

THE AFRICAN PAEDIATRIC FELLOWSHIP PROGRAMME



Strategic workforce development

to strengthen paediatric health care for Africa, in Africa



UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

Department of Paediatrics and Child Health

ANNUAL REPORT 2020

ABOUT THE APFP



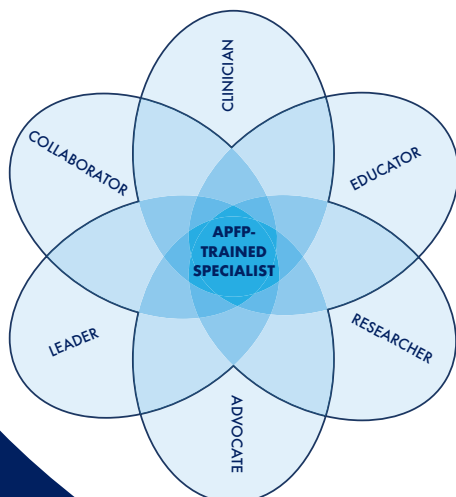
There is less than 1 paediatrician per 100 000 children in sub-Saharan Africa compared to 99 per 100 000 in the USA.

The African Paediatric Fellowship Programme (APFP) builds paediatric clinical workforce, research and training capacity across sub-Saharan Africa.

Initiated by the Department of Paediatrics and Child Health at the University of Cape Town, and now joined by the Universities of Kwazulu-Natal and Witwatersrand, the programme provides relevant training for African child health professionals, by Africans, within Africa.

Our approach keeps content aligned with local health priorities, and retention of expertise in the continent high, building a generation of clinicians, educators and leaders with the power and commitment to transform child health on the African continent.

Delivering more than direct patient care, alumni impact includes educational opportunity, systems change, research, and policy development on a local, national and international stage.



Since 2007, the APFP @ UCT has trained **131** specialist and sub-specialist paediatricians and allied health workers from Africa, with a further **32** mid-training at the end of 2020.



Graduates of the APFP are from **14** sub-Saharan countries.



More than **90%** of APFP graduates still work in Africa, more than **80%** of these in teaching hospitals and other public facilities.



48 fellows enrolled for training in **22** diverse specialty areas of paediatrics in 2020.



10 fellows passed their highly competitive (sub)specialty examinations in 2020, a 100% pass rate. **14** fellows completed their training and returned home to build paediatric services.



Over **300** scholarly scientific articles have been published in the medical literature by fellows and alumni, adding crucial African evidence to clinical science.

OUR PATHWAY TO IMPACT



Theory of change

Strategically selected African health professionals undergo specialist and sub-specialist training in paediatrics in a relevant African setting.

During and after the fellowship, fellows are supported to develop clinical services, research and training programmes and take on leadership roles in their own institutions, and beyond.

The number of trained, qualified paediatric specialists practicing in African hospitals is increased.

African healthcare institutions are strengthened.

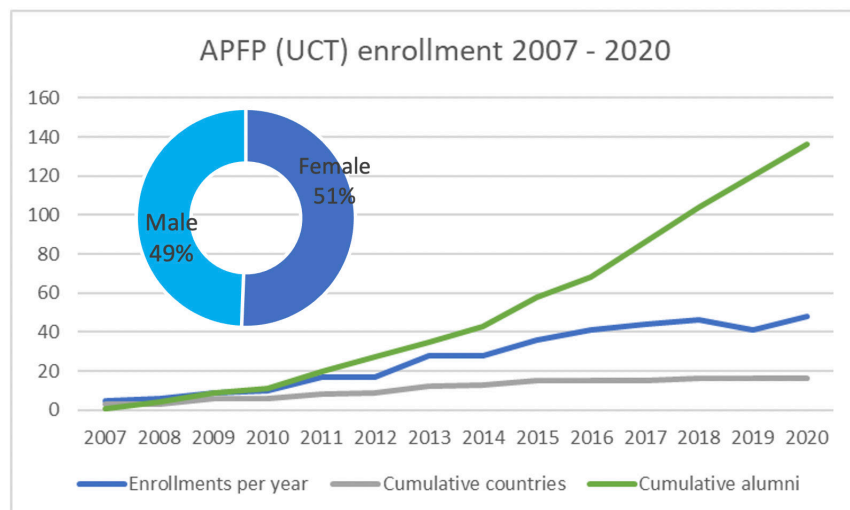
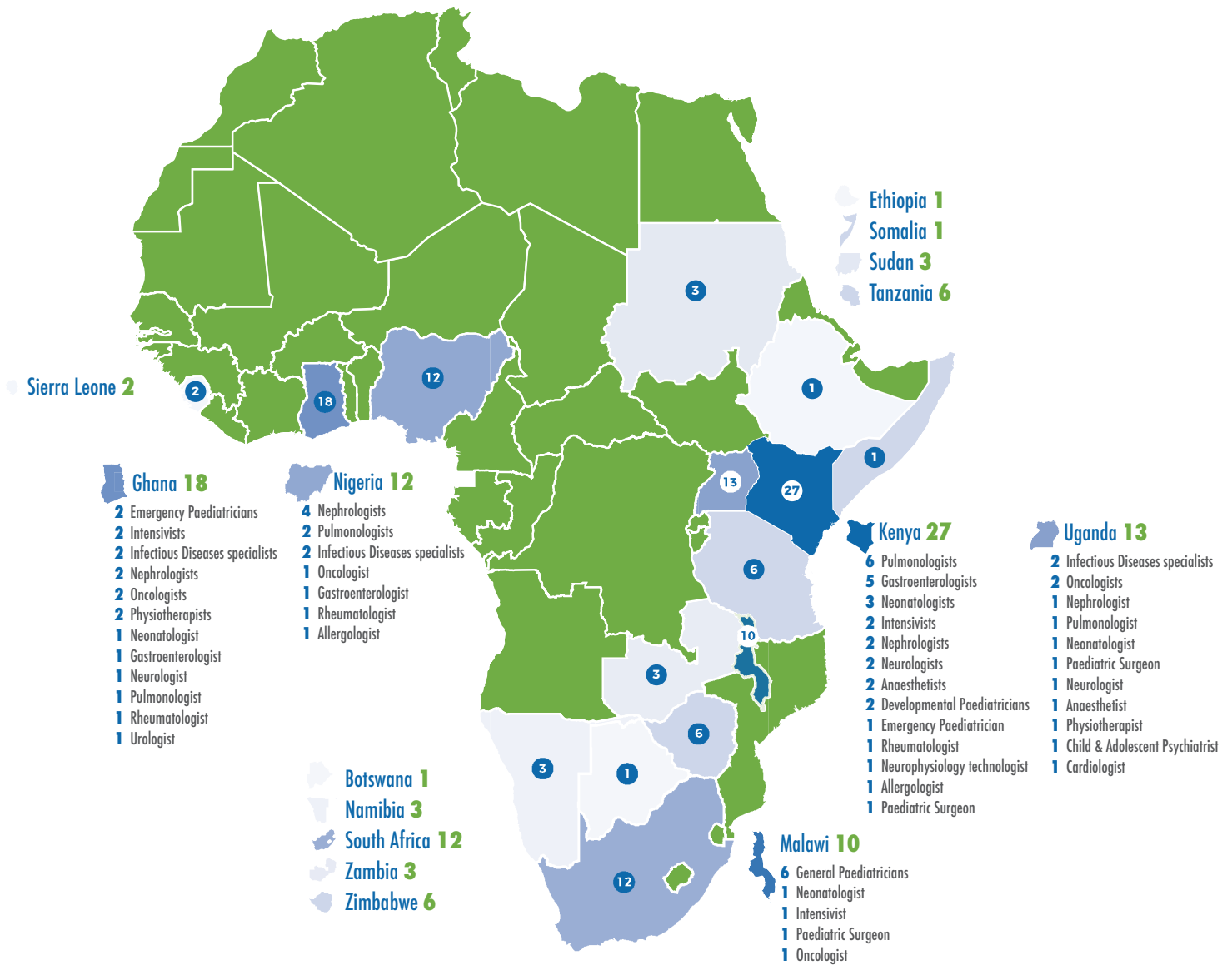
Networks of African child health care professionals provide regional and continent-wide collegial support and collaboration.

African priorities and voices are represented in global forums.

Resourced, responsive healthcare systems, prepared to address the needs of African children.

OUR PATHWAY TO IMPACT

EXPANDING PAEDIATRIC CARE | WHERE ARE APFP ALUMNI NOW?





REGIONAL SUB-SPECIALTY TRAINING DEVELOPMENT

LAUNCH OF NEW SUB-SPECIALTIES

2020 saw the first intake of sub-specialty trainees in neonatology and paediatric neurology in Kenya, and in paediatric infectious diseases in Nigeria, as well as a sub-specialist curriculum in paediatric gastroenterology in development for planned launch in Kenya in 2021.

Each of these developments is led by APFP alumni. And each increases the pace at which paediatric capacity gaps in Africa can be addressed.

NEONATOLOGY IN TANZANIA

Neonatology is a priority specialty area for development in Tanzania. APFP collaborated with Tanzanian stakeholders and experts to develop a curriculum for training in 2020. To support the implementation of the new curriculum, and assist with strengthening neonatal services, we also welcomed one of three paediatricians scheduled for neonatology training at UCT. The first intake of neonatology trainees in Tanzania is expected in late 2021.

ONLINE TRAINING COLLABORATIONS

COVID prompted new approaches to joint teaching and training across the region, with rapid expansion into interactive online platforms replacing planned exchange visits. The possibilities have proved exciting. For example, APFP neurology and neurophysiology faculty participate in bi-monthly online case-driven EEG tutorials with Faculty and trainees in the new Kenyan sub-specialty training programme. While driven by the travel restrictions arising from COVID, this platform is being integrated and expanded into longer-term plans for collaborative training.

COVID

As COVID-19 wreaked havoc across the world, most APFP fellows elected to remain in South Africa to complete their training, and provided immeasurable support to our health services, at significant personal cost and risk.

Our support to trainees during this period included:

- Extension of funding for those due to exit but trapped in South Africa due to lockdowns.
- Extension of funding for those whose specialist exit exams were postponed.
- Assistance with repatriation.
- Negotiation of an official commitment from the Western Cape Department of Health to provide full health coverage to fellows and their families in the event of illness, and vaccination once available.
- The use of online teaching, ward-round and meeting platforms wherever feasible, to protect trainees from unnecessary exposure, and ensure that training continued as seamlessly as possible.

“Patient exposure has been lower due to COVID restrictions. Exams have been postponed. Not being able to visit family back home has been hard and worrying about being sick has had a negative toll. But on a positive side, COVID has provided a lot of time for study and reflection, and has brought us closer together as health workers.”

Pulmonology Fellow, 2020.

Consequences of the COVID-19 pandemic include increased vulnerability of healthcare systems in Africa, making the work of the APFP even more critical. It is APFP alumni who will need to lead the rebuilding of paediatric services decimated by the pandemic.

IMPACT | A FOCUS ON PAEDIATRIC PULMONOLOGY



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

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.



14 DOCTORS
8 COUNTRIES

TWO YEARS' SUB-SPECIALIST TRAINING

SPECIALISTS
EDUCATORS
RESEARCHERS
ADVOCATES
LEADERS

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

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 11th 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. Here, at the teaching hospital for the University of Nairobi, and Kenya's largest health facility, 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 1st 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

...of paediatric specialists

WHAT NEXT FOR APFP?

As these case studies show, APFP alumni have the ability to affect real change in child health. They are extraordinary people, and it is our job to recognize, channel and unleash this potential. It is our job to give each fellow the specialist skills, confidence and connections they need to build their careers as well as regional capacity for paediatrics. It is our job to support them to become the clinicians, educators, researchers and advocates their children, country – and continent – deserve.

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

- Create new training opportunities to build and develop multi-disciplinary clinical teams.
- Respond to preferences identified by alumni as necessary to strengthen their impact on health services and capacity.
- Support the development of East and West African specialist training programmes, led primarily by alumni.

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. Together we will transform childhood health in Africa.

WITH GRATITUDE TO OUR DONORS

Children's Hospital Trust SA
Children's Hospital Trust UK
Children's Hospital Foundation
German Academic Exchange Service (DAAD)
Equiom Trust
Green Leaves Education Foundation
Harry Crossley Family Foundation
International Society of Nephrology
Mauerberger Foundation Fund
Peter Gilgan Foundation
The ELMA Foundation
and the generous individual donors who support the programme

THANK YOU!

"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



2020 | FINANCIAL REPORT

Expenditure Report, January – December 2020

Underspend against the annual budget in 2020 is the result of COVID-related changes to the programme during the course of the year, including delays in arrival of a number of trainees, the cancellation of all non-essential regional travel, the interruption of the rehabilitation and clinical technology fellowships, and a delay in the appointment of a programme administrator.

Budget by Line Item (ZAR)	Approved Budget	Actual Spend	Variance	%Variance
Personnel	R2 546 957	R1 957 998	R588 959	23%
Medical Specialist Fellowships	R9 410 017	R7 195 993	R588 959	24%
Tuition	767 260	723 258	44 002	6%
International Academic Programme office (IAPO) Fees	172 000	124 000	48 000	28%
College of Med SA Exams- Fees and Accom.	194 148	48 400	145 748	75%
Fees for Professional Bodies and Agencies	377 909	161 353	216 555	57%
Stipend	7 477 200	5 909 960	1 567 240	21%
Travel (incl. airfares, visas)	421 500	229 021	192 479	46%
Child Rehabilitation Specialist Fellowships	R703 680	R560 375	R143 305	20%
Paediatric Clinical Technologist Fellowships	R198 639	R101 121	R97 518	49%
African Hospitalist Fellowships	R278 734	R0	R278 734	100%
Congresses and Training courses	R222 500	R133 150	R89 350	40%
UCT APFP site visits to partner institutions	R273 725	R0	R273 725	100%
Partner & Alumni visits to UCT APFP	R67 520	R0	R67 520	100%
SA Training Partners meetings	R21 000	R0	R21 000	100%
General Operating Costs	R197 030	R64 039	R132 991	67%
Program Development	R130 000	R32 602	R97 398	75%
IT Peripherals and Equipment	R30 000	R4 366	R25 635	85%
Total Project Cost	R14 079 802	R10 049 643	R4 030 159	29%

FOR MORE INFORMATION

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