

Name: Samson Awili Gwer

Title/Qualifications: Lecturer/ MBChB, MRCPCH (UK), PHD(Amsterdam)

Department: Medical Physiology

Area of Specialisation: Paediatrics, Neurology

Research Interests: Childhood Acute Coma, Sickle Cell Disease, Childhood Stroke, Health Systems

## Conference Presentations

### **Conference Presentations**

1. 26<sup>th</sup> African Health Science Congress, Ain Soukhna, Egypt. 28<sup>th</sup> Nov to 1<sup>st</sup> Dec, 2005 ,  
Presentation: EEG in children with acute non-traumatic encephalopathy
  2. 6<sup>th</sup> Annual KPA conference, Whitesands, Mombasa. 27<sup>th</sup> to 30<sup>th</sup> April, 2006,  
Presentation: Continuous EEG monitoring in Cerebral Malaria
  3. 27<sup>th</sup> African Health Congress, Durban, South Africa. 3<sup>rd</sup> to 7<sup>th</sup> December, 2006.  
Presentation: Iron deficiency and acute seizures in children living in a malaria endemic area
  4. 8<sup>th</sup> Annual KPA conference, Baobab, Mombasa, 14<sup>th</sup> to 16<sup>th</sup> August, 2008.  
Presentation: Non-invasive intracranial pressure monitoring in African children with infectious encephalopathies: preliminary results
  5. Pasteur Institute Conference, Infectious Diseases of the Nervous System: Pathogenesis and Worldwide impact, 10<sup>th</sup> to 13<sup>th</sup> September 2008.  
Presentation: Intra-Aural Pressure Waves Predict Outcome in African Children with Infectious Encephalopathies: Preliminary Results
  6. 9<sup>th</sup> Society of African Neuroscience Conference, Sharm El Sheikh, Egypt 8<sup>th</sup> to 13<sup>th</sup> December 2009, Presentation: Non-invasive intracranial pressure monitoring in African children with infectious encephalopathies
  7. 14<sup>th</sup> International Conference on Intracranial Pressure and Brain Monitoring, Tuebingen, Germany, 12<sup>th</sup> to 16<sup>th</sup> September 2010, Presentation: Evaluating a non-invasive tool for monitoring intracranial pressure in children with acute coma
  8. 10<sup>th</sup> Society of African Neuroscience Conference, Addis Ababa, Ethiopia, 9<sup>th</sup> to 11<sup>th</sup> February 2011, Presentation: Continuous EEG Monitoring in Kenyan Children with Acute Coma
  9. 11<sup>th</sup> Annual KPA conference, Mombasa, 13<sup>th</sup> to 16<sup>th</sup> May, 2011.  
Presentation: Changing Trends in the Aetiology of Coma in a Rural Hospital at the Coast of Kenya
  10. 12<sup>th</sup> International Child Neurology Congress, 27<sup>th</sup> May to 1<sup>st</sup> June 2012  
Presentations: Sheila Wallace Award Lecture – Research Priorities in Childhood Non-Traumatic Coma in Africa, Changing Trends in Childhood Acute Coma in Africa
  11. 65<sup>th</sup> Annual American Academy of Neurology Meeting, San Diego, USA, 16<sup>th</sup> to 23<sup>rd</sup> March 2013  
Presentation: Middle Ear Function and Mortality in African Children with Acute Non-Traumatic Coma
  12. 14<sup>th</sup> Annual KPA conference, Mombasa, 16<sup>th</sup> to 20<sup>th</sup> April 2013  
Presentation: Evidence Synthesis for the Paediatrician, Chair, Research Symposium
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## Funded Projects

- M-Afya Kiosk Project – 2013 – ongoing – Devolving healthcare using community kiosks; Funder USAID through ABT associates – 93,000 US dollars
- Tele-Afya Telehealth Project – 2012 - ongoing – collaborative venture between Kenyatta University, Gertrude's Children's Hospital, CISCO systems and Orange Telkoms on use of telemedicine for healthcare devolution in Kenya – Principal applicant through GCH ; Funding 1 million US dollars, Principal for Monitoring and Evaluation Role – 14,000 US dollars; Funder – CISCO Systems
- Epilepsy Clinical Outreach Programme – Years 2011, 2012 and 2013 – 3 consecutive funding awards to promote activities to improve access to drugs by people with epilepsy through Foundation for People with Epilepsy; Total Funding – Kshs.2 million; Funder – Groot Haspels Foundation
- Indirect funding through Joanna Brigg's Institute from Australian Aid Agency – To facilitate clinical audit fellowships for 8 Kenyan health workers at the University of Adelaide; Total funding – Approximately Kshs.6 million; Funder; Joanna Brigg's Institute
- Royal Society of Tropical Medicine and Hygiene Fellowship – 2010 – to facilitate research on non-invasive monitoring on intracranial pressure using the Tympanic Membrane Displacement Analyser; Total funding 11,000 British Pounds, Funder- Royal Society of Tropical Medicine and Hygiene

## Publications

1. Over-diagnosis and co-morbidity of severe malaria in children: **a guide for clinicians**, AMJTH 77 (Sup 6) 2007 pages 6 – 13  
**Samson Gwer**, Charles RJC Newton, James A Berkley
2. **Research priorities in the management of severe Plasmodium Falciparum malaria in children** Ann Trop Med Parasitol. 2006 Mar; 100(2):95-108. Review  
Idro R, Akech S, **Gwer S**, Newton CR, Maitland K.
3. **Biphasic Clinical Course in Kenyan Children with Cerebral Malaria**  
African Journal of Neurological Sciences June 2008  
**Samson Gwer**, Jeanine Punt, Richard Idro, Isaac Mwamuye, Hellen Gatakaa, Charles Newton, Kevin Marsh
4. **Volume Expansion with Albumin Compared to Gelofusine in Children with Severe Malaria: Results of a Controlled Trial** PLoS Clin Trials. 2006 Sep 15;1(5)  
Akech S, **Gwer S**, Idro R, Fegan G, Eziefula AC, Newton CR, Levin M, Maitland K.
5. **CR Phase III Trials Required to Resolve Clinical Equipoise over Optimal Fluid Management in Children with Severe Malaria** PLoS Clin Trials. 2007 Feb 9;2(2)  
Maitland K, Akech S, **Gwer S**, Idro R, Fegan G, Eziefula A C, Levin M, Newton
6. **The incidence, etiology and outcome of acute seizures in children admitted to a rural Kenyan district hospital** BMC pediatrics Feb 2008  
Richard Idro, **Samson Gwer**, Hellen Gatakaa, Moses Ndiritu, Michael Kahindi, Tony Kazungu, Kathryn Maitland, Brian GR Neville, Piet A Kager and Charles RJC Newton
7. **Haptoglobin HP2-2 genotype, alpha-thalassaemia and acute seizures in children living in a malaria-endemic area.** Epilepsy Res.2008 October 81(2-3)  
Idro R, Williams TN, **Gwer S**, Uyoga S, Macharia A, Opi H, Atkinson S, Maitland K, Kager PA, Kwiatkowski D, Neville BG, Newton CR
8. **High levels of erythropoietin are associated with protection against neurological sequelae in African children with cerebral malaria.** Proc Natl Acad Sci U S A. 2008 Feb 19;105(7):2634-9. Epub 2008 Feb 8.

Casals-Pascual C, Idro R, Gicheru N, **Gwer S**, Kitsao B, Gitau E, Mwakesi R, Roberts DJ, Newton CR.

9. **HIV infection, malnutrition, and invasive bacterial infection among children with severe malaria.** *Clin Infect Dis.* 2009 Aug 1;49(3):336-43.  
Berkley JA, Bejon P, Mwangi T, **Gwer S**, Maitland K, Williams TN, Mohammed S, Osier F, Kinyanjui S, Fegan G, Lowe BS, English M, Peshu N, Marsh K, Newton CR.
10. **The Role of Osmotic Agents in Children with Acute Encephalopathy: A Systematic Review** Joanna Briggs Library of Evidence Based Health care/BMC Paediatrics 17 April 2010  
**Samson Gwer**, Hellen Gatakaa, Leah Mwai, Richard Idro, Charles Newton
11. **Neonatal seizures in a rural Kenyan District Hospital: aetiology, Incidence and outcome of hospitalization** *BMC Medicine* 17 March 2010  
Michael Mwaniki, Ali Mathenge, **Samson Gwer**, Neema Mturi, Evasius Bauni, Charles RJC Newton, James Berkley, Richard Idro
12. **Clinical Considerations for Antibiotic Choices in the Treatment of Severe Malaria** *Trends Parasitol.* 2010 Jun 25  
Anna Farnert, **Samson Gwer**, Jay Berkley
13. **Evaluating a Non-invasive Intracranial Pressure Monitoring Technique in Comatose Children at a Rural Kenyan Hospital** In preparation  
**Samson Gwer**, Michael Kazungu, Eddie Chengo, Eric Ohuma, Richard Idro, Tony Birch, Robert Marchbanks, Piet Kager, Fenella J. Kirkham, Charles R. Newton
14. **Continuous EEG Monitoring in Kenyan Children with Acute Non-Traumatic Coma** *ADC* – Accepted for Publication February 2012  
**Samson Gwer**, Richard Idro, Gregory Fegan, Edwin Chengo, Godfrey Otieno, Harrun Garrash, Steve White, Fenella J Kirkham, Charles R Newton
15. **Changing Trends in The Aetiology of Childhood Coma in A Rural African Hospital** *BMJ Open* April 2012  
**Samson Gwer**, Nahashon Thuo , Mwanamvua Boga, Charles R Newton, Richard Idro, Fenella Kirkham
16. **The tympanic membrane displacement analyser for monitoring intracranial pressure in children** *Childs Nerv Syst.* 2013 Jan 30. [Epub ahead of print]  
**Gwer S**, Sheward V, Birch A, Marchbanks R, Idro R, Newton CR, Kirkham FJ, Lin JP, Lim M
17. **Clinical stroke scores for distinguishing stroke subtypes: a systematic review of diagnostic test accuracy** *JBI Library of Systematic Review* 02 Apr 2013; 11(3): 191-226  
Mwita C, Kajja D, **Gwer S**, Etyang A, Newton C
18. **Unexpected Relationship between Tympanometry and Mortality in Children with Acute Non-Traumatic Coma** *Pediatrics* 2013 12<sup>th</sup> August 2013 (Ahead of Publication)  
**Samson Gwer**, Eddie Chengo, Charles RJC Newton, Fenella J Kirkham
19. **Childhood Acute Non-Traumatic Coma: Aetiology and Challenges in Management in Resource Poor Countries of Africa and Asia** *Paediatrics and International Child Health* 2013 Aug;33(3):129-38  
**Samson Gwer**, Clifford Chacha, Charles R. Newton, Richard Idro
20. **Fosphenytoin does not prevent Seizures or improve outcome in African Children with Acute non-Traumatic Coma** *Journal of Critical Care* 2013 Oct 14. [Epub ahead of print]  
**Samson Gwer**, Richard Idro, Gregory Fegan, Edwin Chengo, Ayub Mpoya, Esther Kivaya, Jane Crawley, Simon Ndirangu, Michael Kihara, Juliana Otieno, Bernhards R. Ogutu, Fenella Kirkham, Charles R. Newton
21. **Intra-Aural Pressure Waves in Children with Acute Non-Traumatic Coma** In Preparation  
**Samson Gwer**, Michael Kazungu, Eddie Chengo, Eric Ohuma, Richard Idro, Tony Birch, Robert Marchbanks, Fenella J. Kirkham, Charles R. Newton

### Professional Registration and Membership

- Kenya Medical Practitioners and Dentists Board, Registration no. 005658
- Certified Physician Investigator, Academy of Pharmaceutical Physician and Investigators, certification number ICH-I-0907-054
- Member, Kenya Paediatrics Association
- Member, Evidence Synthesis Group, Joanna Briggs Institute, Kenya Chapter
- Member, International Braining Research Organization School Alumni
- Member, Society of Neuroscientists in Africa
- Member, Kenya Society of Epilepsy
- Member, International Child Neurology Association

### Awards

- Visiting Fellow, Royal College of Paediatrics and Child Health, April – May 2009
- Fellow, Royal Society of Tropical Medicine and Hygiene, March – July 2010
- Sheila Wallace Award, International Child Neurology Association, May 2012
- 2013 American Academy of Neurology International Scholarship Award, March 2013
- 2014 Child Neurology Society, Bernard D'Souza Award, October – November 2013

### Supervision of Students

- Zaheer Bagha, Neurology Fellowship, British Paediatric Neurology Association – April 2014
- Clinical audit fellowship project submitted in 2012 - Use of Morphine, Pethidine and other Analgesic Agents for Pain in Children at Gertrude's Children's Hospital – **Fellowship Student; Dr. Timothy Panga**
- Clinical audit fellowship project 2012 submitted in 2012 – Adherence to Best Practices in the Management of Hypertension in Adulthood at Thika District Hospital – **Fellowship Student; Dr. Clifford Chacha**
- Clinical audit fellowship submitted in 2012 – Diagnosis and Treatment of Peptic Ulcer Disease in Nakuru Provincial Hospital – **Fellowship Student; Dr. Monica Migiro**
- Clinical audit fellowship submitted in 2013 – Developing Research Topic– **Fellowship Student; Dr. Rachel Kaguongo (On-going)**
- Comprehensive Systematic Review Apprenticeship in 2012 – A Systematic Review of Prevalence and Risk Factors for Obesity in sub-Saharan Africa: A Systematic Review – **Student; Dr. Hussein Dossajee (On-going)**
- Comprehensive Systematic Review Apprenticeship in 2012 – A Systematic Review of Clinical Stroke Scores for Distinguishing Stroke Sub-types – **Student; Dr. Clifford Chacha**
- Comprehensive Systematic Review Apprenticeship in 2013 – A Systematic Review on the Effect of Antiretroviral Drugs Use on Hearing – **Student; Dr. Barack Ongulo – Lecturer, ENT, School of Health Sciences, Kenyatta University (On-going and working towards a PhD project)**
- Comprehensive Systematic Review Apprenticeship in 2013 – A Systematic Review on the Most Effective Method for Management of Splenic Abscesses – **Student; Dr. Rachel Kaguongo (On-going)**
- Comprehensive Systematic Review Apprenticeship in 2013 – A Systematic Review on the Effect of Migration and Mobility within Sub-Saharan Africa on Tuberculosis Incidence and Prevalence in Host Settings – **Student; Dr. Lily Njeri, Lecturer, Pharmacy, School of Health Sciences, Kenyatta University (On-going)**