

KING DAVID UNIVERSITY OF MEDICAL SCIENCES, UBURU, EBONYI STATE, NIGERIA



INVESTORS' INFORMATION HAND BOOK 2021

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1.0 OVERVIEW OF THE UNIVERSITY

1.1 Preamble

The King David University of Medical Sciences (KDUMS) Uburu, Ohaozara LGA, Ebonyi State is designed as an ultra-modern 21st century state-of-the-art International Medical University. The University's central goal is for specialized manpower development in the most conducive environment in all aspects of medical specialties with the highest form of professionalism, ethics and excellence.

The University is established with the vision and mission that are consistent with the Nigerian National Health Policy (NHP) and Strategy which is targeted at Achieving Health for All Nigerians. The University is programmed to provide the manpower needs to address the challenge of human resources for health in line with new global realities and trends that aligns with the Sustainable Development Goals (SDGs), and emerging health issues, particularly with respect to global health challenges (eg., Covid-19 pandemic).



Figure 1. Map of Nigeria Showing Ebonyi State

1.2 Vision

The vision of The University is to achieve the highest form of quality manpower development for healthcare and other service delivery for all persons irrespective of gender, race, religion, and socio-economic status.

1.3 Mission

The mission of the University is to serve mankind with the highest form of professionalism, ethics and excellence by training highly qualified health professionals who will work to improve health conditions, alleviate sickness, suffering and pain through the provision of high quality, efficient, cost-effective and integrated healthcare with compassion and treatment.

1.4 Core values

The core values of the University include Excellence, Godliness, Ethics, Compassion, Respect, Delivery, Collaboration, Innovation, Accountability, Learning, Improvement and Sustainability

1.5 Guiding Principles

(i). Sustainable improvement: The University and its Teaching Hospital will continue to promote sustainable improvements in the quality of training of professional healthcare providers to render to their clients the highest quality health care services.

(ii). Putting people first: The University and its Teaching Hospital will put the needs of the students and clients to the teaching hospital first and will treat them with utmost respect and compassion.

(iii). Fair and objective: The University and its Teaching Hospital will continue to strive to be fair and objective in all our dealings with people and organizations, and undertake our work without fear or favour.

(iv). Open and accountable: The University and its Teaching Hospital will share information about the nature and outcomes of our work, and accept full responsibility for our actions.

(v). Excellence and innovation: The University and its Teaching Hospital will strive for excellence in our work, and seek continuous improvement through self-and organizational-evaluation and innovation.

(vi). Working together: The University and its Teaching Hospital will engage with people providing and people using the services in developing all aspects of our work.

(vii). Professional ethics: The University and its Teaching Hospital will maintain highest form of professional ethics through observance of human dignity, human rights, confidentiality and cultural sensitivity.

(viii). Responsibilities and accountability: The University and its Teaching Hospital will ensure shared responsibilities and mutual accountability of both the client and the provider in health promotion, health-seeking, and service provision.

(ix). Gender consideration: The University and its Teaching Hospital will ensure gender equity and responsiveness, cultural sensitivity and social accountability to be taken into account by all actors in the health system.

(x). Research and innovation: The University and its Teaching Hospital will continue to undertake research in all aspects of health to facilitate the provision of evidence that will enhance evidence-based healthcare.

(xi). Cost improvement: The University and its Teaching Hospital will establish a Cost Improvement Programme (CIP) that will make the Teaching Hospital to adopt mechanisms that will facilitate cost-effective operations and administration.

(xii). Provision of services to other healthcare facilities: The University and its Teaching Hospital will develop Facility Support Services (FSS) that will provide some services on commercial basis to other health facilities eg., the supply of dialyzers and other dialysis consumables, supply of oxygen etc.

(xiii). Promotion of Medical Tourism: The University and its Teaching Hospital will render world-class medical services in Nigeria, in line with global best practices and make a major contributor to the GDP through healthcare

1.6 The Philosophy of the University

It shall be the object, philosophy and aspiration of the University to:

- (i) Encourage the advancement of learning in Ebonyi State of Nigeria in particular and Nigeria in general;
- (ii) Hold out to all persons, without distinction of race, creed, political persuasion or sex, the opportunity of acquiring higher education.
- (iii). For the purpose of realizing the object, philosophy and aspiration set out, the University shall, so far as its resources permit:
- (iv) Provide such facilities for the pursuit of learning and acquisition of higher education as are appropriate for a University of the highest standing;
- (v) Make those facilities available on proper terms to such persons as are equipped to benefit from the use of the facilities:

1.7 The Objectives of the University

- (i) To build critical competencies and expertise in the health sciences under the most conducive learning environment with the highest form of professionalism, ethics and excellence.
- (ii) To foster the spirit of creativity, inventiveness, resourcefulness and entrepreneurship;
- (iii) To impact on her products and associates the spirit of patriotism, fairness, impartiality, incorruptibility and justice, and to propagate the ideal equality of all mankind;
- (iv) To mobilize all resources both locally and internationally, and work collaboration with other institutions of learning and donor agencies within and outside Nigeria for the advancement of knowledge through research and training;
- (v) To provide such facilities that will give training that has concrete relevance to the developmental need of our society; and
- (vi) To undertake other activities and ventures that can conveniently be undertaken by the University for the overall benefit of mankind.

1.8 Course offered in the University

- (1). Medicine & Surgery,
- (2). Nursing,
- (3). Medical Laboratory Science,
- (4). Pharmacy,

- (5). Physiotherapy,
- (6). Health Policy & Health Systems,
- (7). Hospital Administration,
- (8). Dentistry,
- (9). Optometry,
- (10). Human Anatomy,
- (11). Physiology,
- (12). Biochemistry,
- (13). Microbiology/Parasitology,
- (14). Biomedical Engineering,
- (15). Public Health,
- (16). Human Nutrition/Dietetics,
- (17). Radiography/Radiation Sciences,
- (18). Traditional, Complementary and Integrative Medicine,
- (19). Industrial Physics/Astronomy
- (20). Industrial Mathematics/Statistics
- (21). Industrial Chemistry
- (22). Applied Biology/Biotechnology
- (23). Computer Science

2.0 UNIVERSITY MASTER PLAN CONCEPT FOR GROWTH

2.1 Promoting Research and Innovation

- (i). Promoting research culture within the University
- (ii). Scaling-up PhD programs
- (iii). Supporting innovative research across disciplines to address global challenge
- (iv). Increasing income from research grants and research grant pools
- (v). Implementation of policies and guidelines on research benefits and incentives. Also incentives based on publications in highly ranked journals
- (vi). Developing and retaining high-performing staff
- (vii). Supporting and increasing our early career researchers and postgraduate research students
- (viii). Introduction of innovative strategies to learn how to do research such as: field studies, experiential learning, case based learning, problem based learning.
- (ix). Directorate of Research, Innovation & Commercialization (DRIC) to step up research activities in the University.

2.2 Promoting Staff Development

- (i). Networking and partnership development through conferences and scientific meetings:
- (ii). Development of high-performing staff into high achieving staff:
- (iii). Development of scientific research skills, grantsmanship and scientific writing skill:
- (iv). Development of capacity for the implementation of new and innovative 'teaching & learning' approaches and methods:
- (v). Staff doctoral and post-doctoral scholarship/fellowship programme:
- (vi). Hosting of Professors/industry experts:
- (vii). Attracting high-achieving regional staff for special scientific meetings and workshops:

2.3 Promoting High Academic Standard

- (i). Improving the standards in Postgraduate programmes
- (ii). Introduction of new MSc/PhD programmes and new electives
- (iii). Short term courses for industry and government professionals
- (iv). Introduction and implementation of new and innovative 'teaching & learning' approaches and methods.
- (v). Revising curricula both the content/context & Curricula development workshops
- (vi). Hosting of Professors/industry experts
- (vii). Institution and/or program accreditation
- (viii). Organization of and participation in training workshops/seminars/conferences
- (ix). Publication of research findings and facilitation of access to partner contents
- (x). Investment into new laboratories, purchase of learning equipment, upgrading of facility.
- (xi). Adherence to environmental and ethical guidelines
- (xii). Leveraging ICT to promote extensive collaboration while limiting travel costs
- (xiii). Attract and retain the best staff possible in the University
- (xiv). Establishment of proper evaluation and monitoring systems

2.4 Promoting Development of Academic Faculties

- (i). Development of University Environment and system so as to cultivate, expand and transmit relevant knowledge
- (ii). Development of the character and competence of our graduates
- (iii). Development of a system for proper utilization and management of resources
- (iv). Development of a University environment that supports the growth of staff in their professional careers, well-rounded personal development, and appreciation of community service.
- (v). Expansion and creation of access to learning opportunities based on the capacity, need assessments and relevance, diversify and expand programs
- (vi). Improvement of equity and access to education that addresses the participation of women and those from disadvantaged regions
- (vii). Provision of a system and an environment conducive to all types of research (e.g basic and applied), creative activity, and dissemination of knowledge.
- (viii). Promotion of research collaboration with local, national and international organizations
- (ix). Internationalization of the University

3.0 STATE OF THE ART UNIVERSITY TEACHING HOSPITAL

3.1 Preamble

- 3.1.1 During the opening ceremony of the 41st Annual General Meeting of the Nigerian Orthopaedic Association held in Lagos in November 2018, the then Minister of State for Health who is now the substantial Health Minister of Nigeria, Dr Osagie Ehanire, said that Nigerians spend about \$2bn (two billion Dollars or about 800 billion Naira) annually to seek medical care abroad on the average. He also said that many Nigerians were driven to seek treatment abroad due to lack of trust for hospitals and medical personnel in the country.
- 3.1.2 It is in line with this paradigm shift in healthcare delivery suggested by the health minister that Teaching Hospital is strategically positioned not only to drive the shift but to serve as an excellent example of a world class medical tourism hub in Nigeria. With the Teaching Hospital fully operational,

Nigeria will save not less than 800 billion naira annually and when this huge amount is plunged back into the economy, it will go a long way in revitalizing the Nigeria social sector.

3.2 Rationale for State-Of-The-Art Healthcare Facility

High Disease Burden in Nigeria

3.2.1 Nigeria is one of the countries with a high prevalence of communicable diseases and an increasing burden of non-communicable diseases. The unabating high disease burden largely due to poverty and underdevelopment necessitates the establishment of a state-of-the-art healthcare facility that will cater for the increasing health needs of the citizens.

Weak health systems and health services

3.2.2 In Nigeria, health services are delivered through primary, secondary and tertiary health facilities by both the public and private sectors. However due to decades of inadequate investment into the public sector and poor resource management the Nigeria health systems have become so weak that citizens no longer have strong confidence in the healthcare delivery services rendered by public healthcare sector.

3.2.3 The private healthcare sector is relatively better in terms of quality of care but the high cost of services rendered by them remains a considerable challenge. Also, referral mechanism is very poor because even the secondary and tertiary health facilities in Nigeria have become so grossly underfunded that they can no longer support cases referred to it from the primary healthcare facilities.

3.2.4 The Teaching Hospital will bridge this gap by running an excellent referral mechanism by the virtue of the networking it will establish with secondary health facilities within its primary catchment areas of the south east and south-south geographical regions of Nigeria.

Unavailability of technologically advanced health care services

3.2.5 With the increasing rate of non-communicable diseases and other forms of health challenges that require highly technological approaches for treatment and management, the unavailability of such services has led to many seeking treatments abroad. A lot of Nigerians can afford the resources to seek medical attention for whatever illness they are suffering provided such treatments are available.

3.2.6 Diseases such as cancer, and organ related diseases (eg., those involving the heart, liver, kidney, eye, brain etc) are currently treated with advanced technology and specialized enterprise. Also, reproductive health services including IVF are also in increasing demand. The Teaching Hospital is also strategically positioned to meet the health needs of Nigeria in these specialized areas within and outside the primary catchment locations.

3.3 Major Centres/Unit of The Teaching Hospital

3.3.1 Maternal & Child Care Centre: To undertake all aspects of maternal and child health care including women health, pregnancy, nursing mothers, children healthcare etc.

3.3.2 Cancer Treatment/Oncology Centre: To undertake all aspects of cancer/oncology treatment.

3.3.3 Eye Centre Centre: To undertake all aspects of eye care in all specialties.

3.3.4 Dialysis Centre: To undertake renal management and treatment including dialysis.

- 3.3.5 Laboratory Unit:** To cover the four key areas of laboratory services including medical microbiology, haematology/immunology, chemical pathology and histopathology.
- 3.3.6 Radiology Unit:** To undertake all radiology services.
- 3.3.7 Operating Theatres & Suits:** For all aspects of surgical services.
- 3.3.8 Kidney & Liver Transplantation Unit:** For kidney and liver transplantation and care.
- 3.3.9 Dialyzer Production Plant:** For the production of dialyzers and other consumables used for dialysis centre.
- 3.3.10 Oxygen Production Plant:** For the production of oxygen required for critical care and other related services.
- 3.3.11 Virology & Quarantine Unit:** For the quarantine and management of viral diseases and highly infectious diseases.
- 3.3.12 Dental Services Unit:** For all aspects of dental care and dentistry.
- 3.3.13 Pharmacy Unit:** For the management and administration of drugs and also for the formulation and compounding of drugs and other pharmaceutical services.
- 3.3.14 Accident & Emergency Unit:** For the prompt management and care for accident and emergency case.
- 3.3.15 Physiotherapy Unit:** For physiotherapy services.
- 3.3.16 Health Information Management Equipment & Systems Unit:** For the computerization of all records and other hospital information.
- 3.3.17 Mortuary Unit:** This is a 48-body capacity. Also incorporated is a chapel for funeral services.
- 3.3.18 Central Sterilizing Supply Department (CSSD):** For all kinds of sterilization services.
- 3.3.19 Laundry Unit:** For all aspects of laundry services.
- 3.3.20 Workshop/Maintenance Unit:** For the purpose of maintenance and servicing of equipment and hospital infrastructure and environment.
- 3.3.21 Catering/Kitchen Unit:** For all aspects of catering services.
- 3.3.22 Waste Management Unit:** For management of all forms of hospital wasters.
- 3.3.23 Administration:** For all administrative related services including personnel and finance matters

4.0 MAJOR HEALTHCARE SERVICES TO BE OFFERED AT THE TEACHING HOSPITAL

4.1 Eye Care Services	4.2 Paediatrics Care Services
<ol style="list-style-type: none">1. Anterior segment (including transplant surgeries – conjunctiva, cornea)2. Glaucoma3. Paediatric ophthalmology4. Cataract surgical services including (phacoemulsification cataract surgeries)5. Medical retina and vitreoretinal surgeries;6. Comprehensive ophthalmology services;7. Community ophthalmology services8. Oculoplastic services;9. Optical services10. Refractive services11. Low vision services12. Optical workshop13. Optical sales14. Ocularistic services (prosthesis)15. Lasers	<ol style="list-style-type: none">1. Neonatology2. Paediatric Allergology3. Paediatric Dermatology4. Paediatric Diabetes5. Paediatric Respiriology6. Paediatric Intensive Care7. General Paediatrics8. Tropical Paediatric9. Translational Paediatric10. Paediatric Transplantation11. Paediatric Drugs12. Adolescent Medicine13. Allergy and Immunology14. Cardiology15. Critical Care Medicine16. Developmental-Behavioural Medicine17. Endocrinology18. Gastroenterology19. Haematology-Oncology20. Infectious Diseases21. Neonatal-Perinatal Medicine22. Nephrology23. Neurology24. Emergency Medicine25. Pulmonology26. Rheumatology

4.3 Obstetrics & Gynaecology Services

1. Antenatal clinic
2. Postnatal clinic
3. Family Planning clinic
4. General Gynaecology clinic
5. Gynae-oncology clinic
6. Assisted reproductive technology (ART) clinics.
7. Evaluation and management of recurrent miscarriages.
8. Screening and management of pre-term labour and PPRM
9. Management of critically ill obstetric patients which can include HELLP syndrome, APH, eclampsia, obstetric shock.
10. Management of pregnancies complicated with maternal disorders like hypertension, diabetes, cardiac diseases, collagen vascular disorders, hematologic disorders etc.
11. Management of pregnancies associated with gynaecologic conditions such as fibroids, ovarian tumours, prolapsed uterus etc.
12. Uterine surgeries – myomectomy, rudimentary horn excision, adenomyomectomy, total laparoscopic hysterectomy, laparoscopic assisted vaginal hysterectomy.
13. Tubal surgeries – adhesiolysis, tubal surgeries for ectopic gestation, salpingectomy.
14. Ovarian surgeries – follicular puncture, ovarian biopsy, cystectomy, adhesiolysis, ovariectomy.
15. Hysteroscopic procedures – septum resection, myomectomy, polypectomy, tubal cannulation.
16. Disorders like primary amenorrhea, hirsutism, hyperprolactinemia, polycystic ovarian disease, premature menopause are dealt with by special coordination between this department along with endocrinology.
17. Interventional radiological procedures such as uterine artery embolization available for the treatment of uterine fibroids.

4.4 Neuro Surgery

1. Congenital diseases of the brain and spine and other illnesses affecting children
2. Tumours of the brain, spine and spinal cord
3. Vascular diseases such as aneurysms and vascular malformations
4. Degenerative disc and other spinal diseases
5. Instrumentation of the spine and the cranio-vertebral junction
6. Diseases of the pituitary gland
7. Stroke and haemorrhage in the brain and spinal cord
8. Microneurosurgery
9. Brain tumours (Supra Tentorial and Infra Tentorial)
10. Skull base tumours
11. Spine tumours
12. Anterior Cervical Micro Discectomy
13. Lumbar Micro Discectomy
14. Head injuries
15. Spine injuries
16. Paediatric Neurosurgery:
17. VP shunt surgery
18. Congenital anomaly correction
19. Brain & spine tumours excision
20. Spinal dysraphism anomaly correction
21. Spine Surgery
22. Stabilization of fracture spine
23. Spinal tumors
24. Stroke surgery
25. Medical management of Neurological disorders:
26. Stroke
27. Seizure disorders
28. Movement disorders
29. Parkinson's disease
30. Headache
31. Backache

4.5 Cardiac Care Services

1. Atrial fibrillation/flutter
2. Aortic Stenosis
3. Arrhythmias, acquired and inherited
4. Bradycardia, sick sinus syndrome and heart block
5. Cardiomyopathy, acquired and inherited
6. Chest pain and angina
7. Congenital heart disease
8. Coronary heart disease
9. Heart attacks
10. Heart failure
11. Heart Transplantation
12. High blood cholesterol and triglycerides
13. Hypertension
14. Hypertrophic and restrictive cardiomyopathy
15. Long QT syndrome
16. Pacemakers and defibrillators
17. Pericarditis
18. Peripheral vascular disease
19. Preventive cardiology and risk factor management
20. Pulmonary hypertension
21. Stable angina
22. Supra ventricular tachycardia
23. Ventricular assist devices
24. Valvular heart disease
25. Ventricular tachycardia
26. Women's heart disease

4.6 Orthopaedics and Joint Replacement Services

1. Primary and revision knee, hip, shoulder and elbow replacement
2. Partial knee replacement
3. Patient specific Instrumentation
4. Lifelong knee and hip implants
5. Space suit surgery
6. Minimally invasive surgery
7. Gender specific replacement
8. High flex implants
9. Painless surgery
10. Personalized Post- operative care and dedicated Physiotherapy
11. Fracture care and trauma
12. Hand surgery
13. Shoulder surgery
14. Micro vascular procedures, such as nerve repair and nerve and muscle grafts
15. Foot and ankle injuries
16. Paediatric orthopaedic conditions
17. Sports injuries
18. Arthroscopic ligament reconstructions
19. Articular cartilage repair
20. Multidisciplinary team for Sports specific education and rehabilitation
21. Tumour Surgery for bone cancers
22. Osteosarcoma
23. Ewing's sarcoma
24. Chondrosarcoma
25. Multidisciplinary team for Sports specific education and rehabilitation
26. Soft tissue sarcomas such as Rhabdomyosarcoma

4.7 General Medicine

1. General Diabetes Clinics
2. Diabetes and Pregnancy Clinic For Women
3. Diabetes Nephropathy Clinic for diabetes-related kidney problems
4. Specialist endocrine services include:
5. General endocrine clinics like for conditions relating to adrenal, parathyroid and pituitary glands.
6. Thyroid clinics for conditions including overactive thyroid, enlarged thyroid (goiter) and thyroid lumps.

4.8 Hepatology

1. Hepato Pancreato Biliary Services:
2. Liver surgery –
3. Pancreas –
4. Disorders of the biliary system –
5. Bile duct and gallbladder cancer

<p>4.9 Laboratory Services</p> <ol style="list-style-type: none"> 1. Haematopathology 2. Biochemistry 3. Serology 4. Specialized Microbiology 5. Neuropathology 6. Nephropathology 7. Oncopathology 8. GI Pathology 9. Transfusion Medicine 10. Infection Control 11. Laboratory specialty areas at Capitol include: 12. Histo Pathology 13. Clinical Biochemistry and Immunology 14. Clinical serology 15. Clinical Microbiology* 16. Hematopathology 17. Clinical Pathology 18. Transfusion Medicine/Blood Bank 	<p>4.10 Nephrology & Dialysis Services</p> <ol style="list-style-type: none"> 1. Haemodialysis 2. High-flux dialysis 3. Re-use dialysis 4. ICU procedures like SLED (Sustained Low Efficiency Dialysis), Plasmapheresis procedure, Hemofiltration, Hemoperfusion 5. Peritoneal Dialysis: CAPD (Continuous Ambulatory Peritoneal Dialysis), Automated Peritoneal Dialysis, Acute Peritoneal Dialysis 6. Kidney biopsy 7. PermCath insertion 8. AV Fistulation 9. Graft implantation
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<p>4.11 Gastrointestinal Surgery Services</p> <p><i>Gastric and Oesophageal Surgery</i></p> <ol style="list-style-type: none"> 1. Gastric Cancer 2. Achalasia Cardia 3. Oesophageal Cancer 4. Gastro Oesophageal Reflux Disease - 5. Ulcer Disease – <p><i>Small Intestine and Colorectal Surgery</i></p> <ol style="list-style-type: none"> 1. Colorectal Cancers – 2. Inflammatory Bowel Diseases 3. Abdominal Tuberculosis 4. Rectal Prolapse 5. Complicated Perianal Conditions 6. Anal Sphincter Reconstruction and Augmentation - 7. Stoma clinic <p><i>Hepato Pancreato Biliary Services</i></p> <ol style="list-style-type: none"> 1. Liver surgery 2. Pancreas 3. Disorders of the biliary system 4. Bile duct and gall bladder cancer <p><i>Gastro Intestinal Oncology</i></p>	<p>4.12 Physiotherapy</p> <ol style="list-style-type: none"> 1. Orthopaedics Physiotherapy 2. Amputee Rehabilitation 3. Hand, Wrist, Elbow and Shoulder Rehabilitation 4. Spine Injury & Back Pain Rehabilitation 5. Orthopaedic Bone & Joint Rehabilitation 6. Osteoporosis & Bone Health Rehabilitation 7. Neuro-physiotherapy 8. Parkinson’s Disease Rehabilitation 9. Stroke & Traumatic Brain Injury Rehabilitation 10. Paediatric neuro rehabilitation 11. Cardiac-pulmonary 12. Men & Women health 13. Treatments available for: 14. Spinal Cord Injury 15. Neck Pain (Cervical pain) 16. Fibromyalgia 17. Parkinson’s disease 18. Osteoarthritis
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4.13 Spine Surgery Services	4.14 Plastic & Reconstructive Surgery Services
<ol style="list-style-type: none"> 1. Disk Replacement/discectomy 2. Interlaminar implant 3. Spinal fusion 4. Laminectomy 5. Foraminotomy 6. Endoscopic discectomy 7. Vertebroplasty 8. Kyphoplasty 	<ol style="list-style-type: none"> 1. Craniofacial Surgery 2. Hand Surgery (Chiroplasty) 3. Hand surgery 4. Microsurgery

4.15 General and Laparoscopic Surgery Services	4.16 Urology Services
<ol style="list-style-type: none"> 1. Gallbladder surgery 2. Gynaecological surgeries – hysterectomy (removal of Uterus), fibroid removal, ovarian cyst removal, ectopic pregnancy, evaluation for infertility etc. 3. Gastrointestinal perforation 4. Acid Reflux (Heartburn) surgery 5. Splenectomy (Spleen surgery) 6. Colon and Rectal Surgery 7. Pancreatic surgery 8. Minimal Invasive Procedure for Haemorrhoid (MIPH) / Stapled haemorrhoidectomy which is a pain-free instant cure for piles superior to laser and 9. Cryosurgery and colorectal surgery including Anal Fissures and Fistulae 10. Hi-tech Colour Doppler navigation surgery for varicose veins 11. Keyhole varicose vein surgeries and keyhole breast surgeries 12. Thyroid surgery 13. Laparoscopic Urachal Cystectomy 14. Early diagnosis and cosmetically pleasing surgeries for hernias, appendix, hydrocoeles and varicoceles. Flap repairs for pilonidal sinus Biopsies 15. Excision / Incision / CT Scan and U/S guided. 	<ol style="list-style-type: none"> 1. Ureteroscopy: 2. retero-Renoscropy: 3. Percutaneous Nephrolithotomy (PCNL): 4. Urethroplasty: 5. Laparoscopic Surgery: 6. Uro oncology 7. Trus guided prostatic biopsy: 8. TURBT: 9. Radical cystoprostatectomy with neobladder/conduit: 10. Radical prostatectomy for cancer prostate: 11. Prostate Disease : 12. Uroflowmetry: 13. TURP -Transurethral Resection of the Prostate (TURP) 14. Treatment of Incontinence: 15. Female Urology: 16. Treatment of Haematuria: 17. Andrology Services 18. Infertility: 19. Impotency: 20. Paediatric Urology:

4.17 Gastroenterology Services	4.18 Anaesthesia and Critical Care
<ol style="list-style-type: none"> 1. Anorectal function testing, including evaluation of constipation and faecal incontinence 2. Clinical nutrition, with emphasis on malnutrition from gastrointestinal diseases 3. Diagnostic and therapeutic endoscopy, including enteral stents, biliary stents, banding of oesophageal varices, endoscopic treatment for gastrointestinal bleeding. 4. Diseases of the pancreas, including acute and chronic pancreatitis, autoimmune pancreatitis, hereditary pancreatitis, pancreatic cancer, pancreatic cysts, adult cystic fibrosis 5. Oesophageal diseases and oesophageal cancer 6. Gastrointestinal cancer (anal, colon, rectal, stomach, small bowel, gallbladder, liver, bile duct) 7. Heartburn and gastroesophageal reflux disease (GERD) 8. Hepatobiliary disease, including evaluations for liver transplant and post-operative care 9. Inflammatory bowel disease, including Crohn's disease, ulcerative colitis, microscopic colitis and pouchitis 	<ol style="list-style-type: none"> 1. Administration of anaesthesia in all subspecialties 2. Critical care 3. Coordination of comprehensive pain management services 4. Diagnosis of acute and chronic pain syndromes 5. Injections and nerve blocks 6. Intra-operative trans-oesophageal echocardiography 7. Management of acute and chronic pain 8. Medical management of painful conditions 9. Nursing and case management 10. Obstetrical analgesia and anaesthesia 11. Pre-operative medical evaluations 12. Pre-operative pain management 13. Spinal-cord stimulation 14. Spinal-infusion systems
	4.19 Vascular Surgery Services
<ol style="list-style-type: none"> 10. Swallowing disorders and non-cardiac chest pain 11. GI infections including Clostridium difficile (C. difficile) 12. Capitol, being the one of the best in gastroenterology and hepatology clinic, other than the above mentioned, the listed below are the procedures we conduct regularly: 13. Colonoscopy (with/without Biopsy, with Polypectomy, with Dilatation) 14. Esophagogastroduodenoscopy (EGD) 15. Oesophageal dilation 16. Oesophageal Sclerotherapy/Band Ligation 17. Oesophageal Prosthesis 18. Flexible Sigmoidoscopy 19. ERCP (both biliary and pancreatic) 20. Intra-gastric Balloon placement for obesity 21. Foreign body removal 	<ol style="list-style-type: none"> 1. Angioplasty with or without Stenting 2. Carotid Stenting 3. Angioplasty 4. Aortic and peripheral vascular endovascular stent/graft placement 5. Thrombolysis 6. Vascular bypass grafting 7. Surgical ligation with or without vascular bypass 8. Atherectomy 9. Embolectomy 10. Angiography 11. Dialysis catheter placement 12. Vascularized lymph node transfer 13. Lymphatic venous anastomosis 14. Portosystemic Shunt

4.20 Dentistry & Dental Services	4.21 Radiology Services
<ol style="list-style-type: none"> 1. Dental Implants 2. Orofacial Pain and Temporomandibular disorders (TMD) 3. Orthodontics (Diagnosis, prevention and treatment of dental and facial irregularities) 4. Periodontics (Diagnosis, prevention and treatment of gum diseases) 5. Prosthodontics (Restoration of damaged natural teeth or replacement with artificial teeth) 6. Operative Dentistry 7. Conservative correction of aesthetic problems with dental bonding. 8. Oral Pathology, Radiology & Medicine 9. Investigation of clinical, radiographic and microscopic features of oral / maxillofacial diseases and abnormalities. 10. Paediatric Dentistry Oral health care for infants, children, and adolescents, including persons with special health care needs. 11. Preventive & Community Dentistry Improvement of the public's oral health through prevention and control of oral diseases. 12. Family Dentistry 13. Diagnosis, prevention, and treatment of diseases and injuries of the dental pulp and tissues surrounding the tooth root. 14. Oral & Maxillofacial Surgery 15. Grafting, dental implant placement and other surgical treatments of conditions, injuries, and aesthetics of the teeth, jaws, and face. 16. Orthodontics 17. Periodontics 18. Prosthodontics 	<ol style="list-style-type: none"> 1. Diagnostic Radiology Services: 2. General Imaging X-Rays. 3. Computed Tomography (CT & CAT Scans) 4. MRI (Magnetic Resonance Imaging). 5. Breast Imaging & Breast Services: Sono Mammograms, Breast Biopsies, Breast Ultrasounds, Breast MRIs 6. Cardiac Radiology CT Angiography (CTA), Cardiac CT, Cardiac MRI 7. Cerebral Angiogram 8. Gastrointestinal Radiology. 9. Genitourinary Radiology, CT Urography, Cystography, Hysterosalpingography 10. MR Spectroscopy and Perfusion Imaging. 11. Dynamic MRI contrast studies 12. Musculoskeletal Imaging Bone, Cartilage & Joint Imaging 13. Neuroradiology Imaging of the Nervous System, Spine, Head & Neck 14. Thoracic Imaging 15. Ultrasound & Ultrasound-Guided Procedures. 16. Cross-Sectional Interventional Radiology CT-Guided Biopsies & Fluid Drainage, 17. Imaging-Guided RF and Laser Ablations 18. Invasive Image-Guided Procedures. 19. Arterial Intervention: 20. Embolization 21. In epistaxis. 22. In haemoptysis. 23. In postpartum haemorrhage. 24. Uterine fibroid embolization. 25. In haematuria. 26. Posttraumatic embolization. 27. Trans arterial chemoembolization. 28. Peripheral angioplasty and stenting, 29. Intraarterial thrombolysis. 30. Venous interventions: 31. Sclerotherapy. 32. Intravenous thrombolysis. 33. IVC Filter. 34. Nuclear Cardiology 35. Nuclear Medicine Radiopharmaceutical Treatment for Cancer, Heart Disease & Other Disorders 36. PET Scan

5. THE TEACHING HOSPITAL EQUIPMENT PROFILE

- 5.1 To fulfil the mission of the Teaching Hospital which is to serve mankind with the highest form of professionalism, ethics and excellence to improve health conditions, alleviate sickness, suffering and pain through the provision of high quality, efficient, cost-effective and integrated healthcare with compassion, the need for modern medical equipment becomes very imperative.
- 5.2 Acquiring the most efficient equipment is fundamental to the achievement of the strategic goals of the Teaching Hospital. Since one of the main human needs is to have access to very high-quality medical service and this can only be possible with the availability of the right equipment.
- 5.3 Modern medical equipment has revolutionized medical practice and have contributed immensely in the improvement of treatment success and thereby increased human life expectancy.
- 5.4 In our resolve to promote the highest quality of healthcare services in Nigeria and promote medical tourism, we have engaged renowned medical equipment manufacturers to acquire the most modern medical devices and equipment that will enable us achieve our strategic objectives.
- 5.5 The equipment sets were selected based on their recommendation of the manufacturers and models.
- 5.6 The equipment list covers all the major areas of operation of the Teaching Hospital including laboratory, Maternal & child care, Radiology, Operating theatre, Eye centre, Kidney & liver transplantation, Dialysis centre, Dialyzer production plant, Oncology (radiotherapy), Virology & quarantine, Dental services, Pharmacy equipment, accident & emergency, Physiotherapy, health information management equipment & systems, mortuary, Central sterilizing supply department, medical incinerator, laundry and other hospital equipment (workshop; kitchen; vehicles; waste management).
- 5.7 Agreements have been reached between us and the various equipment representatives and distributors regarding the warranty and maintenance schedules after acquisition and installation.
- 5.8 We have also put in place a robust training mechanism to enable our staff to constantly update their knowledge and skill on the operation and application of the equipment.

6.0 WHY INVEST IN THE TEACHING HOSPITAL?

Market Assessment

- 6.1 The Teaching Hospital is designed to be the largest and most modern teaching hospital in the South-eastern Nigeria. As a teaching hospital it will have a comprehensive portfolio of services and a strong research and educational base, located primarily in Ebonyi State with about three million population.
- 6.2 This gives Teaching Hospital two relatively distinct markets: a local market for the general hospital services in Ebonyi State and a wider market for its more specialized services across the South-east and South-south Nigeria. A number of specific challenges and opportunities exist in both areas of coverage of the hospital.

Local health economy and market for general hospital services

- 6.3 The Teaching Hospital will provide general hospital services for the population of Ebonyi State and for parts of Enugu and Abia States.
- 6.4 The Teaching Hospital is strategically place to also serve both the population of the cities and rural communities. Its serene environment with natural vegetation will add to the ideal condition that clients will require during the process of recovery after undergoing treatment or surgical procedure.
- 6.5 With the excellent access roads constructed by the present administration of Governor Dave Umahi, access to the Teaching Hospital from any part of the state is very easy. Also access form any of the neighbouring states of Enugu and Abia is also easy.
- 6.6 With the completion of the hospital it is expected that additional 5,000 people will be attracted to the immediate Teaching Hospital location and its environs. It is expected that more houses will be built and more businesses will be established thereby increasing the economic activities around the Teaching Hospital location.
- 6.7 With the high level of infrastructural development in Ebonyi State, the State has been described as one of the fasted growing states in Nigeria. The establishment of the Ultra-modern international shopping mall, economic activities are expected to increase as more investors are expected which will lead to a significant boost in the economy of the State and attract more people to the state who will of course require high quality healthcare.

Market for specialized services

- 6.8 Some of the services to be offered by the Teaching Hospital cannot be found in any other part of the catchments area of the South-east and South-south.
- 6.9 For instance, the Teaching Hospital will have the largest Eye Centre in the region, also it will be the only health facility that will render comprehensive Oncology (cancer treatment) services, it will also be the only health facility that will have a dialyzer manufacturing plant to supply the entire Nigeria with dialyzers for the dialysis management.
- 6.10 Furthermore, the Teaching Hospital will be the only health facility that is producing oxygen, from its oxygen production plant which has the capacity to produce 25 cylinders of 40 litre capacity of oxygen

daily. The Teaching Hospital also has a special VIP ward that will have all the comfort that one can think of. This will be a major attraction to the elites who may want to seek medical treatment abroad.

Market requirements

6.11 Market requirements can be summarized as meeting the health needs of the catchment population of South-east and South-south whilst improving quality and healthcare outcomes, within the context of costs associated with changes in demography, technology and expectations and the economic situation that limits the availability of funding for health services.

Choice and competition

6.12 The Nigeria National Health Policy encourages private sector investment into the health sector. This has led to the establishment of some private healthcare facilities within our catchment areas, but there is none of such health facilities that can be compared to what we plan to establish in the Teaching Hospital.

6.13 However, the existence of other federal government health facilities within the catchment areas will induce healthy competition. The introduction of competition will increase the importance of providing care in a way which will encourage patients and referrers to choose the Teaching Hospital services.

6.14 The implication of the competition is that it will help us to respond to changes in demand for our services, monitoring activity levels closely and being able to flex capacity, with contingency plans in place for situations where a service is gained or lost through competition.

6.15 In line with our guiding operational principles, we will continue to developing our capability in responding to commercial opportunities and in reconfiguring existing services to meet patient, and public expectations of the population in our catchment area.

6.16 Summary of competitive threats and the Teaching Hospital response

Competitive threat	Issue	Teaching Hospital Response
Alternative providers	Independent sector treatment centres	Teaching Hospital will assess the threat posed in selected services and develop an appropriate response.
Other Government specialized healthcare centres	Competition from other teaching hospitals for tertiary work on the boundaries of the Teaching Hospital catchment area	Work with clinicians and network hospitals to strengthen referral patterns and create supportive clinical networks that help sustain services throughout the catchment area. Focus on strengthening, sustaining and publicizing quality, patient experience and patient recommendation and choice.
Private Sector	Competition within our catchment area for the specialized services the Teaching Hospital will offer	Participation in investigation. Anticipate that market plurality of providers will be necessary. The Teaching Hospital will strengthen capacity to develop its existing private healthcare service and/or form a strategic partnership with another provider.

The Teaching Hospital plan to develop competitive advantage

Quality

- 6.16 Quality is the primary focus for the Teaching Hospital.
- 6.17 We will draw a long-term Quality Strategy, drawing on a wide range of work on patient safety, clinical effectiveness, outcomes and patient experience.
- 6.18 Regular quality reports will be produced to be submitted to the Teaching Hospital Governing Board covering all aspects of Quality. Divisions/units/departments will prepare their own quality reports for monthly review and present progress to the Medical Advisory Committee (MAC).

Patient experience

- 6.19 The Teaching Hospital will regard patient experience as an important element of service quality. Periodic comprehensive survey of the Teaching Hospital patients will be conducted to provide vital evidence require for quality improvement.

Staff experience and perception

- 6.20 It has been shown that the more positive the experiences of staff within a healthcare setting, the better the outcomes of their services and performance. We will ensure that our staff are properly engaged because the more engaged staff members are, the better are outcomes for patients and for the organization generally.
- 6.21 The score for the staff experience will comprise staff members' perceived ability to contribute to improvements at work, their willingness to recommend the trust as a place to work or receive treatment and the extent to which they feel motivated and engaged with their work. These types of assessments will be a regular practice in the Teaching Hospital

Geography and travel times

- 6.22 The Teaching Hospital is easily assessable from any part of Ebonyi State due to improved road networks which have been constructed by the present administration. It will take a maximum of about 2hours to travel from the farthest local government headquarter in Ebonyi State to the Teaching Hospital location. It is even shorter at about 1-2 hours to travel from the neighbouring states of Enugu and Abia to reach the Teaching Hospital.

Security

- 6.23 Ebonyi State is adjudged the most peaceful state in the South-eastern Nigeria. The peaceful situation in the State is an added competitive advantage to the Teaching Hospital.

Social amenities and facilities

- 6.24 The Teaching Hospital location is being designed to have all the necessary social amenities functional such as uninterrupted power supply, water, access roads, shopping mall, banks, police station, sports centre etc.

Serene & natural environment

- 6.25 The Teaching Hospital is located in a very serene environment devoid of environmental pollution with natural vegetation. This will facilitate recovery process for the patients.

Measures of strategic success

- 6.26 **For patients:** through levels of satisfaction and experience that compare well with those of comparable teaching hospitals. Patients will experience excellent care delivered in accordance with the Teaching Hospital values. Patients receiving 'general hospital' care will benefit from better-integrated care closer to home. Across a wider clinical network, patients will be able to access specialized care more locally.
- 6.27 **For staff:** through raised levels of satisfaction and skills development. Staff will benefit from working in a supportive culture where, consistent with the Teaching Hospital's values, individuals are treated with integrity and respect. Opportunities for personal development will be enhanced through new roles and ways of working, particularly through involvement with research and other capacity building engagements.
- 6.28 **Through choice by referrers:** to use the Teaching Hospital, seen through activity levels demonstrating sustained market share and new patterns of referral for specific services.
- 6.29 **By creating a clinical network:** with continued collaboration and partnership.
- 6.30 **Through research partnerships:** through partnership with a strong commitment to deliver the benefits of innovation for patients and through partnership with a strong commitment to the translation of basic research into applied research and patient services.
- 6.31 **Through innovation in service delivery:** with recent examples including a supportive hospital discharge service delivering social care, and the introduction of a psychological medicine service.
- 6.32 **By benchmarking:** through demonstrating that the Teaching Hospital delivers patient safety, patient experience, outcomes and costs that compare well with available comparators; and

The Teaching Hospital organizational building blocks to deliver strategic goals and targets

Strong and effective leadership

- 6.33 Strong and visible leadership across all areas and specifically in terms of values and strategic development.
- 6.34 Focus on quality and patient experience at the highest level. Leadership within the local and wider health community.

Clinical leadership

- 6.35 Day-to-day management and delivery of services by clinically-led Divisions.

Staff engagement, wellbeing and development

- 6.36 Use of a behavioural framework to support the application of the Teaching Hospital values in practice.
- 6.37 An education and training framework to foster staff development and competence.

Value for money

- 6.38 Maximizing the service quality and clinical outcomes delivered through a defined resource via visibility of costs at patient level.
- 6.39 Divisions operating as strategic business units for delivery of service and workforce redesign, informed by benchmarking.
- 6.40 Delivery of a divisionally-owned and corporately-supported programme to improve outcomes and reduce costs.

6.42 SWOT analysis

Strength <ul style="list-style-type: none">1. Established tertiary centre with strong clinical network arrangements with surrounding hospitals2. Patients to value quality of care and treatment3. Effective planning processes to be put in place4. Reputation for clinical services, using innovative treatments and techniques5. Reputation for excellence in training and developing research awareness and activity6. State-of-the-art facilities including high percentage of single VIP rooms and latest technology & equipment7. Expatriates to be engaged for up to 3 years in various specialties	Opportunity <ul style="list-style-type: none">1. Partnership building with researchers and health practitioners from other institutions2. Access to research grants from international agencies3. Attracting some of the best qualified health workers4. Become a globally recognized centre of excellence
Weakness <ul style="list-style-type: none">1. Access to care requirements may not be met in some areas2. Cost of specialized healthcare services may be unaffordable to the poor3. Patient turnover for first year may be low	Threat <ul style="list-style-type: none">1. Recruitment and retention of specific groups of clinical staff is difficult2. Cost of maintaining the hospital may be enormous3. Sustainability of the services and operation may be challenging without substantial continuous funding

6.43 Financial Projections (in Naira)

Divisions	Year 1	Year 2	Year 3
Laboratory Unit	10 million	20 million	40 million
Maternal & Child Care Centre	20 million	40 million	80 million
Radiology Unit	25 million	50 million	100 million
Operating Theatre	75 million	150 million	300 million
Eye Care Centre	50 million	100 million	200 million
Kidney & Liver Transplantation Unit	25 million	50 million	100 million
Dialysis Centre	100 million	200 million	400 million
Dialyzer Production Plant	100 million	200 million	400 million
Oncology (Radiotherapy)	150 million	300 million	600 million
Virology & Quarantine Equipment	15 million	30 million	60 million
Dental Services	5 million	10 million	20 million
Pharmacy Equipment	75 million	150 million	300 million
Accident & Emergency Equipment	15 million	30 million	60 million
Physiotherapy	2.5 million	5 million	10 million
Oxygen plant	2.5 million	5 million	10 million
Mortuary: 48 Body Capacity	5 million	10 million	200 million
Total	675million	1.35billion	2.70 billion

7.0 PUBLIC PRIVATE PARTNERSHIP MODEL: PROPOSED OPERATIONAL MODEL OF THE UNIVERSITY & ITS TEACHING HOSPITAL

- 7.1 Both the Medical University and its Teaching Hospital will operate via Public Private Partnership Model. Investors, international organizations and international academic and hospital development networks and partnerships will be engaged.
- 7.2 Public Private Partnership Agreement will be reached with various partners and investors on the running of both the university and its teaching hospital.
- 7.3 International partners will be invited under Public Private Partnership arrangement to manage the various Centres of Excellence of the Teaching Hospital including the Cancer Treatment Centre, the Eye Centre, The Kidney/Liver Transplantation Centre and Maternal/Child Centre. Negotiation and Agreement will be reached with various partners on the operational modalities for sustainability of the University & Teaching Hospital.