

Borders

Hannah: In Accra, Ghana's capital, a premature baby struggles to breathe. There's mucous in its airway, blocking the flow of oxygen. Which means if the nurses don't do something soon, the lack of oxygen could cause brain damage—or death.

But, like so much equipment in Ghana, the suction machine is busted. If the nurses want to save this baby, they're going to have to get creative.

They think back to their training. Their SickKids nurse educators taught them the physics of negative pressure and suction. They can do this.

Using castoff I.V. tubing, the nurses jerry-rig a suction device. It's crude, but functional. Then, they insert the device into the baby's airway—and *literally* suck the mucous out.

The airway clears. The baby can breathe. And the nurses are euphoric.

Isaac: So three days later, their nursing tutor, who was Canadian, went to visit them in the hospital. And they saw her about 100 meters away and they were rushing to her. "It worked! It worked!"

Hannah: That's Dr. Isaac Odame. He's a blood disorders specialist here at SickKids. And bringing SickKids nurses to Ghana to teach paediatrics was his idea. His way of giving back to the country he's from. But training a few nurses here and there isn't the goal. Isaac wants to train *hundreds*, from *all over* the country, not just Accra. He believes it's Ghana's best hope for reducing its under five mortality rate, for saving children.

And he's desperate to make it happen.

[MUSIC]

Hannah: Welcome to SickKids VS, where we take you to the frontlines in the fight for child health. I'm Hannah Bank. And this is SickKids VS Borders.

ACT ONE

Hannah: Our story begins in 2009, a couple years before those nurses save the premature baby. Isaac is back in Ghana, searching for ways SickKids can help improve paediatric care. Because children here are dying. For every thousand babies born, 76 die before their fifth birthday.¹ They die of malaria and measles, of pneumonia, diarrhea, sepsis, and malnutrition. All preventable diseases, which aren't being prevented.

Isaac has an interested partner: CIDA, the Canadian International Development Agency. (Today, they're called Global Affairs Canada.) But CIDA needs something tangible, a way in. So, Isaac goes looking. He starts at the teaching hospital in Accra where he once trained.

Isaac: The first person I saw was a nurse I knew who was in the children's emergency room. This nurse was brilliant. She was very knowledgeable. We as interns actually learned a lot from her.

Hannah: But the reunion is bittersweet. Her career has stalled out, her potential blunted by the system.

Isaac: I was teary because I knew the capability of this nurse and I knew that if she had opportunity, she would be able to progress. And not only that, actually have more impact on the work that she was doing.

Hannah: Her story is Isaac's first clue. The next comes as he watches hospital rounds.

Isaac: So, you have a group of medical students, residents, trainees following the professor of paediatrics doing rounds. They are going from bed to bed, seeing the kids and their parents and the nurse was stuck way behind, nowhere close to where the discussions about what has happened to the child, whether the child was tolerating fluids or not.

Hannah: And that's when it hits him—*nurses*. If SickKids and CIDA want to make a difference in Ghana, they have to train nurses in paediatrics. Once educated and empowered, nurses could transform children's health in a way doctors never could.

That's because there are five times as many nurses as doctors in Ghana. Plus, doctors tend to cluster in cities and hospitals. Nurses are everywhere—including rural, underserved areas, where the situation is most dire.

It's innovative, brilliant even. And yet, Isaac is worried. Because he has another meeting coming up with the hospital's doctors. Some were once his teachers. They're expecting to bounce ideas around about this potential SickKids partnership. And they're expecting it to focus on doctors.

Isaac: And I said, "Oh, um, I've thought about this partnership, this proposal. There's no certainty that will be granted. But I think a proposal on training nurses would be great." Everybody's face fell. The place was quiet. And one of them asks, "But are you not a doctor?" And that I thought I was very, very revealing question because they they wondered why a doctor will come all the way to be advocating for nursing training. That to them was unthinkable.

Hannah: But Isaac persists.

¹ <https://data.unicef.org/country/gha/>

Isaac: I asked them when they look at child mortality in the hospital, what times do they occur most? And the answer was it happens overnight.

Hannah: Isaac tells them that's because few doctors work the night shift. And the nurses who do aren't properly trained in paediatrics. He shares what he witnessed during hospital rounds, how nurses were sidelined in their patients' care. Which is not how they do it at SickKids, where nurses *lead* the presentation.

Isaac: It turned out that two of them who were seniors had had part of their training, had been residents here. So that immediately reminded them of the system that they also saw here in Toronto and they were my strongest ally.

Hannah: Soon after, Isaac persuades them. He persuades CIDA too. And in 2011, SickKids starts its one-year paediatric nurse training program. It's a massive project, one which starts in Accra, then expands to two more cities as its mandate grows. But once training begins, it's no longer Isaac's show. He's behind-the-scenes, supervising, advising. It's the nurses doing the real work now, both the Ghanaian students and SickKids teachers.

ACT TWO

Mary: My name's Mary Douglas. I'm a nurse educator. I guess the official title now is interprofessional education specialist at SickKids and I've been an educator for more than 20 years.

Hannah: Mary knows how hard nursing can be. In 1989, she worked in a remote clinic in Northern Kenya on the Sudanese border, where she saw up to 100 patients a day—*without* a doctor. So, she gets it. Which helps her navigate the many challenges in Ghana.

The first is building core skills: using a stethoscope, performing head-to-toe assessments, that kind of thing. To do so, SickKids has a very hands-on approach. Nurses don't just learn theory. They run simulations—again and again and again. Which is *not* what they're used to.

Mary: They are used to lecture-based teaching. The teachers at the front they are all knowing and all powerful and they deliver their content and the student listens.

Hannah: For many, this new approach comes as a shock.

Juliet: Initially, I felt lost.

Hannah: That's Juliet Antwi, a graduate from the program.

Juliet: But then as time went on, I was able to catch up. I mean, I was able to come to terms with what was being introduced to me. And I really enjoyed it.

Hannah: Juliet's not alone. Because the more the nurses practice, the more their confidence grows.

Mary: By the time they got to the clinical part of their program those skills were reiterated, reinforced and we challenged them because we were there with them in clinical to say let's actually do an assessment on that patient. "What do you hear. Can you hear those sounds in the lung?" And quickly, and remarkably actually, but very quickly, they just like absorbed it because they started to realize, "I can do this, like I do hear that sound in the lung. I didn't know I could do that." And then you could just see their like their shoulders come up, and their heads come up.

Hannah: The second major challenge is medical hierarchy. Here's how Isaac explains it:

Isaac: So you have a system where the doctors are at the pinnacle. The nurses are way below, that kind of the team approach, interprofessional partnership, isn't there.

Hannah: Educators like Mary aren't just training nurses. They're empowering them. Teaching them to speak up, to work *with* doctors instead of just following orders.

Mary: These students of ours graduates they would actually present a case to a doctor and say this is what I've found on my assessment and this is what I recommend. And we weren't sure how that would be responded to and what we found is that as our nurses were sending patients into doctors but an assessment had already been completed on the paper and recommendations already made. I'll never forget the first time it happened, a doctor literally came out of his consultation room and he said, "Who did this?" And everybody kind of froze. I was like "Uh, oh, this is about to happen. What's going to go on here?" And one of our students, we call them residents, one of our residents kind of you know waved her hand and he said, "Keep doing this." And he closed the door and went back inside.

Hannah: Juliet has also changed the way she works with doctors.

Juliet: Initially, before coming to the program, it was like whatever the physician says is right. So I did not really question their treatments or their prescriptions or the orders that they gave.

Hannah: Now, she *can* question them. She can refer to what she's learned, to the scientific literature. She can play a role in her patients' care.

The final challenge is the most complex—and elusive: *training nurses to innovate*. But the ability to problem-solve on the fly can mean the difference between life and death. In Ghana, lifesaving equipment is often broken, the nearest doctor many miles away. And nurses are forced to make do.

So, nurses learn to improvise, to make lifesaving gear from medical scraps, and to speak up when they know something doctors don't. All of which come in handy one day in the ER.

A child comes in severely dehydrated. So dehydrated, in fact, nurses can't get an IV in. They're ready to cut the skin to expose the vein. But a graduate from the program stops them. If they use a gastric tube to pump in fluids, she says, the veins should expand, making it easier to get an IV in.

Isaac: The doctors listen, they look at her and you can see the eyes that were rolling. "OK. Get on with it." So this nurse passes the nasal gastric tube, given oral rehydration. Was continuing the rehydration. Within about half an hour, 45 minutes, the veins were beginning to expand. They got a vein in. They were able to give intravenous fluids, in addition. And the child came out, came out from trouble. The following day, one of the doctors went to the nurses and said. "Thank you. Thank you very much. By the way, where did you learn this?" And she said, "Oh, I've enrolled in a paediatric nurse training program. And this was some of the things they taught us." I thought that was a big win because and for the doctor to actually come in and thank her. That's a big, big thing.

Hannah: As SickKids trains more nurses, the under five mortality rate in Ghana drops. It's impossible to know how much SickKids is responsible. There are too many variables. But the SickKids team surveys its graduates—and the data looks good. Nurses' skills and confidence are improving. Plus, there are all the stories. Of nurses starting support groups for families of kids with sickle cell disease. Of nurses teaching the importance of handwashing to new moms. Of nurses standing up—and saving lives.

By September 2020, more than 700 nurses will have graduated. And while SickKids presence is winding down, nurse training will continue. It just won't be SickKids staff leading it.

Because the Ghanaians are taking over. In fact, they've already started.

MID-ROLL COMMERCIAL

ANDREW: Now you know what a difference training nurses makes in Ghana. It's incredible, inspiring work. But it's not easy. Or cheap. There are buses, simulation mannequins, lab equipment, and so much more. To pay for all that, we rely on our partner, Global Affairs Canada. And our donors, including listeners like you. So, if you want to help kickstart the next big breakthrough in kids' health, visit sickkidsfoundation.com/podcast to donate.

ACT THREE

Hannah: From the start, Isaac's intention was clear: He didn't just want to train nurses. He wanted to train the trainers. To build capacity, to create lasting, structural change. So, over the years, SickKids nurse educators like Mary teach less, while the Ghanaian educators teach more. Today, *they're* the ones delivering the program. *They're* the ones empowering nurses and inspiring change.

One of those nurse educators is Sawdah Esaka Aryee. Since joining the project in 2016, she's learned a lot from Mary. In fact, she's still learning.

Sawdah: Even though now I am a faculty member, residents look up to me. But any time I have Mary around, there's always something I also pick up. She's been very supportive of us as a team. She has built us up in ways that she herself has no idea. Just yesterday she joined us and I was introducing her and I told my residents that if you are happy with what I'm doing for you, it is because Mary helped me to this point.

Hannah: Like Mary, Sawdah sees the impact she has as a teacher.

Sawdah: It's very fulfilling, especially when you step out in clinical and you have families and patients telling you how good or how happy they are with the kind of care that they receive from people that you have trained. When you can yourself see that, yes, you have taught something, they've gotten it and they are ready to perform. When you step out and have other people other than the resident themselves telling you that, wow, this is a new crop of nurses you are training and we are so happy to have them.

Hannah: Sawdah works for the Ghana College of Nurses and Midwives. It's been SickKids partner on the project since 2015. And when SickKids leaves, the Ghana College of Nurses and Midwives will continue training nurses. SickKids lit the flame. But Ghanaians like Sawdah are the ones keeping it alive. Because it's their program now.

With our work in Ghana winding down, I ask Mary if there's a story she wants to share. She's got lots. But this one's her favourite.

Mary: In mother's Day in Ghana, whether you're a mother or not is irrelevant. If you're female, it's like Happy Mother's Day. And so one of my graduate students who I hadn't talked to in several months, she sent me a text and said, "How are you? It's so good to hear from you. How are you doing. Happy Mother's Day." And I was like "Oh thanks. Nice to hear from you." And then we were sort of chatting back and forth on text and then all of a sudden my phone just started blowing up like "ding ding ding." And I was like "Who's sending me all these messages?" And I open up my phone and there is all these pictures from this graduate and at the end she said, "These are the pictures of all the children whose lives I've saved this year because of the program." And I couldn't believe it I just thought "Wow."

EXTRO

Hannah: From SickKids Foundation, this is SickKids VS. Thanks for listening.

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