

## FIC BRAIN Webinar Full-text Transcript

### **“20 Years and Still Learning: The Joys and Challenges of Collaborative Research in Sub-Saharan Africa”**

**Presented by Dr. Gretchen Birbeck, Michigan State University  
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**Gretchen Birbeck:** I'm Gretchen Birbeck. I, as you can gather from the slides at the beginning have spent almost 20 years if you include the prep time before my first trip working and collaborating with different people in primarily in Zambia Malawi. And I'm going to speak to you about that a little bit today as I look at the list of folks in the main room so far. Some of you probably have more international collaborative history than I do. Dr. Silverberg. So I'm more than happy to have people pipe in as we go. If you look there are some little icons below your name. One of them is a raise your hand. There's going to be lots of time at the end for people to make comments or ask questions. But if there's anything that I touch upon that you'd really want to kind of chime in at that moment, please go ahead. You can do that by raising your hands. I'm not sure how easy it is for others to use the microphone. It may be easier for you to put a comment down in the chat section under -- type in a comment and I will read the comment or question out for the group. So let me see if I can make these slides move forward, yes. Okay. All right. And I should say I've put quite a lot of text on the slides. More than I might have in a face-to-face presentation but it was pointed out that this could be a bit easier for folks to follow. I'm going to go through the different phases of my interest in work overseas because my experience has been the challenges that I ran into were sort of different at every level. And things come full circle now as I'm supervising students, I could probably add to the challenge list having seen what's going on in their world. But as a medical student I really knew that I wanted to go and see how patients were taken care of where there just wasn't a lot of advanced technology. And I was also very interested in tropical medicine so I decided I was going to do an international rotation. It seemed like a simple enough thing to do and I didn't anticipate some of the challenges that would result. It was quite difficult. I wrote more than 40 letters. This was in the day before email just so everyone knows. And I only got 3 responses which at the time really, really surprised me. In addition while I was trying to organize this rotation, my dean was quite vocal that she wasn't in favor of me doing it. And the only thing that really allowed it to happen for me and I think this is part of the serendipity, you know, lucky things happen and grab onto the luck when it occurs,

is that one of the 3 respondents was an alumnus of my university who the dean remembered. And she became much more comfortable with the idea that I was going to go be supervised by a past graduate of the university. So that really made things much better. When I mentioned it had been 20 years of work, you know, I really started applying for travel funds a full 18 months to 2 years before I traveled and I was lucky enough to obtain some funding. And so as a medical student I realized that I was able -- I was able to realize my hope and go away and do some elective time abroad. So it was quite fortunate for me. But the challenges I ran into and these are the sorts of things I try to anticipate today with my own students is that there were no international opportunities within my university. And I think if there's nothing structured in place, it's difficult for central administration to get very enthusiastic about supporting individual student efforts. The other thing that I discovered is that this was where I was interested in working and I think this is certainly still true today, in less developed regions of the world, communications infrastructure is very poor. One of the comments and advice I give to my medical students who are emailing abroad, chief medical officers, etc. trying to find an opportunity for an international rotation or an international collaboration is to really keep their communications brief. Email access which we all take greatly for granted as we sit in the U.S. on our rapid speed connections is not guaranteed, not necessarily reliable, can be quite expensive, and it's certainly very slow in many regions of the world. And so the medical students sending, you know, 6 page emails with photos trying to persuade somebody that they should invite them to come for a visit really is missing the point. People have limited access to these communication tools and you should respect that. When I finished this medical school rotation, the next barrier that I ran into was that I had already orchestrated my residency in neurology -- I was very enthralled with neurology and yet my mentors in Zambia at that time really couldn't see a role for a neurologist in their environment. And I think this comes back to the hopeful -- hopefully a myth that's being debunked but the kind of perception on the ground in many regions that neurology is kind of an esoteric field that isn't applicable to the average care setting. And a lot's being done by the World Health Organization among other entities to sort of debunk that myth. But I do think we'd still be looking at that. But I did find my path. And one of the most important things I think is if you really know what you want to be doing, what you need to be doing, you can weather a lot of challenges. And from the very beginning I met a lot of wonderful people, some of whom I continue to work with today and they really helped me create later opportunities for work and

collaboration. What I learned I think that was very important for me is that the curiosity and opportunity for exploration are actually a really critical part of academic and professional development. But these opportunities for exploration don't happen when there's too much structure. So I would encourage everybody to really try and build in opportunities for yourself and your trainees. So take these opportunities. Sabbatical if you're in a tenure system and can do that is a wonderful opportunity. There are other ways of structuring it. So planning every moment and being on this overdeveloped track of minute by minute expectations can really take away some of the chance encounters and chances that could end up being the most important ones. I mentioned that I was basically allowed to go by my dean because of this chance letter from an alumnus of the university, I could give many accounts of over and over in my path on this international work of these little serendipitous encounters or events that have opened up entire corridors of research and relationships. And so when you run into serendipitous events that give you new opportunities, grab them with both hands. I discovered early on that there are lots of doubters and obstacles that will get in your way, and you kind of have to expect that. If you are not coming from an environment where international endeavors are the norm, you really should expect that people are going to have some doubts about what you're doing. And don't be too disappointed when that occurs and you really should push quite hard but you do have to be realistic about the limitations about the environment that you're in. I said I was planning in 1992 for a trip in 1994 and I continue to encourage people to plan ahead, way far ahead, planning a really, really obnoxiously early is highly recommended and appreciating the challenges of communication for others who aren't in your environment. The next little series of events was, of course, residency. As I was very determined to use the elective time that I had to go back to Zambia and to conducting research. Most of my colleagues were MD/PhDs with a laboratory background. And my residency colleagues would disappear into their labs for research electives and I wanted to disappear into Zambia for research electives and so that was really what I wanted to do. But I had to first figure out how to front load my clinical work so that I could spend a 6 month chunk of time there and still meet all my residency and training and work requirements. And so it took quite a lot of juggling. I had to convince my chair and residency director to support the idea and they did. But I think possibly part of why they supported the idea is I had a very feasible plan laid out that made that possible. And to organize things on the other end, I had to take advantage of the friends I'd made on my first trip so that I had things like housing and

logistics in place. One of the most valuable things that happened to me at that point was someone suggested that I walk across Wolf Street and see somebody in the School of Public Health to help me design the research project that I was anticipating undertaking. In retrospect, I was quite cheeky and charged into offices of some quite high level people who kindly did not throw me out but who, in fact, spent a quite significant amount of time helping me develop my questionnaires. And so I was able to go back to Zambia and undertake the work I wanted as a resident. So despite the Zambian interest perspective when I had left as a medical student, there was just no role for neurology. When I went back as a neurology resident, you know, the neurologic disorders were so glaring it was impressive. It really reconfirmed that this was where I wanted to work and that there was actually a need for neurology here. I also appreciated at this point in time that if I just dove into doing clinical work, I'd probably burn out and be dissatisfied. I wanted to do something that also had a broader perspective. I wanted to mix the two. Especially with the capacity to do research that might influence and then form healthcare policy. So I learned, you know, the challenges of your first research project is always the hardest and it took a lot of effort to convince people that what I wanted to do was legitimate, not just sort of me trying to sneak off on a vacation. And it was during the conduct of this research project that I really started to understand some of the cultural differences and how these differences impacted the care of patients, their health seeking behaviors. But I also started to realize that having gone through this straight biomedical route, you know, of having an undergrad chemistry major right into medical school right into residency, you know, that I hadn't really developed any of the background in sociology or anthropology that might have served me well. In retrospect the most important thing about what happened during this residency time abroad was that I spent lots of time building relationships. And I've learned especially with international collaborations that can undergo quite a lot of stresses that are externally imposed stresses, stresses in terms of grants administration and in terms of local political issues, hospital administration, that spending time building those relationships and building that trust and friendship really helped the work weather tough times in the future. I'm very fortunate and I learned then that, you know, sometimes asking the top person to help you and seeking expertise and advice broadly actually works. People will be very willing to help you and I encourage my students sometimes to -- they're always shocked. They'll read a paper they like and they don't understand something and neither do I and I'll say, well, call them. And they're like, What? But no literally, you know, people if what you're doing

is in their field then their interest will often embrace helping you. And probably the most important thing that I knew in advance but it certainly bore out in my attempts to work out a long-term residency rotation abroad was that it's much easier for your supervisors and your advisers to support your work if you've planned ahead and other people aren't being required to absorb U.S. based responsibilities while you're overseas. And again this comes back to that plan ahead really, really obnoxiously early. And then fellowship came and I wanted to get training in how to do research that would be valuable and relevant in Zambia. And so this meant not doing an EMU fellowship and not doing an EMG fellowship and I thought about a neuro ID fellowship but really what I'd seen in Zambia wasn't entirely infectious diseases. And so I realized I needed sort of health services work, implementation research, public health, all this kind of conglomeration of skills sets, research methodologies that I didn't have but I really did not want to absorb more educational debt so just going back to school didn't hold much appeal for me. So it was quite a broad search that I put out at that time to try to figure out how to gain the skill set that I needed. And after really searching high and low, I discovered the Robert Wood Johnson Clinical Scholars program which is a really wonderful program. If you don't know about it, I can circulate the website. But it's for physicians who've completed their training and it's really a broad based training in community based research. A truly excellent program. So part of what I - - the joy of fellowship for me was that I found, you know, that I wanted to do something unusual and I just had to look a little bit outside my field to make it fit. And I gained therefore the skills that I needed to do the community based research along with this sort of MPH methodologic skills that were needed on the analytic end of what I wanted to do. I actually as a fellow in my classwork repeatedly went to my professors when they gave us sort of course final, end of the year analytic programs or projects for our grade, and asked them, you know, I have all this data I collected and thankfully -- thanks to the epidemiologists at John Hopkins, it was pretty well structured data -- can I not analyze this data instead of this kind of bold set of data you're giving everybody to play with. Universally all of my professors at UCLA said well sure, you know, we can do that. And this allowed me to do the analysis and get out several publications from the Zambian data I had collected as a resident during fellowship. Again, you know, asking a bit of somebody, these professors certainly had to spend more time grading my project than they did with other people's projects working with data that they knew but they were all very helpful on that front. And by the end of this fellowship I was able to get a small medical education grant

from the World Federation of Neurology which allowed me to return to Zambia to develop some educational tools. And in retrospect I bugged them a lot. Maybe they just gave me the money to make me go away but it ended up being a very productive time and I think the tools that were developed at that time ended up being quite valuable. The challenges were that the Robert Wood Johnson fellowship stipulated that the fellows had to focus upon U.S. based projects to improve the health and healthcare of all Americans. They were not interested in international work. So I was little bit divided in that I was spending my formal fellowship time doing a stroke study in California where my heart really was resting with the research questions I wanted to ask in Zambia. But it served me well in terms of the skill sets that I gained and the people that I met. Also the RWJ fellowship is not for neurologists. It's for physicians in general. It doesn't allow you to maintain your clinical skills. I worked a long time to get those skills so I had to find external opportunities to do clinical neurology while I was a fellow. It wasn't difficult once I decided I really had to do it but that was something I had to organize on my own. And at the end of fellowship, I had to find a job but the Robert Wood Johnson Clinical Scholars program, although I think it's quite well known in internal medicine really was an unrecognized entity among neurology chairpersons, and convincing them that what I'd done with the fellowship was a bit of a challenge. But the important things that I learned from fellowship that I think remain very important today is that I learned how to locate funding opportunities and this is just -- if you want to be able to maintain an academic career with an international edge, knowing how to locate funding opportunities and access funding is just incredibly critical. Because what makes it sustainable will be that you are able to bring in at least some of the resources you need to do the work. If you're looking for your central administration or your department or your unit to come up with those resources, they may be able to provide you with seed money but academic institutions in the U.S. are not geared towards supporting international endeavors. I was able to take advantage of the sort of the required educational activities to actually further the research agenda by asking people to give me a little leeway in these class projects. And, you know, I really appreciated it by the end of the fellowship that now I have the skills that I needed to go back and do some relevant work. Research skills are just simply not part of the usual undergraduate or medical school curriculum. And even if you're an undergraduate who does a lot of research which I did, it's not the sort of hard-core training and grasp of research that's needed to do work in a -- quite frankly at the MIH level. I think 20 years ago, 30 years ago people were

self taught and that worked, but the opportunities for self teaching and the expectations, formal credentials has changed a lot. So I tell people who want do research that they really have to anticipate doing some sort of training post-medical school if they've gone straight through, if they haven't stopped along the way and got some research skills, if they want to conduct independent research. Well, now it's time to go find a job. My first junior faculty job and my primary goal was to try to find a way to get paid and still do my Zambian research and clinical care. So a paid faculty position that wouldn't completely penalize me for every moment I spent in Zambia. And once I had secured that, I planned on then trying to find some extramural funding to support my research there. I did have a sense that I would need a mentor and that was sort of on my radar screen though I doubt I appreciated the importance of that. So I applied to and interviewed at seven medical schools for a faculty position in the neurology departments. And six of these thought my international interests were an interesting hobby and that was very much -- I think at one site, it was even said out loud it was an interesting hobby. Clearly, I did not see this as a hobby. I viewed this as a professional path. One place offered me a position and said upfront, well, you know, I can give you 3 months off-campus assignment to start with and if you're able to get funding, we can expand that. That was Michigan State University where I remain today. I had not even been in Michigan before that interview. I hated snow but in a heartbeat I took the offer because I realized that this was the one place I had visited that actually saw the potential for my interest in work in Zambia to actually be a professionally valid thing to pursue. Again, serendipity. I was very lucky that there was a local mentor here, not in the neurology department, actually the -- in the epidemiology department, Nigel Paneth who helped me write my first grant. And I think I have to say without a local mentor none of that would have happened. I submitted it to the NIH as well as a couple of foundations. I'm going to use the term pink sheets which will date me but I mean the summary scores I received were just -- at the time I think I felt disemboweled and -- but that's not the first time nor the last time that has happened I'm sure. And well NIH was not excited about my proposal. I did get a Rockefeller Brothers grant that was actually more money than the NIH I had applied for. So I had gotten started on the path of extramural funding. So, you know, faculty, junior faculty success, I was able to find a job that would pay me to do what I wanted to do and my first project got funded. But again the recurrent theme of having to struggle to get the international research interests viewed as legitimate continued. And my own naïveté about the NIH system certainly played a role in my

first grant being rejected. I don't think I chose well in the study section of the mechanism but I did learn how to write a NIH grant. The later ones were successful. And I learned and continue to learn every day. You know, pulling together a grant application is challenging on any topic in any environment but when you add the distance between yourself and your partner -- if you're not on the ground and writing grants on your ground, I think for other reasons is quite difficult. You've got a lot of communicating -- communication barriers; you've got competing interests. It gets very crazy and again back to the obnoxious suggestion that you really have to plan early and often and I mean really, really early -- far earlier than you would if the grant that you're pulling together is just U.S. based. Really planning early. One of the important things that I pulled away from this and it's advice that I continue to give fellows and junior faculty who contact me about the hopes of building research career that has an international component is that to be successful you really have to have a department, college, and university that values your work. So if you want to put your heart and soul into an international collaboration and, frankly, I think this is true whether you're on the U.S. end or you're on the non-U.S. end, your department, college, and university really have to value your work. If it's viewed as a hobby that you're doing in your free time, it is almost certainly doomed to fail. Identifying a mentor when you go from fellowship where you sort of by design have a mentor into your first faculty position where you think you don't need one and you probably need one more than ever. It's just critical. And most of the work that we do today is multi-disciplinary so I don't even think you need a mentor. I think you need a team of mentors and as important as all other aspects of finding your first faculty position are that team of mentors is just critical. And then when you've got U.S. responsibilities and you've got responsibilities elsewhere, you really need -- there's a lot of competing interests. So the best - - the better job you can do delineating what your chair wants from you, what your colleagues expect from you, what your students need from you, what the department administrators expect, understanding all of those things so that you can sort of set yourself up for success and not being a failure because you didn't appreciate what they wanted is really important. And that maybe a negotiation process. If you can get everyone to explicitly state what they expect of you and then sit down together and say, yeah, there's one of me and we've all agreed I'm going to do some of this international stuff, you may be able to negotiate that better. It may seem like the safe thing is to kind of keep your head down and just assume you don't really know what they want from you, but ultimately that will blow up on you. You need to be very explicit about it if it's a position that

you hope to hold for any period of time. Well, I'm not junior faculty anymore but I'm certainly still learning lots of things. And one of the biggest issues continues to be this kind of balancing act of trying to balance the U.S. based demands on me with those of my international work and it's really at times quite a high-wire act. There have been certainly more than one moment where I thought why am I even maintaining this U.S. faculty position? I have a joint position at a couple of African institutions. And I've thought about it on more than one occasion of wouldn't it be easier if I just broke those ties. But, in fact, there's so many advantages to maintaining my U.S. position. First of all, I'm able to maintain close connection with colleagues in my field of neurology. There is one neurologist in Malawi. There's one neurologist in Zambia. There's not -- I can't walk into a room full of neurologists and talk about the things that sort of we all may resonate on. And the importance of having those connections really becomes evident when I'm away six months and then I come back and I rejoin that community and I realize how much a part of my own understanding of who I am and my own profession comes from that and so that's important to me. It gives me an opportunity to train U.S. students whether that be residents, medical students, or graduate students. And I have to say, you know, we have students who have the best opportunities and often the best and the brightest migrate towards this work and that's incredibly valuable. And so I would be afraid of losing that opportunity. Importantly, being formally connected to U.S. university also gives me access to the administrative infrastructure there and this is really critical in the complex processes of handling U.S. federal monies. So that's a huge bonus that I would be very reluctant to give up. And, in fact, Michigan State University has been very supportive of building the research endeavor and so there's been lots of infrastructure into the program here at Michigan State that's been put into place by MSU, not by extramural research funding and not by my foreign colleagues. And so those connections have been very valuable in that infrastructure building. But there are challenges to maintaining the sort of dual identity and spending half your life working in the field and half of it in the U.S. And part of that is, you know, is that to be part of a U.S. based team, I have to make contributions to that team and that includes, you know, clinical care, teaching, and committee work so that's part of the balancing act. Again, that's what I suggested before. Really trying to be very clear about everyone's expectations and having these delineated in advance can go a long way toward making that balance doable. It's much easier to have a very rational discussion with people in advance about what expectations are and delineate those rather than have that discussion after

you've failed somebody's expectations and now they're upset with you or they have an emotional involvement in what you're doing. So doing it in advance helps a lot. But it comes back -- being able to maintain that critical balance really comes back to being somewhere that values your international research and international endeavors whether it's research or other activities. It has to be valued where you're at or I don't think it's possible to maintain that balance. For people who are working in the U.S. and trying to build an international program or collaborate closely with an international program that already exists, I have to say maybe the most important thing that you need to remember is that you've got to know your grants administration people. You're going to need to help them to learn the ins and outs of international grants administration if they don't know them already. You may be at an institution where there's lots of international work going on and the grants administrators are very comfortable with that. But if you're not, you may have to take the role of helping them figure things out. They've got a lot of other things on their plate. What you may find is, you know, you're in the department of neurology and your neurology grants administrators don't have a clue how to handle an international grant. But if you're at a large institution, look around and you may find that the epidemiology department or the public health or I've even seen the agriculture department, their administrators do know. And then when you recognize that body of knowledge within the institution, it's a lot easier to have it transferred to your unit, either personnel transfer or somebody in that unit mentoring and assisting somebody in your unit. If you're working with NIH and you're not working with Fogarty but you're working with another institute and you hit brick walls on something you're trying to accomplish from an administrative perspective -- I found that the Fogarty grants administrators are very helpful in talking to and thinking through the process and helping come up with ways to work through their system in a way that meets the system needs but also allows you to do what you need to do. I see this error over and over again which is probably why I'm pounding it so much here. But unless you're joining a very established research group, and by that I mean they've got -- they've worked at this site, they've worked at this site for a long time and they know what they're doing and, you know, basically you can just waltz in and do your science, you really need to be very involved in the administrative work with regard to your research. You can't just advocate the budgeting and the logistical planning and that to other people. The reality is that your U.S. colleagues and administrators don't understand the international setting where you're trying to conduct the work. There's no reason why they would understand it if they haven't

been there and they haven't worked there. On the other hand, your international colleagues and administrators don't appreciate the level of accountability, the bureaucratic infrastructure of your university, the complex systems involved with handling federal funds in a valid way. And so you have to be the bridge that makes these two things happen. And if you think that you can just write a pretty piece of science and walk away from those things -- I've seen many, many wonderful research projects that died on the vine because that was the investigators perspective. What about institutional support in the U.S.? Well, if you have it, again, be certain that you understand what they want from your international work and what it's going to bring to their institution. So everybody in your department says, great, we're going to do international work and you want to do research in Timbuktu and they want you to set up a medical student rotation in Haiti, that is not the same thing and that will not end well. So be very explicit about what you're bringing to the mix. If you don't have institutional support, first try to educate the people you're working with. Trying to engage the folks that are in your department and above you because really the support's going to have to go at least to the college level. If you still can't really get the support you need, look more broadly within your institution. You may find that there's international studies program or an engagement provost. If, regardless of your best efforts, you really can't seem to make any progress, my advice is to start looking for faculty positions somewhere else. Because if you can't get support at your U.S. institution, you're really fighting a losing battle in my opinion. So establish a meaningful research program or collaborate in one that's already established or co-established one, however the circumstances are. I think you need to be prepared to spend a significant period of time in the field in the setting where you want to work. For my fellows I mandate three to six months and I encourage them to try and do a full year. I'm not sure it can happen in the U.S. but I know that in the international settings I've been in, you cannot build meaningful relationships that have only been built upon telephone calls, e-mails and Skype. You really need to spend some face-to-face time with people. Once you've done that, ongoing communications through those modes is fine. But so many research sites that I've worked with have already had the bad experience of sort of research mercenaries who sweep in and befriend everyone and rapidly collect data and swoop out never to be heard from again. This only has to happen to people once or twice and they're done with collaborating with U.S. researchers. So you may be walking into a setting in which you actually have to sort of be part of a wound healing process and people really have to have some faith that you're

partnering with them; you're not just scavenging and going. The most successful programs will address local problems and issues and the more time you spend on a site, the more time -- the more you'll be able to see what these local problems and issues are. It's a little difficult though because in reality you have to let the researching agenda go. You have to let it evolve into whatever it's supposed to be based upon the local problems and issues. And that may not be where you wanted it to go. It may not be work that you imagined you would be doing. But if you can let that go, you will probably find that the project takes on a life of its own that's far more meaningful than anything you could have created. The most important, I think, is that people shouldn't be arriving with a pet project in hand and expecting everybody to jump on board. That's just not how it works. And being willing. If you go somewhere and your skill set is appreciated and people like what you're doing, inevitably other faculty, junior researchers, students are going to come to you with their own projects they want to undertake. And sometimes these will be part of a course work or a degree program; sometimes it will be just something they're interested in. As much as this will take quite a lot of your time, I would encourage you to embrace these opportunities because, again those, projects have come out of local problems and local issues and you may be astonished at the value of them even if they're fairly small scale projects. Select your U.S. collaborators and students carefully. I've witnessed this sort of explosion and interest in international work and that's been good in some ways, but it's been unfortunate in others. I think the proportion -- the number of people coming who want to get involved but who are not at all realistic is much higher than it was 15 years ago. And I'm not kidding. You know, at least once a month somebody wants to contact me to come out for two to four weeks and they need a publication by the end of that, and this will be a grad student or a medical student, sometimes even a faculty member. Like, really? I don't think so. It doesn't work that way. People -- you really need to make sure if you're engaged with people that are going to come spend time at your site that they're realistic about what they can expect in terms of the infrastructure and what they can expect in terms of an academic product. And then there are lots of students interested in working and learning and I've had the privilege of working with some fabulous students. But there is a tendency at some institutions that offer students international electives and it doesn't take five minutes in talking to the student and you realize what they're looking for is an international holiday where they get elective credit. And I don't have a problem with that but not at my site. If that's what you want to do, do it. But I'm not signing off and I'm certainly not

organizing your trip. And it does take a little bit of face-to-face conversation if possible and certainly at least a telephone call to feel out what people's interests are and expectations. Know your international colleagues. I have had talks with people who are really struggling because they feel like they're not successfully engaging their colleagues, their non-U.S. colleagues in the work, that their non-U.S. colleagues are not as available as they had hoped, etc. One of the things that's become very evident to me is that the mound of responsibility and the challenges that some of my colleagues face at Zambia Malawi is really daunting. It really swamps anything that we have in the U.S. You know, they have more clinical work than they could ever possibly do and there's not -- it's not like they can define it by clinical days. It just swamps them. They get loaded down with administrative responsibilities and then they have all the infrastructure challenges that we already know about. It helps a lot if you know what metric is used in their setting to determine their academic success, who's evaluating them on an annual basis. Is it their chair? Is it their dean? How are they being evaluated and how are -- what do they need to produce to be considered successful? Because the project you're working on is clearly something you want to advance your career but it should also be advancing their career. But that's only possible if you know what's required for their career to move forward. And at every opportunity you get using the research program you have ongoing and the resources associated with that to help facilitate their local success -- it's just -- if you do that, you will find your colleagues much more engaged in the work when it's not competing with their other responsibilities. Spend significant time in the field and become an important part of the team locally. You know, wherever you go you're going to be one of the most highly trained and skilled persons in that setting. And it's almost certainly going to be a setting that is professionally underresourced. If you walk in and you say I've got this project and I'm going to do this project and this project is all I really care about, you will be the only one who cares about that project. That's not everybody else's issue. And it's not appropriate. Getting involved in every level of teaching, clinical care, etc. identifying opportunities for capacity building at whatever level and then balancing these activities against your research may be challenging, but it -- that sort of investment is what it takes to have sustainability and to really make a contribution. And when you are part of the integral team, your research becomes part of their agenda and you'll get much more support in the work that you're doing. But it's important to recognize that there will also be competing interests. These are two small examples but I could scale it up to country wide level and think about this when you're

planning activities abroad, there is limited housing for medical students at my hospital. Every time I accept an U.S. medical student for a rotation and book them into the housing, that is one less slot for a Zambian medical student. And I've got the only neurology rotation they have access to. They don't plan ahead like U.S. medical students so it would be very easy for me to fill the housing completely with U.S. medical students and there would be nothing -- no housing available for the Zambian medical students. So I have to balance that out and it needs to be thought of in advance. Another example at my hospital there's very limited transportation. If you don't come in with your own vehicle, there really are limited opportunities for transportation. The hospital has a small pool of vehicles for rental. Outsiders pay top dollar and the local employed physician pays a rate that he or she can afford. If visitors are coming in nonstop and paying top dollar to rent the hospital vehicle to go on sightseeing tours and, you know, see the local villages, etc. the reality is that some of local doctors can't make their shopping trip for the week. That's the sort of competition for resources that occurs that if you're not attentive to it you may actually miss. So this is just small scale stuff but trust me it happens at much higher levels. Ultimately a successful research program belongs to the country and people where it's conducted. It's not yours. So it's really a privilege to be possibly the originator, you know, or the caretaker or even a participant in that work for a period of time. But it is ultimately the country or the people that own that project. When you're conducting research everything that you find should be presented, discussed and disseminated locally first. It shouldn't be at the AA end that everybody sees it, at the AA end before the population and the professionals that you work with to collect the data haven't heard. Whenever possible when you're working with your team, relinquish the limelight. Make sure everybody on the project gets opportunities to present the work and at MSU, faculty are given a small budget for travel funds. I try to use those for my dissemination and we try to reserve the grant money travel funds to allow my colleagues to travel and present the work. If the work is worth continuing beyond a grant cycle or two, you really should make a local succession plan. Who's going to do this work when you're pulled in another direction or who's going to be taking it over over time and if at all possible there should be locally a plan for that. And, you know, trying to make yourself available to support projects and activity that may fall outside of your principal interest, part of the giving back to the environment that's supporting your work. A few practicalities if the environment -- yes, thank you. A AAN -- if the environment where you're working is politically unstable, you may want to diversify your

research portfolio and this is advice given to me ages ago. I've been very -- I have home bases primarily in Zambia but I do have a home and research project in Malawi. I had colleagues who told me ages ago some horror stories about working 20 years in a single country and when things became unworkable in that country, they really didn't have anything else in place. So there may be advantages to diversifying a little bit. Knowing your international IRB is critical and I worked with IRBs in poor countries and they're very different entities in every one. Understanding the limitations of the administration, the banking system itself, etc. They're going to be limitations for your work so understanding them is important. But here's a key point. Yes, there are problems with grants administration, banking, roads whatever you want to picket, save the wailing and moaning for your U.S. friends and spouses. Wailing and moaning to your foreign colleagues about this when these are systems problems they have to cope with every day, they don't need to hear your wailing and moaning. Save it. Learn to work within the systems you have and, you know, if you're really lucky, you can have moments where these problems actually become opportunities for capacity building. So with that I will open it up for questions or comments. I know there's some very engaged workers, international researchers and collaborators on this -- in our main room here and so I will open it up to any questions. You can type them. I don't know that you can speak them. Jeff, can people ask questions verbally or do they need to write them?

**Jeff McAllister:** I'd like to first of all thank you, Dr. Birbeck, for a wonderful presentation. And at this point if anyone -- if you have any questions or comments, feel free to type those into the chat window below. We advise that users only type their questions just because there may be audio issues in case they don't have a microphone properly set up. So at this point feel free to type in any of your questions and comments into the space below.

**Krystyna Isaacs:** Hello, this is Krystyna Isaacs. I have a question while people are typing because I know my mic works. So we're -- our company is the one that is promoting the virtual meeting room here and providing it for Fogarty. I'm just curious what kind of internet kind of activity you have when you're out in the environment and are people using virtual conferencing to connect back with their U.S. colleagues at all?

**Gretchen Birbeck:** We do. So in my Zambian site, we actually have satellite-based internet connections that's really pretty fast and allows us to do internet conferencing. We tend to use Skype and we tend not to use videos because videos slow things down. And what we've discovered especially with video is that the connection is only as good as your weakest link. The most effective situation we have is we can use the Skype conference call that allows us to call in our colleagues from all over and their cell phone. And so for a Skype out fairly small amount of money you can -- you know I can pull eight people in from eight different countries and talk for an hour and it's like \$5. And they're on their cell phones and in countries outside of the U.S. you don't pay to receive a cell phone call so they're not paying to receive that call. They're actually able to take the call free of charge. Cellular connections are brilliant. I have better cell service in Zambia than I've ever had in Michigan. And so we take advantage of the U.S. infrastructure of the fast internet connection and then we tend to pull everybody in by cell phone. That means sometimes our poor U.S. folks are getting here in the wee hours of the morning trying to, you know, set everybody up for a noon day conference call but that tends to be how we do it. We can't use video and once in a while on one of our foreign sites, there'll be a good enough internet connection for them to accept Skype calls but usually we use Skype to pull everybody in by cell phone. But it's critical. I have -- there's probably 15 meetings a week with different research groups that MSU hosts by a Skype that pulls all of the folks in on their cell phones. I should say too there's technology that allows you on the foreign side to put your cell phone into a big speaker system similar to, you know, it's a speaker system that a conference room can use. It took us a while to find that technology so it takes one cell phone and then you can have a whole group of user speakers on the other end because land line phones tend to be pretty poor.

**Krystyna Isaacs:** And then I could read -- there's questions from or statements from Kathy and then Louise Wideroff. So Kathy wrote if others don't have questions could you tell us a little about the research you do and how it was being received in the U.S. But since there is a question, I'll go ahead and read that one first and then if you can get back to Kathy if there's no second question. So Louise wrote, have you subcontracted or directly received NIH funds at the Zambian institution? How was local grants administration infrastructure built to administer the funds?

**Gretchen Birbeck:** So good question. Not NIH but we have been able to acquire U.S. AID, U.N. AIDS and some foundation monies that have gone directly to the Zambian institution and actually haven't been part of the MSU infrastructure. So we have managed to do that. The local grants administration issue has been huge from the very beginning and as I had one of the Brain decoders R21s which is really when the problem with grants administration on the Zambian side became so clear. Such a problem and I have to say we had one wonderful people who were working with us but their training and their background was really insufficient for what was being asked of them. I can honestly say I've seen entire health system trying to function with accounting and administrative infrastructure less than, you know, a small grocery store here in the states would have. And it isn't that the people aren't willing. It's just they haven't been trained in how to do certain tasks and they don't necessarily understand the system that they're working in. For our R01 that came from the R21 and that's an epilepsy associated stigma study in Zambia, the key capacity building piece that we built in was grants administration and training. And we actually had a team of grants administrators here at MSU which included the project coordinator for the project who was doing all the logistics on the project level to the unit administrator in my unit to a person who had been the head administrator in our contracts and grants office, all agreed to sign onboard as being the MSU training team and they worked closely -- first, we had the Zambian grants administrators come to the NCURA meeting which is a grants research administration meeting in the U.S. So they all met and they worked together closely for a period of time at that meeting. Then they did distance collaboration and support through administering the grant. And then in the third year of the grant, my MSU team traveled to Zambia and met with our grants administrators there and worked with them on the ground. And what we did for that is rather than limiting that capacity building opportunity to just the project grants administrators, we opened it up and the accountants and administrators for each of the hospital sites participated in that and it was a very structured -- some basic tasks and some more advanced things. So we are actually formally trying to train grants administrative skills within the Zambian people that we're working with and we're being able to do that because our MSU grants administrators have been incredibly supportive including traveling all the way to Zambia to do some trainings. I will look at some of the other questions. I hope that I -- Louise, did that answer your question, Louise? Good.

**Gretchen Birbeck:** Okay. So let me go to the question after Louise. And I should say we do hope eventually that they'll apply directly for funding. Poor Don is having trouble. Don, have you been able to get your question out there? I don't see Don's question. I will go to Kathy's question unless and until one comes in. And so the research that I'm doing is based primarily out of Zambia. My principal interests are seizures and seizure disorders. And I have work ongoing that's trying to elucidate the underlying etiology of epileptic disorders in this environment. And that's work in Malawi looking at such things as cerebral malaria. Within the Zambian environment my primary focus is a kind of multi-faceted series of interventions aimed at improving epilepsy outcomes for people in Zambia with a goal of decreasing stigma, decreasing morbidity and mortality in the -- the interventions involve things like peer support groups, healthcare infrastructure, training of healthcare personnel, working with teachers to train -- to improve school curriculum with regard to educating the school that teaches about epilepsy but also improving the attention of children with epilepsy in schools. We're working with traditional healers and clerics. It's quite a broad-based intervention. We've also got an ongoing covert study of seizures in people with HIV trying to better understand the issues that evolve when people require both anti-retroviral and anti-epileptic drugs which in an environment where the anti-epileptic drugs tend to be all enzyme inducing agents is very problematic. Oh, there's a storm in Zambia? Really? Surely it's not already raining. If it's raining already, that's impressive. Is it raining in -- that would be interesting. It would be very early rains. It could be just an electrical storm. That would not be unusual. Any other questions? I would love to hear from Don. I'm sorry we haven't managed to get his question in.

**Krystyna Isaacs:** One thing we sometimes do at the beginning and I'm sorry I didn't actually do it. If everybody could write in the instant messaging box where they're from and then we can capture that information. So if everyone just types in that chat box where they're coming in from today and then hit return. And there is a question now, Gretchen, from Susanna. Sorry. Can I ask about your first research project in Zambia. It was a small scale and how did it fit into the research structure there?

**Gretchen Birbeck:** It was very small scale. My first -- my very first project was a hospital based period prevalence study so very, very small. I may be quite atypical in that my very first projects

all began at a rural hospital that had no research infrastructure and no history of research. So there really wasn't any. And the research infrastructure at the hospital until maybe five years ago was entirely what we built. And so it was only as our rural site became successful in research, and then we expanded to other rural sites so that we had bigger numbers and a broader representation of the population that sort of ten years into this we starting collaborating with the teaching hospital so it sort of grew up from the rural hospitals and then reached out and began collaboration with the teaching hospital. So it grew in a perhaps unusual way.

**Krystyna Isaacs:** Gretchen, did you talk about using the supplement mechanism to get started with projects? I was at a NIDA international meeting and several of the PIs stood up and said that's how they started their first international project.

**Gretchen Birbeck:** I did not. So my -- I started basically with small projects that were funded by foundations. So my very first, I had the medical education grant from the World Federation of Neurology but that was very much to develop educational tools for local healthcare workers. The first research project I had which was a prospective covert study of seizures and long-term outcomes in Zambian children with complex seizures that was funded by the Rockefeller Brothers fund as part of the Charles E. Culpepper Clinical Scholars program which was a fair amount of money but it was foundation funds. And so I had two foundation grants that really helped me build infrastructure and get training -- publishing track record and build a pretty meaningful team. And at that point we were able to compete successfully almost simultaneously for an R21 and my K23. So I -- the supplement money -- now there was a supplement that came out for NINDS and that's been very helpful for fellows and junior faculty I'm working with. So we've used that supplement money to start their research projects but that is not how I started.

**Krystyna Isaacs:** And Edith wrote, you would like at Fogarty. There is a lot of U.S. government interest in orphans and vulnerable children. Are you able to include this population in your studies?

**Gretchen Birbeck:** Yeah. We actually have to include that population in our studies. One of the strikingly sad things about stigma is that sort of burden that stigma will distribute itself along

existing power lines. So if you are already in a disempowered group, if you are already a vulnerable child or an orphan or a widow, you will have disproportionate amount of stigma for the same condition that a wealthy man will suffer relatively little from. So we do -- there are subprojects within the easy study, our epilepsy stigma study. A number of the subprojects are actually geared specifically at children, specifically at women. And so that's a yes. In the malaria work and the HIV work, we work quite a lot -- the malaria work is almost entirely children because the nature of the disease. And we have substudies within the HIV work looking at access and adherence issues in women and vulnerable children which are very problematic so we haven't done anything -- any specific project just for those groups. But within the broader projects, there are subanalyses and subwork with those groups that's just an inherent part because they are such a critical part of the patient population that isn't accessing care appropriately.

**Krystyna Isaacs:** There's another question, I'm sorry, from -- what funding resources do you tap into to get U.S. and Zambian students on board in your research projects?

**Gretchen Birbeck:** So yeah -- so we have funds for staff or for research support within the -- we have funds for research support within the grant monies that can be used to support -- for instance, if I need a -- I've brought people with -- students, U.S. students who have skills in chart abstraction in the U.S. or they're familiar with Zambian charts because they've been there before, bring them to Zambia as part of the monies to pay for research data collection and then also pay students locally to work with them. And I tend to try to pair Zambian students with U.S. students so that they work as a team because it's very complimentary. They're still sets of complimentary and it seems very helpful. So you can write and I have it written specifically in graduate students spots but it's often much more fluent to have just a chunk of money that says this is line item funds to pay stuff for data collection and travel. And then when you meet the right students etc. that's the person who will undertake that activity. So that's how I've done that. There are, in addition, you know, we've been quite lucky. I've had two or three Fogarty students I've worked with, I've had a couple of Fulbright students. If you get a keen student which is really committed and I have plenty of partners on the Zambian side too who are happy to write support letters etc. There are nice pools of money for longer terms commitments from students. And those can be pretty life-changing events. It's rare a good Fogarty or Fulbright student will almost always

choose a lifetime involvement in international work so I think helping them apply for their own funding is often an even better idea.

**Krystyna Isaacs:** Well, I think we're at the end now and I'll just read out loud Kathy's signing off words which were, Thank you very much, Gretchen, for being our first speaker. A wonderful kick-off to our Brain Disorders in the Developing World (BRAIN) webinar series. Please feel free to contact us at the Fogarty or the speaker with any further questions at the [www.fic.nih.gov](http://www.fic.nih.gov) and the FIC office number is 301-496-1653. And I'd also like to say thank you from our side. It was a wonderful talk. So thank you very much, Gretchen.

**Gretchen Birbeck:** Thank you.