

BIOGRAPHICAL SKETCH			
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NAME Kwarteng Owusu, Sandra	POSITION TITLE Senior Lecturer Paediatric Pulmonologist, Department of Child Health, School of Medicine and Dentistry, Kwame Nkrumah University of Science and Technology Komfo Anokye Teaching Hospital Kumasi, Ghana		
EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
Post Graduate Education			
University of Cape Town	MPhil	12/2020	Paediatric Pulmonology
Ghana Postgraduate Medical College Accra, Ghana	Fellowship	12/2019	Paediatrics
Colleges of Medicine South Africa	Sub-Specialty certificate in Pediatric Pulmonology	10/2018	Paediatric Pulmonology
West African Postgraduate Medical College. Lagos, Nigeria.	Fellowship	10/2013	Paediatrics
Pan African Thoracic Society Methods in Epidemiologic Clinical and Operation Research- Level 3	Certificate	2023	Research Methods in Respiratory Health
Pan African Thoracic Society Methods in Epidemiologic Clinical and Operation Research- Level -2	Certificate	2022	Research Methods in Respiratory Health
Pan African Thoracic Society Methods in Epidemiologic Clinical and Operation Research – Level 1	Certificate	2021	Research Methods in Respiratory Health
Data Safety Monitoring Training Course offered by Coalition for Epidemic Preparedness Innovations (CEPI)	Certificate	2021	Data Safety in Clinical Trials
Liverpool School of Hygiene and Tropical Medicine, Liverpool United Kingdom	Post Graduate Diploma	11/2011	Project Design and Management
European Gastroenterology Association	Certificate	2012	Paediatric Gastroenterology, Hepatology and Nutrition
West African Postgraduate Medical College. Lagos, Nigeria.	Membership	2008	Paediatrics
Vienna School of Clinical Research, Vienna Austria	Certificate	2008	Ethical aspects of Clinical Research
Johns Hopkins University, School of Hygiene and Public Health. Baltimore, Maryland.	Certificate	2007	Epidemiology and Biostatistics.
Undergraduate Education			
Kwame Nkrumah University of Science and Technology (KNUST), School of Medical Sciences, Kumasi, Ghana.	MB ChB	2003	Medicine
Kwame Nkrumah University of Science and Technology, School of Medical Sciences, Kumasi, Ghana.	BSc	2000	Human Biology

A. Personal Statement

I trained as a paediatric pulmonologist in 2018 in Cape Town South Africa and returned home to establish the first paediatric pulmonology service at the Department of Child Health- Komfo Anokye Teaching Hospital / Kwame Nkrumah University of Science and Technology in Kumasi Ghana. My research has focused on early life respiratory conditions such as asthma, pneumonia, tuberculosis and other chronic diseases such as sickle cell disease that impact the respiratory health of children. I am involved in teaching and training postgraduate and undergraduate students who rotate through the pulmonology unit at the Komfo Anokye Teaching Hospital in Kumasi in Ghana,

I am committed to promoting lung health in Ghana, a Lower Middle-Income where the burden of respiratory disease is high. I have committed time to training teams to use appropriate diagnostic techniques for respiratory diseases such as spirometry and sputum induction. These are essential in supporting early diagnosis of specific respiratory conditions that have impact on lung health. I have collaborated closely with the Pan African Thoracic Society to ensure that International standards are maintained.

B. Professional Experience -Current Appointments

- Academic

Senior Lecturer, Department of Medicine, KNUST School of Medicine and Dentistry, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

- Hospital

Honorary Senior Specialist Physician, Department of Medicine, Komfo Anokye Teaching Hospital (KATH), Kumasi; Ghana

Responsibilities

- Teaching

Didactic lectures on Paediatric Respiratory Disorders

Small group teaching incorporating Bedside and Simulated teaching sessions in General Paediatrics and Child Health

- Clinical

Clinician on paediatric cardio-respiratory diseases sub-unit, Komfo Anokye Teaching of care for in-patient and out patients referred to KATH with respiratory diseases, including asthma, pneumonia, complicated tuberculosis lung disease in HIV and Sickle cell disease. This includes consults to the Paediatric Emergency Unit and the Neonatal Unit

C. Supervision and Mentoring

- Supervision of research work for fellows of the West African College of Physicians and the Ghana College of Physicians in training in the Department of Child health.
- Supervision of master's work for MPhil candidates in Physiology and Clinical Microbiology at the School of Medical Sciences Kwame Nkrumah University of Science and Technology.
- Mentoring of assigned trainees of the West African College of Physicians and the Ghana College of Physicians both at membership and fellowship levels.

D. Past Appointments

- Academic

Adjunct Lecturer Department of Child Health, School of Medical Sciences, Kwame Nkrumah University of Science & Technology, Kumasi, Ghana 2019 to June 2020

Demonstrator 2009 –2016, Department of child Health, School of Medical Sciences, Kwame Nkrumah University of Science & Technology, Kumasi, Ghana

- Hospital

Specialist Paediatrician, Komfo Anokye Teaching Hospital, Ghana (2008-2014)

Resident, Department of Child Health Komfo Anokye Teaching Hospital Kumasi 2006-2008

E. Other Duties

- External Examiner

- West Africa College of Physicians, West Africa Postgraduate Medical College
- Ghana College of Physicians and Surgeons

On-going Research

- I. Chronic Respiratory Disease Observatory for Africa (CHEST-AFRICA)- Ghana site, a multi-center study on asthma in children and COPD in adults. July 2023 to date
- II. Respiratory Health Assessment in Children Younger than Five Years with Sickle Cell Disease using Oscillometry. June 2024 -to date
- III. Consultative Engagement to Standardise Childhood Pneumonia Case Management in Ghana – Establishment of a National Childhood Pneumonia Network January 2024 to date
- IV. Rotavac Vaccine Impact Study January 2022 to Date
- V. Intussusception Surveillance Study 2016 to Date.

F. Previous Research

- I. Network for Severe Pneumonia in Childhood REsearch (NSPIRE) –Trends in childhood pneumonia admissions in the Kumasi Metropolis. April 2023 to December 2023 Principal Investigator
- II. Epidemiology of Pneumococcal Pneumonia in Hospitalised Children, nine years after the introduction of Pneumococcal Conjugate Vaccine April 2023 to December 2023
- III. Using point-of-care ultrasound to diagnose pneumonia in children admitted to a tertiary hospital in Ghana- June 2022 to December 2023.
- IV. Induced Sputum to confirm diagnosis of Tuberculosis in Children – funded by the Kwame Nkrumah University of Science and Technology Research Fund (KREF FUND) January 2022 to June 2022: Role -Principal Investigator.
- V. Association between C-Reactive protein and procalcitonin levels and outcomes in children admitted with pneumonia to the Komfo Anokye Teaching Hospital. July 2022 to August 2023. Role -Principal Investigator.
- VI. Achieving Control of Asthma in African Children (ACACIA) and follow-up study on Children's Air Pollution Profiles in Africa (CAPPA) NHIR funded research in collaboration with Global Health Research Group on improving asthma outcomes in African children at Queen Mary University of London. 2018- 2022: Role – Co-investigator
- VII. Examining Asthma Symptoms in Severely Symptomatic Undiagnosed Children (EASU), Ghana: sub-study under the NHIR funded ACACIA Study -research in collaboration with Global Health Research Group to ascertain the probability of a true diagnosis of asthma among 12–14-year-old children who do not have a doctor diagnosis of asthma yet report severe symptoms of asthma and with markers of asthma severity using electronic devices linked to a smartphone. Role – Co-investigator

G. Research Support

- I. Re- Chronic Respiratory Disease Observatory for Africa (CHEST-AFRICA)- Ghana, a multi-center study on asthma in children and adults. July 2023 to date Funded by the Pan African Thoracic Society Role Principal Investigator of Ghana site
- II. Respiratory Health Assessment in Children Younger than five Years with Sickle Cell Disease using Oscillometry. June 2024 to date Funded by the Pan African Thoracic Society American Thoracic Society (PATS-ATS) -MECOR SMALL GRANT AWARD-2022–Role- Principal Investigator
- III. Using Point of Care Ultrasound to Diagnose Pneumonia in Children admitted to a tertiary hospital in Ghana- July 2022 to December 2023 Funded by the Pan African Thoracic Society PATS - MECOR SMALL GRANT AWARDS -2021 Protocol Title Role- Principal Investigator
- IV. Epidemiology of Pneumococcal Pneumonia in Hospitalised Children, nine years after the introduction of Pneumococcal Conjugate vaccine. April 2023 to December 2023 Funded by the Robert Austrian Research Award -2020 – Role- Principal Investigator
- V. Induced Sputum to confirm diagnosis of tuberculosis in hospitalised children. January 2022 to July 2022 KNUST Research Fund (KReF6) Multi-Disciplinary Category September 2021. Role --Principal Investigator
- VI. Association between C-Reactive protein and procalcitonin levels and outcomes in children admitted with pneumonia. January 2022 to April 2022 Funded by the College of Health Sciences Maiden Grant Role- Principal Investigator
- VII. Achieving Control of Asthma in African Children (ACACIA) and follow-up study on Children's Air Pollution Profiles in Africa (CAPPA) NHIR funded research in collaboration with Global Health Research Group on improving asthma outcomes in African children at Queen Mary University of London. 2018- 2022: Role – Co-investigator.
- VIII. Examining Asthma Symptoms in Severely Symptomatic Undiagnosed Children (EASU), Ghana: sub-study under the NHIR funded ACACIA Study -research in collaboration with Global Health Research Group to ascertain the probability of a true diagnosis of asthma among 12–14-year-old children who do not have a doctor diagnosis of asthma yet report severe symptoms of asthma and with markers of asthma severity using electronic devices linked to a smartphone. Role – Co-investigator

H. Position and Honors

2023 June Ordinary Executive Member – Pan African Thoracic Society PATS

2022 to date- Editorial Board Member – African Journal of Respiratory and Critical Care.


2021 to date- Member – National Non-Communicable Disease Working Group National Training Manual Development Complete -

2020 to date- Member – National Tuberculosis Guideline Development Working Group- National Tuberculosis Control Programme, Ghana. September 2020 to date Guideline Development nearly complete

2020 to date -Member -National Asthma Guideline Development Working Group- Ghana Thoracic Society, September 2020 to May 2023. Guideline Development complete

I. Awards Received

1. Best Senior Specialist- Year 2019 -Directorate of Child Health and Paediatrics Komfo Anokye Teaching Hospital.
2. Second Best Scientific Presentation- Hypoxia and Mortality outcome in Children Admitted with pneumonia to KATH a retrospective study -Department of Child Health Research Conference a joint collaboration between School of Medicine and Dentistry and Komfo Anokye Teaching Hospital, Kumasi Ghana -November 2021
3. Best Scientific Presentation- Early origins of COPD in Childhood -Annual General Meeting West African College of Physicians (Ghana Chapter), Kumasi Ghana -July 2019

MAJOR PUBLICATIONS AND LINKS TO OTHER PUBLICATIONS (ResearchGate)	 Publications Link
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J. Contribution to Science

1. Obianuju B. Ozoh, Nqobile Ndimande, Andre Amaral, Maia Lesosky, Josue Mbonigaba, Marie Stolbrink Lindsay Zurba, Tochukwu Ayo-Olagunju, Tony Kayembe Kitenge, Suliaman Lakoh, Jibril Mohammed, Rebecca Nantanda, Elizabete Nunes, **Sandra Kwarteng Owusu**, Abdoul Risoque, Jean Piere Sibomona, Refiloe Masekela, Kevin Mortimer Chronic respiratory disease observatory for Africa (CHEST-AFRICA): study protocol for the prevalence determinants and economic impacts of asthma and COPD in Africa, BMJ Open Respir Res 2024;11 [Doi:10.1136/bmj-2024-002416](#)
2. **Kwarteng Owusu S**, Mapani MK, Visagie A, Marozva N, Yassin A, Vanker A, et al. Pulmonary function assessments and clinical correlates in children with sickle cell disease in Cape Town, South Africa. J Pan Afr Thorac Soc. 2024;5(1):33–44. [DOI10.25259/JPATS_30_2023](#)
3. Wordui S, Masu A, Golden L, Chaya S, Reichmuth K, Visagie A, Ayuk A, **Kwarteng Owusu S**, Marangu D, Affendi N, Lakhani A. Aetiology of pleural effusions in children living in a high TB endemic setting. The International Journal of Tuberculosis and Lung Disease. 2024 Jun 1;28(6):295-300.DOI: <https://doi.org/10.5588/ijtld.23.0444>
4. Lim, S., Said, B., Zurba, L., Mosler, G., Addo-Yobo, E., Adeyeye, O.O., Arhin, B., Evangelopoulos, D., Fapohunda, V.T., Fortune, F. **Kwarteng Owusu S** Griffiths, C.J., Characterising Sources of PM 2.5 Exposure for School Children with Asthma in Six Sub-Saharan African Cities. Lancet Child Adolesc Health. 2024;8(1):17–27. [https://doi.org/10.1016/S2352-4642\(23\)00294-8](https://doi.org/10.1016/S2352-4642(23)00294-8)
5. Naidoo, K.L., Dladla, S., Mphahlele, R.E., Mosler, G., Muyemayema, S., Ssemata, A.S., Mkutumula, E., Adeyeye, O.O., Goodman, O., Kuyinu, Y. **Kwarteng Owusu S** and Nantanda, R., 2023. A cross-country qualitative analysis of teachers' perceptions of asthma care in sub-Saharan Africa. NPJ primary care respiratory medicine, 33(1), p.31. <https://doi.org/10.1038/s41533-023-00354-7>
6. Karikari P, Oppong-Kyekyeku J, Ekuadzi E, Bekoe SO, Opoku R, Amprako DN, **Kwarteng Owusu S** et al. Development and Validation of an RP-HPLC Method for the Quantitative Analysis of Triclosan in Human Urine. J Chem Volume 2023,Article ID 6684834,10 pages<https://doi.org/10.1155/2023/6684834>

7. **S Kwarteng Owusu**, SA Owusu, OO Nyarko, RKK Owusu, H Mahama, ND Adjetei, B Baah et al. Retrospective review of empyema and parapneumonic effusions in hospitalized children in Ghana | Journal of the Pan African Thoracic Society 2023•ajol. <https://www.ajol.info/index.php/jpats/article/view/263711> DOI10.25259/JPATS_14_2023
8. Golden L, Chaya S, Reichmuth K, Visagie A, Ayuk A, **Kwarteng Owusu S**, et al. Aetiology and presentation of childhood pleural infections in the post- pneumococcal conjugate vaccine era in South Africa. Afr J Thorac Crit Care Med. 2022 Jan 21;27 <https://doi.org/10.7196/AJTCCM.2021.v27i4.152>
9. Verwey C, Gray DM, Dangor Z, Ferrand RA, Ayuk AC, Marangu D, Kwarteng Owusu S et al. Bronchiectasis in African children: Challenges and barriers to care. Front Pediatr. 2022;10:954608. doi 10.3389/fped.2022.95460
10. Chronic Lung Disease in children: disease focused use of lung function - Diane M Gray, Sandra Kwarteng Owusu, Marieke M van der Zalm: Current Opinion in Physiology Volume 22, August 2021 100438 <https://doi.org/10.1016/j.cophys.2021.05.001>
11. Epidemiology of intussusception in infants less than one year of age in Ghana, 2012-2016 -Glover-Addy, H.,Ansong, D., Enweronu-Laryea, C., Tate, J. E., Amponsa-Achiano, K., Sarkodie, B., Mwenda, J. M., Diamenu, S., Owusu, S. K., Nimako, B., Mensah, N. K., Armachie, J., Narh, C., Pringle, K., Grytdal, S. P., Binka, F., Lopman, B., Parashar, U. D., & Armah, G. (2021). The Pan African medical journal, 39(Suppl 1), 8. <https://doi.org/10.11604/pamj.supp.2021.39.1.25445>
12. Social constructs, late recognition and decision making for managing fast breathing in children - Peter Agyei-Baffour, Daniel Ansong, Francis Adjei Osei, Seth Christopher Yaw Appiah, Sandra Owusu Kwarteng, Isaac Nyanor, Joseph Bonney, Anthony Enimil, Dennis Odai Laryea, Jonathan Mensah Dapaah, Nicholas Mensah, Ida Osei-Peprah, Alfred Owusu, Emmanuel Addo-Yobo, Alex Osei-Akoto, Osei Asibey Owusu, Victoria Ampiah, Joana Osei Saahene, Evans Xorse Amuzu, Justice Sylverken-, Children and Youth Services Review, Volume 118,2020,105416,ISSN01907409,<https://doi.org/10.1016/j.chilgyouth.2020.105416>.(<http://www.sciencedirect.com/science/article/pii/S0190740920308719>).
13. Educating caregivers to recognise the clinical signs of pneumonia in children younger than 6 months- D Ansong, F A Osei, S K Owusu; I Nyanor; J Bonney, A Enimil ; D O Laryea; J Dapaah, P Agyei-Baffour; N Mensah; I Osei-Peprah; A Owusu; E Addo-Yobo; A Osei-Akoto; O A Owusu; S C Y Appiah; V Ampiah;; J O Saahene; E X Amuzu; M Telly; J Sylverken, S Afr J Child Health 2020;14(2):70-76. <https://doi.org/10.7196/SAJCH.2020.v14i2.1642>.
- K. Abstract Presentation at International and National Conferences
 1. The Second Congress of the International Society of Paediatric Respiratory Diseases July 4 to Porto Portugal Presented on-
 - a. Advances in the diagnosis of childhood tuberculosis
 - b. Sickle Cell Lung Disease Long- Term Consequences and Prevention
 - c. Utility of Point of Care Ultrasound performed by emergency room paediatricians to diagnoses pneumonia in Hospitalised Children
 - d. Induced sputum samples to improve diagnosis of tuberculosis in children
 2. 13th Meeting of the International Society of Pneumonia and Pneumococcal Diseases 17th to 20th March 2024 Cape Town South Africa
 - a. Epidemiology of Pneumococcal Pneumonia in Hospitalised Children after Introduction of the 13 valent conjugate vaccine
 - b. Epidemiology of Pneumonia in a Teaching Hospital in Ghana
 - c. Association between C -Reactive Protein. and Procalcitonin and outcomes in children hospitalised with pneumonia to a teaching hospital in Ghana.
 3. 12th International Symposium on Pneumococci and Pneumococci disease 21st to 25th June 2022 Toronto Canada
 - a. High burden of pneumonia in children
 4. Paediatric Conference and Child Health Research Day 29th and 30th November 2023 Kumasi
 - a. Safety of sputum induction for diagnosis of Pulmonary tuberculosis in children a tertiary hospital in Ghana.
- L. Trainings and Workshops Facilitated
 1. Training on performing sputum induction to obtain lower airway samples in children for Eastern Regional Hospital, supported by the National Tuberculosis Control Program July 2023
 2. Revision Course for Post Graduates Membership candidates- organised by Ghana College of Physicians and Surgeons and the West African College of Physicians Kumasi Ghana -May 2023.

3. Medical Education and Update on Asthma: May 2023 Presented on Diagnosis and Management of Asthma in Children programme organised by Astra Zeneca Ghana, at the Golden Bean Hotel Kumasi Ghana at Child Health Directorate Mentor Mentee Meeting.
4. Paediatric Society of Ghana Annual General Meeting February 2032 - Presented on Effects of Air Pollution on Child Health

Referees

Emmanuel Addo Yobo
Professor of Child Health
School of Medical Sciences & Dentistry,
Kwame Nkrumah Univ. of Science & Technology,
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