



Respiratory disease kills nine million children a year and causes life-long complications for countless more

## INTRODUCING THE APFP

The African Paediatric Fellowship Programme (APFP) is a South African initiative committed to building a workforce for specialist child healthcare in Africa.

By the end of 2020, 128 health professionals from across the continent had completed their training under the APFP at the University of Cape Town. Of these, 11 trained in paediatric pulmonology. Three more are due to qualify in 2021.



14 DOCTORS  
8 COUNTRIES

TWO YEARS' SUB-SPECIALIST TRAINING

SPECIALISTS  
EDUCATORS  
RESEARCHERS  
ADVOCATES  
LEADERS

Respiratory disease is *the* leading cause of child mortality in Africa. Although pneumonia remains a major risk factor, there are many other respiratory illnesses that contribute to both childhood mortality and ongoing morbidity. From HIV and TB, to asthma, bronchiectasis and chronic obstructive pulmonary disease, the burden of paediatric respiratory illness is as broad as it is high, and has life-long consequences.

A key driver of illness in adults, childhood respiratory disease has a direct impact on an individual's future health. High-quality paediatric care is needed to both reduce mortality rates *and* long-term disease morbidity. This is not possible without investing in the *people* working across the system in areas of:

- **Prevention:** creating systems and protocols that address key risk factors and drivers of disease.
- **Diagnostics:** developing tools to make early and accurate diagnoses and improve case management.
- **Treatment:** developing and delivering treatment protocols that improve patient care.
- **Research:** to better understand disease drivers and develop evidence-based, African solutions.

To reduce child mortality and accelerate progress towards universal health coverage, the WHO has called for renewed focus on health worker training. The APFP is proud to work in direct response to this need.

As the following case studies show, we are building a community of paediatric pulmonologists committed to reducing the burden of childhood respiratory disease.

**DR. ADAEZE AYUK**CONSULTANT PAEDIATRICIAN, SENIOR LECTURER  
& PAEDIATRIC PULMONOLOGIST

2011, 2017-18

**INTRODUCING DR ADAEZE AYUK**

Pulmonology was a natural fit for Dr Ayuk. Early in her medical training, clinical placements and academic assignments introduced her to the world of respiratory health. It is an interest that never wavered. So when the opportunity to formalise her skills with the APFP presented itself, she knew she had to take it.

**A FORCE FOR THE FUTURE...**

Seconded from her role at the University of Nigeria Teaching Hospital, Enugu, Dr Ayuk began her Mphil in 2011. Returning home early to work as a Consultant Paediatrician for their new pulmonology team, she returned to us in 2017 - graduating with distinction two years later.

She might have taken an unconventional route, but for Dr Ayuk, the chance to return home during her training was invaluable. Buoyed by her first year of study, she used this time to show people what she had learned, to raise awareness around paediatric pulmonology, and start pushing for new resources and investment.

**“Everyone thinks pulmonology is pneumonia. This in-between time gave me the chance to explain it. To make my case.”**

It was an important experience. In 2019, Dr Ayuk became one of Nigeria's *first* paediatric pulmonary specialists. She will be joined by another APFP trained pulmonologist in 2023. She knows they have to start small, but that doesn't stop her thinking big!

**“I want people to see that Nigerian paediatric pulmonology is alive and well. Just like it's done in adult pulmonology. I want it to gain momentum in Nigeria and reach that level. That's my whole goal.”**

**■ EDUCATION & DEVELOPMENT**

For Dr Ayuk, training is the best way to advance paediatric pulmonology. ‘Moving the knowledge’ is her bridge. Her road to the future. That's why, in addition to clinical responsibilities, Dr Ayuk works as a Senior Lecturer. A tutor and mentor to undergraduate and postgraduate students, she wants the younger generation to know what's out there, and that a sub-speciality in pulmonology is well within their reach.

Dr Ayuk also sees huge value in short-term professional development. Since returning home, she has run a number of courses, including spirometry and non-invasive ventilation training. It is already making a difference. By building the skills and confidence of those around her, she is laying the foundation for change.

**■ DIRECT CARE**

Practicing at the University of Nigeria Teaching Hospital, Dr Ayuk's team sees 10 in-patient and 60 out-patient cases every month. She also co-founded and works as CEO for Little Lung Africa (LLA). Set up to be a leading provider of ambulatory healthcare, LLA is the first specialist pulmonology and allergy clinic in Enugu. Offering affordable, private paediatric services like bronchoscopy, allergy skin prick testing, spirometry and TB management, it is an important part of Dr Ayuk's ambition to improve the availability of paediatric respiratory care.

**■ RESEARCH & EVIDENCE**

Research is Dr Ayuk's other passion, with current areas of focus including asthma, allergy and lung-related diseases. She has been busy. This year, Dr Ayuk co-authored 10 publications. She also works as interim Chief Editor for the Nigerian Journal of Chest Disease, sits on the editorial board of the Journal of Asthma, and is a reviewer for the Pan African Medical and Clinical Paediatrics Journal.

**■ A NETWORK OF CLINICAL EXPERTISE**

The 11<sup>th</sup> APFP fellow to qualify in paediatric pulmonology, Dr Ayuk joins an active network of alumni. Connected through WhatsApp, every day, academic and clinical conversations cross the continent. Together, this small but growing network are forging a new future for paediatric pulmonology in Africa.

**ON HER TRAINING WITH THE APFP...**

**“APFP gives you the chance to say, ‘we know it’. They don't do observership. You get your hands dirty. You come and you learn the skills and you take the skills home.”**

## DR. DIANA MARANGU

PAEDIATRIC PULMONOLOGIST & LECTURER



2016-18

### MEET DR MARANGU

When Dr Marangu applied to the APFP in 2016, there were less than 10 paediatric pulmonologists for Kenya's 22 million children. Returning home in 2019, she became the second paediatric pulmonary specialist to practice at the Kenyatta National Hospital, the teaching hospital for the University of Nairobi, and Kenya's largest health facility. Here Dr Marangu would take the lead on clinical care.

### THE START OF A NEW CHAPTER

Already, demand for Dr Marangu's knowledge and expertise is huge. With patients often two to a bed, she works across four children's wards - each with up to 80 patients at a time. She also consults across surgical and paediatric oncology wards, as well as out-patient care at her own hospital, and from smaller, peripheral hospitals.

#### ■ SYSTEMS TO IMPROVE PATIENT CARE

Dr Marangu knows she cannot be everywhere at once. Inspired by the success of APFP mentors and colleagues, she set about developing the systems she needed to work effectively. To make the most of her skills and do the best by her patients.

**"There was a time there was no paediatric pulmonology at the Red Cross Children's Hospital. Their story is my inspiration."**

To do this, Dr Marangu set up new referral criteria to make sure the most urgent and complex patients would reach her. Creating guidelines for teams across the hospital, not only does this system help identify the most at-risk children, it also makes the consultation more meaningful and productive. Dr Marangu also used her role as a lecturer to increase the number of staff available to her, and to raise the profile of child

respiratory health. Now, all post-graduates complete a four week rotation in cardiology and pulmonology. This is an important step that helps boost team capacity, improve patient care, *and* inspire a new generation of pulmonary sub-specialists.

**"In their residency, they start to appreciate the value of pulmonology. That's one of my greatest achievements. I'm showing them the need. Creating the demand."**

#### ■ A PAEDIATRIC PULMONARY CLINIC

With these new systems in place, the next step was to set up a pulmonary clinic just for children. There had been one before, but it closed when the lead member of staff retired. It was important for Dr Marangu – and hospital management – to safeguard against this happening again. Running a weekly clinic takes time, people and resources, and they had to be sure they could deliver. It was a team effort, but on 1<sup>st</sup> October 2020 (a year after Dr Marangu returned home) Kenyatta Hospital's paediatric pulmonary clinic re-opened its doors.

**"It's a journey where you have to have everyone on board. Yes, there's a consultant. But who else can you work with? You need numbers. People. Then you can tackle the service much better. It's a team effort."**

#### ■ PROTOCOL FOR COVID-19

It was always going to be a busy year, but when Kenya confirmed their first case of COVID-19, it got a whole lot busier. A member of the Respiratory Society of Kenya, Dr Marangu was asked to help develop the country's first pandemic protocol. She also worked with her team to develop hospital-based systems - including procedures for staff safety, patient testing (all children presenting with severe pneumonia are now tested for COVID-19), and the development of a new isolation ward.

#### ■ DATA AND RESEARCH

Building on this, Dr Marangu has just received approval to study the impact of COVID-19 on children with severe pneumonia. It's not the only project she's working on. Research, she believes, is the key - not just to COVID-19, but to advancing respiratory health as a whole. There is a paucity of data when it comes to pulmonary disease in Africa's children. Research can fill this gap, building knowledge and raising questions that improve patient care. Because for Dr Marangu, *that's* what it is all about.

### ON HER TRAINING WITH THE APFP...

**"APFP is a family. It doesn't stop when the training ends. It grows. That family connection is really important for future training. There can never be too many of us. There is a gap, and we are all working together to fill it."**

## DR. SANDRA KWARTENG OWUSU

SENIOR SPECIALIST PAEDIATRICIAN/PULMONOLOGIST



2016-18

### A SPOTLIGHT ON DR KWARTENG OWUSU

When she returned to her role at the Komfo Anokye Teaching Hospital (KATH) in Ghana, Dr Kwarteng Owusu became the country's first and only specialist paediatric pulmonologist. She had always been fascinated by respiratory health, but it was her supervisor who encouraged her to pursue it. With a formal qualification now in hand, Dr Kwarteng Owusu *knows* this is her chance to make a real difference.

**"I have come home a different person. When you interview me again in five years, I will tell you all the good things that have happened!"**

#### ■ ADVOCACY & TRAINING

Before she left to train with the APFP, Dr Kwarteng Owusu set up a small paediatric respiratory clinic. The first in a series of changes she wanted to make, she is determined to diagnose and help more children with respiratory illness. For Dr Kwarteng Owusu, this means showing people that pulmonary conditions are not limited to pneumonia. So she set about presenting at every training event she could - using each to talk about lung health in children.

As a senior lecturer at the Kumasi School of Medicine and Dentistry, Dr Kwarteng Owusu is also involved in undergraduate and postgraduate training. She has used this opportunity to develop and deliver educational sessions on the world of paediatric respiratory care.

An active member of the Paediatric Society of Ghana, Ghana Thoracic Society, and the Pan African Thoracic Society, slowly but surely she is getting the message out there and raising awareness around the diversity of paediatric respiratory health.

#### ■ BUILDING A MULTI-DISCIPLINARY TEAM

With this profile comes a new focus on human resources for health. Supported by colleagues at KATH, Dr Kwarteng Owusu is working to build a specialist, multi-disciplinary team. At the time of writing, she works closely with a senior registrar and nurse, both of whom will soon travel to South Africa for training. She is also looking forward to the return of APFP physiotherapy fellow, Cedelle Andoh, and two new paediatric radiologists who will train under the APFP in 2022. Together, they will be a team with the power to drive transformational change.

#### ■ DIAGNOSIS & DIRECT CARE

Already taking referrals from across the country, Dr Kwarteng Owusu sees up to 60 in-patients and 40 out-patients every month. This includes, but doesn't end, with childhood pneumonia. Thanks to her training, Dr Kwarteng Owusu is able to diagnose the full range of respiratory conditions, including Ghana's second known case of cystic fibrosis. She knows there are more out there, and would love to improve the availability of diagnostic sweat tests. But funds are tight, so for now samples are sent abroad.

#### ■ HELPING FAMILIES 'BREATHE EASY'

Replicating the groundbreaking 'Breatheasy' programme at the Red Cross Children's Hospital, Dr Kwarteng Owusu is also giving children with tracheostomies (a tube in the neck to enable breathing) the chance to live at home. Learning from Cape Town's children's nursing specialist, Sr. Jane Booth, she wants to help families adapt to the reality of home-based care. There are now 20 children discharged from long-term hospital stays and living at home, thanks to this initiative.

**"It's a scary situation. So we teach them. We support them – through every step. We give children and their families the confidence to go home."**

#### ■ RESEARCH

Amidst all of the above, Dr Kwarteng Owusu is also a dedicated researcher. As such, she is involved in a number of hospital-based, national and international studies - including multi-country research on the control of asthma in Africa's children. With each one, she can help create new awareness, recognition and treatment options for children with respiratory illness. Including, but extending far beyond, childhood pneumonia.

### ON HER TRAINING WITH THE APFP...

**"The training at Red Cross UCT, it's amazing. I would say extraordinary. It opens you up to new world of possibilities. The impact on my career, you can't measure it. It's been 300% good."**

# OUR VISION | A PAN-AFRICAN MOVEMENT

## WHAT NEXT FOR APFP PULMONOLOGY?

As these case studies show, APFP fellows have the power to affect real change in child health. They are extraordinary people, and it is our job to recognise, channel and unleash this potential. To give each fellow the specialist skills, confidence and connections they need to build their careers *and* regional capacity for paediatric pulmonology. To become the clinicians, educators, researchers and advocates their children, country - and continent - deserve.

Individually, APFP fellows are pioneers, leaders in their field and drivers of local and national change. Collectively, they are the start of a Pan-African movement. A community determined to transform childhood respiratory health in Africa.

We must keep this momentum going, and as we work to build a critical mass of African paediatric pulmonary expertise, the APFP is looking to:

- Create new training opportunities to build and develop multi-disciplinary teams.
- Launch a new PhD track to increase clinical research capacity and clinician scientist training.
- Support the development of an East African fellowship programme, led by alumni in Kenya.

**Will you join the APFP community? With your support we can invest in more people like Dr Ayuk, Dr Marangu and Dr Kwarteng Owusu. They are the future of child health, and we would love you to be part of it.**

## ...of paediatric pulmonary specialists

### FOR MORE INFORMATION

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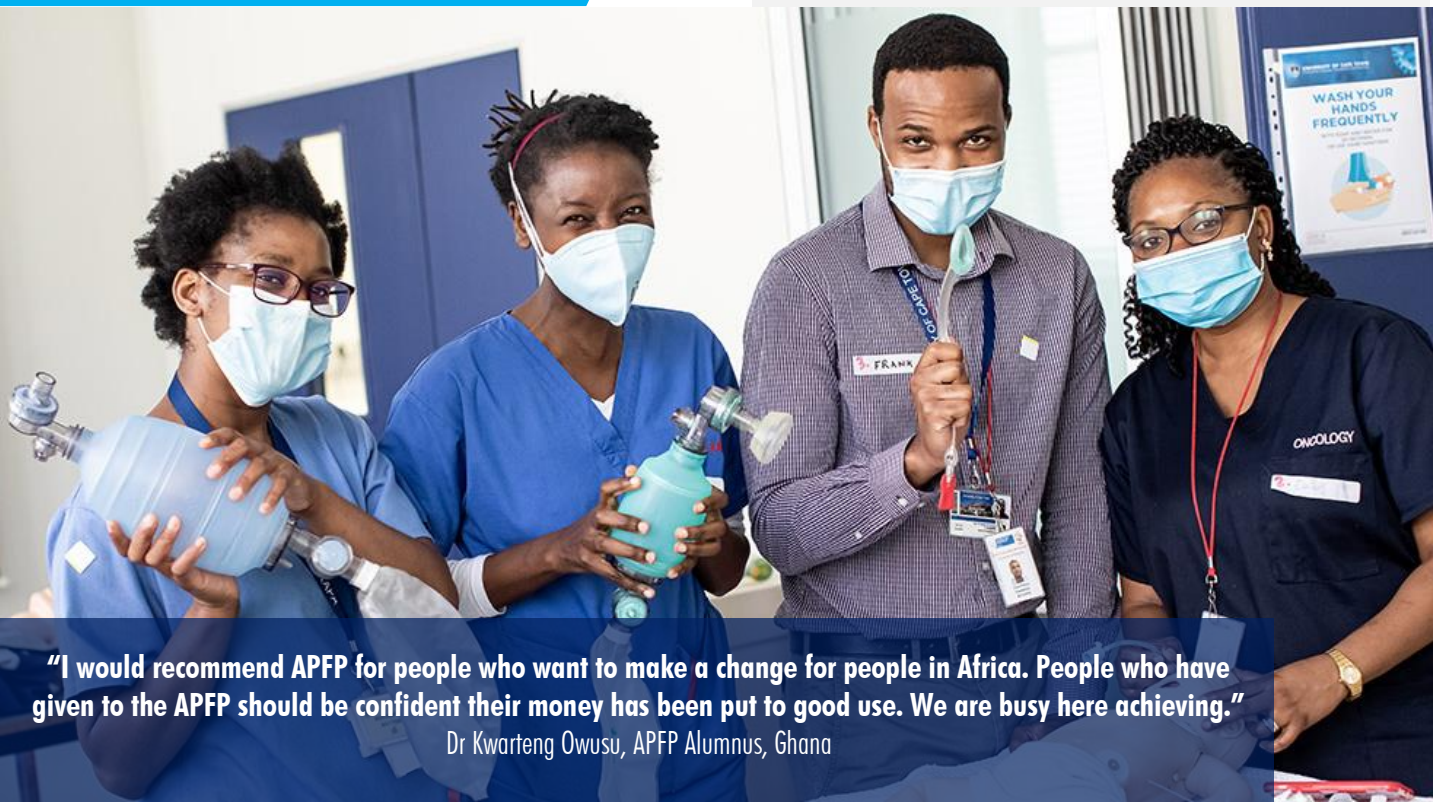
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### PLEASE SUPPORT OUR WORK

It costs US\$30 000 a year to fully support the training of an African paediatric specialist with the APFP. If you would like to support our work, please visit:

The Children's Hospital Trust  
[www.childrenshospitaltrust.org.za/donate](http://www.childrenshospitaltrust.org.za/donate)  
and choose the APFP.



**"I would recommend APFP for people who want to make a change for people in Africa. People who have given to the APFP should be confident their money has been put to good use. We are busy here achieving."**

Dr Kwarteng Owusu, APFP Alumnus, Ghana