

Experience of Starting A Transplant Program in Kenya

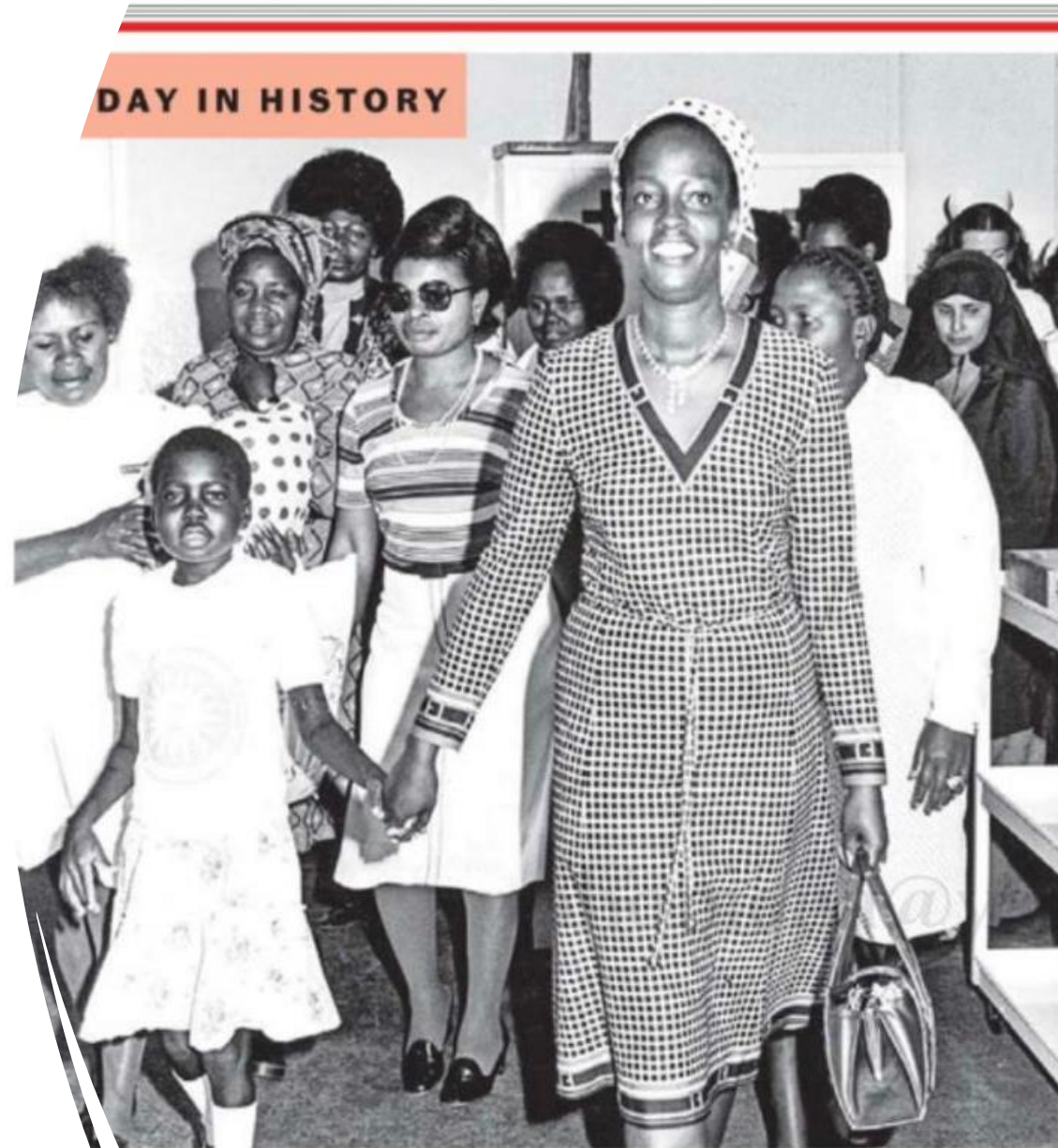
Parklands Kidney Centre

Dr. Ahmed Twahir

First Kidney Transplant in Kenya - 1978

Donor was a Caucasian man who had a donor card

Patient had a horse-shoe kidney that was removed as an abdominal mass



December 3, 1978
 Kenya's stunning medical feat, the ever kidney trans operation in Africa has been successfully completed. "Kenya Kidney Girl" was well after the historic life-saving surgery involved a team of specialists, 10 nurses, two technicians and a professor of medicine from the University of Nairobi. Here 10-year-old Chepkorkor L. leaves Kenyatta National Hospital to start life with a new name. Renamed Koko by doctors and nurses is escorted out of the hospital by Ms Jane K. chairman of Maer ya Wanawake, who offered to take care of her.

COMPILED BY DELVIN O.

Historical Background

1964 First ever hemodialysis in Kenya in a British soldier

1970 first regular HD in an ICU setting in KNH

1977 regular HD by Kenyan nephrologists

1978 first renal transplant in Kenya, one off only

1979 Renal Center established at KNH

1982 regular CAPD program in Kenya

1984 regular renal transplants done in PP setting

1988 - 2009 approximately 130 patients were transplanted at KNH

2010 – 2020 approximately 200 kidney transplants at KNH

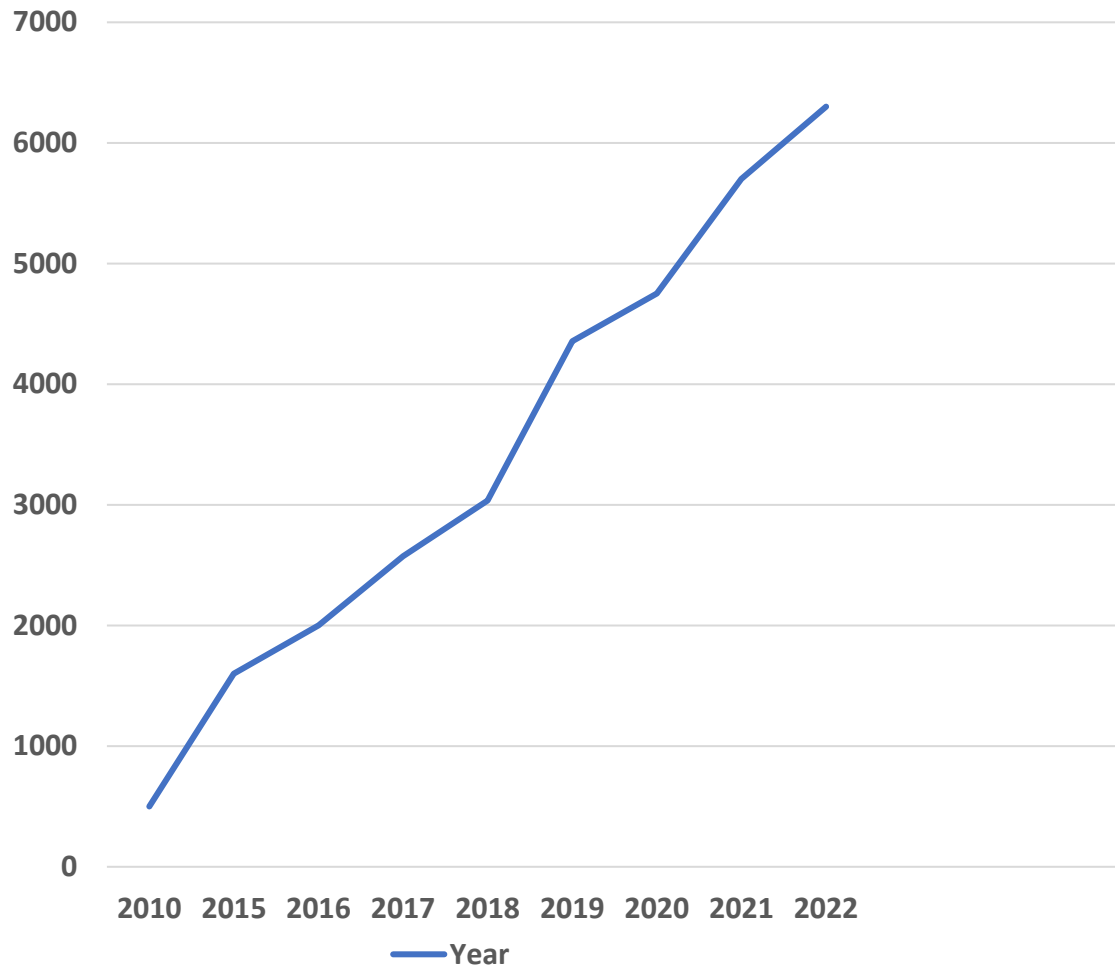
MILESTONES IN KIDNEY CARE

- 2010 – Inter-Life Transplant Program with Novartis to build capacity for Kenya Transplant program
- 2011 – Set up a task force on Upscaling Renal Services in by Kenya Renal Association
- 2012 – Strong patient lobby group pushing the government to improve the state of renal services in Kenya especially HD
- 2014 – Tender to supply Haemodialysis units to all the 47 counties inclusive of other departments like ICU, Radiology, Laboratory and Theatre equipment
- 2015 – Setting up of East African Kidney Institute – funded by African Development Bank
- 2016 – Government backed insurance fund – NHIF
- 2017 – Starting Renal Registry/Joining with AFRAN registry
- 2017 – Solid Organ Transplant Law
- 2022 - Kenya Tissue & Transplant Authority

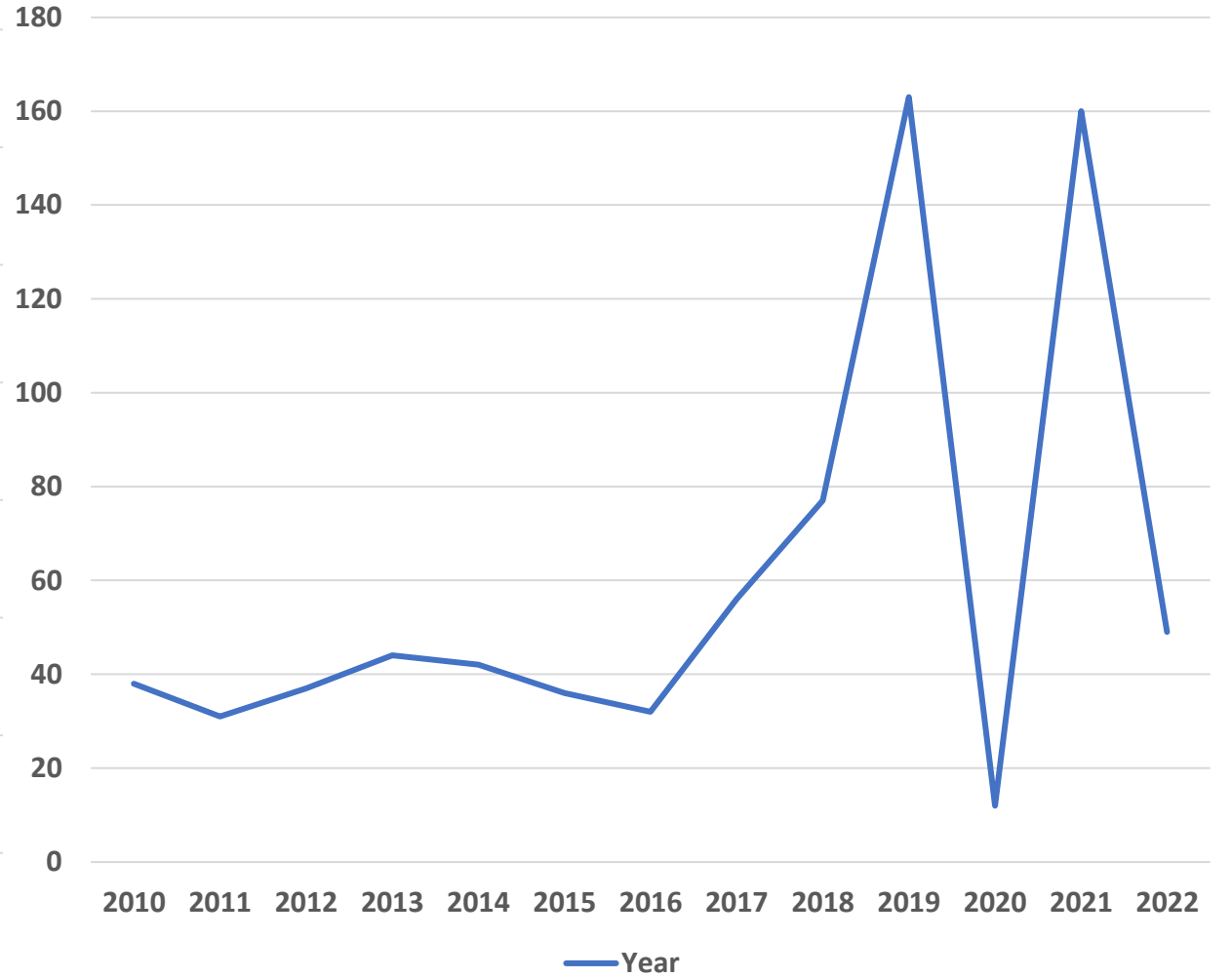
National Data - 2022

Population	52.7 M (2019)
Number of Nephrologists	46
HD centres	215
HD patients	6,300
Kidney Transplant patients	829 +
Transplant centres	7 (5 private + 2 public)
HD reimbursement by NHIF	US \$ 95.00
Cost of Transplant	US \$ 20,000.00 (Private), US \$ 5,000.00 (Public)
Transplant reimbursement by NHIF	US \$ 5000.00
Reimbursement for Transplant medications	N/A

Numbers of HD patients in Kenya



Numbers of Kidney Transplants in Kenya



Laws governing donation and transplantation in Kenya

1. 1967 – the Human Tissue Act 1967 which was revised in 2012

- Provides for 2 things; removal of bodies for medical purposes and limitations on removal
- Only provides for deceased transplantation

2. Constitution of Kenya, 2010

- Supreme law of the land
- Article 43 (1) (a) right to highest attainable standard of health
- Right to health is essentially connected to right to life under Art 26
- Also attaining highest attainable standard of health is beneficial to living a life in dignity

3. Kenya National Patients' Rights Charter - 2013

Chapter 1 - Rights: Section 14 –Every person, patient or client has a right to donate organs upon one's death.

Chapter 2 - Responsibilities: Section 12- informing health care providers of their wishes to donate their organs upon their death

4. Health Act 2017

- Provides a unified health system and coordinates the inter-relationship between national and county government
- Part XI provides for human organs, human blood, blood products, other tissues and gametes.
 - Section 80 on human organ transplantation;
 - Section 81 on making of wills;
 - Section 82 on donation purposes;
 - Section 83 on revocation of a donation by a donor;
 - Section 84 on postmortem; and
 - Section 85 on Kenya National Blood Transfusion Service.

5. Kenya Tissue & Transplant Authority - 2022

The Health Act 2017



THE REPUBLIC OF KENYA

LAWS OF KENYA

THE HEALTH ACT

NO. 21 OF 2017

PART X – TRADITIONAL AND ALTERNATIVE MEDICINE

74. Promotion of practice
75. Regulation of practice on traditional medicine
76. Documentation and mapping
77. Standardization
78. Charges
79. Referral

PART XI – HUMAN ORGANS, HUMAN BLOOD, BLOOD PRODUCTS, OTHER TISSUES AND GAMETES

80. Human organs transplantation
81. Making of wills
82. Donation purposes
83. Revocation
84. Postmortem
85. Kenya National Blood Transfusion Service

PART XII – HEALTH FINANCING

86. Health finance
87. Bank account

PART XIII – THE PRIVATE SECTOR PARTICIPATION

88. Private health services
89. Licensing of private entities to operate hospitals, clinics, etc.
90. Private health workers
91. Duty of licensees
92. Partnership agreements

PART XIV – PROMOTION AND CONDUCT OF RESEARCH FOR HEALTH

PART XI – HUMAN ORGANS, HUMAN BLOOD, BLOOD PRODUCTS, OTHER TISSUES AND GAMETES

Human organs transplantation

No person shall remove tissue or gametes from a human being or carry out the transplantation in another human being or carry out the transplantation of gametes except—

- (a) in a duly authorized health facility for that purpose; and
- (b) on the written authority of—
 - (i) the medical practitioner in charge of clinical services at that health facility or any other medical practitioner authorized by him or her; or
 - (ii) in the case where there is no medical practitioner in charge of the clinical services at that health facility, a medical practitioner authorized by the person in charge of the hospital;



Ministry of Health

KENYA POLICY ON DONATION, TRANSFUSION AND TRANSPLANT OF HUMAN DERIVED MEDICAL PRODUCTS



- The Kenyan Ministry of Health passed the National Policy on Donation, Transfusion, and Transplant of Human Derived Products in 2021 to expand the Health Act of 2017 and set the stage for a national transplantation program.
- The landmark new guidelines lay out principles for the Kenyan Tissue and Transplant Authority (KTTA) to establish a regulated, financially supported, and effective national transplant program - 2022

Transplant Centres in Kenya



3 centres in Eldoret

- MTRH
- Mediheal Hospital
- Oak Tree Hospital

4 centres in Nairobi

- KNH
- NH
- M.P. Shah
- AKUH



M.P.SHAH HOSPITAL

Transplant numbers



2018	5
2019	4
2020	2
2021	7
2022	7



Estimated Cost of Transplant vs. Hemodialysis in Kenya (USD)

	Dialysis		Cumulative cost	Transplant		Cumulative cost
Initial cost	Access	800		Preparation	3000	
	Dialysis	9120		Surgery	15000	
				Medication	5160	
Initial costs	Year 1	9920			23160	
Maintenance	Year 2	9120	19040		4320	27480
	Year 3	9120	28160		4320	31800
	Year 4	9120	37280		4320	36120
	Year 5	9120	46400		4320	40440

The Process

- Donor identification – Living related, blood group compatible
- Recipient and Donor Evaluation
- WBC crossmatch, Tissue typing, DSA (done in India)
 - KNH Histocompatibility and Immunogenetics laboratory will greatly support the program
- Counselling
- Ethical Review Committee approval
- Multidisciplinary Transplant Review Committee – set transplant date



KENYA RENAL ASSOCIATION

THE KIDNEY TRANSPLANT GUIDELINES



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Transplant Team

- Medical director
- 2 Transplant physicians
- 2 Transplant surgeons (Urology/Vascular)
- 2 Anaesthetists
- Transplant coordinator
- Transplant/Renal dialysis nurses
- Patient Advocate
- Councilor
- Nutritionist
- Pharmacist
- Laboratory personnel including Renal Pathologist
- Radiology
- Theatre nurse



Physical Facilities

- 2 Operating theatres
- Intensive care units
- Patient rooms
- Imaging services
- Laboratory
 - KNH Histocompatibility and Immunogenetics laboratory will greatly support the program



Equipment and Supplies

Surgical instruments

Monitoring equipment

Transplant-specific medications

Regulatory Approval

You will need to obtain regulatory approval from respective authorities

Financial Support

- Funding for personnel
- Equipment
- Supplies
- Ongoing operational costs

Training and Education

- Provide ongoing training and education for your medical staff
 - InterLife Project was initiated in October 2009 - is a collaboration between KNH , Novartis Pharmaceuticals and surgeons from the Hospital de Barcelona, Spain. The project is aimed at improving the transplant system not only in KNH but also in the country through capacity building, technological and skills transfer and in the long run building confidence of patients in the Kenyan transplanting system
- Certification in transplant procedures and techniques.

Collaborations

- Collaboration with a high-volume successful transplantation centre to support
 - Training of selected staff
 - Establishment of standard of care protocols including immunosuppression

Transplanting



Hospital signs deal for deceased organ transplant

BY ELVIS ONDIEKI

Are you on your last days on earth and you want to donate an organ when you are gone?

That will be easier in the coming days after a Kenyan hospital launched a new programme for organ harvesting from the deceased.

MP Shah Hospital has signed a memorandum of understanding with a Spanish non-profit organisation, the Donation and Transplantation Institute (DTI), to actualise the programme.

The deal was signed on September 27 and was witnessed by Dr Toseef Din, the hospital's CEO, and Chloe Balleste and Brian Alvarez from DTI.

In a statement, Dr Din said the programme is a "significant step in transforming Kenya's healthcare by introducing deceased donor transplant services to give a second chance at life to patients in dire need".

The MoU covers issues such as facilitation of training and assistance to ensure the success of the programme. It will also govern the collaboration of the involved institutions to "ensure the success of the transplants" as indicated in the statement.

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Conclusion

Starting a transplant unit requires a significant investment of time, resources, and expertise, but the rewards of providing life-saving care to transplant patients can be incredibly rewarding