

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES



ANNUAL REPORT

2015/2016

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES



ANNUAL REPORT 2015/2016

Table of Contents

List of Figures	ix
List of Tables	x
List of abbreviations	xii
Members of the University Council	xvii
University Management	xix
Foreword	xvi
1.0 Introduction	1
2.0 Vision, Mission and Functions of the University	1
2.4 Schools Institutes and Directorates	2
3.0 Teaching and Learning	3
3.1 Academic Programmes	3
3.2 Student Admissions	3
3.3 Students Enrollment During from 2011/2012 to 2015/2016	5
3.4 Performance in Examination During 2015/2016	6
3.5 Students Output	9
3.6 Graduation Ceremony 2015	10
4.0 Reports from Schools and Directorates	11
4.1 School of Medicine	11
4.1.1 Introduction	11
4.1.2 Student Registration	12
4.1.3 Teaching and Assessment of Students:	13
4.1.4 Graduation Ceremony	18
4.1.5 Research and Non-research collaborations	19
4.1.6 Services and Consultancies	22
4.1.7 Governance issues in the School	23
4.1.8 Staff Promotions, Retirement and Transfers	27
4.1.9 Miscellaneous	32
4.2 School of Dentistry	33
4.2.1 Introduction	33
4.2.2 Activities During the Reporting Period	34
4.2.3 Management Profile During the Reporting Period	35
4.2.4 Staff Matters	36
4.2.5 Students Matters	36
4.2.6 External Examiners	37
4.2.7 Graduation Statistics	38
4.2.8 Major Ongoing Research	38
4.2.9 Major Works Implemented During 2015/2016	38
4.2.10 MUHAS - MNH Cooperation and Clinical services	39
4.2.11 Visits	39



4.3	School of Pharmacy	40
4.3.1	Introduction	40
4.3.2	Highlights of Major Achievements and Challenges	40
4.3.4	Research and Publications	44
4.3.5	Five year Rolling Strategic Plan 2014/15 - 2018/19	44
4.3.6.	Consultancy and public services	45
4.3.7	Challenges Faced by the School during the reporting year	46
4.4	School of Nursing	47
4.4.1	Introduction	47
4.4.2	Highlights of Major Achievements and Challenges	49
4.4.3	Human Resource Development in the School of Nursing	52
4.5	School of Public Health and Social Sciences	54
4.5.1	Introduction	54
4.5.2	Programmes	54
4.5.3	Workshops/Meetings Attended	54
4.5.3	Teaching	57
4.5.4	Short Courses	57
4.5.5	Links	57
4.5.6	Research and Research Projects	58
4.5.7	Consultancy	60
4.5.8	Service Provision	60
4.5.9	Staff Recruitment	60
4.6	Institute of Allied Health Sciences	62
4.6.1	Introduction.	62
4.6.2	Student Enrolment and Academic Programmes	62
4.6.3	Student Admission	62
4.6.4	Teaching Staff Recruitment and Development.	62
4.6.5	Administrative and Technical Staff Recruitment and Development	63
4.6.6	Research and Publications	63
4.6.7	Consultancy and Public Service	63
4.6.8	Curricula Revision Progress	63
4.6.9	Rehabilitation of Nurses Hostel Blocks 26 and IAHS main Building	63
4.6.10	Improvement of Cafeteria Accommodation Services at Nurses Hostel	64
4.6.11	Improvement of Boarding Services at Nurses Hostel	64
4.6.12	Constraints Facing the Institute	64
4.7	Institute of Traditional Medicine	65
4.7.1	Highlights of Activities Implemented in 2015/2016	65
4.7.2	Students' Matters	66
4.7.3	Research and Publications	67
4.7.4	Consultancies and Public Services	68
4.7.5	Staff Development	69
4.7.6	Procured Items, Work and Services	69

4.7.7	Infrastructure Development	70
4.7.8	Workshop and Conferences	70
4.7.9	Finances and Investment Activities	71
4.7.10	Visitors to the Institute	72
4.7.11	Key Challenges to the Institute	73
4.8	Directorate of Postgraduate Studies	74
4.8.1	Introduction	74
4.8.2	Enrolment into Postgraduate Programmes	74
4.8.3	Students Research	75
4.8.4	Postgraduate Selection	75
4.8.5	Examinations Results	75
4.8.6	Examinations Results	76
4.8.7	New Programmes	77
4.9	Directorate of Planning and Investment – Muhimbili Campus	78
4.9.1	Introduction	78
4.9.2	Consultancy and Services	78
4.9.3	Evaluation of the Implementation of the University and Unit Specific Strategic plans	78
4.9.4	Promotion of University Activities	79
4.9.5	Redevelopment of Muhimbili campus student hostels	80
4.9.6	Resource Generation	80
4.9.7	MUHAS Investment Holding Company	80
4.10	Directorate of Planning and Investment – Mloganzila Campus	81
4.10.1	Introduction	81
4.10.2	Construction of Basic Infrastructure at Mloganzila	81
4.10.2	Construction of Academic and Support Facilities	85
4.10.3	Supplying and Installation of Medical Equipment in MAMC	85
4.10.4	Visitors to the Site	86
4.10.5	Technical Support for Operationalization of MUHAS Medical Center at Mloganzila	91
4.10.6	Establishment of the Centre of Excellence in Cardiovascular Sciences at Mloganzila	92
4.11	Directorate of Research and Publication	95
4.11.1	Introduction	95
4.11.2	Organizational Matters	95
4.11.3	Capacity Building	95
4.11.4	Policies and Guidelines	96
4.11.5	Research Management	96
4.11.6	Research Dissemination	98



4.12.	Directorate of Undergraduate Education	99
4.12.1	Introduction	99
4.12.2	Students Admission for the Year 2015/2016	99
4.13	Directorate of Information Communication Technology	101
4.13.1	Introduction	101
4.13.2	Internet and Network Infrastructure	101
4.13.3	Information Systems Implementation and Support	103
4.13.4	Practical Training and Internship	105
4.13.5	Collaboration, Research and Publication Activities	105
4.13.6	Staff development	105
4.13.7	ICT User Support	105
4.14	Directorate of Library Services	107
4.14.1	Introduction	107
4.14.2	User Needs	107
4.14.3	Collection Development	107
4.14.4	Teaching and Learning	111
4.14.5	Continuing Professional Development Programmes	112
4.14.6	Staff Development	115
4.14.7	Resource Mobilization	116
4.14.8	Research and Publications	117
4.15	Directorate of Continuing Education and Professional Development	119
4.15.1	Introduction	119
4.15.2	CPD Courses and Quality of Teaching and Learning	119
4.15.3	Accreditation of CPD Courses	120
4.15.4	The 4 th MUHAS Scientific Conference	120
4.15.5	Quality Control and Assurance	123
4.15.6	Infrastructure Development and Income Generation Activities	123
4.16	Directorate of Quality Assurance	124
4.16.1	Introduction	124
4.16.2	Achievements	124
4.17	Dean of Students Office	127
4.17.1	Introduction	127
4.17.2	Students' Affairs	127
4.17.4	Hostel Maintenances	129
4.17.5	Cafeteria Services	130
4.17.7	Students' Leadership and Governance	131
4.17.8	Security Issues at the Hostels	131
4.17.9	Special Events and Recreational Activities	132
4.18	Directorate of Estates	135
4.18.1	Introduction	135
4.18.2	Work Projects	135
4.18.3	Service Projects	137

4.19	Directorate of Human Resources Management and Administration	140
4.19.1	Introduction	140
4.19.3	Activities and Achievements	140
4.19.4	Scheme of Service for Academic Staff.	141
4.19.5	Scheme of Service for MAMC	141
4.19.6	Organizational Structure For MAMC	141
4.19.7	Client Service Charter	141
4.19.8	Code of Ethics and Conduct For Staff	141
4.19.9	Integrity Pledges by Public Servants	142
4.19.10	Staff Training and Development.	142
4.19.11	Management and Leadership Training	143
4.19.12	Promotions.	143
4.19.13	Retirements	144
4.19.14	Staff Turnover and Retention.	144
4.19.15	Staff Disciplinary Issues.	144
4.19.16	Staffing in the Directorate of Human Resource Management and Administration.	144
4.20	External Relations Unit	146
4.20.1	Elective Study Activities	146
4.20.2	Student Exchange	149
4.20.3	Logistics Support	150
4.20.4	Income from Elective Studies	150
4.20.5	Other Developments	150
4.21	Directorate of Finance	151
4.21.1	Introduction	151
4.21.2	Audited Accounts	151
4.21.3	Audited Financial Statement for 2015/2016	152
4.21.4	Temporary Employees	156
4.21.5	Challenges	157
	Appendix 1: List of Research Projects during 2015/2016	158
	Appendix II: Summary of papers published by staff during the reporting period	168



List of Figures

Figure 1:	Admission of Diploma Students from 2011/2012 to 2015/2016	3
Figure 2:	Admission of Undergraduate Students from 2010/11 to 2015/16	4
Figure 3:	Admission of Postgraduate Students from 2011/2012 to 2015/2016	5
Figure 4:	Enrollment of Diploma, Undergraduate and Postgraduate Students from 2011/2012 to 2015/2016	6
Figure 5 :	Performance of Diploma Students in 2015/2016 Examinations	7
Figure 6:	Performance of undergraduate Students in Examinations in 2015/2016	8
Figure 7:	Performance of Postgraduate Students in examinations in 2015/2016	8
Figure 8:	Output of Diploma, Undergraduate and Postgraduate Graduands from 2011/2012 to 2015/2016.	9
Figure 9:	Diploma, Undergraduate and Postgraduate Graduates by Sex (2015 Graduation Ceremony)	10
Figure 10:	Performance of first and second year MD students in 2014/15 and 2015/16	15
Figure 11:	Percentage pass, fail and not yet completed for semester 5 MD programme 2015/2016	16
Figure 12:	Performance of BSc RTT Students, Year 1-3 in 2015	16
Figure 13	Performance of BMLS years 1-3 in 2015	17
Figure 14:	Performance of BMLS students in 2015/16	18
Figure 15:	Graduates from the SOM by programme in 2014/15 and 2015/16	18
Figure 16:	Distribution of staff in the SOM by sex and academic rank in 2015/16	23
Figure 17:	Academic staff distribution by sex and age July 2016	23
Figure 18:	Distribution of School staff by sex and academic qualifications, July 2016	24
Figure 19.	Undergraduate enrollment in the SON from 2007/08 - 2015/16 by sex	47
Figure 20.	Postgraduates enrolment in the SON from 2007/08 – 2015/16 by sex.	48
Figure 21:	Academic staff of SON by sex in 2015/16	48
Figure 22:	Number of ICT related problems attended by DICT	106
Figure 23:	One of the DICT Computer Laboratories	106

List of Tables

Table 1: Members of the University Council during 2015/2016	xiv
Table 2: Summary by programme and sex of registered students	13
Table 3: Staff – Tstudent Ratios in the School of Medicine per department	25
Table 4: Academic Staff Appointed in 2015/16	29
Table 5: Elective students registered by the School in 2015/16	31
Table 6: Departments of the School of Dentistry and their Core functions	35
Table 7: The Management Team of the School of Dentistry.	35
Table 8: Number of Academic staff.	36
Table 9: Number of Administrative, Technical and Support Staff	36
Table 10: Enrolment of Undergraduate Students	37
Table 11: Enrolment of Postgraduate Students, School of Dentistry	37
Table 12: Graduation Statistics for Undergraduates and Postgraduates	38
Table 13: Admission of postgraduate students in 2015/2016	41
Table 14: B.Pharm. Students enrollment in 2015/2016	41
Table 15: Postgraduate Students Admission in 2015/2016	41
Table 16: Student performance in examinations at first sitting	42
Table 17: Postgraduate Student performance	43
Table 18: Academic staff training	44
Table 19: Internally generated income and Institutional Overheads	45
Table 20: The Management Profile School of the Nursing	48
Table 21: Admission of Students, School of Nursing in 2014/15 and 2015/16 by sex	49
Table 22: Graduands in 2014/15 and 2015/16 by sex	50
Table 23: Number of international travels versus local travels 2015/2016	52
Table 24: Students Admission, Enrollment and Achievements - Institute of Traditional Medicine	66
Table 25: New and Ongoing Research Projects for ITM	67
Table 26: Enrolment of Postgraduate students in 2015/2016 2015/2016	75
Table 27: Applicants recommended for admission into postgraduate studies	76
Table 28: Students' Performance in the end of the year examination	76
Table 29: Postgraduate graduands by gender	77
Table 30: Summary of the proposals submitted for review:	97
Table 31: Total number of Undergraduate candidates selected and registered	100
Table 32: Usage statistics for online databases subscribed by MUHAS library	108
Table 33: Institutional Repository Usage Statistics	109
Table 34: Library Website Usage Statistics	110
Table 35: Usage of Computer Laboratory	110
Table 36: Library circulation statistics	111



Table 37: List of workshops for staff conducted by the Library	112
Table 38: List of Postgraduate and Undergraduate students workshops conducted by the Library	114
Table 39: Undergraduate students workshops conducted by the Library	114
Table 40: Status of staff on training during 2015/16.	142
Table 41: Staff Promotions during 2015-2016	143
Table 42: Staff Recruitments in the Directorate	145

List of abbreviations

AIDS	Acquired Immunodeficiency Syndrome
AfDB	African Development Bank
AGCT	Alliance for Global Clinical Training
AOR	Authorized Organization Representative
BMLS	Bachelor of Medical Laboratory Sciences
B.Pharm	Bachelor of Pharmacy
BSc	Bachelor of Science
BScN	Bachelor of Science in Nursing
BSc EHS	Bachelor of Science Environmental Health Sciences
BSc RTT	Bachelor of Science in Radiation Therapy Technology
CBE	College of Business Education
CHPE	Centre for Health Professions Education
CEPD	Continuing Education and Professional Development
COTUL	Consortium of Tanzania University and Research Libraries
CIRCLE	Climate Impact Research Capacity and Leadership Enhancement
COSTECH	Tanzania Commission for Science and Technology
CV	Curriculum Vitae
CVCPT	Committee of Vice Chancellors and Principals in Tanzania
DEHS	Diploma in Environmental Health Sciences
DMLS	Diploma in Medical Laboratory Sciences
DN	Diploma in Nursing
DNA	Deoxyribonucleic acid
DCEPD	Directorate of Continuing Education and Professional Development
DRP	Director of Research and Publication
DDS	Doctor of Dental Surgery
DICT	Directorate of Information and Communication Technology
DLS	Directorate of Library Services
DNS	Domain Name Server
DOS	Dean of Students
DUE	Director of Undergraduates Education
DVC	Deputy Vice Chancellor
DVC-PFA	Deputy Vice Chancellor Planning Finance Administration
FYRSP	Five Year Rolling Strategic Plan
HIS	Health Information System
HEI	Higher Education Institution
HESLB	Higher Education Students Loans Board
HKMU	Hubert Kairuki Memorial University
HIV	Human Immunodeficiency Virus



HCMIS	Human Capital Management Information System
HR	Human Resource
HRH	Human Resource for Health
HRMA	Human Resource Management and Administration
HSR	Health System Research
IAHS	Institute of Allied Health Sciences
IRB	Institutional Review Board
ICT	Information and Communication Technology
IP	Internet Protocol
IRIM	Initiative on Research and Innovation Management
IT	Information and Technologies
ITM	Institute of Traditional Medicine
IUCEA	Inter-University Council of East Africa
KOFIH	Korea Foundation for International Health
KCMCo	Kilimanjaro Christian Medical College
MAMC	Muhimbili Academic Medical Centre
MD	Doctor of Medicine
MMed	Master of Medicine
MPharm	Master of Pharmacy
MNH	Muhimbili National Hospital
MPL	Multipurpose Laboratory
MoH&SW	Ministry of Health and Social Welfare
MoEVT	Ministry of Education and Vocational Training
MEC	MUHASSO Electoral Committee
MUHAS	Muhimbili University of Health and Allied Sciences
MUHASSO	Muhimbili University of Health and Allied Sciences Student Organization
MSc	Master of Science
MSc TDC	Master of Science in Tropical Diseases Control
MPH	Master of Public Health
M&E	Monitoring and Evaluation
MUCHS	Muhimbili University College of Health Sciences
MOU	Memorandum of Understanding
MCW	Miracle Corners of the World
MP	Member of Parliament
NHIF	National Health Insurance Fund
NIH	National Institutes of Health
NIMR	National Institute of Medical Research
NHC	National Housing Corporation
NIBR	National Institute of Biological Research
NCD	Non Communicable Disease

OHCEA	One Health Central and East Africa
OMS	Oral and Maxillofacial Surgery
OSP	Office of Sponsored Project
OUT	Open University of Tanzania
OPCD	Orthodontics Periodontics and Community Dentistry
OPRAS	Open Performance Review and Appraisal
PFA	Planning Finance and Administration
PhD	Doctor of Philosophy
PI	Principal Investigator
PMU	Procurement Management Unit
QA	Quality Assurance
QC	Quality Control
SARIS	Student Academic Records Information System
Sida	Swedish International Development Agency
SOD	School of Dentistry
SPHSS	School of Public Health and Social Sciences
SOPs	Standard Operating Procedures
SHDC	Senate Higher Degree Committee
SUA	Sokoine University of Tanzania
SON	School of Nursing
TACAIDS	Tanzania Commission for AIDS
TAMSA	Tanzania Medical Students Association
TANTRADE	Tanzania Trade Development Authority
TERNET	Tanzania Education and Research Network
TCU	Tanzania Commission of Universities
TFDA	Tanzania Food and Drug Authority
THC	Technical Harmonization Committee
THTU	Tanzania Higher Learning Institutions Trade Union
TBS	Tanzania Bureau of Standards
TIB	Tanzania Investment Bank
TANROADS	Tanzania National Roads Agency
TANESCO	Tanzania Electric Supply Company Limited
UDOM	University of Dodoma
UDSM	University of Dar es Salaam
USA	United State of America
USAID	United States Agency for International Development
UK	United Kingdom
UNESCO	United Nations Educational, Scientific and Cultural Organization
UCSF	University of California at San Francisco
VC	Vice Chancellor



Members of the University Council

Members of Muhimbili University of Health and Allied Sciences Council, who served during the year ended 30th June, 2015 are:

Table 1: Members of the University Council during 2015/2016

No.	Name	Status/Title
1.	Mr. Deogratias Ntukamazina,	University Council Chairman.
2.	Prof. Ephata E. Kaaya,	Vice Chancellor.
3.	Prof. Josephat Itika,	Member, Representative Committee of Vice Chancellors and Principals in Tanzania (CVCPT).
4.	Dr. Gozbert Mutahyabarwa,	Member, Appointee of the Minister of Health, Community Development Gender, Elderly and Children.
5.	Prof. Raphael Chibunda,	Member, Appointee of the Minister of Education, Science and Technology.
6.	Dr. Jamala A. Taib,	Member, Permanent Secretary, Ministry of Health & Social Services Zanzibar, Appointee of the Revolutionary Government of Zanzibar.
7.	Mr. Aziz Hassan Kifile,	Member, Assistant Accountant General, Appointee of the Minister of Finance and Planning.
8.	Prof. Lawrence Museru,	Member, Executive Director, MNH.
9.	Prof. Charles Mgone,	Member, Representative of the MUHAS Convocation
10.	Mr. Ali A. Mufuruki,	Member, Chairman of the University Grants Committee.
11.	Prof. David Urassa,	Member, Appointee of the Senate.
12.	Dr. Edith Tarimo,	Member, Appointee of the Senate.
13.	Dr. Lulu Fundikira,	Member, Representative of the Academic Staff Assembly (MUASA).
14.	Prof. Febronia Kahabuka,	Member, Representative of the Gender Committee.
15.	Dr. Method Kazaura,	Member, Representative of Workers Union (THTU).
16.	Mr. Mathew Mandawa,	Member, Representative of MUHASO.
17.	Mr. Kennedy S. Fussy,	Member, Representative of MUHASO.

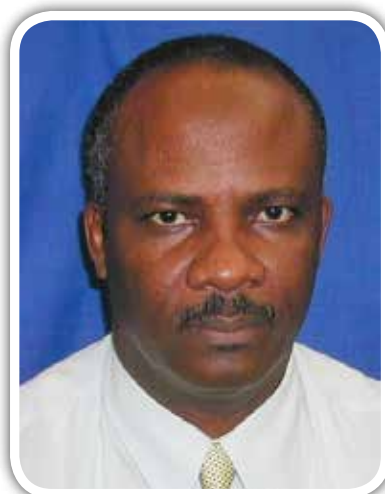
University Management



Prof. Ephata Kaaya
Vice Chancellor



Prof. Eligius Lyamuya
**Deputy Vice Chancellor –
Academic, Research and
Consultancy**



Prof. Muhammad Bakari
**Deputy Vice Chancellor –
Planning, Finance and
Administration**



Foreword

During 2015/2016 the University implemented activities stipulated in the Five Years Rolling Strategic Plan which started in July 2014 with the aim of improving the core functions of the university. During the reporting period academic programmes continued to grow addressing the need of the Tanzania society and beyond. Currently the University has a total of 90 academic programmes. During the reporting period, 1308 students were admitted in various MUHAS diploma, undergraduate and postgraduate programmes, and 907 students completed their studies in various diploma, undergraduate and postgraduate programmes. This is 22.1% increase compared to the number of students who completed similar programmes in 2014/2015.

During the reporting period, the University built capacity of its academic staff to ensure quality training. A total of 67 academic staff pursued further studies related to various professions. A total of 27 staff were registered for PhD programmes (18 females and 9 males), 24 (10 males and 14 females) were pursuing master's degree programs and 4 (2 males and 2 females) were registered for super-specialization and post-doctoral training. Likewise, a total of 15 staff (3 PhD, 9 Masters, 2 Msc supercialization and one Diploma) completed their studies in different units of the University.

During the reporting period the University implemented a total of 78 sponsored research projects and 5 new research projects. Alongside research implementation, the university maintained its leading edge in research publication in the country. A total of 367 peer reviewed journal articles and 129 Conference proceedings reports were published. This achievement was a result of the University's efforts to promote research and innovation as one of its core functions.

The development of the Mloganzila Campus started with construction of the state of the art 571 bed hospital; the MUHAS Academic Medical Centre (MAMC), which was completed during the year and installation of medical equipment started. External works which include construction of internal road network, parking area, paving of pedestrian walkways, and landscaping was ongoing. The construction of the hospital including installation of all medical equipment was expected to be completed on 31st August, 2016.

Collaborative efforts among staff and effective leadership at all levels contributed to achievements scored during the year and therefore I wish to congratulate all staff for working efficiently and diligently and for their contributions in the successful implementation of the University core functions.

Prof. Ephata E. Kaaya
Vice Chancellor

1.0 Introduction

This is the tenth MUHAS Annual report, which describes progress in the implementation of the annual planned activities as described in the MUHAS Five Years Rolling Strategic Plan for the 2014/2015 – 2018/2019. The report show progress in academic programs, student enrolment, student outputs, examinations and human resource development. The report also show achievements made by schools, academic institutes and directorates. Research programs, consultancy and public service achievements made by the various units at MUHAS are decribed.

In a addition, during year 2015/2016, the University made progress towards achievement of its vision and mission through implementation of various development projects, expansion of student intake improvement of the quality of research and teaching, and improved stakeholder's engagement. Construction and equipping of the Academic Medical Centre at the Mloganzila Campus was completed. The construction of the building for Centre for Health Professions Education (CHPE), which will, among other things, play a major role in housing the Directorate in charge of promoting Continuing Education and Professional Development was also completed. Preparations for operationalization of the hospital has started and various hospital commitees have been working hard to ensure that the hospital is in operation after handing over on 31st August 2016.

Due to declining government subvention and the increasing demand for financial resources to fund the core functions of the university, during the reporting period, the university initiated various plans to bost investment and self generate income. These plans include valuation of its properties for investment purposes and establishment of MUHAS Holding Company.

2.0 Vision, Mission and Functions of the University

2.1 Vision

A university excelling in quality training of health professionals, research and public services with conducive learning and working environment.

2.2 Mission

To provide quality training, research and services in health and related fields for attainment of equitable socio-economic development for the Tanzanian community and beyond.

2.3 The Functions

The functions and activities of the University are guided by the following components: -

- (i) To provide in Tanzania a place of learning, education, research in health and allied sciences
- (ii) To be the main producer of key policy makers, experts and personnel in the health sector.



- (iii) To be a catalyst in the health sector reforms through conducting relevant research and educating the public in health related issues
- (iv) To prepare students through regular and professional courses in the fields of health and allied health Sciences for degrees, diplomas, certificates and other awards of the Muhimbili University of Health and Allied Sciences.
- (v) To contribute to the intellectual life of Tanzania, to act as a focal point for its cultural development and to be a center for studies, service, and research pertaining to the interests of the people of Tanzania.

2.4 Schools Institutes and Directorates

The University has five Schools, two Institutes, and Twelve Directorates as follows: -

2.4.1 Schools

- (i) School of Medicine
- (ii) School of Dentistry
- (iii) School of Pharmacy
- (iv) School of Nursing
- (v) School of Public Health and Social Sciences

2.4.2 Institutes

- (i) Institute of Allied Health Sciences
- (ii) Institute of Traditional Medicine

2.4.3 Directorates

- (i) Directorate of Planning and Investment, Muhimbili Campus
- (ii) Directorate of Planning and Investment, Mloganzila Campus
- (iii) Directorate of Postgraduate Studies
- (iv) Directorate of Research and Publications
- (v) Directorate of Information and Communication Technology
- (vi) Directorate of Library Services
- (vii) Directorate of Continuing Education and Professional Development
- (viii) Directorate of Undergraduate Education
- (ix) Directorate of Quality Assurance
- (x) Directorate of Finance
- (xi) Directorate of Human Resources Management and Administration
- (xii) Directorate of Estates

3.0 Teaching and Learning

3.1 Academic Programmes

The University has several academic programmes and the best academic staff profiles in Health and Allied Sciences in Tanzania. The University gives high priority to quality programmes development, delivery and students outcomes. Currently the University offers 10 Diploma programmes, 14 Undergraduate programmes and 66 Postgraduate programmes which are offered in the five schools and two institutes.

3.2 Student Admissions

3.2.1 Diploma Programmes

During the reporting period 368 new students were admitted in the various diploma programmes. Of the total, 216 were males and 152 were females. This makes the proportion of admitted female students to be 41.3%. The total enrolment of Diploma students was 1032 during the academic year whereby 652 were males and 380 were females. Figure1 shows admission trends for diploma students from 2011/12 to 2015/2016. There was a slight decrease of students admitted in 2015/2016 (368) compared to 441 students admitted in previous year (2014/2015) (Figure 1).

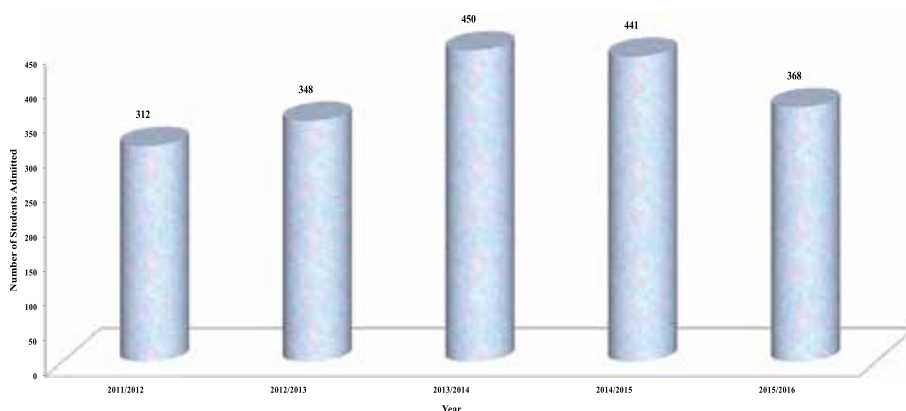


Figure 1: Admission of Diploma Students from 2011/2012 to 2015/2016

3.2.2 Undergraduate Degree Programmes

During 2015/16 academic year (Figure 2) the number of selected applicants into all undergraduate programmes was 564, which is a 6.8% decrease compared to 605 students admitted during the year 2014/15. During the academic year 2015/2016, MUHAS enrolled a total number of 2090 students into various degree programmes. Of these, 30.5% (638) were female students. The MUHAS target for female student enrollment in undergraduate programmes is 50% as per Five Year Rolling Strategic Plan (FYRSP) (2014/2015 to 2018/2019).

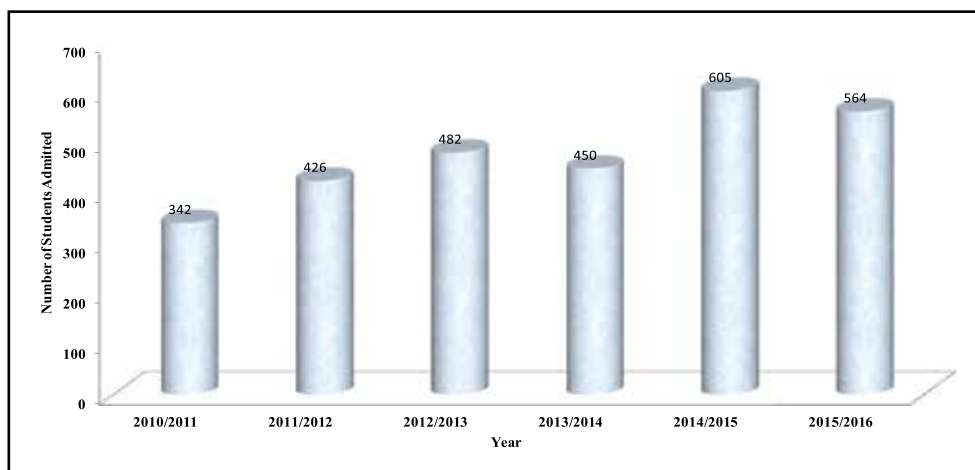


Figure 2: Admission of Undergraduate Students from 2010/11 to 2015/16

3.2.3 Postgraduate Programmes

During the reporting period 376 postgraduate students were admitted in various postgraduate programmes of which 238 were males, and 138 (36.7%) were females. There was a remarkable increase of 114 (30.3%) in admission compared to the previous year (2014/2015) during which 262 students were admitted. For the past four years therefore there has been an increasing trend in the number of postgraduate students admitted into various programmes, as shown in Figure 3.

During the reporting time the postgraduate enrollment was 662 students, which is an increase of 89 (13.4%) students compared to the previous year when enrollment was 573 postgraduate students. Despite the noted increase, the main obstacle to admission of qualifying postgraduate applicants has consistently been lack of sponsorship.

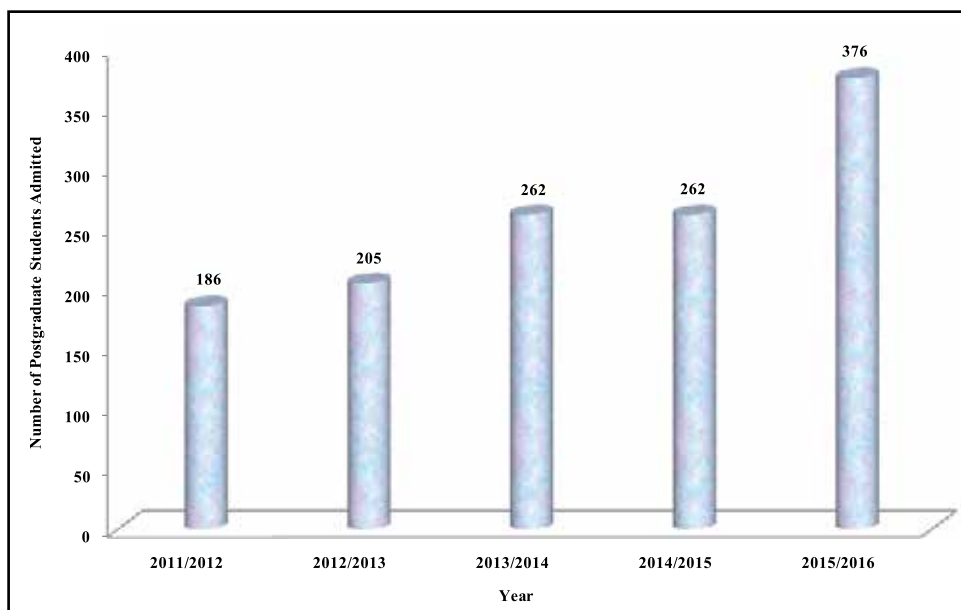


Figure 3: Admission of Postgraduate Students from 2011/2012 to 2015/2016

3.3 Students Enrollment during from 2011/2012 to 2015/2016

3.3.1 Diploma Students

During the reporting period, 1032 students were enrolled in various MUHAS diploma programmes compared to 912 students enrolled in the year 2011/2012. During the past five years there has been a notable increase in diploma student enrollment. During the reporting period there was no substantial increase in enrollment when compared to the previous year (Figure 4).

3.3.2 Undergraduate Students

The number of students enrolled during 2015/2016 into all undergraduate programmes was 2090, a slight increase of 164 (0.08%) compared to 1926 students enrolled in 2014/2015 (Figure 4). During the reporting period, 638 (30.5%) of the total students enrolled the undergraduate programmes were females compared to enrollment of 584 (30.3%) female students in 2014/2015 showing slight improvement and an achievement towards the MUHAS strategic plan for gender mainstreaming.

3.3.3 Postgraduate Students

The number of postgraduate students enrolled in the universities has been consistently increasing from 2011/12 to 2015/16. During the reporting period 673 students were enrolled in various postgraduate programmes. Therefore there was a 55.1% increase of postgraduate students compared to year 2011/12 where only 434 students were enrolled. This significant increase was due to increased number of students with required qualifications due to expansion of enrollment in undergraduate programmes. As noted earlier enrollment could be much much higher if all eligible postgraduate students were sponsored (Figure 4).

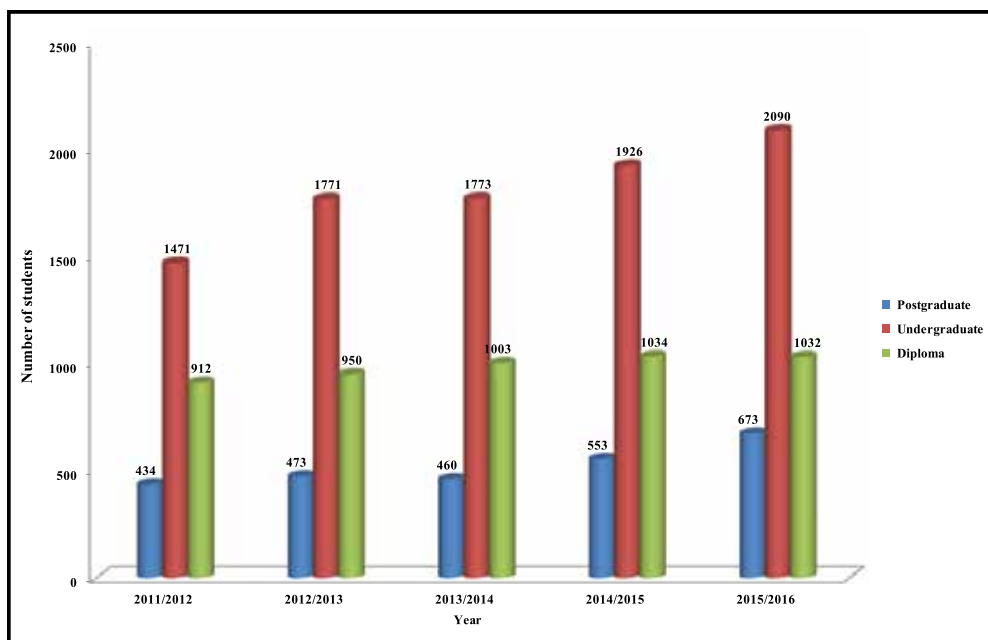


Figure 4: Enrollment of Diploma, Undergraduate and Postgraduate Students from 2011/2012 to 2015/2016

3.4 Performance in Examination During 2015/2016

3.4.1 Diploma Programmes

Figure 5 shows performance of diploma students in examinations during the reporting period. The results indicate that out of 1073 students who sat for examinations, 745(69.4%) passed at first sitting. 152 (14.2%) were referred to do supplementary examinations, 167 (15.6%) students had their examination results withheld and four (4) students were discontinued.

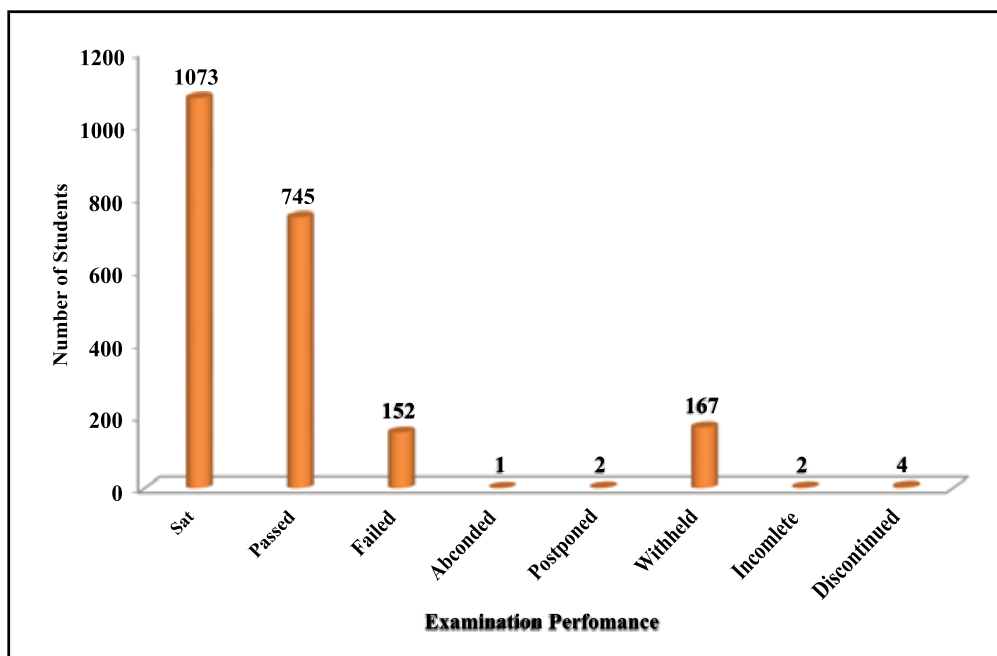


Figure 5 : Performance of Diploma Students in 2015/2016 Examinations

3.4.2 Undergraduate Programmes

During the reporting period, 1807 undergraduate students sat for examinations. Out of these, 1318 (72.9%) passed at first sitting. 456 (25.2%) students failed and were referred to do supplementary examinations, nineteen (19) students had incomplete results and 30 students were discontinued on academic ground (Figure 6).

3.4.3 Postgraduate Programmes

The Directorate of Postgraduate Studies through Senate Higher Degrees Committee (SHDC) processed University Examinations results for a total of 452 postgraduate students who sat for University examinations in July 2015. A total of 347 (76.8%) passed their examinations at first seating. Figure 7 below shows a trend of postgraduate students' performance.

A total of 44 postgraduate students did not sit for July 2015 University Examinations due to freezing of studies (9; School of Medicine), postponement of examinations (15; School of Public Health and Social Sciences) or abscondment (6 from School of Medicine, and 14 from School of Public Health and Social Sciences).

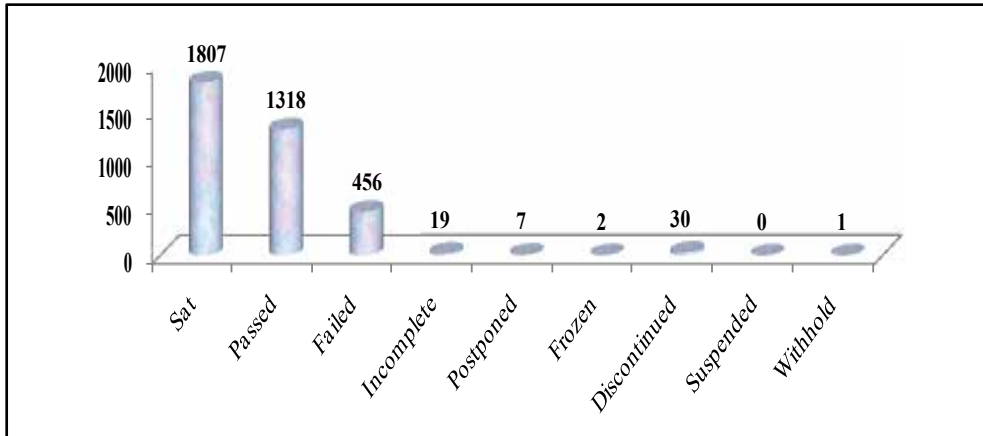


Figure 6: Performance of undergraduate students in Examinations in 2015/2016

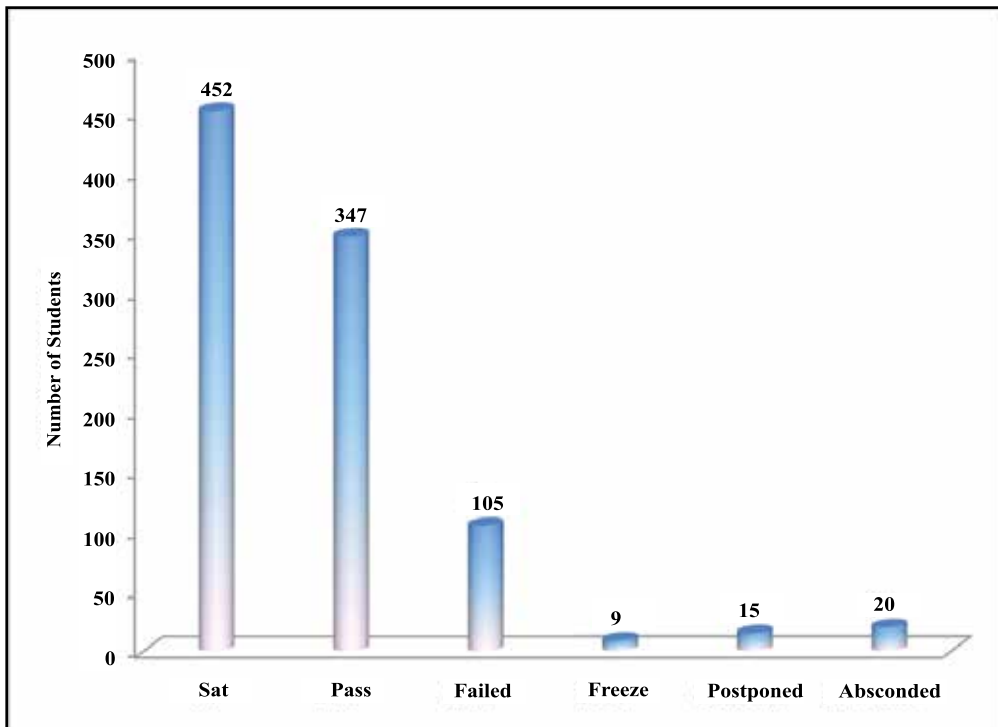


Figure 7: Performance of Postgraduate students in examinations in 2015/2016

3.5 Students Output

3.5.1 Diploma Programmes

During the period under review 352 diploma students completed their studies but the number of qualifying candidates decreased by 20 (5.4%) compared to the year 2014/2015. Figure 9 shows the trend of students awarded diploma over the past five years (2011/2012- 2015/16). It shows that, there has been a gradual increase in the number of qualifying candidates. For instance, in the year 2011/2012, 232 students graduated and from then the trend recorded consistent increase in graduating students to 352 graduates in the year under review.

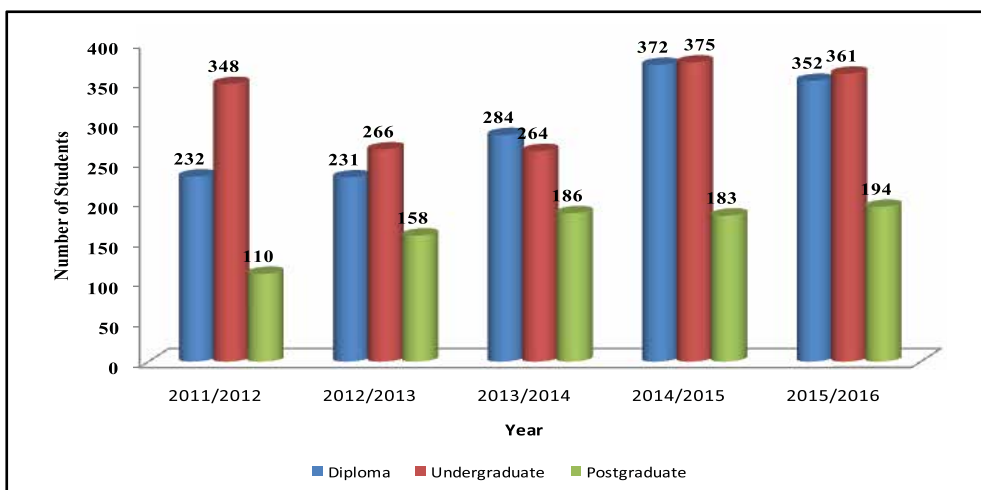


Figure 8: Output of Diploma, Undergraduate and Postgraduate Graduands from 2011/2012 to 2015/2016.

3.5.2 Undergraduate Degree Programmes

The number of graduates during the reporting period (2015/16) was 361 and the number of qualifying candidates slightly decreased by 14 (3.7%) compared to 375 students graduated in the year 2014/2015. Of the total undergraduate students graduated during the reporting period, 31.4% were females.

3.5.3 Postgraduate Programmes

During the reporting period, a total of 194 students graduated at master degree levels indicating an increase in number of qualifying candidates by 11 (6.0%) compared to 183 students who graduated in 2014/2015. Out of the total postgraduate graduands 45.4% were females.

3.6 Graduation Ceremony 2015

During the reporting period MUHAS marked its 9th graduation ceremony on 5th, December, 2015 during which a total of 907 graduates were awarded degrees and diplomas as follows: Three hundred fifty-two (352) diplomas, and 361 first degrees in MD, DDS, BPharm, BSc. Nursing, BSc Midwifery, BScN Management, BSc Environmental Health Sciences, BMLS and BSc RTT.

With regards to postgraduate students, 194 were awarded degrees as follows: - Doctor of Philosophy (2), Master of Science in Superspecialities (11), Master of Medicine (59), Master of Science in Parasitology and Entomology (1), Master of Dentistry (8), Master of Science in Applied Epidemiology (1), Master of Science in Epidemiology and Laboratory Management (6), Master of Science in Tropical Disease Control (1), Master of Arts in Health Policy and Management (3), Master of Science in Environmental and Occupational Health (5), Master of Science in Behavior Change (1), Master of Science in Nursing (Mental Health) (3), Master of Science in Critical Care and Trauma (13), Master Science in Traditional Medicine Development (1), Master of Science in Clinical Psychology (1), Master of Science in Microbiology and Immunology (3), Master of Science in Nutrition by Research (1), Master of Science in Clinical Pharmacology (3), Master of Science in Biochemistry (3), Master of Pharmacy in Quality Assurance and Quality Control (1), Master of Pharmacy in Industrial Pharmacy (1), Master of Science Pharmaceutical Management (6), Master of Pharmacy in Pharmacognosy (1) and Master of Public Health (50).

During the reporting period the number of female graduates was 34.8% (316/907) compared to the previous year whereby 363/743 (48.8%) female students graduated. Compared from the previous year the total number of students who completed their studies increased from 743 in year 2014/15 to 907 in 2015/16.

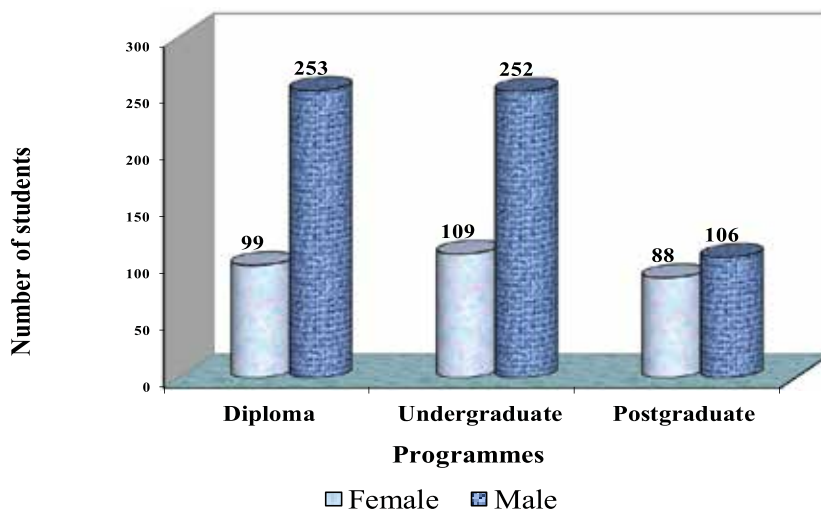


Figure 9: Diploma, Undergraduate and Postgraduate Graduates by Sex (2015 Graduation Ceremony)

4.0 Reports from Schools and Directorates

4.1 School of Medicine



Prof. S. Kaaya

4.1.1 Introduction

This is the annual report of activities and events in the School of Medicine at MUHAS, from 1st July, 2015 to 30th June, 2016. This report summarizes activities related to students' registration for undergraduate and postgraduate programmes, provides an overview of graduating undergraduates in 2015, presents summarized information highlighting implementation of teaching and assessment, research and non-research projects implemented by staff, service delivery by the staff in the school

and governance issues in the school during the reporting period.

Vision, Mission and Functions of the School

Vision of the School

A School of Medicine excelling in quality training of health professionals, research and public services with learning and working environments that is conducive.

Mission

To provide quality training, research and services in health and related fields for the attainment of equitable socio-economic development of the Tanzanian community and beyond.

Functions of the School

The functions of the School and its activities are guided by core components of its mission and include:

- 1) To be directly engaged in the creation, transmission and evaluation of knowledge in medical sciences, laboratory and radiological treatment technologies in the pursuit of excellence in academic scholarship and intellectual inquiry through teaching, research and provision of advisory and public medical related services.
- 2) To provide a place of learning, education and research in medical sciences, laboratory and radiological treatment technologies and through this provide quality services commensurate with a good medical school.
- 3) To provide the labor market in Tanzania and Eastern Africa, with highly competent medical professionals and technologists able to contribute effectively to prevention, treatment and management of health related problems of the society. This is to be achieved through the prime principle of integrating research, teaching and advisory services in the immediate subject areas.

- 4) To contribute to the intellectual and professional life of Tanzania and Eastern Africa and to act as a focal point for continuing professional development, research and services that are of interest to the people of Tanzania.
- 5) In terms of output, the functions of the School are:-
 - (i) To provide undergraduate education in Medicine, Medical Laboratory Sciences and Radiation Therapy Technology for degree and non-degree programs.
 - (ii) To provide post-graduate education in different specialties and superspecialities of medicine
 - (iii) Teach of students/trainees from other Schools/Institutes at MUHAS as well as from outside the University.
 - (iv) To prepare and publish medical educational materials in various fields of medical sciences.
 - (v) To conduct medical research and disseminate the findings.
 - (vi) To carry out scientific educational, professional and technical consultancy services on behalf of third party clients under contract .
- 6 To engage in cost containment and income generating ventures for sustainability.

4.1.2 Student Registration

(i) MD (Medical Doctor) programmes

During the year 2015/16 a total of 782 continuing medical students (in the 2nd to 5th year of training) registered in addition to 205 first year students; the latter is a decrease from last year of newly recruited students. Thus the total number of students registered for the Doctor of Medicine (MD) programme during the reporting period was 987.

(ii) BMLS (Bachelor of Medical Laboratory Sciences) programmes and the BSc RTT (BSc Radiation Therapy Technology) programme

During the reporting period a total of 61 students (in the 2nd to 3rd year of training) registered for the Six Bachelor of Medical Laboratory Sciences (BMLS) programmes and for the Bachelor of Science Radiation Therapy Technology (BSc RTT) programme. In total 76 first year BMLS students and 12 first year BSc RTT students were registered. In terms of continuing students, during this reporting period compared to last, the School saw a 46% (75 Vs 46 in 2013/14) increase in registration of the BMLS students and 80% (3 versus 15 in 2013/14) reduction in registration of BSc RTT students. The BMLS programmes therefore had a total of 179 registered students and the BSc RTT programme had 19 students.

(iii) *Enrollment of Students*

Table 1 shows a summary of registered students by programme and sex during the reporting period. Of the registered students, 28.5% were females compared to 27.6% in the 2014/15 academic year. Generally, fewer females across programmes were registered for the BSc. RTT, and the Histo-technology, Parasitology and Entomology, Microbiology and Immunology BMLS programmes, as well as the MD programme. The highest proportion of total registered to a programme was females for the BMLS clinical chemistry programme. At the end of the registration period, the school had a total of 1,225 students across its eight undergraduate programmes.

Table 2: Summary by programme and sex of registered students

Programme	Male N	Female N (%)	Total N
MD	715	272 (27.6)	987
BMLS Clinical Chemistry	10	14 (58.3)	24
BMLS Haem and Blood Transfusion	16	12 (42.9)	28
BMLS Histotechnology	18	6 (25.0)	24
BMLS Microbiology Immunology	31	12 (27.9)	43
BMLS Parasitology & Entomology	22	8 (26.7)	30
BMLS General	38	19 (33.3)	57
BSc RTT	26	6 (18.8)	32
Totals: 349 (28.5)			1225

iv) *First year student's orientation: The white coat ceremony*

During the reporting period, the School of Medicine organized its 6th Annual White Coat Ceremony, to welcome first year MD, BMLS and BSc RTT programme students to the University Community. During the ceremony, the Dean, faculty and selected student leaders, worked together to inform new entrants of experiences when teaching and learning, as well as the professional and ethical standing of their selected professions. The event was held on Friday 6th November, 2015.

4.1.3 Teaching and Assessment of Students:

Competency Based Curricula Implementation

During the reporting year, the School continued with implementation of competency based curricula (CBC), for both undergraduate and postgraduate programmes. For the second year running, the school implemented its junior, intermediate and senior clinical rotations for all MD students in their third, fourth and fifth years of training in relevant clinical departments.



Undergraduates in semesters one to six or 10, and postgraduates in semesters one to six attended scheduled courses as defined by relevant modularized and competency based curricula. With the intention to gradually increase the number of undergraduate students admitted in school programmes a number of challenges were recorded in biomedical sciences. Measures to address the challenges encountered in the biomedical sciences and laboratory medicine courses (semesters 1-2), clinical teaching as well as in research training are outlined below:-

Biomedical Science and Laboratory Medicine Courses: During the academic year major challenges in teaching occurred after expansion of students admission. This was caused by lack of sufficient number of staff and an inadequate infrastructure (lecture and teaching laboratory rooms) to accommodate lectures and practical sessions shared between the MD, BMLS, and BSc RTT and other programmes taught across Schools at MUHAS. In the pre-clinical training years, this challenge was addressed by fast-tracking an ongoing process of training biomedical science courses jointly taught to MD, BMLS, and BSc RTT students and the Bachelor of Nursing (BScN – School of Nursing), Doctor of Dental Surgery (DDS – School of Dentistry), Bachelor of Pharmacy (BPharm- School of Pharmacy), and Bachelor of Science Environmental Health Sciences (BSc EHS – School of Public Health and Social Sciences) students.

Clinical courses: The clinical departments in the School of Medicine successfully implemented the CBC MD curriculum in semesters 3-5 (junior rotations), 7-8 (intermediate rotations) and 9-10 (senior rotations) after phasing out the old curriculum in the 2013/14 academic year. With increasing numbers of rotating clinical year students, during the reporting period challenges experienced during the past two reporting years, which included overcrowding of students in the clinical areas of the main teaching hospital with whom the University has entered into memorandum of understanding to support clinical training persisted. Many departments addressed this challenge by dividing students into smaller groups and assigning supervisors to each group at the level of clinical department subunits or firm. The CBC for post-graduates students included a course in health professions education, allowing post-graduates to take on instructor roles for undergraduates in some departments. Nominated adjunct and clinical staff in sister institutions such as the Muhimbili National Hospital (MNH), the Muhimbili Orthopedics Institute (MOI) and the Ocean Road Cancer Institute who engaged in this process are part of the reason for successes in implementation of the clinical components of the Competence based Education.

Student research training: During the reporting period, the School's academic and adjunct staff continued to supervise research training for both undergraduate and postgraduate students. For undergraduate students, protocol development, research ethical clearance, data collection, dataanalysis and report writing was supervised at department level across the

School of Medicine and School of Public Health and Social Sciences for 198 Semester 7 and 8 students undertaking the Elective Research (ME 400) course. During the reporting period, the increasing numbers of students doing the ME 400 course, required innovations in facilitating ethical clearance for elective research proposals. Proposals were discussed at assigned the department and in addition to grading, each proposal was evaluated for its ethical soundness using a pre-developed research ethics clearance form. Proposals which met the set criteria were submitted with filled ethical clearance forms to the Directorate of Research and Publications (DRP), where a formal ethical clearance certification was provided for each student to utilize when seeking permission to conduct research from community gatekeepers.

Supervision of postgraduate students dissertations was also undertaken for MMed and MSc and PhD programmes in respective departments. The School also recommended through the Directorate of Postgraduate studies to the Directorate of Research and Publications, requests for ethical clearance for completed Masters and PhD research proposals. As per curricula review and adjustment, students in the MSc super specialization programmes, for the second year running, undertake in their final year a clinical audit the findings of which inform quality improvements in services provided in clinical units providing more specialized care and treatment. As in the year of inception of this activity, in-house staff training occurred to strengthen the supervision of clinical audits with facilitators from both the School of Medicine and the School of Public Health and Social Sciences.

Assessment

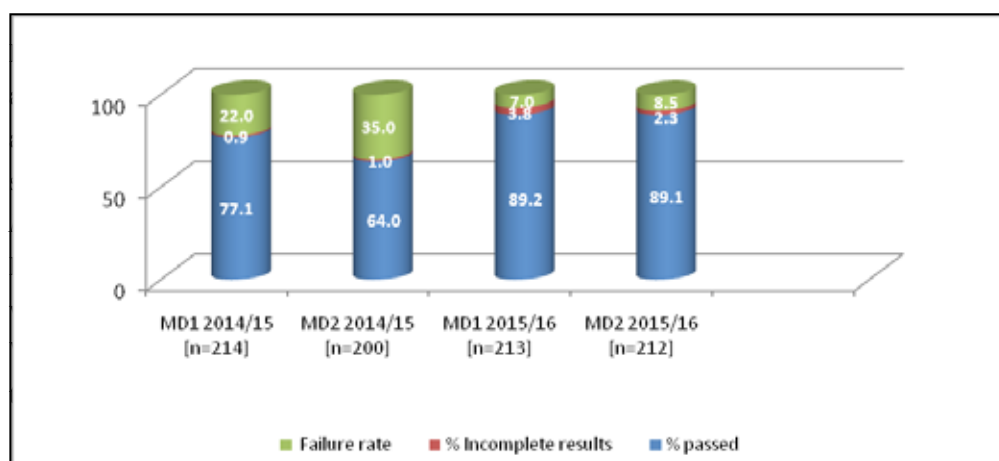


Figure 10: Performance of first and second year MD students in 2014/15 and 2015/16

Results available for the 3rd to the 5th year of the MD programme in this reporting period include

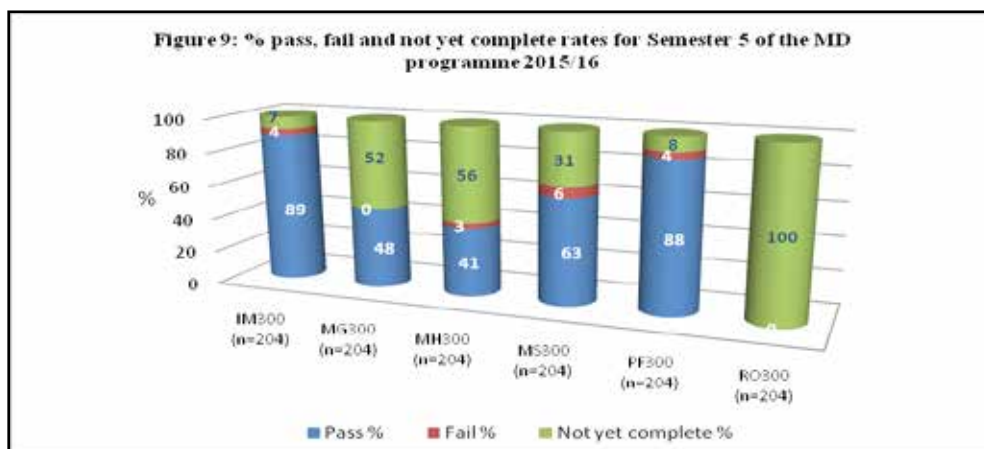


Figure 11: Percentage pass, fail and not yet completed for semester 5 MD programme 2015/2016

BScRTT programme: During the reporting period, in semesters 1, 3 and 5, a total of 34 students sat for exams as summarized in figure 5.3. The failure rate of 38.5% in the first year of this programme was much higher than the 5.2% rate documented in the 2014/15 report, with the highest failure rates occurring in professionalism (21%), basic physics (14%) and in physiology (14%).

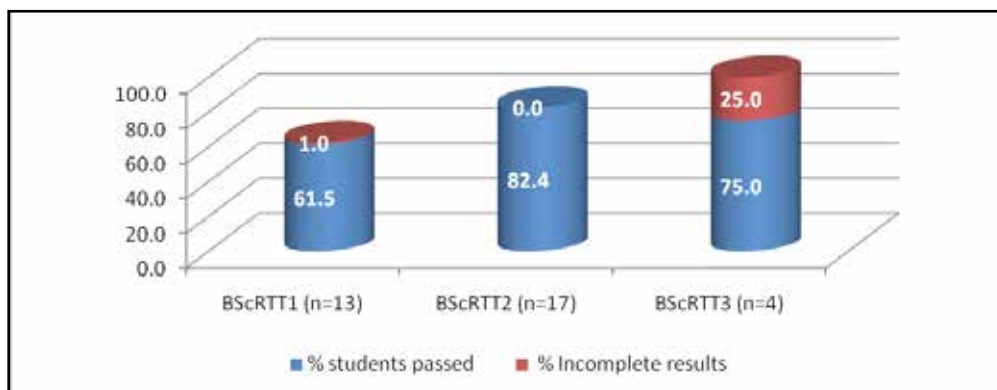


Figure 12: Performance of BSc RTT Students, Year 1-3 in 2015

The responsible departments will continue to offer counseling support and mentoring for students with low performance in formative assessments in order to rectify this situation prior to supplementary examinations in October this year.

BMLS programmes: In semester 1, 3 and 5 a total of 206 students sat for exams, and rates of incomplete and pass performance across the six BMLS programmes are summarized in figures 13 and 14. While still not considered optimal compared to performance in the first year in other programmes, pass rates ranging from 10% to 72% across programmes were an improvement compared to pass rates that ranged from 44% to 53% in the previous academic year (2014/15). There was no student with incomplete results for programmes reflected in figure 13; and only one third year student had incomplete results in programmes reflected in figure 14. This is an improvement in retention within a registered cohort as compared to the results of the 2014/15 academic year.

The lowest pass rate was observed for first year clinical chemistry students, and the very large variations in pass rates are perhaps reflective of selecting students with better high school and diploma programme qualifications this year. There could hence have been much higher variation in baseline qualifications in those accepted to the programme, compared to the previous academic year. As improved performance is evident, measures such as customizing biomedical science and laboratory medicine courses to needs of the BMLS programme will continue, and be more formally evaluated during tracer studies related to curriculum review activities in the future.

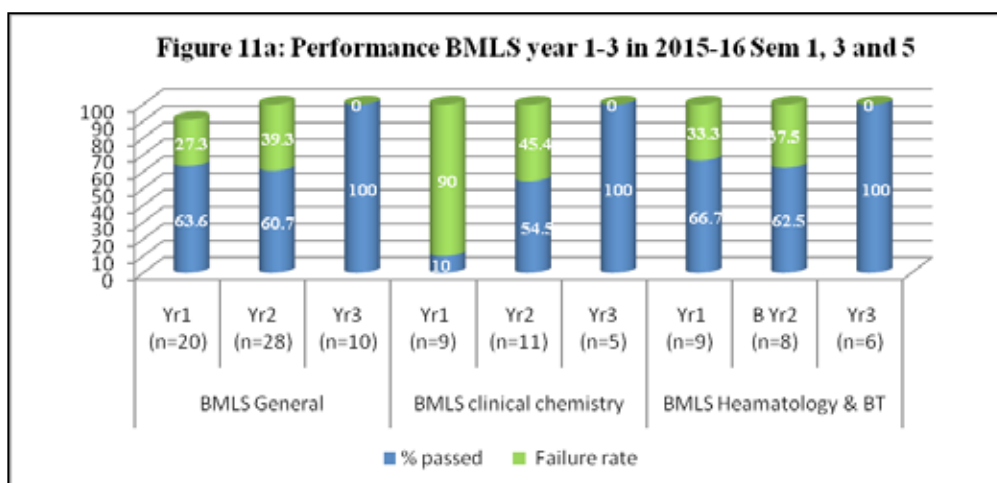


Figure 13 Performance of BMLS years 1-3 in 2015

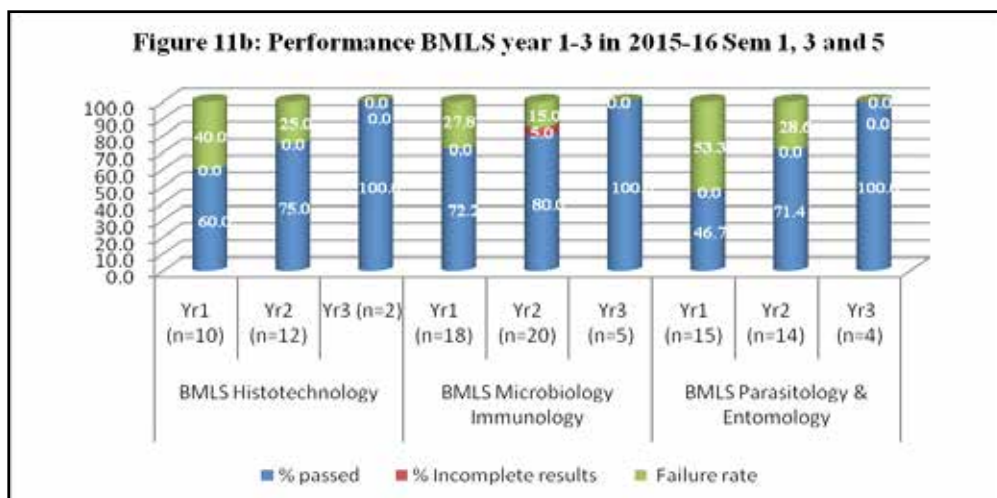


Figure 14: Performance of BMLS students in 2015/16

4.1.4 Graduation Ceremony

Teaching and learning activities always culminate in a graduation ceremony. During the reporting year, the MD class of 2010/2011, BMLS, BSc RTT and MMed classes of 2012/2013 and ordinary MSc and MSc Superspecialities (MSc SS) class of 2013/2014 were conferred degrees on 5th December 2015. A slight increase occurred in the numbers graduating students with BMLS, BSc RTT and MSc SS in 2015 compared to 2014. One PhD was conferred in this year (See Figure 15).

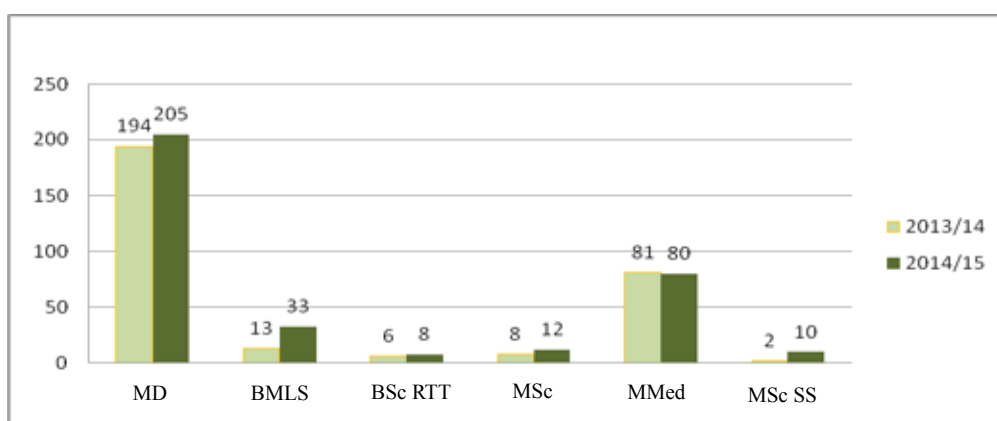


Figure 15: Graduates from the School of Medicine by programme in 2014/15 and 2015/16

4.1.5 Research and Non-research collaborations

Scientific Publications during the reporting period

Teaching staff in the School of Medicine conducted research in various projects. During the reporting period a total of 110 publications were retrieved from PUBMED in which members of the school published as co-author. With a current staffing level of 160, during the reporting period, the publications per staff was 0.69 publications, down from the 0.89 ratio during the 2014/15 reporting period. This decline was expected, as in section 10.1 of this report. During this period the School saw an increased recruitment of young scholars to its academic staff ranks, many of whom are tutorial assistants. Developing research capacity building programmes for newly recruited staff within departments, and that are linked to staff development activities will be an important activity in subsequent years in the School. The School will also continue encouraging analysis and reporting of research findings including strengthening staff research seminars at department and school levels, and advocating for peer writing groups to support development of scientific writing skills.

Ongoing Research Projects

During the reporting period, staff requests to the Directorate of Research and Publications for financial support to undertake research projects were also processed. Furthermore, the office of the Directorate of Research and Publications (DRP) with the mandate to grant ethical clearance for sponsored projects, granted to the same for 13 staff initiated new research projects and annual renewal of ethical clearance for 14 ongoing staff research projects. Therefore 27 research projects were active in the School by the end of June 2016 and ten (10) symposia were conducted between July 2015 and June 2016.

Non-research Collaborations in the School During Reporting Period

During the reporting year, the School established collaborations with various institutions and associations as follows:

- (a) ***Alliance for Global Clinical Training (AGCT)***: An international letter of agreement for medical education and training was signed between the Alliance for Global Clinical Training and the School of Medicine at MUHAS. Under this agreement the major purpose is to further Academic Collaborations between AGCT and MUHAS and to facilitate the exchange of residents, and faculty, particularly in the Department of Surgery, for educational and clinical training while promoting relationships between the two institutions.

- (b) ***Global Health Service Partnership.*** The School of Medicine applied for the third time, to the Global Health Service Partnership (a private-public collaboration between Seed Global Health, the Peace Corps, and the US President's Emergency Plan for AIDS Relief (PEPFAR) established in 2012), to request specialists to contribute for one year to clinical teaching. The following priority/need areas were identified: a) Paediatric Surgery (Surgery Department) and b) Critical Care Medicine (Internal Medicine Department). Specialists from the US have been identified and are expected to report to these departments on 26th August 2016 for a one-year placement as per agreement.
- (c) ***Collaboration School of Medicine and Ministry of Health, Juba, Southern Sudan.*** During the reporting year MUHAS through the School of Medicine participated in the preparation of a memorandum of understanding (MoU) with the Ministry of Health in Juba, Southern Sudan for collaboration in teaching of postgraduate students from Southern Sudan. A committee was formed by the School of Medicine, and charged with developing a remedial programme for doctors from Southern Sudan, to allow them to undertake postgraduate programmes at MUHAS. It was further proposed that a University wide committee be formed in the near future to oversee the initiation and implementation of this MoU.
- (d) ***Collaboration between School of Medicine and St. Joseph's College, Dar es Salaam campus.*** During the reporting year School of Medicine MUHAS negotiated with St. Joseph University College of Health Sciences focusing on collaborative teaching services. As St. Joseph University had formally requested to implement the MUHAS MD curriculum, they had also requested teaching assistance for the biomedical sciences courses. After careful analysis by relevant departments, this request was deemed feasible and a consultancy agreement entered for a fee that is in line with the School's consultancy bureau policy. Negotiations were facilitated with the assistance of the Office of Deputy Vice Chancellor (Academics, Research and Consultancy) and the MOU between MUHAS and St. Joseph's College was signed by the Vice Chancellor for implementation. Once implemented, relevant staff in the School will be able to both assist in teaching activities at St. Joseph University, and also earn some much needed income for MUHAS.
- (e) ***Collaboration between School of Medicine, MUHAS and Maharashtra University of Health Sciences, Nashik India.***
- During the reporting year, the School of Medicine formed a committee to discuss and initiate a collaboration supported by Merck with the Maharashtra University of Health Sciences Nashik India. The collaboration will support a two-year training programme for five (5) staff members (one per year over a period of five years) that

will confer to graduates a clinical fellowship in Medical Oncology. The first trainee, Dr. Malichewa, was selected by the Committee, with representation from Internal Medicine, Surgery, Paediatrics and Obstetrics and Gynecology and will undertake the training from June 2016. The five trainees will be expected to develop a super specialty programme in clinical oncology on their return that will be implemented by the School within the next five years.

(f) *Collaboration between School of Medicine, MUHAS and Heidelberg University.*

During the reporting period preliminary discussions were held with representatives from the University of Heidelberg to explore establishing health services research collaboration with MUHAS focusing on quality monitoring, assurance and improvements in outcomes of clinical practices at MUHAS. The potential outputs of this collaboration include the development of a sustainable clinical quality assurance programme at the Muhimbili Academic Medical Centre (MAMC) and related health services research. A concept note for this collaboration is being developed by a committee comprised of two representatives from three clusters (Surgery, Clinical and Diagnostic/ Laboratory Medicine). Committee chairs of the clusters were appointed and will convene to choose thematic areas relevant for the (MAMC) at the Mloganzila Campus and, they will then combine these thematic areas into the concept note to be discussed in a joint meeting in Dar es Salaam in September-October 2016.

(g) *Student Exchange Activities:* The ongoing collaborative research and student exchange agreement during the year included that of UMCG/FMS – Groningen University, Netherlands (School of Medicine), Mie University, Japan (Paediatrics and Child Health), University Medical Centre, The Netherlands (School of Medicine), The Linneus Palme student exchange program (MUHAS and Uppsala University Sweden), and The University College of London (School of Medicine).

During the Reporting year the institutions listed above implemented formal student exchanges with MUHAS. The other universities were coordinated by respective persons in each university as per memoranda of understanding. Coordinators sent applications to counterparts of students that visited MUHAS or MUHAS undergraduates that would visit the institutions, and host coordinators made arrangements to ensure the visits happened:-

- (i) The Paediatrics department received 5 students under the exchange programme with Mie University, Japan.
- (ii) The Dartmouth University, USA sent 2 students to the School of Medicine that rotated in the Internal Medicine department.

- (iii) MUHAS also received two students under the IAESTE programme which is coordinated by the Open University of Dar es Salaam, and of which MUHAS is a party. One of the two students received in the School, rotated in different departments in the School of Medicine.
- (iv) The School of Medicine also received two students from the Norwegian University of Science and Technology under an agreement with the School of Medicine.
- (v) MUHAS students that benefited from participating in a student exchange arrangement were selected on merit and included:
 - o Norwegian University of Technology (2015/16): Fatema Meghji and Jaqueline Kihwele (MD 4) Obstetrics and Gynecology and Paediatrics and Child Health rotations;
 - o Dartmouth University (2015/16) - David G. Paul and Zahra M. Meghji (MD 4) Research capacity building;
 - o Uppsala University (2015/16) – Renick, Renatus Kihongo and Salome J. Mzinga (MD 5), Obstetrics and Gynecology and Paediatrics and Child Health rotations.

4.1.6 Service and Consultancy

During the reporting year, teaching staff in the clinical departments of the school provided clinical services at Muhimbili National Hospital, and Muhimbili Orthopedics Institute as per agreement in memoranda of understanding (MoU) with the respective institutions.

Arrangements for clinical teaching for post-graduates at the Lugalo Military Hospital, as well as providing support services at this institution with whom a MoU was signed last year are in progress with pending issues including nomination of adjunct staff for teaching. While a memorandum of understanding between the School and the Bagamoyo District Hospital is in place for a year, challenges remain in organizing for sustainable housing for undergraduate students that will be taught at this facility. Negotiations with the Ministry of Health, Community Development, Gender, the Elderly and Children for placement of specialists that can be nominated to become adjunct staff and provided with health professionals education training and budgeting for MUHAS staff outreach services at BDH have been initiated. This will create a win-win situation in which both quality district level training can be provided for our MUHAS undergraduates and decongesting overcrowded teaching and learning spaces at the Muhimbili campus, while at the same time offering essential outreach clinical services support to a district unit. Activities aimed at reaching this goal will continue to be in the School's action plans in the next financial year.

A number of outreach service activities have been carried out by clinical departments, including supporting Ministry of Health and other stakeholder's clinical services camps in underserved areas of our communities in Tanzania.

4.1.7 Governance issues in the School

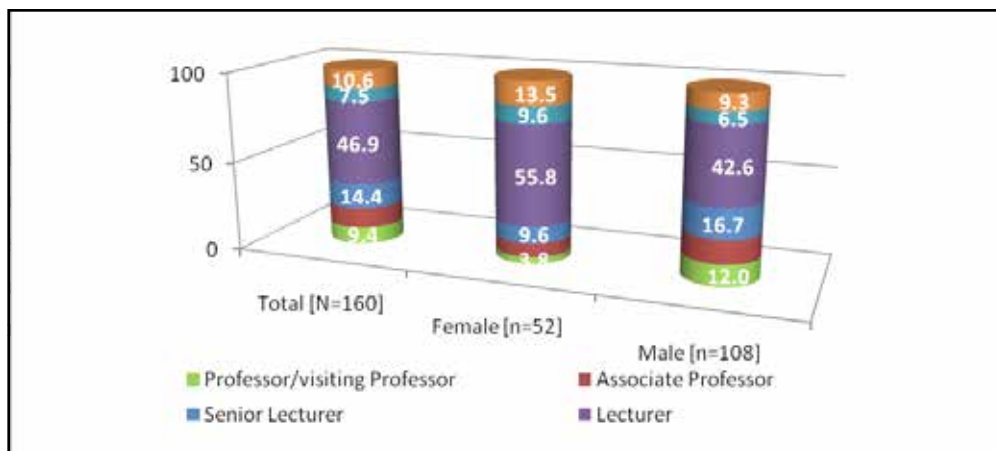


Figure 16: Distribution of staff in the school of medicine by sex and academic rank in 2015/16

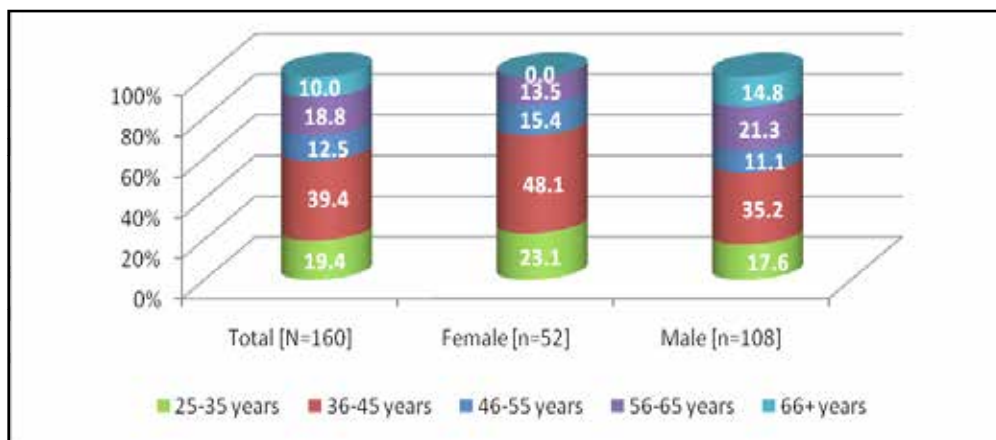


Figure 17: School of medicine Academic staff distribution by sex and age July 2016

There is however, an encouraging trend towards increasing proportions of younger staff, with statistics in October 2012 and July 2015 showing 11.8% and 15.0% of staff were in this age group. The increasing trend of recruitment of young academic staff is responsive to increasing responsibility of the University to develop a critical mass of qualified staff to meet its mandate to train increasing numbers of health professionals in support of government efforts through the Ministry of Education, Science and Technology to narrow the rather wide health professionals to population ratio.

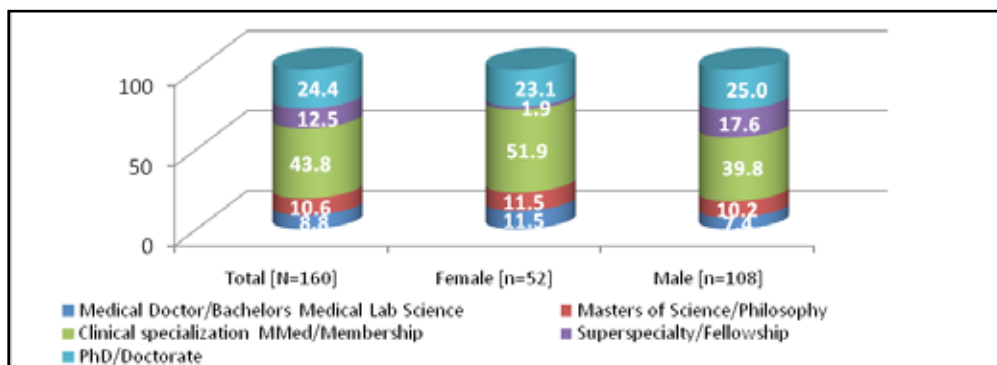


Figure 18: Distribution of School of Medicine staff by sex and academic qualifications, July 2016

Departments of the School of Medicine are and will continue to put in place staff development plans using existing postgraduate programmes and collaborative links with partners both in the South and the North. The current distribution of staff by qualification is summarized in figure 18 while there is an increase of staff with a first degree from 2% in 2015 to almost 9% in this reporting period, there is an apparent decline from 28% in 2015 to 24.4% in the reporting period of staff holding a PhD or doctorate qualification.

In actual numbers, these proportions show the school had 40 and 39 staff respectively with a PhD or doctorate qualification. As was noted in the staff distribution by sex and academic rank, male and female staff were equally distributed by qualifications. Of note however, is the relatively lower proportion of female staff with super specialization or fellowship training. In addition to putting in place staff development plans that are feasible, departments will need to encourage female staff to pursue super specialization training.

Staff to Student ratio

During the Joint East African Community Medical and Dental Boards/Councils accreditation visit at MUHAS in April 2015, though MUHAS was approved for reaccreditation, concerns regarding low staff to student numbers were raised. This concern was particularly raised for biomedical sciences and laboratory medicine courses taught in the first and second year, many being core courses across programmes in the Schools of Medicine, Nursing, Pharmacy, Dentistry and Public Health and Social Sciences.

Table 3 summarizes the observed situation of staff to student ratios in 2015 and the current situation. Other departments except clinical oncology, no department meets the TCU ratio of 8-15 staff per students per faculty. The findings in the reporting period if we consider meeting

a target of 50% (30-40 students per staff) of the TCU requirement show 9 departments meet this target, with four of these departments showing an improved ratio. However, the faculty student ratio has worsened for staff in the anatomy, physiology, hematology, anesthesiology, biochemistry, emergency medicine, anatomical pathology and the obstetrics and gynecology departments due to compulsory retirement of staff most at senior lecturer and professor ranks. The situation has remained consistently poor for clinical pharmacology. The departments of the school are challenged with identifying potential staff from qualifying undergraduate students and facilitating post graduate training. The possibility of hiring tutorial assistants makes this a feasible approach.

Table 3: Staff – Student Ratios in the School of Medicine per department

SNo.	Department	Number of staff 2016	Number of impacted students 2015/16			Student: Staff ratios	
			UG*	PG	Total	2016	2015
1	Anatomy**	5	526	53	584	121:1	84: 1
2	Anatomical Pathology**	8 [‡]	305	57	362	49:1	36: 1
3	Biochemistry*	7	394	29	430	65:1	114:1
4	Clinical Pharmacology**	8	340	38	386	51:1	53: 1
5	Hematology/BT*	5	394	57	456	82:1	71: 1
11	Microbiology/Immun*	12	305	57	374	34:1	36: 1
6	Physiology	7 [‡]	514	3	517	91:1	74:1
7	Anesthesiology**	3	198	4	205	75:1	36:1
8	Clinical Oncology	6	12	10	28	5:1	3:1
9	Emergency Medicine	3	198	18	219	75:1	96:1
10	Internal Medicine	12	376	26	414	37:1	77:1
12	Obstetrics/Gynecology	11	376	33	420	41:1	29:1
13	Ophthalmology	7	198	9	214	32:1	91:1
14	Orthopedics/Traumatology	8	189	16	213	29:1	36:1
15	Otorhinolaryngology	6	198	14	218	38:1	36:1
16	Pediatrics & Child Health	13	376	14	403	32:1	77:1
17	Psychiatry	10	198	8	216	22:1	24:1
18	Radiology	8	189	20	217	29:1	23:1
19	Surgery/Urology	14	376	28	418	31:1	84:1

NB: Staff numbers exclude tutorial assistants

* Students taught in clinical rotation groups – taken into consideration in student: staff ratio estimates

** Teaching in the first year in biomedical and diagnostic science disciplines include students from all or some undergraduate programmes of the School of Medicine and from the BScN, DDS, BScEH and BPharm programmes.

‡ One or more staff on study leave not reflected; and or with administrative duties outside department

∅ Internal Medicine sub-specialty allocation (for both teaching and clinical services units) NOT taken into consideration on computation of Student: Staff ratio

* At least 2 or more tutorial assistants or retired staff or both in the department.



Compounding these academic staff shortages is a lack of supportive administrative and technical staff with most departments having limited administrative and secretarial support, and biomedical science and laboratory medicine departments having few technical support staffs for practical sessions. Other than the microbiology and immunology department where technician student ratio was 1:37; in the remaining relevant departments this ratio ranged for 1: 143-584, being worse again for staffing in the Anatomy department (See appendix 3 for staff list by department). This means, academic staff time that could be released for teaching, assessment supervision and mentoring is taken up by technical tasks that would have been undertaken by absent cadre. The TCU recommends a ratio of one technical staff to 50 students is not met by almost all departments, which is a threat to future re-accreditation of the School and the University . Heads of department continue to work closely with the DHRM&A to advocate for funded salaried positions for these cadres.

Recognition of accreditation of the School of Medicine

During the reporting year 2015/2016 a Joint committee of East African Community Medical and Dental Boards/Councils, conducted an inspection for the recognition and accreditation of the school of Medicine on Monday March 14th 2016 from 8:00am to 1:00pm. In preparation for this visit the School formed a Committee to compile information required by the Joint Medical and Dental Boards/Councils Committee as per provided guidelines and checklist. The committee led by the Dean had the following members:

- Prof Sylvia Kaaya- Dean, School of Medicine - Chair
- Dr Abel Makubi- Hematology/blood transfusion - Member
- Dr Lulu Fundikira- Radiology - Member
- Dr Larry Akoko- Surgery - Member
- Dr Fadhlun M Alwy-Obstetrics/Gynaecology - Member
- Dr Tumaini Nagu- Internal Medicine - Member

Twenty delegates (20) from the East Africa Region, representing the Joint Medical and Dental Boards/Councils visited the University and discussed the School in terms of student enrolment, staffing, and teaching resources visited selected departments as well as our main teaching hospitals, MNH, to observe the environment within which biomedical, diagnostic and clinical medical education is conducted.

Meetings in the School of Medicine

School Boards: All scheduled School Boards were held as per Almanac in the reporting year. In addition, a number of extraordinary meetings were held as needed. Weekly meetings of the School Management Committee were held as scheduled at a level of more than 85% of planned meetings.

School Board Committees: Meetings of the School Undergraduate and Postgraduate& Research Committees were held as needed. Teaching and Assessment of Quality Committee and the Planning Committee meetings were held as planned by Committee Chairs

Action Planning and Open Performance Review and Appraisal

During the reporting period the School of Medicine management committee cascaded the targets of the Deputy Vice Chancellor Academic Research and Consultancy (DVC ARC) and completed its annual action plan and submitted a related budget. The School's annual action plan was shared with all 19 departments (100%), which also formulated their annual action plans.

These School and departments annual action plans formed the basis of staff's performance objectives. During the reporting period the office of the Dean signed performance agreements with Heads of Department from 11th-18th February, 2016. As some heads of department were newly appointed, for the triennium 2015-2018, clarifications needed by new heads of department extended this process to March 2016. Heads of department then met with their own staff to agree on and sign performance agreements. The process of customizing OPRAS forms to include components of the former Annual Confidential Report forms, as well as a change in the appraisal time frame from January to December to July to June were also partially responsible for delays in setting of performance objectives by staff. From the 2016 portion of the academic year, it has been agreed that readiness for promotion will be assessed at the end of each performance appraisal year, hence in June of each year, and will be indicated and processed by the newly customized OPRAS forms.

During the reporting period, all staff in the office of the Dean School of Medicine performed activities as planned in their OPRAS forms. All the staff filled the OPRAS forms for performance agreement /objectives for the year 2015/2016. The office anticipated to receive feedback from the Directorate of Human Resources Management and Administration for the annual performance appraisal for year 2015/2016 which was completed by June, 2016.

4.1.8 Staff Promotions, Retirement and Transfers

Academic Staff Assessments for Promotion

During the reporting year all Heads of Department on the MUHAS payroll, filled their annual OPRAS after training. Seven academic staff members were recommended for promotion to the next rank. They are: -



- (a) Dr. Grace Shayo from Lecturer to Senior Lecturer
- (b) Dr. Tumaini Nagu from Lecturer to Senior Lecturer
- (c) Dr. Obadia Yongole from Lecturer to Senior Lecturer
- (d) Dr. Larry Akoko from Lecturer to Senior Lecturer
- (e) Dr. Francis Fredirick from Lecturer to Senior Lecturer
- (f) Dr. Peter Wangwe from Lecturer to Senior Lecturer
- (g) Prof. Victor Mwafongo from Associate Professor to Professor

During the reporting period two (2) members of academic staff at professional ranks were promoted to their next respective ranks during 38th Council meeting held on 8th February, 2016 as follows: -

(a) Dr. Julie Makani - from Senior Lecturer to Associate Professor

Department of Hematology and Blood Transfusion: Dr. Julie Makani was last promoted to Senior Lecturer in 2007. She had published twenty-two (22) papers in peer reviewed journals; 1st Author in four (4); and earned 6.6 publication units, which were sufficient for her promotion.

(b) Dr. Mabula P. M. Mchembe – from Senior Lecturer to Associate Professor

Department of Surgery: Dr. Mabula P. M. Mchembe was last promoted to Senior Lecturer in 2009. He had since published thirty-three (33) publications in peer reviewed journals; 1st Author in four (4) and earned sufficient publication units (9.08) for promotion to the next level.

Staff Transfers

During the reporting period Mr. Adam Kawalika, a driver in the School was transferred to the Office of the Deputy Vice Chancellor (ARC) and replaced by Mr. Ally Shaabani Kione who was transferred from the Directorate of Human Resources Management and Administration to the office of the Dean, School of Medicine.

Staff retirement

Academic staff: During the reporting period 11 academic staff retired or were assigned duties* outside the University as shown in the matrix below:

S/N	Name	Sex	Academic Rank	Qualification	Department
1	K.E.W. Ngwalle*	M	Senior Lecturer	MMed	Obstetrics and Gynecology
2	M. Bakari*	M	Professor	PhD	Internal Medicine
3	P. M. Magesa	M	Senior Lecturer	MMed	Haematology and Blood Transfusion
4	G. P. Kilonzo	M	Professor	FRCP	Psychiatry & Mental Health
5	N. M. Hogan	F	Senior Lecturer	Psy.D	Psychiatry & Mental Health
6	K. Mrumbi	M	Lecturer	PhD	Psychiatry & Mental Health

S/N	Name	Sex	Academic Rank	Qualification	Department
7	J. M. Lwakatare	M	Senior Lecturer	MMed	Internal Medicine
8	F. S. Mhalu	M	Professor	FRCPath	Microbiology/ Immunology
9	S. Y. Maselle	M	Professor	FRCPath	Microbiology/Immunology
10	J. N. Kitinya	M	Professor	MMed, Phd	Anatomical Pathology
11	M. M. A. Njelekela*	F	Senior Lecturer	PhD	Physiology

Support and Technical Staff: During the reporting period the Principal Administrative Officer in the office of the Dean School of Medicine (Mr. H. K. Mpemba retired from public service after attaining compulsory retirement age as per government circular with effect from 11th March, 2016. The office of the Dean had requested for replacement of the same to cover heavy administrative duties in the office.

New Staff Appointments

During the reporting period, 21 new academic staff were hired, 50% of whom were females. The staff by position, department and date of reporting are listed in table 4 below:-

Table 4: Academic Staff Appointed in 2015/16

S/N	Name	Position	Department	Date Reported
1	Ms. Tasiana Njau (F)	Assist. Lecturer	Psych. & Mental Health	03.08.2015
2	Mr. James J. Hayola	Tutorial Assistant	Biochemistry	03.08.2015
3	Dr. Advera Ngaiza (F)	Tutorial Assistant	Pathology	04.08.2015
4	Mr. Kinuma Ndaki	Tutorial Assistant	Biochemistry	01.09.2015
5	Dr. Ali Said	Lecturer	Obstetrics & Gynecology	01.09.2015
6	Dr. Sabrina M. Kazia (F)	Lecturer	Psychiatry & Mental Health	01.09.2015
7	Dr. Aman Idris Kikula	Tutorial Assistant	Obstetrics & Gynecology	05.10.2015
8	Dr. Alexander M. Tungu	Lecturer	Physiology	13.10.2015
9	Dr. Frank Mbulinyingi Msafiri	Lecturer	Microbiology and Immunology	20.10.2015
10	Dr. Daudi L. Ntunaguzi	Tutorial Assistant	ENT	30.10.2015
11	Dr. Sima Ernest Rugarabamu (F)	Tutorial Assistant	Microbiology and Immunology	26.10.2015
13	Dr. Moses J. Byomuganyizi	Lecturer	Surgery	26.10.2015



S/N	Name	Position	Department	Date Reported
14	Mr. Ponsianus T. Thonya	Tutorial Assistant	Pathology	16.11.2015
15	Dr. Salimu S. Masoud	Assistant Lecturer	Microbiology & Immunology	23.11.2015
16	Dr. Kassim Babu Maconda	Tutorial Assistant	ENT	24.11.2015
17	Dr. John S. Mbwambo	Lecturer	Surgery	08.01.2016
18	Dr. Fileuka C. Ngakongwa (F)	Lecturer	Psychiatry & Mental Health	01.02.2016
19	Dr. Evelyne G. Furumbe (F)	Assistant Lecturer	Paediatrics and Child Health	01.02.2016
20	Dr. Ahlam M. Nasser	Tutorial Assistant	Haematology & blood Transfusion	08.02.2016
21	Anna A. Sanga (F)	Tutorial Assistant	Clinical Pharmacology	04.04.2016

While some new staff were employed as early as October 2014, all were engaged during the reporting period.

Continuing Professional Development Courses offered by DCEPD

The DCEPD offered courses in health professional's education and newly appointed staff were encouraged to attend. Table 5 provides a summary of the 17 staff by department, most being newly appointed, that attended faculty development courses in teaching methodology held at the end of 2015.

Resource Mobilization

Short courses

Staff identified priority and demand driven short courses for implementation, targeting health care providers in Tanzania and beyond. One short course (Diabetes Management) facilitated by the Department of Internal Medicine, has been accredited since 2010, and the course was still ongoing.

Five short courses were submitted to DCEPD for accreditation by the Department of Emergency Medicine. The department had received feed-back that it was in the final stages of processing accreditation for the courses. The School will continue to follow-up with heads of department to encourage them to facilitate and report the development of accredited and implemented short courses.

Uporoto Clinic

The School working with other schools and institutes and the office of the DPI continued to seek funds for the construction of a polyclinic at the MUHAS Uporoto site. While clinical skills for post and undergraduates will be developed at this site further contributing to expanding skills use to different clinical care contexts and decongesting the MNH clinical teaching site; clinical services will also be provided to the neighboring communities.

External Student Clinical or Research electives/exchanges in the School

Elective and exchange foreign students continued to be a major source of income generation in the school. The School in its third of a five-year registration as a GHLO (Global Health Learning Opportunities – the Association of American Medical Colleges) host institution received one elective student from the Eastern Virginia Medical School in the US through this mechanism. During the reporting year the school received a total of 63 students who completed clinical electives in various departments as summarized in table 6 below: -

Table 5: Elective students registered by the School in 2015/16

Department / School	Elective	Exchange	Total
Internal Medicine.	3	5	8
Paediatrics & Child Health	3	6	9
Surgery	11	1	12
Obstetrics & Gynaecology	5	4	9
Psychiatry	1	0	1
Radiology	5	0	5
Orthopedics & Trauma	3	0	3
Emergency Medicine	7	0	7
ENT	3	0	3
Neurology	2	0	2
Otorhinolaryngology	2	0	2
Nephrology	0	1	1
Urology	0	1	1
Total	45	18	63

NB: Some of students in the School of Medicine rotated in more than one department.

The Elective study students during reporting year were from Britain, Canada, Denmark, Germany, Belgium, United States and the United Arab Emirates. Most students who apply for electives at MUHAS are usually from Europe organizations such as Work the World and World Unite which coordinates elective study student applications and placements.

Most universities from the USA, Canada, Norway, Sweden and some other parts have a formal student exchange arrangement with MUHAS and their elective is centrally coordinated with more or less fixed time for starting in the specific departments where students can do their elective. Many of these may not be paying elective fees; counterpart students from Tanzania (n= 6 every year supported and 2 unsupported slots that our students can rarely afford) are supported to do electives in their countries.

Despite efforts to attract elective students there has been a steady decline in the number of elective students registered by the University. The number of elective students was similar to the 65 registered in the 2013/14, but a decline from the 135 registered in the 2012/2013 academic year. This reduction by half in the number of student electives may partly be because MNH has also initiated a separate elective student programme since 2014 that operates in the same physical space. The forthcoming space provided by the Mloganzila campus Academic Medical Centre, once established should provide an alternative site for student electives in Tanzania. The presence of accommodation on site for elective students will increase the attractiveness of the venue as a clinical skills building exposure site.

Individual Department Initiatives

On 19th February, 2016 the School of Medicine received a donation of two hundred (200) chairs for a lecture theatre in the New Paediatrics Complex at MNH from Mohamed Enterprises Tanzania Limited (MetL). The donation alleviated a shortage of chairs in the teaching halls for our undergraduate students. The School of Medicine and Department of Paediatrics and Child Health officially acknowledged the Donor and received the chairs in an official handover ceremony held on Wednesday 18th May, 2016 from 10:00am in the fourth floor Lecture theatre of the New Paediatrics Complex, MNH.

4.1.9 Miscellaneous

Visitors

A total of 40 visitors made courtesy call to the office of the Dean during the reporting period.

Obituary

One student Ms. KINAMBIKE, REHEMA D Reg. No.2015-04-08535 a first year pursuing BMLS General programme, died on 23rd March, 2016. May her soul rest in peace.

4.2 School of Dentistry

4.2.1 Introduction



Dr. Elison Simon

The School of Dentistry started in 1979 as a Dental School within the Faculty of Medicine of the University of Dar es Salaam with the following objectives:

1. To train undergraduates in all aspects of dentistry and teach theoretical medical and basic sciences leading to a degree of Doctor of Dental Surgery (DDS),
2. To provide dental care to patients in and around the city of Dar es Salaam and referral cases from upcountry.
3. To function as a research centre, where epidemiological studies in dentistry will be made and monitored, and also coordinated with other government agencies such as the Tanzania Food and Nutrition Centre, the Ministries of Commerce and Industries, and department of Community Medicine in controlling the consumption of cariogenic non-essential foodstuff, and
4. To team up with the Ministry of Health, Community development, Gender, Children and the Elderly in the training of other cadres of dental personnel who shall work closely with the dental surgeon in rendering services to patients

The School of Dentistry, for the 37 years (1979 – 2014) of its existence has remained the only institution in Tanzania where dental education is offered at degree level.

Vision

To become a center of excellence for training professionals, quality research and services in oral health.

Mission statement

To seek for quality oral health through education, training, research and oral health services for attainment of equitable socio-economic development.

Objectives:

- (i) To provide education and advanced training for oral health personnel
- (ii) To perform research in the field of oral health
- (iii) To provide expert professional services in oral health

Functions:

- (i) To provide graduate dentists and postgraduate specialists in different oral health fields suitable for hospital and community work in Tanzania, regionally and internationally
- (ii) To carry out research in all fields of oral health
- (iii) To cater for continuing education in all fields of oral health
- (iv) To render oral health services to patients
- (v) To provide advisory services to the government in the field of oral health

4.2.2 Activities During the Reporting Period

In 2015/2016, forty six (46) undergraduate and eight (8) postgraduate students were admitted in the School of Dentistry (SoD). This was a decrease of 17.8% for undergraduates and an increase of 33.3% for postgraduates compared to previous reporting year (2014/2015). Teaching and fieldwork were conducted smoothly in August 2015 and in March 2016 examinations for both undergraduates and postgraduates were successfully conducted according to the University almanac. A total of eighteen (18) undergraduate students, (16 males, and 2 females) successfully completed studies and graduated in December 2015. This was an increase of 5% compared to 2014/15 (in which 17 students graduated). Also, there were eight (8) postgraduate students (all males) who graduated, which was an increase of 100% compared to 2014/15. The increase was attributable to efforts made to advertise the programmes locally and internationally. One of the postgraduate students who graduated was from Swaziland. During the academic year 2015/16 all the programmes running in the School of Dentistry, both undergraduate and postgraduate were Competence Based programmes. The School noted improvement in the mastery of clinical skills among 4th year students following introduction of CBC. This was of a result of step-wise acquisition of competencies inherent in CBC, hence fourth year clinical rotations capitalized on foundation of junior clinical rotations during 3rd year.

During the year under review one faculty was doing postdoctoral training under MUHAS supervision in collaboration with the Radboud University, Nijmegen, The Netherlands. Another faculty was on a PhD programme, which is offered by MUHAS in collaboration with the University of Turku, Finland and another one secured registration to pursue a PhD at Jilin University in China. Several academic members of staff attended seminars and conferences within and outside the country e.g. the Annual MUHAS Scientific conference in June 2015 and the Tanzania Dental Association (TDA) Continuing Education workshop and Annual General Meeting that was held in December 2015. Three (3) academic members of staff visited Universities outside the country as external examiners.

During the academic year under review, members of staff from the School conducted research that resulted in eight publications an increase of 12.5% compared to 7 of the previous year.

Consultation and clinical services to patients with oral health problems in the School of Dentistry clinics and the Muhimbili National Hospital were rendered adequately. During the reporting period the School continued to render its core functions within its three departments as summarized in the Table 6.

Table 6: Departments of the School of Dentistry and their Core functions

SN	Department	Core functions
1.	Oral and maxillofacial surgery (OMS)	<ol style="list-style-type: none"> 1. Teach undergraduate and postgraduate students oral and maxillofacial surgery, oral medicine and oral radiology. 2. Conduct research in the area of oral and maxillofacial surgery. 3. Render services to patients and the public in general in oral and maxillofacial surgery.
2.	Restorative Dentistry (RD)	<ol style="list-style-type: none"> 1. Teach undergraduate and postgraduate students in dental biomaterials, operative dentistry, periodontology, and prosthodontics 2. Conduct research in the area of dental biomaterials, operative dentistry, periodontology, and prosthodontics 3. Render services to patients and public in general in operative dentistry, periodontology, and prosthodontics.
3.	Orthodontics, Paedodontics, and Community Dentistry (OPCD)	<ol style="list-style-type: none"> 1. Teach undergraduate and postgraduate students in paediatric dentistry, orthodontics, and community dentistry 2. Conduct research in paediatric dentistry, orthodontics, and community dentistry 3. Render services to patients and the public in general in preventive and community dentistry, paediatric dentistry, and orthodontics.

4.2.3 Management Profile During the Reporting Period

Table 7: The Management Team of the School of Dentistry.

S/N	NAME	POSITION
1	Dr. Elison N. M. Simon	Dean, School of Dentistry
2	Dr. Sira S. Owibingire	Associate Dean, School of Dentistry
3	Dr. Tumaini Simon	Dental Manager, School of Dentistry
4	Dr. Jeremiah Moshy	Head, Department of Oral and Maxillofacial Surgery (OMS)
5*	Prof. Febronia Kahabuka	Heads, Department of Orthodontics, Paedodontics and Community Dentistry (OPCD)
6*	Dr. Lorna C. Carneiro	Head, Department of Restorative Dentistry (RD)



4.2.4 Staff Matters

During the year under review 3 academic members of staff were employed. The number of academic staff therefore increased to 24, of whom 15 (62.5 %) were males and 9 (37.5%) were females. The numbers of academic staff by ranks is as shown below (Table 8).

Table 8: Number of Academic staff.

Department	Designations							On Post
	Professors	Associate Professors	Senior Lecturers	Lecturers	Assistant Lecturers	Tutorial Assistant	Total	
RD	0	1	3	7	0	0	11	11
OPCD	0	2	1	4	1	0	8	8
OMS	0	0	4	1	0	0	5	5
TOTAL	0	3	8	12	1	0	24	24

KEY: RD = Restorative Dentistry, OPCD = Orthodontics, Paedodontics and Community Dentistry, OMS = Oral and Maxillofacial Surgery

The overall faculty to students ratio was 1:8 for all DDS students, 1:7 in Oral and Maxillofacial Surgery, 1:5 in Restorative Dentistry, and 1:5 in Orthodontics, Paedodontics and Community Dentistry. The number of academic staff and faculty to student ratios remained almost static.

Table 9: Number of Administrative, Technical and Support Staff

Qualification	Male	Female	Total
Bachelor degree	3	0	3
Diploma	1	3	4
Certificates	0	1	1
Primary education	2	5	7
Total	6	9	15

The number of Administrative and Technical staff remained unchanged compared to last year 2013/2014. The number of non-academic staff to student ratio is 1:13.

4.2.5 Students Matters

4.2.4.1 Enrolment

Undergraduates

During the reporting year (2015/2016), forty seven (47) DDS 1 students were admitted, which was a decrease by 16% compared to the previous reporting year (2014/2015). This decrease in admission however, did not affect total number of students in the School. The proportion of enrolled female students, however, slightly increased from 25.3% in 2014/2015 to 26.0% in the reporting year (2015/2016).

Table 10: Enrolment of Undergraduate Students

DDS	Sex		Total	Female %
	M	F		
Semester 1 - 2	38	9	47	19.1%
Semester 3 - 4	44	11	55	20.0%
Semester 5 - 6	20	10	30	33.3%
Semester 7 - 8	22	11	33	33.3%
Semester 9 - 10	16	6	22	27.3%
Total	140	47	187	25.1%

Postgraduates

Six (6) postgraduate students were enrolled in the School of Dentistry (SOD). This was an increase of 100% for postgraduates compared to previous reporting year (2013/2014). Nevertheless, this number is still by far lower than the capacity of the School. The low enrolment of postgraduate students was related to decrease in government sponsorship through the Ministry of Health, Community Development, Gender, the Elderly and Children.

Table 11: Enrolment of Postgraduate Students, School of Dentistry

Degree course	Admission				Registered			
	Sex	Govern-ment	Private	Total	Sex	Govern-ment	Private	Total
MDent. Community Dentistry	M	0	0	0	M	0	0	0
	F	0	0	0	F	0	0	0
MDent. Oral Surgery	M	4	1	5	M	2	2	4
	F	0	0	0	F	0	0	0
MDent. Restorative Dentistry	M	1	0	1	M	1	0	1
	F	2	1	3	F	0	1	1
MDent. Paediatric Dentistry	M	2	0	2	M	0	2	2
	F	1	0	1	F	0	0	0
Total		10	2	12	Total	3	5	8

4.2.6 External Examiners

The School received external examiners for both the July/August 2015 and March 2016 examinations as follows:

- Oral and Maxillofacial Surgery - Prof. Mark Chindia from the University of Nairobi.
- Department of Orthodontics, Paedodontics and Community Dentistry – Prof. Mary Masiga from the University of Nairobi.
- Department of Restorative Dentistry - Dr. Penina Kisumbi from the University of Nairobi.

Generally the external examiners were satisfied with the quality and handling of examinations. All of them expressed satisfaction with students' performance in general and were happy that some of their recommendations given during the previous year's examinations were given considerations and taken on board this year. They appreciated the hospitality extended by their hosts and the University.



4.2.7 Graduation Statistics

During the reporting year 18 undergraduate and 8 postgraduate students graduated. This was an increase of 5.8% for undergraduate and an increase of 33.3% for postgraduate students.

Table 12: Graduation Statistics of Undergraduates and Postgraduates

Undergraduate - Degree Programme (DDS)	Number of DDS Students Graduated		
	M	F	TOTAL
Total	16	2	18
Postgraduate – All MDent Degree Programmes	Number of MDent Students Graduated		
	M	F	TOTAL
Total	8	0	8

4.2.8 Major Ongoing Research Project

Several research projects were in progress during the reporting period some of which are internally funded and some externally funded, as shown below:-

SN	Title of the Research project	Research Coordinator	Department
1.	Nylon teeth myth	Prof. F. K. Kahabuka	Orthodontics. Paedodontics and Community Dentistry
2.	Amalgam phase down project	Prof. F. K. Kahabuka	Orthodontics. Paedodontics and Community Dentistry
2.	Emergence Pattern of Third Molar Teeth among Tanzanians	Dr. E. A Mugonzibwa	Orthodontics. Paedodontics and Community Dentistry
3	Post Doc TASENE Research Award	Dr. M. Mtaya Mlangwa	Orthodontics. Paedodontics and Community Dentistry in Collaboration with Nijmegen University

4.2.9 Major Works Implemented During 2015/2016

4.2.8.1 Department of Restorative Dentistry (RD)

During the reporting period the School of Dentistry implemented various activities through their departments as follows :

- Screening of personnel of some public institutions as part of outreach programs and offering of Atraumatic Restorative Technique (ART) by both undergraduate and postgraduate dental students under supervision.
- Promotion of research activities among staff through writing grant proposals and concept notes

- iii. Promotion of collaboration with other Universities and strengthening existing collaborations.
- iv. Visits to primary schools by postgraduate students and their supervisors.

4.2.8.2 Department of Orthodontics, Paedodontics and Community Dentistry (OPCD)

- i. Promotion of research activities among staff through writing grant proposals and concept notes.
- ii. Provision of treatment service to children with special needs.
- iii. Conducting outreach services to schools.
- iv. Promotion of collaboration with other Universities.

4.2.8.3 Department of Oral and Maxillofacial Surgery (OMS)

- i. Promotion of research activities among staff through writing grant proposals and concept notes.
- ii. Provision of specialized treatment services to adults and children for both outpatients and inpatients.
- iii. Promotion of collaboration with other Universities and strengthening existing collaboration

4.2.10 MUHAS - MNH Cooperation and Clinical services

Good working relationship and cooperation was maintained between the two institutions during the reporting period (2015/2016). The MUHAS-MNH staff meetings took place every three months. During 2015/16 the school managed to collect more revenue (almost a 30% increase) from NHIF payments. Most of the routine activities in the School were run using internally generated funds with minimal dependence on government subventions.

4.2.11 Visits

The FDI project coordinator on the phase down of amalgam visited the school. The East African Accreditation team visited the School in March 2016 to carry out the exercise of re-accreditation. Our School was among the re-accredited Dental and Medical schools. Elective students from several Universities in the world visited and worked in the School throughout the period under report as follows:

Mauritius 1student
Namibia 1 student
Zimbabwe 2 students
United states 4 students.

4.3 School of Pharmacy

4.3.1 Introduction



Prof. G. Kagashe

The School of Pharmacy has five Departments namely; Medicinal Chemistry, Pharmacognosy, Pharmaceutics, Pharmaceutical Microbiology and Clinical Pharmacy and Pharmacology. Clinical Pharmacy and Pharmacology is a new Department which was approved during 2015-2016 academic year. The school has one undergraduate programme (Bachelor of Pharmacy) and seven postgraduate programmes, which are MPharm Quality Control & Quality Assurance, MPharm Pharmacognosy, MPharm Industrial Pharmacy, MPharm Pharmaceutical Microbiology, MPharm in Hospital and Clinical Pharmacy, MPharm Medicinal Chemistry and MSc Pharmaceutical Management.

The School continued to provide services in drug quality control through its Pharm R & D Laboratory to clients and assisting the Ministry of Health and Social Welfare as well as its various agencies in several areas of pharmaceutical service policy formulation and implementation. The School is looking forward to establish one undergraduate and one postgraduate programmes in BSc Pharmaceutical Analysis & Herbal Medicines and MSc Medicine Regulatory Affairs respectively after conducting a thorough market survey.

4.3.2 Highlights of Major Achievements and Challenges

During 2015/2016 the School recorded various achievements as detailed below:-

Teaching and Learning

Academic programmes

In the reporting period, the School advertised its undergraduate programme and all its postgraduate programmes to attract students and increase enrollment. Various events such as Saba Saba, higher education exhibitions within and outside the country were used for marketing the programmes.

Admission of Postgraduate Students in the School for 2015/2016

During the academic year a total of 12 postgraduate students were admitted as shown in table 13 below. This was a slight increase compared to year 2014/2015 which recorded a total of 9 students.

Table 13. Admission of postgraduate students in 2015/2016

Programme	Female	Male	Total
MSc Pharm Mgt	3	-	3
MPharm QA & QC	2	2	4
MPharm Hospital & Clinical Pharmacy	-	3	3
MPharm Industrial Pharmacy	1	-	1
MSc by Research	-	1	1
TOTAL	6	6	12

Admission of Undergraduate Students in the School for 2015/2016

For the undergraduate programme, the School admitted 87 students (17 Females and 70 Males). This admission figure is slightly lower compared to previous academic year 2014/2015 in which 90 students were admitted. The actual enrolment capacity is 50 students per year but the School received about 43.5% beyond its capacity.

Student Registration

New and ongoing student registration during the reporting year is summarized in Table 14 and 15 below:-

Table 14: B.Pharm. Students enrollment in 2015/2016

First Year			Second Year			Third Year			Fourth Year			Grand Total		
F	M	T	F	M	T	F	M	T	F	M	T	F	M	T
17	70	87	19	62	81	18	39	57	12	39	51	66	276	342

These figures tally neither with the admission capacity of the programme nor with gender balance (24% female students) strategy of the School which has projected an annual admission capacity of 60 students and the gender balance of at least 30% female students.

Table 15: Postgraduate Students Admission in 2015/2016

Academic Year	MSc Pharm Management		MPharm QC & QA		MPharm Hospt & Clinical Pharm		MPharm Industrial Pharmacy		MSc by Research	
2015/2016	F	M	F	M	F	M	F	M	F	M
	3	-	2	2	-	3	-	1	-	1
Percentage	100%	-	50%	50%		100%	-	100%	-	100%



The admitted postgraduate students in the period under review were 12 students, slightly higher compared to the previous year (2014/2015) which admitted only 8 students.

Implementation of the Competence Based Curriculum and Performance in Examinations

Teaching of Modular programs for undergraduate (1st, 2nd, 3rd and 4th years) and postgraduate continued normally. Students sat for ordinary CATs and end of modules examinations as scheduled. End of semester Examinations were conducted in March, 2016. Failure rate for the first year students in March 2016 slightly increased to 21.8% compared to year 2014/2015 which recorded a failure rate of 19.5% (Table 20).

The second year students recorded the highest failure rate of (42%) during this semester but slightly lower compared to the previous year which had 50.0% at first sitting. Two students were discontinued during the March 2016 University examinations, one student from first year and one from second year.

The teaching for 2nd, 4th, 6th, and 8th semesters continued and end of audit year examinations were done as scheduled from 29th August to 9th September, 2016.

The academic performance for post graduate students was generally good except for the first year students in MSc, Pharmaceutical Management programme. The results for PM 601.01, PM 601.02, PM 601.03 and PM 602 courses were incomplete due to the reasons that the responsible lecturer for these modules was sick in the middle of the semester and failed to continue with teaching. However, these modules shall be taught by staff from the School of Public Health and Social Sciences (SPHSS) as directed by the University Management.

Table 16 Student performance in examinations at first sitting

SUMMARY OF RESULTS	1st yr	2nd yr	3rd yr	4th yr
Number of students sat for the Examination	87	81	57	51
Number of students passed	68	45	34	34
Number of students failed	19	34	23	17
Number of students absconded	0	0	0	0
Number of students postponed studies	0	0	0	0
Number of students results withheld	0	0	0	0
Incomplete results	0	2	0	0
Failure rate %	21.80%	42.00%	40.40%	33.30%

Students output

A total of 57 undergraduate students and 10 postgraduate students including one PhD graduated during the December, 2015 graduation ceremony.

4.3.3 Human Resource Development

Staff Recruitment and Development

During the year under review (2015/16), two academic staff were recruited; one Tutorial Assistant and one Laboratory Technician. Two members of academic staff from the Department of Pharmaceutics completed their PhD studies and graduated in December 2015. However, of the two, one returned for Postdoctoral studies in May, 2016.

On the other hand, two academic members of staff graduated in MPharm Industrial Pharmacy and MPharm Pharmacognosy during December, 2015 graduation ceremony. These belong to the Departments of Pharmaceutics and Pharmacognosy respectively. Also the School had academic staff on studies. The list of the same is as presented in table 18 below:

Table 17: Postgraduate Student performance

Number of students	MSc Pharm Management		MPharm QC & QA		MPharm Hospt. & Clinical Pharmacy		MPharm Industrial Pharmacy	
	Yr1	Yr2	Yr1	Yr2	Yr1	Yr2	Yr1	Yr2
Sat for the Examination	3	3	4	2	3	4	1	1
Passed	0	3	1	2	2	1	1	1
Failed	0	0	3	0	1	3	0	0
Failure rate %	0.0%	0.0%	75.0%	0.0%	33.3%	75.0%	0.0%	0.0%

	MSc by Research	
	Yr1	Yr2
Number of students sat for the Examination	1	0
Number of students passed	1	0
Failure rate %	0.00%	0.00%

Table 18: Academic staff training

S/N	Name	Department	Degree Sought (Institution)	Status
1	Kalala, Wilbrord M.	Pharmaceutics	PhD (MUHAS)	Finalizing Thesis/ expected to graduate Feb. 2017
2	Tindamanyile, Amisa	Pharmaceutics	MSc. Pharmaceutical management. (MUHAS)	To graduate in 2016
3	Mutagonda, Ritah	Clinical Pharmacy and Pharmacology	PhD (MUHAS)	To graduate in 2016
4	Mlyuka, Hamu	Clinical Pharmacy and Pharmacology	M.Pharm (MUHAS)	To graduate in 2017
5	Masota, Nelson	Medicinal Chemistry	MPharm (by research)	To graduate in 2017

4.3.4 Research and Publications

Research/seminar disseminations

In order to strengthen academic activities, the School started conducting symposia on every Wednesdays from 12.45 to 13.45. In the period under review twenty-three (23) symposia were conducted.

Research and Publications in the School

During the year under review, individual faculty in the School continued to carry out research in various topics and published their results in various journals. A total of 21 scientific publications were published in various peer reviewed scientific journals. This is an average of about 1.5 papers per academic staff per year.

Scientific/Professional conferences/Workshops

A total of 14 members of academic staff attended the 4th MUHAS Scientific Conference held on 23rd to 24th June, 2016 and five (5) postgraduate students were invited and these presented their research findings. Three (3) presentations came from Department of Medicinal Chemistry/ Pharm R&D Lab and two (2) presentations from Department of Pharmaceutics.

4.3.5 Five Year Rolling Strategic Plan 2014/15 - 2018/19

The School's Five Years Rolling Strategic Plan (FYRSP) was revised in June, 2016, after incorporating inputs from School level and University-wide strategic planning workshop which was held from 19th to 20th June, 2016.

4.3.6. Consultancy and Public Services

(i) Institutional Overhead/Internally generated funds

During 2015/2016, the School received a total of TZS 666,000.00 and USD 10,650.00 from various activities carried out in the school through short courses. The University generated USD 901.00 and TZS 88,280.00 as Institutional Overheads (15%) and the rest for School as shown in the table 20.

Table 19: Internally generated income and Institutional Overheads

S/N	ACTIVITIES	QUARTER	TSHS.	USD.	I/Overheads 15%	School income
1	Short courses Pre – internship Incubation Training	1 st quarter 2015/2016	500,000.00	-	75,000 TZS	
2	Short courses EAC Proficiency testing workshop and feedback training	2 nd quarter 2015/2016	166,000.00	450	36 USD 13,280 TZS	
	Medicine evaluation course.			10,200	765USD	
3	NIL	3 rd quarter 2015/2016	NIL	NIL	NIL	NIL
4	NIL	4 th quarter 2015/2016	NIL	NIL	NIL	NIL
	TOTAL	USD		10,650	USD 901.00	
	TOTAL	TZS	666,000.00		TZS 88,280.00	

(ii) Services with JSI/SCMS

The Pharm R& D Lab external clients contact to JSI/SCMS came to an end as JSI/SCMS operations in Tanzania are coming to an end. However, the lab submitted two bids to FH1360 to provide similar services. So far we have received a notification of award pending contract signing. Unfortunately, no testing was conducted in the lab during this reporting period; however other activities conducted are reported under finances.

(iii) External Examiners

During the March 2015/2016 University examinations, the following External examiners were invited to examine in Departments of the School: -



- Dr. Stanley Njagih Ndwigah of University of Nairobi, Department of Pharmaceutical Chemistry, University of Nairobi for Medicinal Chemistry.
- Dr. Mahmoud Fahmi Esebai, Mansoura University, Egypt for Pharmacognosy.
- Dr. Shital Mahindra Maru from Department of Pharmaceutics and Pharmacy Practice University of Nairobi for Pharmaceutics/Pharmacy Practice
- Dr. Lucy Namkinga from UDSM for Pharmaceutical Microbiology.

4.3.7 Challenges Faced by the School During the Reporting Year

Infrastructure

The School continued to experience severe constraints in infrastructure for all core activities (Teaching, Research and Consultancy) in terms of space, equipment, reagents and funding. The school is trying to address these challenges through writing research proposal and income generation proposals to obtain funds.

Staffing

During the reporting period, staffing continued to be inadequate in most of the Departments. Pharmaceutics Department which is responsible for teaching two courses to undergraduate B. Pharm students and two (2) programmes for postgraduate had a staff-student ratio of 1:112. The Department of Pharmaceutical Microbiology has a staff-student ratio of 1: 93 for the department whereas the Department of Medicinal Chemistry has staff-student ratio of 1: 40. On the other hand, the Department of Pharmacognosy had a staff-student ratio of 1:46 whereas that of Clinical Pharmacy and Pharmacology had 1:40.

In order to address the staff inadequacy, the school intends to recruit more staff if permission to employ is granted. The School has also been identifying potential final year BPharm students for recruitment as tutorial assistants and subsequently encourage them to register for postgraduate programmes in the School.

4.4 School of Nursing



Dr. Edith Tarimo

This Annual Report for the year 2015/16 consists of two main sections: Introduction and Highlights of Major Achievements and Challenges.

4.4.1 Introduction

The School of Nursing continued to excel in its core functions which are teaching, conducting research, providing public services and consultancy.

Vision

To become a Campus College excelling in quality education, research and public services in Nursing and Midwifery that responds to national, regional and global challenges.

Mission

To provide quality training, research and consultancy services in Nursing and Midwifery for the attainment of equitable socio-economic development of the Tanzanian community and beyond.

Gender equity and mainstreaming

Gender balance is considered across all the core functions of the school. Although for a long time gender imbalance at the School had been inverse to the general university situation due to the historical nature of the Nursing and Midwifery professions, recently the situation has changed. For example, over the past two years (2014/15 and 2015/16), at the undergraduate level more males were enrolled into the School of Nursing than females (Figure 19 and Table 21). These results provide a promising scenario towards gender balance in Nursing and Midwifery professions.

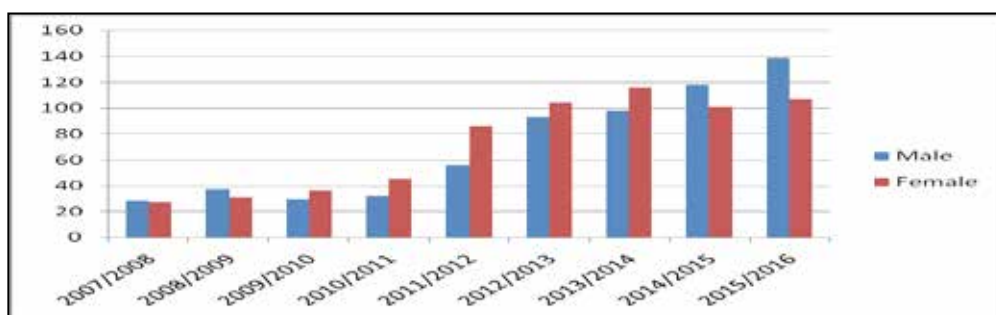


Figure 19. Undergraduate enrollment in SON from 2007/08 - 2015/16 by sex

The School of Nursing has maintained a relatively lower male- female ratio for Postgraduate enrollment and also faculty (Figure 20 and 21). This could be due to the long standing gender imbalance in the Nursing and Midwifery professions pool where the School draws its Postgraduate applicants. The School therefore has an obligation to actively address gender equity and mainstreaming amongst postgraduate candidates and academic members of staff.

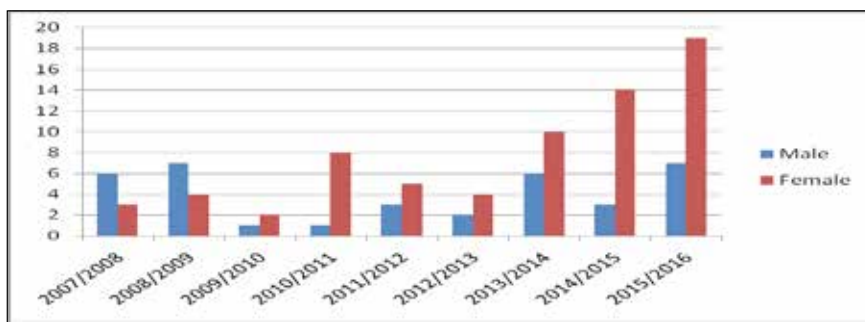


Figure 20. Postgraduates enrolment from 2007/08 – 2015/16 by sex.

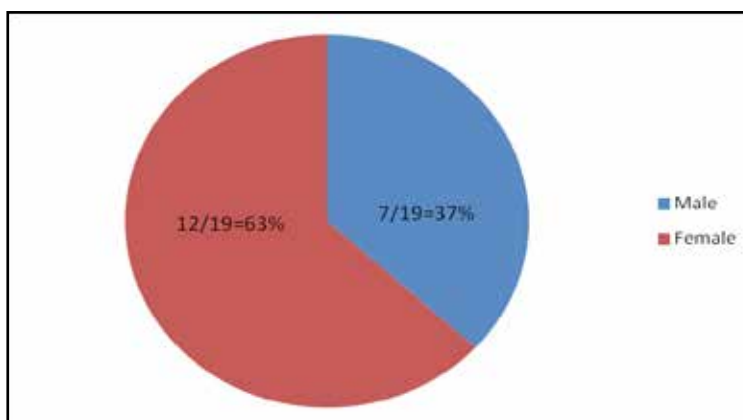


Figure 21: Academic staff of School of Nursing by sex in 2015/16

School of Nursing Management Profile

The older staff at School of Nursing are all females. Since gender balance has been a long-time concern at School of Nursing, many of the newly appointed staff are males who have begun to climb the management ladder. This is demonstrated in the School Management Team, in 2015/16, which was comprised of the Dean, Associate Dean, and three Heads of Department (Clinical Nursing, Community Health Nursing and Nursing Management). In 2014/15 the whole management team was female but in 2015/16 at least one Head of Department was a male (Table 20).

Table 20. The Management Profile of the School of Nursing

SN	Name	Sex	Position
1	Dr. Edith A.M. Tarimo	F	Dean, School of Nursing
2	Dr. Columba K. Mbekenga	F	Associate Dean, School of Nursing
3	Dr Thecla W. Kohi	F	Head, Department of Nursing Management
4	Dr Anne Outwater	F	Head, Department of Community Health Nursing
5	Mr Dickson Mkoka	M	Head, Department of Clinical Nursing

4.4.2 Highlights of Major Achievements and Challenges

4.4.2.1 Major Achievements

During 2015/16 reporting year, the School recorded various achievements as detailed below:

Teaching and Learning

During the period under review, the School continued to run three undergraduate programs namely: BSc. Nursing, BSc. Midwifery and BSc. Nursing Management (final cohort). The three postgraduate programs are MSc Nursing Critical Care and Trauma, MSc Nursing Mental Health and MSc Midwifery and Women's Health.

Students Admission in 2014/15 and 2015/16 by sex

During year 2015/16, a total of 103 applicants joined both undergraduate and postgraduate programmes at the SON. The distribution was as follows:- At Bachelor level: BSc. Nursing (54), BSc. Midwifery (23), and at Master level: MSc Nursing Critical Care and Trauma (6), and MSc Midwifery and Women's Health (20). Male and female enrollment for undergraduate and postgraduate degree programmes in 2015/16, increased by 24.44% and 11.9% respectively compared with 2014/15 academic year (Table 22).

Table 21. Admission of Students, School of Nursing in 2014/15 and 2015/16 by sex

Program	Sex					
	Male 2014/15	Male 2015/16	Male Percent increase/ decrease	Female 2014/15	Female 2015/16	Female Percent increase/ decrease
Undergraduates	42	49	16.87 % increase	28	28	0 % increase
Postgraduates	3	7	133.33% increase	14	19	35.71% increase
Total	45	56	24.44% increase	42	47	11.9% increase

Graduands 2014/15 and 2015/16 by sex

Overall, compared with the academic year 2014/2015, the numbers of male graduands in undergraduate and postgraduate programmes in 2015/2016 increased by 58.82% and that of female decreased by 2.5% (Table 22).

Table 22. Graduands in 2014/15 and 2015/16 by sex

Program	Sex					
	Male 2014/15	Male 2015/16	Male Percent increase /decrease	Female 2014/15	Female 2015/16	Female Percent increase /decrease
Undergraduates	15	21	40% increase	36	29	19.44% decrease
Postgraduates	2	6	200% increase	4	10	150% increase
Total	17	27	58.82% increase	40	39	2.5% decrease

Exhibitions

In June and July 2015, one staff from Clinical Department participated in Sabasaba exhibitions whereby SON provided various health checkups, first AID and other emergence nursing services. In June and July 2016, three staff from Departments of Clinical and Community Health Nursing participated in Sabasaba exhibitions and showed case the role of nurses and midwives in the country. For example: demonstration of insertion of Intrauterine Contraceptive Devices (IUCD) including explanations about myths and misconceptions of IUCD, and counseling about family planning. For the first time First Aid of a choking child was demonstrated. All events and procedures attracted many participants.

Collaborations and Networking

In the year 2015/2016, the school received 42 visitors and 4 external examiners. Most of these visitors were potential collaborators from various academic institutions. The number of visitors in 2014/15 was 32 and four (4) external examiners. Therefore in 2015/16 there was an increase by 31.25%. During these visits, four (4) MoUs focusing on research projects, faculty/students exchange were signed between the MUHAS, School of Nursing (SON) and collaborating institutions. These MoUs were signed between NORPART and SON - MUHAS and University College of Southeast Norway; SON, MUHAS and University of Southern Denmark and SON - MUHAS and Hanze University in the Netherlands; and SON - MUHAS Dalhousie University in Canada. Exchange of academic staff took place between MUHAS and Dalhousie University in terms of research projects.

During the reporting period a one week training on sexuality and reproductive health among faculty and Nursing students was conducted in April 2016. This was made possible through networking with faculty from Lincoln University Pennsylvania, USA, University of Minnesota School of Public Health, and Johns Hopkins University, USA.

During the same period, the School in collaboration with Tanzania Midwives Association secured funding from Canadian Government for a 4-years project to train midwives in the rural areas on Life Saving Skills, Clinical Mentorship and Advocacy for improvement of midwifery services in the country.

The existing Linnaeus Palme collaboration between SON, MUHAS and Umea University as well as with Uppsala University in Sweden enabled two faculty to participate in three weeks short course on pre-hospital care in May 2016. Moreover, through St. Lukes University, Japan– MUHAS collaboration, Professor Yoko actively participated in teaching MSc MWH programmes. Through the Afya Bora Consortium (ABC); a consortium formed by 9 universities, MUHAS (Tanzania), Makerere (Uganda), Nairobi (Kenya), Gabarone (Botswana), Buea (Cameroon), University of Washington, University of San Francisco at California, Pennsylvania and John Hopkins (USA), one faculty actively represented the School in the technical working team, and one junior faculty was recruited into the fellowship in June 2016. Other collaborations such as World Learning, Laerdal Foundation/MNH/ MUHAS, and Miracle Corners of the World were progressing well during the reporting period

On 5th May, 2016 the School actively participated in the World Midwifery Day held in Dar es Salaam, Tanzania. During this important event, one of the faculty, Dr Sebalda Leshabari was awarded “The Midwives for All Prize in 2016” by the International Confederation of Midwives (ICM) and Swedish Embassy; a certificate of recognition awarded to an exceptional midwifery professional through education, provision of services, change-agent in the midwifery profession, regulation, research, midwifery association development, and/or advocacy in the country.

During the reporting year the School faculty worked very actively with National Nursing & Midwifery Council and Professional Associations (Tanzania Nursing Association & Tanzania Midwifery Association) in advising the government, non-governmental organizations, private sector and individuals on the provision of high quality nursing and midwifery services in the country.

Research and Publications

During the year under review, faculty in the School carried out research and submitted proposals for ethical clearance and manuscripts for publications in Nursing, Midwifery and Public Health. Through the Sida Programmes, the School managed to secure funding via three clusters namely: HIV, Injury and Road Traffic Accidents and Reproductive and Child Health. During the reporting period 12 papers were published in peer reviewed journals. This was an increase by 50% when compared with only 6 papers published in 2014/15. Also the number of publications whereby the faculty was the first author increased to 5 which is an increase by 150% compared to 2 in 2014/15. Two (2) faculty participated and presented in the 4th MUHAS Scientific Conference which took place between 23rd and 24th June 2016. This was a decrease by 50% compared with four (4) faculty who participated and presented in the 3rd MUHAS Scientific Conference held between 28th and 29th May, 2015 in 2014/15. Nevertheless, one faculty presented twice and several faculty members contributed to more than one presentation. And for the first time the SON contributed a poster during the Conference. Also one faculty presented in the Midwifery Scientific Conference which was meant to commemorate the World Midwifery Day, on 4th May 2016 in Dar es Salaam.

4.4.3 Human Resource Development in the School of Nursing

Staff Recruitment

Compared to 2014/15, in the year 2015/16, the School recruited 3 academic members of staff (Two Tutorial Assistants and one Assistant Lecturer), of whom one was a male. The school has an obligation to maximize its collaborative opportunities to ensure adequate staffing levels are reached by all means. For example in 2014/2015, the School recruited only one Peace Corp Volunteer to teach Critical care and Trauma, but in 2015/2016 we have managed to recruit two Peace Corps Volunteers to teach Critical Care and Midwifery specialties. The School is also utilizing exchange teachers from existing collaborations such Japan, U.S.A and Sweden. Thus, the School is striving through various means to overcome the challenge of inadequate number of faculty through collaborative efforts.

Staff Development

In the year under review two faculty continued with their PhD training; one at MUHAS (Dikson Mkoka) and another one in St Lukes, Japan (Beatrice Mwilike). In addition, five (5) faculty were locally recruited for postgraduate studies; 4 for PhD (three males and 1 female) and 1 (male) for MSc by research under Sida supported funding.

Other faculty participated in various workshops/ seminars/ trainings and short courses. In line with the President's Directives on travels, the numbers of local travels increased compared to international travels by overall 178.57% increase (Table 24). This implies academic staff members were able to interact and render services to the local community and also internationally.

Table 23: Number of international travels versus local travels 2015/2016

Period	International travels (Outside Tanzania)	Local travels (Within Tanzania)	Local travels Percent increase / decrease
July/September 2015 Quarter	3	11	266.67% increase
October/December 2015 Quarter	2	11	450% increase
January/March 2016 Quarter	2	7	250% increase
April/June 2016 Quarter	7	10	42.86% increase
TOTAL	14	39	178.57% increase

Resource Mobilization

A major source of income for the School during the reporting period was from the elective students' supervision. A total of 29 elective students were registered and completed their attachments at the School. In the year 2015/16, a total of Tshs. 32,371,518/= was generated from elective students compared to Tshs. 22,123,350/= generated in 2014/2015. The observed increase of 46.32% of the amount generated in 2015/16 has been attributed to more networks and collaborations created resulting to more students applying for elective attachments at School of Nursing, MUHAS.

4.4.2.2 Challenges faced by the School during the reporting period

Infrastructure

Although the School continued to share facilities (teaching venues, research facilities and clinical placements) with other Schools, Muhimbili National Hospital, and Municipal Hospitals, the School lacks adequately equipped skills lab with items such as models and simulation materials. Another major constrain is office space; only 40% of faculty have office space.

Staff

Staffing is inadequate in all three Departments. Department of Clinical Nursing is responsible for teaching 10 undergraduate and postgraduate courses, but the Department hosts 8 faculty only. The Department of Nursing Management has 4 faculty who are responsible for 8 courses; the Department of Community Health Nursing has 7 faculty who are responsible for teaching 10 courses. These courses exclude the basic science subjects which are taught by faculty from the School of Medicine. This is big challenge for faculty in the School of Nursing who then cannot get adequate time for research, consultancy services and administrative responsibilities for some senior faculty.

Overall, by using WHO and TCU ratios, the School has a deficit of 1-13 and 1-8 academic staff respectively. In brief, the school hosts only 16 faculty members who are Assistant Lecturers and above namely: 4 Senior Lectures, 2 Lectures, 10 Assistant Lectures.

4.5 School of Public Health and Social Sciences

4.5.1 Introduction



Prof. D. Urassa

The School of Public Health and Social Sciences continued addressing the core functions of the University which are training, research and community service as well as establishing new links and collaborative activities. The School has a total number of 80 staff among them 67 are academic staff and the rest are administrative and technical staff. The School also has eleven staff supported by projects.

Vision of the School

The vision of the School of Public Health and Social Sciences is to become a centre of excellence for training public health and social sciences professionals, conducting quality research and providing public service both in Tanzania, East Africa, and beyond.

Mission of the School

The mission of the SPHSS which is in line with the Universities mission is to improve the health of people in Tanzania through teaching, research, consultancy and public health services using public health principles for the attainment of school, staff and University development.

4.5.2 Programmes

The School hosts one Undergraduate Programme namely BSc. Environmental Health Sciences and fourteen postgraduate programmes namely, Master of Public Health Regular Track, Master of Public Health Executive Track and Master of Public Health Distance Learning, Master of Arts in Health Policy and Management, MSc. in Tropical Diseases Control, MSc. in Applied Epidemiology, MSc. in Epidemiology and Laboratory Management, MSc. in Parasitology and Medical Entomology, Master of Medicine in Community Health, Master in Behavior Change and Master in Behavior Change Communication for Health, MSc. in Environmental and Occupational Health, MSc. in Bioethics and MSc. in Health Information Management.

Furthermore the School is in the process to establishing more postgraduate programmes including Master of Public Health Online, Master of Business Administration in Health Services Management, MSc. Biostatistics and MSc. Health Care Delivery Sciences.

4.5.3 Workshops/Meetings Attended

- i. One member of staff attended a Workshop on Surveillance, Monitoring and Evaluation. Another member of staff attended the American Society for Tropical Medicine and Hygiene conference in Philadelphia, USA, October 25-29, 2015.
- ii. The School conducted 3-day Workshop on Dissertation Supervision for Postgraduate students which was held on 03rd and 04th November 2015 at Mbezi Garden Hotel where by majority of SPHSS faculty participated. The School also conducted a

one day workshop on teaching competence-based curricular and e-learning using Moodle.

- iii. The School conducted several management meetings to address issues related to daily activities within the School and University at large. This is a continuation of follow up meetings to discuss issues from departmental meetings which need attention of the School management for fruitful future. Among issues raised include teaching space as a result of increased number of students and programme offered, inadequate teaching facilities and number of teaching staff who lack office space. The School recommended to the University management that enrolment of students should be proportional to the available space.
- iv. Academic staff in the departments participated in the development of proposals for various funding agents like EDCTP and ACE II.
- v. Members of the Department of Epidemiology/Biostatistics attended AURA workshop from 6th to 8th October 2015. Two members of department traveled to Lund, Sweden from 5th to 12th December for project meeting, planning and data analysis.
- vi. Another member from same department attended Emerging opportunities Workshop on curriculum and material development for online and distant learning courses. The workshop took place in Cape Town South Africa from 19 – 22 October 2015.
- vii. Two faculty participated in a curriculum planning meeting for HIV implementation science training programmes and advisory meeting for the Global Infectious Disease training programmes at the Harvard T. H. Chan School of Public Health from 2nd to 6th November 2015. They also attended a symposium on “Reaping the health benefits of sustainable agriculture” hosted by the Nutrition and Global Health Program at the Harvard T.H. Chan School of Public Health.
- viii. Two members of Department of Epidemiology and Biostatistics attended weekly project meetings every Wednesday between 1-2pm to discuss progress of Community Health Workers-Learning Agenda Project (CHW-LAP).
- ix. Two other members of Department of Epidemiology and Biostatistics attended weekly project meetings every Thursday between 12.10-2pm to discuss progress of the Demographic Dividend Project
- x. One faculty attended a workshop organized by the National Bureau of Statistics (NBS)- National Evaluation Platform (NEP) project from 22nd - 26th February 2016. The workshop involved trainings on doing Comparative and Equity data analysis of DHIS and setting of objectives for the second phase of the NEP project.
- xi. Two faculty attended the key population for HIV prevention symposium in Blantyre, Malawi from 2nd to 4th February, 2016.
- xii. The head of department of Epidemiology and Biostatistics attended the last Afrique

One project meeting in Grand Bassam, Ivory Coast from 25-26 April 2016.

- xiii. One faculty attended a workshop in Baltimore from 19th to 28th May, 2016. The workshop was organized by the National Evaluation Platform Project (NEP) which is a project implemented jointly by National Bureau of Statistics and Johns Hopkins University in Baltimore USA. The task team for this Project involves one member from the Department. The aim of the workshop was to discuss analysis of routine data in the DHIS2 and to evaluate progress towards achievement of maternal, newborn and Child Health national goals.
- xiv. Two faculty from department of Epidemiology and Biostatistics were invited by the Institute of Public Health at Karolinska University from 18-23 May 2016. The aim of the visit was to gain experience on postgraduate teaching methodology and curriculum development for short courses in Epidemiology and Biostatistics.
- xv. One faculty attended a project proposal development workshop at the University of Oslo, Norway from 20th -30th April, 2016. The workshop intended to develop a collaborative project to establishment of a centre of excellence in key population health at MUHAS. He also attended the Global Symposium on cancer and the Consortium of Universities on Global Health in San Francisco, California, USA from 8th -13th April, 2016.
- xvi. One faculty was invited by the Harvard T.H. Chan School of Public Health to attend the foundational workshop for the China/Harvard/Africa Network: A Tripartite Partnership in Health (CHAN Partnership), which took place at the Harvard Chan School from April 26 to 30, 2016.
- xvii. One faculty also attended a meeting in Kampala, Uganda invited by OHCEA to develop the work plan for the third year of the ONE HEALTH Workforce (OHW). The workshop took place from 6-10 June 2016 and was very productive in terms of coming up with the Annual work plan for the third year, which will begin from October 2016 to September 2017.
- xviii. One faculty attended emerging opportunities workshop on curriculum and material development for online and distant learning courses. It took place in Cape Town South Africa from 19 – 22 October, 2015.
- xix. Two faculty travelled to Lund, Sweden from 5th to 12th December 2015, for project meeting, planning and data analysis.
- xx. Two faculty participated in a curriculum planning meeting for the HIV implementation science training program and advisory meeting for the Global Infectious Disease training program at the Harvard T.H. Chan School of Public Health from 2nd to 6th November 2015. They also attended a symposium on “Reaping the health benefits of sustainable agriculture” hosted by the Nutrition and Global Health Program at the Harvard T.H. Chan School of Public Health.

- xxi. Two faculty from departments of Behavioral Sciences and Epidemiology and Biostatistics organized the Second African key population Conference in the HIV Epidemic. 16-18 December 2015, Kunduchi Beach Hotel.
- xxii. One faculty attended the 8th Global Scientific *TEPHINET Conference* held in Mexico City September 7-11, 2015.
- xxiii. One faculty attended several meetings in Cambridge USA from 21-26th September 2015.
- xxiv. One faculty attended the Global Symposium on cancer and the Consortium of Universities on Global Health in San Francisco, California, USA from 8th -13th April, 2016

4.5.3 Teaching

- i. A total of 77 postgraduate and 10 undergraduate students completed the BSc. Environmental Health Sciences programmes courses in the academic year 2014/2015 and were conferred degrees by the Chancellor during the 9th Graduation Ceremony held at MUHAS Graduation Square on December 05th, 2015.
- ii. During academic year 2015 the school registered 113 undergraduate students and 117 new postgraduate students in all programs.
- iii. Three rounds of Semester 7/8 Community Medicine rotations involving about 55 students per group took place both in class and in the earmarked field sites. However, this activity was constrained by insufficient financial resources, which at times resulted in delays of some activities.

4.5.4 Short Courses

Four different short courses were conducted during this reporting year namely; Manuscript writing, advanced epidemiology, Nominal data analysis and Data management and Curriculum development for Monitoring and Evaluation Course. Main participants of these short courses were MUHAS faculty together with postgraduate students and funding was obtained from Strengthening Human Resources for Health through Public Health Training Improvements at MUHAS (SHARE IT) and Office of Directorate of Research and Publication.

4.5.5 Links

New links established during the reporting period include; UCSF-Hellen Diller Cancer Centre through research project on Identification of Molecular Determinants of Oesophageal Cancer in Tanzania (MDEC-TZ) funded by National Cancer Institute USA and Palladium, Population Council, and Pangea Global AIDS Foundation with funding from the USAID in a project known as evaluation of Gender based violence.



The School continued to maintain links with various local and International institutions. This includes but not limited to Uppsala University, Sweden, OHCEA, Africa Hub for Health Systems Research, NIMR and UDSM (Development Studies) on Health Policy and Systems Research, Kalorinska Institute (Malaria Research Project), Cornell, KCMC, Nelson Mandela Institute of Science and Technology and Sokoine University of Agriculture (Building Strong District Multisector Nutrition Systems).

4.5.6 Research and Research Projects

The following are research activities that are undertaken by faculty in the School of Public Health and Social Sciences;

- i. Prevention of TB among adolescents in Dar es Salaam: Phase II Clinical Trial
- ii. Building Evidence and Capacity for Demographic Dividend in Africa
- iii. Examining gender mainstreaming in governance of health service delivery in Tanzania: The case of prevention of mother to child transmission of HIV services in public hospitals in Mwanza
- iv. Facilitators and Barriers of Older People's Access to Health Services at the Regional, District and Lower Level Health Facilities in Tanzania
- v. Identification of Molecular Determinants of Esophageal Cancer in Tanzania (MDEC-TZ) Funded by National cancer Institute-USA, 2016-2018. Institutions: UCSF-Hellen Diller Cancer Centre and MUHAS. PI: Mmbaga EJ
- vi. Access to Health Services among Key population in Tanzania funded by DANIDA (2016-2021). Institutions: MUHAS, University of Copenhagen, University of Oslo. The objective of the project is to test different modalities for provision of health services among MSM, FSW and PWIDS in Tanzania and Tanga using a quasi-experimental study design. Dr Mmbaga is the PI.
- vii. Afrique One: Manuscript writing workshop was held from 23-27 May. Two manuscript have been submitted. Dissemination activities were carried out in Kongwa district from 20-22 June 2016. The project ends in June 2016.
- viii. Dar Urban Cohort Study : Continued to update vital events migration and pregnancy status. In addition, there were two concurrent nested studies taking place at the same time. These were the Value of Statistical Life Years (VSLY) and the ARISE adolescent study. The Demographic Dividend study was being prepared for piloting in June or July 2016.
- ix. Talloires YEPI-SEE project : The project's incubation centre of Ice cream was completed in March 2016 and machine installation took place for one month. The centre started operations in May with the first ice cream production on 2nd May. The centre was launched at the end of June 2016

- x. Demographic Dividend Project : The project aims at assessing the potential of harnessing the demographic dividend in Tanzania by conducting household surveys and comparative analysis using the existing urban based HDSS of the Dar es Salaam Urban Cohort study (DUCS). During January 2016 to date, data collection tools were refined and now waiting for comments from the African Development bank before embarking on a pilot for testing them.
- xi. Strengthening health academic and resources for education in Tanzania - SHARE IT : The project aims at strengthening public health training at SPHSS through faculty capacity building, and infrastructural support to enhance delivery of courses/ programmes by use of the Learning Management systems. Other activities include: supporting income generation activities for the school and enhancing alumni ties as well as promoting the Schools visibility in communities. Faculty have continued to produce online teaching materials mainly in form of video recordings of lectures that are posted on the system/websites for use by students. Alumni network activities have now been revived after the coming back of the Alumni officer who was on maternity leave.
- xii. Access to health services among Men who have sex with men in Dar es salaam and Lilongwe. Developing and intervention with them for them: The project intended to recruit 450 MSM as part of respondent driven sampling. A total of 412 participants have been accrued by 15th June 2016. Qualitative interviews among healthcare workers and policy makers are also ongoing.
- xiii. Genetic Profiling of Oesophageal Cancer in Tanzania: This project received ethical clearance and logistical processes of sample storage, processing and transportation are ongoing before transport to University of California San Francisco.
- xiv. Female Genital Schistosomiasis (LGS) and HIV infection in Rural Tanzania: A cohort of females with and without FGS has been recruited and is followed up to estimate the rate of HIV infection. Two follow up surveys have been conducted in a cohort of about 670 women in rural Kilimanjaro, Tanzania.
- xv. OHCEA – One Health Central and Eastern Africa Network: This project is USAID funded and involves eight countries. These are: Tanzania, Kenya, Uganda, Ethiopia, Rwanda, DRC, Cameroon and Senegal. The project currently involves the ONE HEALTH workforce strengthening to enable countries to fight the emerging pandemic threats by preventing, detecting and responding to major infectious diseases including zoonotics. The project is in its second year now of the 5 years of funding. In April 2016, environmental health students (50 in number) travelled to Morogoro to study with their veterinary medicine counterparts at SUA in food safety for one week supported by OHCEA. In May/June 2016, OHCEA supported the CDC project for 220 students to Mikumi and Kilosa where there is a strong hotspot for animal-human interactions and a geographical risk for emerging pandemics.



- xvi. Community Health Workers – Learning Agenda project (CHW-LAP): This project is supporting the implementation of the Community Based Health programme of the MHCDGE&C through implementation research so as to provide timely recommendations about implementation for improvement of programme strategies. During April 2016, a field case study was completed in Iringa region while in June 2016 we are studying recruitment processes of the CHWs in Morogoro and Simiyu regions. Funding is from USAID.

4.5.7 Consultancy

- i. Members of staff worked with Management Sciences for Health on Medicines Access and Use in Districts Served by Accredited Drug Dispensing Outlets in Tanzania and Evaluation of the recent national integrated measles-rubella immunization campaign
- ii. One member of staff participated in organizing and facilitating training of health personnel responsible for HIV Care and Prevention in Makete District, Iringa.
- iii. One staff member facilitated the revision of the National Supportive Supervision Guidelines by the Ministry of Health, Community Development, Gender, the Elderly and Children.
- iv. Three faculty prepared Tanzania Country Profile on Workers Health. Final draft has been submitted and preparations for dissemination workshop are on-going.

4.5.8 Service Provision

- i. One staff, Dr. Mucho Mizinduko was invited by the Ministry of Health, Gender, Community Development, the Elderly and Children to lead a technical team whose task was to review and update the National Policy Guidelines for Health Sector Prevention and Response to Gender Based Violence (GBV) and Violence Against Children (VAC). The invitation was extended to include a review on and update the National Management Guidelines for Health Sector Prevention and Response to Gender Based Violence (GBV) and Violence Against Children (VAC). Report is at final stages.
- ii. Members actively participated in the services for community on issues of economic empowerment of communities in Dar es Salaam (Temeke and Manzese) Geita, Kyela, Masasi, and Longido
- iii. Members of Staff participated in various media programme on issues of Reproductive and Child health, Women and Political leadership, Education Systems in Tanzania, Environment and other topical issues

4.5.9 Staff Recruitment

Fourteen academic staff joined the School. These staff were assigned to teach in various departments. The increased number of staff has improved the staff students ration and fostered teaching activities in various programmes taught in the School.

4.5.10 Challenges and Recommendations

During the reporting period the School experienced in adequate financial resources to run student Nutritional field activities. This lead to inability to identify new field sites for student field activities. Most of the fields works were conducted in areas close to Dar es Salaam, either Rufiji or Bagamoyo. Some of these sites cannot accommodate high number of students in addition to community fatigue. Office space became more limited during reporting period due to new recruitment resulting in staff working in a very congested environment which does not support teaching responsibility.

Students usually have funds on time whereas per diems for faculty, drivers as well as fuel for the field vehicles are mostly delayed due to non or late disbursement of tuition fees by the Loans Board.

4.6 Institute of Allied Health Sciences

4.6.1 Introduction.



Mr. Ndoele

The Institute of Allied Health Sciences is among the institutes of the Muhimbili University of Health and Allied Sciences (MUHAS) involved in training of the Allied Health professionals. The Institute is academically University unit but administratively under the Muhimbili National Hospital (MNH). The Institute has thirteen (13) schools; nine (9) at Muhimbili, two (2) at KCMC Moshi, one (1) at Mwapwa and one (1) in Tanga.

During the year of the report the future administration position of the institute, after dissolution of the former Muhimbili Medical Centre and Muhimbili University College, remained unresolved by the relevant Authorities, despite efforts initiated in 2012/13 to transfer both academic and administrative functions to the University.

4.6.2 Student Enrolment and Academic Programmes

During the year 2015/2016 the Institute enrolled a total of 1159 students, 369 (31.8%) males and 254 (21.9%) females. Of those enrolled, 164 (14.2%) were at KCMC, Mwapwa and Tanga. The remaining (85.1%) were at Muhimbili. The Evening programmes in the five (5) programmes namely; Diploma in Pharmaceutical Sciences (DPS) (existing), Diploma in Diagnostic Radiography (DDR), Diploma in Environmental Health Sciences (DEHS), Diploma in Medical Laboratory Sciences (DMLS) and Diploma in Nursing (DN), continued to be provided and attracted more applicants than the previous year.

4.6.3 Student Admission

The number of qualified applicants aspiring to join the programmes at the Institute has been increasing from year to year. However, the number of students admitted during the reporting period was limited by inadequate teaching facilities. During the year of reporting, 413 students were admitted of whom 259 (65.7%) were males and 164 (39.7%) were females. This is a decrease of 106 males and an increase of 90 females.

4.6.4 Teaching, Staff Recruitment and Development.

The Institute has no structured development programme for its teaching staff and can not use the University recruitment system because it not under the University administration. Therefore, the Institute depends on placement of teaching staff by the Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC). During the reporting

year the Ministry of Health, Community Development, Gender, Elderly and Children posted tutors to schools but some of the teaching staff went on compulsory retirement and study leave. In total three (3) teachers were posted to various schools at the Institute during the year. This made the ratio of the teacher/student of each school to be at 1:46. Therefore the Institute continued to be severely affected by shortage of teaching staff and heavily dependent on part-time teachers.

4.6.5 Administrative and Technical Staff Recruitment and Development

The Institute continued to utilize administrative and technical staff of the Muhimbili National Hospital who have been working in the Institute before the dissolution of Muhimbili Medical Centre and MUCHS. The staffing level and requirements for each school were developed and submitted to the MOHCDGEC for support.

4.6.6 Research and Publications

The Institute had very low research output only few staff members were engaged in research activities. Nevertheless, efforts are being made to raise the awareness in this particular area of our responsibilities.

4.6.7 Consultancy and Public Service

Individual staff members were involved in community services and consultancies especially in the Ministry of Health Community Development Gender, the Elderly and Children projects. The IAHS was also involved in the SabaSaba exhibition of 2015/2016. A number of consultancies on distance learning programmes in Nursing and Environmental health were conducted and succeeded in starting the Diploma course in distance learning from 2015/2016.

4.6.8 Curricula Revision Progress

The process of curricula polishing to make them competence based was implemented and the efforts for registering other programmes is under way.

4.6.9 Rehabilitation of Nurses Hostel Blocks 26 and IAHS Main Building

Rehabilitation of the Nurses Hostel Blocks was done as planned by the Institute. The IAHS also removed fungus growth on its main building during the year under review. Efforts are being done to increase one floor on top of the IAHS building to enhance the capacity of space requirement.



4.6.10 Improvement of Cafeteria Accommodation Services at Nurses Hostel

A significant improvement was made during the reporting year by procuring 80 mattresses and 40 double decker beds, thus all students were able to sleep on beds and mattresses.

4.6.11 Improvement of Boarding Services at Nurses Hostel

The water tanks were put in place for clean water supply to address the water shortages accordingly.

4.6.12 Constraints Facing the Institute

During the reporting period the institute experienced the following constraints: -

- (i) Undefined administrative position of the Institute following the reforms involving the former Muhimbili Medical Centre. The task force appointed to negotiate with the Ministry of health continued with negotiations and it was expected that it would reach a solution soon.
- (ii) Inadequate funding: Poor funding resulted into inadequate and poor state of buildings especially the Institute building which requires major rehabilitation.

4.7 Institute of Traditional Medicine



Dr. E. Innocent

The Institute of Traditional Medicine started as a Traditional Medicine Research Unit in July, 1974. The unit was later elevated to the Institute of Traditional Medicine in 1991 through an Act of Parliament no. 9, section 10(1)9c); when by then, Faculty of Medicine acquired a University College status. The Institute has a reasonable research capacity in the areas of medical botany, natural products chemistry, biological testing, standardization of herbal medicines and pre-clinical drug research that are done by Postgraduate and Research staff.

Vision

To become a leading institution in Africa in research, training and consultancy in traditional medicines for the healthy well being of the people, and contribute to poverty reduction

Mission

To research, teach and do consultancy on traditional medicines and promote the development of standardized herbal and plant derived pharmaceuticals and useful non-material aspects of traditional medicine for the improvement of the health of the Tanzanian people.

4.7.1 Highlights of Activities Implemented in 2015/2016

During the reporting year 2015/2016 the Institute continued with its research to develop, standardize and dispense quality herbal medicinal products, after verification of their effectiveness and safety. The income accrued from sales of herbal medicine was TZS 48,702,500/= (equivalent to 101.46%) of the projected the target of collecting Tsh. 48 million. The expenditure was TZS 45,433,550/= that was used for funding activities and to improve packaging and labeling of products as they exit to competitive markets.

During the reporting period the institute tested the marketing research questionnaires that were developed under technical support from GAIN-Marketplace. The Questionnaires were issued during the *Inter-University Council for East Africa exhibitions in Uganda on 21-23 October, 2015*; exhibitions at Dodoma region on 13th-17th June, 2016 and Mwalimu Nyerere International trade fair on 28th June to 8th July, 2016 in Dar es Salaam. The tools will be used to assess the possibilities of expanding services to the public by identifying market and distribution points.

The Institute has been successfully running a postgraduate programme in Traditional medicine development at MSc and PhD levels, consequently undertaking continuing education and professional development (CPD) for Traditional Health Practitioners. During the reporting period, about 25 participants from 8 regions of Tanzania attended CPD on good practices in their profession. The second batch of training modules are in approval processes geared at training different experts in pharmaceutical aspects of traditional medicine; conservation and



propagation of medicinal plants and improvement of research and development uptake that will enable delivery of innovative products and services to fast track technology transfer to pharmaceutical industries and stakeholders of traditional medicine. This will aid the integration of traditional medicine in Tanzanian health care system.

The Institute attracted three (3) more research projects thus adding up to 16 ongoing Research projects that are at various levels of funding. The Institute, produced 15 Publications and participated in seven (7) exhibitions at National and International levels. Also, the institute participated in 31 workshops; 10 scientific conferences and 6 expert meetings and seminars.

4.7.2 Students' Matters

Academic Programmes

In 2009, the Master of Traditional Medicine Development programme was initiated with the intention to accelerate research and generate more research results that will be the vehicle for growth in the area of traditional medicines and, possibly stimulate local herbal medicines industrialization and commercialization. During the reporting period the Institute offered training programmes, which included: -

- i. MSc in Traditional Medicines Development programme,
- ii. PhD
- iii. CPD courses in Traditional Medicines Development

The MSc. Phytomedicines Programme was submitted for Quality assurance, discussion and approval through University committees.

Students Admission and Enrollment

During academic year 2015/2016, Traditional Medicine programs successfully produced one (1) Master of Science (MSc.) graduate. Three (3) other MSc and six (6) PhD students continued smoothly with their studies at the Institute while one (1) student postponed and one (1) froze studies (Table 25).

Consequently, continuing and professional development (CPD) training for Traditional health practitioners attracted, about 25 participants from 8 regions of Tanzania whom were instilled with knowledge and skills on good practices in their professional conducts.

Table 24: Students Admission, Enrollment and Achievements - Institute of Traditional Medicine

	MSc. Trad. Med. Dev	PhD
	2015/2016	2015/2016
Admission	7	2
Enrolment/registration	4	6
Freezing	1	0
Postponement	1	0
Completed/graduated	1	0

Students Output and Performance

During the reporting period, one MSc student graduated. The title of thesis was *Identification of chemical profile of essential oils from plants that are traditionally used in Maasai land to repel mosquitoes*.

4.7.3 Research and Publications

Research Projects and Links

In the reporting period, three (3) new projects were initiated (Table 26); making a total of 16 on-going research projects that were under different MUHAS clusters. The research outputs in forms of publications were 15 papers.

Table 25: New and Ongoing Research Projects for ITM

SNo	Research proposals or Grants developed since 2012/2013 academic year	Funder/Donor	Year
THEME 1: HIV and AIDS			
1.	Search for Antifungal Compounds from Tanzanian Medicinal Plants for managing Fungal infections	SRC	2014-2017
2.	Antimicrobial activity of extracts of Combretaceae family plants against drug resistant and biofilm forming bacteria and Candida species isolated from HIV/AIDS patients	NIMR	2014-2016
3.	Effect of climate differences on antifungal activity and chemical composition of plants used to manage fungal infections in Tanzania	AAS	2015-2016
4.	Assessment of bioactivity of roots and leaves of <i>Carissa spinarum</i> extract from two geographical locations in two seasons in Tanzania against some pathogenic bacteria and fungi	AAS	2016-2017
5.	Formulation and standardization of herbal medicine from <i>Garcinia</i> and <i>Combretum</i> plant species growing in Tanzania for managing HIV/AIDS and related diseases	COSTECH	2013-2016
THEME 2: MALARIA			
6.	Phytochemical studies of mosquito larvicidal compounds from ethanol extracts of four <i>Kotschy</i> species	IFS	2014-2016
7.	Conserving repellent plants in Enduimet Wildlife Management Area of Longido Division: A sustainable strategy to vector-borne disease control and climate change mitigation in nomadic heard societies	UNDP	2014-2016
8.	Comparison of Isolated mosquito larvicidal compounds from ethanolic extracts of <i>Kotschy</i> species collected between wet and dry season	Sida-MUHAS	2014-2015
9.	Evaluation of efficacy and safety of medicinal plants traditionally used in the treatment of malaria	Sida-MUHAS	2011-2015

10.	Laboratory and semi-field mosquito larvicidal activity of some Tanzanian medicinal plants formulations	DAAD	2015-2018
	THEME 3: REPRODUCTIVE HEALTH		
11.	Impact of home based life saving skills in rural area of Tanzania on awareness of danger signs, birth preparedness, facility delivery access to emergency obstetric care and cost effectiveness: a cluster randomized trial	Sida	2010-2015
	THEME 4: CHILD HEALTH		
12.	Scale up Cell phones and Psychosis: a pilot study connecting traditional healers and Bio-medical staff in six administrative regions, Tanzania	Canada Grand Challenge	2016-2017
	THEME 5: NON COMMUNICABLE DISEASES		
13.	Phytochemical and Biological investigation of <i>Carissa spinarum</i> root extracts used in the treatment of chronic illnesses	Sida- MUHAS	2015
	THEME 6: HEALTH SYSTEM RESEARCH		
14.	Identifying and monitoring trade in Tanzanian wild-harvested medicinal plants using innovative genomics-based DNA barcoding.	SRC	2015-2018
15.	Use of DNA Technology in Combating Illegal Trade and Promoting Conservation and Sustainable Use of Plants in Kenya and Tanzania.	USAID	2015-2018
	THEME 7. NEGLECTED TROPICAL DISEASES		
16.	Search for Novel Trypanocidal Agents from Selected Tanzanian Wild Mushrooms	Sida-MUHAS	2014-2015

4.7.4 Consultancies and Public Services

- (i) Prof Rogasian LA Mahunnah served in a technical committee to Draft National Intellectual Property Policy of the Ministry of Industries and Trade, Dar es Salaam
- (ii) Dr. Edmud Kayombo Serves as Chairman of the Traditional and alternative practitioners Council of the MoHCDGEC for a 3-years tenure
- (iii) Dr Pax Jessey Masimba and Dr Joseph. N. Otieno were appointed as members of the Research and Development committee of the Traditional and Alternative practitioners Council of the Ministry of Health, Community Development, Gender, Elderly and Children to serve for 3 years (22/09/2015-22/09/2018)
- (iv) Dr Ester Innocent was appointed a member of the Academic committee of the Traditional and Alternative practitioners Council of the Ministry of Health, Community Development, Gender, Elderly and Children to serve for 3 years (22/09/2015-22/09/2018)
- (v) Dr. E. Innocent served as a national expert of the African organization of standardization (ARSO) technical harmonization committee (THC-13 of ARSO) for African Traditional Medicine Standards.

4.7.5 Staff Development

Training leading to degree award

1. One staff was provisionally registered for his PhD studies at MUHAS sponsored by Sida, now developing a proposal
2. Two staff continued with PhD studies at MUHAS while another staff pursued MSc Traditional Medicine Development.

Staff training attachments to other Institutions




- (i) Dr. Pax J Masimba continued with Postdoctoral programme of the African Academy of Sciences under the Climate Impact Research Capacity and Leadership Enhancement (CIRCLE) Program at University of Dar es Salaam to be implemented between January, 2016-January, 2017.

4.7.6 Procured Items, Work and Services

During the academic year 2015/2016, the Department of Biological and Pre-Clinical Studies replaced window louvers with aluminum sliding windows in order to minimize dust entry in the Laboratory. Also, the laboratory was re-arranged into two side rooms such that, one was dedicated for cell culture work that require high sterile working environment. The cell culture lab was established and important equipment such as the carbon dioxide incubator, centrifuge, liquid nitrogen cylinders and a Biological Safety Cabinet level II were procured. Successful installation and operationalization of class II Biological Safety Cabinet offers personnel, samples, and environment protection to airborne biological or particulates contaminants. The lab is also expected to benefit students and researchers in the *in-vitro* research work especially the discovery of anti-malarials, anti-cancers and cytotoxic agents.

In the Department of natural products and formulations window louvers were replaced with aluminum windows in order to minimize leakage of air when air conditions are in operation. The essential oil extraction machine was installed and now available for research essence that can be mainstreamed in the products development and production hence contributing to self-generated Income.

The Department of Medical Botany, Agronomy and Plant Breeding continued with the cultivation of important medicinal plants to supply raw materials for herbal production at the Institute. In the Lushoto farm several species are being produced namely, *Cynara scolymus* and *Plantago lanceolata*. The number of species been experimented at the Arusha farm is more diversified and include; *Artemisia annua*, *Pimpinella anisum*, *Glyhrrza glabra*, *Artemisia affra* and *Chamomilla* species. Further, two species, *Cymbopogon citratus* and *Moringa oleifera* are under experimental cultivation at the Forestry Training Institute (FTI) Plot. The farm at Kongowe, Kibaha was selectively planted with *Hibiscus subdariffa*. The Department also renovated a laboratory for molecular experiments including DNA barcoding of plants and some other molecular related studies. The laboratory has a pre-PCR place where DNA extraction is performed and the post-PCR extraction space special for amplification, viewing and cleaning of DNA.

		
<p><i>Installation of Biological Safety Cabinet level 2 in the Department of Biological and pre-clinical studies</i></p>	<p><i>Installation of essential oil extraction machine in the Department of Natural Products and Formulations</i></p>	<p><i>A section of DNA bar coding lab in the Department of Medical Botany, Agronomy and Plant Breeding</i></p>

4.7.7 Infrastructure Development

The institute developed and submitted proposals to potential donors for its two major projects for establishment of a medicinal plant botanical and scaling up production of herbal medicines

4.7.8 Workshop and Conferences

Scientific/Professional Conferences

1. Dr. Innocent Attended and presented a paper entitled '*Natural products discovery or traditional medicine discovery?: An African dilemma in drug discovery research approach*' during the 16TH NAPRECA symposium on the *Improved Health and Agriculture through Sustainable Exploration of Biodiversity for Drug*, 31st -3rd, September, 2015, Kibo Palace Hotel, Arusha, Tanzania.
2. Dr. Innocent Attended and presented a Keynote presentation "*Promoting evidence based herbal medicine practices and product development; a partnership between scientists, practitioners and entrepreneurs*" during the 3rd Annual National Traditional Medicine Conference on 24th -26th August 2015 at Hotel Africana, Uganda.
3. Dr. Francis Machumi Attended the 16th NAPRECA Symposium on 31st August 2015 – 3rd September 2015 in Arusha – Tanzania
4. Dr. Modest C. Kapingu and Beson Peter Mugaka attended The 29th Annual Joint Scientific Conference and 35th Anniversary of the National Institute for Medical Research from 13th to 16th October 2015 at Julius Nyerere Convention Centre , Dar-es-Salaam.
5. Rogasian L.A. Mahunnah, Febronia C. Uiso and Edmund J. Kayombo presented a key note on *Contribution of traditional and alternative medicine in the provision of healthcare in Tanzania*". at the Tanzania Health Forum Workshop 11-13 November, 2015 at Julius Nyerere Convention Centre, Dar es Salaam.
6. Dr. Francis Machumi presented a paper entitled "*Seasonal variation in chemical composition and antifungal activity on medicinal plants Turraea holstii and Clausena anisata*" at the 17th Conference on Medicinal and Aromatic Plants, from 3rd to 4th December 2015 held in Penang – Malaysia.
7. Mr. Ramadhani S.O. Nondo presented a paper entitled *Evaluation for in vivo Antimalarial Activity of Medicinal Plants Traditionally used in the Treatment of Malaria* during to the International Symposium on Indigenous Knowledge Systems and Public Health in the Southern and Eastern Africa, from 25th to 26th April, 2016 in Kigali, Rwanda.

8. Mourice, N.V. Mbunde, Ester Innocent, Faith Mabiki, Pher G. Andersson. *Traditional Medicine: Ethnomedical Survey and Toxicity Evaluation of selected Medicinal Plants from Southern Highlands of Tanzania* during the MUHAS 4th Scientific Conference held on 23-24th June 2016, at LAPF, Dar es salaam.
9. Ismail Athman attended the 4th MUHAS scientific conference presented a paper titled “*Investigation of chemical composition and mosquito repellent properties of medicinal plants traditionally used to repel mosquito in Longido district, Tanzania* on 23-24th June 2016 at LAPF, Dar es salaam.”
10. Dr Francis Machumi attended the 4th MUHAS Conference and presented a paper titled “*Seasonal impacts on chemical composition and antifungal activity of medicinal plants Turraea holstii and Clausena anisata*” held on 23-24 June 2016, LAPF, Dar es salaam

Technical Meetings

1. Dr. Edmund J. Kayombo Chaired The Traditional and Alternative Practitioners Council 19th -24th January 2016 at NMR , Dar-es-Salaam, Tanzania
2. Dr. Edmund J. Kayombo chaired the Expert meeting on designing strategies and approached to be used by the Traditional and alternative medicine practitioners council to register herbal medicine in Tanzania 3rd March 2016, Dar-es-Salaam, Tanzania
3. Dr. Edmund J. Kayombo chaired a Stake holders meeting on creating awareness on strategies and approaches to be used Traditional and alternative medicine practitioners council to register herbal medicine in Tanzania 17th March 2016 NMR , Dar-es-Salaam, Tanzania
4. Dr. E. Innocent attended the African organization of standardization (ARSO) technical harmonization committee (THC-13 of ARSO) of African Traditional Medicine Standards from 24-28th May, 2016 in Kigali Rwanda
5. Jackson Thomas attended a workshop on development of curriculum for a taught PhD programme in Interdisciplinary Molecular Biosciences (IMB) in the University of Dar es salaam on 25th May 2016
6. Dr. Innocent attended a workshop for preparation of a Five Year Rolling Strategic Plan 2016/17-2020/2021 for the Unit of Traditional medicine of The Ministry of Health, Community Development, Gender, Elderly and Children on 15th, 16th and 17th June 2016 at Mirembe Hospital, Dodoma

4.7.9 Finances and Investment Activities

Internally Generated Funds

The institute generated income through sale of herbal medicines from the outlet allocated at the Institute building. The income from sales of herbal medicine was TZS 48,702,500/= against the target of collecting Tsh. 48 million The expenditure was TZS 45,433,550/= with a net profit of TZS 3,263,950 on closure of the financial year. Most of expenditure was aimed at improving packaging and labeling of products as the institute prepares to take these products to competitive markets.

Exhibitions

1. The institute participated in the Mwalimu Nyerere International Trade Fair exhibitions on 28th June 10th July, 2015, Dar es salaam
2. The institute participated in the 10th Higher Education Science and Technology exhibitions 22nd-25th July, 2015 by TCU at Mwl Nyerere International Trade Centre - Dar Es Salaam
3. The institute attended IUCEA exhibitions in Entebbe, Uganda from 22-24 October, 2015
4. The institute attended High Education Forum from 1st to 2nd October 2015 at Arusha.
5. The institute exhibited nutritious Morizella juice at the stakeholders meeting organized by the Global Alliance for Improved Nutrition (GAIN) from 29.03.2016, at Protea vineyard Hotel, Dar es Salaam, Tanzania
6. The institute exhibited at the Parliament grounds in Dodoma from 13th -17th June 2016.
7. The institute exhibited at the MUHAS Scientific Conference 23rd- 24th June 2016, at LAPF, Dar-es Salaam



Honorable Angela Kairuki, Minister for public service management (UTUMISHI) receiving explanation when she visited the MUHAS pavilion during Mwalimu Nyerere Trade Fair exhibitions, 28th June - 8th July, 2016

4.7.10 Visitors to the Institute

Students

- (i) None

Researchers/professionals.

- (i) On 25th August 2015 a delegation from Israel visited the Muhimbili University of Health and Allied Sciences to explore the activities within the beekeeping industries that can be carried out at the Institute of Traditional Medicine. The delegates were Chaim Efrat and Mr. Shimon Barel also accompanied by Mr. Stephen Msemu, from the Tanzania Forest Service (TFS)

- (ii) On 28th August, 2015 Dr. Charles Kihampa from Ardhi University visited the Institute as External examiner of Semester 2 and 4 examinations
- (iii) On 11th November, 2015 a delegation composed of Olot Andrein, Carinnapri and Sammy Kiambi visited the Institute for African Centre of Excellence site evaluation
- (iv) On 16th November, 2015 Hugo de Boer, and Ghorbani Abdolbaset Visited the Institute on collaboration work between the Department of Organismal Biology of the Uppsala University, Naturalis Biodiversity Centre-Leiden University and the Department of Medical Botany, Plant Breeding on Plant molecular studies basing on genomic DNA barcoding
- (v) On 21-22th December, 2015 Ms Amina Mshighati and Mr. Denis Mwangomo from Tanzania Food and Drug Authority visited the Institute for Inspection of the GMP production Unit.
- (vi) On 9th March, 2016, Dr Macdonald R. Mahiti from Center for Aids Research, International Research Center for Medical Sciences, Kumamoto University, Japan visited the institute for a purpose of initiating research collaboration between our two Institutes
- (vii) On 27th April, 2016, Dr, Rogate R. Mshana from Moshi visited the Institute to discuss possible collaboration in Research of community medicine
- (viii) On 27th April, 2016, Ms. Fatma Kange and Mr. Martin M. Ndunguru from GSI-Tanzania came for sensitization on use of Barcodes in trade and product Traceability identity
- (ix) On 13th May, 2016, Dr. Abdolbaset Ghadomi visited the institute to set up the DNA bar coding laboratory and discuss projects with his students
- (x) On 24th May, 2016, Dr. Paulo P. Mhame made a visit to discuss the possible areas of Collaboration with the republic of India in the area of Traditional medicine

4.7.11 Key Challenges to the Institute

- (i) Limitation of allocated staff for recruitment (Inadequate technician and academic staff): which lead to poor staff succession
- (ii) Poor government funding to run institute activities as planned in the 5YRSP

4.8 Directorate of Postgraduate Studies

4.8.1 Introduction



Prof. A. B. Pembe

The Directorate of Postgraduate Studies, in collaboration with the schools, institutes and other directorates, has the responsibility of promoting, marketing and monitoring the conduct of postgraduate training at the University. During the reporting period the Directorate processed admissions of postgraduate students in various programmes, reviewed postgraduate proposals, processed examination results and facilitated revised curricula to align with the TCU format.

Vision

The vision of the Directorate of Postgraduate Studies is to be an excelling Directorate in training and supplying quality and highly competent specialists and super-specialists to meet the national needs in health and health related fields in Tanzania.

Mission

The Directorate provides in Tanzania a place where competent specialists and super-specialists in health and allied sciences will be trained to meet the national needs for quality health services and research; as well as provide human resources for enhancing management of training institutions in health and allied sciences.

4.8.2 Enrolment into Postgraduate Programmes

PhD degree programmes

During the reporting period the directorate continued to admit PhD students into the programmes. In 2015/2016 academic year a total of 3 PhD students were granted registration and 7 were provisionally registered which makes a total of 38 PhD students. Among them 16 (42%) were females.

Master degree programmes

During academic year 2015/2016 a total of 673 students were enrolled in Master degree programmes in five Schools and one Institute. Among all students enrolled in Master programmes 300 (45%) were females. Out of 673 enrolled, 662 (98%) were enrolled for Master degree by course work and dissertation, and 11 (2%) Master of Science by research. There was an increase of 19% compared to the number of students enrolled the previous academic year 2014 / 2015. The table below summarizes the number of Master degree students enrolled by Schools/Institutes.

Table 26: Enrolment of Postgraduate students in 2015/2016 2015/2016

School/Institute	Total	Male	Female	Percentage Female
Medicine	388	254	134	35%
Pharmacy	21	9	12	57%
Dentistry	18	12	6	33%
Nursing	43	9	34	79%
School of Public Health and Social Science	188	77	111	59%
Traditional Medicine	4	4	0	0%
Master of Science by Research	11	8	3	27%
Total	673	373	300	45%

4.8.3 Students Research

The Directorate of Postgraduate Studies facilitated the review of Master and PhD proposals for ethical clearance in collaboration with the Directorate of Research and Publications. A total of 329 Master students' research proposals were reviewed.

4.8.4 Postgraduate Selection

The Directorate through the Joint Postgraduate Selection Committee recommended applicants for postgraduate studies for the year 2016/2017. There were 663 applicants out of whom 529 (80%) were recommended for admission. Out of 529 recommended applicants, majority were in the School of Medicine (54%) and School of Public Health and Social Sciences (35%). Table 27 summarises applicants recommended for admission according to Schools/ institute.



Table 27: Applicants recommended for admission into postgraduate studies

School/Institute	Total Applicants	Applicants not recommended	Applicants Recommended	Percentage Recommended
Medicine	367	80	287	78%
Pharmacy	24	8	16	67%
Dentistry	11	2	9	82%
Nursing	37	10	27	73%
Public Health and Social Sciences	218	33	185	85%
Traditional Medicine	6	1	5	83%
Total	663	134	529	80%

4.8.5 Examinations Results

The Directorate of Postgraduate Studies through Senate Higher Degrees Committee (SHDC) processed University Examinations results for a total of 452 postgraduate students who sat for semester 2, 4 and 6 University examinations in July 2015. A total of 347 (77%) passed their examinations. Table 28 shows a summary of Students' performance. A total of 44 more postgraduate students did not sit for July 2015 University Examinations due to freezing of studies (9; School of Medicine), postponement of examinations (15; School of Public Health and Social Sciences) or abscondment (6 from School of Medicine, and 14 from School of Public Health and Social Sciences).

Table 28: Students' Performance in the end of the year examination

S/N	School/Directorate	Total Sat for examination	Failed	Passed	Percentage passed
1	Medicine	266	77	189	71%
2	Pharmacy	20	4	16	80%
3	Dentistry	15	2	13	87%
4	Public Health and Social Sciences	115	17	98	85%
5	Nursing	33	5	28	85%
6	ITM	3	0	3	100%
	TOTAL	452	105	347	77%

4.8.6 Postgraduate Output

One hundred ninety two (192) Master candidates graduated in various programmes and two (2) candidates were awarded PhD degree during the graduation day on 5th December, 2015. Among the candidates who graduated 88 (45%) were females. Table 29 summarises graduands by gender.

Table 29: Postgraduate graduands by gender

S/No	Programme	Total	Male	Female	Percentage Female
1	PhD	2	1	1	50%
2	School of Medicine	79	48	31	39%
3	School of Dentistry	8	8	0	0%
4	School of Pharmacy	9	8	1	11%
5	School of Public Health and Social Sciences	79	34	45	57%
6	School of Nursing	16	6	10	63%
7	Institute of Traditional Medicine	1	1	0	0%
	Grand Total	194	106	88	45%

4.8.7 New programmes

During the reporting period two new postgraduate programmes were introduced; these are Master of Public Health Distance Learning and MSc. Health Information Management. Both programmes are offered in the School of Public Health and Social Sciences.

4.9 Directorate of Planning and Investment – Muhimbili Campus

4.9.1 Introduction



Dr. E.J Mmbaga

The Directorate of Planning and Development Muhimbili Campus was established in 2013 as part of improving efficiency and functions. The Directorate has three departments which includes Planning, Investment and Resource Mobilisation. The Directorate continued with the responsibility of coordinating the development and monitoring of the University strategic plans. It ensures that all Schools and Directorates develop strategic plans in line with the University Corporate Strategic Plan. It is also responsible for monitoring and coordinating timely unit specific implementation of the five year rolling strategic plan (FYRSP) and reporting on progress of Implementation.

The Directorate promotes, engages and monitors investment activities at the University for the purpose of income generation and growth. The directorate focuses on developing MUHAS investment portfolio through identification of potential investment avenues and improving productivity on already available investments.

4.9.2 Consultancy and Services

During the period under review, the Directorate Coordinated consultancy for Establishment of MUHAS Investment Holding Company and valuation of MUHAS assets for insurance purposes. These assignments were done by Smart Associates Co. Ltd and Trace Associates Company Ltd. respectively. Both assignments were completed and the consultants submitted their final reports to the University Management.

4.9.3 Evaluation of the Implementation of the University and Unit Specific Strategic plans

During the year 2015/2016 the Directorate organized MUHAS annual strategic plan review workshop which was held from 6th to 8th May 2016 at MPL Building, MUHAS. The Objective of the workshops were to;

- (i) Receive and discuss annual (2015/2016) University- wide implementation reports of five year rolling strategic plans (2015/2016 – 2019/2020)
- (ii) Receive and discuss Annual (2015/2016) unit-specific implementation reports of five year rolling strategic plans (2015/2016 – 2019/2020)
- (iii) Inculcate skills of Setting up Objectives, Targets, Strategies, Activities and Indicators



A group photo during Strategic Planning Workshop held on 6th to 8th May 2016 MPL Board Room

4.9.4 Promotion of University Activities



MUHAS Exhibitors poses for group photo during 40th International Trade Fair at Mwalimu Nyerere Exhibition Ground

During the period under review MUHAS through the DPI was invited by TANTRADE and participated in the 40th Dar es Salaam International Trade fair which was held between 28th June to 10th July 2016. During exhibitions all Schools and some of the directorates prepared brochures and roll up banners that summarized different products and services offered by the respective units. Some of the research projects were able to display various achievements and impacts of their studies through poster presentation. In total the University prepared 9 roll up banners, 5500 brochures and 700 Information booklets.

In addition the Directorate of Planning and Investment coordinated preparation and participated in the Higher Education Institution Exhibitions organized by TCU, which took place from 20st to 22nd May 2015.

4.9.5 Redevelopment of Muhimbili Campus Student Hostels

During the period under review the DPI – Muhimbili developed a proposal for redevelopment of the Muhimbili Campus which was presented to the 9th Grants Committee Meeting on 26th April, 2016. It is planned to construct 17 floor twin-towers hostels with a base area of 4,000sqm, covering 30% of the designated hostel area at Muhimbili campus. Depending on availability of money the proposed twin tower hostel will accommodate 2,560 undergraduate students (as opposed to 400 students currently) and 160 senior students. The hostels will have a junior student/external visitor cafeteria with sitting capacity of 546 students and 200 sitting capacity senior staff cafeteria. A 150 capacity students' TV lounge and 100 capacity gym is included. The total budget for construction and equipping the hostels has been estimated to be TZS 44,310,000,000.

4.9.6 Resource Generation

During the reporting period the Directorate on behalf of the University made negotiation and prepared a contract between MUHAS and EXIM bank who intends to construct two banking facilities one at Muhimbili and another at Mloganzila to serve as their mini branches. The engagement will be on Build Operate and Transfer (BOT) basis where the cost of construction will be recovered from the rental fee and at the end the buildings will be transferred to MUHAS.

4.9.7 MUHAS Investment Holding Company

The directorate managed to oversee the development of the proposal for establishment of the MUHAS Investment Holding Company (MIHC). The company is expected to manage the investment activities at the university for the purpose of improving university investment portfolio and income generation. The company proposal was approved by the University Council and the Directorate is working on various plans to ensure that the company starts its operation as soon as possible.

4.10 Directorate of Planning and Investment – Mloganzila Campus

4.10.1 Introduction



Prof. A. R Kamuhabwa

In order to address the shortage of Human Resource for Health (HRH) in the country, MUHAS has started developmental activities for establishing a New Campus at Mloganzila. The development of MUHAS campus at Mloganzila has received considerable support from the government and development partners. During the reporting period, a number of developmental activities and initiatives were undertaken as follows:-

4.10.2 Construction of Basic Infrastructure at Mloganzila

In order to develop Mloganzila land into a University Campus, basic infrastructure including access roads, water and electrical power supply systems are required.

Water supply:

During thereporting period the contractor (Kolon Global Corporation) was engaged by MUHAS to procure materials and install permanent water supply system for MUHAS Academic MEDICAL Center. Water pipes have been connected from DAWASA pipe line at the main source to the Academic Medical Centre, and water is available for use in the hospital.

Electrical Power Supply:

During the reporting period the contractor (Kolon Global Corporation) was engaged to purchase four sets of 2000KVA transformers and accessories. The contractor procured and installed the transformers at the site in April, 2016. The installation of electrical armored cables from the source (within the site) to the power house was completed in May, 2016. Inspection of the power house including protection equipment test before power is connected was done on 17th May, 2016. The inspection report was submitted to TANESCO and subsequently approved on 25th May, 2016. The permanent electrical power supply is available for use in the hospital.



A power house constructed to support supply of permanent electrical power in the MUHAS Academic Medical Centre at Mloganzila

Construction of MUHAS Academic Medical Centre

The structural works of the building was completed in November, 2015. Finishing works are at final stages of completion. According to the construction schedule Medical Centre was supposed to be completed on 9th June, 2016. However, the contractor requested extension of time for 42 days from 10th June to 21st July, 2016 to complete finishing and external works before handing over of the Academic Medical Centre to MUHAS.

In April 2016, the Ministry of Finance and Planning through the Ministry of Education, Science and Technology disbursed TZS 18,000,000,000 as part of the USD 18,040,000 committed for construction of the MUHAS Academic Medical Centre at Mloganzila. This was paid to the contractor and enabled construction of the hospital to progress as planned. As of June 2016, the remaining amount as part of Government commitment for construction of MUHAS Academic Medical Center was approximately TZS 7 billion.

As of 30th June 2016, the contractor was continuing with finishing of the main building and external works. External works included construction of internal road network, parking area, paving of pedestrian walkways, and landscaping. For Annex buildings; vent blocks were being installed at fuel tank, and finishing works were ongoing for the mortuary. Installation of mesh fence around perimeter of chiller and construction of soak away pit were ongoing.



Installing cabstone for road, car park and paved area at North of the MUHAS Academic Medical Centre



Appearance of MUHAS Academic Medical Centre at Mloganzila as of June, 2016



One of the Nursing Station inside the MUHAS Academic Medical Centre at Mloganzila as of June, 2016



Auditorium (capable of accommodating 150 people) in the third floor of the MUHAS Academic Medical Centre at Mloganzila as of June, 2016

4.10.2 Construction of Academic and Support Facilities

During the reporting period proposals for establishment of academic and support facilities at Mloganzila Campus were developed and submitted to the Government and potential funders and investors. Discussions were held between MUHAS Management, National Housing Corporation (NHC) and Tanzanian Investment Bank (TIB) for possible investment in accommodation facilities. Discussion and due diligence were done between MUHAS and Africa Integras (American Investment Company) regarding construction of staff houses, interns and student hostels. After discussion, it was observed that Government Guarantee is required for the investors to invest in the construction of these facilities. The same proposals were also submitted to the Ministry of Education, Science and Technology requesting for financial support for this project.

The proposal and budget for construction of the accommodation and support facilities for key hospital staff, residents and interns at Mloganzila was prepared and submitted to the Ministry of Education, Science and Technology for inclusion in the budget for the Financial Year 2016/2017. The Government approved TZS 10 billion as capital development budget for Mloganzila Campus.

4.10.3 Supplying and Installation of Medical Equipment in MAMC

During the period under review the updated list of medical equipment was submitted by the Consultant to MUHAS in September 2015 and reviewed by the Steering Committee on 6th October, 2015. After approval of a final list of medical equipment, procurement commenced in March, 2016. Pre-shipment inspection was done in Korea in March, 2016. The shipment of 43 containers of medical equipment was done between March and April 2016. The containers arrived at the Dar es Salaam Port on 30th April, 2016; 12th and 26th May, 2016. After custom clearance, all 43 containers were delivered and stored at the site. MRI, CT scan and Ultra Sounds machines were delivered at the site in June, 2016. The shipment of other three containers of medical equipment were expected in early July, 2016.

During the reporting period a team composed of academic and technical was appointed to conduct inspection of the equipment before installation. Inspection, testing, training and commissioning was done during and after installation of the medical equipment. Installation was awaiting completion of finishing works in the building. As per contractual agreement, the Supplier for Medical Equipment (Samsung C&T Corporation) trained nine (9) MUHAS staff for two-weeks in South Korea (from 16th to 27th November 2015) on management of medical equipment. Other staff will be trained on site during installation of medical equipment in the Academic Medical Center. Training schedule has already been developed and training of users will commence during and after installation of the medical equipment.



Part of Medical Equipment delivered at Mloganzila for installation in the MUHAS Academic Medical Centre

4.10.4 Visitors to the Site

a). Visit of the MUHAS Chancellor at Mloganzila

The MUHAS Chancellor, His Excellence Alhaj Ali Hassan Mwinyi visited Mloganzila Campus on 6th November, 2015 to assess progress of the ongoing construction of the MUHAS Academic Medical Center. He received the project progress report from the contractor and Management. Among the challenges in the report were; funds for establishment of academic and support facilities; additional funds (TZS 25 billion part of USD 18,040,000) which is part of the funds committed by the government of Tanzania for construction of the Academic Medical Center; Government contribution funds (USD 755,000) for establishment of the Centre of Excellence for Cardiovascular Sciences project; and employment of the required human resources for the Academic Medical Centre.

The Chancellor was delighted by the progress reached for construction of the hospital. He promised to continue providing support for establishment of MUHAS New Campus at Mloganzila.



The MUHAS Chancellor, His Excellence Alhaj Dr. Ali Hassani Mwinyi with MUHAS management and consultant during his visit to the construction site at Mloganzila

b). Visit of the Permanent Secretary in the Prime Minister's Office to Mloganzila

The Permanent Secretary in the Prime Minister's Office, Dr. Florence Turuka visited Mloganzila on 10th November, 2015 to assess progress of the construction of the MUHAS Academic Medical Center. Other stakeholders present were representatives from the Ministry of Works, Ministry of Education, Science and Technology, Ministry of Energy and Minerals, Ministry of Water and Irrigation, Ministry of Health, Community Development, Gender, Elderly and Children, and Regional Administrative Secretary for Dar es Salaam. The visiting team received progress report from the contractor and MUHAS Management. Among the challenges mentioned during the meeting were; funds for establishment of academic and support facilities; disbursement of committed funds from the Government for construction of the Academic Medical Center; Government contribution funds (USD 755,000) for establishment of the Centre of Excellence for Cardiovascular Sciences project; employment of the required human resources for the Academic Medical Centre; compensation of 41 remaining residences at Kisopwa; and infrastructures development (road, water and electricity).

It was agreed that, for the infrastructure that were not completed, respective agencies (TANROADS, TANESCO and DAWASA) should prepare cost estimates of the projects and submit to the Permanent Secretary in the Prime Minister's Office for requesting funds to the Ministry of Finance and Planning. MUHAS was also directed to submit the evaluation report and compensation cost for properties of 41 Kisopwa residents to the Prime Minister's Office.

The visiting members were delighted by the progress reached for construction of the hospital. The Permanent Secretary promised to continue providing support for establishment of MUHAS New Campus at Mloganzila.



The Permanent Secretary in the Prime Minister's Office, Dr. Florence Turuka and the Vice Chancellor Prof Ephata E. Kaaya are following presentation from the contractor for construction of MUHAS Academic Medical Centre during the stakeholders meeting held at Mloganzila on 10th November, 2016

c). Visit by the Permanent Secretary, President's Office Public Service Management and Good Governance

The Permanent Secretary in the President's Office - Public Services Management and Good Governance Dr. Laurian Ndumbaro visited Mloganzila site on 11th March, 2016. The Permanent Secretary (PS) was shown around the construction site for the MUHAS Academic Medical Center. During the meeting he received the progress report from the Consultant, Contractor and Muhas Management. He was informed that, construction of the Academic Medical Centre is progressing well and construction was expected to be completed in June, 2016. Among the challenges which were presented to the PS was delay in employment of hospital staff. The PS was informed that 968 staff were needed during hospital opening to work in the prioritized departments of the hospital. The PS was informed that in order to budget for salaries of the 968 staff through Human Capital Management Information System, job codes for each cadre needed approval by his office. After job codes approval, employment or transfer permits for 968 individuals to be employed at MUHAS would be needed.

The PS was delighted by the progress reached for construction of the hospital. He pledged to provide support to ensure that job codes are issued to allow processing of employment and transfer permits of hospital staff.

d). Visit of the Minister of Education, Science and Technology to Mloganzila

The Minister for Education, Science and Technology Prof. Joyce Ndalichako visited Mloganzila on 29th March, 2016 to assess progress of the ongoing construction of the MUHAS Academic Medical Center. During the visit, she received the project progress report from the Consultant, Contractor and MUHAS Management. She was informed that, the construction was progressing well and will be completed in June, 2016.

She was delighted by the progress reached for construction of the hospital and she praised the University Management for hard work in supervision and management of the project. She promised to provide support for establishment of New Campus at Mloganzila. She also informed the meeting that, the Government had approved TZS 18 billion as part of its committed funds for construction of the MUHAS Academic Medical Centre. She promised the management and Contractor that funds will be disbursed to MUHAS in early April, 2016. She also promised to consult the Ministry of Finance and Planning to include funds for operating the hospital in the 2016/2017 budget.

The Minister also promised to work with MUHAS in order to acquire financial resources for establishment of academic and support facilities for Mloganzila Campus.



Minister for Education, Science and Technology Hon. Prof. Joyce Ndalichako receiving explanation of the ongoing construction of MUHAS Academic Medical Centre at Mloganzila.

e). Visit of the Parliamentary Committee for Social Services to Mloganzila

The Parliamentary Committee for Social Services visited Mloganzila on 1st April, 2016 to assess progress of the ongoing construction of the MUHAS Academic Medical Center. During the visit, the committee met with the Minister for Education, Sciences and Technology, MUHAS Management, Consultant and Contractors of the Project. The Committee received progress report for construction of the MUHAS Academic Medical Center.

Committee members were delighted by the progress achieved in the construction of the hospital. It was emphasized by the Committee that part of the funds committed by the government amounting to TZS 18,000,000,000 that were included in the budget for financial year 2015/2016 should be disbursed to avoid delay and increase of interest as per contractual agreement. It was informed by the Minister during the meeting that the budgeted funds had already been approved to be disbursed to MUHAS for payment of the contractor. The committee promised to continue providing support to MUHAS for the project.



Parliamentary Committee for Social Services receiving explanations from MUHAS Vice Chancellor, Prof. Ephata Kaaya regarding ongoing construction of MUHAS Academic Medical Centre at Mloganzila

4.10.5 Technical Support for Operationalization of MUHAS Medical Center at Mloganzila

The consultants from Yonsei University in South Korea visited MUHAS on 25th January, 2016 to conduct the 5th training workshop to MUHAS staff from 25th to 29th January, 2016. The five days workshop involved staff from different departments and units that will support functions of the hospital after commencement of the operation. The aim of the workshop was to support development of the general operationalization procedures (GOPs) and assess progress of the preparations for the opening and operationalization of MUHAS Academic Medical Center.

During the workshop, facilitators from Yonsei University met sub-committees for operationalization of MUHAS Academic Medical Centre to receive progress made for preparation of Standard Operating Procedures (SoPs) and other preparations for opening the hospital. The conveners of sub-committees presented the progress of the preparation of hospital opening. The consultants advised the sub-committees to ensure that their operational plans are in line with the expectation of patients and quality of services provided in the hospital. The facilitators were also able to meet separately with members of different departments at MUHAS to discuss different matters regarding preparations for opening of the hospital.

From 29th February to 11th March, 2016 six MUHAS staff visited Yonsei University in South Korea. The purpose of the visit was to learn various aspects of managing a teaching hospital and also to experience operationalization of the teaching hospital under Yonsei University. A team of six MUHAS staff was selected from the three Departments (Clinical Nursing, Community Nursing, Finance and Procurement) attended the training.

4.10.6 Establishment of the Centre of Excellence in Cardiovascular Sciences at Mloganzila

Activities done during the year 2015/2016 were as following:

i) Project Launching

The project for establishment of the Center of Excellence in Cardiovascular Sciences was officially launched on 10th of September, 2015. The Launching ceremony was held at Mwalimu Nyerere International Convention Centre in Dar es Salaam and was officiated by the Director of Higher Education who represented the Minister for Education, Science and Technology. The ceremony was attended by the chairman of the MUHAS Council, invitees from line Ministries, Development Partners, Private sector and Civil Society Organizations. The launching ceremony was followed by technical training that was conducted on 11th September, 2015 at MUHAS. Facilitators for the training were technical personnel from the AfDB. The training was attended by members of the Project Coordinating Unit (PCU) and some heads of departments including Procurement Management Unit (PMU), Directorate of Finance, Audit Unit and other technical staff from MUHAS. The main content of the training included; AfDB Policies, Financial Management, Procurement Management and Disbursement Procedures.

ii) Construction of the Multipurpose Building for the Center of Excellence in Cardiovascular Sciences at Mloganzila Campus

Requests for Expression of Interest for Procurement of the consultant for designing and supervision of the multipurpose building were received in July 2015. Eligible bidders were short-listed in September, 2015. AfDB approved the short-listed bidders in December 2015. Request for Proposals were advertised and bid evaluation conducted in February, 2016. Technical Evaluation report was submitted to AfDB on 21st March, 2016 and received no objection from the Bank on 5th April, 2016. Financial proposals of technically responsive bidders were opened on 19th April 2016. The combined Technical and Financial evaluation report was approved by the Tender Board on 29th April 2016. Negotiation prior to contract award with the winning bidder was conducted on 23rd May 2016 and the contract was prepared and approved by the Tender Board on 24th May, 2016 and by AfDB on 28th May, 2016.

iii) Training of Staff in Cardiovascular Sciences and collaboration with other Institutions

Needs assessment was conducted to identify the required specialties for the center. Based on the available budget, 24 training positions were identified. The selected candidates will be trained in cardiovascular sciences at PhD, Masters and middle levels. Seven candidates have already obtained admission in various training institutions. Bond agreement with trainees that bind them to work at MUHAS after completing their studies were prepared and signed by both parties.

A list of institutions for collaboration and training of staff was compiled. These included: (1) University of Cape Town – South Africa, (2) Christian Medical College- Vellore – India, (3), University of California at San Francisco - USA (4). Aga Khan University – Nairobi, (5), Harvard University - USA (6), Karolinska Institute - Sweden, (7), Cornell University – USA, (8), Newcastle University – UK, (9), Copenhagen University – Denmark, and (10) Baylor University – USA. Two institutions (University of Cape Town - South Africa and Aga Khan University – Nairobi) were visited for possible placement of candidates.

University of Cape Town agreed to admit candidates in Cardio-thoracic surgery, Cardiology, Cardiovascular Anesthesiology and Cardiovascular Intensivists. The Aga Khan University was willing to take candidates in Cardiology, Cardiovascular Anesthesiology (in partnership with Canadian Partners), Cardiovascular Intensivists, Cardiac Catheterization Laboratory for Nurses and Cardiac Intensive Care for Nurses. Letters seeking for collaboration were written to University of California at San Francisco, Christian Medical College, Vellore in India, and Centre for Translational Research – CTRIS in the USA. Follow up with these institutions is ongoing.

iv) Curricula development for Masters, Super-specialty and PhD training programmes in the fields of cardiovascular sciences (CVS)

A committee to develop curricula for Masters, Super-specialty and PhD training programmes in the fields of cardiovascular sciences (CVS) was appointed on 15th May 2016. The committee has already developed a work plan for curricula development. Three meetings were conducted and development of curricula was ongoing during the reporting period.

v) Project Management, Coordination, Monitoring and Evaluation

One steering committee and nine (9) Project Coordinating Unit (PCU) meetings were conducted in the reporting period. Monitoring and Evaluation forms were developed and circulated to members for monitoring implementation of the planned activities on quarterly basis. Annual work plan and Procurement plan for the year 2015/2016 were developed and approved by the AfDB.



vi) Research in Cardiovascular Sciences to improve the quality of care of patients with cardiovascular diseases

A research proposal on Prevalence and Associated Factors of Rheumatic Heart Disease in children 5-16 years old in Tanzania was developed by members of the PCU in collaboration with other MUHAS staff in the area of cardiovascular research. This proposal was submitted to DRP in January 2016 for ethical clearance and possible funding through Sida-supported small grants. Data obtained from this preliminary study will form basis for establishment of a comprehensive project for prevention and management of RHD in Tanzania. Members of the PCU have been involved in other grant applications, including a world Bank proposal for planning for research centers of excellence in Non- Communicable diseases in East Africa.

vii) Audit

Internal auditing of the project was conducted in June 2016. The audit report was prepared and discussed in the University management meeting as preparation for External Audit expected to commence in August 2016.

4.11 Directorate of Research and Publication

4.11.1 Introduction



Prof. Said Aboud

The Directorate of Research and Publications is the University's hub for coordinating research and innovations. Since its inception in 2003 the directorate has been developing structures and policies for improving research management. A number of policies were developed since 2011: including Research Policy Guidelines, Intellectual Property Policy and Guidelines, and Guidelines on Conflict of Interest and Research Integrity. Likewise the University Research agenda was developed in 2011.

During the reporting year, the directorate continued to review all its guiding documents that were developed in 2011. Seven new policies have started being developed including; the data sharing policy, research chairs' policy, policy for publishing student research data, policy for institutional overheads and effort compensation for faculty working with research projects.

Vision

To be a leading center for coordinating quality health and related research that responds to national, regional and global challenges.

Mission

To provide a conducive environment for research in health and related fields, promote the conduct of research that is in line with Tanzania's National Research Agenda and enhance the University's capacity to advance frontiers of knowledge.

4.11.2 Organizational Matters

The University revised its organizational structure leading to formation of new units. The Directorate of Research and Publications was one of the units whose structure was revised leading to approval of 4 sub units: (a) Institutional Review Board (IRB); (b) Research Development (c); Office of Sponsored Projects (OSP) and (d) Intellectual Property Unit. The Directorate has only one Senior Administrator for OSP units. The other two units are yet to get administrators.

4.11.3 Capacity Building

Through Sida support the directorate supported four faculty to attend a one-week Training of trainer's course in Sweden on PhD supervision. Two more faculty from Epidemiology and Biostatistics were supported to attend a curriculum development for respective modules in Sweden. All these capacity building initiatives were done in order to support the training of 37 PhDs, 23 MSc and 6 Post-doctoral students for the period of 2015-2020 agreement contribution No 51170072; between Sida and MUHAS.

4.11.4 Policies and Guidelines

Professorial Research Chairs Policy

The University recognizes the role played by its senior academic staff in promoting research, mentoring young faculty and supporting the core functions of the University through indirect costs deducted from research grants. The University intends to establish funded research chairs to facilitate retention of productive senior staff and continue to tap their expertise and experience to bring social economic development to the nation. The Directorate therefore drafted a Professorial Research Chairs Policy to be processed through the University machinery and eventually be approved.

Review of IRB Standard Operating Procedures

In the reporting period the Directorate reviewed the SOPs for the MUHAS Institutional Review Board with the main purpose of making our IRB independent. The revised SOPs will be approved through the University machineries after developing a proposal to disengage the IRB from the SRPC.

Formation of a University Policy Briefs Committee

During the reporting period the Directorate developed a Policy Briefs Committee consisting of representatives from the five (5) Schools, Directorate of Library Services, Institute of Traditional Medicine and Institute of Allied Health Sciences. The Committee started its activities, mainly by establishing linkages with important partners and identifying opportunities for capacity building. The Committee Chair is now a member of the Senate Research and Publications Committee; and through this Committee it will channel its proceedings to Senate. The 2015-2020 Sida grant has supported the training of the policy briefs committee and newly graduated PhD candidates. Based on respective PhD findings Sida supported the publishing of the first MUHAS policy briefs handbook which is now ready for dissemination to stakeholders.

4.11.5. Research Management

Building capacity for Office of Sponsored Projects

During the reporting year the Directorate in collaboration with the Swedish International Development Agency (Sida) supported one-week training for four staff at the Karolinska Institute in Sweden. These included one Senior Administrator for OSP, one Accountant, one Lawyer and one PMU staff who attended hands on training in Sweden for purposes of improving skills in grants administration. Further mentorship by Swedish counterparts will continue during the 2015- 2020 Sida funding to MUHAS.

One-day Research Seminars

During the year under review, the Institute of Traditional Medicine, Directorate of Library Services, School of Medicine in collaboration with the School of Public Health and Social Sciences, School of Nursing, School of Dentistry and the School of Pharmacy organized one-day research seminars. The research seminars focused on improving skill for staff grant proposals and postgraduate student proposals writing.

Small Grants application processing

Seven small grants applicants received ethical clearance and funding. The funding was made available on competitive basis, and using peer review system. The maximum support that was offered is 20,000,000 Tanzanian shillings through Sida support. This is seed money was meant to support junior staff to advance in research career and be able to apply for bigger grants.

Review of Proposals

The Directorate coordinated the review of proposals submitted by faculty and students through the Senate Research and Publications Committee and its Expedited Review Sub-Committee. It also monitored the progress of clinical trials implemented by faculty and collaborators at the University. In total 433 proposals (as compared to 238 for 2014/15) were reviewed during this reporting period. This is a 45% increase over previous year's reviews. These included postgraduate and undergraduate students' proposals. Below is a summary of the requests submitted in 2015/16 for review:

Table 30: Summary of the proposals submitted for review:

Type of Submission			Number
Students	Postgraduates	Postgraduates	209
	ElectivesE	Elective students	3
Students	Undergraduate	Undergraduate	85
	ReRequest for Ethical Clearance only		38
Research Others	Protocol Amendments		2
Others	Requests ethical clearance and funding for Funding		7
Total			433

International Collaborative Projects

Research conducted at the University continued to be largely funded by foreign donors. In the period of July 2015– June 2016, the University had 88 active international collaborative projects; out of which 29 were new projects. Project funds awarded during the financial year were TZS 744,199,603.58 and \$ 6, 512,496.76. The overheads retained by the university as institutional cost amounted to TZS 55,125,896.56 and USD 482,405.17 respectively. This is about a 20% decrease from previous year's overhead collections

Publications Output

During the reporting period the Directorate of Library Services compiled and published the MUHAS Research Bulletin Volume 118 (1) of July 2016. This volume contains publications recorded from July 2015-June 2016. During the reporting period, a total of 261 journal articles, 173 dissertations, 142 conference proceedings and 3 books were published.

Compared to last year there is a fall of journal publications from 308 to 261 (15% fall), no significant increase of postgraduate dissertations (from 168 to 173) and number of books (from 2 to 3). However there has been a significant (more than seven-fold) increase of number of conference papers from (17 to 142) in the previous year.

4.11.6 Research Dissemination

The directorate participated in the 4th MUHAS scientific conference held in June, 2015. The conference was largely supported by the DRP through its Sida research training support funds. Other avenues for dissemination included the publications outlined under item 16.5.6. Likewise, repository offers an online dissemination of research findings. During the reporting year MUHAS policy briefs committee managed to publish one issue of policy briefs containing findings from recently graduated PhD candidates. The overall impact is to contribute to improvement of medical practice and influence policy change.

Networking

The Directorate participated in monthly teleconferences with Dartmouth Medical College and UCSF to discuss collaborative activities to improve the performance of the Office of Sponsored Projects. In addition, the Directorate in collaboration with the Karolinska Institute (KI); Sweden strengthened the office of sponsored projects through hands-on training to the grants officer, PMU desk officer for research projects, research projects accountant, and the university legal officer. This initiative is also Sida supported through the 2015-2020 agreement.

4.12. Directorate of Undergraduate Education

4.12.1 Introduction



Prof. M. Moshi

The Directorate of Undergraduate Education supports the educational mission and vision of the University. It maintains and periodically update the Central Timetable and Timetables Management System and coordinates all issues of Undergraduate examinations including submission through SUEC and later to SENATE for approval.

The Directorate support Curriculum reviews and Development of demand driven new curricula for approval by Senate and formulates operational policies and procedures governing inter-school/institute teaching and allocation of resources to maintain such teaching, and coordinates appraisal of teaching load of departments and advise the DV C-ARC accordingly on the recruitment needs of departments for academic, technical and administrative staff.

Vision of the Directorate

To nurture, support and promote excellence and professionalism in the training of human resources for health

Mission of the Directorate

To support and promote training of human resources for health that lead to the attainment of equitable socioeconomic development for the Tanzanian community and beyond.

4.12.2 Students Admission for the year 2015/2016

The Directorate of Undergraduate Education processed the selection of both direct and equivalent undergraduate applicants for 2015/2016 academic year for various programmes. The total number of students selected was 583 of which 564(96.7%) students were registered. During the reporting period the Directorate of Undergraduate Education also processed the applications of both Diploma and Advanced Diploma programmes for various programmes. A total number of 685 students were selected and among them 426(62.2%) students were registered.

The discrepancy between selected and registered diploma and undergraduate students were due to various reasons including inability to pay school fees, students who transferred to other universities and some students who did not report.

Table 31. Total number of Undergraduate candidates selected and registered

Programme	Number of selected Applicants	Number of students registered/On studies
Doctor of Medicine	214	207
Bachelor of Medical Laboratory Sciences	92	88
BSc. Radiotherapy Technology	15	15
Doctor of Dental Surgery	48	48
Bachelor of Environmental Health Sciences	50	47
Bachelor of Pharmacy	87	87
Bachelor of Science Nursing	53	49
Bachelor of Science Nursing (Midwifery)	24	23
Total	583	564

During the academic year 2015/2016 the Directorate of Undergraduate Education administered the enrollment of 3122 students into various programmes, 2090 students being degree programmes and 1032 being diploma programmes. A total of 1026 (32.9%) among enrolled were females.

During the 9th MUHAS Graduation ceremony a total of 727 students graduated in various diploma and undergraduate programmes, of which 228 students (31.4%) were females.

4.13 Directorate of Information Communication Technology

4.13.1 Introduction



Dr. Felix Sukums

The Directorate of ICT is mandated to harness and mainstream information and communication technologies (ICT) into all the University's operational and management functions. The directorate ensures that new developments in ICT are embraced and used to promote the vision, mission, and core functions of the University. To achieve this goal, MUHAS has implemented and maintains various ICT infrastructures, systems, and services including Internet and local area (LAN) infrastructure with fiber optic and UTP cabling, over 85 switches, 3 routers, 1 firewall, 15 servers and 20 wireless access points.

There are about 500 computers and 240 printers, scanners and photocopiers. The university has telephone network and digital private automatic branch exchange (PABX) system, Closed Circuit Television (CCTV) system in the library and Video Conference and Training Facility. There are about 16 management information systems to support core functions of the University.

In-line with the mandate, the Directorate continued to maintain and support use of the ICT infrastructure, systems and services. Some of the activities carried out during the reporting Period 2014/15 are described in the sections below: -

4.13.2 Internet and Network Infrastructure

The Directorate of ICT managed and maintained the ICT infrastructure to ensure reliable access to intranet and Internet services. In addition, significant network expansion to meet the growing Internet demands took place. This included linking Chole hostels to the National ICT Backbone through fibre optic cable as well as increasing the number of functional wireless access points at Chole and MUHAS main campus. All these have significantly contributed in improving the Internet speed in students' hostels. Furthermore, the Directorate managed and maintained the MUHAS LAN through troubleshooting of network problems, upgrading network active components and installation of new network links. The Newborn Screening (NBS) project was connected to the LAN and linked specifically to the Integrated Financial Management Information System (EPICOR), due to the project office relocation to the Dental building. In addition, the directorate performed a thorough review of the LAN at Mloganzila, and made important recommendations that led to the replacement of low performance network cables that were previously installed. The technical audit for the installed LAN at CHIPE building was also done during the period under review.

Management and Maintenance of Video Conferencing and Training Facility

MUHAS has a Video Conferencing facility located at the Library building previously acquired through the Dar Dar and ALP Projects. DICT continued to maintain the infrastructure and support users to employ the facility to enable interaction during trainings and conferences with other remote participants and collaborators. DICT facilitated and supported the use of the facility for Gastroenterology trainings conducted every Thursday and TRIM-TB trainings conducted once every month.

MUHAS Website and Mail System

During the period under review, DICT continued to maintain MUHAS website, and mailing system. MUHAS social media sites were also developed including Facebook page <https://web.facebook.com/muhimbiliuniversity>. Furthermore, redevelopment of the University Website was initiated by gathering of information/content for updating from all units of the university. Re-designing was initiated and reconstruction of the website was under development by the e-Government Agency.



In order to improve email communication, the directorate installed and configured a new mail system. The new MUHAS mail system is based on “Zimbra” which is an enterprise-class email, calendar and collaboration solution”. The new mail system has many improved features like User-friendliness, Calendar, Tasks, Briefcase, more disk space/Mailbox size, and more Security. The new mail system is accessible via <https://mail.muhas.ac.tz>.

4.13.3 Information Systems Implementation and Support

During the period under review, the Directorate supported and introduced a number of electronic management information systems (MIS) in the University. These included the Student Academic Register Information System (SARIS), the Integrated Financial Management Information System (EPICOR), Human Capital Management Information System (HCMIS), e-learning management system, Library Information Systems, and Dental Information Management Systems (DIMS) at the University Dental clinic. Furthermore, various activities towards computerization of the central timetabling, ticket management system/helpdesk, and online telephone directory took place during the period under review. DICT finalized the situation and technical analysis of various required systems during this review year. Technical specifications for the biometric time and attendance system, CCTV and clustering; including that of printing and photocopying services/network were submitted to the management for further processing. of particular importance is a thorough requirements gathering, review and technical audit of the hospital information system (HIS) for MUHAS Academic Medical Centre (MAMC) at Mloganzila which also took place during the period under review. A number of shortcomings were identified and reported to the ICT infrastructure contractor and HIS suppliers for rectification. DICT continued to work with the HIS consultant to ensure an efficient and cost-effective hospital system is installed at the new hospital.



SARIS

In the year under review, DICT carried out a number of improvements in the SARIS including introduction of role based access (RAC) and audit trail to enhance security and data quality. Eighteen (18) training sessions were organized in which 29 academic staff participated. One



technical staff was appointed to provide support and one-on-one trainings to all SARIS users on request. Furthermore, online registration was done using SARIS for all undergraduate and diploma Students.

Computerized Central timetabling system (CELCAT)

DICT installed and configured Computerized Central Timetabling System (CELCAT) to centralize and enhance preparation and management of teaching timetables. Almost all timetables have been uploaded ready for use in the coming semester.

Integrated Financial Management Information System (IFMIS)

The Directorate continued to support EPICOR based IFMIS system operations in collaboration with the directorate of Finance and the software vendor (Soft-Tech Consultants Limited). The activities conducted include technical support, end-user support, troubleshooting and data backup and recovery. A total of 39 users were connected and supported to use the system.

Human Capital Management Information System (HCMIS)

The directorate continued to support HCMIS (LAWSON) system operations in collaboration with the Directorate of HRMA. Seven HR officers were supported to access and use the system. The activities included maintenance of virtual private network (VPN) link, technical support, end-user support, troubleshooting and data backup and recovery.

Library Information Systems

In collaboration with the Directorate of Library Services (DLS), DICT continued to host, maintain, upgrade and support a number of free and open source based Library Information Systems including Integrated library information system (KOHA), Institutional repository system (DSpace) and Open Journal System.

Dental Clinic Computerized Management Information Systems

DICT managed and maintained the Dental Clinic Computerized Management Information Systems (Dentrix and Dexis). The activities carried out included managing user accounts, training new and existing users, user training and support, database administration, conducting data quality checks and backup as well as managing NHIF Claim management system.

CT Teaching, and Learning Activities

The DICT in collaboration with the DLS offered computer skills and information literacy under the Information Technologies (IT 100) course to all first year undergraduate and diploma students. During the period under review, 545 students were trained through lectures and hands-on exercises.

4.13.4 Practical Training and Internship

The directorate continued to offer practical training to ICT students from different Universities and colleges in the country. In the year under review, twenty-one (21) students were accommodated by DICT to do field work (14 field students and 7 interns).

4.13.5 Collaboration, Research and Publication Activities

The directorate continued to participate in research activities in the year under review in which one peer-reviewed journal article was co-authored and published and two abstracts were accepted in scientific conferences and one doctoral thesis was submitted.

For the first time MUHAS Conference Management System was full operational during the 4th MUHAS Scientific Conference. The system was used for online registration, abstracts submission and review. DICT staff also participated in organizing the conference.

DICT continued to participating in a research grant on strengthening the use of ICT at MUHAS, funded by Sida Project-Period: 2015-2020 funded by Swedish International Development Agency (Sida). The Directorate in collaboration with DLS and the Harvard Medical School are running a project that gives medical students access to online medical resources (Up-to-date database). The directorate continued to provide ICT support to various research activities.

4.13.6 Staff development

During the year under review, One System administrator (Mr. Hassan Sengo) was employed. The university has continued to encourage and support DICT staff to pursue further studies in different ICT disciplines. Two technical staff (Mr. Sixmund Amsi and Ms. Daisy Lweitaka) supported and released to pursue post graduate studies (master level) during the period under review. Furthermore, one academic staff (Dr. Felix Sukums) completed his PhD study and reported back to the directorate. Despite this addition, one academic staff (Mr. Edwin Nyella) resigned during the period under review leaving the directorate with only one academic staff. Twelve staff attended at least one short course in various ICT areas and three in-house trainings as well as one study tour were organized during the period under review. Four DICT staff attended training on MUHAS website management and maintenance organized by eGA. All these are targeted towards building the capacity of ICT staff.

4.13.7 ICT User Support

User support is one of the core activities of the DICT to ensure efficient and effective use of ICT infrastructure, systems and services. During the period under review, the directorate continued to offer technical support to staff and students in the use of ICT systems and services. The directorate has provided user support and troubleshooting in the use of 14 information systems.

Consequently, our technical crew attended 706 problems related to hardware, software, SARIS (1920), telephone and the internet services (See Figure 20) as compared to 515 problems in 2014/2015.

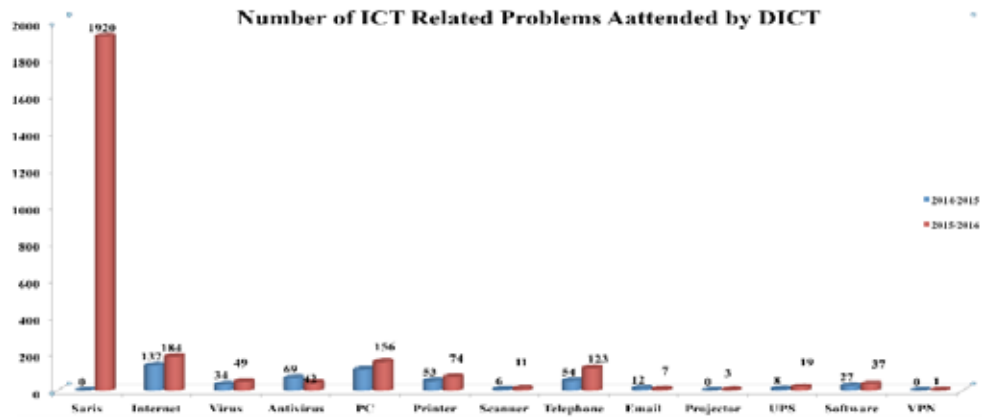


Figure 22: Number of ICT related problems attended by DICT



One of the DICT computer laboratories

4.13.10 Challenges

Some of challenges hindering the directorate to adequately and efficiently support the use of the ICT resources

- (i) Rapid advancement of ICT and inadequate experience and skills among some ICT staff in management and maintenance of the modern ICT infrastructure and systems
- (ii) Inadequate staff in terms of number and qualifications.
- (iii) Inadequate office space.
- (iv) Inadequate funding.
- (v) Limited employment permits

4.14 Directorate of Library Services

4.14.1. Introduction



Dr. E.T Lwoga

During the reporting period the library continued to implement activities aimed at achieving its objectives as outlined in its Five Years Rolling Strategic Plan. Again due to an insufficient local budget, financial support for the activities came mainly from donors, particularly Sida whose aim is to strengthen the teaching and research capacity at the University.

4.14.2. User Needs

The library continued to compile user profiles to give guidance on user needs. Academic departments and staff were contacted for suggestions and views on materials to be acquired, particularly books and journals. Library statistics were taken on daily basis to give guidance on library use and for decision - making.

4.14.3. Collection Development

During the period under review, the library acquired 519 titles (618 copies) of printed books through various means, 350 dissertations, 190 CDs, 6 journals and 16 newsletters as shown below:-

- (i) Received 488 titles (555 copies) which were donated by Book Aid International
- (ii) Received 31 titles (63 copies) which were purchased through SIDA project funds
- (iii) Received 350 dissertations from Directorate of Research and Publication
- (iv) Received 190 CDs from Directorate of Research and Publication
- (v) Received 4 journal from WHO
- (vi) Received 2 journals from Tengeru
- (vii) Received 16 newsletters from MUHAS

The library also acquired a total of 248 periodicals as shown below:

- (i) 10 Economic Bulletin for the Quarter ending September 2014 from Bank of Tanzania
- (ii) 3 Tanzania Investment Report 2013.
- (iii) 10 monthly economic reviews from BOT.
- (iv) 9 BOT Research Bulletin Newsletters
- (v) 200 Research Bulleting (2011) from MUHAS
- (vi) 19 Annual Reports report 2013/2014 from MUHAS Directorate of Planning and Investment.
- (vii) 4 Research collaboration 2009/2014 from MUHAS School of Public Health and Social Science.
- (viii) 3 journals with 6 copies from various organizations.

4.14.4. Electronic library services

During the reporting period the Directorate of library subscribed to about 34 online databases that provide access to e-journals and e-books through the joint subscription under the Consortium of Tanzania University Libraries (COTUL). The library also subscribed to about 12 online databases that provide access to e-journals and e-books through the Electronic Information for Libraries (EIFL). The library further subscribed to Research for Life Programme, which provides free access to electronic journals in health, environment, social sciences and related fields to developing countries. The Research for Life Programme includes the following databases: Access to Research in Health Programme (HINARI), Access to Global Online Research in Agriculture (AGORA), Online Access to Research on the Environment (OARE) and Access to Research for Development and Innovation (ARDI):-

- (i) HINARI provides access to 15,000 journals (in 30 different languages), up to 47,000 e-books, up to 100 other information resources;
- (ii) AGORA provides access to 6,100 journals and up to 5,800 e-books;
- (iii) OARE provides access to 5,710 peer reviewed journals and 1,119 online books and other information resources; and
- (iv) ARDI provides access to around 20,000 journals, books, and reference works.
- (v) The library provided access to The Essential Electronic Agriculture Library (TEEAL), a searchable, offline, digital library which contains mainly agriculturally focused reference journals updated annually and delivered by the TEEAL Project Office at Cornell University's Mann Library. TEEAL contains a full-text and searchable database of articles from more than 325 high-quality research journals in agriculture and the related sciences, including health and life sciences.
- (vi) The Library also provided access to other open access journals and books as catalogued on Library website

Table 32: Usage statistics for online databases subscribed by MUHAS library

Months/Year	Full text Downloads for MUHAS subscribed online databases			
	Sage	Central Index System	Wiley Online Library	Biomed central
July 2015	0	33	134	4
August 2015	0	7	-	0
September 2015	0	0	-	6
October 2015	2	1	-	1
November 2015	1	51	-	1
December 2015	4	29	-	5
January 2016	2	54	293	2
February 2016	0	28	0	290
March 2016	6	45	360	0
April 2016	0	3	260	0
May 2016	0	8	742	0
June 2016	0	-	0	0
TOTAL	15	370	1655	309

ii) Institutional repository

The library continued to create awareness and conducting training on the use of institutional repository (<http://ir.muhas.ac.tz:8080/jspui/>) to students and academic staff at MUHAS. Currently the MUHAS Institutional Repository (IR) has a total of 1,617 research works and still the library staff continued to populate the IR with research works produced by MUHAS faculty and students. During the period under review a total of 2,292 users accessed the institutional repository through a total of 2,889 sessions (see Table 33).

Table 33: Institutional Repository Usage Statistics

Months/Year	Users	Sessions
Jul-15	69	77
Aug-15	187	243
Sep-15	126	154
Oct-15	182	235
Nov-15	212	359
Dec-15	267	350
Jan-16	279	306
Feb-16	139	166
Mar-16	216	259
Apr-16	119	137
May-16	138	191
Jun-16	358	412
TOTAL	2,292	2,889

iii) Library website

The library website was re-designed and it is now available on the internet (library.muhas.ac.tz). The library continued to catalogue the free electronic resources on the internet. The catalogue is available on the library website. The catalogue comprises of links to free online journals, books, evidence based practice databases, educational materials, statistics, tutorials on information searching other health gateways. During the period under review a total of 6,840 users visited the library website with a total of 9,112 sessions (see Table 34).

ii) Data entry activity

The data entry activity continued and the database has a total of 19,141 titles with 31,618 copies of books, and 3,411 titles of journals. Currently, the library staffs are entering records of recently acquired books and journals.



Usage of Computer lab

During the year under review the Computer usage statistics show that a total of 3,046 students used computers in the library as shown in Table 34 below.

Table 34: Library Website Usage Statistics

Months/Year	Users	Sessions
Jul-15	893	1,017
Aug-15	645	827
Sep-15	352	475
Oct-15	430	582
Nov-15	867	1,199
Dec-15	594	786
Jan-16	489	728
Feb-16	467	652
Mar-16	502	744
Apr-16	412	535
May-16	633	831
Jun-16	556	736
TOTAL	6,840	9,112

ii) Circulation services

A total number of 833 books were borrowed from the library. The borrowing statistics showed that undergraduate students were the main users of library books than other patrons as shown in the table 35 below.

Table 35: Usage of Computer Laboratory

Library Computer Lab Statistics

Month/Year	TOTAL
July 2015	461
August 2015	91
September 2015	37
October 2015	25
November 2015	677
December 2015	610
Jan 2016	97
Feb 2016	258
March 2016	384
April 2016	178
May 2016	135
June 2016	93
Total	3,046

4.15.5. Teaching and Learning

The library taught the following University courses to Undergraduate students:

- i. Directorate of Library Services in collaboration with the Directorate of ICT continued to teach IT 100: Information and Learning technology course to all first year Undergraduate students at MUHAS. About 588 first year students completed IT 100 course in the first semester 2015/2016.
- ii. The Library is teaching a course on CS 100: Communication Skills in the second semester 2015/2016 to 478 first year Undergraduate students.
- iii. Library conducted a course on basics to computer to a total of 33 students who are doing Diploma in Medical Laboratory Sciences (DMLS) from the School of Allied Health Sciences at MUHAS.
- iv. Information literacy topics to 23 second year who are doing a Bachelor of Nursing.

Table 36: Library circulation statistics

Month/Year	Student Category	SUB –TOTAL	TOTAL
July 2015	Undergraduate	8	141
	Postgraduate	133	
August 2015	Undergraduate	15	19
	Postgraduate	4	
September 2015	Undergraduate	0	0
	Postgraduate	0	
October 2015	Undergraduate	0	0
	Postgraduate	0	
November 2015	Undergraduate	3	3
	Postgraduate	0	
December 2015	Undergraduate	25	31
	Postgraduate	6	
Jan 2016	Undergraduate	86	99
	Postgraduate	11	
	Ext Borrower	2	
Feb 2016	Undergraduate	110	121
	Postgraduate	11	
March 2016	Postgraduate	5	114
	Undergraduate	109	
April 2016	Postgraduate	13	104
	Undergraduate	91	
May 2016	Staff	3	110
	Postgraduate	4	
	Undergraduate	103	
June 2016	Staff	1	91
	Postgraduate	7	
	Undergraduate	83	
TOTAL			833

The Library taught Information literacy and reference management to the following Postgraduate course:

- i. HE 600: Teaching methodology course to 376 Postgraduate first year students.
- ii. Research methodology course (ER 600) to 376 Postgraduate first year students.
- iii. Master's programme of Applied Epidemiology under a course of Research methodology and computers in public health (AE 603) to 15 Postgraduate students
- iv. 25 Postgraduate students who are doing Masters of Science in Nursing Critical care and Trauma (MScN Crit Care).
- v. 13 Postgraduate students who are doing Masters of Science in Bioethics

4.16.6. Continuing professional development programmes

i) During the period under review, the Directorate of library services conducted a total of 25 workshops for the academic year 2015/ 2016. During the reporting period a total of 184 MUHAS staff, 296 MUHAS postgraduate students, 170 Undergraduate and 206 participants from other institutions were trained (see Table 37,39 and 40).

Table 37: List of workshops for staff conducted by Library

S/N	Names of the workshop	Workshop dates	Workshop Participants Category	Number of Participants trained	Funder
1	Evidence based and Critical Appraisal Workshop	10 th to 12 August, 2015	MUHAS faculty staff	10	ELSEVIER
			Non- MUHAS staff	14	
2	Research Intervention workshop (conducted at MUHAS)	6 th , 7 th and 8 th October, 2015	MUHAS faculty staff	24	AURA
3	TEEAL and AGORA Programme training of trainer workshop (Conducted at SUZA, Zanzibar)	5 th to 7 th October, 2015	SUZA faculty staff	31	ITOCA
4	Online Regional Event: "Future of Research in the 21 st Century".	2 nd to 4 th November, 2015	MUHAS academic staff	22	AURA
5	TEEAL and AGORA Programmes training of trainer workshop (Conducted at Kizimbani, Zanzibar)	23 rd to 25 th November, 2015	Kizimbani faculty members	33	ITOCA

6	Evidence Based Practice workshop (Conducted at Suza, Morogoro)	18 th to 19 th December, 2015	SUA participants	17	ELSEVIER
7	E-resources and reference management	18 th to 19 th January, 2016	MUHAS academic staff	25	SIDA
8	Uptodate data base training	9 th February, 2016	MUHAS participants	21	AHILA
10	Research 2 (R2) Research intervention pre-online training	9 th and 17 th February, 2016	MUHAS Participants	17	AURA
11	Uptodate data base training	10 th February, 2016	MUHAS participants	13	AHILA
12	Face to face workshops on R2: Research intervention	22 nd to 24 th February, 2016	MUHAS participants	17	AURA
13	Research communication and tools	26 th February, 2016	MUHAS participants	27	AURA
14	Uptodate data base training	3 rd March, 2016	MUHAS faculty staff	8	AHILA
15	TEEAL and AGORA Training of Trainers Programme (Conducted at the University of Dar es Salaam)	12 th to 13 th April, 2016	UDSM participants	33	ITOCA
16	Forum on Open data and Open science workshop conducted at COSTECH	23 rd to 25 th May, 2016	Participants from different Universities	48	ITOCA
17	TEEAL and AGORA Training of Trainers Programme (Conducted at the Naliende Agriculture Research Institute)	24 th to 26 th May, 2016	Naliende participants	30	ITOCA
	TOTAL		MUHAS Staff	184	
			Non MUHAS Staff	206	
	GRAND TOTAL	390			

Table 38: List of Postgraduate and Undergraduate students workshops conducted by Library

S/N	Names of the workshop	Workshop dates	Participants category	Number of Participants trained
1	Online Electronic resources: Searching techniques	25 th November, 2015	Postgraduate students	64
2	Advanced searching techniques for online resources	6 th January, 2016	Postgraduate students	29
3	Reference Management	17 th February, 2016	Postgraduate students	25
4	Access to E-resources Teal and Open Access	9 th March, 2016	Postgraduate students	140
5	Training on the development of online data capture survey using Redcap tool	27 th April, 2016	Postgraduate students	32
6	Practical training in Development of online data capture survey using Redcup too 6 students	10 th June, 2016	Postgraduate students	6
	TOTAL			466

Table 39: Undergraduate students workshops conducted by Library

S/N	Names of the workshop	Workshop dates	Participants category	Number of Participants trained
6	Uptodate training	26 th May, 2016	Undergraduate students	170
	TOTAL			170

During the period under review, library staff attended various workshops and short courses outside MUHAS:

- 1 Library staff (Mr. Charles Marwa) attended the RBM workshop under Sida project from 27th to 29th July, 2015 in Bagamoyo, Tanzania.
- 1 Library staff (Prof. Edda Tandi Lwoga) attended the Tapping into e-resources for DAAD scholars Workshop from 27th to 30th July, 2015 in White Sands Dar es Salaam, Tanzania.
- 1 Library staff (Dr. Rehema C. Mallya) attended the Pedagogical workshop from 28th to 31st July, 2015 in Bagamoyo, Tanzania.

- d) 1 Library (Mr. Charles Marwa) attended the Pedagogical from 14th to 16th September, 2015 in Dar es Salaam.
- e) 1 Library staff (Prof. Edda Tandi Lwoga) facilitated the Tapping into E-resources for DAAD Scholars course from 12th to 15th October, 2015 in Kampala, Uganda.
- f) 2 Library staff (Prof. Edda Tandi Lwoga and Dr. Sydney E. Msonde) attended the workshop on Promotion and Marketing of Information services from 3rd to 5th December, 2015 in SUA, Morogoro Tanzania.
- g) 1 Library staff (Prof. Edda Tandi Lwoga) attended the Global Knowledge exchange network conference from 14th to 16th December, 2015 in Addis Ababa, Ethiopia.
- h) 1 Library staff (Mr. Benard Sengo) facilitated KOHA training at the University of Dodoma from 15th to 19th February, 2016
- i) 2 Library staff (Dr. Sydney E. Msonde and Dr. Rehema C. Mallya) attended the workshop for developing professional standards for the diploma in health information science from 7th to 11th March, 2016 in Morogoro.
- j) 2 Library staff (Prof. Edda Tandi Lwoga and William Mviombo) attended the RBM workshop under Sida from 15th to 16th March, 2016.
- k) 3 Library staffs (Dr. Sydney E. Msonde, Dr. Mboni A. Ruzagea and Benard E. Sengo) attended the workshop on marketing and promotion of e-resources from 16th to 18th March, 2016 in Bagamoyo.
- l) 2 Library staff (Dr. Sydney E. Msonde and Dr. Rehema C. Mallya) attended the technical working group (TWG) workshop for developing curriculum for diploma in health information science from 10th to 22nd April, 2016 at TTSA at Tanzania Tree Seeds Agency, Morogoro.
- m) 1 Library staff (Dr. Mboni A. Ruzagea.) facilitated the TEEAL and AGORA Training of Trainers Programme at the Naliendele Agriculture Research Institute in M t w a r a from 24th to 26th May, 2016.
- n) 2 Library staffs (Prof. Edda Tandi Lwoga and Dr. Sydney E. Msonde) facilitated at the African regional licensing and negotiations skills training of trainers workshop at Lusaka, Zambia from 20th to 23rd, June 2016.

4.14.9 Staff Development

During the year under review one library staff was promoted to the rank of Associate Librarian Professor, while one staff was transferred to another institution one staff was recruited to the position of library officer and four staff were on further studies as shown below:

- i) One staff was promoted from senior librarian to Associate Librarian Professor Edda Tandi Lwoga, who is also the library director.
- ii) One library officer, Ms. Fatma Uki was been transferred to Marine Institute, University of Dar es salaam Campus, Zanzibar



- iii) One technical staff Ms. Tatu Majaliwa went for Diploma studies in Library and Archives sciences at Moshi Co-operative University (MoCU) Moshi, Tanzania.
- iv) Three staff went for further studies:
 - a. Mr. William Mviombo, Masters of information studies, UDSM (to complete 2016)
 - b. Mr. Charles Marwa, PhD in Information Studies, UNISA (to complete 2019)
 - c. Mr. Julius Magessa, BSc library and Information Science, Mzumbe University (to complete 2016)
- v) One staff was recruited in position of library officer (Ms. Catherine Chibanda)

4.14.14. Resource Mobilization

- i) During the period under review, the Directorate of library services conducted total of six workshop for income generating activities for the academic year 2015/ 2016. A total of 49 participants from different Institutions were trained as shown in the table 40

Table 40: Status of Staff on training during 2015 / 2016

S/N	Names of the workshop	Workshop dates	Workshop participants category	Number of participants trained
1	KOHA digital library system	27 th to 29 July, 2015	MUHAS faculty	2
			Non-MUHAS faculty	4
2	Intergrated system by using KOHA	16 th to 18 th February, 2016	Participants from University of Dodoma	33
3	Marketing Promotion of Information services application of web 2.0 tools and other technologies	29 th to 2 nd March, 2016	Participants from outside MUHAS	4
4	Records Management workshop	27 th to 29 th April, 2016	Participants from outside MUHAS	6

4.14.15 Research and Publications

i) Research grants

The library has a total of six research projects, which include the following:

1. Title: African Universities' Research Approaches (AURA) Programme

Principal Investigator: Prof Edda Tandi Lwoga & Dr Doreen Mloka

Collaborators: Institute of Development Studies (IDS) in partnership with the Information Training & Outreach Centre for Africa (ITOCA) and Loughborough University.

Duration of the project: April, 2015 to April, 2018.

Total budget: £21,112.26

2. Title: The Essential Electronic Agricultural Library Capacity building in Tanzania

Period: 2014-2016

Funder: Bill and Melinda Gates Foundation, Information and Training Centre for Africa

Principal Investigator: Prof Edda Tandi Lwoga

Training and Outreach Officers under the project: Dr. Mboni Ruzegea, MUHAS & Prof F. Dulle, SUA

Total budget: \$27, 000

3. Title: Strengthening professional's skills in evidence based health care in Tanzania

Period: 2013-2015

Funder: Elsevier Foundation, Netherlands

Principal Investigator: Prof Edda Tandi Lwoga

Collaborator: Gracian Chimwaza, ITOCA, South Africa

Budget: \$80,000

4. Title: Contribution of information and communication technologies for gender empowerment and sustainable poverty reduction. A comparative case study of Tanzania and South Africa

Period: 2013-2015

Funder: COSTECH under the South Africa- Tanzania Joint Research Programme

Principal Investigators: Prof Edda Tandi Lwoga, MUHAS, Postgraduate student: Elias Kaikwa, UDSM

Collaborator: Prof. W. Chigona, UCT, South Africa

Budget: TZS 38,000,000



5. Research grant title: Online information seeking behaviour among HIV patients in selected regional hospitals in Tanzania

Period: 2014-2015

Funder: SIDA small grant

Principal Investigator: Prof. Edda Tandi Lwoga & Dr. Tumaini Nagu

Budget: TZs 15,000,000

6. Research grant title: Building a stronger MUHAS in supporting research and innovation

Period: 2015-2020

Funder: Sida

Collaborator: DSV/SPIDER, Stockholm University, Stockholm, Sweden

4.15 Directorate of Continuing Education and Professional Development

4.15.1 Introduction



Dr. D. Mloka

The Directorate of Continuing Education and Professional Development (DCEPD) is a Unit of MUHAS committed to of coordination, development and effective delivery of Continuing Education (CE) programmes and activities so as to play an effective and leading role in human resource development and capacity building for health in Tanzania.

The Vision of the Directorate of Continuing Education and Professional Development is to be a national and regional Centre of excellence in provision of quality and sustainable continuing education and professional development in health and related disciplines. The directorate envisages realization of this vision through its mission which is to provide quality, demand driven CPD through facilitation, regulation and promotion of CEPD for the health sector and beyond.

In implementing its mission during the reporting year, the Directorate conducted a number of activities: These include the following:

4.15.2 CPD Courses and Quality of Teaching and Learning

- (i) The Directorate conducted various Faculty development workshops focusing on Interactive teaching and teaching and assessment of additional competencies aiming at enabling faculty to better implement the competency based curricula. These trainings were conducted within the MUHAS-KCMC-MEPI project. These include the following: -
 - (a) The 2nd Faculty Development Workshop on Interactive Teaching Methodology using E-Learning for Academic staff was conducted from 17th to 19th June 2015, 24 faculty were trained.
 - (b) The 3rd Faculty Development Workshop on Interactive Teaching Methodology using E-Learning for Academic staff was conducted from 22nd – 24th July 2015, 12 faculty were trained.
 - (c) The Directorate in collaboration with Directorate of ICT conducted SARIS Training workshop on 29th June 2015. Deans, Directors, Heads of Departments and academic Programme coordinators from Institute of Traditional Medicine, Directorates of Library Services and School of Medicine were also trained.
 - (d) The Directorate in collaboration with the directorate of ICT also conducted a four days SARIS Training workshop from 30th June to 3rd July 2015, 54 faculty were trained.

- (e) The Directorate in collaboration with the directorate of ICT also conducted a four days SARIS Training workshop from 20th to 23rd July 2015, 40 faculty were trained.
 - (f) The Directorate also conducted a two days Faculty Development workshop on Teaching Methodologies from 5th to 6th October 2015. It was attended by 34 participants in total, whereby 23 staff were from MUHAS, 6 staff from University of Dar es Salaam, 4 staff from St Joseph University and one staff from Muhimbili National Hospital (MNH).
 - (g) The Directorate in collaboration with the directorate of Library Services also conducted 4, three day workshops on teaching research methodologies through the MUHAS - African Universities' Research Approaches (AURA) project. A total of 53 participants were trained and 2 research proposals were submitted and funded to the tune of 20,000 and 35,000 USD respectively.
- (ii) The Directorate, in collaboration with the HPEG Group continued to run the Post Graduate Teaching course on Educational Principals and Practice for Health Sciences Professionals (HE 600) that started on 14th April 2016 until 25th August 2016. A total of 287 Post graduate students were trained in every Thursday. The course was nominated and won in July 2016; The Network Towards Unity for Health (TUFH) projects that work award for 2016.

4.15.3 Accreditation of CPD Courses

A total of 5 short courses were accredited by the Directorate during the reporting period. The courses are run by Schools, Directorates and Institutes at MUHAS. The accreditation is based on the available accreditation guidelines developed by the Directorate and approved by the relevant University organs. Courses accredited during the year included:

- (i) Introduction to Epidemiology and Biostatistics (SPHSS)
- (ii) Hospital Management for Health Professionals (SPHSS)
- (iii) Quality Control and Regulations governing Medicinal Plants and finished herbal products (Herbal Medicine Development level II) (ITM)
- (iv) Clinical Pharmacokinetics from School of Pharmacy (SOP)

The accredited short courses will have to be re-accredited after every three years.

4.15.4 The 4th MUHAS Scientific Conference

The Directorate facilitated and coordinated the 4th MUHAS Scientific Conference that was held from 23rd to 24th June 2016 at LAPF International Conference Centre in Dar es Salaam, Tanzania. The conference was officiated by the Vice President of the United Republic of Tanzania, H.E. Samia Suluhu Hassan.

The Goal of the conference was to provide a forum for the researchers, practitioners, decision makers, representatives of special groups, media and trainers to share research findings and experiences in health and health related issues and to disseminate their research findings to relevant stakeholders. The conference was attended by 427 participants from Tanzania, USA, Belgium and Nigeria. A total of 180 publications were submitted of which 152 were actually presented including 135 oral presentations and 17 poster presentations as well as three key note addresses. The first Keynote presentation was presented by Prof. Angwara Kiwara which was on *Creating a conducive environment for local stakeholders towards financing in Health*. The second Key note speech was from two MUHAS researchers: Dr. Jessy Mbwambo and Dr. Pamela Kaduri on *“Major Public health problem of Substance Abuse in Tanzania”* and The third one was presented by Prof. Twalib Ngoma from MUHAS about the *“Cancer in Tanzania: Challenges and opportunities.”*

The theme of the conference was *Inventing in Health Research and Training for Sustainable Development*. With the following subthemes:

- (i) Reproductive, Maternal, New born and Child Health
- (ii) Pharmaceutical Care and Practice
- (iii) Oral Health
- (iv) Gender and Health
- (v) E-health, M-health and Health Information System
- (vi) Health Professional Education and Skills Development
- (vii) Basic Science and Clinical Research
- (viii) Infectious Diseases (HIV, TB, Malaria, Neglected tropical diseases, Zoonoses)
- (ix) Traditional, Complementary and Alternative Medicine
- (x) Non-Communicable Disease (NCD) [Cardiovascular Diseases, Cancer, Respiratory Diseases, Diabetes, Substance Abuse, Mental Health, Nutrition, Accidents and Injuries, Neurological Diseases]
- (xi) Health Policy and Health Systems Research (Insurance, Financing)



The Vice President of the United Republic of Tanzania her excellency Samia Suluhu Hassan officiating the 4th MUHAS Scientific Conference at LAPF International Conference Center on June 23rd 2016 in Dar es Salaam, Tanzania.



MUHAS Top Management, Permanent Secretary Ministry of Education Science & Technology, the Guest of Honour, Chairman of MUHAS Council, MUHAS Vice Chancellor, Conference Organizing Committee Members and other participants in a group photo during the opening ceremony of the Conference.

4.15.5 Quality control & Assurance

The Directorate in collaboration with the Directorate of Quality Assurance continued to review curricula of various post graduate programs from various schools as the way of improving and strengthening the quality of teaching and learning at the University.

4.15.6 Infrastructure Development and Income Generation Activities

In an attempt to ensure Sustainability of its activities, DCEPD continued with the following strategies: -

- (i) The Kalenga House continued to provide quality and affordable short-term accommodation for various visitors and the Directorate continued to generate income for the university through lodging fees.
- (ii) The construction of the Centre for Health Professionals Education (CHPE) was in its final stages of completion. When completed, the Centre is expected to be a catalyst for CEPD activities both at University and national level.
- (iii) The Directorate in collaboration with the directorate of library services developed a research proposal and received grants amounting to GBP 50,000 (MUHAS –AURA project) for strengthening CPD related to teaching, learning and research at MUHAS

4.15.7 The 40th Dar es Salaam International Trade Fair and Exhibitions

The Directorate also participated in the 40th International Trade Fair Exhibitions from 28th June to 8th July 2016 as the way of strengthening linkages, partnerships and networks.

4.16 Directorate of Quality Assurance

4.16.1 Introduction



Dr. GH. Leyna

The Directorate of Quality Assurance was established in 2013 and has grown into a full directorate under the office of the Vice Chancellor. This positioning has enabled the directorate to work closely with both Deputy Vice Chancellors (Academic, Research and Publications; and Planning, Finance and Administration) to ensure ‘fit for purpose’ of all University activities.

The directorate has continued to learn on the dynamics of quality assurance in higher education from its collaborations with the Tanzania Commission for Universities, the Inter-University Council of East Africa and other Universities inside and outside the country.

In its initial years, the directorate has prioritized quality assurance activities pertaining to teaching/learning and has gradually moved to include research and public service in its portfolio. The directorate is challenged by limited resources to roll out its activities in full, in particular limited staffing and financial constraints. Also, community perceptions on quality assurance are still misconstrued. To address these challenges, the directorate is working closely with the Directorate of Human Resources Management and Administration to recruit more staff whenever such opportunities occur and coordinate short training of University staff in quality assurance.

4.16.2 Achievements

During the academic year 2015/16, the directorate participated in several activities.

Office space

The directorate obtained office space with a functioning air conditioning. However, this is not adequate to the proposed directorate staffing of at least five (5) staff. There is still a deficit of 3 rooms (Deputy Director’s Office, Administrator/QA officer’s office and a meeting room). In addition, the office is not yet furnished.

Recruitment

The directorate’s Deputy Director was appointed, which provided a huge push to further bolster quality assurance activities at the University. The deputy director is currently reviewing existing quality assurance frameworks for teaching/learning in the clinical settings.

Capacity building

Staff within the directorate continued to participate in National and International forums on QA such as the 4th East Africa Quality Assurance Network and the 2nd Tanzania University Quality Assurance Forum. In these meetings sessions on best practices and experiences implementation of quality assurance in Universities are often shared.

Policy development

The quality assurance policy was tabled in the Committee of Deans and Directors for discussion and approval. Comments were received and the final draft is being revised.

A team of six-senior University staff reviewed the University self-assessment report for completeness and accuracy. The review was completed and the document has been submitted to TCU for re-accreditation of the University.

A draft examination handbook was developed to guide all University assessments. The handbook aims to harmonize all assessments in the University taking into account the expansion and different modes of examination. It also accounts for modules that may be completed before the designated University examination period. The document was tabled in the Committee of Deans and Directors for approval.

Teaching and Learning

In March 2016, the directorate facilitated an external assessment for the MD and DDS programs that was conducted by the East Africa Community Partner States National Medical and Dental Practitioners Boards and Councils. The University overall received a good review. The school of Medicine and Dentistry have developed action plans to address weak areas highlighted in the report.

The directorate has initiated formatting of all undergraduate curricula to meet Tanzania Commission for Universities (TCU) requirements. The documents will be submitted to TCU upon completion before the end of the year. Course evaluation tools have been distributed to all schools for re-introduction in the 2016/17 academic year. This activity will be undertaken by all courses/modules to improve teaching/learning and to assess satisfaction of students on the teaching approaches.

Research

The directorate responded to the 2016 Human Development Innovation Fund call by submitting a proposal titled “Quality Assurance in Universities: A tool to shorten the human resources for health gap in Tanzania” under the sub theme for improved education management system to improve effective and efficient sustainable systems. Although we did not succeed, the directorate plans to continue to identify and respond to such calls whenever available to support its functions.



Links with National and International organizations

The directorate initiated contacts with Academics Without Borders (AWB), an organization that provides technical support to tertiary institutions. Initial conversations are around strengthening core QA activities with the support of an external expert to ensure fit for purpose of the QA framework that is being developed at MUHAS.

4.17 Dean of Students Office

4.17.1 Introduction:



Dr. T. Nyamuhanga,
Dean of Students

This report outlines the events and activities of the office of the Dean of Students that took place from 1st July 2015 to 30th June 2016. During the reporting period the office continued to provide various services including: health, accommodation, cafeteria, games and sports, counseling and guidance as well as overseeing the students' organization (MUHASSO).

4.17.2 Students' Affairs

Academic Activities

During the reporting period the University Academic activities for both undergraduate and Postgraduates students progressed as planned.

Orientation for first year students:

The office of Dean of Students organized a one week orientation for the new students for 2015/2016 academic year. The event took place from 2nd November, 2015 to 7th November, 2015 all activities were successfully accomplished as planned.

Guidance and Counseling Services

The guidance and counseling services continued to be offered to students. A total of 148 (92 males and 56 females) students from various schools and the Institute of Allied Health Sciences clients were counseled. Matters which were reported to the counseling unit were Academic, Social, Psychiatric, Psychosocial, Health, Financial and Spiritual.

Mentor and mentees activities performed during report were

During the reporting period, the Counseling Unit sent letters to the Deans of Schools and the Director of the IAHS reminding them to allocate students to mentors in their respective units. They were encouraged to meet regularly.



Among activities performed were:

- (i) 225 mentor and Mentee forms were collected during reporting time. We are very glad this time most of the academic staff responded on filling in the forms. We are in the process of evaluating them, to know what the most frequent issues are reported.
- (ii) Revised Mentorships forms were sent again to all Deans and Directors, year conveners, Head of departments, Director of Institute Allied Health sciences through MUHAS webmaster, MUHAS website and they were also emailed to all Head of Departments.
- (iii) List of all mentors and mentees telephone numbers were included to facilitate communication.
- (iv) Letters to all Dean of Schools were sent to inform them on the process of collecting mentorship forms at the end of each semester.
- (v) All students were strongly advised to visit their mentors at least three times per semester; this information was posted in MUHAS website and all notes boards and

Support to Students with disabilities:

During the reporting period (2015/2016 financial year), the office of the Dean of students compiled information regarding students with special needs. Overall, 16 students were identified to have special needs related to Hearing Disability (45); Diabetes (2); Visual Impairment (1); Mobility Disability (4); Asthma (1); Heart Problem (2); Epilepsy (1) and Back Bone Problems (1).

Accordingly, the needed support was identified and a request for support was submitted to the Ministry of Education, Science and Technology. The ministry allocated Tzs.3, 940,454.00 to be used to purchase the needed equipment for this group.

4.17.4 Accommodation Service To Students:

Academic year 2014/2015 AND 2015/2016:

For the academic year 2014/2015 and 2015/2016 one (1) student has not cleared his accommodation fee as shown hereunder:

BLOCK E (POSTGRADUATE)								
S/N	NAMES	REG.NO	SEX	COURSE& YEAR	ROOM. NO.	PAYABLE in USD	PAID	BALANCE
1.	ALFRED LUKOYA ALUMYO	HD/MUH/S.127/14	M	OB/GY	19	450	0	450
Total								450 USD

A letter was written to request the Dean, School of Medicine to withhold the examination results of this student until he clears his dues.

Payment of rent:

During the period under review, One hundred fifteen (115) students have not cleared their outstanding rental fees. The letters have been written to each individual and to their respective schools as a last reminder before they are evicted from the rooms or withholding their examination results.

Alternative accommodation:

During the reporting period the SSB office in collaboration with students' government explored availability of affordable and secure hostels around the University and advised students who missed University accommodation.

4.17.4 Hostel Maintenances:

During the period under review, all critical issues that needed immediate attention by the Directorate of Estates in collaboration with MUHASSO and SSB office for both Chole Road and Muhimbili hostels were repaired.

Fumigation exercise:

During the reporting period the University Management facilitated fumigation to all rooms noted to have outbreak of bedbugs at Chole and Muhimbili Campus hostels in April and June, 2016. In order to eliminate bedbugs and mosquitoes, the University Management planned to fumigate all hostels during long vacation.



Gardening and Outside Cleanliness Activities

During the reporting period the gardening and cleanliness of areas surrounding hostels progressed well. Several meetings were held with the main supervisors of gardens and outside cleanliness to ensure premises are cleaned and maintained as per contractual agreement.

Substantial improvements on gardens have been noted whereby flowers have been planted in various places that include students' halls of residence, cafeteria, library, administration block, lecture theaters, conference hall and others. Old flowers were uprooted and replaced by new ones; also weeding was done to let the flowers grow healthy and fast. In general the environment was clean and attractive during the review period.

4.17.5 Cafeteria Services

During the reporting period the Runners Collection Company won the tender of providing catering services for both Chole Road and Muhimbili hostels. SSB and MUHASSO work closely to ensure that all students' cafeteria services are well monitored and supervised through inspection conducted on daily basis. Cafeteria services included general cleanliness of the floor, kitchen, utensils and food preparatory places, food quality and quantity, variety of food and price control.

Furthermore inspections were conducted on Wednesdays which involved Cafeteria Manager, MUHASSO leaders, representatives from Directorate of Estates, PMU and Dean of Students' Office. The observations noted during evaluations were discussed and reports were prepared and submitted to management for noting and interventions where necessary.

In addition to this, the University Management had decided to form another Committee which was chaired by the DVC-PFA to monitor and control the quality of the students catering services.

4.17.6 Health Services

Health Insurance

A total of 1,555 MUHAS students paid for annual NHIF premiums in the academic year 2015/2016 and their membership cards were issued. Moreover, a total of 909 students possessed valid NHIF or other medical insurance membership cards. The SSB Office collected all the cards from NHIF office. The Dean of Students through SSB organized a strategic meeting with NHIF Ilala zone officials, MNH-EMD, Social Welfare Department and MUHASSO at the end of June, 2016. The meeting aimed at addressing all challenges faced by MUHAS NHIF beneficiaries in the ending of each academic year. The meeting spelt out strategies that shall guide on how to access medical services to MUHAS students. This was attributed by the fact that the NHIF membership for all MUHAS students starts on 31st October, 2016 the time that students are reporting for new academic year as per almanac. The NHIF Ilala Region Chief Manager accepted and promised to facilitate the meeting as requested.

Vaccination against Hepatitis B

(i) Phase One to Three Vaccinations against Hepatitis B to both Students and Staff:

During the reporting period a total of 975 out of 1,201 MUHAS staff and students received three doses of vaccination as required. Accordingly, the last dose in phase three was administered by the Ocean Road Cancer Institute (ORCI) vaccination team on 11th, 12th, 18th and 19th June, 2016.

NOTED that about 226 out of 1,201 staff and students received the first dose of vaccination but did not report for the second dose. This group should seek to start the dose from Phase one.

Furthermore, a big number were not vaccinated at all. Thus, preparations are underway to ensure that another batch of vaccination to both staff and students is implemented in July, 2016.

Health Inspection: Visit of Ward and District Health Officers to MUHAS

On 20th November 2015, Health Officers of Upanga West ward and Ilala District visited MUHAS. They inspected the University premises especially areas that students use for their daily activities.

4.17.7 Students' Leadership and Governance

MUHASSO Government continued with their activities as required during the academic year. MUHASSO Electoral Committee (MEC) conducted elections of the Chairpersons and Secretaries of all schools in April, 2016. Hostel Leaders elections were held in the first week of May, 2016. Elections of the Vice President and President were held on 18th May, 2016. MEC declared Mr. Bujiba Marco M (**MD 4**), with reg.no: 2012-04-04322 as MUHASSO President and Mr. Fussy Kennedy S. (**BMLS 2**) with reg.no: 2014-04-07340 as MUHASSO Vice President and were sworn into office on 13th June 2016. Thereafter, the new MUHASSO government with a total of 12 Ministries and 34 Members were sworn to take office.

4.17.8 Security Issues at the Hostels

The security matters at MUHAS were supervised by MUHAS Auxiliary Police, during the year.

Contracted Company for security in Muhimbili Students Hostel:

Diamond Security Company was contracted to implement security in the hostels. Five (5) staffs from Diamond Security Company were located at the block entrances as follows: Pangani (1), Ruvu (1), Lukuledi (1) and Kagera (2).



In this regard, the side entrance doors were closed; consequently no theft incidences were reported since the company was contracted to the end of the reporting period.

In order to curb theft of students' properties in the halls of residence, students were cautioned not to exchange keys for whatever reasons, to report any suspects immediately to the security guards or Warden/Janitors. Nevertheless, the roommates were directed to monitor all visitors getting in the room as well as taking care of their properties.

4.17.9 Special Events and Recreational Activities

(a). Sports activities

(i) First year students' Orientation

The office of the Dean of Students organized a one week orientation for the first year Undergraduate and Postgraduate students for the academic year 2015/2016.

(ii) KIU Inter-University League:

During the period under review there was a friendly match between MUHAS football club versus Kampala International University (KIU) on Wednesday 8th June, 2016 at MUHAS playground. This was very interesting match as students were actively engaged into motivating players and consequently the match ended by 1-1 score. This was observed as a good step towards fueling plans to improve games/sports at MUHAS.

(iii) Encouraging Sports Spirit at MUHAS:

During the period under review the SSB office supervised all students' sports match and competitions. The SSB office issues sports gear for football, volleyball, basketball and netball to MUHASO Minister for sports who took care of them. Also, students participated in sports activities for their fitness and physical exercises in the evening and weekends.

(iv) Participation in Tanzania Universities Sports Association (TUSA) meetings:

During the period under review the SSB Games/Sports coordinator requested for financial support from the University Management to attend TUSA meetings in the coming academic year.

(b) Recreational Activities

(i) Students Talent Show:

MUHASSO government in collaboration with TAMSA held student's talent show at

Chole Road Hostels on 19.03.2016.

(iii) LAPF Seminar

On 18th May 2016 and on 8th June 2016, the final year students attended a seminar conducted by LAPF at MUHAS whose theme was benefits that one may get if he/ she joins the pension fund.

(iv) GEPF Seminar

On 15th June 2016, finalist students attended a seminar conducted by GEPF, whose theme was issues regarding pension fund.

4.17.11 Staff Matters:

During the reporting period a total of 19 DOSO staff continued to provide services to students.

2.1 Staff Recruitment

Name	Position/Rank	Dept.	Date
1. Mr. Fidelis S. Sanja	Janitor II	DOS	March, 2016
2. Mr. Victor L. Ngaile	Janitor II	DOS	March, 2016

2.2 Staff Appointment.

Name	Position/Rank	Date
Dr. T.Nyamhanga	Associate Dean of Students	November, 2015
Dr. T.Nyamhanga	Acting Dean of Students	April 2016

2.3 Staff Resignation

Name	Position/Rank	Date
Dr. D. C. V. Kakoko	Dean of Students	April 2016

2.4 Staff Development

Name	Position/Rank	Dept.	Course
1. Mr. Ireneus Rwiza	Senior Warden	DOS	Master of Leadership and Management
2. Ms. Gladys Willy	Senior Warden	DOS	Master of Public Administration
3. Mr. Titus Mhokole	Senior Janitor II	DOS	Master of Social Work
4. Ms. Rehema Mwaituka	Warden	DOS	Master of Social Work
5. Ms. Juliana Masatu	Janitor II	DOS	Master of Social Work



2.5 Staff Promotion

Name	Previous position	Current position.	Date
1. Ms. Ruth Kitundu	Senior Administrative Officer I	Principal Administrative Officer II	1st April, 2016
2. Vumilia C. Mushi	Senior Warden II	Senior Warden I	1st April, 2016
3. Titus C. Mhokole	Senior Janitor II	Senior Janitor I	1st April, 2016
4. Jitikayoa M. Ndunguru	Janitor II	Janitor I	1st April, 2016

2.6 Staff Transfer

Name	Position/Rank	From	To
1. Mr. Joseph A. Mongella	Driver	DOS	Transport Department
2. Mr. Patrick Mkwinda	Driver	School of Nursing	DOS

2.7 Staff Retirement

Name	Position/Rank	From
1. Ms. Grace Mbwana	Assistant Accountant	May, 2016

4.18 Directorate of Estates

4.18.1 Introduction



The Directorate of Estates has the function of maintaining grounds i.e. soft and hard landscaping, managing both outsourced and in-house minor and major rehabilitation as well as supervising new construction projects. As a technical directorate, it is responsible for supporting core institutional functions by providing and ensuring that the teaching, research and consultancy services are rendered within a safe environment at the University.

Mr. Lugano E. Kyejo

4.18.2 Work Projects

Construction of CHPE Building

During the reporting period the *Haile Debas* Center for health Professions Education (CHPE) building was practically completed and the handover ceremony was planned for 26th August, 2016.



The Haile Debas Building after Practical Completion

Renovation of Third floor of the Dental Building

During the reporting period the renovation work of the Dental Clinic in the school of Dentistry was carried out by the contractor M/S Kimberlite Investments Limited, at a contract sum of TZS 31,612,640. The work was successfully completed and handover was scheduled for September, 2016.



Renovation of Private Dental Clinic at the School of Dentistry

The Directorate supervised the project for the renovation of the private dental clinic at the School of Dentistry. The project's contract sum was TZS 49, 718,946 VAT Inclusive, and was awarded to M/S Kimberlite Investments Limited. This project was successfully completed and handed over in February, 2016.

Construction of the Police Post at Mloganzila

During the reporting period the contractor, M/S PIA COMPANY LTD was awarded the contract for the construction of the Police post at a contract sum of TZS 57,650,552/-. The construction was practically completed in October 2015. During the pre handover meeting, end users (Tanzanian police force) suggested some minor modifications that included the introduction of armory room, drawers and the cabinets in the reception counter. These additional works were completed in June 2016, and Final hand over was scheduled for July 2016.

Renovation of MPL Ground Floor Toilet

The Directorate of Estates supervised the project for renovating the MPL ground floor toilet that was awarded to M/S. Kiareni Investments Company Limited at a contract sum of TZS 9,665,250 VAT Inclusive during the reporting period. The work was successfully completed and handed over on 11th January 2016.

Rehabilitation of Electrical network at Chole and Main Campus Hostels

During the reporting period, the Directorate supervised M/S Demax Company Limited that was awarded a tender for rehabilitation of electrical fittings and wiring of the system at both Chole and the main campuses. The project whose contract sum was 12,180,000 VAT inclusive was successfully completed and handed over in December 2016.

Painting of Lecture Halls

The Directorate supervised the project for painting lecture halls 2, 3, 4 and 5 during the reporting period. This project was awarded to M/S Kimberlite Investments Company Limited on the 13th October 2015 at a contract sum of 9,683,080 VAT inclusive. The contract also involved repairing of wooden seats and tables by replacing the defective ones and applying a new varnish on the wooden surfaces. The work was successfully completed on the 3rd November 2015.

Repairing of Pot Holes in the Tarmac Road from MTC Gate to the Estates Directorate.

During the reporting period, the Directorate supervised the project for repairing of pot holes in the tarmac road from MTC gate to the estates directorate. This contract was worth a sum of 14,644,980 VAT inclusive, and was awarded to M/S Ajax Associates Limited on the 23rd November 2015. The work was successfully completed and handed over on the 3rd December 2015.

Plumbing Repairs in Student Hostels

During the reporting period, M/S Kiareni Investments was awarded a contract worth TZS 17,368,921 to change faulty plumbing parts and change curtains in the student hostels at Chole Road and the main campuses. The work was successfully completed and handed over in January 2016.

Installing Ramps in Various Areas at MUHAS Campus

During the reporting period, the University awarded the contract for constructing ramps for disabled people in various buildings at MUHAS campus. The works contract sum was TZS 19,804,176 and was awarded to M/S PIA Company Limited. The work was successfully completed and handed over in September 2015.

4.18.3 Service Projects

In its efforts to improve environmental cleanliness, the Directorate has been supervising various services providers doing in grounds maintenance, cleaning and garbage collection. During the reporting period the following were implemented:-



Ramps construction at at Offices and Hostel Buildings entrances

Cleanliness in the Students Hostels –Chole, Bagamoyo Training Centre and the School of

Dentistry

During the reporting period, the M/S Kishengweni Enterprises cleaning services inside and outside of the buildings as well as maintaining of gardens at Chole Road student hostels at a contract sum of 48,480,000 per annum VAT Inclusive. The Company also cleaned inside and outside of the building facilities as well as maintaining of grounds and gardens at a contract sum of TZS 39,240,000 per annum VAT inclusive. In addition the company cleaned inside and outside of the pharmacy building at a contract sum of TZS 33,600,000 per annum, VAT inclusive.

Grounds Maintenance and Cleanliness at Muhimbili Main Campus

During the reporting period, M/S Care Sanitation and Suppliers Limited provided cleaning services which included footpaths and roads as well as maintenance of gardens around Muhimbili main campu at a contract sum of TZS 88,200,000 per annum VAT inclusive.

Cleaning of the Sewerage System

To combat outbreak water borne diseases, particularly during rainy seasons, the University engaged a contractor M/S Mtanzania Limited at a contact sum of TZS 12,174,000 VAT inclusive to clean the sewerage system at the main campus. The work whose scope was to clean the sewerage system from MUHAS main Campus to the DAWASCO main pumping station was successfully done and handed over on 21st May 2016.



Sewerage Cleaning Services Provider at work

Enhancing Security in the Student's Halls of Residence

In an effort to combat increasing incidences of theft in various areas of the University and notably in the student hostels the University hired a security company to provide security services at entrances into all students hostels from 6 am in the morning to 6 pm in the evening. This task started from the 1st February 2016.

Similarly bills of quantities for constructing a security post on the year gate leading to MNH were prepared. The Contractor to undertake the construction of the security post will be awarded a contract during the first half of 2016/2017.

4.19 Directorate of Human Resources Management and Administration

4.19.1 Introduction



Mr. A. Nnko

The Directorate of Human Resource Management and Administration (DHRMA) is mandated to execute various Human Resource Functions for the University. Among others, the Directorate has to ensure that the University Human Resource needs have been fulfilled. The Directorate promotes the University performance through effective and efficient administration of the Human resource functions. It has the duty to maintain a working environment that encourages employees to achieve the University goals as well as the individual professional goals.

The Directorate also has a role of planning, recruiting, developing and managing human resource for optimal University performance and implementation of HR- actions on staff policies, rules and regulations. The Directorate of Human Resource Management and Administration (DHRMA) is comprised of three departments as listed below: -

- i) Department of Human Resource Planning and Development
- ii) Department of Human Resource Salaries and Benefits
- iii) Department of General Administration Services

4.19.3 Activities and Achievements

Staff Establishment and Recruitment.

During the reporting period the Directorate recruited 87 new staff for the whole University 57 being Academic staff and 30 Administrative and Technical staff (table 42).

The new recruitment increased the total number of staff in the University from 569 to 656 as at 30th June, 2016. Among these, 307 are academic staff (202 male and 105 female) and 349 are Administrative and Technical Staff (199 male and 150 female) table 43

Personal Emoluments Budget for MUHAS Academic Medical Centre (MAMC)

During the reporting period the Directorate prepared and submitted the PE budget for 928 new staff for MAMC as a special as a special Budget 2016/2017. The budget was processed from the level of the University to Ministry of Education, Science and Technology (MEST), Ministry of Finance and Planning (MoFP) and President's Office –Public Service Management & Good Government (PO-PSM&GG) through HCMIS. Out of the 928 slots, 470 were slots for new employees and 458 slots were for staff to be obtained through transfers of staff who

are already employed in the public service. The job codes for all cadres listed in the MAMC Scheme of service were prepared and subsequently approved by PO-PSM&GG.

4.19.4 Scheme of Service for Academic Staff

The Harmonized Scheme of Service for Academic staff which had been approved by the Treasury Register in December, 2014 was implemented effective in July 2015. However, Salary Slotting which had to take effect from 1st July, 2015 was implemented from January, 2016. The salary arrears for the period between July and December, 2015 were and submitted to the appropriate authority for payment.

4.19.5 Scheme of Service for MAMC

The scheme of service for MAMC was processed through the respective University organs and later was submitted to Treasury Registrar for final approval. The scheme was finally approved by Treasury Registrar (TR) and the effective date of implementation was 1st July, 2016.

4.19.6 Organizational Structure For MAMC

The MAMC organizational structure was prepared and processed through the University Machinery up to the level of the University Council after stakeholder's inputs. The final organogram would be prepared by a consultant as directed by the Council during its 39th Meeting held on 6th May, 2016.

4.19.7 Clients Service Charter

During the period under review the Clients Service Charter was developed to describe the level, quality and standard of services a customer can expect from Muhimbili University of Health and Allied Sciences (MUHAS). The preparation of the charter which was inclusive and participatory is an indication of the MUHAS firm commitment to provision of services as a Public Institution within the context of our Vision, Mission and Core Values. The Client Service Charter was approved by the Council during its 39th meeting held on 6th May, 2016 for implementation.

4.19.8 Code of Ethics and Conduct for Staff

During the reporting period the Code of Ethics and Conduct for MUHAS Staff was developed so as to provide guidance to MUHAS staff towards performance of their duties in an ethical and professional manner while observing compliance to rules and regulations. It enables staff to clearly understand what is required of them in terms of ethical conduct and standards of performance and behavior acceptable in the public service. Besides of stipulating clearly the

standard of behavior, the code also enhances ethical performance in order to regain confidence as an employee of MUHAS. The Code of Ethics and Conduct was approved by the Council during its 39th meeting held on 6th May, 2016 for implementation.

4.19.9 Integrity Pledges by Public Servants

During reporting period, MUHAS Academic, Administrative and Technical staff signed integrity pledges which were administrated by the Vice Chancellor as the Chief Executive of the University.

4.19.10 Staff Training and Development

During the period under review the Directorate continued to ensure that competent, functional, relevant and adequate human resource with appropriate skill - mix and competences are in place. In recognition of the importance staff training, the University continued to train its employees both locally and oversee encouraged and supported individual efforts for continuing professional development. In this respect a number of employees were trained, others attended Form four, Diploma, Undergraduate and Postgraduate courses at higher learning institutions. Table 42 describes the status of staff training as at 30th June, 2016.

Table 40: Status of staff on training as at during 2015/16.

Type of sstaff	Status	PhD	Master	Post Doc, MSc. Super Specialization	Total
Academic Staff	Staff on Training	M =18	M = 4	F= 2	
		F =9	F = 8	M=2	
	Total	27	12	4	43
	Staff completed training	M = 1	M = 5	M = 2	
		F = 2	F = 1	F = 0	
	Total	3	6	2	11
Adm and Technical Staff	Staff on Training	Master	Degree	Diploma	
		M= 6	M = 4	M = 1	
		F = 6	F = 6	F = 1	
	Total	12	10	2	24
	Staff completed training	M = 1	M = 1	M = 0	4
		F = 2	F = 1	F = 1	
	Total	3	2	1	6

Many other staff attended short courses / professional trainings locally and internationally during the reporting period. Such trainings included, Customer Care, Human Resource Audit, Accounting and Research, The Environment of work Organization, How to conduct mediation and Arbitration, Electronic Records Management and e - Government training.

4.19.11 Management and Leadership Trainings

Corporate Governance Training for Council Members

During the reporting period, DHRMA organized a Corporate Governance Training for MUHAS Council Members. A total of seventeen (17) Council Members were invited to attend the training for two (2) days i.e 1st & 2nd June, 2016 but only 12 managed to attended the training. The training was facilitated by Tanzania Institute of Directors.

OPRAS Training for Deans, Directors, Head of Departments and Administrators

During the period under review, OPRAS training for Deans, Directors, Heads of Departments and Administrator was organized by Directorate of Human Resource Management and Administration in the MPL Board room. The training was held on 15th, 16th, and 17th June, 2016 and it was facilitated by Mzumbe University.

Induction and Leadership Training for Newly Appointed University Leaders

During the reporting period, the DHRMA organized a Leadership and Induction training for newly appointed Deans, Directors & Heads of Departments from 17th -19th March 2016. A total of Eighty-Eight (88) University Leaders attended the course.

Induction for Newly Recruited Staff

During the reporting period, Induction training for newly employed staff was conducted. A total of Fifty-six (56) staff were trained for three (3) days i.e 12th, 13th, & 15th October, 2015 by Tanzania Public Service College and the training was successful.

4.19.12 Promotions

During the reporting period, Eighty-Six (86) staff were promoted. Among these Academic staff were Twenty (20) while Administrative and Technical Staff were sixty-six (66). The promotions were subject to approval by PO-PSM&GG through HCMIS.

Table 41: Staff Promotions during 2015-2016

Year	Academic Staff	Administrative and Technical Staff	Total
2014/2015	20	6	26
2015/2016	20	66	86



4.19.13. Retirements

Retirement and End of Contract for Academic staff

During the reporting period one (1) Academic staff retired due to compulsory retirement age while post retirement contracts for 9 retired faculty ended and the government did not approve their extension due to age limit.

Retirement of Administrative staff

During the reporting period a total of 7 Administrative staff retired due to compulsory age of retirement.

Post Retirement Contracts

Post Retirement contracts for about 31 Staff were approved by the University Council and subsequently by President's Office –Public Service Management and Good Governance which bring the total of 57 faculty who are on post retirement contracts as of June 30th, 2016.

4.19.14 Staff Turnover and Retention.

In the reporting period, a total number of 5 staff left employment because of resignation. The attrition rate was only 0.76 % while the retention reached 99.24 %

4.19.15 Staff Disciplinary Issues.

One staff who was under suspension on criminal offences was reinstated back to the University by Kisumu Resident Magistrates Court to continue with his duties following Judgment by the Court that the due court process did not prove him guilty of the offences he had been alleged to commit.

4.19.16 Staffing in the Directorate of Human Resource Management and Administration.

The Directorate of HR Management and Administration is still understaffed. According to the establishment, the Directorate needs a minimum of 23 staff but still there is deficit of 9 staff as shown in the table 38.

Table 42: Staff Recruitments in the Directorate

Establishment by Post				
A.	The office of the Director			
	Post	Required Number	Actual Number available	Deficit
1	Director, of HR Management and Administration	1	1	0
2	Office MGT Secretary	1	1	0
3	Records Management Assistant	2	1	1
4	Office Assistant	1	1	0
5	Driver	2	2	0
Total I		7	6	1
B	Department of Human Resource Planning and Development			
7	Head of Department	1	1	0
8	Senior Human Resource Officer II	1	0	1
9	Human Resources Officer I	1	0	1
10	Human Resource Officer II	2	2	0
Total II		5	3	2
C	Department of Human Resource Salaries and Benefits			
11	Head of Department	1	1	0
12	Senior Human Resource Officer II	1	0	1
13	Human Resource Officer I	2	1	1
14	Administrative Officer II	2	1	1
Total III		6	3	3
D	Department of General Administration Services			
15	Head of Department	1	1	0
16	Senior Administrative Officer II	1	0	1
17	Administrative Officer I	2	1	1
18	Administrative Officer II	1	0	1
Total IV		5	2	3
GRAND TOTAL		23	14	9

4.20 External Relations Unit



Dr. B. Balandya

The unit received and processed applications for elective period of study from different departments within the Schools of Medicine, Pharmacy, Dentistry, Nursing; and the Institute of Traditional Medicine. The Unit received, registered and allocated a total of 94 elective and 11 exchange study students at MUHAS in the reporting year. The number of elective and exchange students has remained to be the same so far as compared to last year.

4.20.1 Elective Study Activities

Most elective study students arrange for their electives individually, by applying to different teaching hospitals and or universities for clinical rotations. Most of the students who apply for electives at MUHAS are from Europe and Germany. WORK THE WORLD and WORLD UNITE are still coordinating elective study student applications and placements.

Most universities from the USA, Canada, Norway, Sweden and some other countries have a formal arrangement with MUHAS and their elective was centrally coordinated with more or less fixed time to start and specific places where they can do their electives.

a). Institutionally Arranged/ Coordinated Elective Study

A number of universities/institutions have an agreement with MUHAS regarding elective studies. Their coordinators of elective studies sent applications of students to MUHAS, and the feedback was to the coordinator. A few other universities that did not have an agreement with MUHAS also used the coordinators to apply for elective studies for their students:-

- (i) A group of 7 students from the Umea University and Uppsala University, Sweden did a one month clinical nursing rotation at the Buguruni Health centre under the agreement with the School of Nursing. Another of group of 5 students from Bergen University, Norway also came under an agreement with the school of Nursing.
- (ii) Through an agreement with Pennsylvania State University and the Olf Palme Exchange, the school of Nursing received 8 and 2 students respectively.
- (iii) The school of nursing also has an agreement with the HINT-NAMSOS – NORD TRONDELAG for elective placements. During the year the School received four students under this agreement.
- (iv) The Paediatrics department received 5 students under an exchange program with Mie University in Japan.
- (v) The Dartmouth University, USA sent two (2) students to the school of medicine that rotated in the Internal medicine department.

- (vi) MUHAS also received 2 students under the IAESTE program which is coordinated by the Open University of Dar es salaam. One student rotated in the school of Nursing, and the other rotated in different departments in the School of Medicine.
- (vii) The school of Medicine also received two (2) students from the Norwegian University of Science and Technology under an agreement with the school of Medicine.

b). Student Initiated Elective Study Arrangement

A number of students applied on their own for the elective studies after they saw the information in the MUHAS website or after they heard about it from others who had been here before. Their universities were then be involved during the application process by filling the last part of the application forms for each student and writing a recommendation letter.

At times the students apply directly to the school/department of their choice, and they are then advised to bring their applications to the foreign relations unit.

In recent years, the unit has been receiving Tanzanian students who are doing their medical studies in China. These students have been asking for a reduction in the tuition fees. The proposal for fees reduction for this group of students was been submitted to the management for approval.

c). Number of Elective Study Students

In the reporting period, the unit received a total of 94 elective and 11 exchange study students. Some of these students rotated in just one department, but others rotated in more than one department (in the school of Medicine)

The school of nursing received and supervised the largest number of students (48) followed by the school of Medicine (table 45). Within the school of medicine, most students rotated in surgery (12), obstetrics and gynecology (9), Paediatrics and child health (9) and internal medicine (8) departments (see table 43)



Ms. Ashura Kiliza, a Tanzanian citizen studying in China, doing her elective rotation in the ENT department.

Table 43: Elective and Exchange Students Registered by ERU During the Year

Department / School	Elective	Exchange	Total
Internal Medicine.	3	5	8
Paediatrics & Child Health	3	6	9
Surgery	11	1	12
Obstetrics & Gynaecology	5	4	9
Psychiatry.	1	0	1
Radiology.	5	0	5
Orthopaedics & Trauma	3	0	3
Emergency Medicine	7	0	7
ENT	3	0	3
Neurology	2	0	2
Otorhinolaryngology	2	0	2
Nephrology	0	1	1
Urology	0	1	1
School of Dentistry	6	0	6
School of Nursing	47	1	48
Parasitology	1	0	1
Total	99	19	118

NB: Some of students in the school of Medicine rotated in more than one department.

4.20.2 Student Exchange Activities

The Unit had the opportunity to meet and discuss with coordinators of existing Elective Study Student Exchange Agreements and some of them discussed on the possibility of an agreement for Exchange arrangements. These included the coordinators of Bergen University, Norway and Ulm University, Germany. Other communications with coordinators was done through emails and at times phone conversations.

The ongoing collaborative research and student exchange agreements include the MUHAS and North South - South Higher Education Network Programme (School of Public Health and Social Sciences), UMCG/FMS – Groningen University, Netherlands (School of Medicine), HAN University of Applied Sciences (School of Nursing), The St. Radboud University College Holland (Community Medicine), UCSF (DCEPD), Mie University, Japan (Paediatrics and Child Health), University Medical Centre, The Netherlands (School of Medicine), The Linneus Palme student exchange program (MUHAS), The University College, London (School of Medicine).

4.20.3 Logistics Support

Foreign students and staff coming to Tanzania for studies or research are by regulation required to have a Resident Permit Class C. Thus the Unit processed and submitted applications for Resident Permit Class C for elective, occasional, foreign degree and diploma registered students and staff on exchange at MUHAS. During the last two months, there were some changes in the processing of these documents from resident permit class C, to visitor's pass and back to resident permit class C. But of late, students are required to apply for a business visa at the airport. The office is still sorting out this problem with the immigration office.

4.20.4 Income from Elective Studies

All MUHAS registered foreign students paid registration fees amounting to US \$ 100. Foreign elective study students paid a tuition fee amounting to 90 US\$ per week and research elective study students paid supervision fees amounting to US\$ 35 per week. Some of the students under formal exchange arrangements were exempted registration and/or tuition/ research supervision fees depending on the agreement reached in the Memorandum of Understanding between the two universities. Department received 70% of their total and the respective school receives 20%, and the remaining 10% is retained as institutional capacity building contribution. The unit has asked for a review of the funds distribution to include the external relations unit as seen in the table below:

	PREVIOUSLY	PROPOSED
University	10%	15%
School	20%	10%
Departments	70%	60%
External Relations Unit	0%	15%

This proposition is still awaiting approval from the university management.

In the current financial year, the unit generated 7,100 USD and TZS 1,517,625 as registration fees, 26,415 USD, 20,160 NOK and TZS 12,062,695 as tuition fees, and 175 USD as supervision fees.

4.20.5 Other Developments

- The External Relations Unit received one Staff Gladness E. Malimi (Public Relations Officer) who reported for duty on 22nd February 2016.
- The head of External Relations Unit started a one-year course as part of Dialogue on Innovative Higher Education Strategies (DIES) on "Management of Internationalization"; a course prepared and sponsored by the German Academic Exchange Services (DAAD) and German Rectors Conference (HRK). During the reporting period, she attended a 2 weeks' workshop; to be followed by online studies. There will be two other contact phases, in October 2016 and April 2017.

4.21 Directorate of Finance

4.21.1 Introduction



Mr. Titus Tibenda

Directorate of Finance is one of the thirteen directorates of the Muhimbili University of Health and Allied Sciences (MUHAS). The Directorate is responsible with financial planning, directing and controlling of the financial accounting operations of the University. The directorate is also responsible for coordinating the preparation of budgets and provides fundamental financial analysis and feedback on the budget performance and assessment of the financial situation of the University.

The Directorate uses integrated financial management system, Epicor version 9.2, in its financial accounting operation

4.21.2 Audited Accounts

The directorate has started preparation of the Financial Statements for the year 2015/2016 for statutory audit. MUHAS adopted International Public Sector Accounting Standards (IPSAS) in the year 2014/2015, migrating from International Financial Reporting Standards (IFRS). The audit for the year is expected to start before the end of September 2016. MUHAS statutory auditor is the Controller and Auditor General (CAG) who is currently represented by M/S KLM Consultants. Accounts for the following projects were also prepared and audited in the reporting period:

Sn	Name of Project	Auditor
1	Sida Programe	KLM
2	Share IT Project	PWC
3	NBS Project	KLM
4	TAPP Project	KLM
5	Norhed - Norad Project	KLM



4.21.3 Trainings, Seminars, Workshops and Conferences

In the year under review Directorate organized IPSAS training for key accounting staff and internal auditors. The training provided detailed analysis of various IPSAS functions applicable to the University. The objective was to build capacity to Finance staff in implementation of the stands. Some staff were supported to attend seminars and workshops on Public Procurement Act and Regulations. The Directorate also organized EPICOR customized training for users in various modules of the system. The purpose was to increase proficiency and competency in the use of the system.

Other specific seminar and workshops attended by various staff of the Directorate included:

- (i) Induction and leadership workshop for MUHAS leaders in March 2016
- (ii) The head of departments attended training on Open Performance Review and Appraisal Systems (OPRAS) in June, 2016

4.21.4 Temporary Employees

The Directorate is facing a near crisis shortage of staff. In order to temporarily reduce the shortage five (5) temporary employees were hired and assigned to various departments. Working with the Directorate of Human Resources Management and Administration the directorate continued to request employment permits from the Government

Achievements

- i. All staff of the Directorate set objectives and targets of performance and evaluated through OPRAS.
- ii. Reduction of turn-around time in preparation and execution of University payments. In most cases now turn-around time is about three (3) days
- iii. Increased proficiency in the use of EPICOR, thus reduced posting errors
- iv. Timely issue of receipts to students during registration for the year 2015/16
- v. Timely submission of annual and bi annual tax returns and payments
- vi. Timely handling of student issues and complaints
- vii. Cleared backlog in NHIF forms processing at the School of Dentistry
- viii. Bank reconciliations statements for the University and projects account were completed on time
- ix. Increased revenue collection at Dental Clinic
- x. Revenue collection system at Dental Clinic improved from manual to electronic

4.21.5 Challenges

The following challenges were experienced in the reporting year.

- (i) Inadequate funding of the University budget
- (ii) Delay in payment of tuition fees by Higher Education Students Loans Board.
- (iii) Inadequate staff in terms of number and qualifications.
- (iv) Inadequate office space
- (v) Low level of knowledge in application of EPICOR and other accounting packages
e.g. excel.
- (vi) Unstable internet connection and EPICOR connectivity.
- (vii) Frequent power interruptions



4.21.3 Audited Financial Statement for 2015/2016

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
REPORT OF THE COUNCIL AND FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH JUNE 2016

STATEMENT OF FINANCIAL POSITION AS AT 30TH JUNE 2016

ASSETS	NOTES	30.06.2016 TZS	30.06.2015 TZS
NON-CURRENT ASSETS			
Property plant and equipment	4	73,102,326,807	74,086,618,582
Epicor accounting software	5	313,480	313,480
Capital works in progress	6	61,187,034,970	45,690,561,502
Total		134,289,675,257	119,777,493,564
Current Assets			
Inventories	7	110,975,033	16,452,600
Trade and other receivables	8	4,931,060,549	4,879,371,865
Investments	9	3,022,693,046	4,111,954,427
Cash and cash equivalents	10	20,203,637,934	10,070,768,326
		28,268,366,562	19,078,547,218
TOTAL ASSETS		162,558,041,819	138,856,040,782
EQUITY AND LIABILITIES			
Equity			
Capital fund	11	29,029,722,438	29,029,722,438
Revaluation reserves	12	55,669,886,352	55,669,886,352
Accumulated surplus/ (Deficit)	13	(6,872,505,738)	43,992,143,949
Total Equity		77,827,103,052	128,691,752,739
LIABILITIES			
Non-Current Liabilities			
Capital grant	14	71,494,755,149	5,820,364,781
Current Liabilities			
Trade and other payables	15	13,227,987,108	4,335,726,752
Other short term liabilities	16	8,196,510	8,196,510
		13,236,183,618	4,343,923,262
TOTAL EQUITY AND LIABILITIES		162,558,041,819	138,856,040,782

The accounting policies and the notes on page 25 to 43 form an integral part of these financial statements

CHAIRPERSON *M. M. M. M. M.* COUNCIL MEMBER *S. M. S. M. S.*
DATE: 28/12/2016 DATE: 28/12/2016

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
REPORT OF THE COUNCIL AND FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH JUNE 2016

STATEMENT OF FINANCIAL PERFORMANCE FOR THE YEAR ENDED 30TH JUNE 2016

	NOTES	30.06.2016 TZS	30.06.2015 TZS
REVENUE FROM EXCHANGE TRANSACTIONS			
Fees and charges	17	6,961,346,481	5,686,611,086
Rental Income	18	240,878,000	135,861,788
Interest Income	19	395,642,123	265,448,613
Sundry income	20	2,485,103,284	1,396,309,060
		<u>10,082,969,888</u>	<u>7,484,230,547</u>
REVENUE FROM NON - EXCHANGE TRANSACTIONS			
Exchequers/transfers/subsidies from Government	21	22,396,602,263	62,983,015,660
Donor Research Grants	22	15,492,575,802	14,800,576,623
Project Income	23	953,494,103	1,160,048,061
		<u>38,842,672,168</u>	<u>78,943,640,344</u>
TOTAL REVENUE		<u>48,925,642,056</u>	<u>86,427,870,891</u>
EXPENDITURES			
Academic expenses	24	15,624,130,547	15,182,746,092
Staff emoluments	25	23,176,290,089	15,689,615,198
Administrative expenses	26	8,320,833,638	5,729,783,661
Depreciation and amortization	27	1,710,502,946	1,629,754,738
		<u>48,831,757,220</u>	<u>38,231,899,689</u>
SURPLUS FOR THE YEAR		<u>93,884,835</u>	<u>48,195,971,202</u>

The accounting policies and the notes on page 25 to 43 form an integral part of these financial statements

CHAIRPERSON M. M. M. M. M. COUNCIL MEMBER M. M. M. M. M.
DATE: 28/12/2016 DATE: 28/12/2016



MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
REPORT OF THE COUNCIL AND FINANCIAL STATEMENTS FOR THE YEAR ENDED 30TH JUNE 2016

STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 30TH JUNE 2016

	30.06.2016 TZS	30.06.2015 TZS
Cash flows from operating activities		
Surplus for the Year	93,884,835	48,195,971,202
Adjustment for:		
Depreciation	1,710,502,946	1,629,754,738
Gain on disposal of assets	(41,336,101)	(6,082,847)
Prior year adjustment	(50,958,534,522)	(273,737,843)
Operating surplus/(deficit) before changes in working capital items	<u>(49,195,482,842)</u>	<u>49,545,905,251</u>
Changes in Working Capital:		
Change in inventory	(94,522,433)	234,700,246
Change in trade and other receivables	(51,688,684)	1,293,735,095
Change in trade and other payables	8,892,260,356	1,982,640,287
Net Cash Flows from/(to) operating activities	<u>(40,449,433,603)</u>	<u>53,056,980,879</u>
CASH FLOWS FROM INVESTING ACTIVITIES		
Acquisition of property and equipment	(747,220,070)	(273,358,120)
Additional work in progress	(15,496,473,468)	(42,074,259,662)
Proceeds from sale of motor vehicles	62,345,000	16,050,000
(Increase)/decrease in investments	1,089,261,381	(4,111,954,427)
Net Cash flows used in Investing Activities	<u>(15,092,087,157)</u>	<u>(46,407,522,209)</u>
CASH FLOWS FROM FINANCING		
Capital fund	-	-
Donor grants	65,674,390,368	-
Net Cash Generated from Flows Financing Activities	<u>65,674,390,368</u>	<u>-</u>
(DECREASE)/INCREASE IN CASH AND CASH EQUIVALENT	<u>10,132,869,608</u>	<u>6,649,458,670</u>
Cash and cash equivalents at beginning of the year	<u>10,070,768,326</u>	<u>3,421,309,656</u>
CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR	<u><u>20,203,637,934</u></u>	<u><u>10,070,768,326</u></u>

The accounting policies and the notes on page 25 to 43 form an integral part of these financial statements.

STATEMENT OF COMPARISON OF BUDGET AND ACTUAL AMOUNT FOR THE YEAR ENDED 30 JUNE 2016

Details	Original Budget {A} TZS	Final Budget {B} TZS	Actual on Comparable Basis {C} TZS	Difference {B-C} TZS	Difference in {%}	Note 32
REVENUE						
Fees and charges	6,363,038,000	6,363,038,000	8,452,098,273	(2,089,060,273)	-33	
Rental Income	175,507,000	175,507,000	205,972,000	(30,465,000)	-17	
Interest Income	405,990,488	405,990,488	395,642,123	10,348,365	3	
Other revenue	400,000,000	400,000,000	1,935,523,179	(1,535,523,179)	-384	i
Exchequers/transfers/subsidies from Government	30,692,702,173	30,692,702,173	20,929,236,824	9,763,465,349	32	
Donor Research Grants	-	-	15,448,355,322	(15,448,355,322)	100	ii
Project Income	1,150,000,000	1,150,000,000	953,494,103	196,505,897	17	
TOTAL REVENUE	39,187,237,661	39,187,237,661	48,320,321,823	(9,133,084,162)		
EXPENSES						
Wages, Salaries and Employee Benefits	31,294,959,609	31,294,959,609	23,439,528,624	7,855,430,985	25	
Social Benefits	157,000,000	157,000,000	144,575,200	12,424,800	8	
Teaching and Examination Expenses	612,693,000	612,693,000	463,824,136	148,868,864	24	
Supplies, and Consumables Used	3,794,372,200	3,794,372,200	13,512,151,375	(9,717,779,175)	-256	iii
Maintenance Expenses	789,097,600	789,097,600	729,340,893	59,756,707	8	
Bank Charges and Interest Expenses	20,000,000	20,000,000	34,096,122	(14,096,122)	-70	iv
OTHER GAIN AND LOSSES						
Gain (Loss) on foreign Exchange Transactions	-	-	512,295,447	(512,295,447)	100	v
TOTAL EXPENSES	36,668,122,409	36,668,122,409	38,835,811,797	(2,167,689,388)		
SURPLUS/ (DEFICIT) FOR THE YEAR	2,519,115,252	2,519,115,252	9,484,510,025	(6,965,394,774)		

Appendix 1: List of Research Projects during 2015/2016

S/N	PI/Coordinator Name	Project donor/Link	Main Project Title and sub-project	Objectives	Brief Progress Report
1	Prof. M.I. Matee	Sokoine University	NATCIDS	To support research costs for one MSc and one PhD student	The MSc student is progressing well due to defend her dissertation titled "Etiology and antimicrobial resistance of agents causing diarrhoea in children less than 5 years in Zambia. The PhD student was registered in August 2016 and he is about to start.
2	Prof. M. Aboud	NIH/ National Institute of Child Health Human Development (NICHD)	International Extramural Research Development Award	Building Research Administration at MUHAS	Four workshops conducted; 1) Scientific Writings 2) Grant writing 3) Qualitative research data 4) Quantitative Research data. Each workshop ran for 5 days and attended by 32 -34 participants. The grant has come to an end, closeout report written and new application G11 submitted.
3	Prof. M. Aboud	NIH- Fogarty International Centre	DPRET- Dartmouth- Penn Research Ethics Training Programme	Capacity Building Grant in the Bioethics, provides fellowships to study Bioethics at University of Pennsylvania	1) MBE program has enrolled 9 trainees. All have completed first year of training. 2) Five 2 days regional workshops conducted at Dar, ZNZ, Dodoma, Mbeya, Kilimanjaro 3) Proposal to start bioethics department has been approved by the University Council 4) Four bioethics fellows have attended various international conferences 5) Renewal application submitted and award granted for the next five years

4	Dr. M. Ezekiel	USAID	HIV Testing Counseling Guidelines for Non Clinicians	To review HIV testing counseling guidelines for non clinicians	We are making final reviews prior to submission of final document
5	Dr. T.W Kohi	PEPFAR	Teaching and learning about HIV/AIDS in Tanzania Schools	Training nurse teachers to be effective as HIV/AIDS educators	300 hundreds nurse educators have been trained on PMTCT including Option B+
6	Dr.T. Kohi	Dalhousie University-Canada	Innovation Exchange-Strengthening Evidence Based	Explore postpartum service-delivery & experiences on postpartum care of nurse-midwives, community health workers and postpartum mothers and their families in Tanzania	Data collection is completed and five manuscripts are to be submitted to peer review journals. One is already submitted while four are in progress.
7	Prof. Siriel Massawe	Karolinska Institute	Global health course	Global Health Course for medicaland nursing students from Karolinska Institute conducted twice /year,one group in January another group in May	Conducted two course; for 23students in January 2016 and another one for 22 students in May 2016

8	Dr. C. Moshiri	Muhimbili Research Program- Wellcome Trust- UK	MUHAS/ Afrique One Project	To enhance potential researchers and institutions with a focus on zoonotic diseases to attract grant funding independently and to develop their own research agenda	<p>One manuscript published in August 2015. Manuscript writing workshop was held from 23 to 27 May 2016. The workshop involved the PI, postdoc fellow, one master student and two MUHAS staff. The aim of the workshop was to analyse data and prepare presentation materials for the dissemination activity, work on 2 manuscripts, one of which was submitted to BMC Research Notes in June 2016.</p> <p>Dissemination of project findings in Kongwa District at district, ward and village level from 12-25th June 2016.</p> <p>The project also supported 9 master students and 7 members of faculty to attend the 4th MUHAS scientific conference from 23-24 June 2016. Project closed out in June 2016.</p>
9	Prof. S. Massawe	TRACTION/URC -USAID	Task Shifting for Caesarean Section in Tanzania	To explore, analyze, and document facilitators, barriers and challenges in implementation and scaling up of task sharing for caesarian sections by Assistant Medical Officers in Tanzania; document lessons learned and best practices in task sharing for caesarian section to provide lessons for other countries in the region facing similar human resource for health pragmatic issues.	<p>Field work completed. Data analysis is near completion. First draft report has been submitted</p>

10	Ms. Lusajo Kajula	University of North Carolina at Chapel Hill	Microfinance and health intervention trial	Identifying venues to prevent HIV and violence for youth in Tandale district, Dar es Salaam	The intervention has been finalised and we are currently in the process of endline data collection.
11	Dr. E. Innocent	Stockholm University	Natural products with anti HIV properties	Search for herbal drugs that cure fungus in HIV patients	Their results were presented during the MUHAS conference and 1 paper is accepted for publication. The Student Progress is good since he has isolated some compounds that can be used for further analysis of development of fungal herb drugs
12	Dr. E. Innocent	UNDP	Conserving repellent plants in Enduimet wildlife	Conserve plants which are repellent and used as vector of diseases	The results from the project are in 2 published papers and 2 draft manuscripts. The validation using ethobotany was completed; Using Biassay against mosquito and ticks is going on; propagation of wild plants is going on. Requested extortion to finalize and demonstrate the mitigation and coping practices
13	Dr. J. Makani	University of Capetown	H3ABioNet: a sustainable African Bioinformatics Network for H3Africa	To provide bioinformatics infrastructure and support for the H3Africa Consortium. The network aims to support genomics and bioinformatics components of H3Africa research projects and Collaborative Centres, to contribute to improved patient outcomes across the continent.	MUHAS node co-created Genomics research proposals, published the proceedings of the Sickle cell ontology, installed the H3ABionet Server, collaborated with TERNET to connect the Tanzania Supercomputer to our servers and increase the computational power. We continue to conduct Genome Wide association studies (GWAS) following completion of internship fellowship at University of Cape Town. We have completed data migration at the sickle cell programme installation of REDCap server at MUHAS.

14	Dr. J. Makani	Muhimbili Wellcome Programme	Strategic Project	To define the major causes of morbidity and mortality among patients with Sickle Cell disease attending Muhimbili National Hospital.	Project officially finished on the 30th March 2016, with sorting outstanding financial commitments April to June 2016. Until 30th March 2016, the project had provided core support for Wellcome Trust projects, and in addition support of patients seen at Muhimbili National Hospital and other projects not funded by the Wellcome Trust. Currently papers are being written up by Tanzanian scientists.
15	Dr. J. Makani	Muhimbili Wellcome Programme	Haematology Programme of anaemia and its therapy (PAST)	The role of anaemia and foetal haemoglobin in SCD: Clinical epidemiology to establish the evidence base for interventional trials of blood transfusion and Hydroxyurea.	Enrolment of study participants completed Dec 2015 - May 2016: 378 (38.7%) enrolled from 957 hospitalised SCD patients. Clinical and some laboratory data have been collected. We will complete all data collection by 31st October, 2016. Analysis plan has been developed. Protocol manuscript developed, to be submitted for publication by 16 September, 2016
16	Dr. J. Makani	University of Capetown	H3Africa ELSI Project	Advance understanding of the perspective of researchers, health professionals and community population concerning genomic research and public health aspect of sickle cell disease	Data collection and coding completed. Currently the project team focus on manuscript development. Expected to produce 16 manuscripts in total, 1 manuscript on methodology submitted for publication.

17	Dr. J. Makani	Human Development Innovation Fund/ GRM International Ltd	New Born Screening for Child Survival	Screening newborns for sickle disease to facilitate early intervention	<p>The programme trained 100 healthcare workers to provide health education on newborn screening (NBS) and sickle cell disease (SCD) to pregnant women, collect blood samples from newborns, and test the blood samples. In October 2015, the programme embarked on a pilot by screening newborns at MNH, and in January 2016 the pilot expanded to Temeke Regional Hospital. The programme has screened 4,000 babies and has tested 3,290 samples. Of those tested, 27 (0.8%) babies have been diagnosed to have SCD and have been contacted and registered at the existing SCD clinic and initiated on comprehensive care</p>
18	Dr. J. Makani	Wellcome Trust	Provision of Public engagement	Determining the best way of public engagement	<p>10 media professionals and 8 researchers have been trained in engaging the public in science. Currently working on teaming media professionals and researchers to produce articles for the month of September 2016</p>

19	Dr. C. Moshiro	Muhimbili Research Program- Wellcome Trust- UK	MUHAS/ Afrique One Project	To enhance potential researchers and institutions with a focus on zoonotic diseases to attract grant funding independently and to develop their own research agenda	One manuscript published in August 2015. Manuscript writing workshop was held from 23 to 27 May 2016. The workshop involved the PI, postdoc fellow, one master student and two MUHAS staff. The aim of the workshop was to analyse data and prepare presentation materials for the dissemination activity, work on 2 manuscripts, one of which was submitted to BMC Research Notes in June 2016. Dissemination of project findings in Kongwa District at district, ward and village level from 12-25th June 2016. The project also supported 9 master students and 7 members of faculty to attend the 4th MUHAS scientific conference from 23-24 June 2016. Project closed out in June 2016.
20	K. Pallangyo	GHIT Fund/ Dartmouth College	A Phase 2, Randomized, Placebo Controlled, Double Blind, Study of the Prevention of infection with Mycobacterium tuberculosis Among Adolescents Who Previously Received BCG Investigation Drug	To determine the safety and efficacy of a 3 dose series of DAR- 901 for the prevention of infection with M. tuberculosis (TB) among healthy adolescents previously immunized with BCG	Recruitment of study subjects started in March 2016 and has been progressing well. Status of study subject recruitment is as follows:- 1. Screening target: 1000, screened 509, Number screened out for being IGRA positive: 66. Number received 1st vaccination: 317. Number received 2nd vaccination 104. Number received 3rd vaccination 19.

21	Prof. S. Kaaya	NIMH - subcontract with African Academy of Public Health; Prime Harvard Medical School. MUHAS has a service agreement with AAPH, for training, and supervising of implementation of the RCT, with MUHAS/MNH staffs as PI and co-PIs or just trainers.	Healthy Options	<p>This is a 5 years research project, started October 2012, ending in October 2017; with 16 sites from all districts in Dar es Salaam: (8 intervention and 8 control) Main objectives of study: 1) Examine the acceptability and feasibility of integrating an enhanced standard of mental health care and group counseling with PMTCT-plus services provided at government-run maternal and child health (MCH) clinics, from the perspectives of:</p> <p>a) facility mental health care focal points and MCH clinic managers, b) perinatal direct care providers, and c) HIV-positive perinatal women;</p> <p>2) Validate a depression screening tool for major depressive disorder (MDD) and suicidality for use in Tanzania; and</p> <p>3) Conduct a cluster randomized controlled trial comparing a task-sharing approach (i.e. problem-solving and cognitive behavioral therapy components delivered to groups facilitated by lay community based health care workers; CBHWs) versus improved standard of care for the treatment of depression among HIV-positive women accessing PMTCT-plus services.</p>	<p>As of end of Oct 2016; 1. Total patients with HIV and major depression enrolled into the study and completed baseline interviews were 735 (409 intervention and 326 control group). All staff in the 16 PMTCT sites had been trained in the enhanced standard of depression care protocol. In intervention sites, problem solving therapy groups had been conducted for 340 out of the 409, meaning we have 69 (17%) who didn't attend the sessions. Six weeks post delivery follow-up was completed on 624, the remaining 111 who have not delivered yet included 50 lost to follow-up and the remaining not yet due for follow up until between November–February 2017. Post delivery of the 35 in the intervention sites that were still depressed, all have been subjected to 8 sessions of group cognitive behavioural therapy and child development sessions; the last group is ongoing. Nine months post delivery follow-up was complete 69, with 666 remaining. We are expecting to complete the follow up two by the end of July 2017. Process evaluation in-depth interviews are ongoing. Expected outputs: Two final revised training manuals for lay providers for delivery group psychosocial supports for women living with HIV using evidence-based problem solving and cognitive behavioral therapy components; One manual for primary health care staff training in enhanced management of depression. Three successful Data Statistical and Monitoring Boards (DSMB) have been conducted since study inception. We are in track to complete the study in the allocated timeframe.</p>
----	----------------	---	-----------------	--	--

22					
23	Prof. S. Kaaya	NIH/Columbia University	Structural Intervention for Adolescent Alcohol Use and HIV Risk in Tanzania	<p>To evaluate structural causes of alcohol use in adolescents with the following study aims: 1) To explore the current patterns of alcohol initiation and consumption by adolescent girls and boys (aged 14-18) in urban Tanzania. 2) To understand the social processes and contextual factors shaping the dynamic between alcohol consumption and risky sexual behaviors among adolescents (aged 14-18) in urban Tanzania. 3) To inform the development of new or the adaptation of existing structural interventions for reducing the contribution of alcohol consumption on unsafe sexual practices among urban adolescents in Tanzania within the context of the implementation of a new national alcohol policy and existing alcohol laws.</p>	<p>Qualitative data collection and participatory research activities with adolescents are completed as planned. A couple of adult Key informant interviews are to be completed. A code book workshop completed the study code book in November and supervised RAs completed data coding of interviews and participatory data (pictures and charts) uploaded in NVivo Version 10. Data analysis plans will soon be initiated for writing activities. Work on this projected is expected to be completed on time.</p>

24	Dr. D. Urassa	PEPFAR/NIH	Afiya bora consortium (ABC)	To contribute to health systems strengthening in our African partner countries by developing a leadership training program targeting primarily African health professionals	The project entered its fourth year and as other past years recruited 4 fellows from Tanzania. This time two were members of staff at MUHAS. The project is progressing and will approach its final fifth year by July 2016.
25	Dr. Tumaini Nyamhanga	National Institute for Medical Research	Viral Load costing	To determine the cost of viral load testing	Draft final Report submitted. Currently responding to reviewers' comments, after which the Final Report will be submitted by 15th December 2016.
26	Prof. N. Moshi	NIH/Dartmouth	Central auditory deficits associated with HIV infection and treatment	Recruitment and Testing of HIV negative and positive subjects	Mobilization of research equipment is ready. Training of research assistants is completed. We have just started collection of data
27	Prof. M. Moshi	NIH	Establishing Office of Sponsored Projects at MUHAS	To establishing and strengthen Office of Sponsored Projects at MUHAS through North South partnership	
28	DRP	Sida	Health Research, Training and Innovation for Sustainable Development	The proposed research training program seeks to address gap and build sustainable research training capacity by year 2020. Programs that will host the students include HIV, Malaria & neglected tropical diseases, Reproductive Health, Injuries, Health Systems, and Research Training Support Program.	



Appendix II: Summary of Papers Published by Staff During the Reporting Period

Publications

During the reporting period, the university published various publications which included 367 journal articles and 129 conference papers, making a total of 496 publications. The following is the list of some publications produced in local, regional and international journals during the reporting period.

A: Journal Articles

S/NO	AUTHORS	TITLE OF PUBLICATION
1	Abioye AI, Aboud S, Premji Z, Etheredge AJ, Gunaratna NS, Sudfeld CR, Mongi R, Meloney L, Darling AM, Noor RA, Spiegelman D.	Iron Supplementation Affects Hematologic Biomarker Concentrations and Pregnancy Outcomes among Iron-Deficient Tanzanian Women. The Journal of nutrition. 2016 Apr 27;jn225482.
2	Ahaneku H, Ross MW, Nyoni JE, Selwyn B, Troisi C, Mbwapbo J, Adeboye A, McCurdy S.	Depression and HIV risk among men who have sex with men in Tanzania. AIDS Care. 2016 Mar; 28 Suppl 1:140-7.
3	Akwilina W. Mwanri, Joyce Kinabo, Kaushik Ramaiya, Edith J. M. Feskens	Gestational diabetes mellitus in sub-Saharan Africa: systematic review and metaregression on prevalence and risk factors." Tropical Medicine & International Health 20.8; 2015: 983-1002.
4	Al-Shaer, Mohammad H., and Tarek Ibrahim.	Safety and Efficacy of Fondaparinux in Renal Impairment." Journal of Pharmacy Technology 31.4; 2015: 161-166.
5	An SJ, George AS, LeFevre AE, Mpembeni R, Mosha I, Mohan D, Yang A, Chebet J, Lipingu C, Baqui AH, Killewo J.	Supply-side dimensions and dynamics of integrating HIV testing and counselling into routine antenatal care: a facility assessment from Morogoro Region, Tanzania. BMC health services research. 2015 Oct 4; 15(1):1.
6	Aneela Sabir , Atif Islam, Muhammad Shafiq, Amir Shafeeq, Muhammad Taqi Zahid Butt, Nasir M. Ahmad, Khairuddin Sanaullah, Tahir Jamil.	Novel polymer matrix composite membrane doped with fumed silica particles for reverse osmosis desalination. Desalination 368; 2015: 159-170.
7	Aneela Sabir ,Muhammad Shafiq, Atif Islam, Afsheen Sarwar, Muhammad Rizwan Dilshad, Amir Shafeeq, Muhammad Taqi Zahid Butt,Tahir Jamil.	Fabrication of tethered carbon nanotubes in cellulose acetate/polyethylene glycol-400 composite membranes for reverse osmosis. Carbohydrate polymers 132; 2015: 589-597.
8	Åström AN, Lie SA, Mbawalla H.	Do self efficacy and depression predict oral impacts on daily performances across time? A 2 yr follow up of students in Tanzania. European journal of oral sciences. 2016 Apr 1.

9	August F, Pembe AB, Mpembeni R, Axemo P, Darj E.	Community health workers can improve male involvement in maternal health: evidence from rural Tanzania. Global Health Action. 2016 Jan 18; 9:30064.
10	August F, Pembe AB, Mpembeni R, Axemo P, Darj E.	Effectiveness of the Home Based Life Saving Skills training by community health workers on knowledge of danger signs, birth preparedness, complication readiness and facility delivery, among women in Rural Tanzania. BMC pregnancy and childbirth. 2016 Jun 2; 16(1):1.
11	August, F, Pembe, A B, Mpembeni, R, Axemo, P, & Darj, E (2016).	Community health workers can improve male involvement in maternal health: evidence from rural Tanzania. Global Health Action, 9.
12	Aurzada, Frank, and Thomas Simon.	Persistence probabilities and exponents. Lévy Matters V. Springer International Publishing, 2015.183-224.
13	Balandya E, Reynolds T, Obaro S, Makani J.	Alteration of Lymphocyte Phenotype and Function in Sickle Cell Anemia: Implications for Vaccine Responses. American journal of hematology. 2016 May 1.
14	Basu P, Bhatla N, Ngoma T, Sankaranarayanan R.	Less than 3 doses of the HPV vaccine - review of efficacy against virological and disease end points. Hum Vaccin Immunother. 2016 Mar 2:1-9.
15	Bauer A, Joseph S, Geldmacher C, Munseri PJ, Aboud S, Missanga M, Mann P, Wahren B, Ferrari G, Polonis VR, Robb ML.	Boosting with Subtype C CN54rgp140 Protein Adjuvanted with Glucopyranosyl Lipid Adjuvant after Priming with HIV-DNA and HIV-MVA Is Safe and Enhances Immune Responses: A Phase I Trial. PloS one. 2016 May 18; 11(5):e0155702.
16	Bholla M, Kapalata N, Masika E, Chande H, Jugheli L, Sasamalo M, Glass TR, Beck HP, Reither K.	Evaluation of Xpert MTB/RIF and Ustar EasyNAT™ TB IAD for diagnosis of tuberculous lymphadenitis of children in Tanzania: a prospective descriptive study. BMC infectious diseases. 2016 Jun 6; 16(1):1.
17	Boillat-Blanco N, Ramaiya KL, Mganga M, Minja LT, Bovet P, Schindler C, Von Eckardstein A, Gagneux S, Daubenberger C, Reither K, Probst-Hensch N.	Transient Hyperglycemia in Patients With Tuberculosis in Tanzania: Implications for Diabetes Screening Algorithms. J Infect Dis. 2016 Apr 1; 213(7):1163-72.
18	Bosch, Pierre, and Thomas Simon.	A proof of Bondesson's conjecture on stable densities. Arkiv för Matematik 2015: 1-8.
19	Bosch, Pierre, and Thomas Simon.	On the infinite divisibility of inverse Beta distributions. Bernoulli 21.4; 2015: 2552-2568.
20	Callaghan-Koru JA, McMahon SA, Chebet JJ, Kilewo C, Frumence G, Gupta S, Stevenson R, Lipingu C, Baqui AH, Winch PJ.	A qualitative exploration of health workers' and clients' perceptions of barriers to completing four antenatal care visits in Morogoro Region, Tanzania. Health policy and planning. 2016 Apr 26:czw034.

21	Chai J, Fink G, Kaaya S, Danaei G, Fawzi W, Ezzati M, Lienert J, Fawzi MC.	Association between intimate partner violence and poor child growth: results from 42 demographic and health surveys. <i>Bull World Health Organ.</i> 2016 May 1; 94(5):331-9.
22	Chambongo PE, Nguku P, Wasswa P, Semali I.	Community vaccine perceptions and its role on vaccination uptake among children aged 12-23 months in the Ileje District, Tanzania: a cross section study. <i>Pan African Medical Journal.</i> 2016 Jun 4; 23(162).
23	Changamire, Freeman T, et al.	Effect of multivitamin supplements on weight gain during pregnancy among HIV-negative women in Tanzania. <i>Maternal & child nutrition</i> 11.3 (2015): 297-304.
24	Chebet JJ, McMahon SA, Greenspan JA, Mosha IH, Callaghan-Koru JA, Killewo J, Baqui AH, Winch PJ.	“Every method seems to have its problems”- Perspectives on side effects of hormonal contraceptives in Morogoro Region, Tanzania. <i>BMC women’s health.</i> 2015 Nov 3; 15(1):1.
25	Chiang LF, Chen J, Gladden MR, Mercy JA, Kwesigabo G, Mrisho F, Dahlberg LL, Nyunt MZ, Brookmeyer KA, Vagi K.	HIV and childhood sexual violence: implications for sexual risk behaviors and HIV testing in Tanzania. <i>AIDS Education and Prevention.</i> 2015 Oct; 27(5):474-87.
26	Chishimba K, Hang’ombe BM, Muzandu K, Mshana SE, Matee MI, Nakajima C, Suzuki Y.	Detection of Extended-Spectrum Beta-Lactamase-Producing <i>Escherichia coli</i> in Market-Ready Chickens in Zambia. <i>International journal of microbiology.</i> 2016 Apr 17; 2016.
27	Doan Holbein, Marie F., Valerie J. Bristor, and Noorchaya Yahya.	A Model for Using Television and Video to Motivate Writing. <i>Reading Horizons</i> 41.3: 4.
28	Duysburgh E, Temmerman M, Yé M, Williams A, Massawe S, Williams J, Mpembeni R, Loukanova S, Haefeli WE, Blank A.	Quality of antenatal and childbirth care in rural health facilities in Burkina Faso, Ghana and Tanzania: an intervention study. <i>Trop Med Int Health.</i> 2016 Jan; 21(1):70-83.
29	Efferth T, Banerjee M, Paul NW, Abdelfatah S, Arend J, Elhassan G, Hamdoun S, Hamm R, Hong C, Kadioglu O, Naß J, Ochwangi D, Ooko E, Ozenver N, Saeed ME, Schneider M, Seo EJ, Wu CF, Yan G, Zeino M, Zhao Q, Abu-Darwish MS, Andersch K, Alexie G, Bessarab D, Bhakta-Guha D, Bolzani V, Dapat E, Donenko FV, Efferth M, Greten HJ, Gunatilaka L, Hussein AA, Karadeniz A, Khalid HE, Kuete V, Lee IS, Liu L, Midiwo J, Mora R, Nakagawa H, Ngassapa O, Noysang C, Omosa LK, Roland FH, Shahat AA, Saab A, Saeed EM, Shan L, Titinchi SJ.	Biopiracy of natural products and good bioprospecting practice. <i>Phytomedicine.</i> 2016 Feb 15; 23(2):166-73

30	Eggers SM, Aarø LE, Bos AE, Mathews C, Kaaya SF, Onya H, de Vries H.	Sociocognitive Predictors of Condom Use and Intentions Among Adolescents in Three Sub-Saharan Sites. Arch Sex Behav. 2016 Feb; 45(2):353-65.
31	Elin Sandström, Ingrid Bolmsjö, and Ellis Janzon.	Attitudes to and Experiences of Physical Activity among Migrant Women from Former Yugoslavia.
32	Ezekiel MJ, Chitama D.	Magnitude and factors associated with intimate partner violence in mainland Tanzania. BMC Public Health. 2016 Jun 10; 16(1):1.
33	Febriyanti Ramadhani, Reka Maiyarni, Nela Safelia.	Pengaruh Modal Intelektual terhadap Kinerja Keuangan Perusahaan Perbankan yang Terdaftar di Bursa Efek Indonesia (BEI) Tahun 2010-2012
34	Feldhaus I, Silverman M, LeFevre AE, Mpembeni R, Moshia I, Chitama D, Mohan D, Chebet JJ, Urassa D, Kilewo C, Plotkin M.	Equally able, but unequally accepted: Gender differentials and experiences of community health volunteers promoting maternal, newborn, and child health in Morogoro Region, Tanzania. International journal for equity in health. 2015 Aug 25; 14(1):1.
35	Fredrick F, Francis JM, Ruggajo PJ, Maro EE.	Renal abnormalities among HIV infected children at Muhimbili National Hospital (MNH)-Dar es Salaam, Tanzania. BMC Nephrol. 2016 Mar 21; 17(1):30.
36	Frumence, G, T M Nyamhanga, and M Mwangi.	The Role of Council Health Management Team in the Improvement of Health Services Quality: The Case of Kinondoni and Ilala Municipalities in Dar es Salaam, Tanzania. Tanzania Journal of Development Studies 13.1-2; 2015: 83-95.
37	G. A. Hussain; Sch. of Electr. Eng., Aalto Univ., Aalto, Finland; M. Shafiq; M. Lehtonen; M. Hashmi.	Online Condition Monitoring of MV Switchgear Using-Dot Sensor to Predict Arc-Faults. Sensors Journal, IEEE 15.12; 2015: 7262-7272.
38	Gadalla NB, Malmberg M, Adam I, Oguike MC, Beshir K, Elzaki SE, Mukhtar I, Gadalla AA, Warhurst DC, Ngasala B, Mårtensson A.	Alternatively spliced transcripts and novel pseudogenes of the Plasmodium falciparum resistance-associated locus pfcrt detected in East African malaria patients. Journal of Antimicrobial Chemotherapy. 2015 Jan 1; 70(1):116-23.
39	Ghulam Amjad Hussain, Muhammad Shafiq, Lauri Kumpulainen, Farhan Mahmood, Matti Lehtonen.	Performance evaluation of noise reduction method during on-line monitoring of MV switchgear for PD measurements by non-intrusive sensors. International Journal of Electrical Power & Energy Systems 64; 2015: 596-607.
40	Grossmann, Holger.	Device and method for aseptic pressure relief. U.S. Patent No. 8,985,134. 24 Mar. 2015.
41	Guo SP, Wu Z, Li W, Kukulka D, Sundén B, Zhou XP, Wei JJ, Simon T.	Condensation and evaporation heat transfer characteristics in horizontal smooth, herringbone and enhanced surface EHT tubes. International Journal of Heat and Mass Transfer. 2015 Jun 30; 85:281-91.

42	Hamisi M Malebo, Victor Wiketye, Shaaban J Katani, Nteghenjwa A Kitufe, Vitus A Nyigo, Calister P Imeda, John W Ogondiek, Richard Sunguruma, Paulo P Mhame, Julius J Massaga, Bertha Mammuya, Kesheni P Senkoro, Susan F Rumisha, Mwelecele N Malecela and Andrew Y Kitua.	In vivo antiplasmodial and toxicological effect of <i>Maytenus senegalensis</i> traditionally used in the treatment of malaria in Tanzania. <i>Malaria journal</i> 14.1; 2015: 1-7.
43	Hansen ME, Hunt SC, Stone RC, Horvath K, Herbig U, Ranciaro A, Hirbo J, Beggs W, Reiner AP, Wilson JG, Kimura M, De Vivo I, Chen MM, Kark JD, Levy D, Nyambo T, Tishkoff SA, Aviv A.	Shorter telomere length in Europeans than in Africans due to polygenetic adaptation. <i>Hum Mol Genet.</i> 2016 Mar 2.
44	Harrison AJ, Long KA, Manji KP, Blane KK.	Development of a Brief Intervention to Improve Knowledge of Autism and Behavioral Strategies among Parents in Tanzania. <i>Intellectual and developmental disabilities.</i> 2016 Jun; 54(3):187-201.
45	Hawkins C, Ulenga N, Liu E, Aboud S, Mugusi F, Chalamilla G, Sando D, Aris E, Carpenter D, Fawzi W.	HIV virological failure and drug resistance in a cohort of Tanzanian HIV-infected adults. <i>J Antimicrob Chemother.</i> 2016 Apr 13.
46	Hisahiro Ishijima, Martin Mapunda, Mathew Mndeme, Felix Sukums, Violet Solomon Mlay.	Challenges and opportunities for effective adoption of HRH information systems in developing countries: national rollout of HRHIS and TIIS in Tanzania. <i>Human resources for health</i> 13.1; 2015: 48.
47	Ibadullah WH, Yahya N, Ghazali SS, Kamaruzaman E, Yong LC, Dan A, Zain JM.	Comparing insertion characteristics on nasogastric tube placement by using GlideScope™ visualization vs. MacIntosh laryngoscope assistance in anaesthetized and intubated patients. <i>Brazilian Journal of Anesthesiology (English Edition).</i> 2015 Oct 20.
48	Innocent, Ester, and Ahmed Hassanali.	Constituents of Essential Oils from Three Plant Species Used in Traditional Medicine and Insect Control in Tanzania. <i>Journal of Herbs, Spices & Medicinal Plants</i> 21.3; 2015: 219-229.
49	Iqbal, Z, Sattar, M N, & Shafiq, M. (2016).	Crispr/cas9: a tool to circumscribe cotton leaf curl disease. <i>Frontiers in plant science</i> , 7, 475.
50	Isa, N F, Muhamad, K, Yahya, N, Ahmad, M M, Manaf, A, Hisyam, M B, Naspu, S N. A. (2016, February).	DOLOMITE QUARRY WASTE AS SAND REPLACEMENT IN SAND BRICK. In <i>Materials Science Forum</i> (Vol. 857).

51	Iseselo MK, Kajula L, Yahya-Malima KI.	The psychosocial problems of families caring for relatives with mental illnesses and their coping strategies: a qualitative urban based study in Dar es Salaam, Tanzania. BMC psychiatry. 2016 May 14; 16(1):1.
52	Jamil, Atif, Mohd Zuki Yusoff, and Noorhana Yahya.	MINIATURIZATION OF DUAL-BAND MEANDER LINE ANTENNAS FOR WLAN.
53	Juliano JJ, Parobek CM, Brazeau NF, Ngasala B, Randrianarivelojosia M, Lon C, Mwandagalirwa K, Tshefu A, Dhar R, Das BK, Hoffman I, Martinson F, Mårtensson A, Saunders DL, Kumar N, Meshnick SR.	Pooled Amplicon Deep Sequencing of Candidate Plasmodium falciparum Transmission-Blocking Vaccine Antigens. Am J Trop Med Hyg. 2016 Jan 6; 94(1):143-6
54	Kaale E, Hope SM, Jenkins D, Layloff T.	Implementation of 350-2500 nm diffuses reflectance spectroscopy and High-Performance Thin-Layer Chromatography to rapidly assess manufacturing consistency and quality of cotrimoxazole tablets in Tanzania. Trop Med Int Health. 2016 Jan; 21(1):61-69.
55	Kahabuka, F K, and I E Mwangosi	Emergency visits at a paedodontic clinic in Tanzania. Tanzania Dental Journal 8.1 (2015): 21-23.
56	Kajula L, Balvanz P, Kilonzo MN, Mwikoko G, Yamanis T, Mulawa M, Kajuna D, Hill L, Conserve D, Reyes HL, Leatherman S, Singh B, Maman S.	Vijana Vijiweni II: a cluster-randomized trial to evaluate the efficacy of microfinance and peer health leadership intervention for HIV and intimate partner violence prevention among social networks of young men in Dar es Salaam. BMC Public Health. 2016 Feb 3; 16(1):113
57	Moshy JR, Sohal KS.	The types, incidence and demographic distribution of benign oral and maxillofacial neoplasms among patients attending Muhimbili National Hospital in Tanzania, 2008-2013. Tanzania Journal of Health Research. 2016 Apr 1; 18(2).
58	Kamuhabwa, A.R, and A.M Ignace.	Dispensing practice of prescribed medicines in the private pharmacies in urban areas of Tanzania. Indian Journal of Pharmaceutical Sciences 77.5; 2015: 542.
59	Kamuhabwa, Appolinary AR, and Vicky Manyanga.	Challenges facing effective implementation of co-trimoxazole prophylaxis in children born to HIV-infected mothers in the public health facilities."Drug, healthcare and patient safety 7 ;2015: 147.
60	Kandil, E, Deniwar, A, Noureldine, SI, Hammad, AY, Mohamed, H, Al-Qurayshi, Z, Tufano, R P. (2016).	Assessment of Vocal Fold Function Using Transcutaneous Laryngeal Ultrasonography and Flexible Laryngoscopy. JAMA Otolaryngology–Head & Neck Surgery, 142(1), 74-78.

61	Kirstein, Jürgen, et al.	Seamless Smart Labs. PhyDid B-Didaktik der Physik-Beiträge zur DPG-Frühjahrstagung 2015.
62	Kishimba, Rogath Saika, Rose Mpembeni, and Janneth Mghamba.	Factors associated with major structural birth defects among newborns delivered at Muhimbili National Hospital and Municipal Hospitals in Dar Es Salaam, Tanzania 2011–2012. Pan African Medical Journal 20.1; 2015.
63	Kishimba RS, Mpembeni R, Mghamba JM, Goodman D, Valencia D.	Birth prevalence of selected external structural birth defects at four hospitals in Dar es Salaam, Tanzania, 2011–2012. Journal of global health. 2015 Dec; 5(2).
64	Kiwara, Angwara Denis.	University medical education in the twenty first century: Challenges of social determinants of health and noncommunicable diseases. East African Journal of Public Health 12.2; 2015: 1001-1010.
65	Kohi TW, Obogo MW, Mselle LT.	Perceived needs and level of satisfaction with care by family members of critically ill patients at Muhimbili National hospital intensive care units, Tanzania. BMC Nurs. 2016 Mar 9; 15:18.
66	Koole O, Denison JA, Menten J, Tsui S, Wabwire-Mangen F, Kwesigabo G, Mulenga M, Auld A, Agolory S, Mukadi YD, van Praag E, Torpey K, Williams S, Kaplan J, Zee A, Bangsberg DR, Colebunders R.	Reasons for Missing Antiretroviral Therapy: Results from a Multi-Country Study in Tanzania, Uganda, and Zambia. PLoS One. 2016 Jan 20; 11(1):e0147309.
67	Kutcher S, Wei Y, Gilberds H, Brown A, Ubuguyu O.	Evaluating Community Health Care Providers Knowledge and Self-Confidence in the Identification, Diagnosis and Treatment of Adolescent Depression in Tanzania. Arch Depress Anxiety 2 (1): 026. 2016; 30:026.
68	Langwieser, Nicolas, et al.	Radial artery applanation tonometry for continuous noninvasive arterial blood pressure monitoring in the cardiac intensive care unit. Clinical Research in Cardiology 104.6; 2015: 518-524.
69	LeFevre, Amnesty E, et al.	Profile, knowledge, and work patterns of a cadre of maternal, newborn, and child health CHWs focusing on preventive and promotive services in Morogoro Region, Tanzania. Human resources for health 13.1; 2015: 98.
70	Leshabari, Sebalda, et al.	Looking forward to the East African Countries' Collaboration in Nursing and Midwifery Education, Practice and Legislation. Rwanda Journal 2.2; 2015: 69-73.
71	L'Esperance VS, Ekong T, Cox SE, Makani J, Newton CR, Soka D, Komba A, Kirkham FJ, Hill CM.	Nocturnal haemoglobin oxygen desaturation in urban and rural East African paediatric cohorts with and without sickle cell anaemia: a cross-sectional study. Arch Dis Child. 2016 Apr; 101(4):352-5.

72	Lindsay E. Evans, Matthew D. Cheeseman, Norhakim Yahya, Keith Jones.	Investigating Apoptozole as a Chemical Probe for HSP70 Inhibition. PloS one 10.10; 2015: e0140006.
73	Lindsay E. Evans, Matthew D. Cheeseman, Norhakim Yahya, Keith Jones.	Investigating Apoptozole as a Chemical Probe for HSP70 Inhibition. PloS one 10.10; 2015: e0140006.
74	Litorp, Helena, et al.	Fear, blame and transparency: Obstetric caregivers' rationales for high caesarean section rates in a low-resource setting. Social Science & Medicine 143; 2015: 232-240.
75	Locks LM, Manji KP, McDonald CM, Kupka R, Kisenge R, Aboud S, Wang M, Fawzi WW, Duggan CP.	Effect of zinc and multivitamin supplementation on the growth of Tanzanian children aged 6-84 wk: a randomized, placebo-controlled, double-blind trial. Am J Clin Nutr. 2016 Mar; 103(3):910-8.
76	Lwoga ET, Komba M.	Antecedents of continued usage intentions of web-based learning management system in Tanzania. Education+ Training. 2015 Sep 14; 57(7):738-56.
77	Komba MM, Lwoga ET.	Government information seeking behaviour of citizens in selected districts of Tanzania. Journal of Library & Information Science. 2015 Dec; 5(4).
78	Lundmark, Joakim, and Eric Sandström Lindberg.	The effects of intrinsic motivation, extrinsic motivation and toolkits on user participation in User-generated content for video games: A quantitative study of product development in online communities. 2015.
79	Luzzatto L.	Recent advances in the pathogenesis and treatment of paroxysmal nocturnal hemoglobinuria. F1000Res. 2016 Feb 23; 5.
80	M. Bilal, Saifullah, M. Shafiq, B. Khan, H.A. Rahnamaye Aliabad, S. Jalali Asadabadi, Rashid Ahmad, Iftikhar Ahmad.	Antiperovskite compounds SbNSr3 and BiNSr3: Potential candidates for thermoelectric renewable energy generators
81	M. Shafiq, Iftikhar Ahmad, S. Jalali-Asadabadi.	Mechanical properties and variation in SOC going from La to Nd in intermetallic RIn 3 and RSn 3 (R= La, Ce, Pr, Nd). RSC Advances 5.49; 2015: 39416-39423.
82	M. Shafiq, Suneela Arif, Iftikhar Ahmad, S. Jalali Asadabadi, M. Maqbool, H.A. Rahnamaye Aliabad.	Elastic and mechanical properties of lanthanide monoxides. Journal of Alloys and Compounds 618; 2015: 292-298.
83	Macieira, Raphael M, et al.	Isolation and speciation of tidepool fishes as a consequence of Quaternary sea-level fluctuations. Environmental Biology of Fishes 98.1; 2015: 385-393.

84	Maganda, Betty A, et al.	The influence of nevirapine and efavirenz-based anti-retroviral therapy on the pharmacokinetics of lumefantrine and anti-malarial dose recommendation in HIV-malaria co-treatment. <i>Malaria journal</i> 14.1; 2015: 1-11.
85	Maganda BA, Minzi OM, Ngaimisi E, Kamuhabwa AA, Aklillu E.	CYP2B6*6 genotype and high efavirenz plasma concentration but not nevirapine are associated with low lumefantrine plasma exposure and poor treatment response in HIV-malaria-coinfected patients. <i>Pharmacogenomics J.</i> 2016 Feb; 16(1):88-95.
86	Mahende, Coline, et al.	Bloodstream bacterial infection among outpatient children with acute febrile illness in north-eastern Tanzania. <i>BMC research notes</i> 8.1; 2015: 289.
87	Mahiti, Gladys Reuben, et al.	Women's perceptions of antenatal, delivery, and postpartum services in rural Tanzania. <i>Global health action</i> 8; 2015.
88	Mahmoud, Shady, et al.	Reliability of the Lisfranc injury radiological classification (Myerson-modified Hardcastle classification system). <i>International orthopaedics</i> 39.11; 2015: 2215-2218.
89	Makani J, Roberts DJ.	Hematology in Africa. <i>Hematol Oncol Clin North Am.</i> 2016 Apr; 30(2):457-75.
90	Manji KP, Duggan C, Liu E, Bosch R, Kisenge R, Aboud S, Kupka R, Fawzi WW.	Exclusive Breast-feeding Protects against Mother-to-Child Transmission of HIV-1 through 12 Months of Age in Tanzania. <i>J Trop Pediatr.</i> 2016 Mar 15.
91	Manji M, Shayo G, Mamuya S, Mpembeni R, Jusabani A, Mugusi F.	Lung functions among patients with pulmonary tuberculosis in Dar es Salaam - a cross-sectional study. <i>BMC Pulm Med.</i> 2016 Apr 23; 16(1):58.
92	Manji M, Shayo G, Mamuya S, Mpembeni R, Jusabani A, Mugusi F.	Lung functions among patients with pulmonary tuberculosis in Dar es Salaam—a cross-sectional study. <i>BMC pulmonary medicine.</i> 2016 Apr 23; 16(1):1.
93	Martins, A, L C Carneiro, and R Castro.	Progress in mass and clonal selection of grapevine varieties in Portugal. <i>VITIS-Journal of Grapevine Research</i> 29; 2015: 485.
94	Mavura, Daudi R., et al.	Initiation of antiretroviral therapy in HIV-infected adults with skin complaints in northern Tanzania. <i>International journal of dermatology</i> 54.1; 2015: 68-73.
95	Mbawala, H S, F M. Machibya, and F. K. Kahabuka.	Assorted Errands in Prevention of Children's Oral Diseases and Conditions. 2015.
96	Mbugi EV, Katala BZ, Streicher EM, Keyyu JD, Kendall SL, Dockrell HM, Michel AL, Rweyemamu MM, Warren RM, Matee MI, van Helden PD.	Mapping of Mycobacterium tuberculosis Complex Genetic Diversity Profiles in Tanzania and Other African Countries. <i>PloS one.</i> 2016 May 5; 11(5):e0154571.

97	McCleary-Sills J, Namy S, Nyoni J, Rweyemamu D, Salvatory A, Steven E.	Stigma, shame and women's limited agency in help-seeking for intimate partner violence. <i>Glob Public Health</i> . 2016; 11(1-2):224-35.
98	McCleary-Sills, J, Namy, S, Nyoni, J, Rweyemamu, D, Salvatory, A, & Steven, E. (2016).	Stigma, shame and women's limited agency in help-seeking for intimate partner violence. <i>Global public health</i> , 11(1-2), 224-235.
99	McDonald CM, Manji KP, Gosselin K, Tran H, Liu E, Kisenge R, Aboud S, Fawzi WW, Gewirtz AT, Duggan CP.	Elevations in serum anti-flagellin and anti-LPS Igs are related to growth faltering in young Tanzanian children. <i>The American journal of clinical nutrition</i> . 2016 Jun 1; 103(6):1548-54.
100	Mcharazo AA, Olden A.	Fifty years of Tanzania's national/public library service. <i>Alexandria: The Journal of National and International Library and Information Issues</i> . 2016 May 25:0955749016649107.
101	McMahon, Shannon A, et al.	You should go so that others can come"; the role of facilities in determining an early departure after childbirth in Morogoro Region, Tanzania. <i>BMC pregnancy and childbirth</i> 15.1; 2015: 1.
102	Mega, Jessica L, and Tabassome Simon.	Pharmacology of antithrombotic drugs: an assessment of oral antiplatelet and anticoagulant treatments. <i>The Lancet</i> 386.9990 ; 2015: 281-291.
103	Meremo A, Mboya B, Ngilangwa D, Dulle R, Tarimo E, Urassa D, Michael E, Gibore N, Mpondo B, Mchonde G, Ernest A.	Barriers to accessibility and utilization of HIV testing and counseling services in Tanzania: experience from Angaza Zaidi programme. <i>Pan African Medical Journal</i> . 2016 Apr 14; 23(189).
104	Metghalchi, Sarvenaz, et al.	Indoleamine 2, 3-dioxygenase fine-tunes immune homeostasis in atherosclerosis and colitis through repression of interleukin-10 production. <i>Cell metabolism</i> 22.3; 2015: 460-471.
105	Mhode M, Nyamhanga T.	Experiences and Impact of Stigma and Discrimination among People on Antiretroviral Therapy in Dar es Salaam: A Qualitative Perspective. <i>AIDS Res Treat</i> . 2016; 2016:7925052.
106	Mideo N, Bailey JA, Hathaway NJ, Ngasala B, Saunders DL, Lon C, Kharabora O, Jamnik A, Balasubramanian S, Björkman A, Mårtensson A, Meshnick SR, Read AF, Juliano JJ.	A deep sequencing tool for partitioning clearance rates following antimalarial treatment in polyclonal infections. <i>Evol Med Public Health</i> . 2016 Jan 27; 2016(1):21-36.
107	Mirambo MM, Aboud S, Mushi MF, Seugendo M, Majigo M, Groß U, Mshana SE.	Serological evidence of acute rubella infection among under-fives in Mwanza: a threat to increasing rates of congenital rubella syndrome in Tanzania. <i>Italian journal of pediatrics</i> . 2016 May 25; 42(1):1.

108	Mkoka, Dickson A., et al.	Once the government employs you, it forgets you”: Health workers’ and managers’ perspectives on factors influencing working conditions for provision of maternal health care services in a rural district of Tanzania. <i>Human resources for health</i> 13.1; 2015: 77.
109	Mlunde LB, Sunguya BF, Mbwapo JK, Ubuguyu OS, Shibanuma A, Yasuoka J, Jimba M.	A Mismatch between High-Risk Behaviors and Screening of Infectious Diseases among People Who Inject Drugs in Dar es Salaam, Tanzania. <i>PLoS One</i> . 2016 Feb 5; 11(2):e0148598.
110	Mlunde LB, Sunguya BF, Mbwapo JK, Ubuguyu OS, Yasuoka J, Jimba M.	Association of opioid agonist therapy with the initiation of antiretroviral therapy - a systematic review. <i>Int J Infect Dis</i> . 2016 Mar 29; 46:27-33.
111	Mlunde LB, Sunguya BF, Mbwapo JK, Ubuguyu OS, Yasuoka J, Jimba M.	Association of opioid agonist therapy with the initiation of antiretroviral therapy-a systematic review. <i>International Journal of Infectious Diseases</i> . 2016 May 31; 46:27-33.
112	Moen BE, Kayumba A, Sakwari G, Mamuya SH, Bråtveit M.	Endotoxin, dust and exhaled nitrogen oxide among hand pickers of coffee; a cross-sectional study. <i>J Occup Med Toxicol</i> . 2016 Apr 12; 11:17.
113	Moen BE, Kayumba A, Sakwari G, Mamuya SH, Bråtveit M.	Endotoxin, dust and exhaled nitrogen oxide among hand pickers of coffee; a cross-sectional study. <i>Journal of Occupational Medicine and Toxicology</i> . 2016 Apr 12; 11(1):1.
114	Mohamed H, Clasen T, Njee RM, Malebo HM, Mbuligwe S, Brown J.	Microbiological effectiveness of household water treatment technologies under field use conditions in rural Tanzania. <i>Trop Med Int Health</i> . 2016 Jan; 21(1):33-40.
115	Mohamed Y. Janabi, Patricia Munseri, Said Aboud, Eric Sandstrom, Muhammad Bakari.	Low prevalence of detectable serum cardiac troponin I among healthy Tanzanian adults: observational study. <i>Tanzania Journal of Health Research</i> 17.1; 2015.
116	Mohamed, H, Szarowski, DH, Lepak, LA, Spencer, MG, Martin, DL, Caggana, M, Turner, JN. (2016).	Purification of PCR-Inhibitory Components by Cellulose Acetate Membranes. June, 13, 15.
117	Mohammad Ali Shah, Muhammad Shafiq, Mian Amjad Ali, Shakil Ahmad Shah, Irfan Aziz.	Treatment Of Unstable Distal Radius Fractures By Percutaneous Pinning And Plaster Cast Immobilization. <i>Gomal Journal of Medical Sciences</i> 13.3; 2015.
118	Mohd Eksan Sairin, Noorizan Yahya, Chew Yok Kuan, Mohd Razif Mohamad Yunuse, Mohamad Khir Abdullah.	Management of a Rare Lymphoepithelial Carcinoma of the Submandibular Gland in Elderly. <i>Indian Journal of Otolaryngology and Head & Neck Surgery</i> 2015: 1-3.

119	Molyneux S, Sariola S, Allman D, Dijkstra M, Gichuru E, Graham S, Kamuya D, Gakii G, Kayemba B, Kombo B, Mabwambo J, Maleche A.	Public/community engagement in health research with men who have sex with men in sub-Saharan Africa: challenges and opportunities. Health Research Policy and Systems. 2016 May 27; 14(1):1.
122	Morejohn, Dwight P., et al.	Adjustable clamp systems and methods. U.S. Patent No. 9,072,522. 7 Jul. 2015.
121	Mori, Amani Thomas, Ole Frithjof Norheim, and Bjarne Robberstad.	Budget Impact Analysis of Using Dihydroartemisinin-Piperaquine to Treat Uncomplicated Malaria in Children in Tanzania. Pharmacoeconomics 2015: 1-12.
122	Mori AT, Norheim OF, Robberstad B.	Budget Impact Analysis of Using Dihydroartemisinin-Piperaquine to Treat Uncomplicated Malaria in Children in Tanzania. Pharmacoeconomics. 2016 Mar; 34(3):303-14.
123	Moshy, J., et al.	Ameloblastoma in Tanzania: A retrospective analysis of histological records. Tanzania Dental Journal 9.2; 2015: 2-4.
124	Moshy, Jeremiah, et al.	Platelets Levels before and after Surgical Intervention in Patients with Oral and Maxillofacial Tumors at MNH, Tanzania. Surgical Science 6.01; 2015: 7.
125	Mselle, Lilian T, and Thecla W. Kohi.	Living with constant leaking of urine and odour: thematic analysis of socio-cultural experiences of women affected by obstetric fistula in rural Tanzania. BMC women's health 15.1; 2015: 107.
126	Mshana SE, Falgenhauer L, Mirambo MM, Mushi MF, Moremi N, Julius R, Seni J, Imirzalioglu C, Matee M, Chakraborty T.	Predictors of bla CTX-M-15 in varieties of Escherichia coli genotypes from humans in community settings in Mwanza, Tanzania. BMC infectious diseases. 2016 Apr 29; 16(1):1.
127	Mssusa AK, Fimbo AM, Nkayamba AF, Irunde HF, Sillo HB, Shewiyo DH, Hill G, Minzi OM.	Safety Profile of Artemether-Lumefantrine: A Cohort Event Monitoring Study in Public Health Facilities in Tanzania. Clin Drug Investig. 2016 May; 36(5):401-11.
128	Mugonzibwa, E A, and P G M Rugarababu.	Eruption pattern of permanent teeth in Tanzania children and adolescents in Dar es Salaam. Tanzania Dental Journal 6.1; 2015: 39-46.
129	Muhammad Shafiq, Ghulam A. Hussain, Lauri Kütt, Nagy I. Elkalashy, Matti Lehtonen.	Partial discharge diagnostic system for smart distribution networks using directionally calibrated induction sensors. Electric Power Systems Research 119; 2015: 447-461.
130	Muhammad Shafiq, Ravi Sastri Ayyagari, Mohammad Ehaab, Murat Vural.	Multiaxial yield surface of transversely isotropic foams: Part II—Experimental. Journal of the Mechanics and Physics of Solids 76; 2015: 224-236.

131	Mulawa M, Kajula LJ, Yamanis TJ, Balvanz P, Kilonzo MN, Maman S.	Perpetration and Victimization of Intimate Partner Violence Among Young Men and Women in Dar es Salaam, Tanzania. <i>J Interpers Violence</i> . 2016 Jan 21.
132	Mulawa M, Yamanis TJ, Balvanz P, Kajula LJ, Maman S.	Comparing Perceptions with Actual Reports of Close Friend's HIV Testing Behavior Among Urban Tanzanian Men. <i>AIDS Behav</i> . 2016 Feb 15.
133	Mulawa M, Yamanis TJ, Hill LM, Balvanz P, Kajula LJ, Maman S.	Evidence of social network influence on multiple HIV risk behaviors and normative beliefs among young Tanzanian men. <i>Soc Sci Med</i> . 2016 Mar; 153:35-43.
134	Mulder NJ, Adebisi E, Alami R, Benkahla A, Brandful J, Doumbia S, Everett D, Fadlilmola FM, Gaboun F, Gaseitsiwe S, Ghazal H, Hazelhurst S, Hide W, Ibrahimi A, Jauferally Fakim Y, Jongeneel CV, Joubert F, Kassim S, Kayondo J, Kumuthini J, Lyantagaye S, Makani J, Mansour Alzohairy A, Masiga D, Moussa A, Nash O, Ouwe Missi Oukem-Boyer O, Owusu-Dabo E, Panji S, Patterson H, Radouani F, Sadki K, Seghrouchni F, Tasthan Bishop Ö, Tiffin N, Ulena N; H3ABioNet Consortium, Adebisi M, Ahmed AE, Ahmed RI, Alearts M, Alibi M, Aron S, Baichoo S, Bendou H, Botha G, Brown D, Chimusa E, Christoffels A, Cornick J, Entfellner JB, Fields C, Fischer A, Gamielien J, Ghedira K, Ghouila A, Ho Sui S, Isewon I, Isokpehi R, Dashti MJ, Kamng'ona A, Khetani RS, Kiran A, Kulohoma B, Kumwenda B, Lapine D, Mainzer LS, Maslamoney S, Mbiyavanga M, Meintjes A, Mlyango FE, Mmbando B, Mohammed SA, Mpangase P, Msefula C, Mtatiro SN, Mugutso D, Mungloo-Dilmohammud Z, Musicha P, Nembaware V, Osamor VC, Oyelade J, Rendon G, Salazar GA, Salifu SP, Sangeda R, Souiai O, Van Heusden P, Wele M. H3ABioNet,	A sustainable pan-African bioinformatics network for human heredity and health in Africa. <i>Genome Res</i> . 2016 Feb; 26(2):271-7.

135	Mushi, Novatus F., Ester Innocent, and Abdul W. Kidukuli.	Cytotoxic and antimicrobial activities of substituted phenanthrenes from the roots of Combretum adenogonium Steud Ex A. Rich (Combretaceae). Journal of Intercultural Ethnopharmacology 4.1; 2015: 52.
136	Mutagonda RF, Kamuhabwa AA, Minzi OM, Massawe SN, Maganda BA, Aklillu E.	Malaria prevalence, severity and treatment outcome in relation to day 7 lumefantrine plasma concentration in pregnant women. Malaria journal. 2016 May 13; 15(1):1.
137	Muthaiah Shellaiah a, Turibius Simon b, Venkatesan Srinivasadesikan c, Chein-Ming Lin b, Kien Wen Sun *ad, Fu-Hsiang Ko b, Ming-Chang Lin c and Hong-Cheu Lin b Yeom T, Simon T, Zhang T, Zhang M, North M, Cui T.	Enhanced heat transfer of heat sink channels with micro pin fin roughened walls. International Journal of Heat and Mass Transfer, 2016: 92, 617-627.
138	Mwaiswelo R, Ngasala BE, Jovel I, Gosling R, Premji Z, Poirot E, Mmbando BP, Björkman A, Mårtensson A.	Safety of a single low-dose of primaquine in addition to standard artemether-lumefantrine regimen for treatment of acute uncomplicated Plasmodium falciparum malaria in Tanzania. Malaria Journal. 2016 Jun 10; 15(1):1.
139	Mwambete, Kennedy D.	Targeting microbial virulence factors: potential alternative to evade the antimicrobial resistance threats. Strategies 4: 5.
140	Mwambete, Kennedy Daniel, and Wilbard Semvua Stephen.	ANTIMICROBIAL RESISTANCE PROFILES OF BACTERIA ISOLATED FROM CHICKEN DROPPINGS IN DAR ES SALAAM. International Journal of Pharmacy and Pharmaceutical Sciences 7.9; 2015.
141	Mwansisya, Tumbwene Elieza, Anne Outwater, and Zhening Liu.	Perceived barriers on utilization of mental health services among adults. Journal of Public Mental Health 14/2.
142	Ngaile JE, Msaki PK, Kazema RR, Schreiner LJ.	Initial Investigation of Factors Influencing Radiation Dose to Patients Undergoing Barium-Based Fluoroscopy Procedures in Tanzania. Radiation Protection Dosimetry. 2016 Jun 16.
143	Ngalesoni FN, Ruhago GM, Mori AT, Robberstad B, Norheim OF.	Cost-effectiveness of medical primary prevention strategies to reduce absolute risk of cardiovascular disease in Tanzania: a Markov modelling study. BMC health services research. 2016 May 17; 16(1):1.

144	Ngwa W, Ngoma T, Zietman A, Mayr N, Elzawawy A, Winningham TA, Balogun O, Enwerem-Bromson N, Ntizimira C, Olopade OI, Oluwole D, Odedina F, Williams M, Flanigan J, Asana L, Ngwa K, Avery S, Pollard JM, Roland T, Funwi-Gabga N, Mbarika V, Hardenbergh P, Winkfield K, Pipman Y, Stefan C, Ngoma M, Mohammed S, Katz M, Erno S, Moni J, Fitzgerald T, Tonlaar N, Efstathiou J, Gierga D, Ayo C, Knaul F, Gospodarowicz M, Makrigiorgos GM, Nguyen PL.	Closing the Cancer Divide Through Ubuntu: Information and Communication Technology-Powered Models for Global Radiation Oncology. Int J Radiat Oncol Biol Phys. 2016 Mar 1; 94(3):440-9.
145	Niaz Akhtar, Majid, et al.	Investigations of Structural and Magnetic Properties of Nanostructured Ni _{0.5} + xZn _{0.5} □ xFe ₂ O ₄ Magnetic Feeders for CSEM Application. International Journal of Applied Ceramic Technology 12.3; 2015: 625-637.
146	Njelekela, MarinaA, et al.	Knowledge and attitudes towards obesity among primary school children in Dar es Salaam, Tanzania. Nigerian medical journal: journal of the Nigeria Medical Association 56.2; 2015: 103.
147	Nondo, Ramadhani SO, et al.	Ethnobotanical survey and in vitro antiplasmodial activity of medicinal plants used to treat malaria in Kagera and Lindi regions, Tanzania. Journal of Medicinal Plants Research 9.6; 2015: 179-192.
148	Nondo, Ramadhani SO, et al.	Evaluation of the cytotoxic activity of extracts from medicinal plants used for the treatment of malaria in Kagera and Lindi regions, Tanzania. Journal of Applied Pharmaceutical Science Vol 5.04; 2015: 007-012.
149	Nondo RS, Erasto P, Moshi MJ, Zacharia A, Masimba PJ, Kidukuli AW.	In vivo antimalarial activity of extracts of Tanzanian medicinal plants used for the treatment of malaria. Journal of advanced pharmaceutical technology & research. 2016 Apr; 7(2):59.
150	Noorani M, Ramaiya K, Manji K.	Glycaemic control in type 1 diabetes mellitus among children and adolescents in a resource limited setting in Dar es Salaam-Tanzania. BMC endocrine disorders. 2016 May 31; 16(1):1.
151	Noorelawati Yahya, Masitah Shahrill.	The strategies used in solving algebra by secondary school repeating students. Procedia-Social and Behavioral Sciences 186; 2015: 1192-1200.
152	Norshafika Yahya, Zaki Yamani Zakaria, Noorhalieza Ali, Mazura Jusoh.	Effect of Coolant Temperature on Progressive Freeze Concentration of Refined, Bleached and Deodorised Palm Oil based on Process Efficiency and Heat Transfer. Jurnal Teknologi 74.7; 2015.

153	Nzobo, Baraka J, Billy E. Ngasala, and Charles M. Kihamia.	Prevalence of asymptomatic malaria infection and use of different malaria control measures among primary school children in Morogoro Municipality, Tanzania. <i>Malaria journal</i> 14.1; 2015.
154	Oberthuer, André, et al.	Revised risk estimation and treatment stratification of low-and intermediate-risk neuroblastoma patients by integrating clinical and molecular prognostic markers. <i>Clinical Cancer Research</i> 21.8; 2015: 1904-1915.
155	Olofin IO, Liu E, Manji KP, Danaei G, Duggan C, Aboud S, Spiegelman D, Fawzi WW.	Active Tuberculosis in HIV-Exposed Tanzanian Children up to 2 years of Age: Early-Life Nutrition, Multivitamin Supplementation and Other Potential Risk Factors. <i>J Trop Pediatr.</i> 2016 Feb; 62(1):29-37.
156	Ombeni W, Kamuhabwa AR.	Lipid Profile in HIV-Infected Patients Using First-Line Antiretroviral Drugs. <i>J Int Assoc Provid AIDS Care.</i> 2016 Mar-Apr; 15(2):164-71.
157	Ombeni, Walter, and Appolinary R. Kamuhabwa.	Lipid Profile in HIV-Infected Patients Using First-Line Antiretroviral Drugs. <i>Journal of the International Association of Providers of AIDS Care (JIAPAC)</i> (2015): 2325957415614642
158	O'Sullivan PS, Mkony C, Beard J, Irby DM.	Identity formation and motivation of new faculty developers: A replication study in a resource constrained university. <i>Med Teach.</i> 2016 Feb 8:1-7.
159	Ousman K, Polomano RC, Seloilwe E, Odero T, Tarimo E, Mashalla YJ, Voss JG, O'Malley G, Chapman SA, Gachuno O, Manabe Y.	Interprofessional Fellowship Training for Emerging Global Health Leaders in Africa to Improve HIV Prevention and Care: The Afya Bora Consortium. <i>Journal of the Association of Nurses in AIDS Care.</i> 2016 Jun 30; 27(3):331-43.
160	Patel AA, Ciccone O, Njau A, Shanungu S, Grollnek AK, Fredrick F, Hodgeman R, Sideridis GD, Kapur K, Harini C, Kija E, Peters JM.	A pediatric epilepsy diagnostic tool for use in resource-limited settings: A pilot study. <i>Epilepsy Behav.</i> 2016 Apr 15; 59:57-61.
161	Petraro P, Duggan C, Spiegelman D, Hertzmark E, Makubi A, Chalamilla G, Siril H, Sando D, Aboud S, Fawzi WW.	Determinants of Anemia among Human Immunodeficiency Virus-Positive Adults at Care and Treatment Clinics in Dar es Salaam, Tanzania. <i>Am J Trop Med Hyg</i> 2016 Feb 3; 94(2):384-92.
162	Protas J, Tarimo D, Moshiri C.	Determinants of timely uptake of ITN and SP (IPT) and pregnancy time protected against malaria in Bukoba, Tanzania. <i>BMC Research Notes.</i> 2016 Jun 21; 9(1):1.
163	Ramadhani, Fitri, and AsiahHamzah.	"PERILAKU KONSUMEN PELAYANAN KESEHATAN BERHUBUNGAN DENGAN PEMANFAATAN ANTENATAL CARE DI PUSKESMAS BINAMU KOTA." 2015.

164	Ratliff EA, Kaduri P, Masao F, Mbwanbo JK, McCurdy SA.	Harm reduction as a complex adaptive system: A dynamic framework for analyzing Tanzanian policies concerning heroin use. <i>Int J Drug Policy</i> . 2016 Apr; 30:7-16.
165	Ravi, K, Schrinner, T, Grossmann, H, Ray, A, & Tandon, R. (2016).	Improving Adsorption Deinking by Identifying the Optimum Balance between Polymer Beads and Deinking Chemistry. <i>BioResources</i> , 11(1), 1664-1671.
166	Reither K, Manyama C, Clowes P, Rachow A, Mapamba D, Steiner A, Ross A, Mfinanga E, Sasamalo M, Nsubuga M, Aloï F.	Xpert MTB/RIF assay for diagnosis of pulmonary tuberculosis in children: A prospective, multi-centre evaluation. <i>Journal of Infection</i> 70.4; 2015: 392-399.
167	Reynolds TA, Noble J, Paschal G, Sawe HR, Sohoni A, Shah S, Nicks B, Mwafongo V, Stein J.	Bedside ultrasound training at Muhimbili National Hospital in Dar es Salaam, Tanzania and Hospital San Carlos in Chiapas, Mexico. <i>African Journal of Emergency Medicine</i> . 2016 Apr 7.
168	Ossenkoppele R, Schonhaut DR, Baker SL, O'Neil JP, Janabi M, Ghosh PM, Santos M, Miller ZA, Bettcher BM, Gorno-Tempini ML, Miller BL	Ghosh BA, Miguel Santos MD, Zachary A. Tau, amyloid, and hypometabolism in a patient with posterior cortical atrophy. <i>Annals of neurology</i> 77.2 (2015): 338-342.
169	Romore I, Njau RJ, Semali I, Mwisongo A, Ba Nguz A, Mshinda H, Tanner M, Abdulla S.	Policy analysis for deciding on a malaria vaccine RTS, S in Tanzania. <i>Malar J</i> . 2016 Mar 8; 15(1):143.
170	Runyoro DK, Joseph CC, Ngassapa OD, Darokar MP, Srivastava SK, Matee MI, Wright CW.	Anticandida Agents from a Tanzanian Plant <i>Albiziaanthelmintica</i> .” <i>Journal of the Chinese Chemical Society</i> 62.8; 2015: 669-674.
171	Ruparelia K, Abubakar A, Badoe E, Bakare M, Visser K, Chugani DC, Chugani HT, Donald KA, Wilmshurst JM, Shih A, Skuse D, Newton CR.	Autism Spectrum Disorders in Africa: Current Challenges in Identification, Assessment, and Treatment: A Report on the International Child Neurology Association Meeting on ASD in Africa, Ghana, April 3-5, 2014. <i>J Child Neurol</i> . 2016 Mar 15.
172	S. Lambert-Niclot ¹ , E. C. George, A. Pozniak, E. White, C. Schwimmer, H. Jessen, M. Johnson, D.Dunn, C. F. Perno, B. Clotet, A. Plettenberg, A. Blaxhult, L. Palmisano, L. Wittkop, V. Calvez, A. G. Marcelin ¹ and F. Raffi.	Antiretroviral resistance at virological failure in the NEAT 001/ANRS 143 trial: raltegravir plus darunavir/ritonavir or tenofovir/emtricitabine plus darunavir/ritonavir as first-line ART.” <i>Journal of Antimicrobial Chemotherapy</i> . 2015: dkv427.
173	Saada A.Seifl, Thecla W.Kohi1, Lilian T. Mselle.	Caretaker's Perceptions on Caretaker-Adolescent Communication on Sexual and Reproductive Health in Unguja-Zanzibar: Implication for Intervention

174	Saidi H, Smart LR, Kamugisha E, Ambrose EE, Soka D, Peck RN, Makani J.	Complications of sickle cell anaemia in children in Northwestern Tanzania. <i>Hematology</i> . 2016 Feb 17:1-9.
175	Sairin ME, Yahya N, Kuan CY, Yunus MR, Abdullah MK	Management of a Rare Lymphoepithelial Carcinoma of the Submandibular Gland in Elderly. <i>Indian Journal of Otolaryngology and Head & Neck Surgery</i> 2015: 1-3.
176	Saleem HT, Mushi D, Hassan S, Douglas Bruce R, Cooke A, Mbwanbo J, Lambdin BH.	“Can’t you initiate me here? Challenges to timely initiation on antiretroviral therapy among methadone clients in Dar es Salaam, Tanzania. <i>Int J Drug Policy</i> . 2016 Apr; 30:59-65.
177	Samsuri S, Amran NA, Yahya N, Jusoh M.	Review on Progressive Freeze Concentration Designs. <i>Chemical Engineering Communications</i> . 2016 Mar 3; 203(3):345-63.
178	Sandström E, Linnér L, Stambulova N.	Career profiles of athlete–coach relationships: Descriptions and interpretations. <i>International journal of Sports Science & Coaching</i> . 2016 Apr 22:1747954116645012
179	Sawe HR, Mfinanga JA, Mwafongo V, Reynolds TA, Runyon MS.	The test characteristics of physician clinical gestalt for determining the presence and severity of anaemia in patients seen at the emergency department of a tertiary referral hospital in Tanzania. <i>Emerg Med J</i> . 2016 May; 33(5):338-44
180	Sawe HR, Mfinanga JA, Ringo FH, Mwafongo V, Reynolds TA, Runyon MS.	HIV counselling and testing practices for children seen in an urban emergency department of a tertiary referral hospital in Dar es Salaam, Tanzania: a retrospective cross-sectional study. <i>BMJ Open</i> . 2016 Feb 15; 6(2):e010298.
181	Sawe HR, Murray B, Jamieson J.	Compassion fatigue in emergency providers: Experiences from Sub-Saharan Africa. <i>Emerg Med Australas</i> . 2016 Feb; 28(1):109-11.
182	Schein Y, Harding JC, Merbs SL, Cassard SD, Mabula K, Othman MS, West SK, Gower EW.	Corneal Sensitivity and Presence of Pathogenic Organisms Among Participants Who Have Undergone Trichiasis Surgery Differ by Surgical Outcome. <i>Cornea</i> . 2016 Apr 1; 35(4):513-8.
183	Schober M, Mtonga R, Valenti M, Hametner S.	Improving care for victims of violence in resource-poor settings such as Lusaka, Zambia: results of a low-budget intervention. <i>Injury prevention</i> . 2016 Apr 1; 22(2):144-8.
184	Sedgh G, Filippi V, Owolabi OO, Singh SD, Askew I, Bankole A, Benson J, Rossier C, Pembe AB, Adewole I, Ganatra B, MacDonagh S.	Insights from an expert group meeting on the definition and measurement of unsafe abortion. <i>Int J Gynaecol Obstet</i> . 2016 Mar 3. pii: S0020-7292(16)00102-8.

185	Seif SA, Kohi TW, Mselle LT.	Caretaker's Perceptions on Caretaker-Adolescent Communication on Sexual and Reproductive Health in Unguja-Zanzibar: Implication for Intervention. <i>Health</i> . 2016 Apr 11; 8(06):518.
186	Seni J, Falgenhauer L, Simeo N, Mirambo MM, Imirzalioglu C, Matee M, Rweyemamu M, Chakraborty T, Mshana SE.	Multiple ESBL-Producing <i>Escherichia coli</i> Sequence Types Carrying Quinolone and Aminoglycoside Resistance Genes Circulating in Companion and Domestic Farm Animals in Mwanza, Tanzania, Harbor Commonly Occurring Plasmids. <i>Front Microbiol</i> . 2016 Feb 11; 7:142.
187	Senkoro M, Mfinanga S, Egwaga S, Mtandu R, Kamara DV, Basra D, Fundikira L, Kahwa A, Shirima R, Range N, Hinderaker SG.	Prevalence of pulmonary tuberculosis in adult population of Tanzania: a national survey, 2012. <i>The International Journal of Tuberculosis and Lung Disease</i> . 2016 Jun 1.
188	Shafiq, Majid MD, MPH; Frick, Kevin D. PhD; Lee, Hans MD; Yarmus, Lonny MD; Feller-Kopman, David J. MD.	Management of Malignant Pleural Effusion: A Cost-Utility Analysis. <i>Journal of bronchology & interventional pulmonology</i> 22.3; 2015: 215-225.
189	Shafiq, Muhammad and Viertl, Reinhard.	Empirical reliability functions based on fuzzy life time data. <i>Journal of Intelligent & Fuzzy Systems</i> 28.2; 2015: 707-711.
188	Shafiq, Muhammad, Youngmee Jung, and Soo Hyun Kim.	Stem cell recruitment, angiogenesis, and tissue regeneration in substance P-conjugated poly (l-lactide-co-caprolactone) nonwoven meshes. <i>Journal of Biomedical Materials Research Part A</i> 103.8; 2015: 2673-2688.
189	Shafiq, Muhammad; Lee, Sang-Hoon; Jung, Youngmee; Hyun Kim, Soo.	Strategies for recruitment of stem cells to treat myocardial infarction. <i>Current pharmaceutical design</i> 21.12, 2015: 1584-1597.
190	Shekalaghe, Biatha A, and David P Urassa.	Body Mass Index and self perceptions of weight status among outpatients attending hospital health facilities in Dar es Salaam. <i>East African Journal of Public Health</i> 12.1, 2015: 940-947.
191	Shellaiah, M, Simon, T, Sun, KW, & Ko, FH. (2016).	Simple bare gold nanoparticles for rapid colorimetric detection of Cr ³⁺ ions in aqueous medium with real sample applications. <i>Sensors and Actuators B: Chemical</i> , 226, 44-51.
192	Shimoda K, Leshabari S, Horiuchi S, Shimpuku Y, Tashiro J.	Midwives' intrapartum monitoring process and management resulting in emergency referrals in Tanzania: a qualitative study. <i>BMC pregnancy and childbirth</i> . 2015 Oct 8; 15(1):1.
193	Siti Haizum Md Zamani, Norshafika Yahya, Zaki Yamani Zakaria, Mazura Jusoh.	"Fractional Freezing of Ethanol and Water Mixture." <i>Jurnal Teknologi</i> 74.7, 2015.

194	Sobota RS, Stein CM, Kodaman N, Scheinfeldt LB, Maro I, Wieland-Alter W, Igo RP Jr, Magohe A, Malone LL, Chervenak K, Hall NB, Modongo C, Zetola N, Matee M, Joloba M, Froment A, Nyambo TB, Moore JH, Scott WK, Lahey T, Boom WH, von Reyn CF, Tishkoff SA, Sirugo G, Williams SM.	A Locus at 5q33.3 Confers Resistance to Tuberculosis in Highly Susceptible Individuals. <i>Am J Hum Genet.</i> 2016 Mar 3; 98(3):514-24.
195	Sukums, Felix, Nathan Mensah, Rose Mpembeni, Siriel Massawe, Els Duysburgh, Afua Williams, Jens Kaltschmidt, Svetla Loukanova, Walter E. Haefeli, Antje Blank.	Promising adoption of an electronic clinical decision support system for antenatal and intrapartum care in rural primary healthcare facilities in sub-Saharan Africa: The QUALMAT experience. <i>International journal of medical informatics</i> 84.9, 2015: 647-657.
196	Sztam KA, Liu E, Manji KP, Kupka R, Kisenge R, Aboud S, Fawzi WW, Bosch RJ, Duggan CP.	Maternal Antiretroviral Therapy Is Associated with Lower Risk of Diarrhea in Early Childhood. <i>The Journal of pediatrics.</i> 2016 May 28.
197	Tarimo EA, Bakari M, Kakoko DC, Kohi TW, Mhalu F, Sandstrom E, Kulane A.	Motivations to participate in a Phase I/II HIV vaccine trial: A descriptive study from Dar es Salaam, Tanzania. <i>BMC Public Health.</i> 2016 Feb 24; 16(1):182
198	Tariq Yasin, Sara Khan, Muhammad Shafiq, Rohama Gill.	Radiation crosslinking of styrene–butadiene rubber containing waste tire rubber and polyfunctional monomers.” <i>Radiation Physics and Chemistry</i> 106 2015: 343-347.
199	Trishul Siddharthan, Kaushik Ramaiya, Gerald Yonga, Gerald N. Mutungi, Tracy L. Rabin, Justin M. List, Sandeep P. Kishore, Jeremy I. Schwartz.	Noncommunicable Diseases in East Africa: Assessing the Gaps in Care and identifying Opportunities for Improvement. <i>Health Affairs</i> 34.9 2015: 1506-1513.
200	Ubuguyu O, Tran OC, Bruce RD, Masao F, Nyandindi C, Sabuni N, McCurdy S, Mbwapo J, Lambdin BH.	Improvements in health-related quality of life among methadone maintenance clients in Dar es Salaam, Tanzania. <i>International Journal of Drug Policy.</i> 2016 Apr 30; 30:74-81.
201	Urassa DP, LeFevre A, George A, Frumence G, Mpembeni R, Chitama D, Mohan D, Feldhaus I, Kilewo C, Baqui AH, Winch PJ.	Influence of age on community health worker’s knowledge and service provision for maternal, newborn, and child health in Morogoro region, Tanzania.” <i>East African Journal of Public Health</i> 12.1 2015: 964-974.
202	Urio F, Lyimo M, Mtatiro SN, Cox SE, Makani J.	High prevalence of individuals with low concentration of fetal hemoglobin in F cells in sickle cell anemia in Tanzania. <i>American journal of hematology.</i> 2016 May 1.

203	Vagi KJ, Brookmeyer KA, Gladden RM, Chiang LF, Brooks A, Nyunt MZ, Kwesigabo G, Mercy JA, Dahlberg LL.	Sexual Violence Against Female and Male Children in the United Republic of Tanzania. Violence against Women. 2016 Mar 14.
204	Muthu V, NavaneethaKrishnan SV, Panimayam AF, Ramaiya K, AyyaSamy M.	Spark-assisted HCCI engine using hydrous methanol as a fuel: an ANN approach. Biofuels, Bioproducts and Biorefining. 2015 Jul 1; 9(4):344-57.
205	Walker RW, Wakefield K, Gray WK, Jusabani A, Swai M, Mugusi F.	Case-fatality and disability in the Tanzanian Stroke Incidence Project cohort. Acta Neurol Scand. 2016 Jan; 133(1):49-54.
206	West C, Ploth D, Fonner V, Mbwapo J, Fredrick F, Sweat M.	Developing a Screening Algorithm for Type II Diabetes Mellitus in the Resource-Limited Setting of Rural Tanzania. Am J Med Sci. 2016 Apr; 351(4):408-15.
207	Wylie BJ, Kishashu Y, Matechi E, Zhou Z, Coull B, Abioye AI, Dionisio KL, Mugusi F, Premji Z, Fawzi W, Hauser R, Ezzati M.	Maternal exposure to carbon monoxide and fine particulate matter during pregnancy in an urban Tanzanian cohort. Indoor Air. 2016 Feb 16.
208	Yahya, N, Hidouri, A, CHrigui, M, Boushaki, T, & Omri, A.	LES modeling of non-premixed turbulent Oxy-Fuel combustion supplied by three separated jets. Combustion Science and Technology, (just-accepted).
209	Yatim B, Masdar A, Mohamad Yusof A, Tang Suet Ping S, Yahya N, Maaya M.	Comparison of ease of intubation between GlideScope® and C-MAC® Videolaryngoscopes for novices. Brunei International Medical Journal. 2015; 11(3):139-46.
210	Yu H, Le HM, Kaale E, Long KD, Layloff T, Lumetta SS, Cunningham BT.	Characterization of drug authenticity using thin-layer chromatography imaging with a mobile phone. Journal of pharmaceutical and biomedical analysis. 2016 Jun 5; 125:85-93.
211	Zamudio-Haas S, Mahenge B, Saleem H, Mbwapo J, Lambdin BH.	Generating trust: Programmatic strategies to reach women who inject drugs with harm reduction services in Dar es Salaam, Tanzania. Int J Drug Policy. 2016 Apr; 30:43-51.
212	Rwezaula, S.S., Magesa, P.M., Mgaya, J., Massawe, A., Newton, C.R., Marlow, T., Cox, S.E., Gallivan, M., Davis, B., Lowe, B. and Roberts, D.J.	Newborn screening for hemoglobinopathies at Muhimbili National Hospital, Dar es Salaam–Tanzania. <i>East African Journal of Public Health</i> , 12(1), 948-955. 2015.
213	Ngaeje, M., Chinenere, F., Mageasa, A. and Makani, J., 2016.	A Case of a Child with Chronic Myeloid Leukemia Presenting with Vision and Hearing Loss. <i>Journal of Blood Disorders & Transfusion</i> , 2016
214	Makani, J., Mgaya, J., Balandya, E., Msami, K., Soka, D., Cox, S.E., Komba, A.N., Rwezaula, S., Meda, E., Muturi, D. and Kitundu, J.	Bacteraemia in sickle cell anaemia is associated with low hemoglobin: a report of 890 admissions to a tertiary hospital in Tanzania.” <i>British journal of hematology</i> . 171.2: 273-276. 2015

215	Wonkam, A., Makani, J., Ofori-Aquah, S., Nnodu, O.E., Treadwell, M., Royal, C. and Ohene-Frempong, K.	“Sickle cell disease and H3Africa: enhancing genomic research on cardiovascular diseases in African patients.” <i>Cardiovascular journal of Africa</i> 26.2 H3Africa Suppl: S50. 2015
216	Makani J.	“Knowledge management, research data management, and university scholarship: Towards an integrated institutional research data management support-system framework.” <i>VINE</i> 45.3: 344-359.2015
217	Adekile, A. and Makani, J., 2016.	Sickle Cell Disease in Africa and the Arabian Peninsula: Current Management and Challenges. In <i>Sickle Cell Anemia</i> (pp. 339-370). Springer International Publishing.
218	L’Esperance, V. S., T. Ekong, S. E. Cox, J. Makani, C. R. Newton, D. Soka, A. Komba, F. J. Kirkham, and C. M. Hill.	“Nocturnal Haemoglobin Oxygen Desaturation in Urban and Rural East African Paediatric Cohorts with and without Sickle Cell Anaemia: A Cross-Sectional Study.” <i>Arch Dis Child</i> 101, no. 4: 352-5.2016
219	Ikama, S. M., J. Makani, X. Jouven, and G. Kimbally-Kaky.	“Permanent Cardiac Pacing: First Congolese Experiment.” <i>Pan Afr Med J</i> 20: 381. 2015
220	Ikama, S. M., B. M. Nsitou, J. Makani, B. Ellenga-Mbolla, L. I. Ondze-Kafata, S. F. Mongo-Ngamami, M. Nkalla-Lambi, T. R. Gombet, and G. Kimbally-Kaky.	“[Practice of Ambulatory Measurement of Arterial Pressure in Brazzaville (Congo): Preliminary Data].” <i>Pan Afr Med J</i> 20: 353. 2015
221	Mtatiro, S.N., Makani, J., Mmbando, B., Thein, S.L., Menzel, S. and Cox, S.E..	“Genetic variants at HbF modifier loci moderate anemia and leukocytosis in sickle cell disease in Tanzania.” <i>American journal of hematology</i> 90.1 2015
222	Marealle, A., Makani, J., Prentice, A., Kamuhabwa, A., Sasi, P., Minzi, O., Siervo, M., Cox, S. and Wassell, S.	“Systemic Nitric Oxide (NO) Production is increased in Children with Sickle Cell Disease (SCD) Receiving Fortified Supplementary Food.” <i>The FASEB Journal</i> 29.1 Supplement: LB276.2015Surgery
223	Ngowi, B. N., O. V. Nyongole, J. S. Mbwapo, and A. K. Mteta.	“Clinicopathological characteristics of urinary bladder cancer as seen at Kilimanjaro Christian Medical Centre, Moshi-Tanzania.” <i>East and Central African Journal of Surgery</i> 20, no. 3: 36-45. 2015
224	Akoko, L.O. and Joseph, A.B., 2015.	Blood utilization in elective surgery in a tertiary hospital in Dar es Salaam, Tanzania. <i>Tanzania Journal of Health Research</i> , 17(4).
225	Nyongole, O.V., Akoko, L.O., Mwanga, A.H., Mchembe, M., Kamala, B. and Mbembati, N.	Blood use in urological surgeries; a six years review at Muhimbili National Hospital, Dar es salaam-Tanzania. <i>Pioneer Medical Journal</i> , Vol. 5, No. 9, 2016

226	Nyongole, O., Akoko, L., Mwanga, A., Mchembe, M., Kamala, B. and Mbembati, N	“Antibiotic use in urological surgeries: a six years review at Muhimbili National Hospital, Dar es salaam-Tanzania.” <i>Pan African Medical Journal</i> 22.226. 2015.
227	Ngowi, B. N., O. V. Nyongole, J. S. Mbwambo, and A. K. Mteta.	“Clinicopathological characteristics of urinary bladder cancer as seen at Kilimanjaro Christian Medical Centre, Moshi-Tanzania.” <i>East and Central African Journal of Surgery</i> 20, no. 3: 36-45.
228	O’Sullivan, Patricia S., Charles Mkony, Jessica Beard, and David M. Irby.	“Identity formation and motivation of new faculty developers: A replication study in a resource constrained university.” <i>Medical Teacher</i> (2016): 1-7.
229	Muzdalifat Abeid, Projectine Muganyizi, Rose Mpembeni, Elisabeth Darj and Pia Axemo.	A community-based intervention for improving healthseeking behavior among sexual violence survivors: a controlled before and after design study in rural Tanzania. <i>Glob Health Action</i> 2015, 8: 28608 - http://dx.doi.org/10.3402/gha.v8.28608
230	Muzdalifat Abeid, Projectine Muganyizi, Sirel Massawe, Rose Mpembeni, Elisabeth Darj and Pia Axemo..	Knowledge and attitude towards rape and child sexual abuse-a community based cross-sectional study in Rural Tanzania. <i>BMC Public Health</i> 04/2015;15(1):428. DOI:10.1186/s12889-015-1757-7
231	Anna Glasier, David Baird, Paul Blumenthal, Sharon Cameron, Ailsa Gebbie, Stefan Gebhardt, Natalie Kapp, Judy Kluge, Patricia Lohr, Projectine Muganyizi, Malika Patel, Gregory Petro, Petrus Steyn and Zephne van der Spuy.	Best practice in postpartum family planning. RCOG, 2015: https://www.rcog.org.uk/bestpracticepapers
232	Anna Glasier, David Baird, Paul Blumenthal, Sharon Cameron, Ailsa Gebbie, Stefan Gebhardt, Natalie Kapp, Judy Kluge, Patricia Lohr, Projectine Muganyizi, Malika Patel, Gregory Petro, Petrus Steyn and Zephne van der Spuy.	Best practice in comprehensive abortion care. RCOG, 2015: https://www.rcog.org.uk/bestpracticepapers
233	August F, (et al.)	“Birth preparedness and complication readiness—a qualitative study among community members in rural Tanzania.” <i>Global health action</i> 8.2015.
234	August F, (et al.)	“Men’s knowledge of obstetric danger signs, birth preparedness and complication readiness in rural Tanzania.” <i>PloS one</i> 10.5: e0125978. 2015
235	August, Furaha, Andrea B. Pembe, Rose Mpembeni, Pia Axemo, and Elisabeth Darj.	“Effectiveness of the Home Based Life Saving Skills training by community health workers on knowledge of danger signs, birth preparedness, complication readiness and facility delivery, among women in Rural Tanzania.” (2016).

236	August, Furaha, Andrea B. Pembe, Rose Mpmembeni, Pia Axemo, and Elisabeth Darj.	“Community health workers can improve male involvement in maternal health: evidence from rural Tanzania.” <i>Global Health Action</i> 9 (2016).
237	Keogh SC, Kimaro G, Muganyizi P, Philbin J, Kahwa A, Ngadaya E, et al. (2015)	Incidence of Induced Abortion and Post-Abortion Care in Tanzania. <i>PLoS ONE</i> 10(9): e0133933. doi:10.1371/journal.pone.0133933
238	Duysburgh, Els, Marleen Temmerman, Maurice Yé, Afua Williams, SirelMassawe, John Williams, Rose Mpmembeni, SvetlaLoukanova, Walter E. Haefeli, and Antje Blank.	“Quality of antenatal and childbirth care in rural health facilities in Burkina Faso, Ghana and Tanzania: an intervention study.” <i>Tropical Medicine & International Health</i> 21, no. 1: 70-83.2016
239	Sedgh, G., Filippi, V., Owolabi, O.O., Singh, S.D., Askew, I., Bankole, A., Benson, J., Rossier, C., Pembe, A.B., Adewole, I. and Ganatra, B., 2016.	Insights from an expert group meeting on the definition and measurement of unsafe abortion. <i>International Journal of Gynecology & Obstetrics</i> . 2016
240	H Litorp, M Rööst, HL Kidanto, L Nyströma, et al.	“The effects of previous cesarean deliveries on severe maternal and adverse perinatal outcomes at a university hospital in Tanzania.” <i>International Journal of Gynecology & Obstetrics</i> (2016).
241	Sawe, H.R., Mfinanga, J.A., Ringo, F.H., Mwafongo, V., Reynolds, T.A. and Runyon, M.S., 2016.	HIV counselling and testing practices for children seen in an urban emergency department of a tertiary referral hospital in Dar es Salaam, Tanzania: a retrospective cross-sectional study. <i>BMJ open</i> , 6(2), p.e010298.
242	Sawe, H.R., Murray, B. and Jamieson, J., 2016.	Compassion fatigue in emergency providers: Experiences from Sub-Saharan Africa. <i>Emergency Medicine Australasia</i> .
243	Bae, C., Geduld, H., Wallis, L.A. and Reynolds, T., 2016.	Professional needs of young Emergency Medicine specialists in Africa: Results of a South Africa, Ethiopia, Tanzania, and Ghana survey. <i>African Journal of Emergency Medicine</i> .
244	Reynolds, T.A., Noble, J., Paschal, G., Sawe, H.R., Sohoni, A., Shah, S., Nicks, B., Mwafongo, V. and Stein, J., 2016.	Bedside ultrasound training at Muhimbili National Hospital in Dar es Salaam, Tanzania and Hospital San Carlos in Chiapas, Mexico. <i>African Journal of Emergency Medicine</i> .
245	Sawe HR, George U, Mfinanga JA, BL Murray.	An Epidemic Is Coming- What has Tanzania learned from Ebola and Cholera?. <i>Tanzania Medical Journal</i> , [S.1.], V. 27, n. 1, p. 1-3, jan. 2016. ISSN 0856-0719.
246	Sawe HR, Mfinanga JA, Mwafongo V, Reynolds TA, Runyon MS.	The test characteristics of physician clinical gestalt for determining the presence and severity of anaemia in patients seen at the emergency department of a tertiary referral hospital in Tanzania. <i>Emerg Med J</i> . 2015 Nov 26;emermed – 2015–204908.

247	Sawe HR, Mfinanga JA, Ringo FH, Mwafongo V, Reynolds TA, Runyon MS, et al. 2015:e108247.	Morbidity and Mortality following Traditional Uvulectomy among Children Presenting to the Muhimbili National Hospital Emergency Department in Dar es Salaam, Tanzania, Morbidity and Mortality following Traditional Uvulectomy among Children Presenting to the Muhimbili National Hospital Emergency Department in Dar es Salaam, Tanzania. <i>Emergency Medicine International</i> , Emergency Medicine International. 2015 Jun 16;2015,
248	Sawe HR, Mfinanga JA, Mwafongo V, Reynolds TA, Runyon MS.	Trends in mortality associated with opening of a full-capacity public emergency department at the main tertiary-level hospital in Tanzania. <i>International Journal of Emergency Medicine</i> . 2015 Jul 22;8(1):24..
249	Njoku, I., Wanin, O., Assey, A., Shabani, H., Ngerageza, J.G., Berlin, C.D. and Härtl, R. Minimally Invasive 2D	Navigation-Assisted Treatment of Thoracolumbar Spinal Fractures in East Africa: A Case Report. <i>Cureus</i> ,8(2). 2016
250	Boniface, R., Museru, L., Kiloloma, O. and Munthali, V.	Factors associated with road traffic injuries in Tanzania. <i>Pan African Medical Journal</i> ,23(46). 2016
251	Haonga, B.T., Mrita, F.S., Ndalama, E.E. and Makupa, J.E., 2015.	Short-term outcome of patients with closed comminuted femoral shaft fracture treated with locking intramedullary sign nail at Muhimbili Orthopaedic Institute in Tanzania. <i>Tanzania Journal of Health Research</i> , 17(3).
252	Kramer, E.J., Shearer, D.W., Marseille, E., Haonga, B., Ngahyoma, J., Eliezer, E. and Morshed, S., 2016.	The Cost of Intramedullary Nailing for Femoral Shaft Fractures in Dar es Salaam, Tanzania. <i>World Journal of Surgery</i> , pp.1-11.
253	Chillo, P., Gerdt, E., Lwakatare, J. and Lutale, J.,	“Increased relative wall thickness is a marker of subclinical cardiac target-organ damage in African diabetic patients.” <i>South African Journal of Diabetes and Vascular Disease</i> , 12(2), pp.83-88. 2015
254	Nagu TJ, Aboud S, Mwiru R, (at al)	Multi Drug and Other Forms of Drug Resistant Tuberculosis Are Uncommon among Treatment Naïve Tuberculosis Patients in Tanzania. <i>PloS one</i> , 10(4), e0118601. 2015.
255	Janabi MY, Munseri P, Aboud S (et al).	“Low prevalence of detectable serum cardiac troponin I among healthy Tanzanian adults: observational study.” <i>Tanzania Journal of Health Research</i> 17.1 2015.
256	Munseri, P.J., Kroidl, A., Nilsson, C., Geldmacher, C., Mann, P., Moshiri, C., Aboud, S., Lyamuya, E., Maboko, L., Missanga, M. and Kaluwa, B., 2015..	Priming with a simplified intradermal HIV-1 DNA vaccine regimen followed by boosting with recombinant HIV-1 MVA vaccine is safe and immunogenic: a phase IIa randomized clinical trial. <i>PloS one</i> , 10(4), p.e0119629

257	Liu E, Makubi A, Drain P, Spiegelman, D., Sando, D., Li, N., Chalamilla, G., Sudfeld, C.R., Hertzmark, E. and Fawzi, W.W	“Tuberculosis incidence rate and risk factors among HIV-infected adults with access to antiretroviral therapy in Tanzania.” <i>AIDS (London, England)</i> 29.11: 1391.2015
258	Lutale, J.J.K., Thordarson, H., Gulam-Abbas, Z., Vetvik, K. and Gerdts, E.	“Prevalence and covariates of electrocardiographic left ventricular hypertrophy in diabetic patients in Tanzania.” <i>South African Journal of Diabetes and Vascular Disease</i> 12.2: 72-78.2015
259	Manji, M., Shayo, G., Mamuya, S., Mpembeni, R., Jusabani, A. and Mugusi, F., 2016. 1.	Lung functions among patients with pulmonary tuberculosis in Dar es Salaam—a cross-sectional study. <i>BMC Pulmonary Medicine</i> , 16(1), p.
260	Buma D, Bakari M, Fawzi W (et al). “.	The Influence of HIV-Status Disclosure on Adherence, Immunological and Virological Outcomes among HIV-Infected Patients Started on Antiretroviral Therapy in Dar-es-Salaam.” <i>Tanzania. J HIV AIDS</i> 1.3 2015
261	<u>Ruggajo P</u> ^{1,2} , <u>Svarstad E</u> ^{2,3} , <u>Leh S</u> ^{2,4} , <u>Marti HP</u> ^{2,3} , <u>Reisæther AV</u> ^{5,6} , <u>Vikse BE</u> ^{2,7} .	Low Birth Weight and Risk of Progression to End Stage Renal Disease in IgA Nephropathy-A Retrospective Registry-Based Cohort Study. <i>PLoS One</i> . 2016
262	Ruggajo, P., Skrunes, R., Svarstad, E., Skjærven, R., Reisæther, A.V. and Vikse, B.E.	“Familial Factors, Low Birth Weight, and Development of ESRD: A Nationwide Registry Study.” <i>American Journal of Kidney Diseases</i> 2015.
263	Walker, R.W., Wakefield, K., Gray, W.K., Jusabani, A., Swai, M. and Mugusi, F., 2016.	Case-fatality and disability in the Tanzanian Stroke Incidence Project cohort. <i>ActaNeurologicaScandinavica</i> , 133(1), pp.49-54.
264	Tarimo, E. A. M., M. Bakari, D. C. V. Kakoko, T. W. Kohi, F. Mhalu, E. Sandstrom, and A. Kulane.	“Motivations to participate in a Phase I/II HIV vaccine trial: A descriptive study from Dar es Salaam, Tanzania.” <i>BMC public health</i> 16, no. 1 (2016): 1.
265	Buma D, Fawzi W, Bakari M (et al)..	“Virological Response Following Anti-Retroviral Therapy Employing Once-A-Day 30mg of Stavudine in HIV-Infected Patients: A 24-Week Randomized Controlled Study in Dar Es Salaam.” <i>Tanzania. J VirolEmerg Dis</i> 2.1 2015
266	Ruggajo, P., Svarstad, E., Leh, S., Marti, H.P., Reisæther, A.V. and Vikse, B.E., 2016.	Low Birth Weight and Risk of Progression to End Stage Renal Disease in IgA Nephropathy—A Retrospective Registry-Based Cohort Study. <i>PloS one</i> , 11(4), p.e0153819.
267	Shayo, G.A., Moshiri, C., Aboud, S., Bakari, M. and Mugusi, F.M..	Acceptability and adherence to Isoniazid preventive therapy in HIV-infected patients clinically screened for latent tuberculosis in Dar es Salaam, Tanzania. <i>BMC infectious diseases</i> , 15(1), p.1. 2015

268	Corinna S, Mendl M, Matuja W, Schmutzhard E and Winkler A;	Community-Based prevalence and Clinical characteristics of febrile seizures in Tanzania <i>Pediatric Research</i> 2015; 77: 591-596
269	Mwidunda SA, Caraban H, Matuja WB, Winkler AS and Ngowi HA;	A school Based Cluster Randomised Health Education Intervention Trial for improving KA Related to Taenia solium Cysticercosis and Taeniasis in Mbulu District, Northern Tanzania <i>PloS ONE</i> 2015;10(2):1-17
270	Schmidt V, Sikasunge CS, Odongo-Aginya E, Simukoko C, Mwanjali G, Alarakol S, Ovuga E, Matuja W, Kihamia C, Löscher T, Winkler AS, Bretzel G	Taenia solium metacestode preparation in rural areas of sub-Saharan Africa: a source for diagnosis and research on cysticercosis. <i>Afri Health Sci</i> 2015;15: 58-67
271	Ratliff EA, Kaduri P, Masao F, Mbwapo JK, McCurdy SA.	Harm reduction as a complex adaptive system: A dynamic framework for analyzing Tanzanian policies concerning heroin use. <i>International Journal of Drug Policy</i> . 2015 Dec 23
272	Eggers, S. M., L. E. Aaro, A. E. Bos, C. Mathews, S. F. Kaaya, H. Onya, and H. de Vries.	“Sociocognitive Predictors of Condom Use and Intentions among Adolescents in Three Sub-Saharan Sites.” <i>Arch Sex Behav</i> 45, no. 2 (Feb 2016): 353-65.
273	Fekadu, A., C. Hanlon, G. Thornicroft, C. Lund, S. Kaaya, A. Alem, O. Gureje, <i>et al.</i>	“Care for Bipolar Disorder in LMICS Needs Evidence from Local Settings.” <i>Lancet Psychiatry</i> 2, no. 9 (Sep 2015): 772-3.
274	Mahenge, B., H. Stockl, S. Likindikoki, S. Kaaya, and J. Mbwapo.	“The Prevalence of Mental Health Morbidity and Its Associated Factors among Women Attending a Prenatal Clinic in Tanzania.” <i>Int J GynaecolObstet</i> 130, no. 3 (Sep 2015): 261-5.
275	Namisi, F., L. E. Aaro, S. Kaaya, L. J. Kajula, G. P. Kilonzo, H. Onya, A. Wubs, and C. Mathews. 2162-76.	“Adolescents’ Communication with Parents, Other Adult Family Members and Teachers on Sexuality: Effects of School-Based Interventions in South Africa and Tanzania.” <i>AIDS Behav</i> 19, no. 12 (Dec 2015):
276	Wubs, A. G., L. E. Aaro, S. Kaaya, H. Onya, and C. Mathews.	“Social Cognition Variables and Victimization as Predictors of Sexual Debut among Adolescents in South Africa and Tanzania: A Multi-Group Sem Analysis.” <i>AIDS Behav</i> 19, no. 12 (Dec 2015): 2141-51.
277	Sommer M, Likindikoki S, Kaaya S.	“Bend a fish when the fish is not yet dry”: adolescent boys’ perceptions of sexual risk in Tanzania. <i>Arch Sex Behav</i> . Apr 2015;44(3):583-595.
278	Kajula, L., Balvanz, P., Kilonzo, M.N., Mwikoko, G., Yamanis, T., Mulawa, M., Kajuna, D., Hill, L., Conserve, D., Reyes, H.L.M. and Leatherman, S., 2016.	VijanaVijiweni II: a cluster-randomized trial to evaluate the efficacy of a microfinance and peer health leadership intervention for HIV and intimate partner violence prevention among social networks of young men in Dar es Salaam. <i>BMC public health</i> , 16(1), p.1.

279	Mulawa, Marta, Lusajo J. Kajula, Thespina J. Yamanis, Peter Balvanz, Mrema N. Kilonzo, and Suzanne Maman.	“Perpetration and Victimization of Intimate Partner Violence Among Young Men and Women in Dar es Salaam, Tanzania.” <i>Journal of Interpersonal Violence</i> (2016): 0886260515625910.
280	Ubuguyu, O., Tran, O.C., Bruce, R.D., Masao, F., Nyandindi, C., Sabuni, N., McCurdy, S., Mbwapo, J. and Lambdin, B.H., 2016.	Improvements in health-related quality of life among methadone maintenance clients in Dar es Salaam, Tanzania. <i>International Journal of Drug Policy</i> , 30, pp.74-81.
281	Zamudio-Haas, Sophia, Bathsheba Mahenge, HaneefaSaleem, Jessie Mbwapo, and Barrot H. Lambdin.	“Generating trust: Programmatic strategies to reach women who inject drugs with harm reduction services in Dar es Salaam, Tanzania. ” <i>International Journal of Drug Policy</i> (2016).
282	Mulawa, Marta, Thespina J. Yamanis, Peter Balvanz, Lusajo J. Kajula, and Suzanne Maman.	“Comparing Perceptions with Actual Reports of Close Friend’s HIV Testing Behavior Among Urban Tanzanian Men. “ <i>AIDS and Behavior</i> (2016): 1-9.
283	Mlunde, L.B., Sunguya, B.F., Mbwapo, J.K., Ubuguyu, O.S., Shibamura, A., Yasuoka, J. and Jimba, M.	A Mismatch between High -Risk Behaviors and Screening of Infectious Diseases among People Who Inject Drugs in Dar es Salaam, Tanzania. <i>PloS one</i> , 11(2), p.e0148598. 2016
284	Caroline West BA, David Plath MD, Virginia Fonner PhD, Jessie Mbwapo MD, Francis Fredrick MD, Michael Sweat PhD.	Developing a screening algorithm for type II diabetes in the resource-limited setting of rural Tanzania, <i>Am J Med Sci</i> , http://dx.doi.org/10.1016/j.amjms.2016.01.012
285	Chai, J., Fink, G., Kaaya, S., Danaei, G., Fawzi, W., Ezzati, M., Lienert, J., Smith Fawzi, M. C. (2016).	Association between intimate partner violence and poor child growth: results from 42 demographic and health surveys. <i>Bull World Health Organ</i> , 94(5), 331-339. doi:10.2471/BLT.15.152462
286	Kaaya S, Garcia ME, Li N, et al..	Association of maternal depression and infant nutritional status among women living with HIV in Tanzania. <i>Matern Child Nutr</i> . Jul 2016;12(3):603-613
287	Chandraratne S, von Bruehl ML, Pagel JI, Stark K, Kleinert E, Konrad I, Farschtschi S, Coletti R, Gärtner F1, Chillo O, Legate KR1, Lorenz M, Rutkowski S, Caballero-Martinez A, Starke R, Tirniceriu A, Pauleikhoff L, Fischer S, Assmann G, Mueller-Hoecker J, Ware J, Nieswandt B, Schaper W, Schulz C1, Deindl E, MassbergS.	“Critical role of platelet glycoprotein Iba in arterial remodeling.” <i>Arteriosclerosis, thrombosis, and vascular biology</i> 35.3: 589-597. 2015
288	Emmanuel Balandya, Teri Reynolds, Stephen Obaro, Julie Makani.	Alteration of Lymphocyte Phenotype and Function in Sickle Cell Anemia: Implications for Vaccine Responses. <i>Am J Hematol</i> . 2016; 91(9):938-46.

289	Julie Makani, Josephine Mgaya, Emmanuel Balandya, Khadija Msami, Deogratias Soka, Sharon E Cox, Albert N Komba, Stella Rwezaula, Elineema Meda, David Muturi, Jesse Kitundu, Gregory Fegan, Fenella J Kirkham, Charles R Newton, Robert W Snow, Brett Lowe.	Bacteraemia in Sick Cell Anaemia is associated with low haemoglobin: A report of 890 admissions to a tertiary hospital in Tanzania. <i>Br J Haematol</i> .2015 [Epub ahead of print].
290	Njelekela, M.A., Muhihi, A., Mpembeni, R.N., Anaeli, A., Chillo, O., Kubhoja, S., Lujani, B., Ngarashi, D. and Maghembe, M.	“Knowledge and attitudes towards obesity among primary school children in Dar es Salaam, Tanzania.” <i>Nigerian medical journal: journal of the Nigeria Medical Association</i> 56.2: 103. 2015
291	Naburi, H., Assenga, E., Patel, S., Massawe, A. and Manji, K.	“Class II pentalogy of Cantrell.” <i>BMC research notes</i> 8.1: 318. 2015
292	Manji, K.P., Duggan, C., Liu, E., Bosch, R., Kisenge, R., Aboud, S., Kupka, R. and Fawzi, W.W. Tanzania. <i>Journal of Tropical Pediatrics</i> , p.fmw012. 2016	Exclusive Breast-feeding Protects against Mother-to-Child Transmission of HIV-1 through 12 Months of Age in
293	Locks, L.M., Manji, K.P., McDonald, C.M., Kupka, R., Kisenge, R., Aboud, S., Wang, M., Fawzi, W.W. and Duggan, C.P.	Effect of zinc and multivitamin supplementation on the growth of Tanzanian children aged 6–84 wk: a randomized, placebo-controlled, double-blind trial. <i>The American journal of clinical nutrition</i> , 103(3), pp.910-918.2016
294	Sztam, K., Liu, E., Manji, K., Kupka, R., Kisenge, R., Aboud, S., Bosch, R., Fawzi, W. and Duggan, C.	Diarrhea In HIV-Exposed Tanzanian Infants Is Reduced With Maternal Antiretroviral Therapy. <i>The FASEB Journal</i> , 29(1 Supplement), 898-47. (2015).
295	Patel, A.A., Ciccone, O., Njau, A., Shanungu, S., Grollnek, A.K., Fredrick, F., Hodgeman, R., Sideridis, G.D., Kapur, K., Harini, C. and Kija, E., 2016.	A pediatric epilepsy diagnostic tool for use in resource-limited settings: A pilot study. <i>Epilepsy & Behavior</i> , 59, pp.57-61.
296	Kija, E., Schlegel, B., Samia, P. and Wilmshurst, J.”P115–2579:	Clinical presentation of Tuberous Sclerosis Complex in Cape Town, South Africa.” <i>European Journal of Pediatrics Neurology</i> 19: S126-S127. 2015
297	Chirande L, Deborah Charwe, Hadijah Mbwana, Rose Victor, Sabas Kimboka, Abukari Ibrahim Issaka, Surinder K. Baines, Michael J. Dibley and Kingsley	Emwinyore Agho “Determinants of stunting and severe stunting among under-fives in Tanzania: evidence from the 2010 cross-sectional household survey.” <i>BMC pediatrics</i> 15.1: 1. 2015

298	Fredrick, F. and Mhada, T.V.	Anaemia among HIV infected children attending care and treatment clinic at Muhimbili National Hospital, Dar es Salaam-Tanzania. <i>East African Journal of Public Health</i> , 12(2), pp.1070-1074. 2015.
299	Fredrick, F., Francis, J.M., Ruggajo, P.J. and Maro, E.E.	Renal abnormalities among HIV infected children at Muhimbili National Hospital (MNH)—Dar es Salaam, Tanzania. <i>BMC nephrology</i> , 17(1), p.1. 2016
300	Fredrick, F., Sawe, H., Muze, K., Mally, D. and Majaliwa, E.	A seven weeks old baby with diabetic ketoacidosis: a case report. <i>Clinical Case Reports</i> . 2015
301	McDonald, C.M., Manji, K.P., Kisenge, R., Aboud, S., Spiegelman, D., Fawzi, W.W. and Duggan, C.P.	“Daily Zinc but Not Multivitamin Supplementation Reduces Diarrhea and Upper Respiratory Infections in Tanzanian Infants: A Randomized, Double-Blind, Placebo-Controlled Clinical Trial.” <i>The Journal of nutrition</i> 145.9: 2153-2160. 2015
302	Modlin, Chelsea E., Helga Naburi, Kristy M. Hendricks, GoodluckLyatuu, R. D. JosphineKimaro, Lisa V. Adams, Paul C. Palumbo, and M. D. C Fordham von Reyn.	“Nutritional Deficiencies and Food Insecurity among HIV-infected Children in Tanzania.” <i>International Journal of MCH and AIDS (IJMA)</i> 2.2 220-228. 2015
303	McCormick, Nora M., Nan Li, David Sando, AisaMuya, Karim P. Manji, Rodrick Kisenge, Christopher Duggan, GuerinoChalamilla, Wafaie W. Fawzi, and Donna Spiegelman..	“Implementation and Operational Research: Risk Factors of Loss to Follow-up among HIV-Positive Pediatric Patients in Dar es Salaam, Tanzania.” <i>JAIDS Journal of Acquired Immune Deficiency Syndromes</i> 70.3: e73-e83. 2015
304	Lulu L. Sakafu, Teddy Mselle, Julius Mwaiselage, Amina Msengwa, KhamzaMaunda, Bouyoucef S. Eddin.	Clinician’s awareness and knowledge on the management of differentiated thyroid cancer and the use of radioactive iodine in Tanzania. <i>Tanzanian Journal of Health Research</i> . Vol 18, No 2 (2016)
305	Gabel, J.V., Chamberlain, R.M., Ngoma, T., Mwaiselage, J., Schmid, K.K., Kahesa, C. and Soliman, A.S., 2016.	Clinical and epidemiologic variations of esophageal cancer in Tanzania. <i>World Journal of Gastrointestinal Oncology</i> , 8(3), p.314.
306	Ngoma TA.	“Cancer Control in the Tropical Areas, Access to Expensive Treatments, and Ethical Considerations.” <i>Tropical Hemato-Oncology</i> . Springer International Publishing. 25-35. 2015
307	Gonçalves BP, Prevots DR, Kabyemela E, Fried M, Duffy PE.	<u>Preparing for future efficacy trials of severe malaria vaccines.</u> <i>Vaccine</i> . 2016 Apr; 34(16):1865-7. Doi: 10.1016/j.vaccine. 2016.02.053. Epub 2016 Mar 8.
308	Xiang Longquan and Edda Vuhahula:	Endometrial ossification: A case report and literature review; East Africa Journal of Pathology, Published in Dec 2015

309	Majigo, Mtebe, Fred Mhalu, Joel Manyahi, Said Aboud, Stephen Mshana, and Willy Urassa.	“Microbial Audiology of Vaginal Discharge In Relation To Intra-Vaginal Practices among Women Attending Reproductive Health Clinic in Dar Es Salaam, Tanzania.” <i>International Journal of Health Sciences and Research</i> (IJHSR) 5.5: 164-172. 2015
310	Moyo, S., Haldorsen, B., Aboud, S., Blomberg, B., Maselle, S.Y., Sundsfjord, A., Langeland, N. and Samuelsen, Ø.	“Identification of VIM-2-producing <i>Pseudomonas aeruginosa</i> from Tanzania is associated with sequence types 244 and 640 and the location of blaVIM-2 in a TniCintegron.” <i>Antimicrobial agents and chemotherapy</i> 59.1: 682-685. 2015
311	Nilsson, C., Aboud, S., Bakari, M., Lyamuya, E.F., Robb, M.L., Marovich, M.A., Earl, P., Moss, B., Ochsenbauer, C., Wahren, B. and Mhalu, F	“Potent functional antibody responses elicited by HIV-I DNA priming and boosting with heterogonous HIV-1 recombinant MVA in healthy Tanzanian adults.” <i>PloS one</i> 10.4: e0118486.2015
312	Manyahi, J., Jullu, B.S., Abuya, M.I., Juma, J., Ndayongeje, J., Kilama, B., Sambu, V., Nondi, J., Rabiell, B., Somi, G. and Matee, M.I.,	“Prevalence of HIV and syphilis infections among pregnant women attending antenatal clinics in Tanzania, 2011.” <i>BMC public health</i> 15.1: 1. 2015
313	Hawkins, C., Ulena, N., Liu, E., Aboud, S., Mugusi, F., Chalamilla, G., Sando, D., Aris, E., Carpenter, D. and Fawzi, W., 2016.	HIV virological failure and drug resistance in a cohort of Tanzanian HIV-infected adults. <i>Journal of Antimicrobial Chemotherapy</i> , p.dkw051.
314	Jacob M, Frankl A, Beeckman H (et al.)	“North Ethiopian Afro-Alpine Tree Line Dynamics and Forest Cover Change since the Early 20th Century.” <i>Land Degradation & Development</i> 26.7: 654-664. 2015
315	Jacob M, L. O. Akoko, R. R. Kazema.	“Lumbar Disc Degenerative disease: Magnetic Resonance Imaging Findings in Patients with Low Back Pain in Dar Es Salaam.” <i>East and Central African Journal of Surgery</i> 20.1: 122-131. 2015
316	Jacob, M. and Lee, S.K., 2016.	Intracranial cystic tumors with a mural nodule: Conventional, diffusion tensor and perfusion magnetic resonance imaging findings. <i>West African Journal of Radiology</i> , 23 (1), p.1.
317	Jacob, M., Kasilima, B.E. and Kazema, R., 2015.	Investigation of Infants with Hydrocephalous at Muhimbili National Hospital Using Anterior Transfontanelle Ultrasound Scan. <i>Tanzania Medical Journal</i> , 27(1), pp.95-113.
318	Mbugi, E.V., Katale, B.Z., Streicher, E.M., Keyyu, J.D., Kendall, S.L., Dockrell, H.M., Michel, A.L., Rweyemamu, M.M., Warren, R.M., Matee, M.I. and van Helden, P.D., 2016.	Mapping of Mycobacterium tuberculosis Complex Genetic Diversity Profiles in Tanzania and Other African Countries. <i>PloS one</i> , 11(5), p.e0154571.

319	Pallangyo CK, Paul KZ, Florian RG.	“IKK β acts as a tumor suppressor in cancer-associated fibroblasts during intestinal tumor genesis.” <i>The Journal of experimental medicine</i> 212.13: 2253-2266.2015
320	Russa, A.D., 2015.	Pre-omental epigastric redundant sigmoid colon: a case report and review of its functional and clinical implications. <i>Int J AnatVar (IJAV)</i> , 8, pp.17-19.
321	Ulisubisya, M., Jörnvall, H., Irestedt, L. and Baker, T.,	Establishing an Anaesthesia and Intensive Care partnership and aiming for national impact in Tanzania. <i>Globalization and Health</i> , 12(1), p.1. 2016
322	Semali IA, Leyna GH, Mmbaga EJ, Tengia-Kessy A (2015)	Social Capital as a Determinant of Pregnant Mother’s Place of Delivery: Experience from Kongwa District in Central Tanzania. PLoS ONE 10(10): e0138887. doi:10.1371/journal.pone.0138887
323	Innocent Antony Semali; Anna Tengia-Kessy, Elia John Mmbaga and Germana Leyna (2015).	Prevalence and determinants of stunting in under-five children in central Tanzania: remaining threats to achieving Millennium Development Goal 4. <i>BMC Public Health</i> 1153 DOI: 10.1186/s12889-015-2507-6
324	Peter Ernest Mabwe, Anna Tengia-Kessy, Innocent A. Semali (2015),	Understanding the magnitude of occupational exposure to HIV and uptake of HIV post exposure prophylaxis among healthcare workers in a rural district in Tanzania. <i>Journal of Hospital Infections</i> . (Accepted for Publication).
325	Daudi Simba; Deodatus Kakoko; Innocent Semali; Anna Kessy; Martha Embrey (2015):	Household Knowledge of Antibiotics and Antimicrobial Resistance in the Wake of an Accredited Drug Dispensing Outlet (ADDO) Program Rollout in Tanzania. PLOS ONE (Accepted for Publication).
326	Judith Msovela and Anna Tengia-Kessy (2015).	Acceptability and perceived effectiveness of strategies instituted for engaging men in family planning services: A case study of Kibaha district, Tanzania. <i>Reproductive Health</i> (Accepted for Publication).
327	Mlunde Linda Beatrice, Sunguya Bruno Fokas, Mbwambo Jessie Kilonzo, Ubuguyu Omary Said, Yasuoka Junko, Jimba Masamine.	Association of opioid agonist therapy with the initiation of antiretroviral therapy - a systematic review. <i>Int J Infect Dis</i> . 2016. pii: S1201-9712(16)31009-8
328	Mlunde Linda Beatrice, Sunguya Bruno Fokas, Mbwambo Jessie Kazeni Kilonzo, Ubuguyu Omary Said, Shibamura Akira, Yasuoka Junko, Jimba Masamine.	A Mismatch between High-risk Behaviors and Screening of Infectious Diseases among people who inject drugs in Dar es Salaam, Tanzania. <i>Plos One</i> . 2016;11(2):e0148598

329	Linda Beatrice Mlunde, Bruno Fokas Sunguya, Jessie Kazeni Kilonzo Mbwambo, Omary Said Ubuguyu, Akira Shibamura, Junko Yasuoka, Masamine Jimba.	Correlates of health care seeking behaviour among people who inject drugs in Dar es Salaam, Tanzania. <i>International Journal of Drug Policy</i> , 1683 1–8, 2015
330	Sunguya Bruno Fokas, Murallitharan Munisamy, Sathirakorn Pongpanich, Junko Yasuoka, Masamine Jimba.	Effectiveness of HIV advocacy on social norms and a change in impact: lessons for NCD advocacy. <i>American Journal of Public Health</i> , Accepted January, 2016
331	GBD 2013 Lancet, S0140-6736 (15) 00128-2, Sep10, 2015	Risk Factors Collaborators. Global, regional, and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of risks in 188 countries, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013.
332	GBD 2013	DALYs and HALE Collaborators. Global, regional, and national disability-adjusted life years (DALYs) for 306 diseases and injuries and healthy life expectancy (HALE) for 188 countries, 1990-2013: quantifying the epidemiological transition. <i>Lancet</i> , S0140-6736 (15) 61340-X, Aug 27, 2015.
333	GBD 2013	Global Burden of Disease Study 2013 Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. <i>Lancet</i> , <i>Lancet</i> , S0140-6736 (15) 60692-4, Aug 22, 2015.
334	Pai Elia Chambongo, Innocent Semali, Patrick Nguku	Community Vaccine Perceptions And Its Role On Vaccination Uptake Among Children Aged 12-23 Months: Ileje District, Tanzania: A Cross Section Study. Accepted for publication in the Pan African Medical Journal
335	<u>August F</u> , <u>Pembe AB</u> , Mpembeni R, <u>Axemo P</u> , <u>Darj E</u> (2016).	Community health workers can improve male involvement in maternal health: evidence from rural Tanzania. <i>Glob Health Action</i> . 2016 Jan 18;9:30064. doi: 10.3402/gha.v9.30064. eCollection 2016.
336	Kevin J. Vagi, Kathryn A. Brookmeyer, R. Matthew Gladden, Laura F. Chiang, Andrew Brooks, Myo-Zin Nyunt, Gideon Kwesigabo, James A. Mercy, and Linda L. Dahlberg.	Sexual Violence Against Female and Male Children in the United Republic of Tanzania <u>Violence Against Women</u> . March 2016
337	Mwaikambo SA, Leyna GH, Killewo J, Simba A, Puoane T.	Why are primary school children overweight and obese? A cross sectional study undertaken in Kinondoni district, Dar es Salaam. <i>BMC Public Health</i> (2015) 15:1269.

338	Kileo NM, Michael D, Neke NM, Moshiro C.	Utilization of cervical cancer screening services and its associated factors among primary school teachers in Ilala Municipality, Dar es Salaam, Tanzania. BMC Health Serv Res. 2015 Dec 15;15(1).
339	Semali IA, Leyna GH, Mmbaga EJ, Tengia-Kessy A.	Social Capital as a Determinant of Pregnant Mother's Place of Delivery: Experience from Kongwa District in Central Tanzania. PLoS One. 2015 Oct 1;10(10).
340	Semali IA, Tengia-Kessy A, Mmbaga EJ, Leyna G. BMC Public Health. 2015 Nov 21;15(1):1153.	Prevalence and determinants of stunting in under-five children in central Tanzania: remaining threats to achieving Millennium Development Goal 4.
341	Kazaura MR, Ezekiel MJ, Chitama D..	Magnitude and factors associated with intimate partner violence in mainland Tanzania. BMC Public Health. 2016 Jun 10;16(1):494. doi: 10.1186/s12889-016-3161-3
342	Manji M, Shayo G, Mamuya S, Mpembeni R, Jusabani A, Mugusi F.	Lung functions among patients with pulmonary tuberculosis in Dar es Salaam - a cross-sectional study. BMC Pulm Med. 2016 Apr 23;16(1):58. doi: 10.1186/s12890-016-0213-5.
343	August F, Pembe AB, Mpembeni R, Axemo P, Darj E.	Effectiveness of the Home Based Life Saving Skills training by community health workers on knowledge of danger signs, birth preparedness, complication readiness and facility delivery, among women in Rural Tanzania. BMC Pregnancy Childbirth. 2016 Jun 2;16(1):129. doi: 10.1186/s12884-016-0916-x.
344	Kazaura MR, Ezekiel MJ, Chitama D.	Magnitude and factors associated with intimate partner violence in mainland Tanzania. BMC Public Health. 2016 Jun 10;16(1):494. doi: 10.1186/s12889-016-3161-3.
345	Protas J, Tarimo D, Moshiro C.	Determinants of timely Uptake of ITN and SP (IPTp) and pregnancy time protected against malaria in Bukoba, Tanzania. Accepted for publication in BMC Research Notes in June 2016.
346	Semali IA, Leyna GH, Mmbaga EJ, Tengia-Kessy A (2015)	Social Capital as a Determinant of Pregnant Mother's Place of Delivery: Experience from Kongwa District in Central Tanzania. PLoS ONE 10(10): e0138887. doi:10.1371/journal.pone.0138887
347	Kidukuli AW, Maregesi SM, Saria J, Otieno NJ, Lawi Y, Nondo RS, Innocent EM, Mlimbila J, Mihale MJ, Moshi MJ.	Larvicidal efficacy of some Tephrosia species extracts against Anopheles gambiae s.s and Culex Quinquefasciatus Say. Spatula DD. 2015; 5(1): 21-25

348	Ester Innocent, Joseph Sempombe, Pax J Masimba, Innocent Daniel, Matthias Heydenreich.	Comparison of cycloartenone from four insecticidal <i>Kotschy</i> species (Fabaceae) harvested during dry and wet Seasons. <i>Journal of Pharmacognosy and Phytochemistry</i> 2015; 4(4): 97-102 18.
349	Joseph Otieno, Siri Abihudi, Sarina Veldman, Michael Nahashon, Tinde van Andel and Hugo J de Boer 2015	Vernacular dominance in folk taxonomy: a case study of ethnospecies in edicinal plant trade in Tanzania <i>Journal of Ethnobiology and Ethnomedicine</i> 2015,11:10 19
350	Otieno JN, Moshi MJ, Mbwapbo ZH P,. (2015) 3(4): 169-176	Adoption of community based cultivation of medicinal plants for management of HIV/AIDS in Coast region, Tanzania <i>Herald J. Agric. Food Sci. Res.</i> Vol. 4 (2), pp. 014 – 020B. Samwel, E. Innocent and P. J. Masimba. Larvicidal Activity of <i>Metarhizium anisopliae</i> and <i>Annona squamosa</i> Leaf Extract against <i>Culex quinquefasciatus</i> and <i>Anopheles gambiae</i> Larvae <i>Journal of Applied Life Sciences International</i> 2015,
351	Regina Mutayangulwa and Edmund J. Kayombo	Knowledge Attitude and use of female condoms among the female undergraduate students at the University of Dar-es-Salaam <i>Journal of Scientific Research & Reports</i> 9(2): 1-10
352	Edmund. J. Kayombo (2014).	Commonly used Plants for Various Health Conditions in Mlangali Ward
353	Ester Innocent.	Trends and challenges towards integration of traditional medicine in formal health care system: An Appraisal of curricula in Sub-Sahara Africa “ <i>Journal of Intercultural ethnopharmacology</i>
354	Lwoga, E T and Komba, M. 2015.	Antecedents of continued usage intentions of web-based Learning management system in Tanzania. <i>Education and Training</i> 57 (7)
355	Lwoga, ET and Questier, F. 2015.	Open access behaviors and perceptions of health sciences faculty and roles of information professionals. <i>Health Information & Libraries Journal</i> http://onlinelibrary.wiley.com/doi/10.1111/hir.12094/abstract
356	Lwoga, ET and Komba, M. 2015.	Antecedents of continued usage intentions of web-based learning management system in Tanzania. <i>Education and Training</i> 57(7)
357	Komba, MM and Lwoga, ET. 2015	Government information seeking behavior of citizens in selected districts of Tanzania. <i>International Research: Journal of Library and Information Science</i> 5(4), http://irjlis.com/wp-content/uploads/2016/05/14-IR-331-54.pdf
358	Sukums, Felix (2016).	Implementation of an electronic clinical decision support system for maternal and newborn care in rural primary health care facilities in Africa: Assessment of its adoption and usability. Doctoral Thesis, University of Heidelberg, Germany.

359	Felix Sukums, Nathan Mensah, Rose Mpembeni, SiriellMassawe, ElsDuysburgh, Afua Williams, Jens Kaltschmidt, SvetlaLoukanova, Walter E Haefeli, Antje Blank:	Promising adoption of an electronic clinical decision support system for antenatal and intrapartum care in rural primary healthcare facilities in sub-Saharan Africa: The QUALMAT experience. 06/2015; Int J Med Inf84(9):647–657.
360	YasintaKisisiwe, Joyce Rose Masalu, Felix Sukums.	“Exploring Factors Influencing Prostate Cancer Screening Among Adult Men in Dar-Es Salaam Tanzania: Using the Theory of Planned Behavior”. A paper to be presented at the National Conference on Health Communication, Marketing and Media to be on August 23 – 25, 2016 in Atlanta, GA.
361	Felix Sukums, Nathan Mensah, Rose Mpembeni, SiriellMassawe, ElsDuysburgh, Afua Williams, Jens Kaltschmidt, SvetlaLoukanova, Walter E Haefeli, Antje Blank:	Experience in implementation of an electronic clinical decision support system for antenatal and intrapartum care in rural primary healthcare facilities in sub-Saharan Africa: The QUALMAT experience. A paper presented at the Global Maternal and Newborn Health Conference 2015 in Mexico City from 18 th – 21 st October 2015.
362	Kisisiwe, Y., Masalu, J., Nyamsogoro, R., Kwesi, E., Nswilla, A., Mkopi, A. & Sukums, F.	Factors Influencing Prostate Cancer Screening among Adult Men in Dar es Salaam, Tanzania, a paper presented in the fifth National Quality Improvement Forum held at Hyatt Regency Dar es Salaam, The Kilimanjaro Hotel from 26th to 28th August 2015.

B: Conference Papers

1	Alexander Mtemi Tungu, Magne Bråtveit, Simon HD Mamuya, Bente E Moen	The Impact of Reduced Dust Exposure on Respiratory Health among Cement Workers: an Ecological Study. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
2	Alexander Mtemi Tungu, Magne Bråtveit Bråtveit, Simon HD Mamuya, Bente E Moen	Fractional Exhaled Nitric Oxide among Cement Factory Workers: A Cross Sectional Study. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
3	Andrew C Gard, Amr S Soliman, Twalib Ngoma, Julius Mwaiselage, Crispin Kahesa, Robert M Chamberlain, Siobán D Harlow.	Most women diagnosed with cervical cancer by a visual screening program in Tanzania completed treatment: Evidence from a retrospective cohort study. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
4	Anne H. Outwater, Agnes Nyomora, Alice B. Outwater, Jamidu Y Katima	Health Considerations on Suitability of Domestic Wastewater for Irrigating Crops, Mafisa, Waste Stabilization Ponds, Morogoro
5	Anne H. Outwater, Fredrick Mashili, Marie Hasselberg, Candida Moshiri, Britt-Inger Saveman, Susann Backteman, Omary Chillo	Building a foundation for a multi-decade programme for Injury Prevention and Care in Tanzania focusing on Road Traffic Injury: INPACT: RTI. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
6	Aza Innocent Lyimo, John S. Kisimbi, Celina F. Mhina	Diabetic Retinopathy among Adult Diabetic Patients at the Muhimbili National Hospital With No Prior Ophthalmic Consultation for Diabetic Retinopathy. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
7	Beatrice Mushi, Katrina Deardorff, William Mgisha, Julius Mwaiselage, Li Zhang, Aparna Parikh, Robert A. Hiatt, Katherine Van Loon, Elia Mmbaga.	A Case-Control Study to Evaluate the Etiology of Esophageal Cancer in Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
8	Catherine Reuben Shar	Barriers to Blood Transfusion in Anaemic Children Under 5yrs in The Emergency Department at Muhimbili National Hospital, Dar Es Salaam, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
9	Charles K. Pallangyo, Paul K. Ziegler and Florian R. Greten	IKK β acts as a tumor suppressor in cancer-associated fibroblasts during intestinal Tumorigenesis. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
10	Christina Malichewe, Dartell, Twalib, Ngoma	Human papillomavirus prevalence and type distribution in 3603 HIV-positive and HIV-Negative Women in the General Population of Tanzania: The PROTECT study. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.

11	Christina Malichewe, Lovgren, Twalib Ngoma	Characteristics and geographic distribution of HIV-positive women diagnosed with Cervical cancer in Dar es Salaam, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
12	Clare Meernik, Amr S. Soliman, Twalib Ngoma, Crispin Kahesa, Julius Mwaiselage, Sofia D Merajver.	The changing pattern of ano-rectal cancer, squamous cell carcinoma of the eye, and Hodgkin's lymphoma as non-AIDS-defining cancers, by HIV status, in Tanzania over 11 years (2002-2012): a retrospective case-report study. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
13	Clarer Jones	Effects of twelve rounds Mass Drug Administration with Albendazole and Ivermectin on Lymphatic Filariasis transmission in Rufiji District, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
14	Cosmas Alex Kapinga, Annette Angela, Almeida Martha, Kisanga Zukrah	Reaching Men through Vasectomy Services: Successes from Dar es Salaam. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
15	D Chiwaya, B Lembariti	Antenatal health providers' awareness of effects of periodontal diseases on pregnancy outcomes in South-East Malawi. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
16	D. C. Stefan · N. Masalu · L. Ngendahayo · D. Amadori · M. Botteghi · M. Mendy · N. A. Othieno-Aabinya · T. Ngoma · F. Asirwa · O. Balogun · W. Ngwa · E. Vuhahula · A Adesina	Pathology and oncology in Africa: education and training for the future in cancer research for East African Regional Meeting. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
17	Dickson Ally Mkoka	Governance Perspectives in Decentralised Maternal Health Care Delivery, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
18	Dickson Pius Wandé	Application of Nanotechnology for Enhancing Solubility of Lumefantrine: Evaluation of Polymetric Loaded Nanoparticles and In vitro Properties. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
19	Dominica Eligius Lyamuya and Anna Tengia Kessy	Utilization of VCT among High Risk Populations: The Case of Barotses in Kinondoni District. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.

20	Edith A.M. Tarimo, Gustav Moyo, Happy Masenga, Paul Magesa, Dafrosa Mzava, Concessa Nsanze, Lena Mfalila.	Performances and self-perceived competencies of Enrolled Nurse/ Midwives in Pwani Region, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
21	Edward Amani, Brittany Murray, Juma Mfinanga, Hendry Robert Sawe	Profile and outcome of Patients with Severe Sepsis or Septic Shock presenting to Emergency Department at Muhimbili National Hospital, Dar Es Salaam, Tanzania
22	Emmanuel Abduel, Nelson Masota, Prosper Tibalinda, and Eliangiringa Kaale	HPTLC Densitometric Screening for the presence of sildenafil in Octopus soup sold in Dar Es Salaam, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
23	Emmanuel Balandya, Teri Reynolds, Stephen Obaro, Julie Makani	Increased Activated Memory Phenotypes Of T And B Lymphocytes In Children With Sickle Cell Anaemia. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
24	Erasto V Mbugi, Bugwesa Z Katale, Elizabeth M Streicher, Julius D Keyyu, Sharon L Kendall, Hazel M Dockrell, Anita L Michel, Mark M Rweyemamu, Robin M Warren, Mecky I Matee, Paul D van Helden, David Couvin and Nalin Rastogi	Mapping of Mycobacterium tuberculosis complex genetic diversity profiles in Tanzania and other African countries. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
25	Fatema Z Alimohamed, Joyce Rose P Masalu	Awareness of preventive oral health care among parents/caregivers of preschool children in Dar es Salaam Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
26	Flola Njiku, Dr. Herman Wella, Adellah Sariah, Joyce Protas	Prevalence and Factors Associated with Late Antenatal Care Visit Among Pregnant Women in Lushoto, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
27	Francis Machumi, Ester Innocenti, Pius Yandaii, Philip C. Stevensoniii	Seasonal Impacts on Chemical Composition and Antifungal Activity of Medicinal Plants <i>Turraea holstii</i> and <i>Clausena anisata</i> . The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.

28	Frank Patrick, Celina Mhina, Anna J. Sanywa	Awareness of Hiv/Aids Ocular Manifestations Among People Living With HIV/AIDS Attending HIV Clinic at Muhimbili National Hospital october to November 2015. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
29	Fredrick Lazaro Mashili	Enviromental Intervention to Promote Active Living in Urban Tanzania: Surveys to Engage the Public in Creating a Conducive Environment. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
30	Fredrick Furia	Medical training in Tanzania: Is it time to it together? The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
31	Furahini Tluway Chinenere	Severe Anaemia in Sickle Cell Disease; Factors and Outcomes at Muhimbili National Hospital. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
32	Furahini Tluway Chinenere	The Road towards the First Sickle Cell Disease Ontology. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
33	Gasto Frumence, Idda Mosha, Dereck Chitama Peter	Barrie rs to identification and follow-up of pregnant women by community health workers in Morogoro Region, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
34	Gcora, N, Gopeni, A., Tuswa, M., Lwoga, ET and Chigona, W. 2015	The benefits and challenges of using Telecentres in rural areas: Case of women in Eastern Cape Province. Steyn, J., Van Belle, J.P. (eds.) (2015). Beyond development. Time for a new ICT4D paradigm? Proceedings of the 9th IDIA conference, IDIA2015, Nungwi, Zanzibar. ISBN: 978-0-620-68395
35	Germana H. Leyna, Berkman L, Njelekela M, Kazonda P, Irema K, Wafaie F, Killewo JZJ	Profile: The Dar Es Salaam Health and Demographic Surveillance System (Dar es Salaam Cohort Study DUCS). The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
36	Germana H. Leyna, Japhet Z.J. Killewo, Marina A Njelekela, Wafaie Fawzi, Lisa Berkman.	Missing persons: Addressing residential mobility in an urban cohort. The case of the Dar es Salaam Health and Demographic Surveillance site. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.

37	Godfrey Agrey, Nelson Enos Masota, Rogers Mwakalukwa and Joseph Sempombe	Screening for Phytochemicals and Antimicrobial Potency of Root Tuber Crude Extracts of <i>Pyrenacantha kaurabassana</i> Bail. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
38	Grace A. Shayo, Candida Moshiri, Said Aboud, Ferdinand Mugusi	Tubeerculosis Incidence and All-Cause Mortality among HIV-Infected Patients on Isoniazid Preventive Therapy in Dar es Salaam, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
39	Helga Elineema Naburi, Anna Mia Ekström, Phares Mujinja, Charles Kilewo, Karim Manji, Gunnel Biberfeld, David Sando, Till Bärnighausen	The potential of task shifting in scaling up services for prevention of mother-to-child transmission of HIV: a time and motion study in Dar es Salaam, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
40	Hilda Joseph Kanama	Impact of Facility Delivery Load on the Practice of Active Management of Third Stage of Labor in Dar es Salaam. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
41	Irene Bahoya Kulola, Victor Mwafongo, Teri Reynolds	Ultrasound findings and 72-hour outcomes of adult trauma patients who undergo FAST at Muhimbili National Hospital Emergency Department (MNH EMD), Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
42	Ismail Athuman, Innocent, Esther, Francis Machumi, Augustino, Suzana and Kisinza, William	Investigation of Chemical Composition and Mosquito Repellent Property of Essential Oils from Plants Traditionally Used as Mosquito Repellents in Longido District, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
43	Jamila Said, Kisali Pallangyo	The Burden and Clinical Characteristics of Patients Admitted at MNH Medical wards with Unknown HIV Infection. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.

44	Jane S. Mlimbila, Ken M. Hosea, Masoud Muruke	Genetic Diversity and Proteinase Activity of Yeasts Isolated from Traditionally Fermented Milk (mtindi) and Industrially Fermented Milk (yoghurt). The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
45	Jeremiah Seni, Mariam M Mirambo, Martha F Mushi, Nyambura Moremi, Mecky Matee, Trinad Chakraborty, Stephen E Mshana.	Trends of ESBL genotypes in humans, animals and environment, North Western Tanzania: Preliminary insights for action
46	John Jeremiah, Nelson Masota, Prosper Tibalinda, Veronica Mugoyela, Eliangiringa Kaale	Assessment of Adherence to Storage Conditions of DAKTACORT Cream among Community Pharmacies in Dar es Salaam, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
47	Joseph Matiko, Raphael Zozimus Sangeda, Julie Makani, Amos Nungu	Establishment of Bioinformatics Community of Practice in Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
48	Juma Mfinanga	Referral Patterns of Patients arriving to Muhimbili National Hospital Emergency Medicine Department. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
49	Kaijage H.R, Mrema E.J. Mamuya S.H & Rweyemamu D	The role of occupational health and safety in climate change mitigation: A Case of agricultural sector. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
50	Khadija Murtaza Bhimji	Vitamin D Status and Associated Factors in Neonates at Muhimbili National Hospital, Dar Es Salaam, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
51	Lia Koski, Twalib Ngoma, Julius Mwaiselage, Lynne Le and Amr S Soliman	Changes in the pattern of Kaposi's sarcoma at Ocean Road Cancer Institute in Tanzania (2006-2011). The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
52	Lia Koski, Twalib Ngoma, Julius Mwaiselage, Lynne Le, and Amr S Soliman	Treatment of Burkitt lymphoma in equatorial Africa using a simple three -drug combination followed by a salvage regimen for patients with persistent or recurrent disease. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
53	Lilian Barikiel, Nkinda Regnald, GervasAmina	Assessing the Laboratory utilization patterns by the clinicians for patients' management at Muhimbili National Hospital. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.

54	lixia ji, Caina Li	Diosgenin, a novel aldose reduce inhibitor, attenuate the galactosemic cataract on rat. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
55	Lwoga, ET Chigona, W.	Characteristics and factors that discriminate internet users from non-users information seekers: the case of rural women in Tanzania. IST- Africa Conference, 11 - 13 May 2016, Durban, South Africa
56	Lwoga, ET, Sangeda, RZ and Sife, AS. 2016.	Web Visibility of Pharmacy Research at Muhimbili University of Health Sciences, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016
57	Lwoga, ET. Mloka, D. Chimwaza, G. and Chataira, B. 2016.	Mapping outcomes of evidence based health care training among health professionals in Tanzania, 11 th International Conference on ICT for Development, Education & Training, 24-26 th May 2016, Egypt
58	Maganga Bundala Maganga, M. Eulambius, P. Tibalinda, E. Kaale, Bundala Maganga	Development and optimization of oro-dispersible paediatric paracetamol tablets by response surface methodology. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
59	Mamuya SH and Stanford John	Mercury exposure and related health problems among Artisanal and Small Scale Gold Mining Community in Chunya District. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
60	Mariam H. Ibrahim, Joel Manyahi, Fausta Mosha Fred	Rubella specific IgG and IgM antibody prevalence in infants before and after combined Measles and rubella vaccination in Dar es Salaam. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
61	Mariam Yusto Ngajeje, Abel Makubi, Julie Makani, Raphael Sangeda, Furahini Chinenere	A single centre, prospective, observational Hydroxyurea Registry for Sickle Cell Anemia. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
62	Marina Alois Njelekela, Bonita Kilama, Mussa Sylvester Ndile, Protas Ndayanga, Patrick Swai, Joseph Eshun	Quality Improvement Approaches Improved Delivery of HIV/AIDS Services. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
63	Martha Namwaza Chipanda, Lilian E.Mkonyi	Knowledge, Attitude and Practices of Primary School Teachers Towards Oral Health in Mzuzu City, Malawi. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.

64	Meera Ramesh Nariadhara, Meera Ramesh Nariadhara, Hendry Robert Sawe, Brittany Lee Murray	<p>Predictive value of Systemic Inflammatory Response Syndrome (SIRS) and clinician</p> <p>gestalt on risk of mortality among children under 5 years presenting at the Emergency</p> <p>Department of Muhimbili National Hospital. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>
65	Mourice, N.V. Mbunde, Ester Innocent, Faith Mabiki, Pher G. Andersson.	<p>Ethnomedical Survey and Toxicity Evaluation of selected Medicinal Plants from</p> <p>Southern Highlands of Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>
66	Mudavanhu, S. Lwoga, ET, Chigona, W.	<p>Framing telecentres: Accounts of women in rural communities in South Africa and Tanzania. International Conference on Information Resources Management (CONF-IRM), 18-20, May 2016, Cape Town</p>
67	Mujuni Rutasera Njunwa	<p>Risk Factors Associated with Preterm Birth at Muhimbili National Hospital, Dar Es Salaam, Tanzania: Unmatched Hospital-Based Case-Control Study. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>
68	Muller M. Mundenga, Brittany Murray, Juma M finanga, Victor Mwafongo, Hendry R.Sawe	<p>Prevalence of Alcohol and other substances of abuse among injured patients presenting to the emergency department, Muhimbili National Hospital, Dar es Salaam, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>
69	Muzdalifat Abeid, Projestine Muganyizi and Rose Mpembeni	<p>Evaluation of a training program for health care workers to improve the quality of care for rape survivors: a quasi-experimental design study in Morogoro, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>
70	Nampenda Mbwanbo Zehirwa, Vicky Manyanga, Danstan Hipolite, Eliangiringa Kaale.	<p>Comparative in vitro dissolution studies of selected generic essential medicines in</p> <p>Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>
71	Nathan Lungu, Lilian E.Mkonyi	<p>Knowledge, Attitude and Practices of Primary School Teachers Towards Oral Health in</p> <p>Mzuzu City, Malawi. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>
72	Nathanael Shauri Sirili, Angwara Denis, Kiwara, Frumence, Gasto, Anna-Karin Hurtig	<p>Training and deployment of Medical Doctors: the case of Tanzania post-1990s health sector reforms. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>

73	Nathanael Shauri Sirili, Siriel Nanzia Massawe, Amani Anaeli Mlaki, Lilian Teddy Mselle	Sometimes a laboratory Assistant stand as my assistant surgeon...,” Challenges and experiences by Assistant Medical Officers in performance of caesarean section in rural setting, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
74	Nathanael Sirili, Siriel Massawe, Amani Anaeli and Lilian Mselle	Scaling up of caesarean section deliveries in rural Tanzania; The ups and downs of Assistant Medical Officers. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
75	Nelson Enos Masota1, Veronica Mugoyela1, Joseph Sempombe	Pesticidal Bioactivity and influence on quality parameters of Amanita muscaria and Boletus sanatus in Stored Maize Grains. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
	Ngaeje, M., Chinenere, F., Magessa, A. and Makani, J., 2016.	A Case of a Child with Chronic Myeloid Leukemia Presenting with Vision and Hearing Loss. <i>Journal of Blood Disorders & Transfusion, 2016</i>
76	Nilesh Deshpande, Rose Mpembeni, Juliana Joachim; Kadia Patricia; Helen Semu ;Japhet Killewo, Abdulla Baqui	Profile of existing CHWs in five BRN regions of Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
78	Ntakirutimana Gervais, Kitinya James	Colorectal Cancer Pathology at Muhimbili National Hospital Dar es salaam, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
79	Paulina Warae, Telesphory Nesphory, Hassan Mkwachu, Mwanamkuu Maghembe, Omary Chillo	Physical activity and cardiovascular risk assessment in third trimester pregnant woman. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
90	Peter M. Mbelele, Said Aboud	GeneXpert MTB/Rif assay detects more Mycobacterium tuberculosis on sputum sediments of Pulmonary Tuberculosis suspect cases. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
91	Pius Daniel Kiwango, Nelson Enos Masota, Eliangiringa Kaale, Apolinary Kamuhabwa Kamuhabwa	Assessment of Health Related Effects and Screening for Chemical Composition of Selected Local Brews available in Rombo District, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
92	PJ Shao, BL, Murray, JA.Mfinanga, TA Reynolds, VMwafongo, HR. Sawe.	Profile and outcome of patients with hypertensive crisis presenting to the Emergency Medicine Department of Muhimbili National Hospital in Dar es salaam Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.

93	<p>Projestine S. Muganyizi, Edward Maswanya, Stella Kilima, Grades Stanley, Ahmadi</p> <p>Makuwani, Deus Mogela, Gasto Frumence and Julius J. Massaga</p>	<p>Utilization and quality of Emergency Obstetric and New born Care Services in Tanzania Mainland. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>
94	<p>Projestine S. Muganyizi, Edward Maswanya, Stella Kilima, Grades Stanley Ahmadi</p> <p>Makuwani, Deus Mogela, Gasto Frumence and Julius J. Massaga</p>	<p>Availability and distribution of EmONC Services in Tanzania Mainland. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>
95	<p>Projestine Selestine Muganyizi, Sarah C Keogh, Godfather G Kimaro</p>	<p>Abortion incidence and unintended pregnancies in Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>
96	<p>Prosper Severin Tibalinda, Dickson Pius Wande, Nelson Enos Masota, Mary Justine Temu,</p> <p>Eliangiringa Amos Kaale</p>	<p>Pre-Formulation Development of Lamivudine 300 Mg and Tenofovir Disoproxil Fumarate (Tdf) 300 Mg Fdc Tablets. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>
97	<p>Raphael Shedafa, Prosper Tibalinda, Vicky Manyanga, Joseph Sempombe, Mary Justine-Temu, Eliangiringa Kaale</p>	<p>Assessment of moisture permeability and closure systems of HDPE plastic bottles used as primary packaging containers for moisture sensitive medicines. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>
98	<p>Raphael Z. Sangeda, Julie Makani</p>	<p>Data repository interoperability between MySQL and REDCAP systems in Muhimbili</p> <p>Sickle Cell Cohort. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>
99	<p>Raphael Zozimus Sangeda, Eligius F Lyamuya</p>	<p>Drug Resistance Mutations and Genetic Diversity in Adults Treated for HIV Type 1</p> <p>Infection at Amana Hospital, Dar es Salaam. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>
100	<p>Raphael Zozimus Sangeda, Felix Sukums, Edda Tandi Lwoga, Julie Makani</p>	<p>Deployment of an institutional wide easy to use Tools for research electronic data capture at MUHAS. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>
101	<p>Rar R, Kisali Pallangyo.</p>	<p>Characteristics of Tube rculosis and Associated Co-Morbidities among Elderly and referent patients in Dar es Salaam. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>
102	<p>Restuta Kibasa</p>	<p>Determinants of Adverse Neonatal Outcome Among Preterm Neonates Of Severe Pre-Eclamptic/ Eclamptic Mothers At MNH. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>

103	Richard Owden Mwaiswelo, Billy Ngasala, Irina Jovel, Weiping Xu, Zulfiqarali Premji, Bruno P Mmbando, Anders Bjorkman, Andreas Mårtensson	Submicroscopic Plasmodium falciparum parasitemia following artemetherlumefantrine treatment and its associated factors in endemic rural Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
104	Rugabela Kabyemela	Developing and internally validating a risk prediction model for pediatric severe malarial anemia in a Tanzanian region of perennial malaria transmission. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
105	Rugabela Kabyemela	Placental Malaria Exposure and Severe Malarial Anemia Risk in African Children. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
106	Rugabela Kabyemela	Cord blood anti-PfSEA-1 and protection from severe malaria in infants. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
107	Ruhi Kashmiri, Sira Stanslaus Owibingire	Oral Health Status of Children with Malignancies at Muhimbili National Hospital. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
108	Rwehumbiza Charles Edward, Moshiro Candida, Antelman Gretchen	Support services may affect pediatric Antiretroviral Therapy (ART) access in Arusha Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
	Rwezaula, S.S., Magesa, P.M., Mgaya, J., Massawe, A., Newton, C.R., Marlow, T., Cox, S.E., Gallivan, M., Davis, B., Lowe, B. and Roberts, D.J.	Newborn screening for hemoglobinopathies at Muhimbili National Hospital, Dar es Salaam–Tanzania. <i>East African Journal of Public Health</i> , 12(1), 948-955. 2015.
109	Said Kilindimo	Medical Education and Social Network: The Trend, Pearls and Pitfalls. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
110	Salim S Masoud and Karen Robinson	Induction of Active TGF-beta by Helicobacter pylori and its influence in disease progression. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
111	Samwel Elineema Kisakeni, Anne Outwater, Menti Ndile	Role of Emergency Triage Vital Signs in Predicting Outcome of Traumatic Brain Injured Patients at MNH and MOI. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
112	Sarah Abubakar Al-Bait1, Febronia Kokulengya Kahabuka1	Most commonly used orkers management techniques and factors influencing their choice among Tanzanian dental practitioners. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.

113	Shaheen Kassam, Nelson Enos Masota, Eliangiringa Kaale, Esther Innocent, Joseph Sempombe	Analysis of Heavy Metals in TUMBO and PUMU Herbal Medicines Prepared at Institute of Traditional Medicine, MUHAS, Dar es Salaam. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
114	Sherin A. Kassamali, Juma A. Mfinanga, Hendry R. Sawe, Andrea Tenner, Victor Mwafongo, Teri A. Reynolds	Disaster in Sub Saharan Africa: Lessons learned from a new emergency department of an urban public hospital in Tanzania
115	Sibtain Mustafa Moledina	Factors Associated with Adverse Outcomes Among Patients Admitted with Upper Gastrointestinal Bleeding. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
116	Singh Sohal	Platelets Levels before and after Surgical Intervention in Patients with Oral and Maxillofacial Tumors at MNH, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
117	Siya Ringo	Assessment of Cold Chain Medicines Conformity with Who Requirements in Public Health Facilities in Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
118	Stephen Atingi Mwaisobwa, Lilian E. Mkonyi	Dental Caries Knowledge Among Nursing Students of Muhimbili University of Health and Allied Sciences (MUHAS). The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
119	Tryphone Gujema, Innocent Daniel, Nelson Masota, Eliangiringa Kaale	HPTLC Densitometric Screening for Sildenafil adulterated in Herbal Sexual Dysfunction Medicines available in the Dar Es Salaam Market. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
120	Tumaini Nyamhanga & Gasto Frumence	Prevention of Mother to Child Transmission of HIV in Tanzania: How well are organizational guidelines and practices gender mainstreamed? The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
121	Twaliib Ngoma, Ngoma John Mandeli	Downstaging Cancer in Rural Africa. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.
122	Upendo George, Faith H. Ringo, Victor Mwafongo, Teri Reynolds, Michael S. Runyon	The Systemic Inflammatory Response Syndrome as Predictor of Mortality among Febrile Children in the Emergency Department. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.

123	<p>Wilfred Ngwa, Twalib Ngoma, Anthony Zietman, Nina Mayr, Ahmed Elzawawy, Thomas A.</p> <p>Winningham, Onyinye Balogun, Nelly Enwerem-Bromson, Christian Ntizimira, Olufunmilayo I.</p> <p>Olopade Janaki Moni, Thomas Fitzgerald, Nathan Tonlaar, Jason Efsthathiou, David Gierga,</p> <p>Charles Ayo, Felicia Knaul, Mary Gospodarowicz, G Mike Makrigiorgos and Paul L. Nguyen.</p>	<p>Closing the Cancer Divide through Ubuntu: Information and Communication Technology powered models for global radiation oncology. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016.</p>
124	Lwoga, ET Chigona, W.	<p>Characteristics and factors that discriminate internet users from non-users information seekers: the case of rural women in Tanzania. IST- Africa Conference, 11 - 13 May 2016, Durban, South Africa</p>
125	Mudavanhu, S. Lwoga, ET, Chigona, W. 2016.	<p>Framing telecentres: Accounts of women in rural communities in South Africa and Tanzania. International Conference on Information Resources Management (CONF-IRM), 18-20, May 2016, Cape Town</p>
126	Lwoga, ET. Mloka, D. Chimwaza, G. and Chataira, B. 2016.	<p>Mapping outcomes of evidence based health care training among health professionals in Tanzania, 11th International Conference on ICT for Development, Education & Training, 24-26th May 2016, Egypt</p>
127	Lwoga, ET, Sangeda, RZ and Sife, AS. 2016.	<p>Web Visibility of Pharmacy Research at Muhimbili University of Health Sciences, Tanzania. The Fourth MUHAS Scientific Conference 2016, 23 -24 June 2016</p>
128	Gcora, N, Gopeni, A., Tuswa, M., Lwoga, ET and Chigona, W. 2015.	<p>The benefits and challenges of using Telecentres in rural areas: Case of women in Eastern Cape Province.</p>
129	Steyn, J., Van Belle, J.P. (eds.) (2015).	<p>Beyond development. Time for a new ICT4D paradigm? Proceedings of the 9th IDIA conference, IDIA2015, Nungwi, Zanzibar. ISBN: 978-0-620-68395- http://developmentinformatics.org/conferences/2015/papers/6-Gcora-Gopeni-Tuswa-Lwoga-Wallace.pdf</p>

