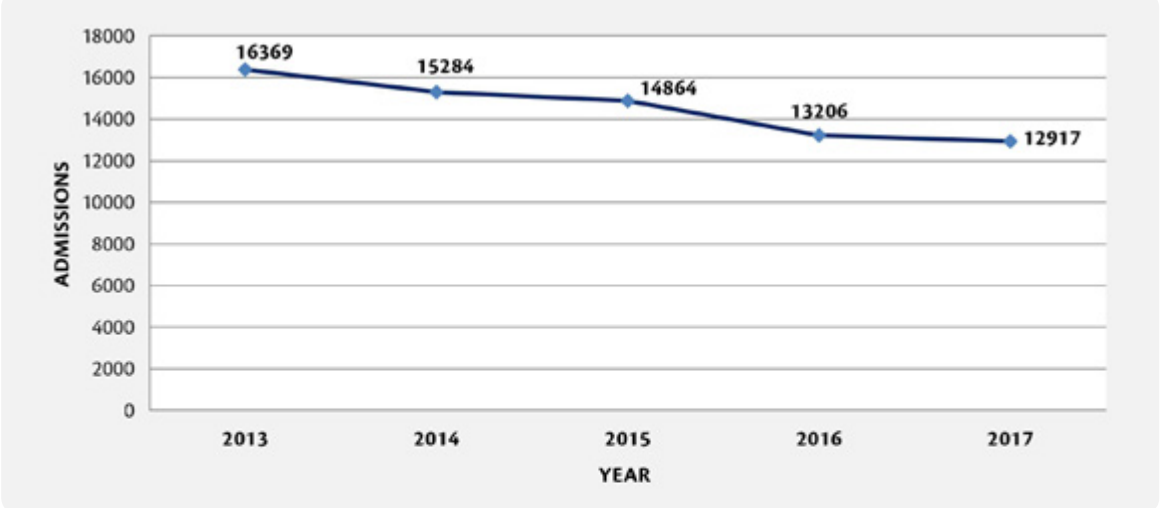
IN-PATIENT SERVICES

In 2017, the directorate admitted 12,917 patients, representing 92.3% of the projected target for the year. The bed complement for the directorate was 157. The directorate has a total of six (6) wards, out of which four (4) are labour wards. The average turnover per bed was 81 patients, compared to 84 for the previous year. The directorate also witnessed a turn over interval of less done a day in the same period. The average daily bed occupancy was 138 compared to 135 in the previous year.

Trend Analysis of In-patient services

The directorate recorded a consistent fall in the number its admissions since 2013. Figure 54 gives details in the trend of admissions in Obstetrics & Gynaecology Directorate (2013-2017)

FIGURE 54: TREND OF ADMISSIONS IN OBSTETRICS & GYNAECOLOGY DIRECTORATE (2013-2017)



OBSTETRICS SERVICES

In the year under review, a total of 8,438 deliveries were recorded in the directorate. Table 26 presents the details of obstetrics services from 2013 to 2017.

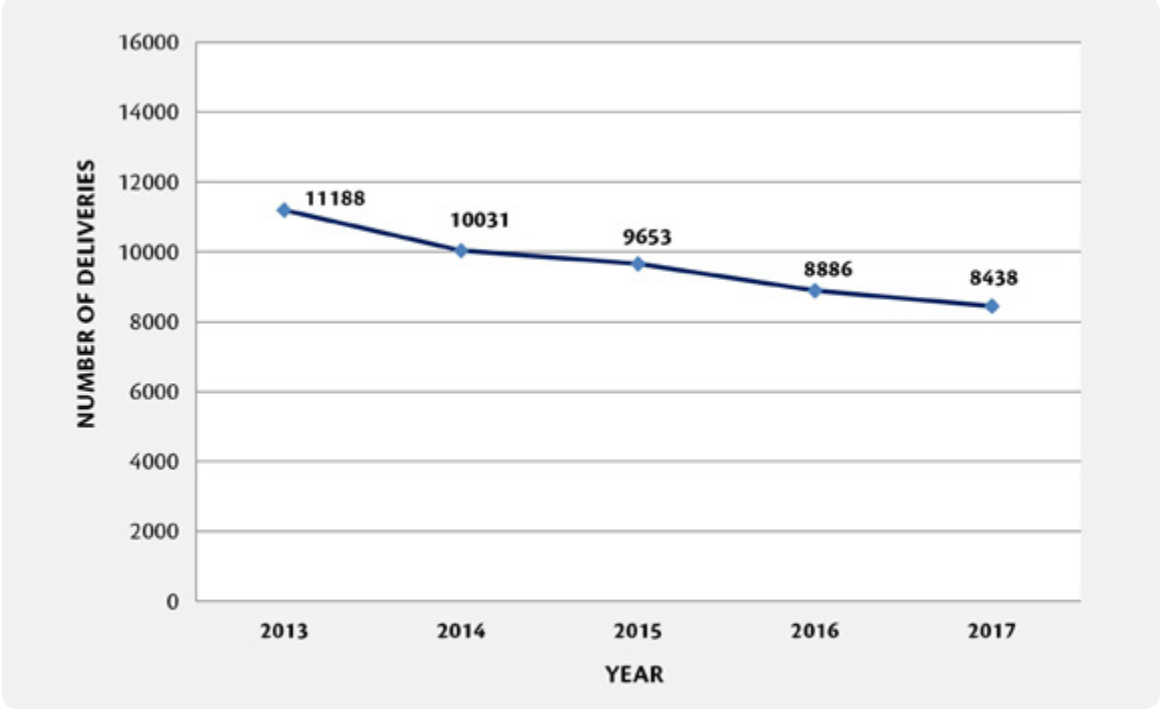
DELIVERIES

In 2017, a total of 8,438 deliveries, representing 87.90% of the projected target for the year was achieved. Over the past five years, the pattern in deliveries has seen a consistent fall. In the year under review, 5.04% fewer deliveries were recorded in the directorate compared to the previous year.

TABLE 26: TREND IN OBSTETRIC SERVICES IN OBSTETRICS & GYNAECOLOGY DIRECTORATE, 2013-2017

INDICATOR	2013	2014	2015	2016	2017
Total deliveries	11,188	10,031	9,653	9,653	8438
Male	5,643	4,869	5,042	5,042	4411
Female	5,962	4,707	4,993	4,993	4442
Still Births	460	408	384	384	403
Live Births	11,145	9,168	9,651	9,651	8450
Weights Over 2.5kg	7,324	6,525	6,571	6,571	5343
Weights Below 2.5kg	4,281	3,051	3,464	3,464	3510
Abortions (EOU)	920	641	-	483	276
Caesarean Section	3,652	3456	3357	3,357	3256
Caesarean Section Rate	32.64%	34.45%	34.78%	34.78%	38.59%

FIGURE 55: TREND IN DELIVERIES IN OBSTETRICS & GYNAECOLOGY DIRECTORATE (2013-2017)



SURGICAL OPERATIONS

In 2017, a total of 5,879 surgical cases were conducted. This represents 88.81% of the projected target for the year. Again, the 2017 surgical performance was 5.59% lower than the 2016 performance for the directorate. Major and minor surgeries performed in the year was 3,997 (67.98%) and 1,882 (32.01) respectively.

TREND IN THEATRE UTILIZATION

The directorate recorded a continuous decline in minor surgeries over the five year period. There has been a general decline in the number of major surgeries since 2013 except for 2016. See Figure 57.

FIGURE 56: DISTRIBUTION OF SURGICAL OPERATIONS IN OBSTETRICS & GYNAECOLOGY DIRECTORATES, 2017

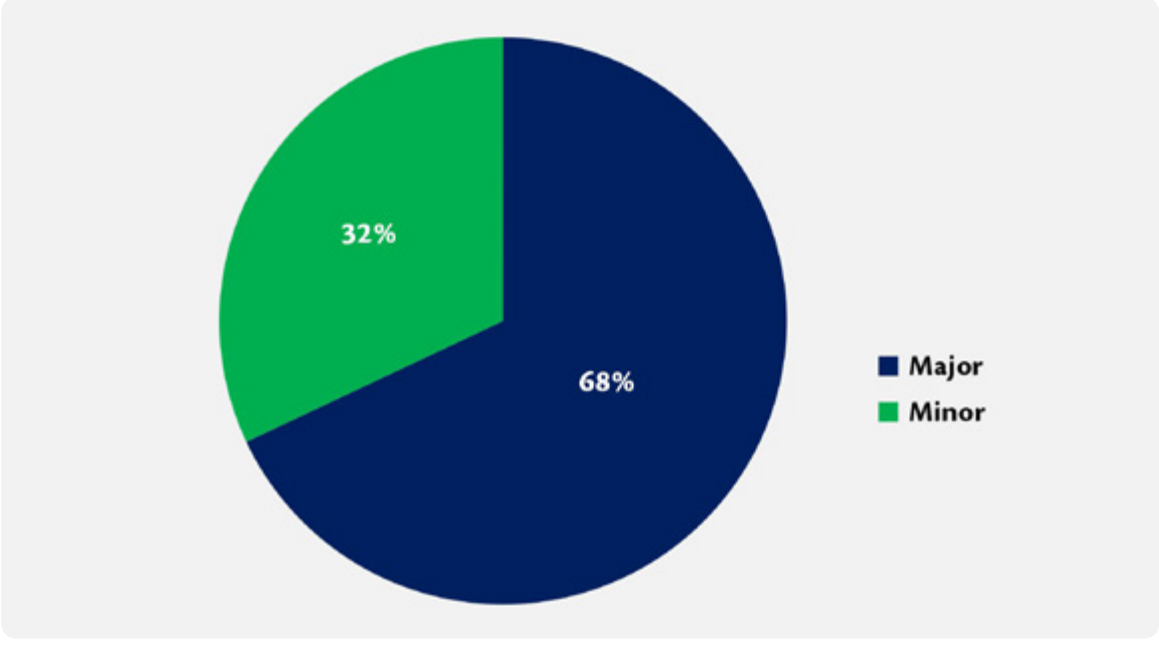
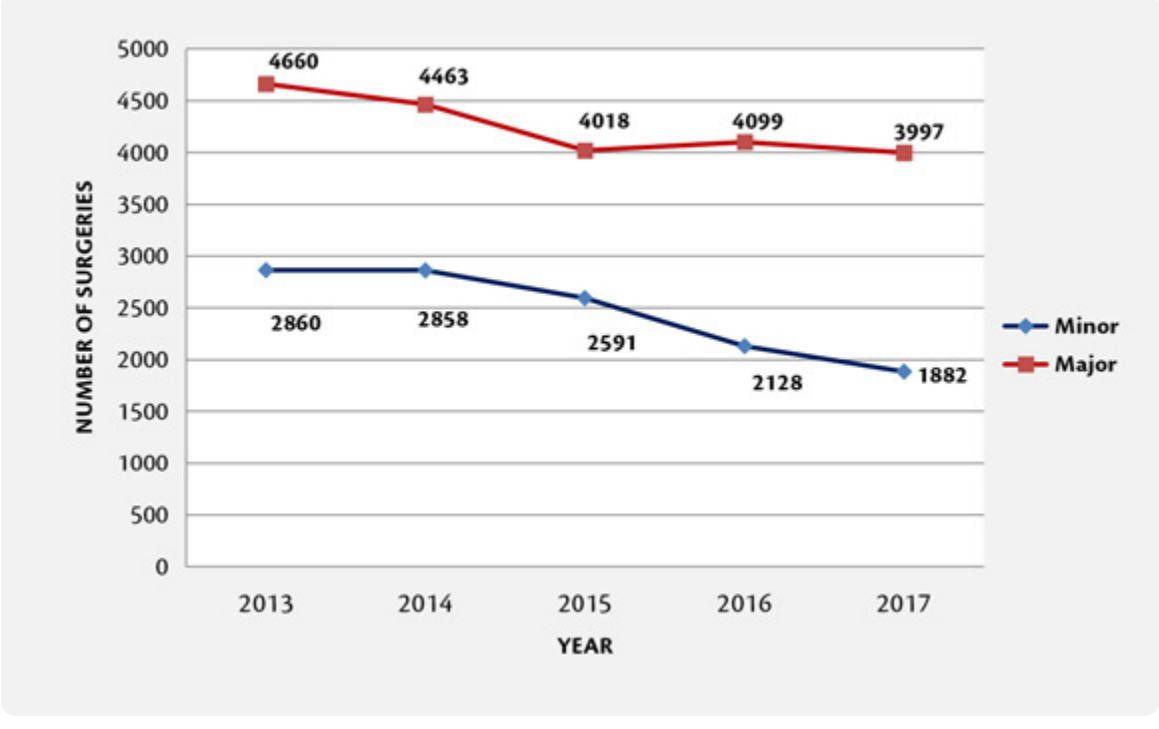


FIGURE 57: TREND IN SURGERIES IN OBSTETRICS & GYNAECOLOGY DIRECTORATE (2013-2017)



FAMILY PLANNING

In 2017, the Family Planning Unit recorded a total of 8712 clients. . This indicates a sharp rise from the previous year (see Figure 58).

FAMILY PLANNING METHOD UTILIZATION

In the year under review, Depo Provera method recorded the highest utilization compared to the other family planning methods (see Figure 59).

FIGURE 58: FAMILY PLANNING ATTENDANCE, 2013-2017

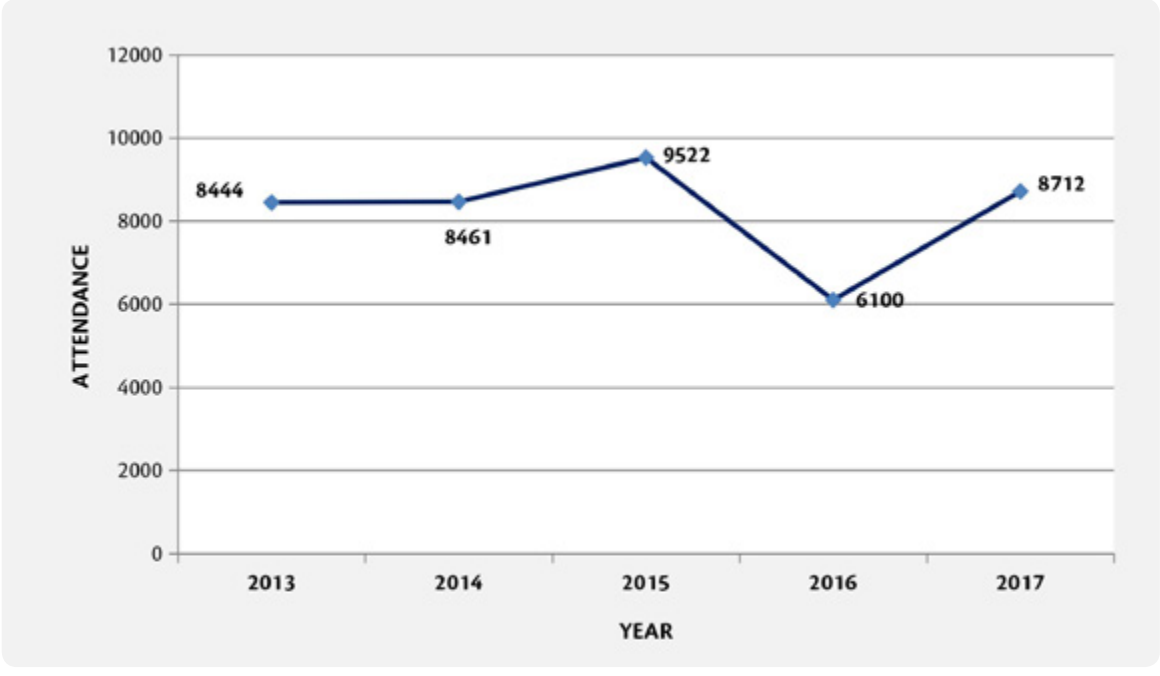
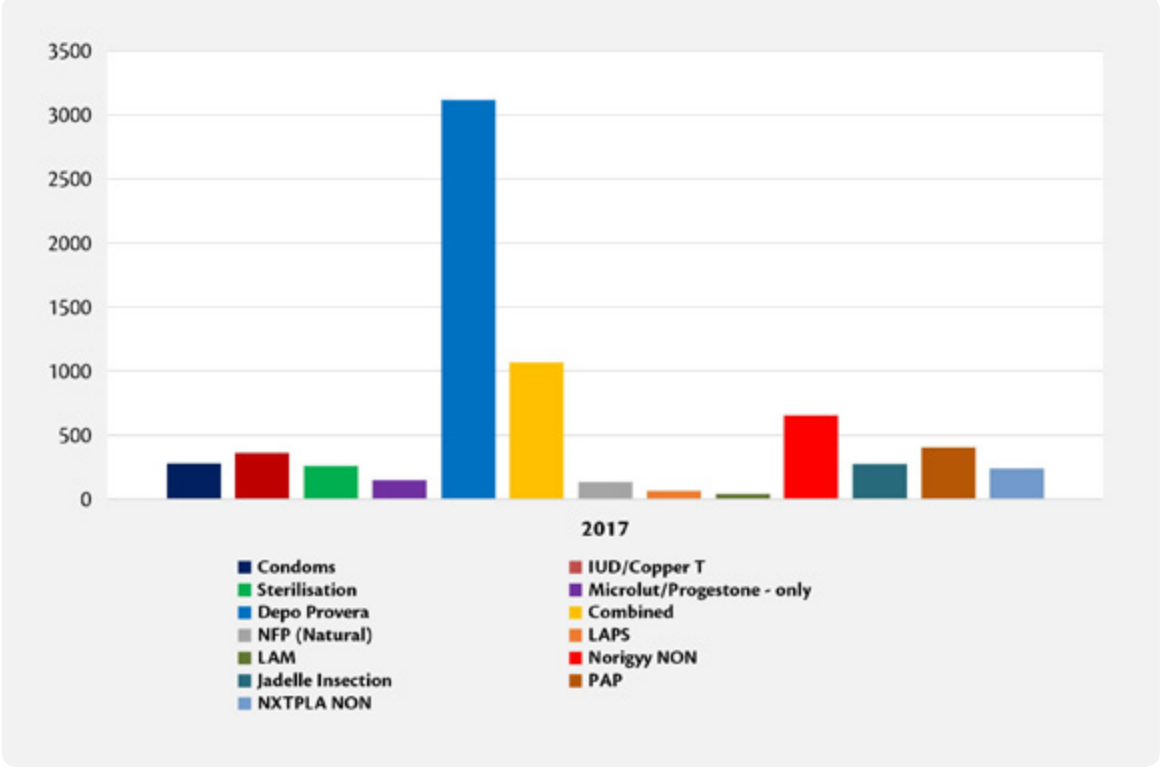


FIGURE 59: FAMILY PLANNING METHODS UTILIZATION, 2017



PRIORITY ACTIVITY 2: SUSTAIN ACTIVITIES TO REDUCE MORTALITIES, ESPECIALLY MATERNAL AND NEONATAL DEATHS

In 2017, twelve (12) monthly maternal mortality meetings were conducted and all the deaths that occurred within the period were audited.

Trend Analysis of Mortalities

The trend in mortality has seen a decline in the directorate since 2013 except for 2015 and 2017. See Figure 60

Trend in Maternal Death Rate

Maternal mortality rate has seen a constant decline since 2013 except for the year under review. It rose from 1021 per 100,000 live births in 2016 to 1027 per 100,000 live births in 2017.

FIGURE 60: TREND IN MORTALITY IN OBSTETRICS & GYNAECOLOGY DIRECTORATE (2013-2017)

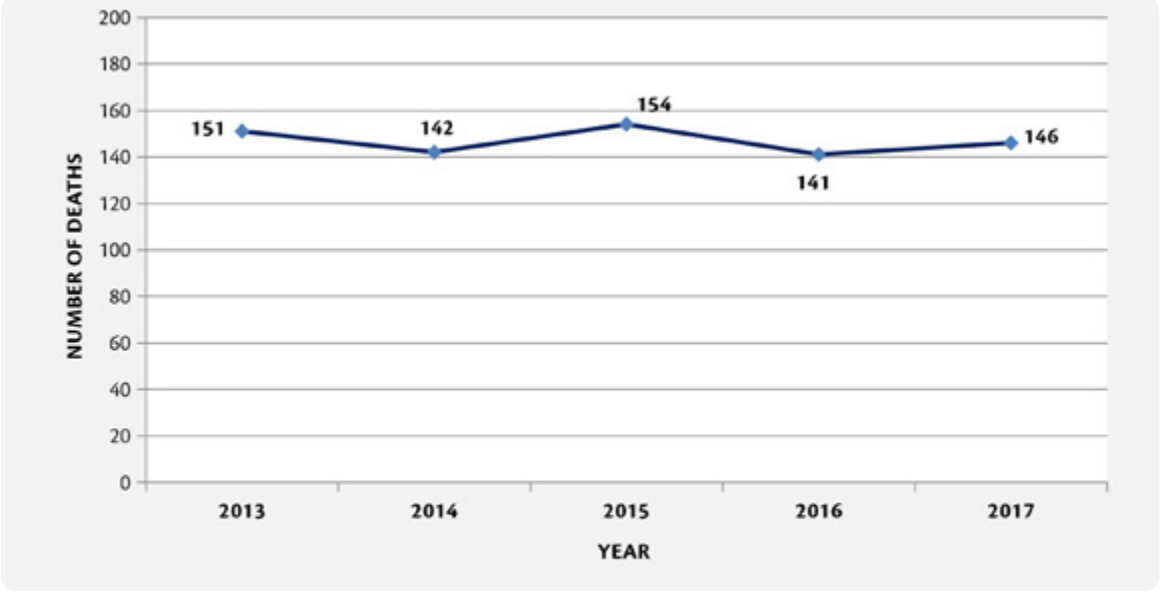
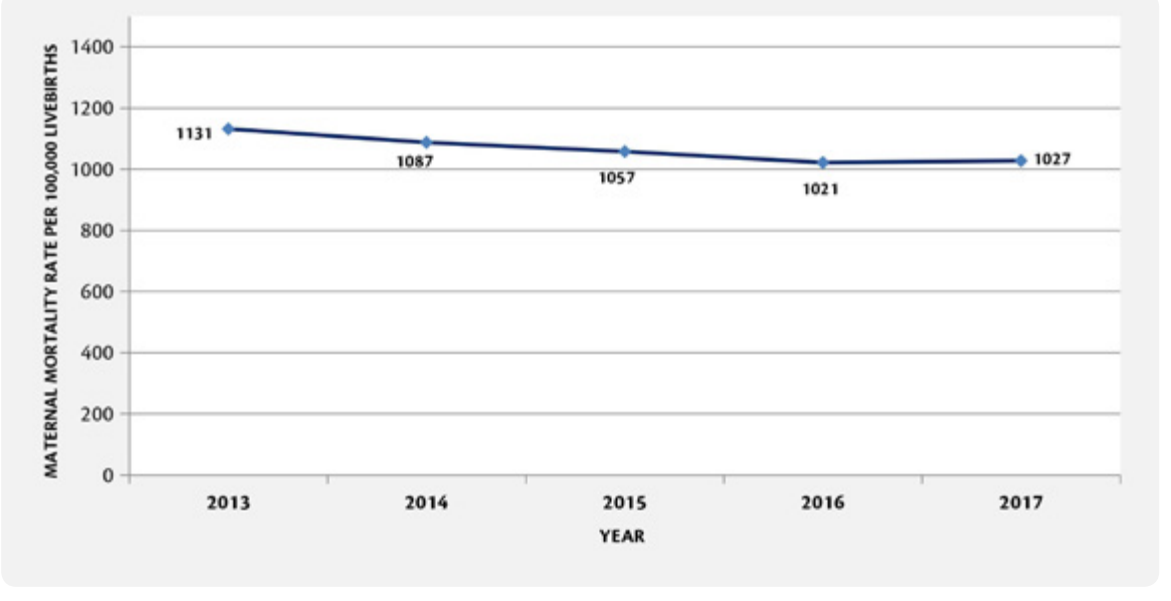


FIGURE 61: TREND IN MATERNAL MORTALITY RATE (2013-2017)



TOP TEN CAUSES OF MATERNAL DEATHS

In 2017 Hypertension-Related disease (Eclampsia/pre-Eclampsia) and Haemorrhage were the two leading causes of maternal deaths, contributing 56.86% of all maternal deaths in the directorate.

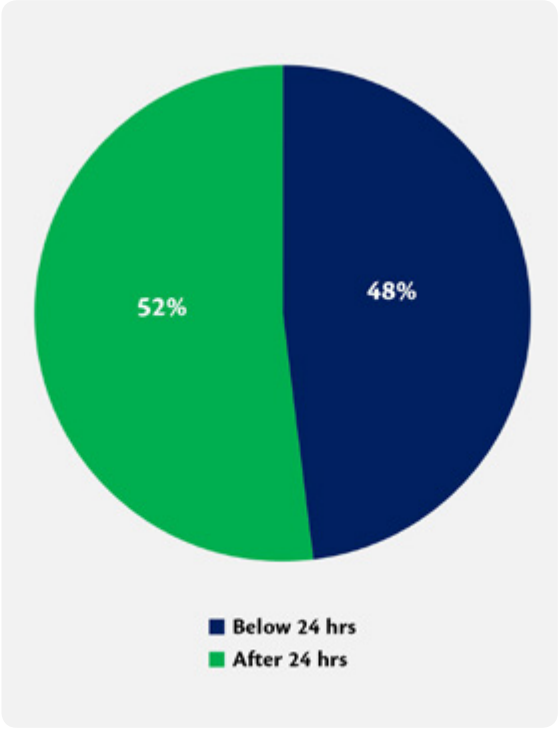
TABLE 27: TOP TEN CAUSES OF MATERNAL DEATHS IN OBSTETRICS & GYNAECOLOGY, 2017

DISEASE CATEGORY	NUMBER OF DEATHS	PROPORTION OF TOTAL NUMBER OF DEATHS
HPT-Related disease (Eclampsia/Pre-Eclampsia)	38	26.00
Haemorrhage	15	10.27
SCD related	10	6.85
Sepsis	8	5.48
Pulmonary Embolism	4	2.74
Acute renal failure	3	2.05
Severe Anaemia	3	2.05
HIV-Related	2	1.37
Abortion-related	2	1.37
DIC	2	1.37
Other death	44	30.14

MATERNAL DEATHS BY TIME

A total of 49 maternal deaths occurred within 24 hours, accounting for 48.04% of all maternal mortalities in the directorate. The remainder of the deaths occurred after 24 hours (Figure 62).

FIGURE 62: DISTRIBUTION OF MATERNAL DEATHS BY TIME PERIOD IN O & G DIRECTORATE (2017)



PRIORITY ACTIVITY 13: SUPPORT TRAINING OF STAFF

The directorate made conscious efforts to improve the quality of clinical care services in the year under review. In line with achieving this, the directorate embarked on various training courses.

Three (3) doctors and four (4) nurses enrolled for fellowship programmes at the Ghana College of Physicians and Surgeons and Ghana College of Nurses and Midwives respectively. Thirteen (13) doctors passed out. In the same period, 23 midwives and nurses received support to pursue degree in Midwifery.
The Family Planning Unit of the directorate conducted family planning update course for 273 nurses and midwives. It also organized training on BTL and IUD for midwives and nurses during the same period.

ONCOLOGY DIRECTORATE

16

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
- Heamatology
- Hepatitis

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

The Directorate provides the following treatments to patients namely Chemotherapy, Brachytherapy and Radiotherapy.

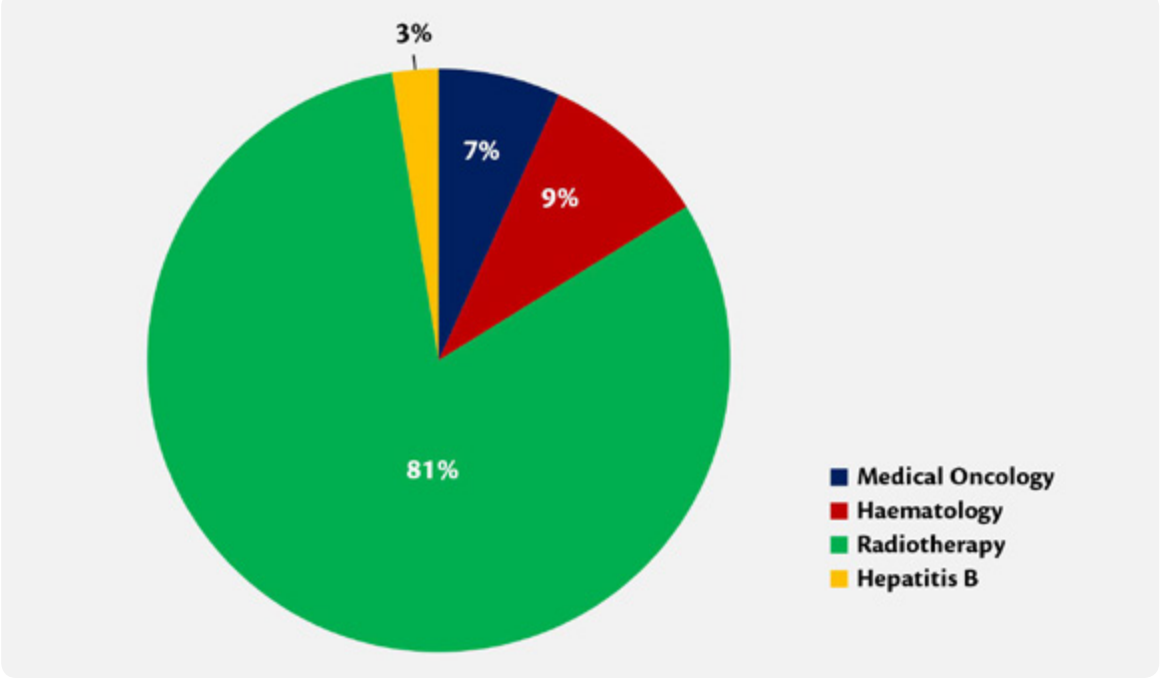
The staff strength of the Directorate increased from fifty-six (56) in 2016 to sixty-two (62) in 2017.

PRIORITY ACTIVITY 1: INCREASE THE RANGE OF SPECIALIST SERVICES

Out -Patient Services

In 2017, a total of 10,726 outpatients were seen. This depicts 34 % more cases compared to 2016 OPD attendance, Radiotherapy constituted 81% of the total out-patients in the year 2017. A total of 577 patients were seen at Multidisciplinary clinic.

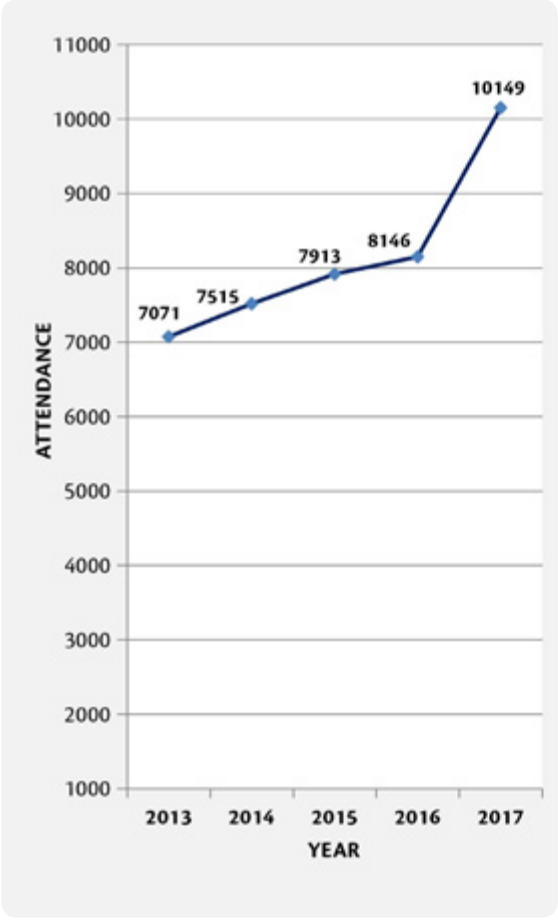
FIGURE 63: OPD SERVICES UTILIZATION IN ONCOLOGY DIRECTORATE (2017)



TREND IN OPD UTILIZATION 2013 – 2017

OPD attendance for the directorate has gradually risen since 2013 (Figure 64)

FIGURE 64: TREND IN OPD ATTENDANCE IN ONCOLOGY DIRECTORATE (2013- 2017)



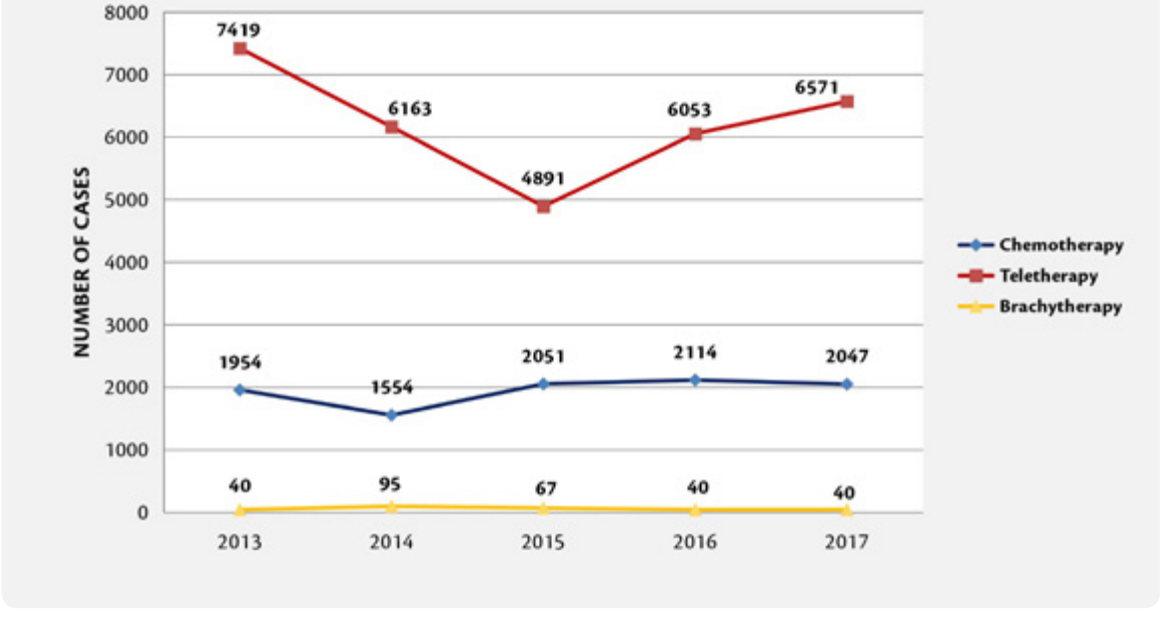
COMPARATIVE ANALYSIS OF TREATMENT OPTIONS FOR CANCER CONDITIONS

The Directorate offered the following treatment options over the period:

- Teletherapy sessions
- Chemotherapy sessions
- Brachytherapy sessions

In the period under review, the Directorate provided 8,658 treatment sessions to patients. Teletherapy accounted for 75.90% of all the treatment sessions given by the Directorate. The trend for this treatment shows a decline since 2013 and a subsequent rise in 2016. With the exception of 2014 and 2017, the number of chemotherapy sessions has shown a consistent rise over the period. Brachytherapy accounted for 0.46% of the treatment sessions in the year 2017. Over all, in 2017, a total of 451 more treatment sessions were conducted as compared to the previous year.

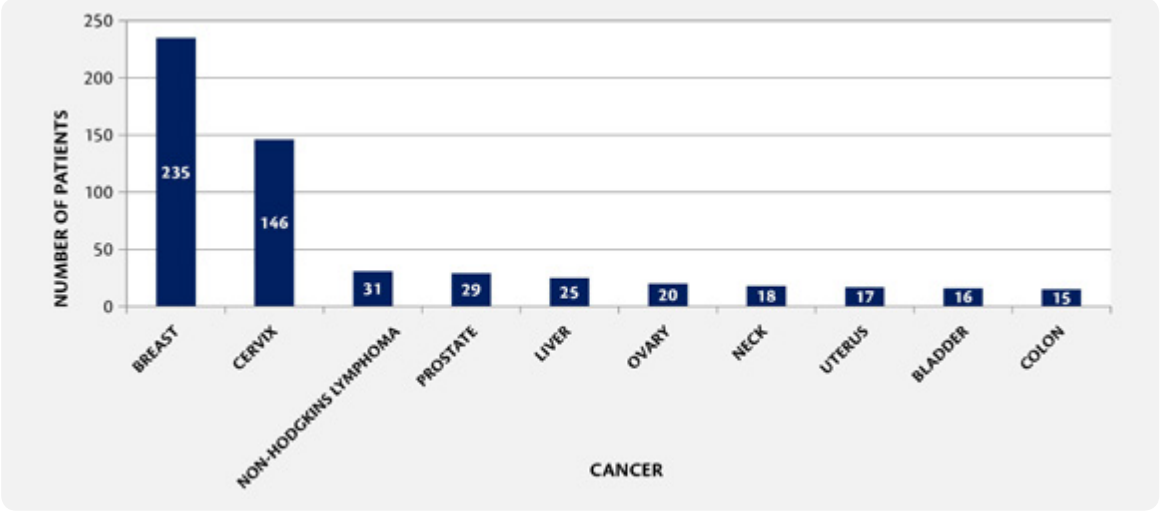
FIGURE 65: COMPARATIVE ANALYSIS OF TREATMENT GIVEN IN ONCOLOGY DIRECTORATE (2013-2017)



TOP TEN (10) CANCER CASES BY SITE, 2017

Breast cancers constituted 42.57% of top 10 cancers recorded in the hospital for 2017. Figure 66 give details of the composition of all top ten cancer cases by site recorded in the Directorate.

FIGURE 66: TOP TEN CANCERS TREATED, DIRECTORATE OF ONCOLOGY (2016)



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 28 gives details of the Directorate's outreach activities.

TABLE 28: OUTREACH ACTIVITIES, ONCOLOGY 2017

PLACE /ACTIVITY	NUMBER SCREENED	PROPORTION OF TOTAL NUMBER OF DEATHS
Patasi Methodist Church (Breast cancer screening)	87 screened, 3 referred	26.00
Kumasi Senior Technical School (cervical cancer screening)	All female students screened	10.27
Patasi SDA church	149 screened	6.85
Suntreso SDA church	95 screened	5.48
DIC	2	1.37
Other death	44	30.14

PRIORITY ACTIVITY 13: SUPPORT TRAINING OF STAFF

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 Haematopoiesis (Leukemias)
- Lymphomas
- Treatment planning before radiotherapy
- Oncology Emergencies

For Residency programmmes, three nurses enrolled at Ghana College of Nurses and Midwives and five doctors at the Ghana College of Physicians and Surgeons.

17 FAMILY MEDICINE DIRECTORATE

The Directorate provides a 24-hour specialized and general primary care services. It also offers specialized physical therapeutic care for outpatients and inpatients to promote and restore health.

Services such as Palliative Care, Medical Examination, In-patient, 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 directorate has staff strength of 193 in the year under review.

PRIORITY ACTIVITY 1: INCREASE THE RANGE OF SPECIALIST SERVICES

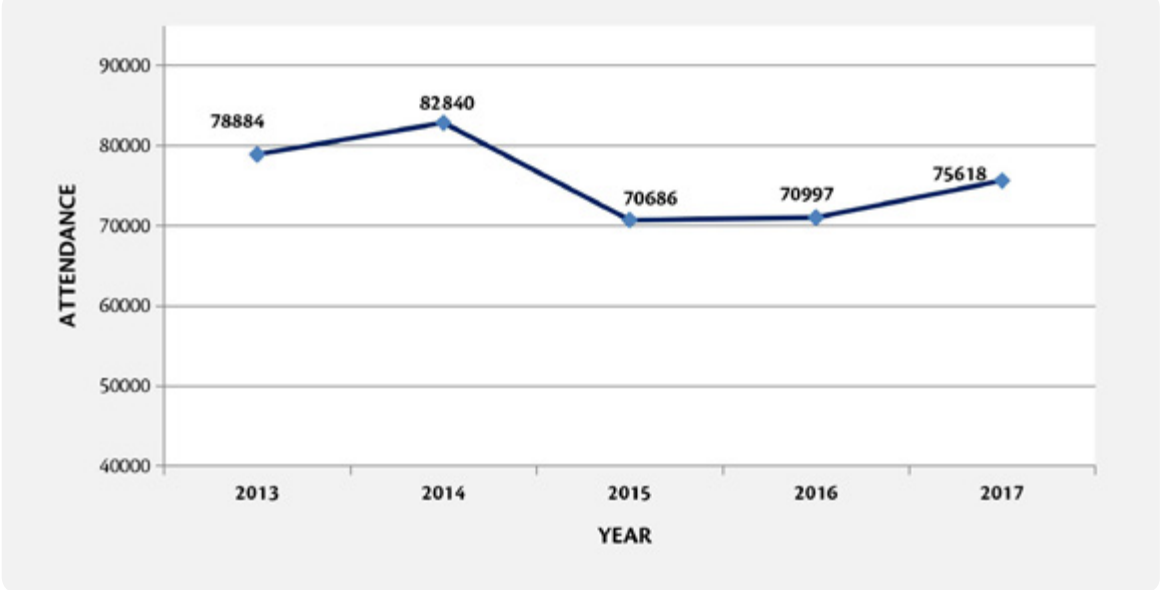
Out-Patient Services (Primary and Specialist Care)

In the year under review, a total of 75, 618 OPD attendance was registered in the Directorate. This comprises of 68, 234 primary care cases and 7,384 specialist consultations (chronic care clinic). This represents 99% and 87% of the expected output for the Directorate respectively for primary and specialist care consultations respectively.

TREND ANALYSIS IN OPD SERVICES (PRIMARY AND SPECIALIST CARE)

The trend in OPD attendance over the last five-year period (2013-2017) has generally been inconsistent. There was an increase in OPD attendance for the year under review by 6.51% as compared to 2016 (see Figure 67).

FIGURE 67: TREND IN OPD SERVICES (PRIMARY AND SPECIALIST CARE) IN FAMILY MEDICINE DIRECTORATE (2013-2017)



OTHER SERVICES AT FAMILY MEDICINE DIRECTORATE

In the 2017, the Directorate conducted 346 medical examinations, which represented 73% more than the expected output set for the year. A total of 49 patients were given Palliative Care services in the Directorate for the same period.

The new Rehabilitation clinic saw 139 patients, representing 39% above the target. See Table 29 for details in other services offered by the Directorate in 2017.

TOP TEN CONDITIONS SEEN IN OPD IN FAMILY MEDICINE DIRECTORATE, 2017

Hypertension was the leading cause for OPD attendance in 2017 accounting for 20.02% of total OPD attendance. The remaining nine top causes of OPD attendance in the Directorate contributed 22.0% of total OPD attendance as shown in Table 30.

TABLE 29: SERVICES BY FAMILY MEDICINE DIRECTORATE, 2015-2017

SERVICES	2015 OUTPUT	2016 OUTPUT	2017 TARGET	2017 OUTPUT	% OF TARGET ACHIEVED
Casualty procedures (Suturing/ I&D- Incision and drainage)	135	266	280	51	18%
Wound dressing clinic	13	1460	1000	2,883	288%
Medical Examinations	376	336	200	346	173%
Palliative Care Services	28	155	80	84	105%
Rehabilitation Clinic	-	139	100	189	189%

TABLE 30: TOP TEN CONDITIONS SEEN IN THE OPD- FAMILY MEDICINE DIRECTORATE, 2017

	CONDITIONS	NUMBER OF ATTENDANCE	PROPORTION OF TOTAL OPD ATTENDANCE (%)
1	Hypertension	13,332	17.63
2	Diabetes Mellitus	4370	5.78
3	RTI (Respiratory Tract Infection)	4,035	5.34
4	Malaria	3,839	5.08
5	Lumbar Spondylosis /MSP (Musculoskeletal Pain) / Myalgia/ Osteoarthritis	3,407	4.51
6	GERD (Gastroesophageal Reflux Disease) / Gastritis/ Peptic Ulcer	2,845	3.76
7	Neuropathy	1,644	2.17
8	Gastroenteritis/Diarrhoea	1,611	2.13
9	Normal Pregnancy	1,393	1.84
10	UTI (Urinary Tract Infection)	1,219	1.61
*	Others	37960	50.20
	Total	75618	100.00

TREND IN ADMISSIONS

The Directorate's trend in admission has been inconsistent since 2013. For the year under review, the number of admissions declined by 19.59% when compared to the 2016 performance.

PHYSIOTHERAPY UNIT

The Unit provides care in physical therapeutic care for out-patients and in-patients to promote and restore health. Services offered include: OPD Rehabilitation, Clubfoot, Cardiopulmonary Rehabilitation, OPD Electrotherapy, Cerebral Palsy, Back Care, Child Health and Gym and Hand Therapy. Table 31 gives a summary of the various planned activities, targets and performance of the Unit in 2017.

FIGURE 68: TREND IN ADMISSIONS IN FAMILY MEDICINE DIRECTORATE, 2013-2017

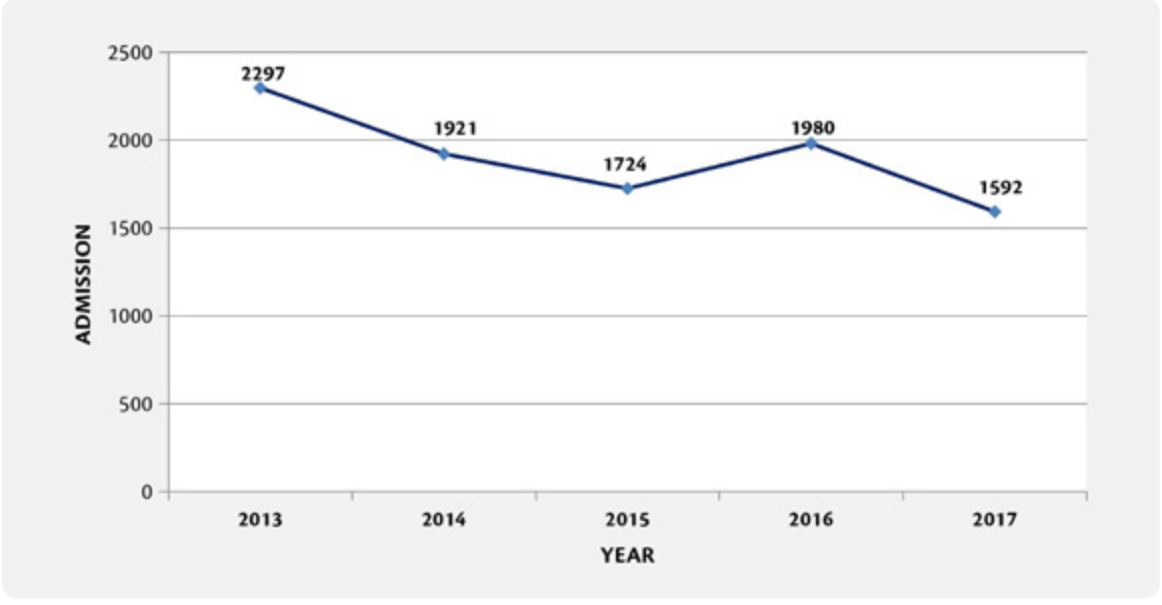


TABLE 31: SUMMARY OF ACTIVITIES OF PHYSIOTHERAPY UNIT, 2017

PLANNED ACTIVITIES	TARGET	PERFORMANCE	% TARGET
Assessment and Rehabilitation of inpatient and OPD cases	1,550 new in-patients	1,328 new in-patients seen	86%
	6500 old in-patients assessed and rehabilitated	4,957 old in-patients assessed and rehabilitated	76%
	2,100 new OPD cases to be seen	2,103 new OPD cases seen	105.15%
	19,000 old OPD cases to be seen	16,001 old OPD cases seen	84%
Provide services for Children with Clubfoot	120 new clubfoot patients to be evaluated and managed.	70 New Clubfoot patients evaluated and managed	53%
	1,400 Clubfoot weekly attendance to be evaluated and managed	898 weekly clubfoot attendance and managed	64%

TREND OF PHYSIOTHERAPY OUTPATIENT SERVICES (2013 AND 2017)

The Unit recorded increases in both new and old OPD cases in 2017. However, the general trend in new and old OPD attendance has been inconsistence over the 5year period. The trend in OPD attendance in new cases has been fairly stable over the same period (see Figure 70).

TREND IN- PATIENT SERVICES AT THE PHYSIOTHERAPY UNIT

The unit recorded 6,285 in-patient visits, comprising 4,957 old and 1,328 new visits. Over the five-year period the trend for new in-patient visits recorded its highest value in 2017. The trend for in-patient visits for continuation cases has seen a decline since 2013 but recorded a rise in 2017, as illustrated in Figure 70.

FIGURE 69: TREND OF OPD SERVICES -PHYSIOTHERAPY UNIT, 2013-2017

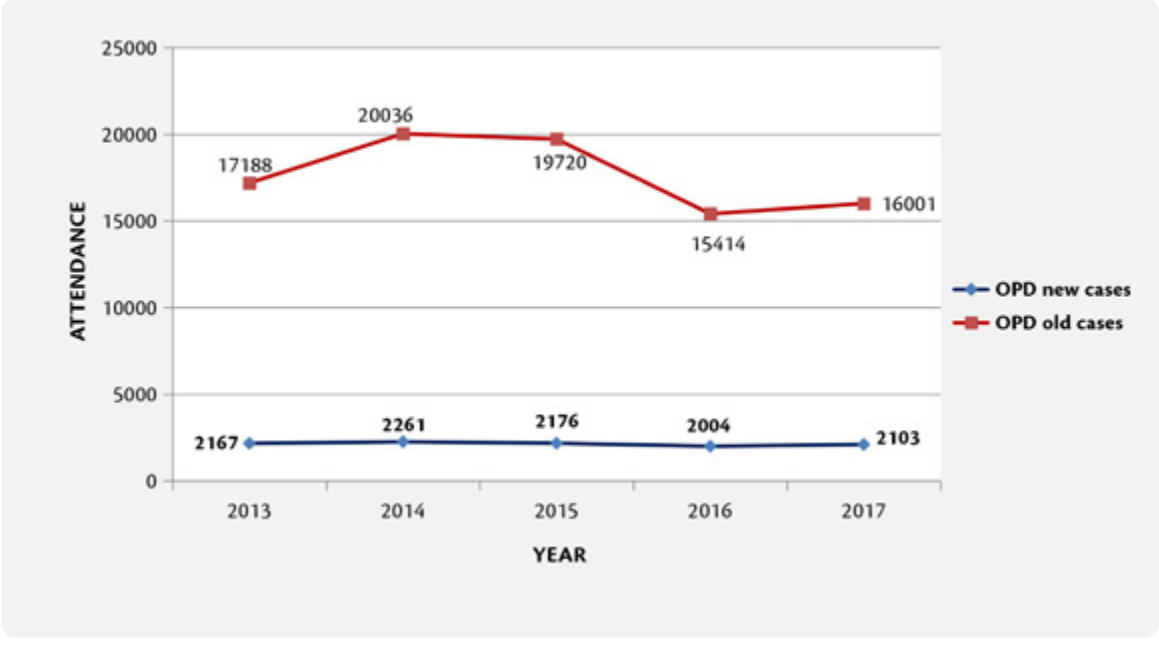
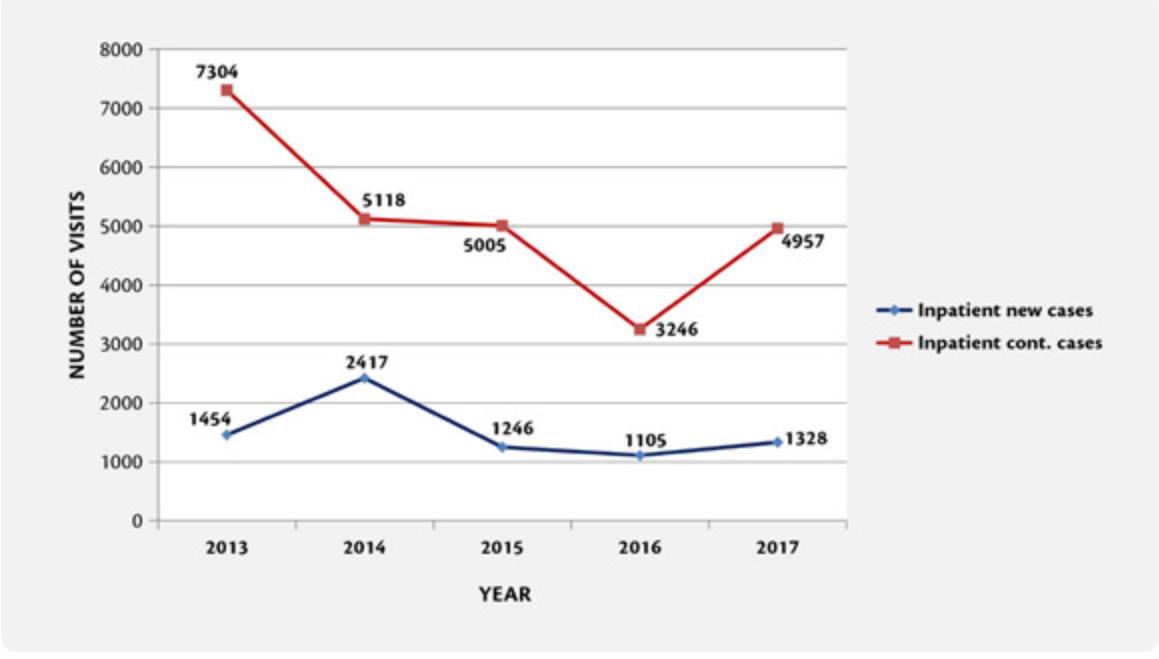


FIGURE 70: COMPARATIVE ANALYSIS OF IN-PATIENT SERVICES (PHYSIOTHERAPY UNIT), 2013-2017



PRIORITY ACTIVITY 5: CONDUCT OPERATIONAL RESEARCH INTO EMERGING DISEASES

The Directorate undertook a study into patient engagement in improving primary care.

PRIORITY ACTIVITY 13: SUPPORT TRAINING OF STAFF

The following were the training programmes and conferences attended during the period under review:

- International Symposium on Human Health and Ageing Sciences, Indonesia.
- Update course on Sports Medicine
- Mandela Washington Fellowship in Public Management
- Observation at Good Shepherd Rehabilitation Hospital.
- Workshop on Road Traffic Injuries

DIAGNOSTICS DIRECTORATE

18

The Diagnostics Directorate is a clinical directorate and comprises the following departments;

- Haematology
- Biochemistry
- Pathology
- Microbiology services (Bacteriology, Parasitology & Serology)
- Radiology

PRIORITY ACTIVITY 4: CONTINUE THE PROVISION OF ADVANCED DIAGNOSTIC SERVICES

In the year 2017, the Directorate planned to further scale up diagnostic services. To achieve this priority, the Directorate undertook the following activities:

I. Procured and installed a dental radiography machine
II. Introduced immunohistochemistry laboratory
III. Established internal and external quality control systems for all laboratories.
IV. Bone marrow examinations started
V. Factor 8 and factor 9 assays started
VI. Comprehensive standard operational procedures for all test at bacteriology department developed.

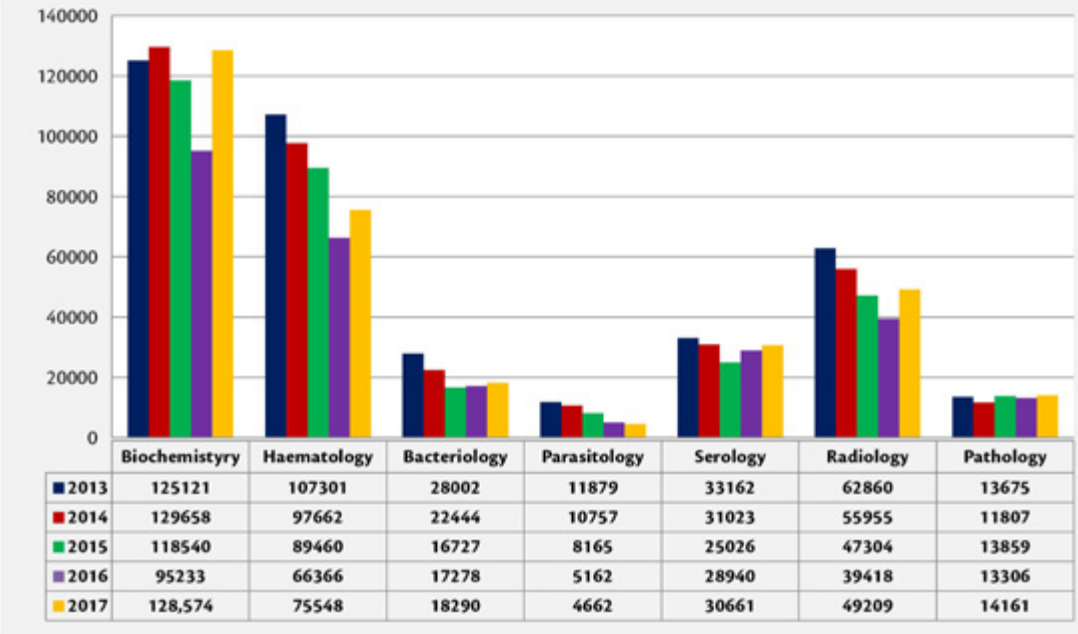
During the year under review, the Directorate carried out 319937 diagnostic services. This represents a 22.46% increase compared to the 2016 performance. The Performance for the year is also a decrease of 1.30% reduction compared to the target of 324,166 set for the year.

There were increases in all the departments in the Directorate with the exception of Parasitology which saw a reduction during the year under review.

TREND ANALYSIS OF VARIOUS DIAGNOSTIC SERVICES

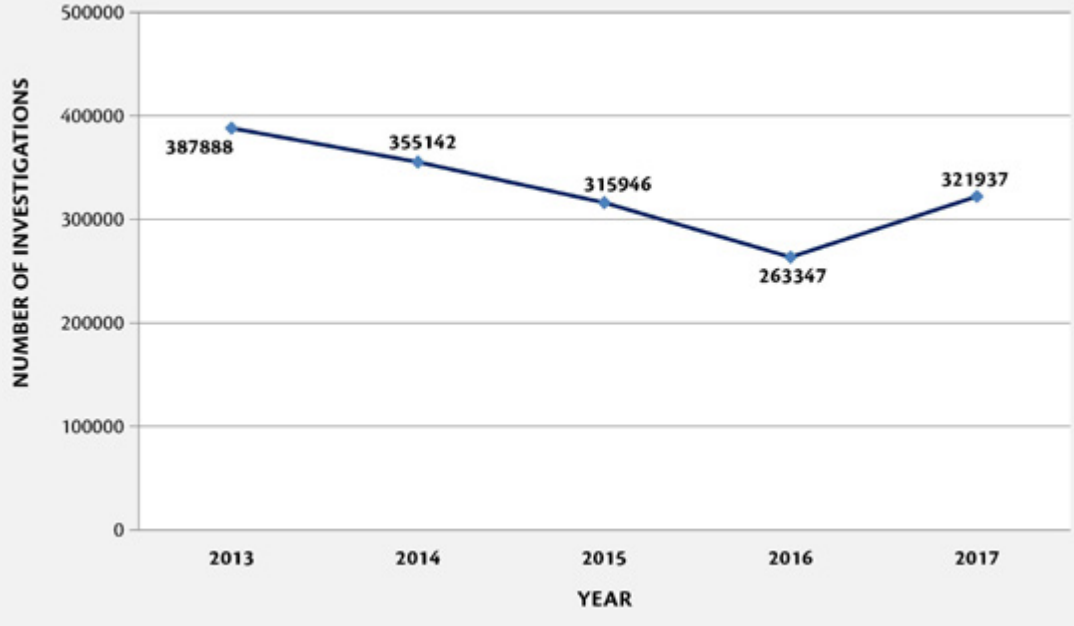
Over the five-year period (2013-2017), the trend in the various diagnostic services in the hospital has generally not been consistent. Figure 71 below shows the performance of the various diagnostic investigations.

FIGURE 71: TREND IN DIAGNOSTICS INVESTIGATIONS IN THE DIAGNOSTIC DIRECTORATE (2013-2017)



	Biochemistyry	Haematology	Bacteriology	Parasitology	Serology	Radiology	Pathology
2013	125121	107301	28002	11879	33162	62860	13675
2014	129658	97662	22444	10757	31023	55955	11807
2015	118540	89460	16727	8165	25026	47304	13859
2016	95233	66366	17278	5162	28940	39418	13306
2017	128,574	75548	18290	4662	30661	49209	14161

FIGURE 72: TREND OF AGGREGATED DIAGNOSTIC SERVICES IN THE DIAGNOSTICS DIRECTORATE (2013-2017)



Generally, there has been a declining trend in Diagnostics service since 2013. The year under review saw an increase. The Performance for the year represents a 22.25% increase compared to the 2016 performance.

PRIORITY ACTIVITY 13: SUPPORT TRAINING OF STAFF

In 2017, Six (6) resident doctors were admitted for training in Pathology and radiology. One (1) Radiologist was also trained in breast imaging. One (1) staff of Radiology was admitted into fellowship programme. One (1) Biomedical Scientist was also trained in lab toxicology.

TRAUMA AND ORTHOPAEDICS DIRECTORATE

19

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

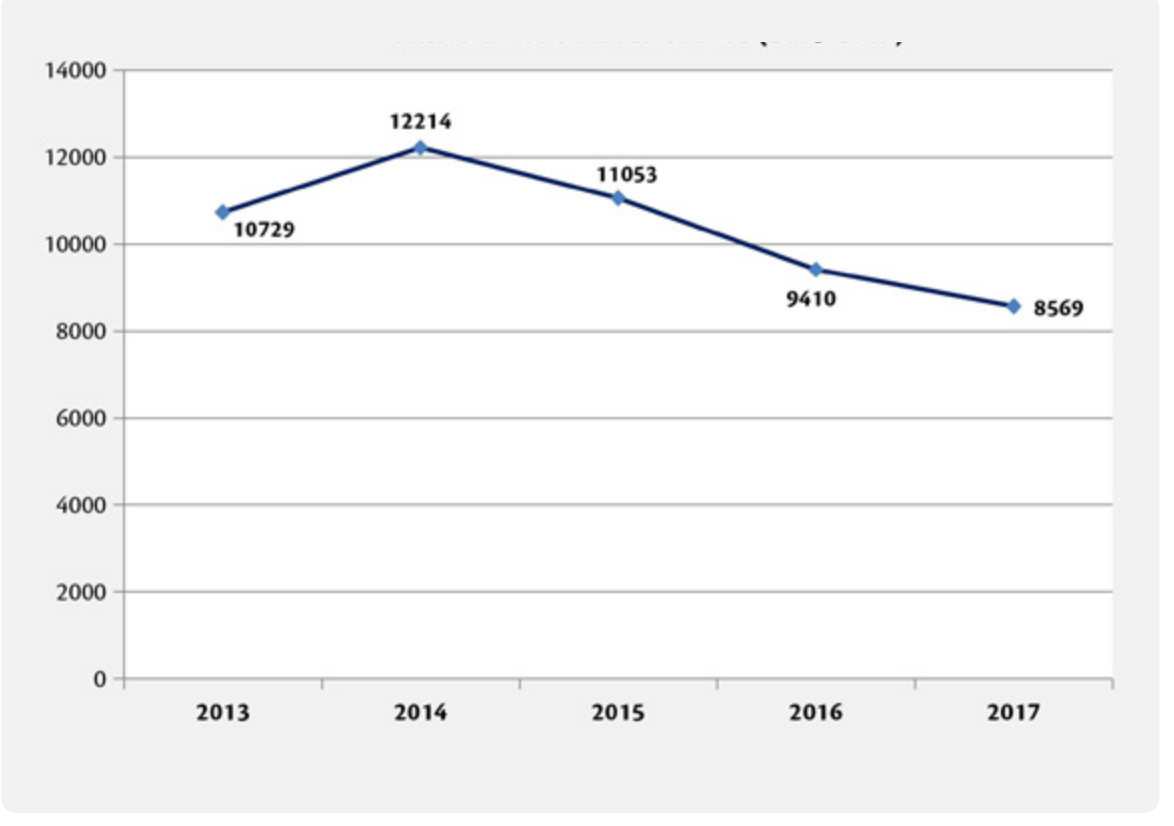
PRIORITY ACTIVITY 1: INCREASE THE RANGE OF SPECIALIST SERVICES

During the year under review, the Directorate Management team, planned to improve on their existing services.

TREND OF OUT-PATIENT SERVICES (2013-2017)

During the year under review a total of 8,569 cases were seen representing a decrease of 8.9% compared to the 2016 performance. The year's performance also represented a 9.8% decrease on the targeted output of 9,500 set for the period. There has been a consistent decline in the OPD performance since 2014. This is shown in detailed in figure 73 below.

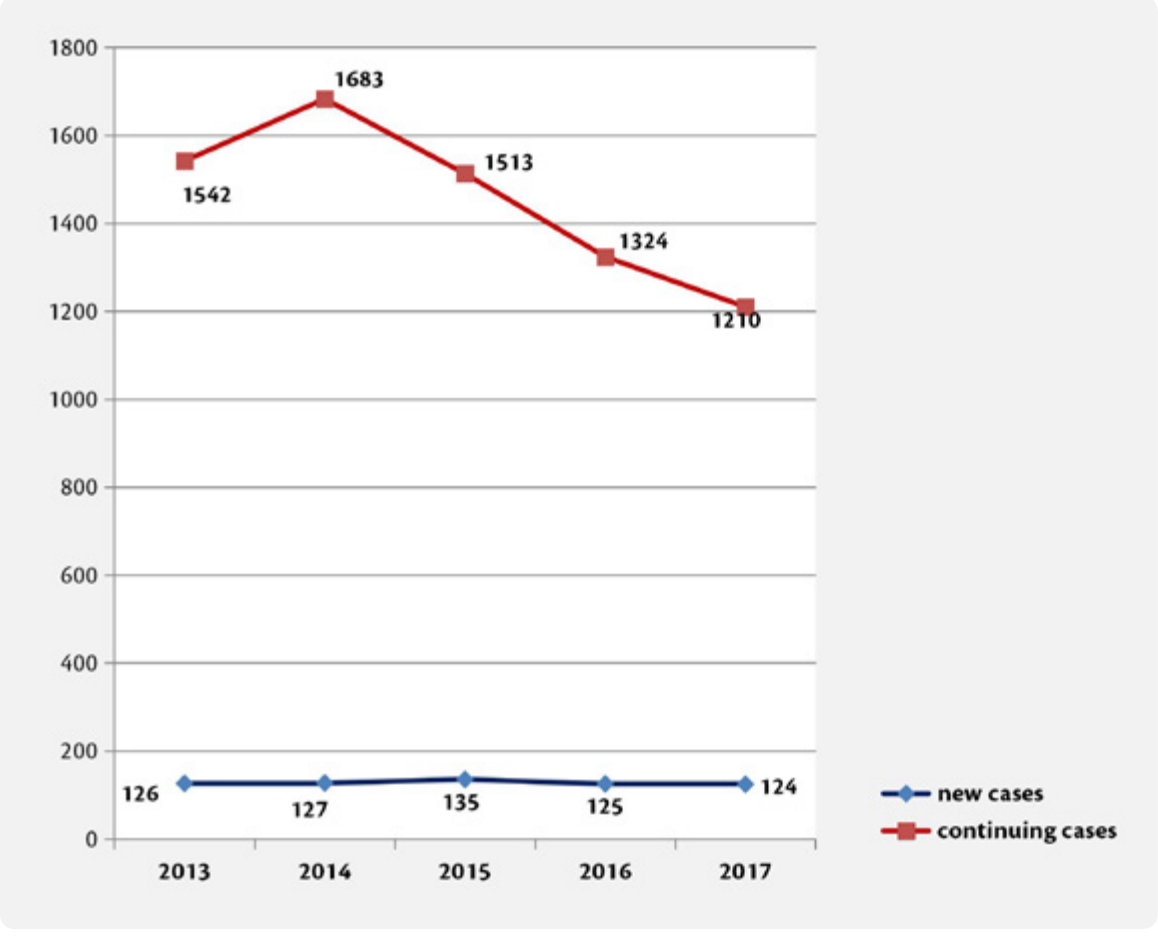
FIGURE 73: TREND IN OPD ATTENDANCE IN TRAUMA AND ORTHOPAEDICS (2013-2017)



TREND OF CLUBFOOT CASES (2013-2017)

During the year 2017, a total of 1,334 club foot cases were recorded. This comprises of 1,210 continuing cases and 124 new cases. The performance is also a decrease of 7.9% compared to the previous year performance. This is demonstrated in Figure 74.

FIGURE 74: COMPARATIVE ANALYSIS OF CLUBFOOT CASES IN TRAUMA AND ORTHOPAEDICS DIRECTORATE, 2013-2017



The number of continuing cases and new cases declined by 8.61% and 0.80% compared to their 2016 performance respectively.

IN-PATIENT SERVICES

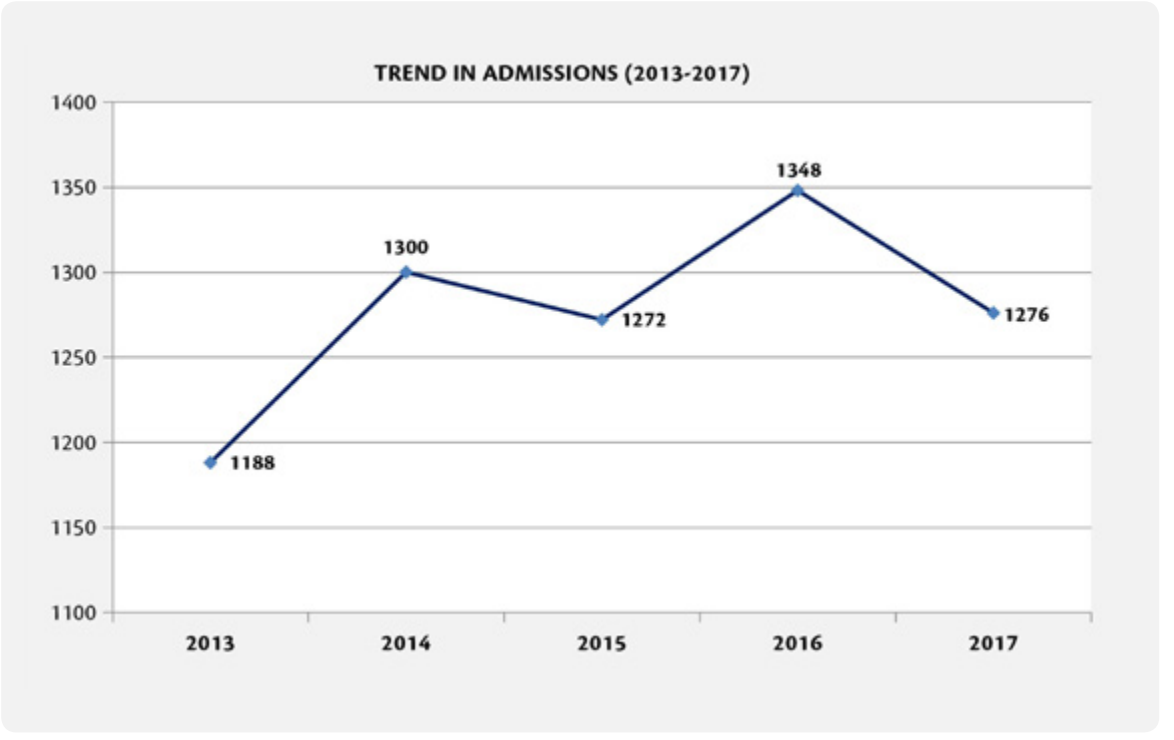
Trauma and Orthopaedics Directorate provides in-patient services for its clients. The directorate operated with a total bed complement of 90. Average length of stay remained at 21 days during the year under review. Percentage Bed occupancy also decreased from 82.48% to 79.51%.

In 2017, 1,276 admissions were recorded which represented a decrease of 5.34% compared to the previous year's performance of 1,348.

TREND ANALYSIS OF ADMISSIONS 2013 – 2017

Figure 75 below 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.

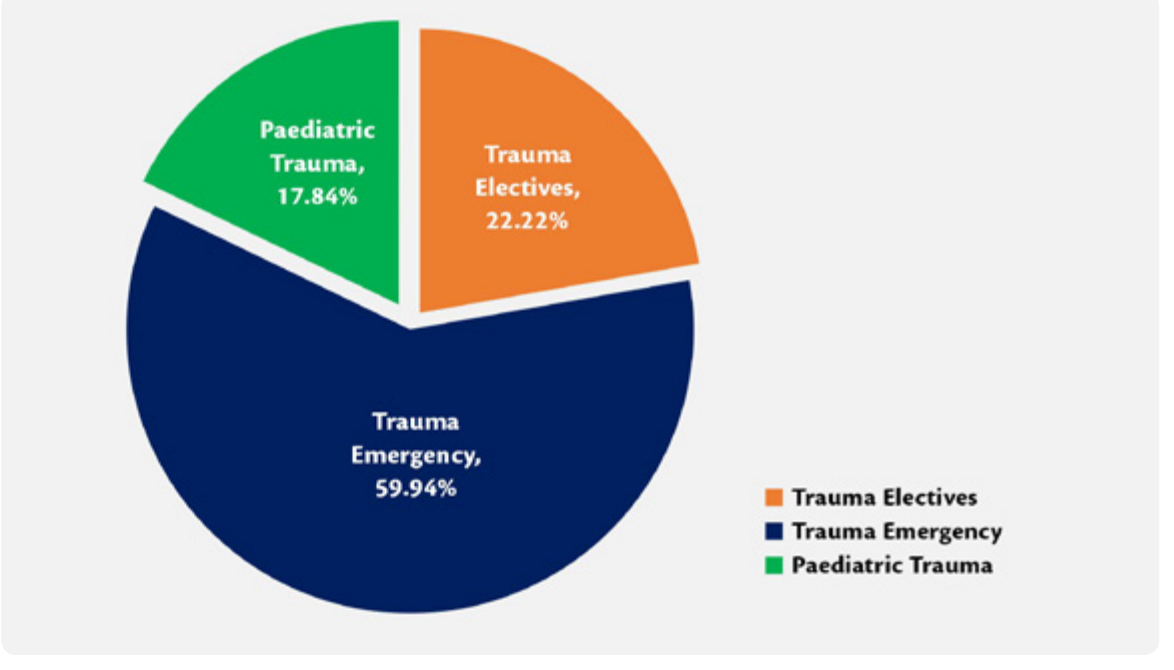
FIGURE 75: TREND IN ADMISSIONS IN TRAUMA AND ORTHOPAEDICS DIRECTORATE, 2013-2017



SURGICAL OPERATIONS

In 2017, the Directorate performed a total of 1,323 major surgeries. This comprised of 793 Elective, 294 Emegency and 236 paediatric trauma surgical cases. Figure 76 shows the breakdown of major surgeries performed during the year.

FIGURE 76: DISTRIBUTION OF MAJOR SURGICAL OPERATIONS IN TRAUMA AND ORTHOPAEDICS DIRECTORATE, 2017



TREND IN SURGICAL OPERATIONS

The trend in Surgical operations for the past five (5) years is shown in Figure 77 below.

FIGURE 77: TREND IN SURGICAL OPERATIONS IN TRAUMA AND ORTHOPAEDICS DIRECTORATE (2013-2017)

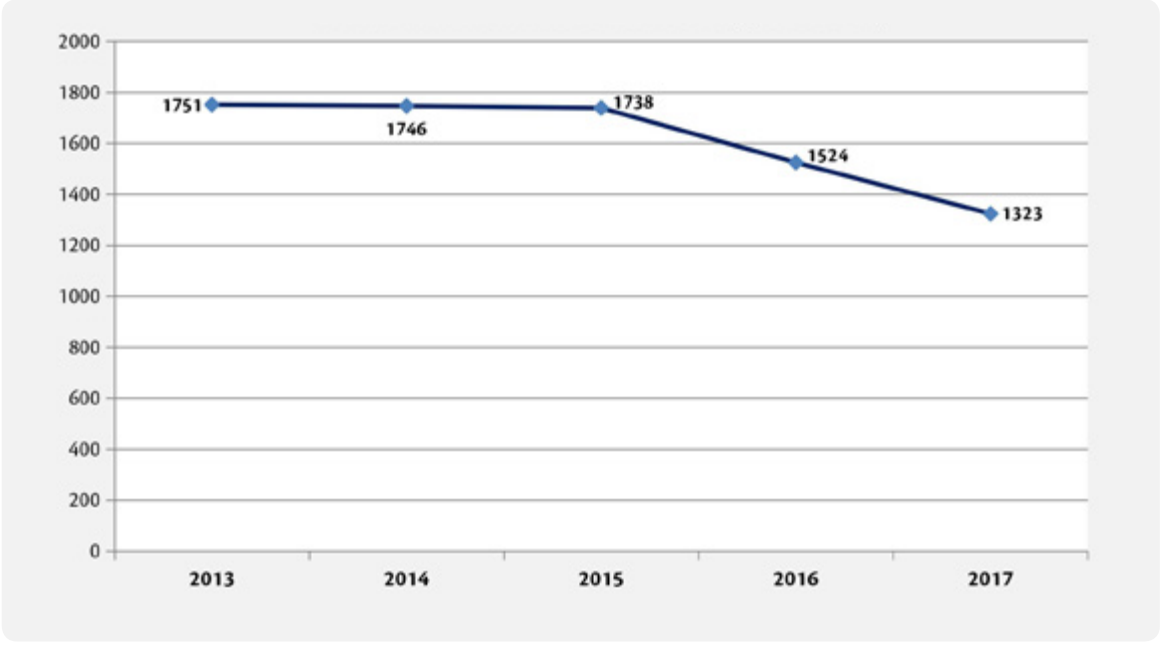
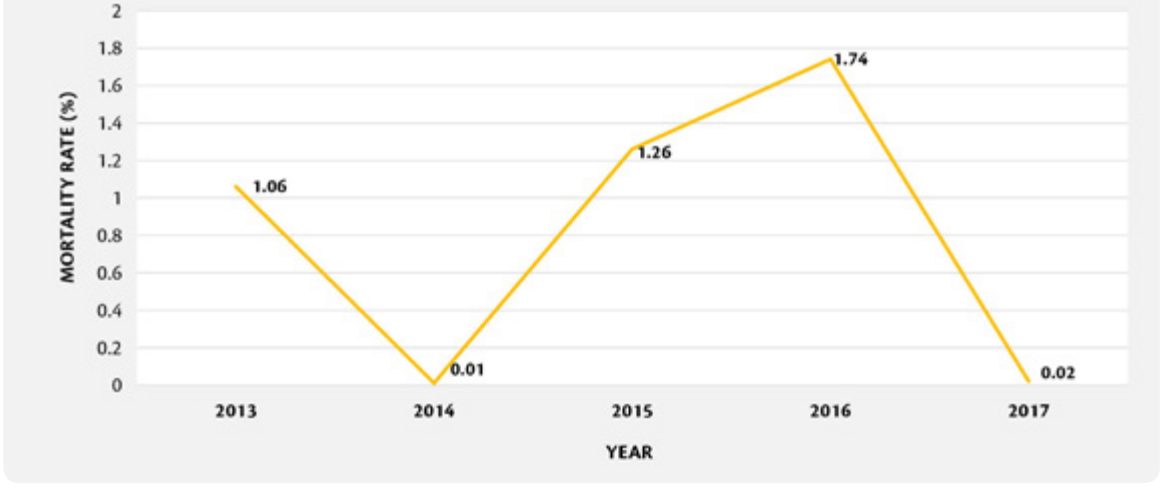


Figure 77 above depicts a marginal decrease from 2013-2014 but a consistent decline from 2015 to 2017. The year under review saw a further decrease of 13.19% compared to the 2016 performance of 1,524.

PRIORITY ACTIVITY 2: SUSTAIN ACTIVITIES AIMED AT REDUCING MORTALITY, ESPECIALLY MATERNAL MORTALITY

The Directorate continued its routine mortality audit during the year under review. With the exception of 2014, mortality rate for the directorate was high for all the other years over the past five years. Figure 78 shows the mortality rate at the directorate from 2013-2017.

FIGURE 78: TREND IN MORTALITY RATE (%) IN TRAUMA AND ORTHOPAEDICS DIRECTORATE, 2013-2017



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, University of California Orthopaedics Department to train staff at the Directorate.

Five (5) Trauma/ Orthopaedic Doctors and Ten (10) nurses are currently under training. Two (2) training programmes, 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. One hundred and seventy three (173) staff out of a targeted number of 181 were trained in nine different areas.

20 EMERGENCY MEDICINE DIRECTORATE

This Directorate provides a 24-hour emergency medicine services.

The Directorate has the following working units:

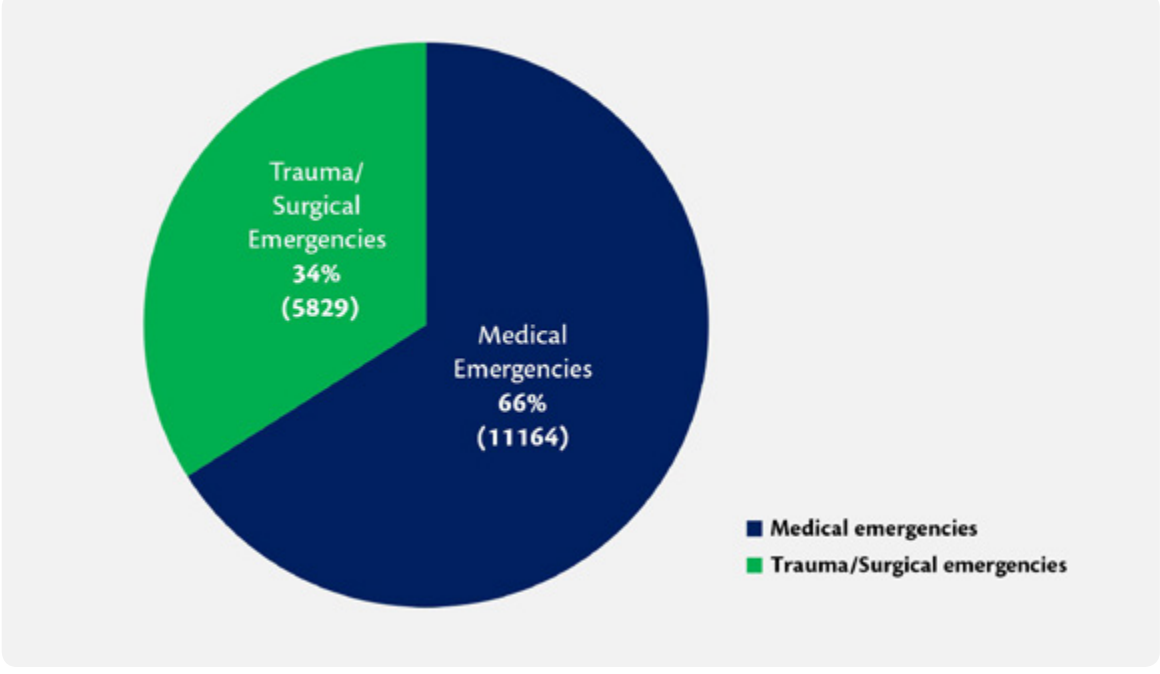
- Triage/Screening room; Red, Orange and Yellow zones
- Clinical Decision Units – Male, Female and Paediatrics.
- Minor procedure room

PRIORITY ACTIVITY 3: CONTINUE TO SUPPORT EMERGENCY SERVICES

In the year 2017, a total of 16,993 emergencies were recorded which represent 85% of the target of 20,000 and declined by 4.56% compared to the previous year's performance of 17,804. Patients continue to stay beyond the 24-hour limit in the emergency unit due to shortage of patient beds at the main wards. This resulted in congestion in the Directorate.

In 2017, the Directorate recorded 11,164 medical emergencies which represented (66%) of total emergencies as compared to 5,829 Trauma/ surgical emergencies of 34%. The diagram 79 below shows emergency cases recorded in the year 2017.

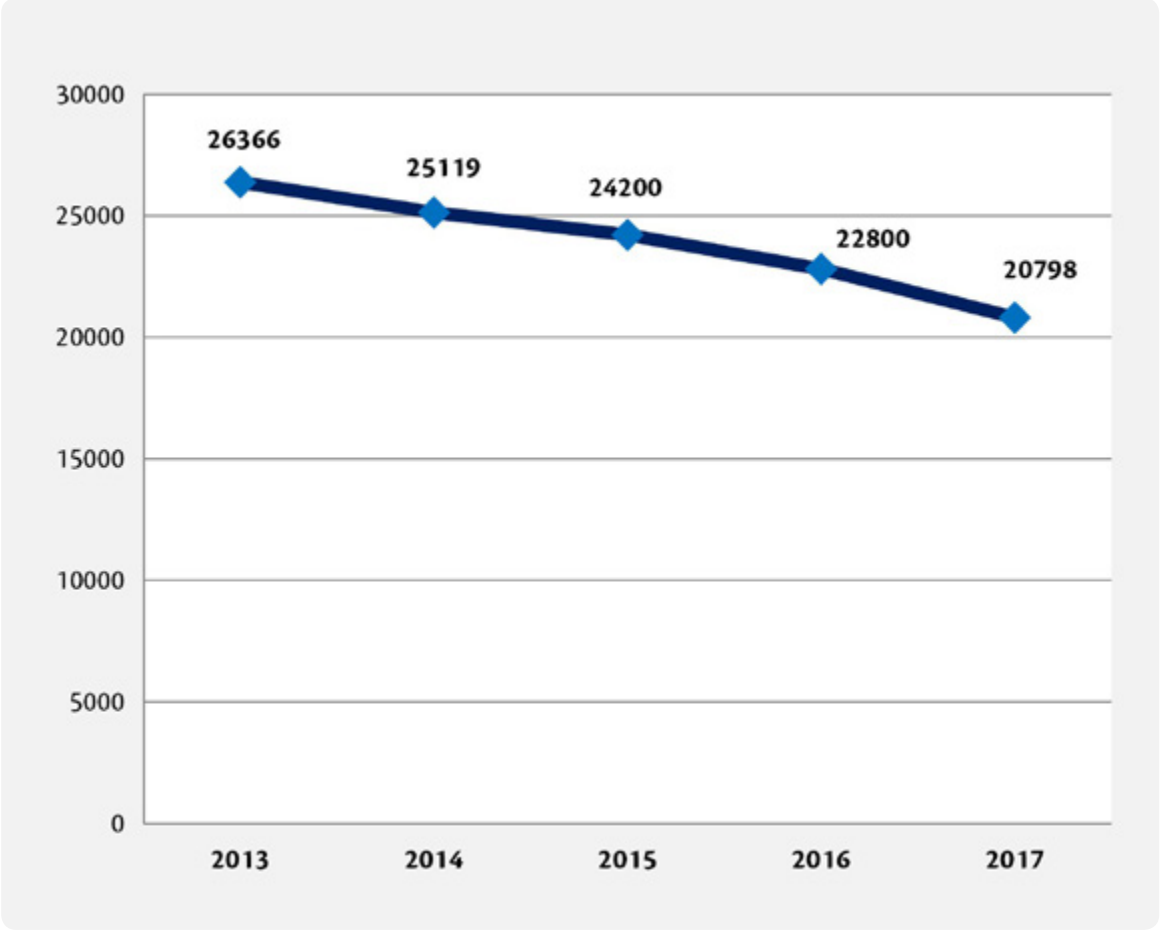
FIGURE 79: CATEGORIZATION OF EMERGENCIES IN EMERGENCY MEDICINE DIRECTORATE (2017)



TREND IN EMERGENCY SERVICES UTILIZATION, 2013-2017

Trend in Patients' Attendance at Emergency Medicine for the past five years is shown in chart 80 below.

FIGURE 80: TREND OF PATIENTS' ATTENDANCE AT EMERGENCY MEDICINE, 2013-2017

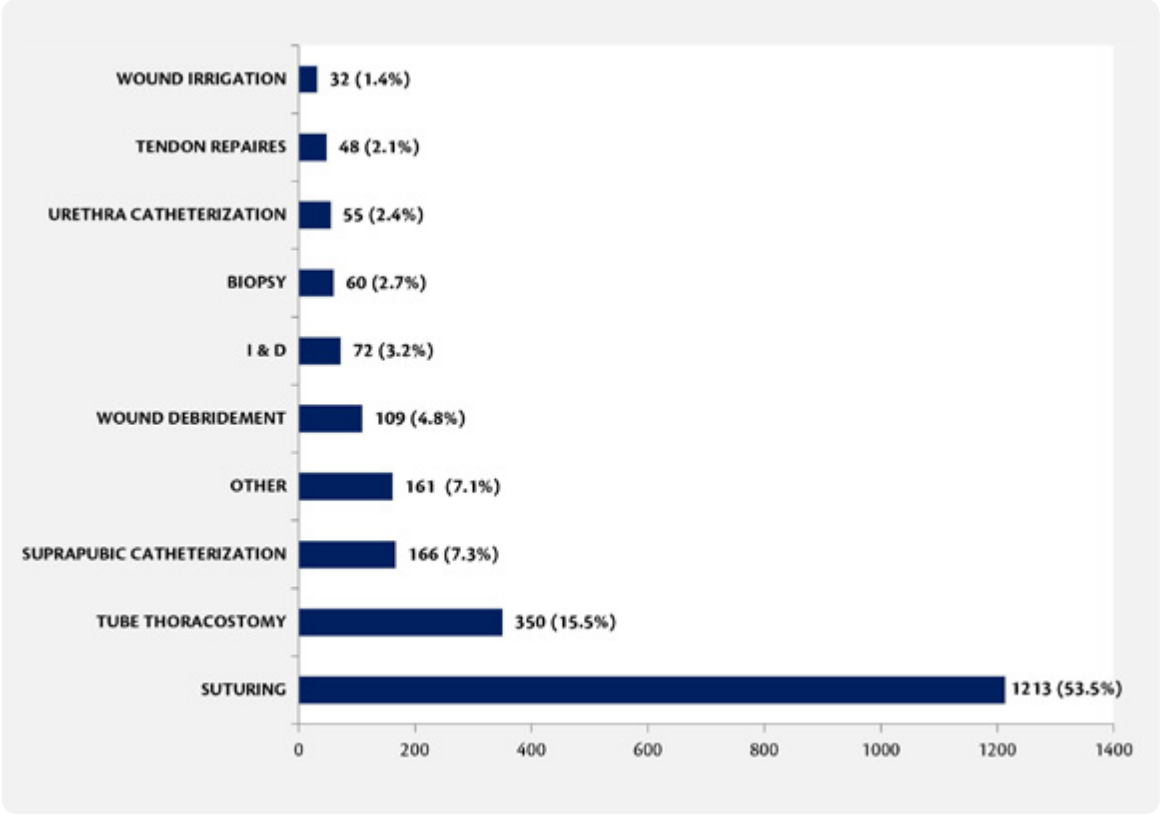


Emergency services have seen a consistent decline in attendance over the last five (5) years. In 2017, there was a reduction of 8.78% compared to the previous year's performance. There was also 9.6% reduction in the target set for the year.

MINOR PROCEDURES IN 2017

In the year 2017, a total of 2,266 minor procedures were successfully carried out at the Directorate. Out of the total cases, suturing (53.50%) was the highest while wound irrigation recorded the least (1.40%). Figure 81 below shows the percentage distribution of minor procedures performed for 2017.

FIGURE 81: PERCENTAGE DISTRIBUTION OF MINOR PROCEDURES IN EMERGENCY MEDICINE (2017)



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) residents were also trained in Emergency Ultrasound.

TRANSFUSION MEDICINE UNIT

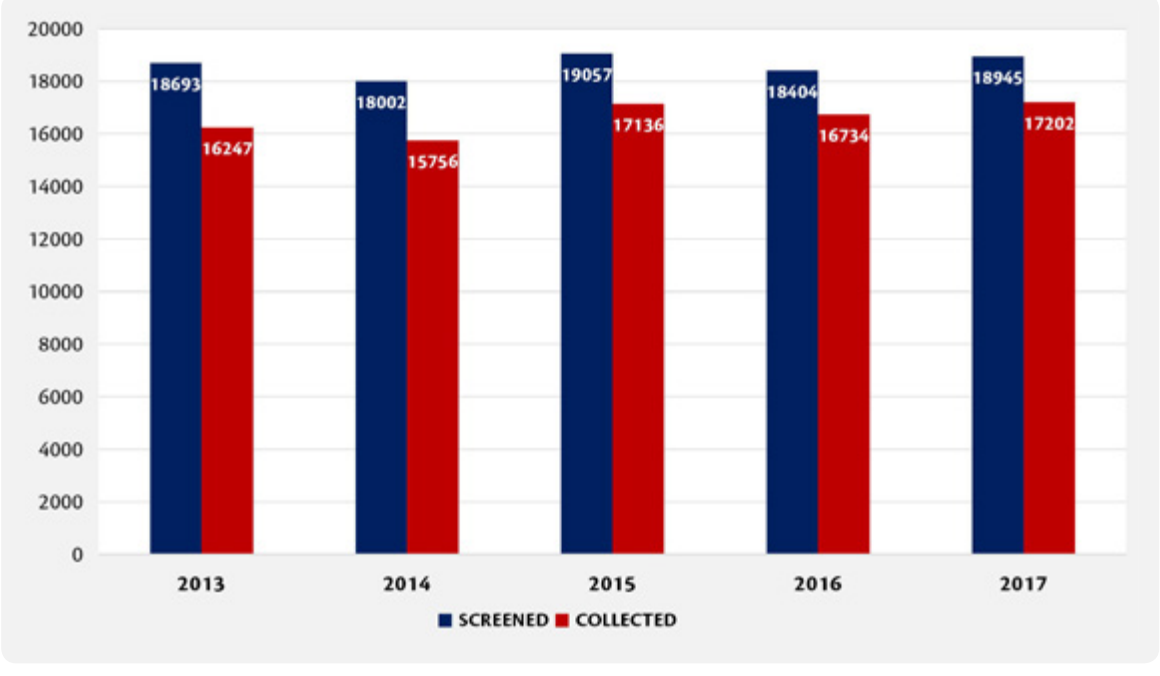
21

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 KATH.

BLOOD DONORS SCREENED AND BLOOD COLLECTED

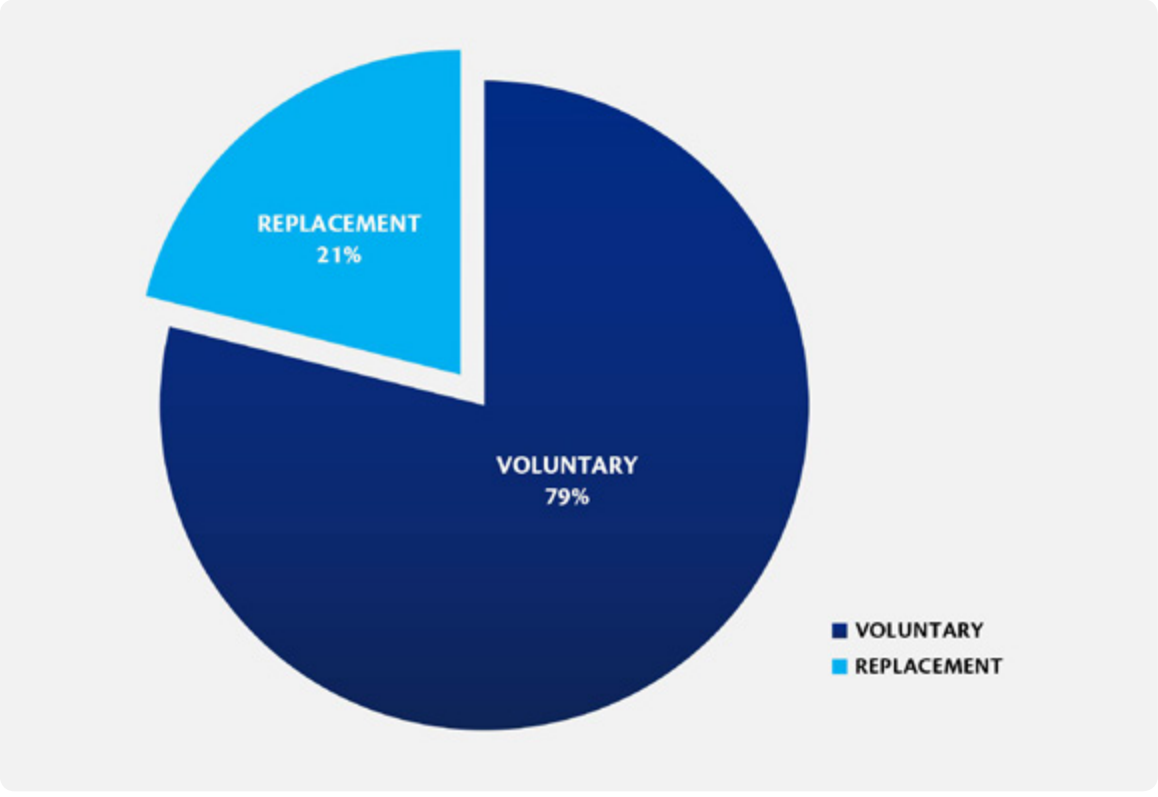
The TMU screened 18,945 donors in the year 2017 which represents 2.93% increase over the 2016 performance. A total of 17,202 units of whole blood were collected as against 16,734 units in 2016. Figure 82 depicts the five-year trend of blood screened and blood collected.

FIGURE 82: DONORS SCREENED VS. BLOOD COLLECTED IN TMU, 2017



Voluntary Donors contributed 79% of the total blood collected while Replacement Donors contributed 21% in the year 2016 as depicted in Figure 83. While Voluntary blood donations increased by 8.39% in 2017 compared to the 2016 performance Replacement donations decreased by 13.81%.

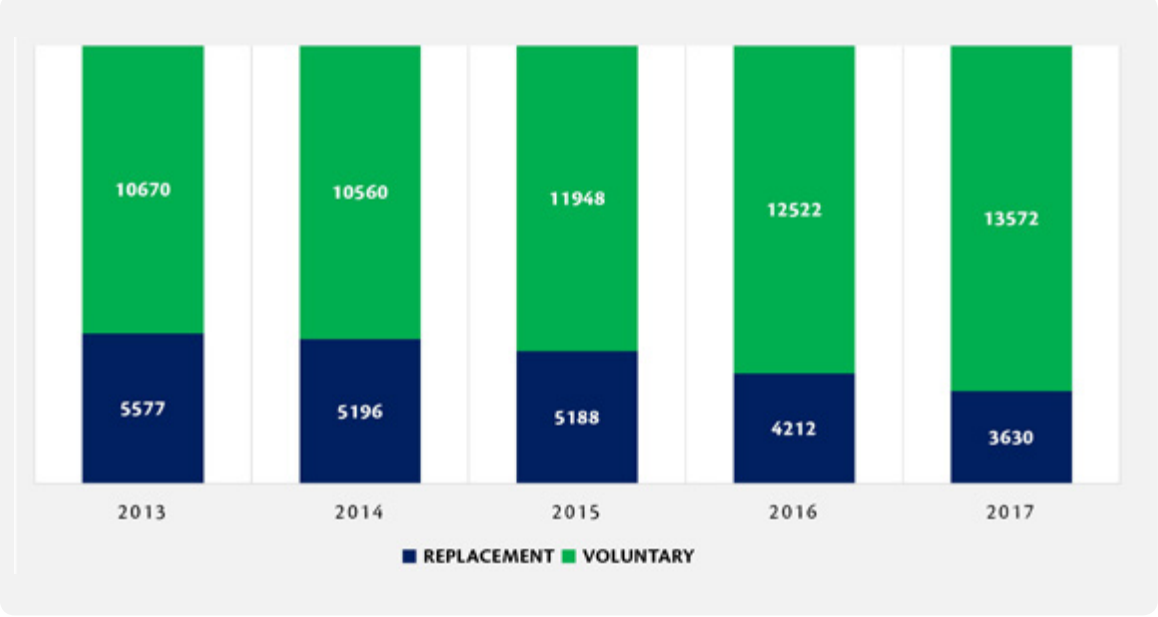
FIGURE 83: BLOOD COLLECTED IN TRANSFUSION MEDICINE UNIT, 2017



TREND OF TOTAL BLOOD DONATION

Voluntary blood donations which have been the major contributor to the total blood collection by the Unit continue to increase in the last five (5) years while replacements have on the other hand, been decreasing.

FIGURE 84: TREND OF TOTAL BLOOD DONATIONS IN TRANSFUSION MEDICINE UNIT, 2017

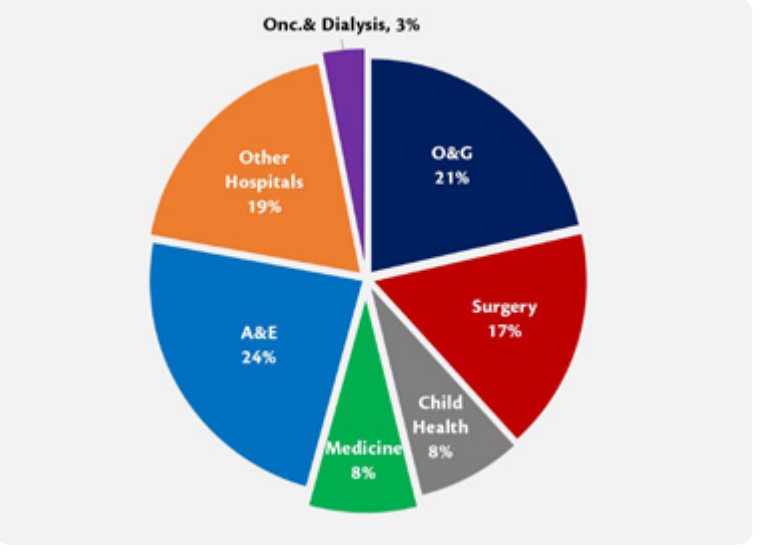


CLINICAL USE OF BLOOD

Whole Blood

The major user of whole blood continued to be the Accident & Emergency Centre (24%), followed by Obstetrics &Gynaecology (21%), other hospitals (19%), Surgery (17%), Child Health and Medicine (8% each) and Oncology and Dialysis (3%). This is depicted in Figure 85 below.

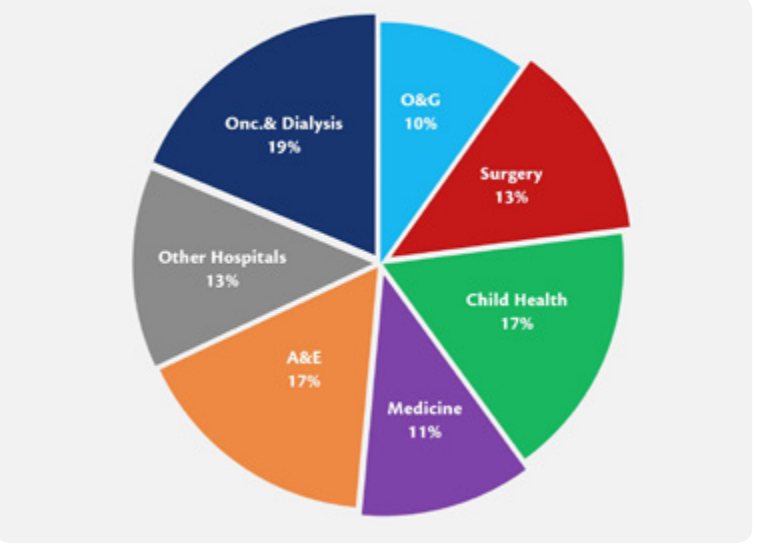
FIGURE 85: CLINICAL USE OF WHOLE BLOOD IN TRANSFUSION MEDICINE UNIT, 2017



Concentrated Red Cells

In the year 2017, a total of 5008 units of Concentrated Red Cells were used. The Oncology Directorate and Dialysis Unit (19%), led in the clinical use of Concentrated Red Cells (18%). A&E Centre and Child Health used 17% each, Surgery and other hospitals (13% each), Medicine (11%) and O&G (10%), as depicted in the chart 86 below.

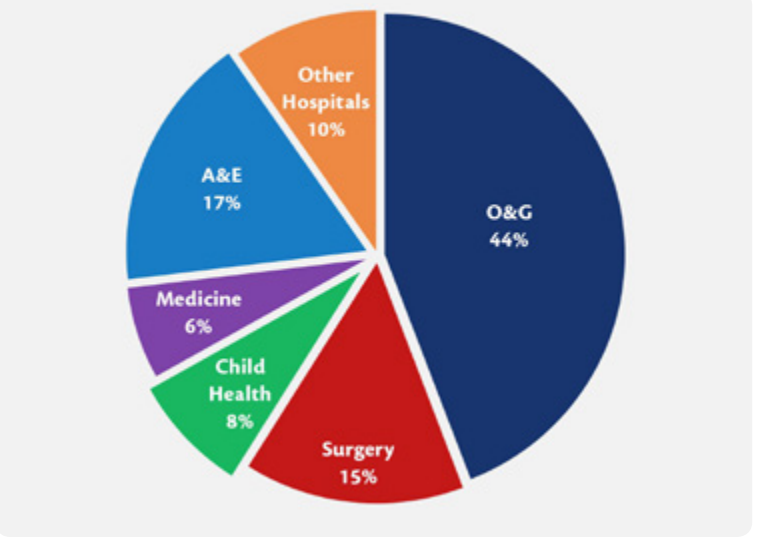
FIGURE 86: CLINICAL USE OF CONCENTRATED RED CELLS IN TRANSFUSION MEDICINE UNIT, 2017



Fresh Frozen Plasma

Two thousand eight hundred and sixty-six (2866) units of Fresh Frozen Plasma were used in the year 2017. The Directorate of Obstetrics and Gynaecology was the leading user (44%) of Fresh Frozen Plasma (FFP) followed by the Accident and Emergency Centre (17%), Surgery (15%), other hospitals (10%), Child Health (8%) and Medicine (6%) in that order in the year 2017. This is presented in Figure 87.

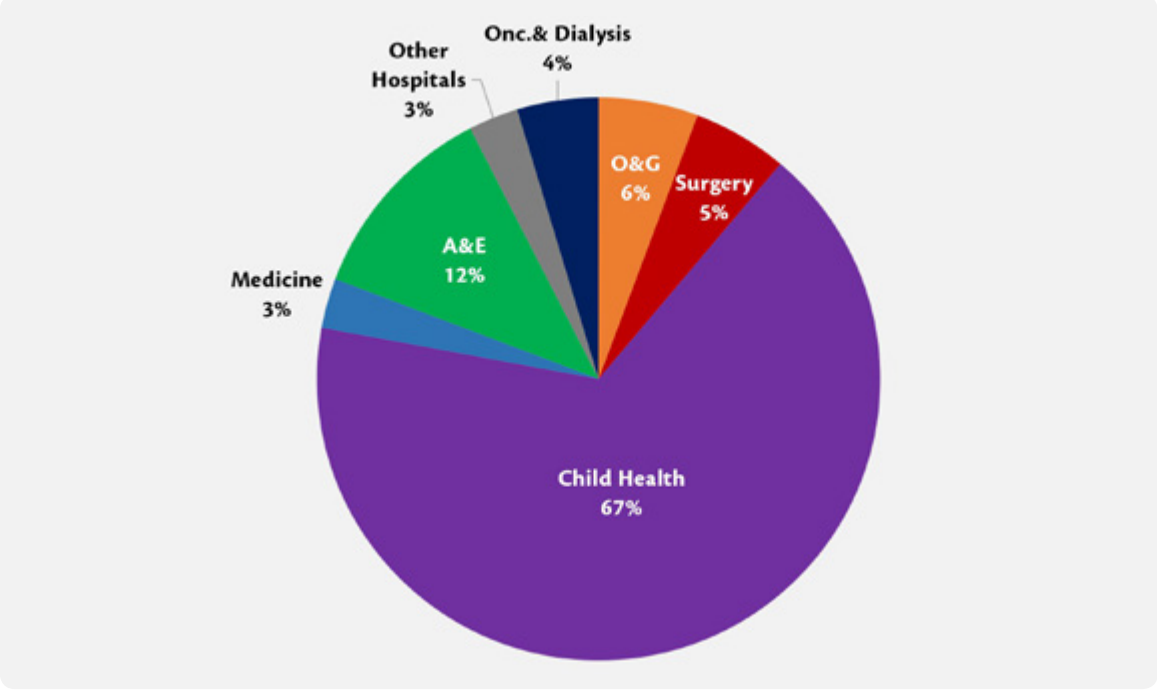
FIGURE 87: CLINICAL USE OF FRESH FROZEN PLASMA IN TRANSFUSION MEDICINE UNIT, 2017



CLINICAL USE OF PLATELET

With the clinical use of platelets in 2017, the highest user was the Directorate of Child Health (67%). The Accident and Emergency Centre used (12%), Obstetrics and Gynaecology (6%), Surgery (5%) Oncology and Dialysis (4%), and Medicine and other hospitals used 3% each as shown in Figure 88.

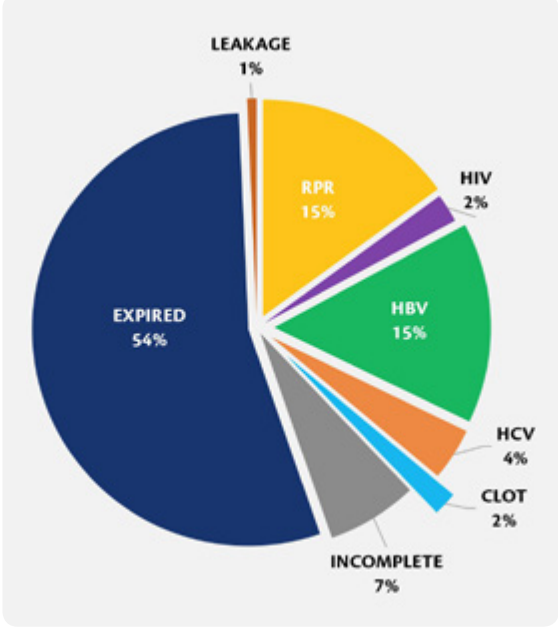
FIGURE 88: CLINICAL USE OF PLATELET IN TRANSFUSION MEDICINE UNIT, 2017



BLOOD DISCARDS

In 2017, the total blood units discarded was 280. The breakdown is as shown in Figure 89 below: Expired units (54%), Syphilis (15%), HBV (15%), Incomplete units (7%), HCV (4%), Clot (4), HIV (2%) and Leakage (1%).

FIGURE 89: BREAKDOWN OF BLOOD DISCARDED IN TRANSFUSION MEDICINE UNIT, 2017



CAPACITY BUILDING IN BLOOD TRANSFUSION

The Transfusion Medicine Unit trained 409 staff and 213 house officers 317 in "Safe Haemovigilance Practices", "Post-transfusion Audit of IBCT" among others in the year 2017. The Unit also trained 287 health professionals from other health facilities in areas like Advances in Transfusion Medicine and Safe Reliable Blood Supply.

INTERNAL AUDIT UNIT

22

The Internal 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 embarks on the following:

- 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 controls; compliance with policy, regulations and laws; value for money and performance.

THE SCOPE OF INTERNAL AUDIT

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 32: ACHIEVEMENTS

PLANNED ACTIVITIES	OUTPUT
Revenue Management: Task:	Review of revenue generation process(folder management) Review of on- site revenue collection. Other revenue investigations
Stores Verification Task: Procurement verification function Medical stores audits & Physical inspection of stores Review of contract award letters Verification on SRA	Sample award letters were reviewed Sample contract documents were reviewed SRAs were reviewed. Physically inspected items purchased or donated to KATH
Payments Related Audits: Task: Compensation and HRM controls (Monthly) Pre audit of petty cash and all other payments IGF Staff Confirmation	Payments Worked On Includes; Daily pre-audit of all payments Contracts and KATH projects. IGF Staff salaries and statutory deductions on monthly basis Fuel/Responsibility Allowance Vehicle Maintenance
Stock And Other Assignments Task: All Kath Stores Other Special functions and Hospital-wide Assignments: **Other Confirmations:**	Stock count in all stores done Routine Confirmation of Inventory. Canteen Coupon verifications Investigations on issues referred from management Different assignments handled as follows: - Confirmation of stoppage of salaries/ separation system controls - Follow up on documents on payments to help manage risk and give assurance to management

RESEARCH AND DEVELOPMENT UNIT

23

The Research and Development (R&D) Unit was established in 2006 in line with one of the core mandates as 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.

The unit planned and prioritised the following activities for the year 2017

- Develop a plan to integrate research into graduate and postgraduate training
- Development of Research Strategies, Policies and Funding
- Support Funding Applications
- Promote both local and International Research Collaborations

PRIORITY ACTIVITY 1: DEVELOP A PLAN TO INTEGRATE RESEARCH INTO GRADUATE AND POSTGRADUATE TRAINING

1. Diploma in Project design and management (DPDM)
    a. Plan and run faculty meetings, workshops for students, examiners meetings, and board meetings for the KATH/LSTM diploma program.
    b. Integrate the DPDM into the research framework of KATH
    c. Organize graduation ceremony for DPDM graduates.
2. Organise seminars/workshops on research capacity development and ethics

ACTIVITIES	OUTPUTS	RESULTS
Plan and run faculty meetings, workshops for students, examiners meetings and board meetings for the KATH/ LSTM Programme	Data Analysis and Report writing workshop for 2016/2017 batch of DPDM candidates conducted in March 2017 Two academic board meetings held during the year under review Collated results for the 2015/2016 DPDM cohort	Increased appreciation of research in the areas of research methodologies, data analysis and report writing Marks sent to LSTM
Develop a plan to integrate DPDM into the research framework of KATH **Graduation Ceremony for the 2014/15 and the 2015/16 batch of candidates**	Calls for application for 2017/2018 DPDM academic year completed Graduate 2014/15 and 2015/16 candidates	Selection of candidates for the 2017/2018 programme completed. However, programme could not begin as LSTM withdrew certification in May 2017 due to new strategic focus. Programme could not be done in the year under review as a result of LSTM accreditation issues. Ghana College of Physicians (GCP), however, agreed in 2017 to take up the DPDM accreditation.

PRIORITY ACTIVITY 2: DEVELOPMENT OF RESEARCH STRATEGIES, POLICIES AND FUNDING

1. Develop a five (5) year research strategy for the hospital
2. Assist directorates and units in developing a research policy
3. Registration of all research and development projects
4. Organize training for finance officers on research methodologies
5. Disseminate grant opportunities to Directorates and Units

ACTIVITIES	OUTPUTS	RESULTS
Develop a five year research strategy	Management team members of the various directorates and units were invited to a meeting on the development of research strategy	One meeting held
Assist directorates and units to develop a research policy	A guideline on research policy development was issued to all directorates and units	Three directorates produced their draft policies during the period year under review
Registration of all research and development projects going on in KATH	Register all research projects into a database	412 research projects were registered during the year
Organize training for finance officers on research methodologies	Conduct Research Budgeting Workshop for finance officers	Programme stalled due to inadequate funds

PRIORITY ACTIVITY 3: COLLABORATION WITH INTERNATIONAL AND LOCAL INSTITUTIONS

ACTIVITIES	OUTPUTS	RESULTS
Promote both National and International Research and collaboration	**International Collaboration** KATH & U.S Naval Medical Research Unit – Sepsis Study KATH, WHO & MOH– Congenital Rubella Surveillance Programme KATH John Hopkins-Medicine GAAP Study	Enrolment has ended. 204 cases enrolled. Study is in follow-up phase 70 cases recruited during the period under review Active enrolment ended in 2017
Promote both National and International Research collaboration	**International Collaboration** KATH-Utah MMS Study WHO & KATH - Surveillance of Rotavirus	Enrollment ended in 2017 98 cases recruited; R&D unit providing data management support
Promote both National and International Research collaboration	**Local and KATH:** KATH Child Health-Noguchi Intussusception Study KATH A&E-University of Michigan outcomes of injuries study	Data collection is ongoing. The unit provides support for data collection and management Data collection is ongoing. The unit provides support through data collection and management
Promote both National and International Research collaboration	KATH Child Health-WHO/AFRO-Invasive Bacterial Disease Case Investigation KATH Child Health- Surveillance of Poisoning and Injuries presenting to the PEU of KATH	Data collection is ongoing. The unit provides support for data collection and management Data collection is ongoing. The unit provides support for data collection and management.

24 PHARMACY UNIT

INTRODUCTION

The Pharmacy Unit has the mandate to provide quality medicines for use by patients and non-clients of the hospital.

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),
- Manufacturing Unit (MU) and
- Pharmacy Accounts.

The Unit's focus for 2017 centered on strengthening Pharmacovigilance services, introduction of Centralised Intravenous Additive System (CIVAS), and expansion of medicines storage facilities, improving drug availability, equipping the Quality Control Lab among others.

The provision of quality medicines for use by patients and non-clients is the core mandate for the Pharmacy Unit. From the table above, general drug availability within the Unit and the Hospital as a whole has been declining steadily over the last five (5) years; that is from 68% in 2013 to 46% in 2017. Emergency drug availability however has been consistent within the same period, that is, around 85%. A 24 hour cash sales Pharmacy was established at the Accident & Emergency Centre during the year under review.

5 YEAR TREND OF DRUG AVAILABILITY AT THE PHARMACY UNIT

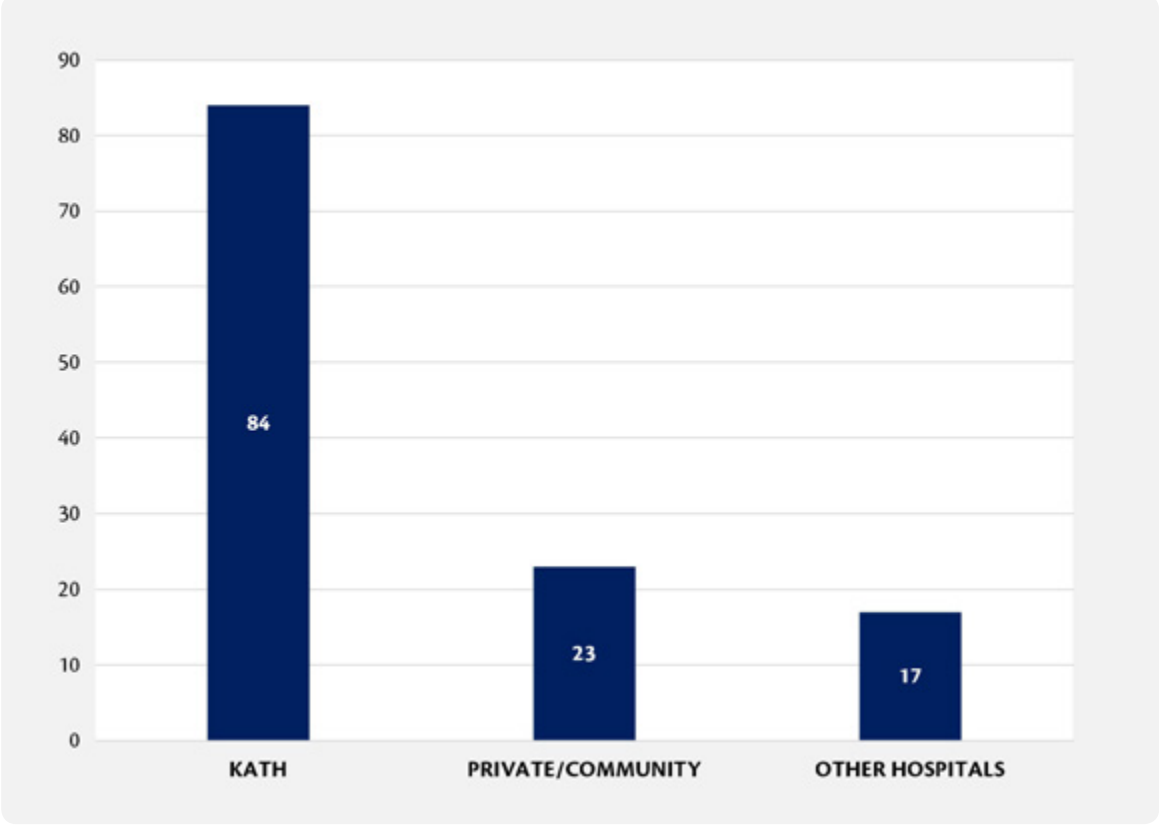
	2013	2014	2015	2016	2017
General Drug Availability	68.0%	62.0%	56.0%	50.7%	46.0%
Emergency Drug Availability	85%	85%	83%	84%	87%

DRUG INFORMATION SERVICE CENTRE

The Drug Information Centre (DI) received one hundred and twenty-four (124) calls during the period to answer drug information queries; eighty-four (84) of these calls representing 67.7% were from within the Hospital (KATH) whilst the remaining 32.3 % came from private/ community and other Hospitals. The Unit submitted 53 ADR forms to the Food and Drug Authority (FDA).

Most of the enquiries (consults) at the Drug Information (DI) Unit were done by pharmacist (78.70%), doctors (11.11%), chemical sellers (1.85%), nurses (1.85%), patients (3.70%), Pharmacy Technicians (1.85%) and Health Services Administration (0.93%). See Figure 90

FIGURE 90: DISTRIBUTION OF CALL INS AT THE DRUG INFORMATION CENTRE



SPECIALIST OPD PHARMACY (SOPD)

The specialist OPD Pharmacy attended to total of 67,586 prescriptions in 2017. This represents an 18.34% decrease compared to the 2016 year's figure of 82,766.

25 SUPPLY CHAIN MANAGEMENT UNIT

The Supply Chain Management Unit handles the Procurement of goods & services (i.e. Consulting, Non-consulting and Technical Services) for the Hospital.

The unit 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.

SUMMARY OF ACHIEVEMENTS

- The unit conducted ten (10) National Competitive Tenders (NCTs) for procurement of: Medicines, Non-medicine consumables, Medical equipment, Works and other services. This ensured an uninterrupted flow of medicines, consumables and services in the hospital.
- The unit received three (3) sole sourced and one (1) restrictive tendering approval from PPA.
- The Planned Board of Survey was done successfully.
- The unit intensified its sample evaluation and delivery inspection system by ensuring that all items delivered strictly conformed to the specification. Those which failed to meet the specifications were rejected. This ensured that all items delivered were of high quality.
- The unit reviewed the hospital's Procurement Plan for 2017 and submitted it to the Entity Tender Committee and PPA.
- A total of four (4) wards and user points monitoring exercises were conducted. This ensured that there was optimal utilization of consumables, end user satisfaction, improved records keeping and excellent complaints management.
- The unit through Ghana Supply Company Limited facilitated the clearing of some donated items from various organizations and individuals to the hospital.
- The Unit was able to identify cheaper sources of supply of CT Films and sterilization paper and gauze rolls. This reduced the cost of procuring these consumables.

PROCUREMENT SECTION

The following are the major activities conducted through National Competitive Tendering (NCT):

TABLE 33: TENDERING ACTIVITIES

#	ACTIVITY	STATUS
1	National Competitive Tendering (NCT) for the supply non – Medicine consumables	Completed. Awarded and supplied
2	National Competitive Tendering (NCT) for the supply, Installation and Commissioning of Oxygen Plant	Tender process has been cancelled and re-tendered through Restrictive Tendering and Evaluation.
3	National Competitive Tendering for the supply of Medical Oxygen	Completed. Contract awarded
4	National Competitive Tendering (NCT) for the supply and installation of Dental Laboratory Equipment & Consumables, Chemicals, Patient Monitor and ECG Machine	Completed. Contracts awarded and items delivered.
5	National Competitive Tendering (NCT) for the supply of Pharmaceutical items	Evaluation completed, awaiting ETC approval
6	National Competitive Tendering (NCT) for Insurance policy of hospital buildings	Completed.
7	National Competitive Tendering (NCT) for Cleaning Services at Accident and Emergency and other areas of the hospital	Evaluation completed, pending ETC approval
8	National Competitive Tendering (NCT) for the outsourcing of weed control services	Evaluation completed, pending ETC approval
9	National Competitive Tendering for the provision of waste control services	Evaluation completed, pending ETC approval
10	National Competitive Tendering (NCT) for the supply and installation of Hematology Analyzers, Cardiac Analyzers, Blood Gas Analyzers and Physiotherapy Equipment.	Evaluation is on going

FIVE YEAR TREND ANALYSIS OF ACHIEVEMENTS

TABLE 34: TREND ANALYSIS OF ACHIEVEMENT

#	SERVICE DELIVERY	ACHIEVEMENT FOR 2013	ACHIEVEMENT FOR 2014	ACHIEVEMENT FOR 2015	ACHIEVEMENT FOR 2016	ACHIEVEMENT FOR 2017
1	Conduct of tender	14 NCTs conducted	17 NCTs conducted	12 NCTs conducted	13 NCTs conducted	10 NCTs conducted
2	Procurement audit/Assessment	Excellent Status	Excellent Status	Excellent Status	Excellent Status	Excellent Status
3	Board of Survey	1	1	1	1	1
4	Ward Monitoring	3	3	3	4	4

The table below shows other major activities conducted through Price Quotation (PQ):

TABLE 35: ACTIVITIES CONDUCTED THROUGH PRICE QUOTATION

#	ACTIVITY	STATUS
1	Price Quotation (PQ) for the supply of Safety Boots for Technical Services Directorate	Contract awarded and delivered.
2	Price Quotation (PQ) for the supply of Wall mounted flow meter and Cylinder mounted flow meter.	Contract awarded and delivered.
3	Price Quotation (PQ) for the Outsourcing of PPM of mortuary fridges and Air Condition, UPS, Stabilizers and Photocopier Machines.	Evaluation completed, pending award of contract
4	Price Quotation (PQ) for the supply of Diaries and Calendars	Contract awarded and delivered
5	Price Quotation (PQ) for the supply and installation of patient beds with mattresses	Contract awarded. Supplier has made part delivery
6	Price Quotation for the supply and installation of casting machine, vita vacumat furnace/ crucibles, OPG proda & films, Table top centrifuge.	Evaluation completed. Award letters issued.
7	Price Quotation (PQ) for the supply of monitor Accessories and Ventilator Accessories	Contract has been awarded pending delivery.
8	Price Quotation for the supply of MRI Films	Contract awarded and delivered.

WARD MONITORING REPORT

As part of measures to ensure efficiency in the use of consumables in the hospital, the monitoring team from the unit conducted ward stock monitoring on the use of consumables at the various wards. A total of four (4) monitoring exercises were conducted at the following directorates of the hospital:

- O&G Directorate
- Child Health Directorate
- Medicine Directorate
- Surgery Directorate
- Family Medicine Directorate
- Emergency Medicine
- Trauma & Orthopaedics
- Anaesthesia & Intensive Care Directorate

Below are some of the major findings from the directorate stock monitoring:

TABLE 36: MAJOR FINDINGS OF WARD MONITORING REPORT

#	ACTIVITY	STATUS
1	There has been an improvement in record keeping of consumables received from stores.	It is recommended that Nurse managers/ Business Managers should continuously remind ward in-charges to keep proper documentation on items received from stores.
2	The issue of overstocking of consumables received from stores has also reduced.	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
3	Most beds in the wards were without bed sheets	Ward in-charges were advised to give bed sheets to patients instead of keeping them for medical examination.

TABLE 37: DONATIONS

NO.	NAME OF DONOR
1	Himalayan Cataract Project(HCP)
2	Orbis Africa
3	Regional Medical Store
4	Ari Technology Group Co Ltd
5	Karup Perth
6	Mr Kwasi Kyei
7	Direct Relief International
8	Royal Foam
9	Women Health to Wealth
10	Usico Ghana Company
11	PKF Scientific Limited
12	Draegerwerk AG & Co.Kgaa,Germany
13	Pz Cusson Ghana Ltd
14	Asanteman Association (Belgium)
15	Rotary Club of Accra Labone
16	Divine Star Co. Ltd. Accra
17	Ministry of Health/Ghana Health Service
18	Akosua Newman
19	National Blood Service, Ghana
20	Medsinglong Global Group Co. Ltd, China
21	Novartis Pharmacy Ag, Switzerland
22	Image Consortium Limited
23	Herona Company Limited
24	Inchcape Shipping Services
25	Kessben Group of Companies, Kumasi
26	In God We Trust Charity Works
27	Mangel Clicks Company Limited
28	Tizman Link Ent
29	Angel Group of Companies
30	Controller and Accountant General 'department, Accra
31	Toyota Ghana
32	Mission Relief (Cotonou Direct International
33	Appasamy Associates
34	Bb Ncipd Ltd
35	Radiometer Medical Aps (Scan Health Systems Ltd)
36	Radiometer Medical Aps (Scan Health Systems Ltd)
37	Anna Karikari of United Kingdom
38	Macboafo Hand of Compasion
39	Bringham Women's Hospital (Boston Massachusetts) USA
40	Rotary Club of Kumasi
41	U.N.D.P.

BIOSTATISTICS UNIT

26

The Unit is responsible for the collection and management of health records in the hospital through traditional and electronic means.

The core mandate of the unit for the year under review was 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.

In the year 2017, the total workforce for the Unit was seventy-five (75). This comprised of three (3) Public Health officers, four (4) Biostatistics Officers, thirty-five (35) Technical Officers, nine (9) Biostatistics Assistant, seventeen (17) Technical Assistant and ten (10) other staff. Figure 91 shows the categories of staff that worked in the Unit during the period under review.

Staff of the Unit are distributed to the various directorates of the hospital and are supervised by the management team of the respective directorates. However, 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 the technical expertise for their respective duties. This is usually done through on-the- job training, in-house and external training workshops, and conferences. Figure 92 represents the staff in the various directorates/units.

FIGURE 91: CATEGORY OF STAFF, BIOSTATISTICS UNIT, 2017

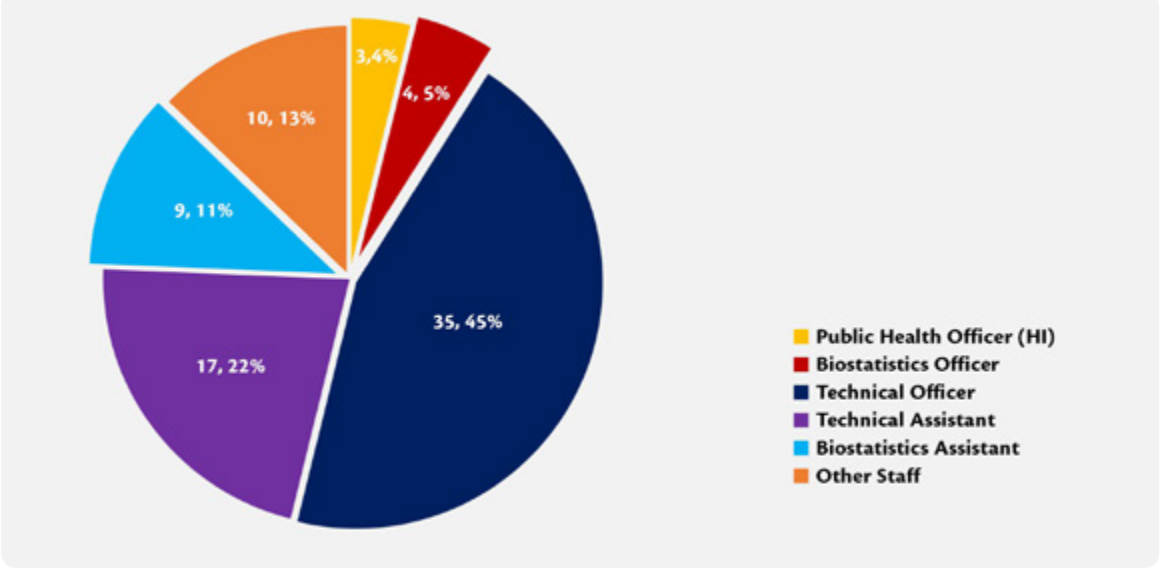
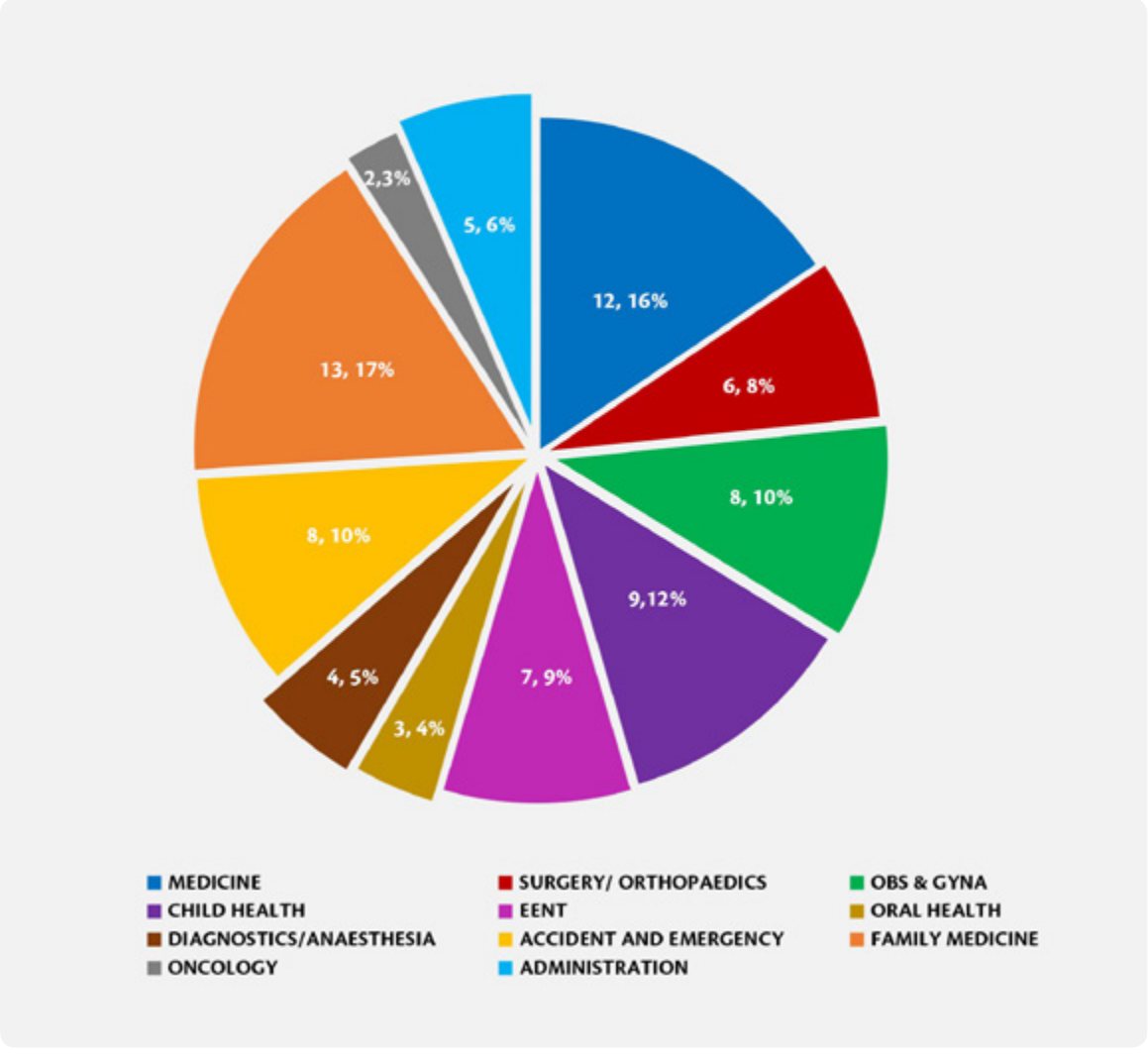


FIGURE 92: DISTRIBUTION OF STAFF TO THE DIRECTORATES, BIOSTATISTICS UNIT, 2017



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

ACHIEVEMENTS

- Scanning of patient's case notes is still on-going in the unit to help address issues of space for filing.
- Extension of HAMS network to some selected wards

SOCIAL WELFARE UNIT

27

The Social Welfare Unit of the Hospital provides psychosocial support to patients and other health workers in the hospital..

ACHIEVEMENTS

TABLE 38: ACHIEVEMENTS

NO	ACTIVITY	OUTPUT	RESULTS
1	**Conduct social investigations on the background of patients**	The background information of 2,489 patients were acquired	Out of this number, 1,889 patients were counseled, 175 were reunited with their family and 20 were sent to Children's home. Seventeen (17) patients were referred to DOVVSU and 9 were given financial support
2	**Contact patient relatives and trace defaulters**	1,986 patients and relatives contacted. 570 patients received support in payment of bills 175 patients reunited with family members 167 defaulters settled their bills	Patients were supported by relatives in the payment of their medical bills. Through this activity, patient relatives reunited with their relatives.
3	**Provide counselling services to patients and relatives**	1,889 patients and their relatives were counseled. The breakdown were as follows: 1,191 patients were counseled on the importance of registering for the National Health Insurance Scheme. 123 patients were counseled on Substance abuse 144 patients were also counseled on Burns and other domestic accidents 283 patients and their relatives were counseled on Sexual and reproductive health 28 patients on Disability/Deformities and 83 on Nutrition	Patients and their relatives were educated and empowered on various social issues.

4	**Write social enquiry reports to management to seek approval for waiver and installment payment of patients bills**	379 reports written for approval from management.	Approval received from management for patients to be discharged thereby reducing the length of stay. Approval secured for the admission of patients into homes for care and protection.
5	**Provide help to abandoned babies**	A total of 2 babies helped. The breakdown is as follows: 17 – Kumasi Children's Home 2 – New Life Home 1 – Save our life home	Babies given care and protection at the Kumasi Children's Home.
6	**Advocate for financial and material resources for needy patients**	The unit has initiated efforts to dialogue with NHIS managers and other corporate organizations to offer free registration for paupers.	Reduce patients' financial burden. Decrease in number of patients unable to pay their bills

CATEGORIES OF SOCIAL ISSUES HANDLED DURING THE YEAR 2015

TABLE 39: SOCIAL ISSUES HANDLED IN 2017

NO	ISSUE	OUTPUT	INTERVENTION
1	**Inability of patients to pay medical bills**	841 patients	235 patients – Installment 33 patients - Waiver 373 patients – Full payment 263 patients were supported by family members and through donations.
2	**Inability to afford drugs, non-drug consumables and other diagnostic services**	290 patients reported that they were unable to afford the cost of their drugs and other diagnostic services	12 patients were referred to LSF for support 5 patients were given free services and drugs 19 patients were supported by philanthropists 254 patients helped by family members and friends

3	**Patients abandoned/neglected by their families**	95 patients were neglected or abandoned by their relatives in the year 2017 as against 272 in the 2016.	23 of these patients were sent to approved orphanages and destitute home. 72 were reunited with their family members
4	**Patients discharged against medical advice**	42 patients were discharged against medical advice	All patients were counseled. Five (5) rescinded their decisions. The rest were discharged to go home.
5	**Unknown patients/relatives**	13 patients were declared unknown.	Four (4) of those patients died, 2 were referred to KATH Police and 7 were reunited with their families
6	**Victims of sexual and physical assault.**	17 patients	All patients were counseled and referred to DOVVSU for further action.
7	**Victims of burns and other domestic accidents**	193 patients	Patients, parents, caregivers and guardians were counseled on needs of safety precautions at home
8	**Illegal abortion**	13 patients	Patients were counseled on sexual and reproductive health as well as family planning
9	**Terminally ill patients**	207 patients	Patients were reassured and counseled.
10	**Persons with physical deformities/disability**	28 patients	Patients and their relatives were counseled.
11	**Teenage Pregnancy**	55 patients	Patients were counseled on sexual reproductive health as well as other family planning methods

28 INFORMATION COMMUNICATION TECHNOLOGY

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.

Table 40 below shows the ICT installed equipment in the year 2017.

TABLE 40: HARDWARE INFRASTRUCTURE (EQUIPMENT)

SERVER	WORK STATION	PRINTER	SCANNER	UPS	SWITCH	LAPTOP
5	**423**	141	13	333	68	21

In 2017, the ICT Unit undertook the following activities:

NETWORKING AND SOFTWARE ACHIEVEMENTS

System Security

In 2017, the Unit reconfigured the firewall system and upgraded the security software of the KATH IT system. Scans were done on all systems for system security of which 256 attacks were resolved.

System and Data Backup

A total data of 869.96 GB was backed up during the year 2017

System software

There were 35,761 updates done on various Microsoft Operating systems used in the hospital. There were 76 routine works on the windows servers.

STATUS OF HAMS SOFTWARE

The following modules of the HAMS software has been implemented

- Patient registration and Records Management (in /out patient)
- Consulting Room Management
- Ward Management
- Supply Chain Management.
- Pharmacy Management
- Pay group and Service Charge (Health Insurance Ready).

- Billing Management
- Asset Registry
- Human Resource Management and Pay roll Processing
- Family Medicine Directorate (Records, consulting rooms, wards, Pharmacy, Physiotherapy and Accounts)
- Oncology
- Health Insurance Unit
- Specialist OPD area (Records and pharmacy)
- Eye Centre (Records and Pharmacy)
- ENT (Records and Pharmacy)
- Medicine Management Unit
- Wards (Child Health, A&E and Family Medicine)
- ICT Unit

The HAMS database was also reconfigured with full system upgrade which has new features. There were eight maintenance works that was done on the HAMS system with 89 user related problems resolved.

NETWORKING

The following are the computer network engineering issues during the year under review.

1. Network Status

- 358 workstations and 5 servers were connected to the KATH LAN

2. Internet Services

- Internet Service Provider is Ecoband Ltd with a speed of 20MB
- 195 computers are connected to the Internet
- The internet service was worked on 5 times for its availability and fast service

3. Network Monitoring

- The DNS was pruned 8 times
- 5 Active directory related problems were resolved.
- 5465 network scan was done using vulnerability security software.

4. Website

The restructuring of the website is ongoing

5. Network Engineering

- 66 new accounts were created
- 450 maintenance works done
- Installation of a temporal network connection to the Family Medicine ward.
- Installation of a network connection at the Oncology block
- Extension of network connection to Accounts Block (Monitoring, Budget, Cash Office and IGF)
- Extension of network connection to the Cash Pharmacy
- 118 network points were added to the existing network
- There were about 179 Minor network related issues resolved

HARDWARE SUPPORT

Repairs and Maintenance on ICT equipment

The table below depicts the rate at which repairs were made on various ICT equipment reported faulty and the routine maintenance carried out during the period under review:

EQUIPMENT REPAIRED AND MAINTAINED

EQUIPMENT	FREQUENCY
System unit	487
Monitor	48
Printer	102
UPS	98
Network Switch	26
Laptop	21

New Installation and Replacement of equipment

Table 42 indicates the number of new equipment installed during the year 2017:

TABLE 41: NEW INSTALLATION AND REPLACEMENT OF EQUIPMENT

EQUIPMENT	NUMBER	REPLACEMENTS
System unit	50	22
Monitor	58	34
Printer	23	17
Ups	93	25
Switches	12	5
Laptop	5	1
Projector	3	1

OTHERS

Other activities carried out were the installation CCTV at the A&E Centre, Specialist OPD Pharmacy, Family Medicine Pharmacy, Main Administration and CSSD.

TRAINING

During the year under review, the following training programmes were done by the Unit:

- 348 staff were trained in the use of HAMS software
- 66 staff were trained on the use of the KATH mailing system
- Two (2) CPD training meeting was held for the Unit staff in the year under review

PUBLIC HEALTH UNIT

29

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 sections:

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

The Unit has a staff strength of 59 including 3 Counsellors. The health promotion team of the unit and other staff of selected directorates give health education at the Out-patient clinics of several directorates.

This report examines activities undertaken by the Unit during the period from January to December, 2017, including issues of public health importance in KATH not directly undertaken by the Public Health Unit.

TABLE 42: SUMMARY OF EXPECTED OUTPUTS AND RESULTS

ACTIVITY	EXPECTED OUTPUT	RESULTS
Conduct surveillance for diseases of PH importance	Data on diseases of PH importance Weekly notification of Regional Surveillance Team	Data on diseases of PH importance compiled. Weekly notificationto Regional Surveillance team done
Conduct mortality surveillance	Daily surveillance on deaths in KATH	Done
	Train Doctors and Public Health HI officers in ICD-10 coding and death certification	Training not done
Conduct bi-monthly surveillance meetings	Hold three (6) bi-monthly meetings	6 meetings held
Investigate all disease outbreaks and collaborate with all stakeholders to institute preventive and control measures	Investigation of all potential and confirmed outbreaks	Suspected Cases of epidemic prone diseases investigated: Suspected cases of meningitis, H1N1 Influenza AFP, measles, VHF cases were notified. 1 case of Rabies reported
Conduct laboratory surveillance	Information on infectious diseases from the laboratories	Lab information on suspected cases of meningitis, malaria, pneumonia obtained
Provide HIV counselling (before and after HIV test)	Provision of information on HIV and disclosure of results	2595 counselled pre-test, 2571 counselled posttest
Conduct daily HIV testing at the CT laboratory	Number of Blood samples tested for HIV	2593 clients tested. 1026 (39.5%) confirmed positive
Link HIV positive patients to clinical care	All HIV positive persons informed on clinical care services and linked to an ART Centre	970 clients linked to ART Centres at KATH Tafo Govt Hospital, Suntreso Govt Hosp, Kumasi South Hospital, KNUST Hospital and a few other ART Centres according to clients' choice.
Conduct Immunization for children under five years of age	To provide immunization for all children under 5 presented at the MCH	8040 given BCG 2173 given OPV3 2034 given PENTA3 2037 given PCV3 2316 given M/R 2432 Yellow Fever

Link HIV positive patients to clinical care	All HIV positive persons informed on clinical care services and linked to an ART Centre	970 clients linked to ART Centres at KATH Tafo Govt Hospital, Suntreso Govt Hosp, Kumasi South Hospital, KNUST Hospital and a few other ART Centres according to clients' choice.
Conduct Immunization for children under five years of age	To provide immunization for all children under 5 presented at the MCH	8040 given BCG 2173 given OPV3 2034 given PENTA3 2037 given PCV3 2316 given M/R 2432 Yellow Fever
Conduct immunization services for pregnant women	Provide Td for all eligible pregnant women	A total of 1850 doses given
Provide Hepatitis B immunization services for clinical staff	1000 staff screened 200 staff vaccinated	Not done Not done
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 who reported exposures (73 in number) were given HIV PEP
Conduct daily health promotion sessions at designated clinics and units in KATH	120 Daily health promotion sessions held	Total of 112 health education sessions held at Chronic Care clinic, Physiotherapy and Dialysis Centre
Fellowship Training for Public Health Doctors	Admission to the Ghana College of Physicians and Surgeons for Senior Residency Training	One doctor admitted for Fellowship training at GCPS.

DETAILS OF REPORT ON ACHIEVEMENT AND RESULTS

Disease Surveillance

This report examines activities undertaken by the Section during the period from January to December, 2017. This report reviews both communicable and non-communicable diseases.

NON-COMMUNICABLE DISEASES (NCDS)

Hypertension

One thousand three hundred and ninety-three (1393) new cases of hypertension were recorded during the year under review, a little over half of which were females (823; 59.1%). The majority of new hypertension cases (1071; 76.9 %) were recorded at Family Medicine OPD, 314 (22.5%) at the Internal Medicine Specialist Consulting Room and 8 (0.6%) at Child Health.

Diabetes

A total of 697 new cases of diabetes were recorded during the period under review. A little over half (398; 57.1%) of the cases were females. The Family Medicine OPD recorded 236(33.9%) new cases, Internal Medicine and Diabetic Clinic recorded 447(64.1%) cases whilst Child Health recorded 14(2.0%) cases.

Childhood Malnutrition

One hundred and thirty four (134) cases of malnutrition were recorded at the Child Health Directorate during the period under review. More than half 84(62.7%) were males and females 50(37.3%). The majority 129 (96.3%) of cases were children less than 5 years.

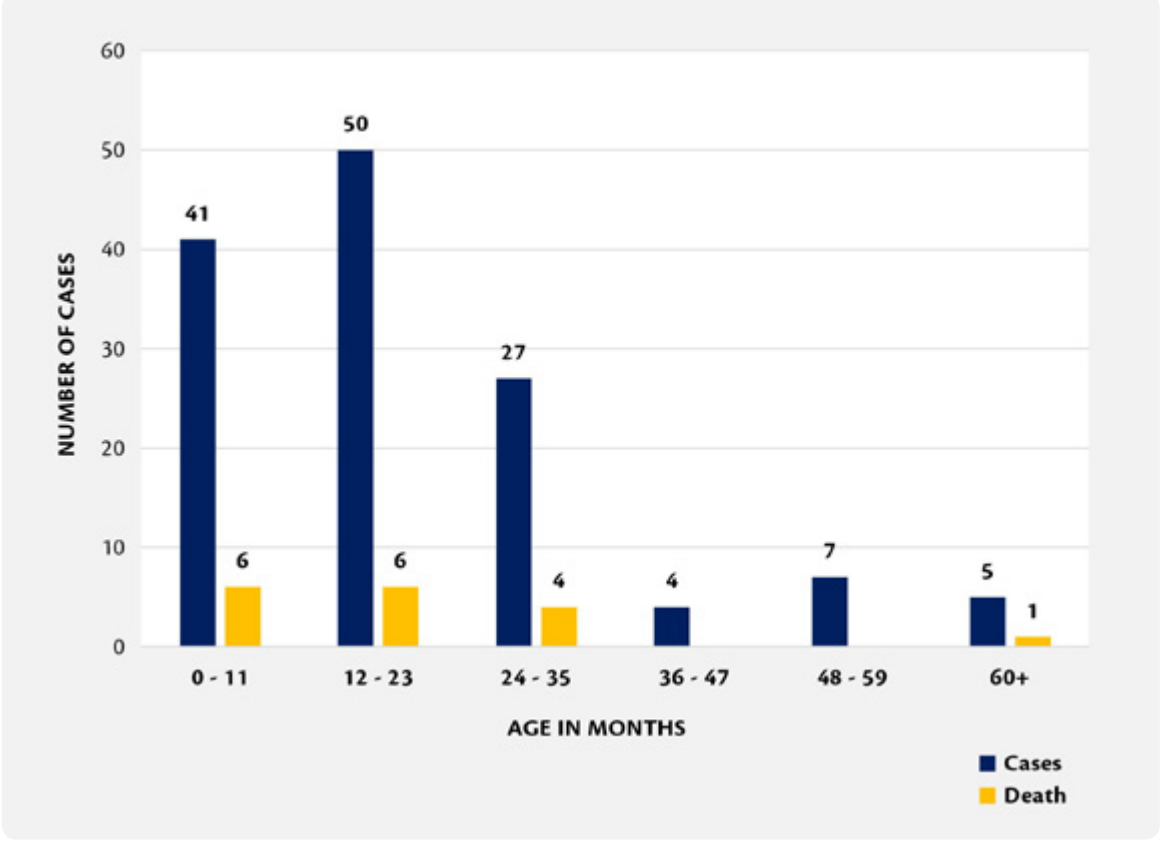
There were 17(12.9%) deaths due to malnutrition recorded during the period under review. The figure below illustrates the age distribution of malnutrition cases and attributable deaths by age group.

Malnutrition continues to be a major problem in children under-5, especially in infants and toddlers and contributes to worsening morbidity outcomes in such children. These figures likely represent moderate to severe cases of malnutrition and hence underestimate the true burden of all children who have some degree of malnutrition.

Haematological Malignancies

Ninety-nine (99) cases of haematological malignancies were confirmed through blood film studies. Females accounted for forty-nine (49) of the total cases, representing forty-nine percent (49%). Leukaemia was the most common presentation, accounting for 63.6% of cases (63 cases), most of which were acute leukemic states (35 cases). The remaining were Lymphomas (36 cases) with the majority being lymphoma in blastic transformation (19 cases).

FIGURE 93: CHILDHOOD MALNUTRITION CASES AND DEATHS BY AGE GROUPING, KATH, 2017



COMMUNICABLE DISEASES

Pneumonia in children under 5 years of age

Five hundred and two (502) cases of pneumonia in children under 5 years were recorded during the period under review. The majority (449; 89.4%) were admitted at the Child Health Directorate, with a little over 10% (53 cases) seen at the Family Medicine OPD. There were 265(52.8%) males and 237(47.2%) females. Children under 12 months accounted for more than half of cases (341; 67.9%).

In all, there were 40 (7.9 %) mortalities due to pneumonia during the period under review, and this was predominantly amongst infants (children aged <12 months).

The figure below illustrates prevalence and mortality by age group for Pneumonia in children <5 years at KATH for 2017.

Diarrhoea with dehydration in children under 5 years

In the period under review, there were 38 cases of diarrhoea with dehydration in children under 5 years managed at the Paediatric Emergency Unit. There were 24 (63.2%) and 14(36.8%) females. Four (4) deaths were recorded.

FIGURE 94: DISTRIBUTION OF PNEUMONIA CASES AND DEATHS BY AGE GROUP IN CHILDREN UNDER-5 YEARS, KATH, 2017

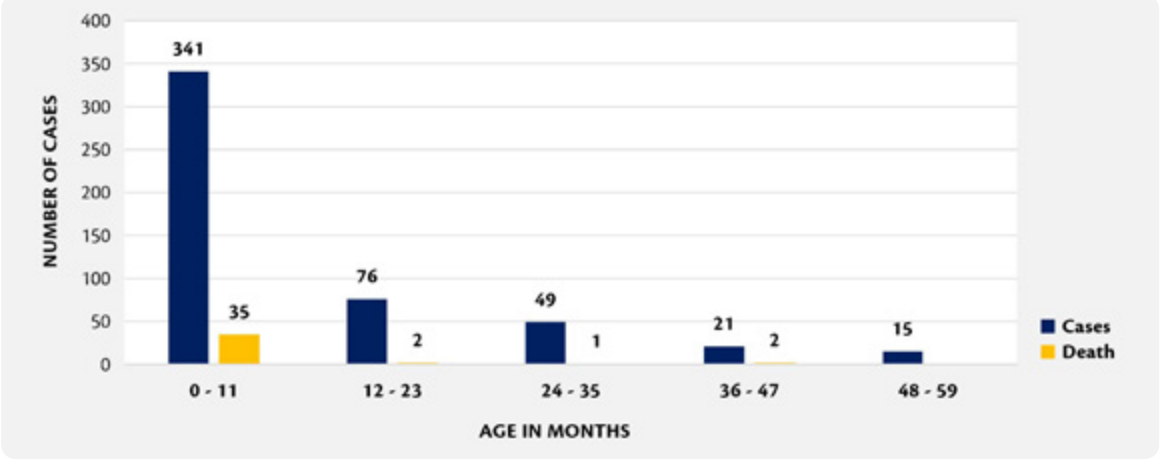
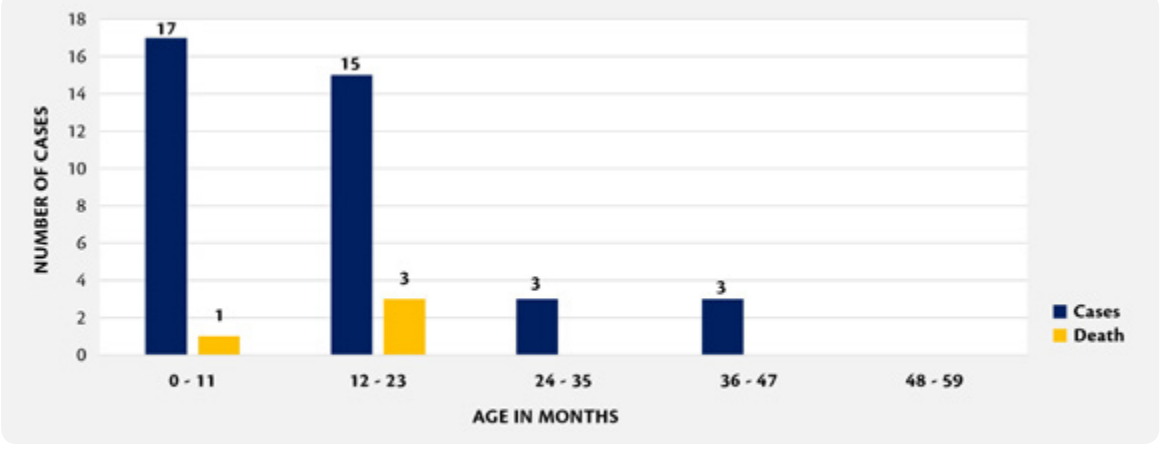


FIGURE 95: AGE DISTRIBUTION OF DIARRHOEA WITH DEHYDRATION CASES AND DEATHS IN CHILDREN UNDER 5 YEARS AT KATH, 2017



Viral hepatitis

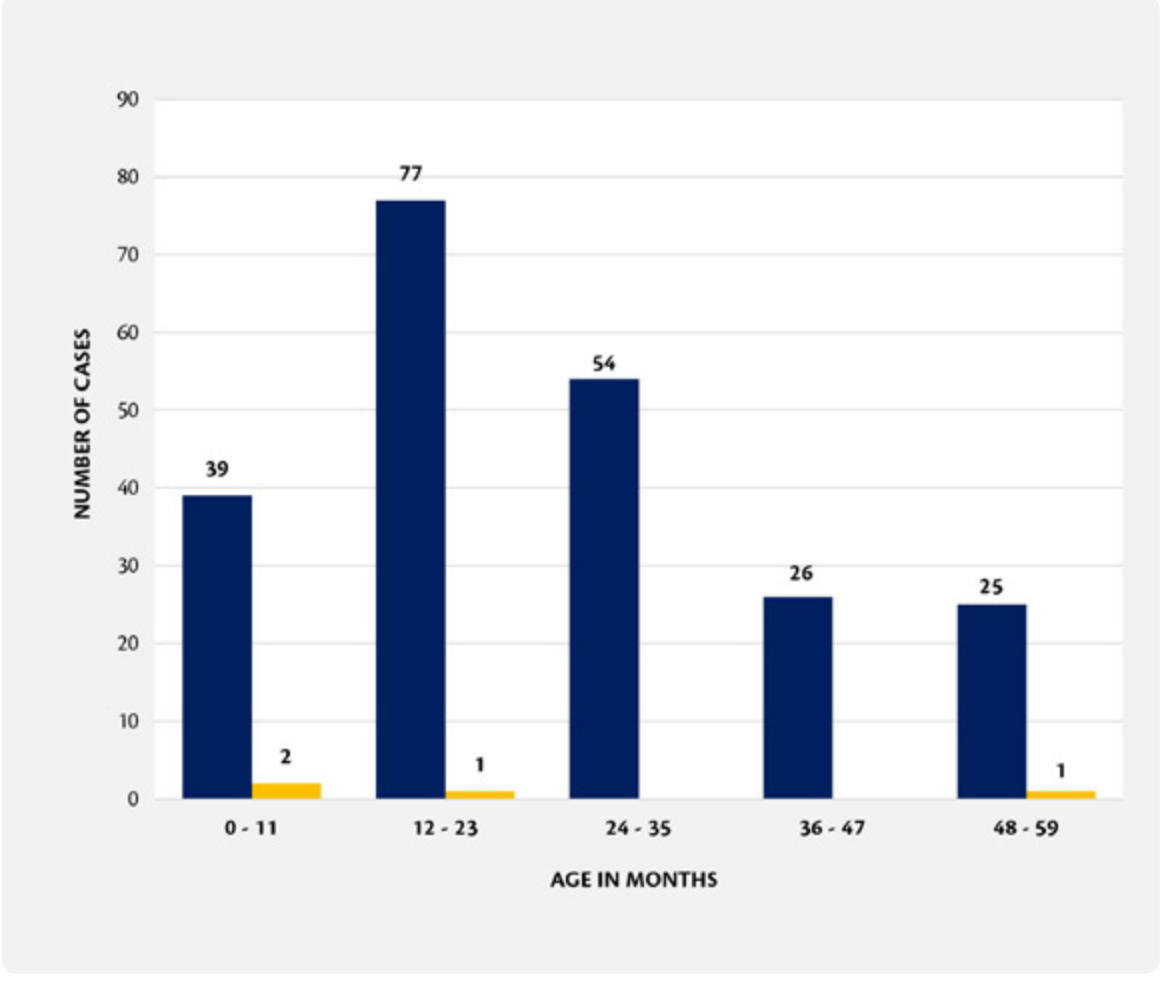
There were 269 new cases of viral hepatitis were recorded during the period under review, with majority being males (181; 67.3%. Most of the cases (197; 73.23%) were seen at Internal Medicine Specialist Consulting Room, 66(24.54%) at the Family Medicine OPD and 6(2.23%) at the Child Health Directorate. About a quarter of all new cases (69; 25.6%) required inpatient management.

Hepatitis B was the most prevalent viral hepatitis cases recorded, with 251 cases out of 269(93.3%) cases of viral Hepatitis recorded. Thirteen clients had hepatic complications at diagnosis; liver cirrhosis (7 cases) and hepatoma (6 cases). Hepatitis B/HIV co-morbidity was recorded in five patients.

Malaria in child under 5 years

A total of 221 cases of malaria in children under 5 years were recorded during the period under review with 136(62.0%) cases being males and 84(38.0%) being females. The majority of malaria cases in under-5s were admitted (155 representing 70%) whilst the remaining were managed on OPD basis. There were 4 deaths attributable to malaria in children under-5. Among the 155 cases admitted with severe malaria, 21 had cerebral malaria. Malaria was most common in children aged under two years as well as malaria deaths, as illustrated by the chart below.

FIGURE 96: MALARIA CASES AND DEATHS IN CHILDREN UNDER-5 YEARS, KATH, 2017

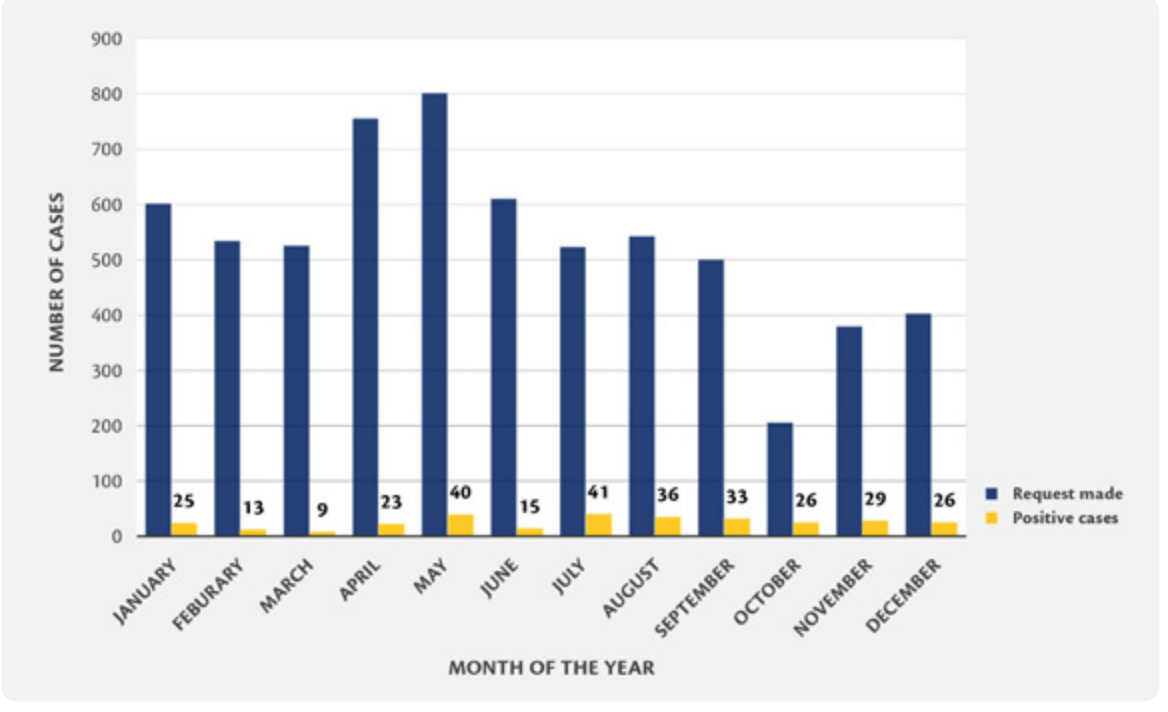


Malaria Laboratory Surveillance

For the year 2017, a total of 6,389 requests for microscopic malaria parasite examination were made out of which 316 (5%) were confirmed to have malaria parasites. Out of the 316, 108 cases (34%) occurred in children under five years. When grouped according to sex, 152 cases occurred in males and 144 cases in females.

The graph below shows the total requests by month and the proportion which turned out to be positive.

FIGURE 97: TOTAL REQUEST BY MONTH AND PROPORTION OF POSITIVES



The low rate of positive results, even by macroscopy is supportive of the suggested practice to Test, Treat and Track, rather than presumptive treatment of malaria as previously practiced.

Viral haemorrhagic Fever syndrome (VHF)

Six suspected cases of viral haemorrhagic fever syndrome were recorded during the period under review. They were four males and two females all residing in the Ashanti Region. Blood samples taken to Noguchi Memorial Institute for Medical Research (NMIMR) and Kumasi Centre for Collaborative Research (KCCR) tested negative for Ebola, Marburg, Lassa fever, Zika, Dengue fever and Yellow fever viruses. However, two deaths were recorded among the suspected cases. Notably, VHF was only a differential diagnosis and these two deaths were unlikely due to Viral Haemorrhagic Fever.

Acute Flaccid Paralysis (AFP)

Four case of acute flaccid paralysis were recorded during the period under review. There were two females and two males. There was a 6 year old male from Kokoben, 8 year old girl from Achiase, 13 year old boy from Effiduase-Asokore and a 14year old girl from Mfensi, all in the Ashanti region. Stool samples were collected and transported to the Noguchi Memorial Institute for Medical Research for investigation. No poliovirus was isolated in all four cases.

The Public Health Unit in collaboration with Ghana Health Service did 60-day follow-ups for 3 cases. All 3 were finally classified as 'discarded'. The last case occurred in late December and is pending 60-day follow up.

Measles

Eight suspected cases of measles were recorded during the period under review. There were five males and three females. The cases were an 8 month old female from Ahodwo, 9 month old male from Sepe, 12 month old female from Atimatim, 13 month old male from Amanfrom, an 18-month old female from Kronum, 23 month old male from Atwima Techiman, 40 month old boy from Pankrono and a 7 year old boy from Ahodwo all in the Ashanti region. Blood samples were taken to the National Public Health Reference Lab for investigation. All eight suspected cases tested Negative for Measles.

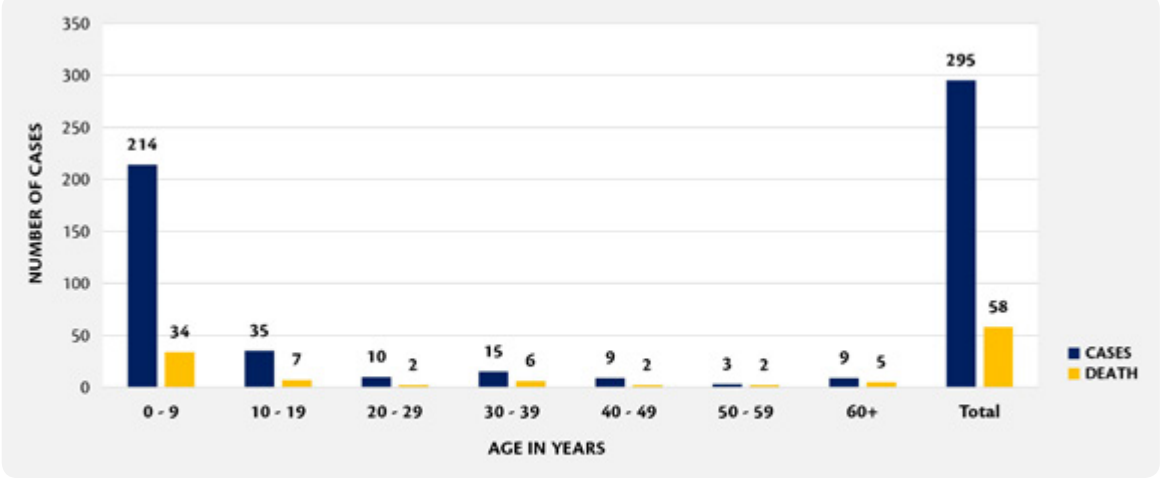
H1N1 Influenza A

The Public Health Unit coordinated the activities at the Highly Infectious Isolation Unit (HIIU) during the H1N1 influenza A outbreak at Kumasi Academy Senior High School. During the outbreak, a total of 17 H1N1 cases were admitted and managed at the HIIU. There were 11 (64.7%) males and 6 (35.3%) females. Throat swabs of 8 of these clients were taken to Kumasi Centre for Collaborative Research (KCCR) for investigations. Three cases out of the 8 tested positive to H1N1 (2009) strain. There was one death recorded.

Meningitis

A total of 295 cases of suspected meningitis were recorded during the period under review. The majority of cases (233; 79.0%) were seen at the Child Health Directorate, with 47(15.9%) seen at the Directorate of Medicine through the Accident and Emergency Unit and 15(5.1%) recorded at Family Medicine. Males were slightly more than females (56.9% versus 43.1%). More than half (167; 56.6%) of cases were seen in children less than 5 years old. There were 58 deaths among the suspected meningitis cases during the period under review (CFR= 19.7%) out of which 30 (51.7%) were in children less than 5 years. The figure below details meningitis cases and mortality by age group.

FIGURE 98: MENINGITIS CASES AND MORTALITY BY AGE



REPRODUCTIVE AND CHILD HEALTH (RCH)

As part of efforts to improve the quality of maternal and newborn care in the hospital, the Reproductive and Child Health (RCH) section of the Public Health Unit is committed to ensuring that children receive all required vaccines in the Expanded Programme on Immunization (EPI). The RCH section also conducts growth monitoring of children aged 6 weeks to 60 months and give health education, nutritional and reproductive counselling to mothers/guardians. The RCH also gives Tetanus-Diphtheria (Td) vaccination for pregnant women and Vitamin A supplementation for children aged 6 months to 5 years.

HEALTH EDUCATION

In line with the program of work of the Unit, the RCH conducts health education on daily basis for clients who assess services. Education is mainly on maternal and child health issues of public health importance. In the period under review, 245 health education sessions were conducted. The topics discussed were: importance of Child Welfare Clinic (CWC), Respiratory Tract Infections, Tuberculosis, Malaria and Diarrheal diseases, Personal and Home Hygiene, Home Accidents, Infectious Diseases and Safe Motherhood. Clients were also educated on the importance of family planning and the various methods were explained. Clients who expressed interest in family planning were counselled and were subsequently referred to the Family Planning Unit. Mothers were encouraged to avail themselves for cervical cancer screening. Clients were also informed on cervical cancer vaccination and its relevance duly explained.

IMMUNIZATIONS

A summary of the vaccine doses given in the Expanded Program on Immunization is presented in the table below. Comparing the number of children vaccinated in 2015 to the present year (2017), there was a slight reduction in some vaccine doses. There was a nationwide shortage of oral polio vaccine (OPV) from May till July, resulting in a significant dip in the numbers of children who were able to receive OPV during that period.

TABLE 43: TREND OF VACCINATIONS FROM 2015 TO 2017 AT KATH.

INDICATORS	2015	2016	2017
Number of Children vaccinated with BCG	10190	8,848	8040
Number of Children vaccinated with OPV 0	10179	9141	7142
Number of Children vaccinated with OPV 1	3651	3196	2840
Number of Children vaccinated with OPV 2	3264	2555	2173
Number of Children vaccinated with OPV 3	3076	2416	2173
Number of Children vaccinated with Penta 1	3691	3196	3388
Number of Children vaccinated with Penta 2	3386	2555	2182
Number of Children vaccinated with Penta 3	3090	2477	2034

Number of Children vaccinated with PCV - 1	3686	3021	3394
Number of Children vaccinated with PCV – 2	3388	2560	2184
Number of Children vaccinated with PCV - 3	3111	2420	2037
Number of Children vaccinated with Rotavirus - 1	3651	3196	3101
Number of Children vaccinated with Rotavirus - 2	3241	2555	2182
Number of Children vaccinated with Yellow Fever	2954	2116	2432
Number of Children vaccinated with Measles - Rubella	3221	2445	2316
Number of Children vaccinated with Measles – 2	2189	1501	2203
Number of Children vaccinated with Meningitis vaccine	-	290*	2203
Episodes of Td vaccinations among pregnant women			1,850

* *Men A vaccination started in November, 2016*

The decreasing trend in vaccinations follows the decreasing trend in deliveries in the hospitals. Out of 8450 live births at KATH, 6,719 received BCG. This implies that about 1,731 children (20.5%) were 'missed'. This is likely due to challenges in vaccinating some sick preterm babies, neonatal deaths occurring in the first 48 hours, non-availability of Cold Chain Refrigerator at A1 new born screening and babies who are born and discharged over weekends and holidays.

VITAMIN A SUPPLEMENTATION

A total of 10574 episodes of vitamin A administration were done in the period under review. The majority of recipients (78%) were children aged between 6 and 12 months old. Vitamin A supplementation is meant to be given at 6 monthly up to age 5. Very few children aged above 12 months are presented for Vitamin A supplementation, possibly a reflection of the few number of children who are brought to the MCH to continue growth monitoring once the vaccine series are completed.

LONG LASTING INSECTICIDE TREATED NETS (LLIN) DISTRIBUTION

As part of efforts to prevent malaria in children under five and malaria in pregnancy, the MCH distributes Long Lasting Insecticide Treated Nets (LLITN). Children who receive measles booster (given at 18 months) are given the nets. In all, a total of 1400 LLIN's were distributed in the year under review. This is less than the quantity issued last year (1863 administered in 2016). A brief shortage of LLINs coupled with transfer of some LLINs for distribution to new ANC registrants accounted for the dip in the total number of LLINs distributed at the MCH during 2017.

GROWTH MONITORING

A total of 4571 children were seen at the MCH the year under review for growth monitoring. One hundred and thirteen children (113) were found to be severely underweight, 72 were clearly malnourished and 33 had childhood obesity. These were referred to ward B4 for nutrition counselling and further management.

There was an increased male involvement in MCH visit. The section has adapted a policy to give priority to children with male partners present. This is to encourage male involvement in child welfare clinic attendance. A total of 541 males were actively involved in CWC in the year under review. This represents a four-fold increase compared to 138 males involved the previous year (2016).

The section also carries out inpatient outreach in search of children due for vaccination and children who have defaulted vaccine uptake due to being on admission themselves or their mothers. Overall, 100 children were captured in this initiative and had their vaccination status fully updated.

HIV TESTING AND COUNSELLING (HTC)

In 2017, a total of 2,595 clients reported at the KATH HTC section of the Public Health Unit with females constituting a majority (1,564; 60.27%).

The majority of patients were aged between 20 to 49 years, with a mean age of 35 years. The chart below shows the age distribution of clients presenting at the HTC section during 2017.

FIGURE 99: AGE DISTRIBUTION OF HTC CLIENTS, JANUARY TO DECEMBER, 2017

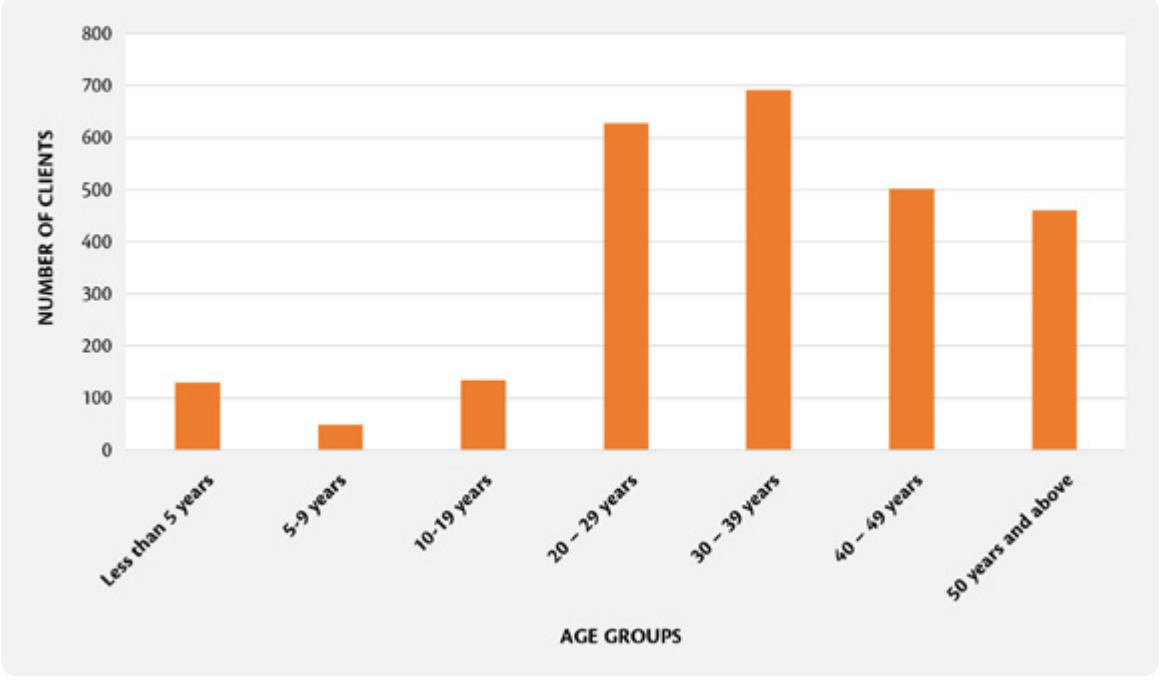


TABLE 44: CATEGORIES OF CLIENTS WHO REPORTED AT THE HIV TESTING AND COUNSELLING SECTION (HTC, KATH 2017)

TYPE OF CLIENTS	FREQUENCYN=2595	PERCENTAGE(%)
Requested by a clinician (A/D)	1859	71.6
Walk-in (A/W)	672	25.9
Post Exposure prophylaxis (PEP)	42	1.6
Rape/Defilements (CD)	5	0.2
Others	17	0.7
Total	2595	100.0

In the period under review, all clients presenting to the HTC section received pretest counseling.

A total of 2,593 clients consented to testing and 1026 (39.54%) tested positive for HIV.

A total of 2567 received post-test counselling at the Section. This means up to 28 clients were lost to post-test counselling. This is an improvement over the number of clients lost to post-test counselling during the previous year. However, this is still unacceptable and needs to be addressed.

Client who tested positive were referred to various Antiretroviral Centres based on their convenience and choice. Nine hundred and seventy (971) clients out of the total 1026 who tested positive were referred to various facilities for ARV therapy. The majority of the patients opted to access ARV care at the KATH Centre.

The most common referral centres are outlined in the table below.

TABLE 45: ARV FACILITIES TO WHICH HIV POSITIVE CLIENTS WERE REFERRED, JANUARY TO DECEMBER 2017

REFERRING FACILITY	NO OF CLIENTS (N=971)	PERCENTAGE (%)
Suntreso Government Hospital	98	10.09
KATH	439	45.21
Tafo Government Hospital	132	13.59
SDA Hospital, Kwadaso	39	4.02
Kumasi South Hospital	50	5.15
KNUST Hospital	37	3.81
Manhyia Hospital	17	1.75
Other facilities	159	16.37
TOTAL	971	100.00

PREVENTION OF MOTHER TO CHILD TRANSMISSION OF HIV

The Prevention of Mother to Child Transmission of HIV (PMTCT) programme is designed to enable the early detection, and initiation of interventions to protect the unborn baby from infection. As part of the global efforts to eliminate vertical transmission, the section provides HIV screening to all pregnant mothers as an integrated routine ANC service at KATH.

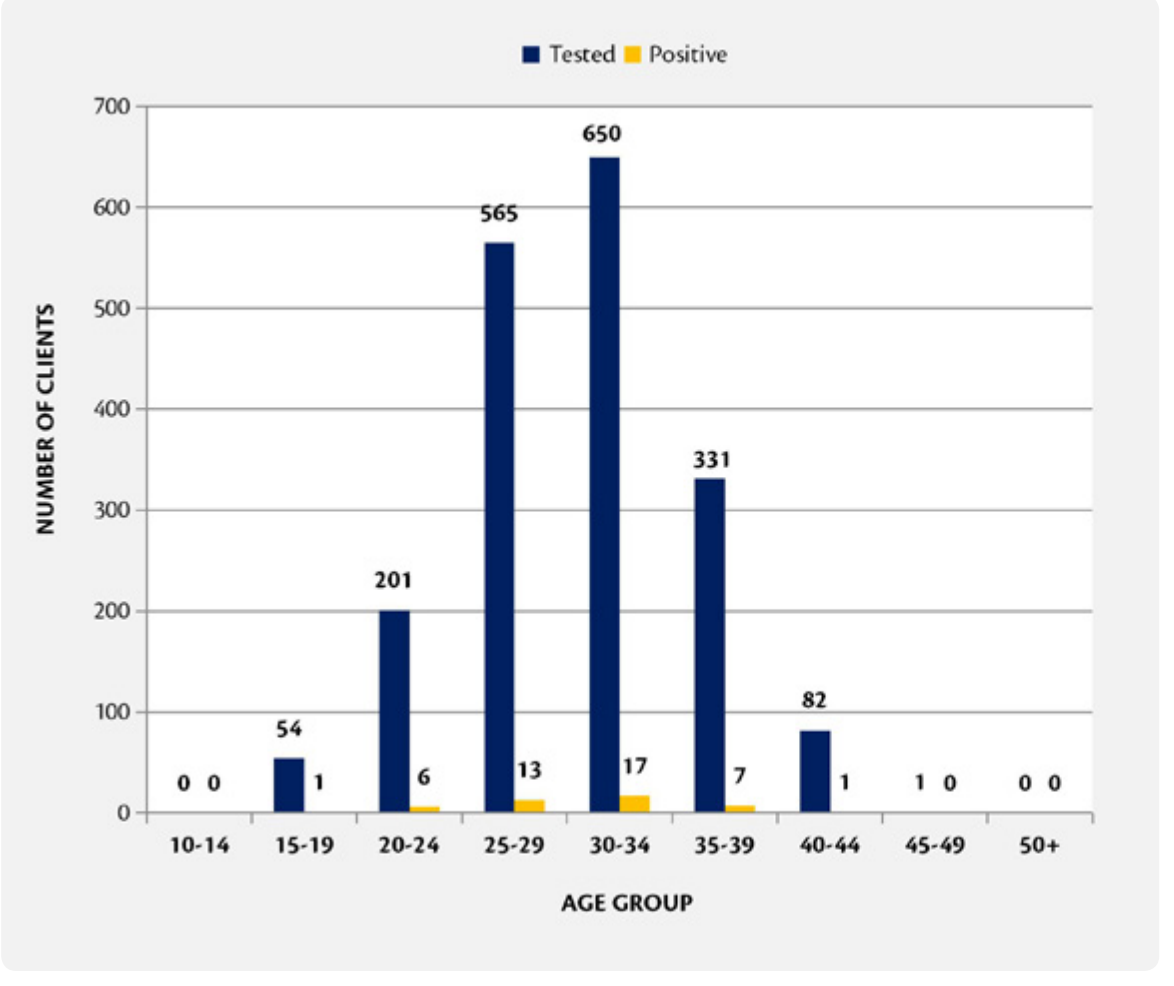
ANC REGISTRANTS

A total of 1169 mothers were newly registered at the ANC during 2017, a sharp decline from 1673 registrants recorded in 2016. The majority age group was 30-34 years, constituting 37.1% of all registrants, with teenagers accounting for only 1.4% of all registrants.

TESTING AND COUNSELLING

A total of 1884 mothers were tested and counseled for the year 2017. The number tested positive was 45(2.4%). Out of the total of 1884 mothers 34.5% fell within the age group 30-34years. The same age group recorded the highest number of positives 17(37.8%). The minimum and maximum recorded ages were 15 and 48years respectively, with an average age of 30.1years. A graphical representation of mothers tested and counseled is shown in the chart below.

FIGURE 100: DISTRIBUTION OF PREGNANT WOMEN TESTED AND POSITIVE RESULTS, BY AGE GROUPS, KATH ANC, 2017



TRENDS IN PMTCT TESTING AND RESULTS

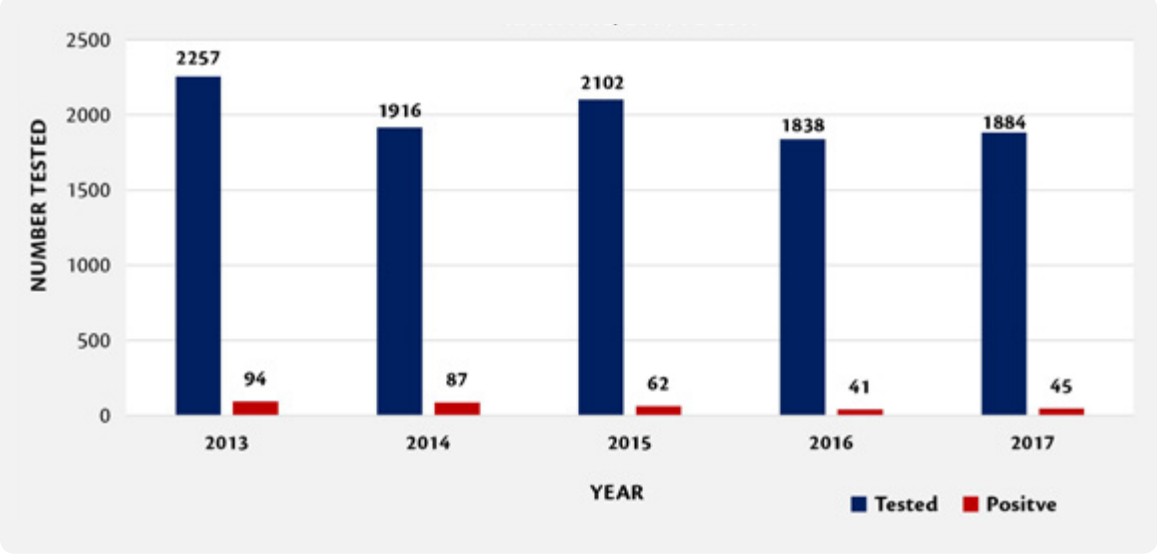
The year 2017 showed a less than significant increase (1.2%) in the number tested and counseled years from 2016. Comparatively, the year 2013 recorded the highest number (2257) and the lowest was in 2016 which recorded 1838. The number tested positive also slightly increased by 4.7% from 2016. However, in terms of the percentage tested positive, there has been an alternating rise-and-fall yearly trend from the year 2013 to 2017, which recorded 94(4.2%), 87(4.5%), 62(2.9%), and 41(2.2%) respectively. A representation of the yearly trend of mothers tested and the corresponding positives for HIV is shown in figure below.

MOTHERS ON ANTI-RETROVIRAL THERAPY (ARV'S)

During the period under review a total of 187 mothers were on ARVs. The number of mothers who were put on ARVs as antenatal clients were 95 (50. 8%) and post-natal clients were 25 (13.4%). Mothers who were already on treatment before pregnancy were 67 (35.8%).

The post-natal clients put on ARV's did not attend ANC at KATH but were referred for anti-retroviral services after delivery.

FIGURE 101: TREND NUMBER OF PREGNANT WOMEN TESTED AND POSITIVE RESULTS FOR HIV, KATH ANC, 2013 TO 2017



HIV EARLY INFANT DIAGNOSIS

As at the close of 2017, a total of 134 dry blood spot samples were taken for PCR. A total of 111 results were received from the laboratory during the year with 15 positive results. Of all exposed babies who tested positive, only 3 mothers were taken through the complete PMTCT protocols at KATH (pregnancy till 6 weeks after birth). The remaining 12 were later referrals from other centers. There is the need to strengthen PMTCT services at the peripheries in order to ensure prompt referral of exposed mothers or adequate treatment. The table below gives a 5-year trend of EID screening and results for exposed babies.

TABLE 46: TREND OF EID TESTS AND RESULTS FOR HIV EXPOSED INFANTS, KATH, 2013 TO 2017

YEAR	NO. SCREENED	NO. POSITIVE	PERCENTAGE
2013	187	5	2.7
2014	142	4	2.8
2015	146	6	4.1
2016	165	11	6.7
2017	111	15	13.5

POST EXPOSURE PROPHYLAXIS (PEP) OF HIV

75 clients received HIV post-exposure prophylaxis.51 of these were KATH staff, 15 were health workers from other facilities and 9 were sexual assault/defilement cases.

Out of the 51 KATH staff, 26 were nurses, 16 were doctors, 4 were orderlies and 5 were other categories of staff.

TABLE 47: CATEGORIES OF EXPOSURE TO BODY FLUIDS AMONG CLIENTS WHO RECEIVED PEP IN KATH, JAN – DEC 2017

EXPOSURE TYPE	FREQUENCY	PERCENTAGE
Splash of body fluids on skin	5	6.7
Mucocutaneous exposure	8	10.7
Injury with solid needle	11	14.6
Superficial injury	6	8.0
Injury with hollow needle	30	40.0
Deep and extensive injury	4	5.3
Sexual assault	9	12.0
Missing data	2	2.7
TOTAL	75	100

HEALTH PROMOTION

Health promotion and education is an essential component of the health system, but it is often relegated to the background in most health institutions.

Health promotion aims at improving good health and preventing diseases among individuals and groups by influencing the beliefs, attitudes and behaviour of those with power and the community as a whole.

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

The Health Promotion section under the Public Health Unit has the mandate to conduct regular health education at KATH to create awareness on pertinent public health issues.

During the year, the Health Promotion Unit carried out a number of activities across the Hospital including daily health education for patients and relatives, staff education and celebration of notable WHO days with some partners.

Specific public health issues treated included Diabetes, Hypertension, Hepatitis, Cholera, Malaria, Family Planning and Cervical Cancer. A total of 112 health education sessions were held at Chronic Care Clinic, Physiotherapy and Dialysis Centre.

SECURITY UNIT

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BACKGROUND

The Security Unit aims at providing excellent safety and security services for staff, patients, visitors and properties of KATH.

PERSONNEL DEPLOYMENT

During the yearunder review, the Unit adopted strategic personnel deployment methods based on level of risk assessed for various locations due to inadequacy of guard force and the architecture of the hospital.

OUT-SOURCED SECURITY

In 2017, Mabot Security Services Limited and First Watch Security Services (a new provider) took over security services at some staff residences.

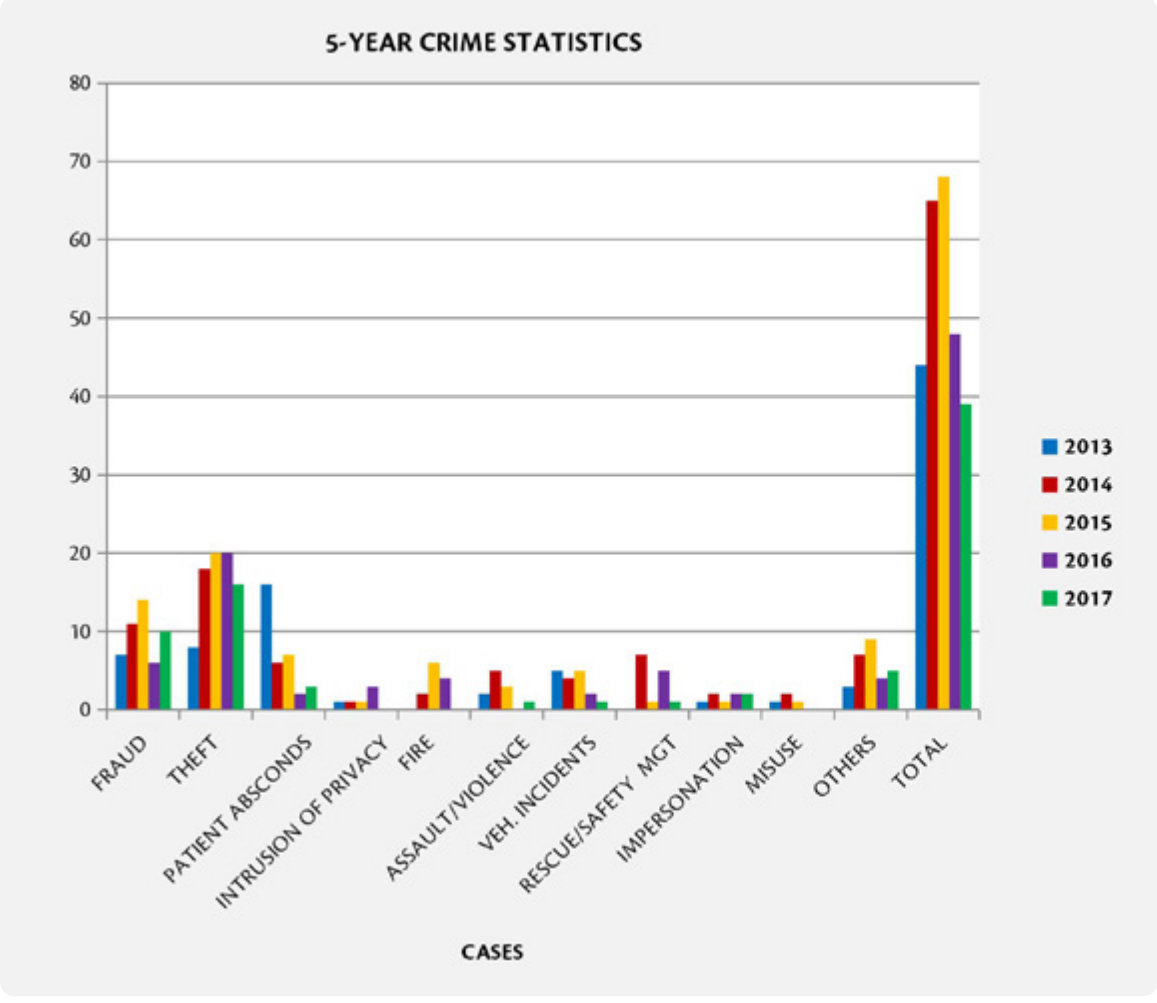
CASES RECORDED AND TACKLED

The Security Unit recorded and tackled 39 cases in the year 2017 which involved the following:

- Fraud
- Theft
- Patient Absconding
- Intrusion Of Privacy
- Fire
- Assault/Violence
- Vehicular Incidents
- Rescue/Safety Management
- Impersonation
- Misuse
- 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. Figure 103 is the trend of cases from 2013-2017.

FIGURE 102: TREND OF CASES FROM 2013-2017



From the chart above, fraud, intrusion of privacy and patient absconds cases recorded in the year 2017 increased slightly compared to the previous year figures. Theft cases reduced during the year under review as a result of prudent measure put in place by the Security Unit. Cases of theft recorded were all theft of properties of staff and clients. Generally, there were reductions in the number of cases recorded which were partly due to perception of detection measures put in place by the security.

Additionally, good cooperation was received from general staff over the period as they continued to play vigilante roles by reporting cases and suspicious activities as a result of the enhanced security policies and measures put in place.

Asset identification and classification were done in collaboration with the Asset Registry of Technical Services in 2017.

CHALLENGES AND MITIGATION STRATEGIES

31

High Institutional Maternal and Neonatal Mortality

- Undertaking of Outreach support programmes
- Improving communication systems b/n KATH and Peripheral Institutions

Inadequate and ageing infrastructure, vehicles and equipment such as Oxygen Plant, diagnostic equipment, Cobalt machine, Laundry and CSSD equipment, and associated high maintenance costs

- Continue Lobbying MOH for replacement of obsolete equipment and machinery (Radiology, Oncology, Laundry, CSSD).
- Replacement of obsolete equipment especially oxygen plant
- Look for donor support in the area of equipment and renovation of buildings
- Intensify planned preventive maintenance activities

Accommodation for House officers and Residents (High cost of Rent)

- Construction 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.

Ageing vehicles

- The hospital requires additional vehicles to operate efficiently

Delay in full implementation of HAMS

- Speed-up the deployment of the Hospital Administration and Management Software (HAMS) which will data collection and records keeping
- Explore LHIMS:
  (Lightwave Health Management Information System) now

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 individual to support patients who are not able to pay their bills

Inadequate clinical staff, particularly in Pharmacy, Diagnostics (Radiology and Laboratories) and Transfusion Medicine

- Continuous discussion with Ministry of Health for financial clearance to recruit

SUMMARY ACTIVITIES/ PROJECTS FOR THE YEAR 2018

- 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 HAMS software
- Support staff in sub-specialty training programme
- Continue dialogue with Insurance Authority to reduce the delays in the payment of claims and provide realistic tariff.
- 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 and transport facilities to support healthcare delivery
- Continue efforts in securing the necessary funds for the completion of children and maternity block
- Sustain activities to reduce mortalities (especially maternal and neonatal deaths) and improve general care outcomes

KATH **ANNUAL REPORT 2017**

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