

## Updated Profile April 2021



### **1.1 Personal profile**

#### **1.1.1 Personal details**

Name: Wanyoro Anthony Karanja.

Nationality: Kenyan

Designation: Associate Professor

PF. No: 7578

#### **1.1.2 Academic and professional qualification**

- 2012-2015: Kenyatta University: PHD (Epidemiology)
- 2002-2003: Kenya Medical practitioners board qualification for specialist recognition
- 1997-2002: University of Nairobi: Master in Medicine obstetrics and gynecology.
- 1992-1993: Kenya Medical practitioners board qualification for internship
- 1987-1992: University of Nairobi: Bachelor of Medicine and Bachelor of Surgery

#### **1.1.3: Employment history**

- 2010-Date: Senior lecturer, Department of Obstetrics and Gynaecology, School of Medicine, Kenyatta University.
- 2015-2017: Acting Director, Kenyatta University Hospital
- 2010-2015: Chairman, Department of Obstetrics and Gynaecology, School of Medicine, Kenyatta University.
- 2002-2010: Obstetrician/Gynecologist, Thika District Hospital
- 1997-2002: Master's program in Obstetrics and Gynecology (Registrar).
- 1994-1997: Medical officer, Makindu Sub-District Hospital.
- 1993-1994: Medical officer intern, PGH Nyeri.

#### 1.1.4: Major achievement since last appointment

- 5 years (two terms and one year extension) as Foundation Chairman of Department of Obstetrics and Gynecology, Kenyatta University
- 18 months as Ag. Director Kenyatta University hospital: Defining and setting up systems for the hospital operationalization.
- 7 years as chairman of Kenyatta University Health Service Board
- Attained an earned PHD in Epidemiology
- Spearheaded the development of the curriculum for Master of Medicine In Obstetrics and Gynecology at Kenyatta University
- Supervised 2 PhD students to completion

### 1.2 Research and Publications

#### 1.2.1 Refereed Journal Papers Since Appointment

- F.N. Karanja, **A.K. Wanyoro**, (2011): Understanding the spatial prevalence of cervical cancer using GIS in Nairobi, Kenya: *Applied Geoinformatics for Society and Engineering. AGSE publications, Karlsruhe, Germany ISBN 978-3-943321-00-5.*
- Aiken, AM; Karuri, DM; **Wanyoro, AK**; Macleod, J (2012): Interventional studies for preventing surgical site infections in sub-Saharan Africa - A systematic review. *International journal of surgery, 10 (5). pp. 242-9. ISSN 1743-9191 DOI: 10.1016/j.ijso.2012.04.004*
- A.M. Aiken, **A.K. Wanyoro**, J. Mwangi , P. Mulingwa , J. Wanjohi, J. Njoroge, F. Juma, I.K. Mugoya, J.A.G. Scott, f, A.J. Hall (2013): Evaluation of surveillance for surgical site infections in Thika Hospital, Kenya: *Journal of Hospital Infection 83 (2013) 140e145*
- Aiken AM, **Wanyoro AK**, Mwangi J, Juma F, Mugoya IK, J. Anthony Scott. (2013): Changing Use of Surgical Antibiotic Prophylaxis in Thika Hospital, Kenya: A Quality Improvement Intervention with an Interrupted Time Series Design. *PLoS ONE 8(11): e78942. doi: 10.1371/journal.pone.0078942*
- **Wanyoro A.K**, Kabiru E, Bukusi E (2015): Cervical Cancer Screening Adherence And The SMS: Screening Adherence And Availability Of The Mobile Phone SMS In Women Attending The Outpatient Clinic At Thika Hospital. *The East and Central African Medical Journal 2015(2)1*
- Jeremy M. Njiru, Margret N. Keraka, **Anthony K. Wanyoro** (2016): Challenges to Visual Cervical Cancer Screening Service Integration and Utilization in Imenti South Sub-County Reproductive Health Care System, Meru County – Kenya. *Imperial Journal of Interdisciplinary Research (IJIR) Vol-2, Issue-5, 2016 ISSN: 2454-1362, <http://www.onlinejournal.in>*
- Judith Lukorito, **Anthony Wanyoro**, Harun Kimani (2017): Uptake of Cervical Cancer Screening among HIV Positive Women in Comprehensive Care Centres in Nairobi, Kenya. *Research in Obstetrics and Gynecology 2017, 5(1): 1-6 DOI: 10.5923/j.rog.20170501.01*

- Jenna L. Mueller, Elizabeth Asma, Christopher T. Lam, Marlee S. Krieger, Jennifer E. Gallagher, Alaattin Erkanli, Roopa Hariprasad, J.S. Malliga, Lisa C. Muasher, Bariki Mchome, Olola Oneko, Peyton Taylor, Gino Venegas, **Anthony Wanyoro**, Ravi Mehrotra, John W. Schmitt, and Nimmi Ramanujam (2017): International Image Concordance Study to Compare a Point-of-Care Tampon Colposcope With a Standard-of-Care Colposcope. *Journal of Lower Genital Tract Disease* • Volume 21, Number 2, April 2017.
- **Wanyoro A.K.**, Kabiru EW, Bukusi E (2015): Cervical Cancer screening adherence and the SMS: Screening adherence and availability of the mobile phone SMS in Women attending the outpatient clinic at Thika Level 5 Hospital. *East and Central Africa Medical Journal* 2(1)3-6
- **Wanyoro A. K.** Kabiru E.W., (2017): Use of Mobile Phone Short Text Message Service to Enhance Cervical Cancer Screening at Thika Level 5 Hospital, Kiambu County, Kenya: A Randomized Controlled Trial. *Research in Obstetrics and Gynecology* 2017, 5(1): 10-20DOI: 10.5923/j.rog.20170501.03
- Francis M. Muoki, Prof. Ephantus W. Kabiru, **Dr. Anthony K. Wanyoro (2017)**: Management of Type 2 Diabetes Mellitus by Diabetic Clients in Nyandarua South Sub – County, Kenya. *Global Journal of Health Science, ISSN 2519-0210 (Online) [www.iprjb.org](http://www.iprjb.org), Vol.2, Issue 2 No.3, pp 35 – 53.*
- Agnes Wavinya Nzioka, Akunga Daniel Nyagetiria, **Wanyoro Anthony Karanja (2018)** Individual Attributes Influencing Cervical Cancer Screening Services in Selected Health Facilities in Machakos County: *Journal of Cancer Treatment and Research. Vol. 6, No. 1, 2018, pp. 1-6. doi: 10.11648/j.jctr.20180601.11*
- Ryan Keating, Rikita Merai, Paul Mubiri, Darious Kajjo, Christopher Otare, David Mugume, Fitti Weissglas, Peter Waiswa, Phelgona Otieno, Leah Kirumbi, **Anthony Wanyoro**, Gertrude Namazzi, Kevin Achola, Roger Myrick, Elizabeth Butrick, Dilys Walker (2019). Assessing effects of a data quality strengthening campaign on completeness of key fields in facility-based maternity registers in Kenya and Uganda. *East African Journal of Applied Health Monitoring and Evaluation* Issue 3 February 2019 page 36-42
- Angie Sway, Peter Nthumba, Joseph Solomkin, Giorgio Tarchini, Ronald Gibbs, Yanhan Ren, **Anthony Wanyoro** (2019): *Burden of surgical site infection following caesarean section in sub-Saharan Africa: a narrative review.* *International Journal of Women's Health* 2019:11 309–318
- Juma, E., Keraka, M., & **Wanyoro, A.** (2019). Clinical Phenotypes Associated With Preterm Births at Jaramogi Oginga Odinga Teaching and Referral Hospital in Kisumu County, Kenya. *International Journal of CurrentAspects*,3(III),175-186.  
<http://journals.ijcab.org/journals/index.php/ijcab/article/view/38>
- Mwangi Edith, Warutere Peterson, Wanyoro Anthony, Koome Gilbert: (2019): Influence of Menopause on Work Productivity among Health

Workers in Public Hospitals in Kiambu County, Kenya: Afr. J. Health Sci. 32(1):27-33

- Joseph W. Musana, Craig R. Cohen, Miriam Kuppermann, Roy Gerona, **Anthony Wanyoro**, David Aguilar, Nicole Santos, Marleen Temmerman & Sandra J. Weiss (2019) Association of differential symptoms of stress to hair cortisol and cortisone concentrations among pregnant women in Kenya, *Stress*, DOI: [10.1080/10253890.2019.1696305](https://doi.org/10.1080/10253890.2019.1696305)
- Angie Sway, **Anthony Wanyoro**, Peter Nthumba, Alexander Aiken, Patrick Ching, Anna Maruta, Revathi Gunturu, and Joseph Solomkin (2020). Prospective Cohort Study on Timing of Antimicrobial Prophylaxis for Post-Cesarean Surgical Site Infections. *Surgical Infections*. Aug 2020.552-557. <http://doi.org/10.1089/sur.2018.226>
- Shaheen Mehtar, **Anthony Wanyoro**, Folasade Ogunsola, Emmanuel A. Ameh, Peter Nthumba, Claire Kilpatrick, Gunturu Revathi, Anastasia Antoniadou, Helen Giamarelou, Anucha Apisarnthanarak, John W. Ramatowski, Victor D. Rosenthal, Julie Storr, Tamer Saied Osman, Joseph S. Solomkin (2020) .Implementation of Surgical Site Infection Surveillance in Low- and Middle-Income Countries A Position Statement for the International Society for Infectious Diseases. Available from: <https://www.researchgate.net/publication/343183296>
- **Wanyoro A**, Ogolla D, Merai R, Otare C, Simotwo R, Mutindi G, Mumo E, Walker D, Otieno P (2020). Outcome of data quality assessments of maternity records across 17 health facilities in Migori County, Western Kenya. *Journal of Global Health Reports*. 2020;4:e2020104. doi:10.29392/001c.1811

## **1.2.2 Other Publications**

### **1.2.1 Theses**

- Wanyoro A.K 2015: Use of Mobile Phone Short Text Message Service to Enhance Cervical Cancer Screening at the Thika Level 5 Hospital, Kiambu County, Kenya: PhD (Epidemiology)-thesis
- Wanyoro A.K, 2002: Outcome of Labor Amongst Referred and Non-Referred Patient Delivered at Kenyatta National Hospital: M. Med thesis.
- Wanyoro A.K., 2002: Complications of Patient Presenting With Incomplete Abortion at Kenyatta National Hospital: M. Med thesis

### **1.2.2 International Conference Papers presented and conferences attended since appointment**

- **Wanyoro A.K., 2010:** Barriers to maternal and neonatal health: comparison of labor between booked and un-booked parturient at Kenyatta National Hospital. *Paper presented during the 2nd International conference on preventing maternal and child deaths: Towards the MDGs 2015: Kigali, Rwanda.*

- **Wanyoro, A.K (2015):** The case of mobile phone short text message service to enhance cervical cancer screening at Thika L5 hospital. *Paper presented at the 1st global conference on patient centered care: Kenyatta University, Kenya*
- Alex A, **Wanyoro A.K. (2011):** Surgical Site Infections at Thika District Hospital. Paper co-presented at SSK of Kenya symposium, Limuru, Kenya.
- Alexander M Aiken, **Anthony K Wanyoro**, Jonah Mwangi, J Anthony G Scott, Andrew J Hall (2013). Improving use of antibiotic prophylaxis use for major O+G surgery in Thika Hospital, Kenya: *A poster presented at the GMHC 2013 conference , Arusha, Tanzania*
- **Wanyoro A.K (2011):** Rational use of prophylactic antibiotics during caesarian section. *Paper presented at annual Nairobi Hospital Obstetrics and Gynecology symposium, Nairobi, Kenya*
- **16<sup>th</sup>-18<sup>th</sup> Feb 2013-** Participated in the Annual Kenya Obstetrics and Gynecological society scientific conference at *Nakuru Kenya.*
- **Wanyoro A.K (2012):** barriers to MDG: Complications of patients presenting with incomplete abortion at Kenyatta National Hospital. *Paper presented at FIGO conference in Rome Italy.*
- **15<sup>th</sup>-17<sup>th</sup> Feb 2012-** Participated in the Annual Kenya Obstetrics and Gynecological society scientific conference at *Safari Park Kenya.*
- **13<sup>th</sup>-15<sup>th</sup> Feb 2012-** Participated and Rapporteur in the Annual Kenya Obstetrics and Gynecological society scientific conference at *Sirikwa Hotel, Eldoret Kenya.*
- **3<sup>rd</sup>. 5<sup>th</sup> November 2014-** Participated in the 5<sup>th</sup> Infection Africa Network conference at *Meikles Hotel, Harare, Zimbabwe.*
- **Wanyoro A.K (2014):** Surgical site infections in Obstetrics and Gynaecology. *A paper presented at the Surgical Society of Kenya preconference symposium. Temple point resort Malindi, Kenya.*
- **Wanyoro A.K (2014):** Surgical Site infections in Obstetrics and Gynaecology. *A paper presented during the Global Perspectives on surgical site infections in Vienna, Austria.*
- **Wanyoro A.K (2014),** Kabiru E, Bukusi E: Cervical Cancer Screening Adherence and the SMS Text Message: Screening Adherence and Availability of the Mobile Phone SMS in Women Attending the Outpatient Clinic at Thika Hospital. *A paper presented during the annual Kenya obstetrical and gynecologic conference, Nyeri, Kenya*
- **22<sup>nd</sup> -23<sup>rd</sup> 2015:** Participated in the 6<sup>th</sup> Eurasia Medical Days, Turkey
- **Wanyoro A.K (2015):** Pattern of Cervical abnormalities in a cervical cancer screening naïve population at a selected hospital in Kenya. *A paper presented during the annual Kenya obstetrical and gynecologic conference, Nairobi, Kenya*
- **Wanyoro A.K (2015):** Pattern of Cervical abnormalities in a cervical cancer screening naïve population at a selected hospital in Kenya. *A paper resented a during the annual African Federation of Obstetricians*

*and Gynaecologists/Kenya obstetrical and gynaecologic conference, Nairobi, Kenya*

- **Wanyoro A.K (2015):** Systematic review of published studies on the burden of post CS SSI in Sub Saharan Africa. *A paper resented a during the annual African Federation of Obstetricians and Gynaecologists/Kenya obstetrical and gynaecologic conference, Nairobi, Kenya*
- **Wanyoro A.K (2015),** Igogo S, Solomkin J, Allen E: Pregnancy outcome in Ebola Virus Disease Era. *A paper presented a during the annual African Federation of Obstetricians and Gynaecologists/Kenya obstetrical and gynaecologic conference, Nairobi, Kenya*
- **Wanyoro A.K (2015):** Use Of Mobile Phone Short Text Message Service To Enhance Cervical Cancer Screening: A Case Study Of Thika Level 5 Hospital, Kiambu County, Kenya. *A paper presented a during the 1st Global Patient Centred Care Conference, Nairobi, Kenya*
- **Wanyoro A.K (2016):** Relationship between Puerperal Sepsis and Neonatal Survival: *A Paper presented during the 6<sup>th</sup> Infection Control Africa Network Congress 2016 at Indaba Hotel Fourways Johannesburg, South Africa from September 26<sup>th</sup> to 29<sup>th</sup>, 2016.*
- **Wanyoro A.K (2017):** Experience and highlights of PTBi in data strengthening systems around preterm birth in Migori County: *A paper resented during a Collaboratory at AKUH, Kenya.*
- Angie Sway, Katrina Kraft, **Anthony Wanyoro**, Claire Kilpatrick, Joseph Solomkin (2017): A review of the burden of infection following cesarean section in sub-Saharan Africa. Poster at 27<sup>th</sup> ECCMID 22-25 April, Viena, Austria.
- **Wanyoro A.K,** Angie Sway, Katrina Kraft, Ronald Gibbs, Joseph Solomkin (2017): Timing Considerations in Decision to Incision in Emergency Caesarean Section. *A paper presented during the annual Kenya obstetrical and gynaecologic conference, Mombasa, Kenya.*
- **Wanyoro A.K (2017):** Optimizing Preconception Health for Prevention of PTB: Opportunities and Impediments. *A paper presented during 2017 Preterm Birth Initiative at the University of California, San Francisco (UCSF), California, USA.*
- **Wanyoro A.K (2018):** Modified Safe Child Birth Check List: A Still Birth or a Vigorous Thriving Baby. *A paper presented at the Preterm Birth Initiative Symposium Safari Park Hotel*
- **Wanyoro A.K,** Prof. Kabiru E (2018) Cervical Cancer Screening Naïve Women: What Are Their Social Demographic Factors and Risk Profiles? *A paper presented during the 42<sup>nd</sup> Annual Kenya Obstetrical and Gynaecologic Conference, Naivasha, Kenya at the Sawela Lodge, Naivasha from 21<sup>st</sup> to 23<sup>rd</sup> Feb. 2018.*
- **Wanyoro A.K,** Prof. Kabiru E (2018) Use of Mobile Phone Short Text Message Service to Enhance Cervical Cancer Screening at Thika Level 5 Hospital, Kiambu County, Kenya: *A paper presented during the 42<sup>nd</sup>*

*Annual Kenya Obstetrical and Gynaecologic Conference, Naivasha, Kenya at the Sawela Lodge, Naivasha from 21<sup>st</sup> to 23<sup>rd</sup> Feb. 2018.*

- C. Otare, **A. Wanyoro**, D. Ogolla, R. Simotwo, G. Mutindi, E. Mumo, K. Achola, B. Olack, P. Otieno (2018): The missing link: Data Strengthening to Improve Documentation of Key Indicators for Care during Intrapartum and Immediate Postnatal Period: *A paper presented during the 42<sup>nd</sup> Annual Kenya Obstetrical and Gynaecologic Conference, Naivasha, Kenya at the Sawela Lodge, Naivasha from 21<sup>st</sup> to 23<sup>rd</sup> Feb. 2018.*
- Vincent Moshi, Beatrice Olack, **Anthony Wanyoro**, Leah Kirumbi, Phelgona Otieno (2018): Categorizing Preterm and Low Birth Weight Babies in Selected Health Facilities in Migori County Kenya: *A paper presented during the 42<sup>nd</sup> Annual Kenya Obstetrical and Gynaecologic Conference, Naivasha, Kenya at the Sawela Lodge, Naivasha from 21<sup>st</sup> to 23<sup>rd</sup> Feb. 2018.*
- **Wanyoro A.K (2018)**: Undaunted: Stories from the Front line of Health Care: *A presentation made at Aspen Ideas festival, Spotlight Health 2018, Aspen Colorado, USA from June 21<sup>st</sup> to 24<sup>th</sup> 2008.*
- **Wanyoro A.K**: Overview Presentation on Quality Improvement Strategies to Improve Perinatal Health in Kenya. *Paper presented during a Frontier Counties Health Sector Reflection workshop organized by Global health Strategies at Silver Springs Hotel, Nairobi, Kenya 7th August 2018.*
- **Wanyoro A.K**: PRONTO Simulation Training to Improve Quality of Intrapartum & Postpartum Care for Preterm Babies in Kenya. *Paper presented during the International Federation of Gynecology and Obstetrics (FIGO) XXII FIGO World Congress 2018 at Rio Centro, Brazil, from October 14 to 19, 2018.*
- L. Kizili, J Okore, A Osimbo, A Nyakech, J wangia, D Ogolla, C Otare, K Achola, B Olack, L Kirumbi, **A Wanyoro**. P Otieno: Effect of patient waiting time on clinical outcome and client satisfaction in migori county referral hospital maternity. *A paper presented at the 9th Annual scientific & health (KASH) conference. Safari pack Hotel, Nairobi, Kenya 13th- 15th February 2019.*
- **Anthony Wanyoro**, Vincent Moshi, Beatrice Olack, Phelgona Otieno, Dilys Walker: Are caesarean sections safer than vaginal delivery?. Assessing the effect of mode of delivery on Maternal and Neonatal Outcomes in Selected Health Facilities in Migori County, Kenya. *A paper presented during the 43<sup>rd</sup> Annual Kenya Obstetrical and Gynaecologic Conference, Nairobi, Kenya at the Movenpick Hotel, Nairobi from 20th to 22nd Feb. 2019.*
- **Anthony Wanyoro** presented a paper titled Virtual Mentor: A virtual assistant for health care workers: during the community of Practitioners Virtual meeting on PPH organized by JHPIEGO between 21- 23 August, 2020.
- **Anthony Wanyoro**: Heavy menstrual Bleeding: A paper presented online to Kenya Medical Association, Thika Branch, Thursday 18/03/2021

- **19-21st of February 2020:** Attended the 44th Annual Scientific KOGS congress at Leisure Lodge Beach and Golf Resort

### **1.3 Quality Teaching and learning**

#### **1.3.1 Trainings attended**

- **20/3/2019:** Bulk marks entry training
- **8/3/2018:** Campus Vue refresher training course
- **29/5-1/6 2018:** Accelerating Saving Lives at Birth Xcelerator Workshop
- **June 2018:** Online Course on Responsible conduct of human research
- **6/ 11/2018:** Hands on Clinical Key Training for staff
- **March 2017:** UCSF/KEMRI: Collaborative Quality improvement training in Migori
- **21/6/2016 :** Turnitin Anti-plagiarism software training
- **September 2015:** Good Clinical Practice (GCP) training in clinical research training
- **1/10/2014:**Centre For Teaching Excellence and Evaluation E-Learning Training of Teaching Academic Staff
- **10/01/2014:** Smartboard training for academic members of staff
- **19-23/8/2013:** PACE Training in Innovative Teaching Methodologies and Clinical Mentorship Monday Kenyatta University Conference Centre (KUCC)
- **5-6/6/2013:** Tests and Measurements Capacity Building Seminar: Centre for Teaching Excellence and Evaluation
- **9/9/2015,** Good clinical Practice workshop conducted by Africa Clinical Research Management Limited
- **20<sup>th</sup> -23<sup>rd</sup>/2/2012,** Responsible Conduct of Research Course, PRIME (K) UON and University of Washington
- **20-22 /2/2012:** Responsible conduct of research course: Medical research and the IRB Application Process. Organized by UON
- **16-21/9/2012:** FIGO committee for Capacity Building in education training on Minimal Access Surgery, Soba University Hospital, Khartoum, Sudan

#### **1.3.2 Workshops and Seminars attended**

##### **1.3.2.1: Attendance to seminars and workshops**

- **Thursday 25th October, 2018:** PHDs Postgraduate Defense Seminar for Department of Population and Reproductive Health. **School of Public health boardroom**
- **Thursday, 27th September, 2018:** Postgraduate defense Seminar for Department of Population and Reproductive Health: **Graduate School seminar Hall 2.**
- **Thursday, 23rd August, 2018:** Postgraduate Defense Seminar for Department of Population and Reproductive Health. **Graduate School Staff Lounge 1ST Floor Wing A.**



- **Wednesday 18th July, 2018:** School of public health and school of medicine 36th postgraduate seminar. **BSSC Room 152**
  - **29<sup>th</sup> May- 1<sup>st</sup> June 2018:** Accelerating Saving Lives at Birth Xcelerator Workshop (ASL@B) **Safari park Hotel Nairobi, Kenya**
  - **14<sup>th</sup> February 2018:** East Africa Preterm Birth Initiative symposium. **Safari Park Hotel, Nairobi, Kenya.**
  - **February 11 and 14, 2018:** WRITING WORKSHOP at the Preterm Birth Initiative (PTBi) EA Regional Meeting **Safari Park Hotel, Nairobi**
  - **Thursday, 25th January, 2018:** Postgraduate Defense Seminar for Department of Population and Reproductive Health. **Graduate School Seminar Room 2.**
  - **Thursday 30th November 2017:** School of Public Health and School of Medicine 35th Postgraduate Seminar. **Graduate School Seminar Room PHG8 – 1st Floor**
  - **11 November – 15<sup>th</sup> November 2017:** The UCSF Preterm Birth Initiative Annual Symposium on Racism and Prematurity: **UCSF, California USA**
  - **Thursday, 12th October, 2017:** Postgraduate defense Seminar for Department of Population and Reproductive Health and Department of Environmental and Occupational Health. **Graduate School**
  - **February 20-22, 2017:** UCSF PRETERM BIRTH INITIATIVE-EAST AFRICA INTRAPARTUM/IMMEDIATE NEWBORN workshop: **Jinja Nile Resort - Jinja, Uganda**
  - **27<sup>th</sup> -28<sup>th</sup> October 2016:** PRETERM BIRTH INITIATIVE STAFF TRAINING: KEMRI
  - **Wednesday 30th November 2016:** 33rd Postgraduate Seminar. **Graduate School**
  - **September 22-23, 2016:** UCSF PRETERM BIRTH INITIATIVE ANNUAL SYMPOSIUM. **DusitD2 Hotel, Nairobi, Kenya**
  - **Tuesday 28th June, 2016:** School Of Public Health 32nd Postgraduate Seminar. **KU Business & Students Services Center (BSSC) Room 149**
  - **3rd - 4th December, 2015:** KU Ph.D. graduants Seminar: **Business and Services Centre, Conference Hall, room 12**
  - **12<sup>th</sup> -16<sup>th</sup> 2013, 2013 Innovators Summer school, KU, Nairobi, Kenya**
  - **17<sup>th</sup> April 2012:** 7<sup>th</sup> Nairobi Hospital Annual Reproductive Health Symposium. **Nairobi Hospital, Nairobi.**
  - **26<sup>th</sup> July 2019:** 1<sup>st</sup> Annual Fertility and andrology society of Kenya conference: **Nairobi Hospital, Kenya**
  - **10th-13 September 2019:** Attended the International Conference on Prevention and Infection control: UN headquarters Geneva, Switzerland.
  - **27th -31st October 2019:** Attended Grand challenges meeting for innovators in health: The UN Complex and AU headquarters in Addis Ababa, Ethiopia
- Virtual Conferences and workshops attended**

- **13th to 14th October 2020:** Participated in Medicines Utilisation Research In Africa (MURIA Virtual Mini-Conference): Present Status & Future Direction Conference
- **25th January 2021:** GLOW webinar. Demystifying qualitative research in global maternal and newborn health
- **13<sup>th</sup> -15<sup>th</sup> Dec. 2020:** FIGOAFOG conference organized.
- **16th November 2020:** GLOW Webinar. Complications of caesarean section in low-and-middle-income countries, a systematic review. The power of evidence synthesis
- 22nd January 2021: Overview of Cervical Cancer screening hosted by Kenyatta National Hospital and the University of Nairobi in collaboration with Daktari Online.
- **19th January 2021:** Strengthening the Microbiology Laboratory - Clinical Interface through Mentorship hosted by Kenyatta National Hospital and the University of Nairobi in collaboration with Daktari Online
- **20th January 2021:** Role of Genomics In NCD hosted by Kenyatta National Hospital and the University of Nairobi in collaboration with Daktari Online
- **19th January 2021:** Transforming Culture of Care to improve Preterm survival hosted by Kenyatta National Hospital and the University of Nairobi in collaboration with Daktari Online.
- 18th January 2021: PrEp Implementation-The Journey from Trials to practice hosted by Kenyatta National Hospital and the University of Nairobi in collaboration with Daktari Online
- **12th January 2021:** COVID-19 Vaccines Clinical Trials hosted by Kenyatta National Hospital and the University of Nairobi in collaboration with Daktari Online.
- **14th January 2021:** Utilizing E-health Strategies to Optimize Health Care Delivery hosted by Kenyatta National Hospital and the University of Nairobi in collaboration with Daktari Online
- **10-11th September 2020:** GLOW 2020 Conference: Implementing Respectful Care: Science and Practice
- **31st August, 2020:** Attended the virtual conference on COVID 19 entitled organized by the Council of Governors.
- **26 August, 2020:** Medico-legal Overview of Medical Malpractice & Documentation organized by Kenyatta National Hospital and UON
- **2 August, 2020:** Streamlining antibiotic prophylaxis in Obstetrics and Gynecological surgeries organized by Kenya Obstetrical and Gynecological Society

- **04 August, 2020:** Protecting Health Care Providers at Workplace and beyond organized by Kenyatta National Hospital and UON
- **28 July, 2020:** Supporting Home based care with Jitenge system: Introduction and a practical demonstration organized by Kenyatta National Hospital/UON
- **13 July, 2020:** COVID 19 disease: Stigma organized by Kenyatta National Hospital/UON
- **08 July, 2020:** Experiences managing COVID-19 disease organized by Kenyatta National Hospital/UON
- **30 June, 2020:** Detection, prevention and management of renal complications of COVID 19 disease organized by Kenyatta National Hospital/UON
- **03 July, 2020:** Experiences managing COVID-19 disease organized by Kenyatta National Hospital/UON
- **30 June, 2020** Coping with stressful conditions organized by Kenyatta National Hospital/UON
- **30 June, 2020** Optimal Nutrition for patients with COVID-19 disease organized by Kenyatta National Hospital/UON
- **13 July, 2020** COVID-19 at the front door in the UK: Experiences of a Kenyan Emergency Medicine Physician organized by Kenyatta National Hospital/UON
- **27 July, 2020** Home based Care: Perspectives of patients in Mombasa County organized by Kenyatta National Hospital/UON
- **20 July, 2020** Food products and Immunity organized by Kenyatta National Hospital/UON
- **19 June, 2020** Experiences managing COVID-19 disease organized by Kenyatta National Hospital/UON
- **16 June, 2020** COVID 19 disease in UK: Lessons learnt organized by Kenyatta National Hospital/UON
- **12 June, 2020** Maintenance of Essential Health Services during Covid 19 pandemic organized by Kenyatta National Hospital/UON
- **04 June, 2020** Messaging for COVID 19 disease prevention: Are we communicating effectively organized by Kenyatta National Hospital/UON
- **29 May, 2020** Experiences managing COVID-19 disease 29.5.2020 organized by Kenyatta National Hospital/UON
- **26 May, 2020** Managing COVID-19 diseases in pregnancy> Seattle, USA experience organized by Kenyatta National Hospital/UON
- **26 May, 2020** Experience managing COVID-19 disease in Italy organized by Kenyatta National Hospital/UON
- **13.5.2020** Overcoming psychosocial distress organized by Kenyatta National Hospital/UON

- **22-05-2020** Managing renal complications among patients with COVID-19 organized by Kenyatta National Hospital/UON
- **22-05-2020** KAP Webinar Series: Generation Gap organized by Kenyatta National Hospital/UON
- **22-05-2020** Gas and Fire: Fine Tuning the Gastrointestinal System organized by Kenyatta National Hospital/UON
- **22-05-2020** Quarantine for COVID 19 disease: Rationale and implementation process organized by Kenyatta National Hospital/UON
- **22-05-2020** COVID 19 disease among individuals with diabetes mellitus organized by Kenyatta National Hospital/UON
- **18 May, 2020** COVID 19 disease: Spectrum of images from public and private facilities in Kenya organized by Kenyatta National Hospital/UON
- **22-05-2020** COVID 19-Front line lessons from New York City organized by Kenyatta National Hospital /UON
- **22-05-2020** TELE-HEALTH CONSIDERATIONS AT PRESENT organized by Kenyatta National Hospital/UON
- **22-05-2020** Principles of Biomedical Ethics: Emphasizing on prioritizing/withholding of care in the covid-19 era organized by Kenyatta National Hospital/UON
- **18-05-2020** COVID 19 vaccine: What is in the pipeline? organized by Kenyatta National Hospital /UON
- **18-05-2020** COVID 19 disease in Germany organized by Kenyatta National Hospital/UON
- **18-05-2020** HEART FAILURE: THE WAY FORWARD organized by Kenyatta National Hospital/UON
- **14-05-2020** Enhanced Traffic Control bundling to prevent COVID 19 organized by Kenyatta National Hospital/UON
- **14-05-2020** KMA/BAYER - Updates on Management of Lower Respiratory Tract Infections (LRTIs) Organized by Kenya Medical Association
- **14-05-2020** COVID 19 - Overcoming psychosocial distress organized by Kenyatta National Hospital/UON
- **14-05-2020** COVID 19 disease among individuals with cardiovascular disease organized by Kenyatta National Hospital/UON
- **14-05-2020** OCCUPATIONAL THERAPY GUIDELINES DURING COVID-19 organized by Kenyatta National Hospital/UON
- **14-05-2020** Modeling COVID 19 disease in Kenya. Are the interventions working or is the worst yet to come? organized by Kenyatta National Hospital

- **28-04-2020** KOGS 44th Annual Scientific Congress Organized by Kenya Obstetrics and Gynecologic Society
- **28-04-2020** LABORATORY DIAGNOSIS OF COVID-19 organized by Kenyatta National Hospital/UON
- **28-04-2020** Pathology Lecture April 23, 2020 organized by Kenyatta National Hospital/UON
- **28-04-2020** COVID -19 disease among pregnant & breastfeeding women organized by Kenyatta National Hospital/UON
- **28-04-2020** CURRENT UPDATES ON COVID-19 organized by Kenyatta National Hospital/UON

### **1.3.2.2. Facilitation of seminars and workshops**

- **24-25/3/2014:** Facilitated International Surgical Infection Study Group Surgical Infections Training Manual Surgical Society of Kenya (SSK) Pre-Conference Workshop Program Incorporating Research Writing Skills Temple Point Resort, Watamu, Malindi
- **27-28/3/2014:** Facilitated Ethical Conduct of Research workshop: KUCC Training Hall
- **15th-16/9/2014:** Facilitated Ethical Conduct of Research workshop: KUCC Training Hall

### **1.4 Professional/consulting**

- **2019:** Developing the Ministry of Health point of care booklet entitled: **Post abortion Care: A pocket guide for health care providers**
- 2014-date: Editorial board member of East African Medical Journal
- **Journal evaluation:** Online Journal of Medicine and Medical Science Research: Manuscript Number: OJMSSR-13-06326-7-2013 HIV/AIDS Related Workplace Stress and Fear among Nurses: Experiences in Windhoek (Namibia)
- **2011 to date:** Consultant Reproductive, Adolescence and Child Reproductive Health Committee, Kenya Medical Research Institute.
- **2018-date:** Member National Infection control steering committee

### **1.5 Administrative and responsibility**

#### **1.5.1 Recognized university Administrative positions**

- 2015 -2017: Acting Director, Kenyatta University Hospital
- 2010-2015: Two terms and One year extension as Chairman, Department Of Obstetrics and Gynaecology, Kenyatta University.
- 13<sup>th</sup>-26-january 2012 Acting dean School of medicine

#### **1.5.2: Other Responsibilities in the University**

- **1.5.2.1** 2010-date: Mentoring of undergraduate 4<sup>th</sup> year medical students

**1.5.2.2** 2010-2016: Spearheaded the development of the Master of Medicine curriculum (obstetrics and Gynecology, KU)

**1.5.2.3 University Committees participation**

- 2012-2019: Chairman, Health Services Board, Kenyatta University
- 2019- to date: committee to develop course units to be taught for PhD program in the school of medicine
- 2012-2017: Member, Committee on Capacity Building, KU Referral Hospital
- 2013 –2015: Member of KU Ethical Review Committee
- Member Committee to Organize for the Hosting Of the Constructions of Public Health Gateways Open Science Workshop in Kenyatta University Institute for Non-Communicable Diseases Committee
- Member KU –Fortis Hospitals MOU Implementation Committee
- Member Medical Tourism and Medical School Affiliation with U.S Hospitals Committee
- Member KUH Governance Structure Retreat Committee
- Member Vice Chancellors Committee on Establishment of Kenyatta University Women Hospital
- Member Committee on administration Structures of Kenyatta Teaching Referral and Research Hospital
- Member Infrastructure Development Proposal Committee
- Member Committee to Plan of the official Opening of The Kenyatta University Teaching Research and referral Hospital
- Member Committee develop Letter of Intent of Host Research Chair in Agricultural Biotechnology and Health Sciences
- Member Committee to Develop A Proposal on Collaboration between Kenyatta University and Fortis group of hospital in India
- Member committee to make recommendations on capacity building for proposed Teaching, Research and Referral Hospital
- Member Procurement of drugs committee
- Member Bill and Melinda gates proposal writing committee
- Member to an organizing committee for international conference on ending obstetric fistula in a generation
- Member committee to develop training schedule of Kenyatta university hospital personnel
- Member to the medical and anti-doping sub-committee
- Member to KUH maternity and antenatal /post-natal wards implementation committee
- Member protocols and systems sub-committee of the Kenyatta university teaching research and referral hospital operationalization committee
- Member of the Kenyatta University –General Electric [KU-GE] molecular imaging Centre [MIC]committee

- Member to a committee to benchmark with teaching research and referral hospitals
- Member committee to plan the visit by a Spanish delegation to KU
- Member to the Kenyatta university hospital design defects committee
- Member to the Kenyatta university teaching research and referral hospital [KUTRRHH]final interview panel for clinical team
- Member to a research team to work on the GlaxoSmithKline [GSK] Africa NCD open lab call for proposals

#### **1.5.2.4 Conferences organized**

- Member of organizing committee of the International Conference on Reproductive health held in 2016
- Member of organizing committee of the International workshop Sci-GaiA held in 2017

### **1.6 Student supervision**

#### **1.6.1 Masters Student Supervision to completion**

- **Judith Lukorito Nasambu (Q57/CTY/PT/20594/2012):** Uptake of Cervical Cancer Screening Services among HIV Positive Women in Dagoretti, Nairobi County
- **Francis Nganga Gicheru(57/CTY/PT/23692/2011):** To Determine the Factors Influencing 5 Year Implant Discontinuation Amongst Women of Reproductive Age group in Nairobi.
- **Jeremy N. Njiru (Q139/22979/2011):** Challenges to Visual Cervical Cancer Screening Service Integration and Utilization in Imenti South Sub-County Reproductive Health Care System, Meru County, Kenya.
- **Eucabeth Jabuya(Q139/CTY/PT/21167/2012):** Determine the Prevalence of Pre-eclampsia And Risk Factor Associated in Pregnancy among Women of Reproductive Age Of 15- 49 Years in Rachuonyo North District in Homabay County.
- **Beauty N. Tali (I57/11099/04):** Knowledge and Health Seeking Behaviors on Prevention of Breast Cancer among Women in Kahawa Soweto, Nairobi County, Kenya.
- **Agnes W Nzioka (Q139/CTY/PT/21169/12):** Utilization of Cervical Cancer Screening Services among Female Health Care Workers at Machakos General Hospital, Machakos County.
- **Muoki Francis Matheka (Q57/CTY/PT/20598/2012):** Management of Type 2 Diabetes Mellitus by Diabetic Clients in Nyandarua County, Kenya.
- **Miriam Wanjiru Ngure (P57/23696/11):** Health seeking behavior for Key Sexually Transmitted Infections among the Female sex workers in Eldoret Municipality, Uasin-Gishu County, Kenya.

- **Mugure Kiambati (I57/10728/2007):** Essential Newborn Care Practices among Home Delivered Postnatal Mothers with babies 0-28 Days from Korogocho Slums, Nairobi County.
- **Mwangi E. Wamaitha (Q140/CTY/PT/23831/2013):** Influence of menopause on work productivity among health workers in public hospitals in Kiambu County, Kenya
- **Juma Edwin Omondi:(Q139/CTY/PT/30822/2015):** Clinical Phenotypes associated with preterm births at Jamogi Oginga Odinga Teaching and referral hospital in Kisumu County, Kenya

#### 1.6.2 PhD Students Supervision to completion

- **Mukunyi E. Gitonga (Q97/29793/14):** Influence of Mobile Short Message Service on Utilization of Focused Ante Natal Care among Women in Rural Kenya: A Randomized Controlled Trial
- **Kanini Caroline Mumbe (Q97/30765/2015): Role Of Counseling In Mitigating Psychosomatic Morbidity After A Stillbirth Among Women In Kitui And Machakos Counties, Kenya**

#### 1.6.3 Ongoing maters supervision

- **Sagwa Sally Maria (Q57/31059/2015):** Male Involvement in Female Breast Cancer Screening and Associated Co-Relates in Vihiga County.
- **Sino A. Zakayo (Q57/33714/2015):** Evaluating utility of first and second tier health systems in cervical cancer screening in Kakamega county, Kenya
- **Felistas Savai Mbindyo (P151/31173/2015):** Cervical cancer screening among female prisoners in selected female correctional centers in Kenya.
- **Edith Chebet (Q57/38965/2016):** Utilization of Pre-Exposure Prophylaxis among Youth age 15-24 years in Mukuru Kwa Njenga, Nairobi County, Kenya
- **Rahab Wanjiku Njoroge (Q57/37558/2017):** Quality of antenatal and postnatal care in relation to the high cases of obstetric fistula in Kiminini Sub county, Trans-Nzoia County, Kenya

#### 1.6.4 Ongoing PhD Student Supervision

- **Beatrice Nesidai Kithuka (Q97/26290/13):** Application of Mobile Phone Short Message Service to Enhance Treatment Compliance among Patients with Type 2 Diabetes Mellitus in Thika Level 5 Hospital, Kiambu County. Data collection stage. *Status: Data analysis*
- **Maritim Violet (Q97/31186/15):** Key Pathogenic Microorganism colonizing reproductive Tract among Young Street Females in Eldoret Town, Kenya. Data collection stage. *Status: Data analysis*
- **Wilbroda Wasonga (I84/24457/2013):** Immune Enhancing Potentials of Moringa Oleifera Nutritional Supplement in Treating of HIV/AIDS Patients. *Status: Data collection*



- **Charles Kiragu Ngigi (Q97/37411/16):** Use of an Educational Package to Enhance Adherence to Post Natal Care in Selected Hospitals in Western Kenya region. *Status: data collection*
- **Ernest B.Wanyama (Q97/30568/15):** Effects of primary eye care training and supportive supervision on competencies of rural health workers: Kitui and Machakos Counties, Kenya. *Status: Proposal development*
- **Lukorito Judith Nasambu:** Male Partner Edification in Increasing Uptake of Cervical Cancer Screening and Treatment Services among HIV Positive Women in Nairobi County, Kenya. *Status: Proposal development*

## **1.7 Internal examiner for Masters and PhD Thesis**

### **1.7.1 Masters theses examination**

- **James Maina Onchong'a:** Male Partner Involvement in Choice of Delivery Site among Women Delivering at Provincial Government Hospital Coast, Mombasa County, Kenya.
- **Rosalilian Khanali Andanje:** Male Partner Involvement in Promoting Skilled Attendance at Child Birth in Matayos Division, Busia County, Kenya.
- **Elizabeth Wachuka Wambui Q139/CTY/PT/23390/12:** The role of maternal, psychosocial and social cultural factors in HIV exposed infant's service uptake: Nakuru provincial general hospital, Kenya.
- **Jane Mugwe:** Determinants Of Uptake Of HPV Vaccine And Screening For Cervical Precancerous Lesions Among Attendees Of MCH Clinic At Thika Level 5 Hospital
- **Shelmith Mituko:** Utilization of Unskilled Birth Attendants Services in Mbirikani Division, Loitokitok District of Kajiando County, Kenya.
- **Fredrick Juma Otieno:** Effect of Voluntary Medical Male Circumcision Program in Hiv Risk Reduction Among Men In Mbita-Homabay County, Kenya.
- **Kanini M. Carolyne:** Utilization Of Skilled Birth Attendants In Central District, Kitui County
- **Cheptum Joyce Chebet:** Factors Affecting Vulnerability of Women to Adverse Pregnancy Outcomes in Public Health Facilities in Keiyo District, Kenya.
- **Milka Choge Cherotich:** Factors Affecting Contraceptive Uptake Among Women of Reproductive Age In Kakuma Refugee Camp In Turkana County, Kenya
- **Mary Flavine Nyangasi:** Determinants of Delay in Seeking Medical Care among Women with Invasive Cervical Cancer in Western Kenya.
- **Mwangi Hellen Nyambura Q139/CTY/PT/27692/13:** Risk Factors Associated With Syphilis Infection Among Men Who Have Sex With Men In Nairobi County, Kenya

- **Edwina Anyango Ouma Q57/CTY/PT/20597/12:** Health Related Factors Among Prenatally Human Immunodeficiency Virus Infected Adolescents In Nairobi County, Kenya.
- **Agneta Chelimo: Q57/CTY/PT/20597/12:** Determinants of Post Caesarian Section Wound Sepsis Among Postnatal Mothers at Kenyatta National Hospital Nairobi County, Kenya.
- **JACKLINE GAKII (Q139/CTY/PT/31417/2015:** Predictors of Retention in Care among Human Immunodeficiency Virus Infected Pregnant Women in Narok Sub- County Hospitals.
- **REF: M/TH/ 042/2019:** Utilization of the Sexual and Reproductive Health Care Services among Youth Living on the Streets in Nakuru County, Kenya
- **REF: M/TH/ 044/2019:** Utilization of Cervical Cancer Screening Services among Women Aged 30-49 Years in Kitui County, Kenya
- **Ref: M/TH/124/2019:** Investigation of factors associated with uptake of HIV and AIDS combined prevention strategies among female sex workers in Nakuru County, Kenya
- **ref: m/th/109/2019:** Dyslipidemia and blood pressure control among adult hypertensive patients at Kiambu County Hospital, Kenya
- **ref: m/th/186/2019:** Cervical cancer prevention practices among women of reproductive age in Juja sub-county, Kenya

### 1.7.2 PhD thesis examination

- **Tom Marwa Machera (Q97/24416/13):** The Effects of Oral HIV Self Testing Kits on Uptake of Male Partner Testing Among Pregnant Women in Selected Counties in Kenya
- **REF. PHD/003/2019:** Contraceptive Uptake and Adherence among Post Abortion Women Following Contraceptive Counselling by Physicians and Midwives in Kisumu County, Kenya.

### 1.7.3 External Examiner

- **2018 to date:** Bachelor of Medicine and Bachelor of Surgery. School of Medicine, Egerton University
- **2018 to date:** Bachelor of Medicine and Bachelor of Surgery. School of Medicine, Mount Kenya University
- **2010:** Hanna Maruta: Masters in Infectious Diseases Thesis: Stellenbosch University, South Africa
- **2010:** Bachelors in clinical medicine Jomo Kenyatta University
- **2010:** Diploma in clinical medicine, Kenya Medical training center, Thika

## 1.8 Current Linkages and research interest

### 1.8.1: Current linkages

- University of Sans Francisco, California: Preterm birth initiative

- Kenya Medical research institute: Preterm Birth initiative
- University of Sans Francisco, California: Virtual mentor
- Duke University: A Side By Side Comparison of a Trans-Vaginal Colposcope to Standard of Care Visual Inspection in a 50-Patient Pilot Study on Women Undergoing Cervical Cancer Screening.
- World Surgical Infections Society: Point Prevalence of Post CS Surgical Site Infections in Selected Sub Saharan African Countries.

### **1.8.2 Current Research Interests**

- **Preterm initiative:** A Bill and Melinda Gates foundation funded Initiative being implemented in Migori county
- **Post Caesarian Section Surgical sites infection:** A World Society of Surgical Site Infection Initiative
- **Virtual Mentor:** Innovation to reduce Postpartum bleeding deaths:A collaboration with University of Sans Francisco, California, funded by a Grant from Saving Life’s at Birth, Canada.

## **1.9 Membership of Professional Institutions and community engagement**

### **1.9.1 Membership of professional institutions**

- Kenya Medical Association
- Kenya Obstetrical Gynecological Society
- East Central South African College of Obstetrics and Gynecology (ECSACOG)
- Fertility and Andrology Society of Kenya (FASK)

### **1.9.2 Community engagement and other contributions**

- **2011 to date:** Member Reproductive, Adolescence and Child Reproductive Health Committee, Kenya Medical Research Institute.
- **2013 to date:** Member Steering Committee of International Surgical Infections Study Group
- **2016-2018:** Member of Board of governors, Munyu Secondary School
- **2013 to date:** Member of National Infection Prevention Committee under the Ministry of Health
- **2013-2017:** Member, Kiambu County Economic Forum
- **2008—2014:** Member of the ACK St. Joseph of Arimathea rites of passage committee

## **2.0. Grants and Awards/Appreciation**

- 2019 :**Kenyatta University Vice Chancellors Recognition and appreciation for being a chair of University Health directorate Services Board**
- 2019: **Kenyatta University Vice Chancellors Recognition and appreciation for Serving g Ag Director KUTRRH**

- 2018: USA Colorado: **Global Health Scholar award** at Spotlight Health, the opening session of the Aspen Ideas Festival
- 2018: **Saving lives at Birth grant Award: CD30000**
- 2017: **Johnson and Johnson GEN-H challenge grant award: USD 50000**
- 2016: **Kenyatta University Vice Chancellors Recognition and appreciation for Support as Director KUTRRH**
- 2016: **Culturally appropriate screening and diagnosis of cervical cancer in East Africa NIH PTE FAN5R01CA193380-02 sub award no. 203-6071 -5000USD.**
- 2015: **Kenyatta University Vice Chancellors Recognition and appreciation for developing the Protocols and Systems for KUTRRH**
- 2015: **Kenyatta University Vice Chancellors Recognition and appreciation for contribution as a member of the Hospital Operationalization Committee**
- 2015: **Kenyatta University Vice Chancellors Recognition and appreciation for contribution as a member of the KU ERC**
- 2015: **Preterm Birth Initiative (UCSF/KEMRI) Bill & Melinda Gates Foundation grant award-100,000,000**
- 2014 Awarded **Kenyatta University Vice Chancellor extra mile award**
- 2014: **Kenyatta University Vice Chancellors Recognition and appreciation for contribution in being a member of the hospital strategic planning and development of SOPs**
- 2014: **Appreciation by Pathways youth empowerment program of ACK Church**
- 2012: **Kenyatta University VCs PhD facilitation grant: 150000**
- 2012: **University of Nairobi, MEPI seed grant: 20000USD**

## Referees

**Prof. Ephantus Kabiru:** School of Public health, Kenyatta University

P.O. Box 43844-00100 Nairobi, Tel: +254721998558 Email:

[kabiru.ephantus@ku.ac.ke](mailto:kabiru.ephantus@ku.ac.ke)

**Prof. Joseph G Karanja:** College of Health science, Department of Obstetrics and Gynecology, University of Nairobi

P.O Box 19676, Nairobi, Tel: +254722513881

**Name:** Dr. Wanyoro A. Karanja

**Signed:**

**Date:**