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Oathokwa Nkomazana is my name and I come from Botswana. I work in the University of Botswana School of Medicine. I trained as an ophthalmologist but also in Public Health.

Our MEPI project came in the second year of existence as a medical school, so we were really brand new. I think the MEPI just allowed us to do what we had planned to do anyway, but do it quicker and maybe in some ways even do it better because there were resources to ensure that we could do it better. And so we used the money to develop the curriculum, we used the money to develop and strengthen the infrastructure, especially the information technology infrastructure. We used the money for faculty development and also to establish what we call the health systems research unit, which we hope will evolve to a center.

So especially in the first year it was very broad – it almost covered as big as the school. And then in the second year we kind of tried to focus it a little bit to specific areas. And in third year we focused even more. In the first year we had four aims. MEPI has three themes, but we had four aims. The first one was the first aim of MEPI which is medical education, training more doctors. So quantity and quality. The second one was looking into improving the clinical care as a way of obviously improving the classroom, because that's where you teach doctors; but also at the same time as a way of improving the quality of the patient care training and aiming towards getting them there, because we started the graduate programs at the same time. In the US they say residency programs, in ours the MS

or registrars, in a number of programs. So we knew it was important that the place where they practice meets a certain level of quality for the programs to be accredited. And so we used the money in there. We spent some money to work with the Colleges of Medicine of South Africa to come and look at our curricula, look at where we train our people, and where we plan to have our trainees especially during the South African College exams.

Also we worked with the University of Pennsylvania, who is our partner. We actually have two partners, the University of Pennsylvania and the Harvard School of Public Health. And the main relationship with the University of Pennsylvania actually was to help us to hire faculty who work in the clinics, in the hospitals. That's a part of the way of improving the quality of patient care and therefore of clinical teaching.

And then with Harvard they help us with teaching public health. We also have a residency in public health medicine and they have helped us a lot. At that point we only had one faculty member in that unit and so the Harvard input was really appreciated and very helpful.

And then one of the other things that we tried to do in the first year was actually try and do what we call a reverse brain drain. We tried to track down Botswana doctors especially those working ?? to see if we could recruit them back. We've had some mixed successes, but we've had a couple back home.

And then the third one was research and what we did, we focused on the two most important public health problems in the country, which is maternal mortality and pediatric mortality. So we have two big studies that are called the maternal mortality study and the pediatric mortality study, as our beginnings in building a research infrastructure.

And the last one was actually more looking into strengthening distance training facilities and also improving patient care across the health system. So there were two aspects to it. The first aspect was pediatric outreach. Pediatric outreach to

the rural areas. So the doctors went out, they saw patients that had been already set aside for them, they went on rounds to see problem cases, but they also taught the doctors and nurses at these sites.

Now the aim of this was also that our trainees would learn through the experience. So they would go out as a team of the pediatric resident, of the pediatric faculty and also of medical students. And so they go out together. So that was one way. So strengthening and helping the doctors and nurses in the distance but as well as getting our trainees to experience practice of pediatrics outside of the big centers where they were used to working. But at the same time actually providing patient care and also providing the linkages between these distant sites and the referral sites. Because now very often when they try to refer a patient they have a name but now they could have a name and a face so that they know who they are talking to at the end of the line. So that has been really quite successful and we have continued it to now.

And the other one was developing family medicine. We chose two distant sites, one a 1000 kilometers from Gaborone, which is where we are based, and one 200 kilometers away. And we have used these sites, have developed them so that they will be centers where we will start the family medicine training program. And so we did a number of things. Of course faculty recruitment, that wasn't done with MEPI money it was just part of the School of Medicine development and so we placed family medicine faculty at these sites.

But what we did with MEPI money in the first year was actually develop primary care guidelines. We worked with the University of Cape Town Knowledge Translation Unit, it's called, to help us develop these guidelines initially based on what is called WHOPEN and I'm trying to remember what the acronym means. Anyway it was one of those initiatives that initially was trying to help resource limited countries develop a primary level as a way of managing non-communicable diseases. What we did is we took all our.....we looked at who comes to primary care. People come in with HIV, with TB, with diabetes, so initially what we had written into the grant application was that we wanted to

transform the very, very good HIV clinics in the clinics to comprehensive care clinics. Because what used to happen was I am a woman and I have HIV, I'll go and see my HIV doctor on a Monday and maybe on a Tuesday I'll go and see somebody and see if I have cervical cancer and then on a Wednesday I may go and see my dermatologist because I have a skin rash, and so what we wanted to do was to make sure that if a woman, or a man for that matter, comes in and they have a headache, they will have a doctor who will understand why do people come in with headaches and if it ends up being HIV related they can work their way through and manage it, and if they are hypertensive, whatever problem, they can also get to a point and manage it.

So eventually we developed that for the most common presentations in primary care except for pediatrics. And this has been so successful that the Ministry of Health now has taken these up as the Botswana national primary care guidelines and in September we will launch them. So that is actually something that we are very excited about. And so we integrated the same guidelines into the curriculum of our fifth year medical students.

There are two things. First we partnered with a local mobile phone provider thus providing the data. Just 200 megabytes of data a month. And it is almost free. For each device it will be something like just over \$2 a month. Which if we don't use MEPI money, each student can pay. It's going to be available on this, and not just one. I think it is four different ones, there's one for emergency medicine. So they will be available on this device. Then there will also be, our primary care guidelines that we are developing will also be available on that same thing. So basically at the bedside, this we are going to give to the faculties, so they can very quickly look at and find out, they can refer, can have a reference. And the library is also contributing. Now I'm going to think hard because I don't remember. It is not up to date, but it is another type of bedside..... They always leave ophthalmologists, so that's why I don't remember them.

We have had tremendous support from the library. You have met (name) our Head Deputy Director, Head Director. We just had a strategic planning meeting

recently and her Director, her Deputy Director and herself came to this and it was almost a full week away. We took them 300 kilometers away from this and they came and they were really engaged. They were excited about this. This is something, in the words of the deputy director, 'This is what real librarianship is about. It is not just about books.'

I was the co-PI. The PI left at the beginning of this year, and so I became the PI, so I took over the program. We actually had a lot of issues to sort out. It has been a very, very steep learning curve. It's been hours and hours and hours and more hours of work on this. It has almost become a full time job to get it going.

Also I think the other thing is, it is very important. MEPI will only be successful if the rest of the faculty sees it as important. And so your communication with the rest of the faculty, selling it, making them feel a part of it. That has been one of the biggest challenges, one of the biggest.....one of the things I really had to do and try very hard is to let people see that they actually have a stake in MEPI, that MEPI is just as successful as they are willing to become part of it. And that has sometimes been a challenge. There is some kind of, how do you call it, they...so I think that has been a real challenge, for everyone to feel that, the faculty at the school to feel that this is their program. Sometimes people feel that if this is our program then people can just come with ideas and change it. I can come today and say, 'This is what I want done,' and, 'This is what I want done.' And so just being able to tell the people, 'OK, it is our project but we have applied for something very specific, and therefore we can't stray too far away. We may be able to change it here and there, but we can't...' and everybody's thinking, well, if I want to go to and see how the University of Namibia does this, can MEPI pay for it? Or I want my students to go and do this, can MEPI pay for it? We applied specifically for a specific thing.

They won't have as steep a learning curve or integration as I had. The other thing is I want to believe that in five years time we will have a fully functioning distance learning site, and a community of practice will be built around it. And a new culture will have been created in this. A culture of academic inquiry, a culture of,

because you know when you bring the academics into a service there are certain things have to change because our students ask all the time because they are taught about evidence. They ask their doctors so what is the evidence? So we have created a culture where our doctors at least in these sides will think about the evidence of what they are doing.

Botswana spends a lot of money in health. I think actually Botswana spends a lot more money than many medium income countries on health, but Botswana's health outcomes are actually worse than many of them. That's why we thought if we are going to start locally relevant research, we have to look into systems. It's not a question of resources, it's a question of how the system works together to give us the outcome. And so what I'm hoping is by that time we will actually through the system or through the center we will have actually started to really look at the pertinent issues. We will have found out that why it is that despite the fact that we have one of the most successful PMCT programs on the continent that has reduced transmission of maternal to child HIV from 40% to under 4% we still have so many of our children dying.

So I am very excited because I think we will have hopefully found many answers to that, and hopefully will have translated some of these answers into policy so that is I am really quite excited about.