



Almost 1 in 2 childhood deaths globally  
are caused by neonatal conditions

## 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 2021, 154 health professionals from across the continent had completed their training with the APFP at the University of Cape Town. Of these, 12 trained in neonatology, with three more due to qualify in 2022.

In 2019, 2.4 million of the world's newborns lost their lives. Of these, 99% were born in low and middle income countries - almost half (44%) in sub-Saharan Africa. Most of these deaths were caused by three main conditions (preterm birth, infection and intrapartum hypoxia) and could have been prevented through improved coverage of obstetric and neonatal healthcare services.

To realise the change we know is possible, the World Health Organization is calling for improved service coverage at every level of the health system. For those working in neonatology, that means:

- **Mobilising political will** to protect and respect the rights of every newborn child.
- **Introducing appropriate care protocols** and adapting evidenced-based practices to low-resource settings.
- **Building a neonatal workforce** by training and retaining African doctors, nurses and other professionals to deliver services across all levels of the healthcare platform.

At current rates, it will take 100 years to reach global targets for neonatal mortality. Determined to change this trajectory, APFP alumni are at the heart of a pan-African movement driving long-term change in neonatal health.

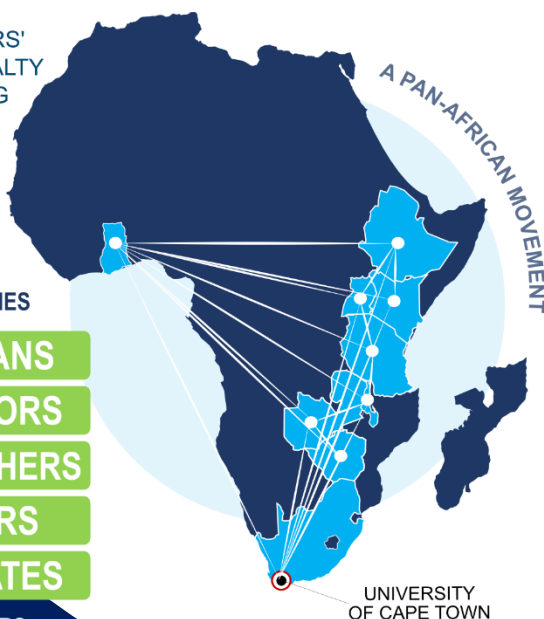
Working in strategic partnership with stakeholders across Africa we are building a critical mass of neonatal expertise. With each fellow selected in accordance with a broader strategic plan, together we are training the *clinicians, educators, researchers, leaders and advocates* needed to change the shape of neonatal health in Africa.

TWO YEARS' SUB-SPECIALTY TRAINING

8 COUNTRIES

CLINICIANS  
EDUCATORS  
RESEARCHERS  
LEADERS  
ADVOCATES

15 DOCTORS



**DR. VICTORIA NAKIBUUKA**

HEAD OF NEONATOLOGY, NSAMBYA HOSPITAL



2012-14

**A SPOTLIGHT ON DR NAKIBUUKA**

When she first started out as a paediatrician, Dr Nakibuuka found herself drawn to the neonatal unit at Nsambya Hospital again and again. There was something about it that she just couldn't let go. Too many babies were dying - and Dr Nakibuuka was determined to find out why.

For Dr Nakibuuka, training with the APFP opened that door. With every day that passed, she started piecing the world of neonatology together – learning the physiology of how diseases present, the best way to treat them, and the importance of working with different levels of care. She knew exactly what she had to do. So when Dr Nakibuuka returned to Uganda, she started working with the hospital management team to develop a new set of standards for neonatal care, and to lay the foundations of what is set to become a national Centre of Excellence.

- A NEW NEONATAL ICU

First on the list was a neonatal ICU (NICU). Backed by her management team, this new 10-bed ward doesn't just have the equipment it needs to manage intensive neonatal care, it also has the staff – with the number of nurses allocated to the unit growing from seven to 30, and Dr Nakibuuka overseeing both their training, and that of unit physicians. Armed with the equipment and *people* they need to deliver quality neonatal care, hospital mortality rates have finally started to fall.

- A FOCUS ON NEONATAL RESUSCITATION

But responsibility for neonatal intensive care doesn't just sit with the unit. It's about the systems and processes that get babies there. That's why Dr Nakibuuka teamed up with colleague, Dr Leah Green Span Hodor, to create a dedicated

neonatal resuscitation team. Made up of one medical officer and two midwives, the team are stationed in the delivery room and provide advanced neonatal resuscitation while the baby is prepped for transfer to the NICU. Normally, this next step would involve an incubator - so Dr Nakibuuka and her team set about creating a low-cost alternative using a cot, neopuff, exothermic mattress and pulse oximeter. Keeping babies warm and safe on their journey to the NICU, already three other hospitals have decided to adopt the same technique.

**“I have had so many people coming to see what we are doing and what we have done. It's an inspiration. It's amazing.”**

- UGANDA'S FIRST BREAST MILK BANK

Pioneering progress in neonatal care, Dr Nakibuuka also knew that many of the neonates on her ward – particularly those that were born early – would benefit from supplemental breast milk. Better than formula in every way, Dr Nakibuuka started asking new mothers for breastmilk donations and pasteurising the milk at local centres. But it wasn't a long-term solution. Raising \$6,000 in 2017, Dr Nakibuuka and the team at Nsambya Hospital started work to set up a Breast Milk Bank in the heart of their very own hospital. Guided by Gillian Weaver, former president of the European Breast Milk Banking Association and with ELMA Philanthropies stepping in to close the funding gap, Uganda's first Breast Milk Bank opened its doors on 26<sup>th</sup> November 2021. Supporting three major hospitals in the area, this new venture will save countless pre-term lives.

- A PICTURE OF NEONATAL HEALTH

For all that she is looking forward, Dr Nakibuuka has not forgotten how important it is to keep looking back. A champion for perinatal death audits before and after her time with the APFP, today a process that started at Nsambya Hospital has been adopted nationwide – giving clinicians and decision-makers vital insight into the cause of neonatal deaths, and the priorities that need to underpin the future of neonatal care.

**“It's the genesis of my neonatal career. When you look at babies that are dying you want to know why. This data, it gives us that.”**

It was worth finding out. Over the last 11 years, neonatal mortality at Nsambya Hospital has fallen from 10% to 4%, and every year the picture is improving. An inspiration for people and healthcare facilities across the country, this time there is no need to ask why. You only have to look at Dr Nakibuuka and the Nsambya Hospital team to understand.

**CLINICIAN**

EDUCATOR | ADVOCATE | RESEARCHER | LEADER

# DR. EVELYNE ASSENGA

LECTURER, MUHIMBILI UNIVERSITY OF HEALTH & ALLIED SCIENCES



2020-PRESENT

## MEET DR. EVELYNE ASSENGA

From the moment she started her first neonatal rotation as a paediatrician-in-training, Dr Assenga knew she was going to be a neonatologist. Watching her mentor (the late Dr Augustine Massawe) work with some of Tanzania's newest and most vulnerable lives, she saw the difference even the smallest interventions could make – and decided there and then that one day she would join him.

**“You see the before and after instantly – it's a memory that has stayed with me. I've spent years building up to this point.”**

As soon as she qualified as a paediatrician, Dr Assenga headed to the neonatal wards at Muhimbili National Hospital. And when the chance came to join the university faculty to work as a clinical educator on the very same ward, she jumped at it.

### ■ SETTING UP A LOCAL FELLOWSHIP

The difficulty is that even though she'd learned on the job, it was impossible for Dr Assenga to qualify as a neonatologist in Tanzania. The course didn't exist. So she travelled with her youngest child all the way to Cape Town to train with the APFP. Here she became the second of a small but focussed intake of would-be neonatologists that would return to work at Muhimbili University and its teaching hospital, Muhimbili National Hospital. The plan? To train the people they need to run their own in-country fellowship and build Tanzania's workforce from the bottom up.

### ■ GETTING STRATEGIC WITH THE APFP

A strategy endorsed by both the national Ministry of Health and the Ministry of Education, before she left for the

APFP, Dr Assenga was part of the local taskforce working with partners in Tanzania, Germany and South Africa to establish a subspecialty neonatal curriculum. It took six months, but with the course now approved and accredited the first intake of students enrolled at the end of 2021. In its early years, the course will be supported by Professor Karim Manji (currently the only neonatologist at the university and hospital) and recent APFP alumnus, Dr Martha Mkony - with Honorary Faculty rotating in from Tanzania's private sector, South Africa, Sweden and Germany. Dr Assenga will join the team in 2022 and will soon be followed by her colleague and budding neonatologist, Dr Helga Naburi. Together they are the start of a new, specialist team who will see the course become an independent Tanzanian fellowship.

### ■ PREPARING FOR THE FUTURE

Thanks to the APFP, Dr Assenga and her colleagues have the chance to build the clinical and educational skills they need to take this project forward. Working in one of Africa's leading neonatal units at UCT and the Groote Schuur Hospital, every day is a chance to learn – to refine her practice, fill in the gaps, deliver and learn how to adapt 'gold-standard' techniques in neonatal care. Because the APFP isn't just about the now. It is about preparing people like Dr Assenga for the future, giving them the skills, confidence and support they need to take their learning home and apply it to their own setting.

**“It's not just clinical training. We also have essays to write that get us thinking about how you can bring about change. It gets you thinking, it helps you see the approach you can take.”**

### ■ BUILDING A LOCAL WORKFORCE

Once the fellowship is up and running, for Dr Assenga, the next steps are all about growth and skills sharing. She knows they will need to tailor their training and cascade it down into lower levels of care, and that they need to find a way to support and train nurses as well as physicians. It sounds overwhelming, but Dr Assenga is looking forward to the challenge. Thanks to the APFP she's seen how the system can work, and is part of a committed team working together to grow the future of neonatal care, and give budding clinicians the chance she didn't have: to specialise at home, in Tanzania.

**“Not everybody can train overseas. There are a lot of people waiting to do this course. Now they can. We can take that learning and trickle it down - improving neonatology at different levels of care.”**

## EDUCATOR

CLINICIAN | ADVOCATE | RESEARCHER | LEADER



# PROF. KONDWANI KAWAZA

ASSOCIATE PROFESSOR, KAMUZU UNIVERSITY OF HEALTH SCIENCES



2015-17

## MEET PROFESSOR KONDWANI KAWAZA

Professor Kawaza always wanted to work with mothers and their children, and with neonatology he found the chance to do both. Qualifying with the APFP as a specialist paediatrician in 2011, he came back to us in 2015 to begin his sub-specialist training. Since returning to practice at the Queen Elizabeth Central Hospital (QECH) in Malawi, neonatal death rates at the centre have fallen from 17% to 10%. It's a huge team achievement, and for Professor Kawaza, numbers like this matter. Not just because of the lives they represent, but because research and data are the evidence-base from which gold-standard and resource-appropriate interventions can grow.

**“When you work in a resource-limited environment you often have to improvise. We need to know if our innovations are making a difference. How do we get those answers? Through research!”**

Putting his plans for a PhD on hold, Professor Kawaza has dedicated much of his career to this process. Author and co-author of 35 publications and counting, he has led on local, national and international research projects that are shaping the field of neonatal care in Africa today. They include, but are by no means limited to:

### ■ THE INVENTION OF LOW-COST TECHNOLOGY

For newborns fighting acute respiratory infections in LMICs, nasal oxygen therapy is often their only treatment option – with continuous positive airway pressure (CPAP) key to keeping their airways open. But at \$6,000 for a single bubble CPAP device, few African hospitals are in the position to buy them. Project lead for Malawi, Professor Kawaza led the clinical evaluation of a

new low-cost bubble CPAP machine – seeing the process through from prototype to final product design. Proven to be just as effective as traditional models, a single Pumani bCPAP machine costs just \$800. Now available in more than 30 countries worldwide, this new cost-effective technology is revolutionising the availability of bCPAP in low-resource settings and saving thousands of lives in the process.

### ■ NEST 360

It was during the roll-out and evaluation of the Pumani bCPAP machine that Professor Kawaza and his team learned their biggest lesson so far:

**“In most cases we saw that bCPAP treatment was effective. But we also started to notice systemic challenges and realised - it isn't about improving one component of care. It's about how you support that component so you get synergy and realise the full benefit.”**

It was this notion of collective care, that gave rise to NEST 360, an international alliance of clinical, technical and public health experts working to develop and strengthen policies, guidelines, standards, and training for comprehensive newborn care. With Professor Kawaza working as part of their leadership team, in 2020 NEST worked across 65 hospitals in four sub-Saharan countries, delivered 2,300 essential newborn technologies, and trained over 10,000 doctors, nurses, students, biomedical technicians and faculty. All as part of their work to end preventable newborn deaths, and to set a new standard for neonatal care in Africa.

### ■ A BREAKTHROUGH IN KANGAROO CARE

It doesn't stop there. Before his neonatology training with the APFP, Professor Kawaza was part of a multi-country research team looking to prove a new hypothesis for the introduction of immediate Kangaroo Mother Care (iKMC) – a model that uses skin-to-skin contact and exclusive breastfeeding to treat preterm and low birthweight babies. Principle investigator for the Malawian team, it took a long time to get the study off the ground, but it was worth it. Commissioned by the WHO, the results were published in May 2021 and has proved without a doubt that the introduction of iKMC significantly improves the survival rates of newborn babies between 1 and 1.8kg. Rewriting the status quo, this new intervention has the potential to save up to 150,000 lives each year – with the WHO reviewing its global recommendations on kangaroo mother care in light of this new evidence. A shining example as to the power and potential of African-led research.

## RESEARCHER

CLINICIAN | ADVOCATE | LEADER | EDUCATOR

## DR. KUNDA MUTESU-KAPEMBWA

NATIONAL CO-ORDINATOR OF NEONATOLOGY,  
HEAD OF NEONATOLOGY, UNIVERSITY TEACHING HOSPITAL



2013-15

### MEET DR MUTESU-KAPEMBWA

On the neonatal wards of Livingstone Central Hospital, one in every three newborns would lose their life. Buried by the elders of their family, for too many women, there was hardly even chance to say goodbye – to make memories or create the moments they would need to remember the life they lost. It was a hard reality, but a common one. And with no qualified neonatologist to turn to, Dr Mutesu-Kapembwa knew that if she wanted answers, she had to go out and find them.

**“There were so many questions I had that couldn’t be answered. Somebody needed to make a difference. It turns out that somebody was me.”**

Moving to Cape Town with her husband and children, Dr Mutesu-Kapembwa began her training with the APFP in 2013. In 2015, she returned to Zambia as their first qualified neonatologist. Two years later and not only was Dr Mutesu-Kapembwa leading her own unit, she became the first-ever National Coordinator for Neonatal services in and across the country.

#### ■ A MODEL TO IMPROVE NEONATAL CARE

When she returned, people didn’t quite know what to expect - and Dr Mutesu-Kapembwa knew that if she wanted to make a difference, she had to show them what was possible. It wasn’t about bringing in the latest technology or equipment. For Dr Mutesu-Kapembwa, the key to good neonatal care meant keeping it simple, affordable and sustainable. Handwashing, kangaroo care, breastfeeding, continuous positive airway pressure (CPAP)... It all made a difference. She also created a ‘Serenity Room’ to give grieving mothers and families the time and space to say goodbye –

an occasion that, fortunately, now happens far less often.

**“It’s amazing to see the difference simple changes can make. We brought unit neonatal mortality down from 40% to 20% just by using low-cost techniques.”**

The impact was hard to ignore, and when Dr Mutesu-Kapembwa was asked to run the neonatal unit at Zambia’s University Teaching Hospital (UTH) she decided to use the same approach. Once again, neonatal mortality rates dropped from 35% to 25%, and it seemed that in a world full of questions, Dr Mutesu-Kapembwa had found an answer – one that could have a huge impact on neonatal health across Zambia.

#### ■ LEADING WORKFORCE DEVELOPMENT

To scale up, Dr Mutesu-Kapembwa needed to build a neonatal workforce. Fast. Unphased, she began by training unit interns and introducing a neonatal rotation for off-site paediatric registrars. Today, Dr Mutesu-Kapembwa and her team have built a suite of skills-based courses that include a Post-Graduate Diploma in Neonatology, as well as a masters course in Neonatal Nursing. She has also worked with her team to develop a five-day ‘Introduction to Neonatology’ programme, and with 50 faculty trained as trainers, this popular course now runs nationwide.

**“We teach doctors and nurses in one sitting. It gives people a foundation. It’s very popular and quite packed!”**

#### ■ A FRAMEWORK FOR NATIONAL SUCCESS

Leading by doing, as the National Coordinator of Neonatal Services Dr Mutesu-Kapembwa is responsible for assessing and setting the country’s strategic priorities. Managed alongside her role at UTH, since returning home, Dr Mutesu-Kapembwa has led the development and implementation of Zambia’s national:

- Neonatal Care and Drug Dose Protocol
- Kangaroo Care Guidelines
- Neonatal Service Standards

As hands-on and practical as she has ever been, step by step, Dr Mutesu-Kapembwa, is bringing her vision for neonatal care to life. And with every tertiary hospital now home to a new neonatal unit, a suite of training programmes up and running, and a young colleague identified for training with the APFP, she knows that if – and when – she decides to step back, healthcare teams across the country will have the answers they need to keep neonatology moving forward.

## LEADER

CLINICIAN | ADVOCATE | RESEARCHER | EDUCATOR

# DR. ALEX STEVENSON

PRESIDENT, AFRICAN NEONATAL ASSOCIATION



2017-19

## INTRODUCING DR. ALEX STEVENSON

For Dr Alex Stevenson, neonatology is a world like no other. It's a community, a family that welcomed him with open arms – and he knew from his very first rotation that he was here to stay.

To become a specialist, Dr Stevenson knew he would have to study in Cape Town – so when the opportunity to train with the APFP presented itself, he signed up immediately. It was the right choice. As a consultant neonatologist, he loves the way he gets to know his patients and their families, the speed at which neonates can recover, and the feeling you get when a baby born 12 weeks early can go home.

Thriving under the physicians in UCT's Department of Paediatrics and Child Health, Dr Stevenson loved seeing neonatology in action. For him, neonatal care isn't just about having the theoretical knowledge, it's about understanding how systems and management processes come together to improve quality.

**“You could read 100 text books, but seeing how professionals work in a real life situation... It changed my life. It's my focus here. We are going to improve neonatology not through clever knowledge, but through systems and quality improvement.”**

### ■ THE AFRICAN NEONATAL ASSOCIATION

One of just three in-country neonatologists and a small team of APFP alumni, as he lifted his plan from the page, Dr Stevenson was keen to connect and collaborate with his colleagues.

Two years later, what began as a small WhatsApp support group now brings together more than 200 neonatal professionals from 44 different countries, with

Dr Stevenson the President of what is now formally recognised as The African Neonatal Association (ANA). Built on a philosophy of collective strength, members work together on a range of projects that advance local and regional agendas in neonatal health – never forgetting, of course, the systems and processes that underpin them.

### ■ MAKING DATA-DRIVEN DECISIONS

To advance neonatal health in Africa, you need to have all the facts - and Dr Stevenson and the ANA are on a mission to collect them. Connecting units across the continent, work to develop Africa's first neonatal database is well underway. The plan is to standardise and record reliable data from as many facilities as possible, and bring much-needed visibility and insight into the realities of neonatal health. Developed in collaboration with the Vermont Oxford Network and London School of Hygiene and Tropical Medicine, the complexity and nature of the data collected will vary depending on partner resources, but has been designed to enable real-time data entry for every single neonatal patient. It's a revolution in health information management, and a vital foundation for quality improvement.

**“No-one knows what's happening on the ground. In two years, that will start to change. It's going to revolutionise the data we're getting out of Africa.”**

### ■ FIGHTING FOR NEONATAL RIGHTS

Once the numbers are in and the baseline is visible, African policy and decision makers will have the information they need to prioritise actions and focus investment. It's a huge step forward for Dr Stevenson and the ANA. Because improving neonatal care isn't just a health issue, it is about protecting a newborn baby's basic human rights. Sadly, these rights often fall below those of children and adults, despite the overwhelming number of neonatal lives lost every year. A passionate advocate, Dr Stevenson is determined to make sure that their right to health is realised.

**“We need to get the facts in, and advocacy out. The resources are there. We've got to raise the volume and call for help.”**

There is a long way to go, but Dr Stevenson isn't on his own. He is part of a community, a family and a pan-African movement that is working to bring about long-term, systemic change in neonatal health.

**“We're getting through things. One by one, it's all starting to happen!”**

## ADVOCATE

CLINICIAN | EDUCATOR | RESEARCHER | LEADER



# OUR VISION | STRATEGIC WORKFORCE DEVELOPMENT

...and a critical mass of neonatal expertise

## WHAT NEXT FOR APFP NEONATOLOGY?

About more than clinical expertise, as these case studies highlight, the APFP is working to build the *educational, research, leadership and advocacy skills* people need to effect and embed long-term change in neonatal health.

Leaders in their field, APFP alumni are at the heart of a pan-African movement that is coming together to set a new trajectory for neonatal health. Proud to enable and support this ambition, not only is the APFP committed to training more neonatologists, we are also working to:

- **Build strategic partnerships** with hospitals, academic institutions and international organisations to support workforce development.
- **Expand our focus** to support the training of neonatal nurses in partnership with the Harry Crossley Children's Nursing Development Unit.
- **Initiate and strengthen research** opportunities that demonstrate the impact of APFP fellowships and alumni.
- **Break down silos** and support the positioning and development of neonatology as an integral part of broader maternal and child health services.
- **Support and mentor** APFP alumni as they create and embed new initiatives that drive positive change in the world of neonatal health.

**We are strongest when we work together. Will you join the APFP, its fellows and alumni as we continue on our mission to reshape the future of neonatal healthcare in Africa?**

## FOR MORE INFORMATION

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## PLEASE SUPPORT OUR WORK

It costs US\$35,000 a year to fully support the training of neonatologists like Dr Nakibuuka, Dr Assenga, Dr Kawaza, Dr Mutesu-Kapembwa and Dr Stevenson. 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.

