Canadian Anesthesiologists' Society, Archives and Artifacts Committee Presidential Interviews
Dr. Angela Enright, interviewed by personal friend and colleague Dr. Sue Ferreira
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Dr. Angela Enright is a widely recognized anesthesiologist in Canada and internationally. From 1994 to 1995, she served as the first female president of CAS, and was president of the World Federation of Societies of Anaesthesiologists (2008 to 2012). She has been a supporter of global health programs such as CASIEF (Canadian Anesthesiologists' Society International Education Foundation).

Sue
Hello, my name is Sue Ferreira. I am a retired anesthesiologist here in Victoria [British Columbia] and I am here with Dr. Angela Enright, whom I'm sure all of you know. The archives committee of the Canadian Anesthesiologists' Society has asked Dr. Enright to tell her story, so here we go!

Dr. Enright, tell me about your early childhood.

Angela
Thanks for doing this, Sue, and hello everyone! I hope you won't mind if every now and then I have to refer to my notes so I don't forget things that I would like to say.

My story begins in Dublin, Ireland, where I was born, and I grew up and went to school. I went to medical school at University College Dublin. Following graduation there, I interned in St. Vincent's Hospital in Dublin and then pursued pediatrics in Temple St. Hospital [now, Children's Health Ireland at Temple Street]. After training as a senior house officer in pediatrics, my husband and I decided that we should take off on an adventure, and our adventure landed us in Canada, in Toronto. From there, I did some locums in general practice in southern Ontario.

Coming to a fork in the road, we took it! That led us to Thunder Bay, Ontario, in late 1972. There, I did emergency room work and family medicine. After about two years there, I thought, I don't think this is the job for me; I would like to do a specialty. Because I had done quite a bit of pediatrics in Ireland, I thought pediatrics would be the choice. From Thunder Bay, we moved on to Calgary, where I started a residency program in pediatrics. I really enjoyed it. I loved dealing with the children, but there was some unrest in the pediatric department at that time in Calgary – some political debates over the building of the Alberta Children's Hospital, and so on.

I met a fellow resident who was in anesthesia at Calgary at the time. He kept telling me, "Oh, you should come into anesthesia. It's just great. You'd love it!" Finally, I took his advice and switched into anesthesia, and I've never looked back! Certainly, anesthesia has been a great specialty, for me. I've loved every minute of it. It's taken me on adventures far and wide around the world, which one never thinks of when training in a particular program.

One of the faculty in Calgary at the time was someone who actually ended up having a significant influence on my career, subsequently. I'm sure he didn't realize that [at the time]. This was Dr. Roger Maltby, who was very well known as an anesthesia historian. He's written a great deal about that, and he got me interested in the history of anesthesia. Later on, he became chair of the archives committee of the CAS and invited me, at the end of my residency and beginning of my consultant years, to join the archives committee. We'll come back to that a little later.

The other thing that was really important and had an influence on many things later on, was that the University of Calgary had started a program of work with Nepal. [It was intended] initially to train obstetricians and gynecologists, but the Department of Obstetrics and Gynecology realized they needed to have anesthesia there. They talked to Dr. Maltby in the Department of Anesthesia and so the department became involved in the training of anesthesiologists in Nepal, and the setting up of a formal [anesthesia] training program there. In fact, Roger Maltby went off and lived in Nepal for at least six months the first time, and then, many times after that returned to Nepal.

I became very aware of the need for anesthesia in under-serviced areas. In fact, that program then was taken over by the CAS from the University of Calgary and became one of the success stories of overseas aid from the CAS. It's interesting that I'm still in touch with Dr. Bisharad Shrestha, who was head of the program and whom I met many times through Roger, and subsequently later on. I still keep in touch with him. Many of that first group of residents that were training then, are now the professors and chairs in Nepal. I'm still in touch with them, in touch with their residents. It's been such a long-term success. This program in Nepal is considered a model for how overseas development should be done.

That all began for me when I was a trainee in Calgary.

Sue
We're going to come back later to your involvement in setting up programs overseas. You were in Calgary for a while, but then you moved to Saskatoon, which is where you were when I first met you.

Angela
That's right. When I finished my training, my husband's job actually took him to Saskatoon, so we moved there. I worked at the University Hospital [now, Royal University Hospital]. First of all, that was before it had its "Royal" designation. I was only there a very short time when I was asked to become the residency program director! I think they'd had some difficulties for a while, and they gave me the job. It was really interesting because I loved to teach and one of my strengths is organization, organizing people, and so on. I set about organizing or reorganizing the residency training program. I called on a lot of people to help, and that taught me one lesson which was, if you ask for help people are always willing to give it. I called on people in the Department of Anesthesia in Winnipeg, which had probably the strongest residency training program in Canada at that time! I got help from people like Drs. John Wade, Doug Craig, Diane Biehl, and Bill Pope. People came and were visiting professors [and] visiting instructors for us. We were able to send residents there. That established a very strong relationship between the two departments, and we got to know people very well. Many of these people that I've mentioned, I worked with later on in various other projects in the CAS.

The other thing that I did then was include anesthesiologists in the teaching program who worked outside the University Hospital. Until then, I think there had been a fair degree of town-gown separation. So, this was really important in building relationships and being inclusive. Again, some of the people that came to teach in the program – people like Drs. John Parker and Jim Scott – were really important in my career as I moved along.

And move along, of course, I did! I moved from University Hospital to Saskatoon City Hospital and stayed there for probably nigh on 20 years' time. That was a very interesting time because John Parker was the incoming president of the Canadian Anesthesiologists' Society and he had a profound influence on me, made me very aware of the CAS, and the activities that they were doing, and awakened my involvement in organizational affairs. In order to progress – if you like – through to the CAS, one comes through the respective provincial divisions. I got involved in the Saskatchewan division of the CAS and eventually became its president and the representative from Saskatchewan to the CAS council. There was

another past president of the CAS, who was highly involved in that – that was Dr. Doug McAlpine [1965 to 1966] of Regina. At that time, Doug was our economic affairs person. I always remember him talking about "horizontal relativity and vertical relativity" [said with Scottish accent]. He was a broad Scot [referring to Scottish accent]. However, that led me to another path, because I would often stand in for Doug and his activities in the Saskatchewan Medical Association [SMA]. I eventually took on the economics portfolio and became a member of the tariff [committee] and then chair of the tariff committee, which allowed me to get to know physicians from all over the province and to work with government, because we were talking about fees for all of the physicians in the province. And [this allowed me to] to see how a big organization in medicine works, such as the Saskatchewan Medical Association.

I worked in many roles for the SMA, and it certainly was a broad learning experience. Then, when I became the representative of Saskatchewan to the CAS council, that opened up a whole other horizon. I sat on many committees at the CAS. Archives is where I started. I eventually became chair of that. I was on the economics committee – what used to be the manpower [committee], now the human resources committee – and many others. Eventually [I] was elected from council to the executive of the CAS, which led in a fairly direct line to the presidency of the CAS.

I became president of the CAS in 1994, the first woman ever to do so.

I'm really glad to say there have been many more women who followed, and that has been great.

Sue
Back in 1994, when you were president of the CAS, what were the issues that were paramount at that time?

Angela
You know, I don't remember very specific issues, but I do remember some of the things that I wanted to do and was able to accomplish. One of the things I thought was really important was to have resident representation on the CAS committees, so we formed the resident's section and started to place residents on all our committees, including the executive committees. I think now, when I see how the residents' section has grown and bloomed, how important that was, because the residents are the future members of our profession, and of the society. Getting them involved at a young stage in their careers really builds the society into their professional lives. [It] is vital for the society and for the residents. That to me was a really important accomplishment.

The other thing I was very keen to do was to build liaison with other societies of anesthesia. We always in the CAS had a very strong relationship with the International Anesthesia Research Society. Over many years, many prominent Canadian anesthesiologists had been on the board of trustees of [IARS], way back to Dr. Harold Griffith, and so on. Many, many names that people would know well: Drs. Doug Craig, David Bevan, Emerson Moffitt – they were all really important. So, the relationship between the IARS and the CAS was really important. We used to accredit each other's meetings so that Canadians could go to the IARS and Americans could come to the CAS.

I felt it was important to build liaison with other societies. Our relationship with the United Kingdom, the Association of Anaesthetists of Great Britain and Ireland [AAGBI] had always been very strong, but we worked to develop relationships with the American Society of Anesthesiologists, with the Australian Society [Australian Society of Anaesthetists]. Eventually, after I finished my time as president […] there developed what is called the Common Interest Group, and it's [composed of] the American society, the Canadian society, the Australian society and the Association of Anesthetists of Great Britain and Ireland –

the IARS decided to step back from that because the others were all national societies. Now the New Zealand society [New Zealand Society of Anaesthetists] and the South African society [South African Society of Anaesthesiologists] have been invited to join. We do have common issues in spite of the differences [of geography]. Many things are common in standards of practice worldwide, so this has become an important area where people get together and discuss these common issues.

Another important step forward in the time when I was president – or, it might have been when I was on council, I'm just not completely sure – Dr. David Bevan was editor of the Canadian Journal of Anesthesia, and I think at that time it was the Canadian Anaesthetists' Society Journal (CASJ). It was only published every second month, and he wanted to move it up to monthly. There was a lot of hesitation around the council table, but I really felt this was important, so I supported this quite strongly. I think David Bevan is always very grateful to me for doing that.

So those were some of the issues that were around when I was president. Of course, the big one, which had a huge influence on what came next for me, was the fact that in 1988 the society had bid to become host of the World Congress of Anaesthesiologists [WCA]. They won the bid, and it was slated to be held in Montréal in the year 2000. So, in 1994 and 1995 when I was president, it really wasn't very far away. We had to find someone to take on leading that event and leading the process to develop it. I was looking around and nobody seemed to be very keen to take on the job. Then, suddenly it was *my* job, so I became chair of the organizing committee for WCA 2000. [laughs] I can remember as we started to promote this meeting, people saying, "2000, oh, that's so far away. Should I live that long?" It led me on a whole new path to the world at large.

We started by presenting in 1996 at the World Congress in Sydney, Australia, and then from '96 to 2000, we were in full progress mode. We had a wonderful team of people who took on all the various jobs that had to be done. You know, we came to this Congress in Montréal in 2000 [and] it was Millennium year. It was just such a big, big thing and we had gone all around the world, the whole team. We divided the world up and went everywhere. I learned many things from that. First of all, when I went to Latin America, I realized I had to learn Spanish. I actually set about and learned Spanish, so I could do business in Latin America. That brought us to promoting the Congress there and realizing that if we wanted the Latin Americans to come, we had to put on some Spanish programming. Of course, we were going to do everything in French and English as would be normal for Canada. So, for that Congress we actually had three languages running, not for every event, but for many. That was an important thing. We promoted very strongly in the United States because we wanted to bring many Americans. We succeeded. For the Congress in Montréal, we had more Latin Americans than had ever come. I think we had almost 1000. We had more Americans than had ever come, including to their own Congress in Washington [D.C.] in 1988. It was certainly the biggest Congress that had been held up to that time.

The other important thing I learned from the promotion was that there was a large part of the world where there were anesthesiologists practicing who would never be able to afford to come to Montréal to the Congress. We decided it would be important to have some sort of a plan where we could offer scholarships to young, up-and-coming anesthesiologists from countries where there were huge financial challenges for them. We developed this scholarship program, and we brought many, many anesthesiologists to Montréal. A good number of them have gone on to become leaders and heads of departments in their own countries. I'm still in contact with many of them. One of the other things that was fun in Montréal was – we thought, you know, everybody thinks of Canada as a land of ice and snow, and we should do something to celebrate that. So, we rented the hockey arena in Montréal. We put on a big figure skating show and most of the registrants at the meeting had never seen figure skating before. It was a wonderful evening. People still talk to me about that when I'm traveling around the globe. They still remember because it was such a fun thing to do and so off-the-wall. It was a lot of fun. But the business

of the World Federation of Societies of Anesthesiologists [WFSA], whose Congress this is, then began to become important to me in terms of anesthesia in low- and middle-income countries.

Sue
Continuing on what I call the path of inevitability, you've now moved to the world. Take us along that road.

Angela
Right. I suppose it began in the lead up to the World Congress, but it really changed when Dr. Kester Brown, who was the chair of the executive committee of the WFSA at the time, asked me if I would take on the chairmanship of the education committee for the WFSA. I said yes without having any idea what I was getting into. I had not been involved in anything like that before with the WFSA, but I had great mentors in Kester Brown and the outgoing chair, who was Haydn Perndt from Australia. Both of these people gave me enormous help as I took on this challenging role. In fact, I remained chair of education from 2000 to 2008, and that's a very long time to be chair of a committee like that. We had a lot of work to do, and the committee is made up of people from all over the world, almost all of whom have an interest and experience in education in anesthesia. So, there was a wealth of experience to draw on and our work, following on from the work that had been done, was to try to develop education programs for those anesthesia trainees in need around the world. The WFSA worked really hard at this.

Some of the training programs which I was involved in and supported or developed over those eight years was: one in Bangkok, led by Professor Thara Tritrakarn, which trained young anesthesiologist from places like Mongolia, Laos, Cambodia, Myanmar, that area of the world. They got the full year's training paid for by the WFSA but run by the people in Bangkok and that continues to the present day. As a result of that kind of work, the Mongolian Society of Anesthesiologists has gone from strength to strength. The program they've developed, having come through the Bangkok program and with big help from the Australians, is doing a great job of training people in anesthesia in Mongolia. They [Bangkok] train four people every year. That was one program.

Another program, which Kester Brown and Haydn had started in Santiago, was in pediatric anesthesia for Latin America. That was run by Dr. Silvana Cavallieri in Santiago and trained pediatric anesthesiologists for many countries in Central and South America. It's still ongoing to the present day.

We had training programs in Israel, and they trained people from particularly Eastern Europe but also would take some people from Africa. They got training in various aspects of anesthesia, obstetric anesthesia, general anesthesia.

And so, we developed more and more programs. I thought it was important to involve other organizations with this in some sort of cooperative way, and the Society for Pediatric Anesthesia contributed toward our pediatric fellowships. They would support one fellow of our programs, which was great. They have gone on to continue being very supportive of pediatric fellowship training in anesthesia in Africa now, in the Nairobi program.

We worked with the International Association for the Study of Pain [IASP] to develop a training program in pain in Bangkok, and that's a combined WFSA/IASP program.

There was all of this work going on, coordinating, collaborating. At that time, the WFSA had just one secretary in the office in London, so most of the work was done off the corner of one's desk with individuals around the world doing what they could, because really there was very little help or support available to us. We also supported lots of education programs in sub-Saharan Africa, where they were

trying to run conferences in, say, Uganda or Tanzania or wherever, and needed support and funding to get that done. [For instance, if someone] needed speakers, we would do that. In about 2008, maybe 2006, we had the idea of starting a pediatric anesthesia fellowship training program in Nairobi. This idea had come from Dr. Zipporah Gathuya, who had done a fellowship training program in Cape Town, supported by the WFSA, and had come back to Nairobi to work. She was very keen to help spearhead this. It took a long time to come to fruition but has been working very well now. I can't remember how many years – maybe about eight years – it took a long time to get it started and get it approved. It was the first sub-specialty training program in East Africa, at the University of Nairobi. We had to break down a lot of barriers to get it going, but it has now trained many, many pediatric anesthesiologists for sub-Saharan Africa and has gone from strength to strength.

So, the work of the education committee is vital to the improvement in safety and quality and education of anesthesiologists all over the world. We developed training programs in how to teach because, in many parts of the world, including many of our own [parts], teaching was kind of left behind the advances in practice. People taught in the same old way, you know, the professor gave a lecture. But it was really important to move that along into modern teaching methods, appreciating how adults learn and so on. At that time, we worked very closely with the publications committee of the WFSA. They have their journal, Update in Anesthesia, which is provided free around the world. It was really the only journal that people in low-income countries had access to. It's still going. They developed the Anesthesia Tutorial of the Week, which is still ongoing and very popular, and provides free information and knowledge to people who need it around the world.

Sue
I know that all the time that you were working with the WFSA, you were also doing a lot of work with CASIEF, the Canadian Anesthesiologists' Society International Education Foundation – it's quite a mouthful, that's why we call it CASIEF! So, fill us in with that global role you found with CASIEF.

Angela
This links back of course to Dr. Roger Maltby, what I learned in Calgary, getting involved in the Canadian Society, and understanding something about the program in Nepal. Roger became Chair of CASIEF. While it might sound relatively new to some people, actually way back in Dr. Rod Gordon's time [mid-1960s], he developed the Anesthesia Training and Relief Program to help people overseas when he was chair in Toronto and editor of the CASJ at that time. There was a long relationship with particularly Nigeria, but also in other countries where the society helped people in those countries to train. Over the years, this gradually evolved into the CAS International Education Fund. That was the sort of more modern name to it. Roger Maltby became chair, and he was followed by Dr. Dennis Reid. I think John Sandison had been chair before that. So, they branched out and had training programs in sub-Saharan Africa. By the time I got involved, Nepal was still active. While I was getting involved in the WFSA and their education program, CASIEF was developing. I think When I became chair of that, I had the name changed from International Education Fund to International Education Foundation, because that seemed a more appropriate designation at that time.

I think it was in Paris at the World Congress in 2004, when we were approached by Dr. Jeanne d'Arc Uwambazimana from Rwanda asking if CASIEF could assist Rwanda in developing their own anesthesia training program. Rwanda, as most of you will know, is a small landlocked country in sub-Saharan Africa and they had undergone a traumatic genocide. Things had been very difficult after that. They had a training program, but they used to send people abroad to train. Some [graduates] came back but then left again. Some never came back and so they had decided at the University of Rwanda [along with] the government that they needed to have a training program in anesthesia that was based *in* Rwanda. So, in 2004, I went out to look at this and see what the feasibility of setting up a program would be. I met with

all the requisite people and looked at the program, met the then-residents, and came back and recommended to CASIEF that we could do so. I remember the American Society was also interested in doing some overseas work. They had had Dr. Nicholas Greene's work going on, but that had ended in various places, and they were looking. Phillip Bridenbaugh and I thought between the two societies that we could take this on.

I went back to Rwanda a year later with the Memorandum of Understanding to be signed by everybody. I remember the president of the KIST Technical College in in Kigali [Kigali Institute of Science and Technology], where the anesthesia technicians were trained, saying to me, "I can't believe you're here with this. People say, 'Oh, well, I'll do this, or I'll do that,' and they never come back again." But, one year later, we were there with our MOU, which everybody signed. Then in January of 2006, the training program started!

From that time to this, we have volunteers, mostly Canadian, but with many Americans and also some from other countries. We've had some from England and some from Australia, going there to help develop the program, to teach, to assist the residents. Then, we had a big breakthrough when Dr. Patty Livingston from Halifax went out as a volunteer, became enchanted with the program, and for 10 years took charge of this program and really developed it to its full potential. Now, the Rwandans basically train their own people. They still have help from us and from the Americans, but they are doing a very good job. And from having one Rwandan anesthesiologist there, that was Dr. Uwambazima in 2004, they now have thirty-something! It's not many for now 12 million people, but it is many more than where they were before.

Plus, the spin-off has been the improved training of the anesthesia technicians who – as many of you will know – all over sub-Saharan Africa, anesthesia is mostly provided by the non-physicians, because (physician) anesthesiologists, are in very short supply. [The program] helped to bring up the whole level of anesthesia for the non-physician providers and so they have become strengthened. They now have a BSc degree. The quality and the level of improvement in anesthesia is – of course, there's a lot to be done everywhere, and that includes Rwanda – but the progress has been enormous. It's wonderful to see the people who were the first residents when I went there, who are now the heads of the departments and running everything within Rwanda. We have a very strong relationship with them through CASIEF, which has gone on from strength to strength.

Since I stepped away from [CASIEF], it has gone on to work in Ethiopia – with a big, strong training program – and Guyana, helping develop anesthesia there. And then, one of the places that I particularly am fond of, is Burkina Faso. It has got to be one of the poorest countries on Earth. French West Africa in my opinion is poorer and less well-off even than East Africa. I've been there quite a number of times and we have worked with them a lot and have developed some of their young people. It's really been a very nice work in progress for CASIEF.

So, I take my hat off to the current CASIEF team. They are doing a fantastic job and long may it continue!

Sue
I remember well, being in South Africa and Cape Town in 2008 with you, when you decided to step up for the presidency of the WFSA.

More on your journey, tell me your thoughts at that time and what your goals were for the WFSA.

Angela

Well, [it was] certainly an interesting experience to become president of the WFSA. Harold Griffith had been the first President, and I was the second Canadian to take on this role. It's an amazing role and the scope is enormous. The WFSA, for those not so familiar with it, is a society of societies. Griffith was the first president and one of the instigators in forming the WFSA. At that time, which was the late 1940s, early 1950s, they felt it was important to have a worldwide association of anesthesiologists, to have something in common with people around the world, and to try to provide education to those who had little access to it. Continuing in a long line of presidents, having spent eight years as chair of education, I really wanted to further that mission, make it more developed, and bring more and more people into the fold to get involved and see what they could do. Communication was a really important issue for me, and I tried to improve communication throughout the WFSA by sending out newsletters and using contacts. One builds up a large number of contacts around the world and by visiting so many societies around the world to make the WFSA further known to them and to seek their involvement in it, for those societies who had the ability to provide education, and to get involved in educational activities and publications, and so on, to continue to build that.

That was a really important part of that four years that I was president. Now, in 2008, a really important event happened. That is, the World Health Organization introduced its surgical safety program. Interestingly enough, the WFSA has formal liaison with the World Health Organization. It's one of the few societies or organizations that has a built-in liaison. That became important and has become even more important now. So, in 2008 in Washington, the surgical safety checklist, which had been developed by a group for World Health – that group was led by Dr. Atul Gawande from the Brigham and Women's Hospital in Boston, a surgeon, but with input from anesthesiologists from around the world, [and] surgeons, a huge group of people. One of the lead anaesthesia people involved in that was Professor Alan Merry from Auckland, New Zealand, who has had a huge interest and done a huge amount of work on anesthesia safety. Anyway, I went to the release of the – yes, I guess you'd call it the release – the introduction of this surgical safety checklist, which was held in Washington. There were many, many people there. As a result of that, a discussion began. The only medical device in the surgical safety checklist is a pulse oximeter, and we were talking, “Well, not everybody has a pulse oximeter!”

This related back to an activity of the World Congress in Paris in 2004, when a group led by Alan Merry said, what would happen if we tried to get pulse oximeters to people? This became the Global Oximetry Project, led by the WFSA, run by the WFSA and its people. That was 2004. And that was in operation. They had got pulse oximeters. They had put them in various places and studied the improvements that occurred as a result.

So, with the conversation in 2008, with the surgical safety checklist about pulse oximeters, the WFSA experience was invaluable in the development. So, with the World Health Organization, with the WFSA, Brigham and Women's Hospital, and the Association of Anaesthetists of Great Britain and Ireland working together, we began to develop a plan to get a low-cost oximeter for those in need around the world. We published a paper which estimated that at that time, just in operating rooms alone, there were 77,000 of them around the world that did not have pulse oximetry. That didn't include recovery rooms, ICU's, or anywhere else. Just operating rooms. Over the course of the next year or two, we finally had built for us and developed a low-cost oximeter, which would be suitable for working in severe environments where they might not have electricity. It had to have a battery that would last where it might be challenged in many ways by the environment, heat, cold, et cetera, et cetera. The organizations decided that this was taking a lot of their time from other work, so a new group was formed called Lifebox Foundation, which was to focus solely on this low-cost oximeter and its distribution around the world. I was highly involved in this obviously as president of the WFSA, and so became a member of the governing council of Lifebox. We put a significant amount of funding into getting this project off the ground. I was highly involved in the writing of educational materials for this project. It was our firm

belief that there is no point in having a device that you give to somebody unless you give them the training and the knowledge of how to use it. So, we built the education program specifically for this.

Over the course of time since then, I think about just under 50,000 oximeters have been distributed by Lifebox to around 100 countries. Where we perhaps haven't been quite so successful is in having governments and departments of health recognize the need for this and put it into their purchasing plans. A lot of this has been done by donations. Societies of anesthesia were hugely important in this. For instance, the Canadian Anesthesiologists' Society got bought oximeters for distribution in Rwanda, Ethiopia, Nepal, Burkina Faso. Other societies did the same thing in their sphere of influence, and so anesthesia has contributed enormously to this. Interestingly enough, COVID has been helpful in in this project because, during those years of the COVID pandemic, it became obvious oximetry was our vital monitor in managing patients sick with COVID. So, many, many organizations realized they should get these oximeters. They bought other oximeters too, but many of them bought the Lifebox oximeter because of its pricing and its suitability for use in areas of the world that are challenged with resources. This has been an enormous success project and has revolutionized the practice, especially of the non-physician anesthetists who work in rural areas all over the world and had very little monitoring. Having an oximeter has just been a revolution for them and this work continues to this day.

Lifebox has continued and it has developed other streams of work. Because one of the predominant killers in surgical care is actually infection. And so Lifebox has developed [Clean Cut program], more on the surgical than the anesthesia side, it's an infection control project showing where all of the areas that can be vulnerable to failure of control of infection can occur, and in helping hospitals and operating rooms develop the processes needed to improve their infection control. This has been a big work, as I say, more on the surgical than anesthesia side.

As we work around the world with the oximetry, many of the anesthesia providers have said to us, "Well, what about capnography? We really hear this is great and we'd like to have it." And, over the last two years working closely with Smile Train – who has been a big provider of funds to develop this because they would like to have it in the institutions that they support, but they are supportive of its need around the world – Lifebox has now developed a new purpose-built, low-cost capnograph. And this is now just coming on stream. For the last year, we have been engaged in the development of this and also the development of the educational program to go with this. The same strong belief is there that we had with oximetry; you cannot provide a device without providing the education. There's no doubt that education in capnography is much more difficult than education in oximetry. So, we've had to take a great deal of care as we built this education program. The capnograph itself is also more complex than an oximeter, so there are lots of issues about making this feasible for low-income areas to be able to use it. In January of this year, I went with Dr. Faye Evans from Boston Children's Hospital, and we tested out the education materials for the capnograph in Ethiopia, and they were very well received. We've made some modifications since and now we've just put the final touches on the educational package for capnography. We will be launching in the immediate future this capnograph for donation or purchase to low- and middle-income countries, or anywhere where it's needed. We'll be starting very shortly the education program that goes with the capnographs to these various countries.

This is one of the most exciting projects that's all come out of, you know, WFSA, Lifebox, Smile Train and all of the other people who've helped us put this together.

Sue
[We're] pretty up to date. Where are you still involved in programs today?

Angela

I'm still hugely involved in the capnography project because that's really just at its inception. That's going to go on for a good few years yet. We'll see how it goes! I'm hoping that it will have the same sort of success that the oximetry project has had, because anything that makes anesthesia safer everywhere is really important. Capnography, as you know, you and I wouldn't give an anesthetic without it. But people in lower resource areas around the world – they have the right to expect the same quality, and we need to help them get there. So that's my current major work.

I've just finished a couple of years – or more than a couple of years, maybe six years – on the Royal College International Committee. That is, of the Royal College of Physicians and Surgeons of Canada. Bill Pope was the chair of that committee, going back to someone I've known for 40 years. He invited me to join. The Royal College is a very important organization in Canadian medicine, and in Canadian anesthesia. But, compared to, say, the Royal College of Anaesthetists in Britain or the sister college in Australia and New Zealand, our college has not been hugely active in the global development world. Royal College International, while it has a big activity in consulting in how to do things in various parts of the world, it, as I say, hadn't quite developed its arm for low-income countries. That was one of the things. I was very keen to help them do when I joined the committee. I'm very happy to say that they responded very well to the prodding and their consultative arm helps to fund their developmental arm. Now, for the last couple of years, they have been funding at least 10 projects for one, two, or three years, depending on the project. For Canadian physicians, not just anesthesia, but for all of the physicians from the Royal College who have projects overseas. There's now a competition and they can apply for these grants. I'm happy to say that anaesthesia has done well in these grants and so this kind of support is really important for the [Royal] College. Not just the people who are the end receivers of the support, but for Canadian universities, Canadian societies who have such a philanthropic approach and need all the support they can get. I'm really happy to see the Royal College doing this and hoping that it will go from strength to strength. I don't sit on that committee anymore, but it was an important thing to do in my opinion.

Then, in terms of other things that I'm doing, I still stay involved in teaching and training programs around the world when asked or when needed. The one I've been most involved with lately is VAST, Vital Anesthesia Simulation Training, developed by Drs. Patty Livingston and Adam Mossenson from Dalhousie University and Australia [respectively]. Although it's named Vital Anesthesia Simulation Training, it is focusing on low-cost simulation that can be done in pretty well in any environment and is multidisciplinary. It focuses on the non-technical skills and the teamwork within the OR. We've taught surgeons, obstetricians, nurses, obviously people from anesthesia. Midwives are really important for this. It is gone from strength to strength. I had the pleasure of helping teach trainers for this program in Honduras last year, the first time in Latin America! So, this was great.

I've also taught in the SAFE courses, that's Safer Anaesthesia From Education, developed mostly by the Association of Anaesthetists of Great Britain and Ireland and the Royal College of Anaesthetists, along with the WFSA. Those are all important courses that go on all the time around the world, that we don't think of very often.

There's another great one called Essential Pain Management, developed by a New Zealander and an Australian [Drs. Wayne Morris and Roger Goucke, respectively]. I've taught that in many places around the world. It's just a simple approach to diagnosing, treating, and monitoring pain. It gives people a great structure that's simple, that they can understand and apply. I have to tell you I had a wonderful experience teaching this in Ethiopia. Normally, when we teach, we don't see the outcome or the end result of our teaching, because people go home and they teach it. But we happened to be teaching this in Ethiopia when there was a plastic surgical mission team there. They would do very nice blocks for the patients and then [left] orders for pain management when the block wore off, as it does later on in the day post-op. A

lot of the patients were children. When the team would come in the next day, they would find the children crying, the parents unhappy, even the adults who had surgery, not very happy at all in pain because the local nurses would not give them anything for pain. They just didn't do it. So, a colleague from Serbia and I were teaching this program. We had started out with leaders of the physicians and nurses. Then we went to teach the nursing staff, and they were just so excited to learn this, to do it. Then, the plastics team found this big difference when they came in; everybody's smiling and they're all happy because our nurses went back and applied what they learned. We saw it work. It was just miraculous. It was great. This is a terrific program that continues to this day all around the world and I've taught it in many places.

I love teaching and I love all these interesting programs. They keep me enthused. That's basically what I do. The other thing I've been doing now, for probably about five or six years, is I've become the executive section editor for global health, for Anesthesia & Analgesia [A&A; IARS journal]. This was a first [journal] to have such a section. But the International Anesthesia Research Society and A&A its journal feel that they have an obligation to include the many parts of the world that are excluded. We wanted to encourage people to do research, be able to get it published, to have their opinions on things. The section works really hard to encourage people to send us their work, but also to bring it to a standard that makes it publishable in such a prestigious journal. I believe we're succeeding. It's been slow, building work. In addition to the papers that are published, I've been including and trying to train reviewers of papers from all over the world so that we're building up their skills and building up their enthusiasm for journals, and for doing research, and feeling that people will hear it and will listen to it. While it might not be entirely new for North America or Europe or wherever, it is important in the great scheme of things.

For instance, one of the papers that excited me the most was the first description of day care surgery for children in Burkina Faso. Now, we've been doing outpatient pediatric surgery for a very long time, but the difficulties and the challenges of doing this in a place such as Ouagadougou, the capital of Burkina Faso, is enormous. But they set about doing it the right way. They organized the parents. They had to have phones. And they did it. I think that's just an enormous step forward. It's a great job and I love doing it. And wherever there's a big Congress on, such as the upcoming World Congress in Singapore in 2024, in the All Africa Congress, wherever we can, we try to put on panels about developing your research skills, developing your writing skills, how to be a reviewer, and so on. Gradually we're building and that's what it's about.

Sue
You know, we've had lots of conversations over the years about the privilege we've had of going into anesthesia 50 years ago now and basically working and flying by the seat of your pants. We have witnessed the most wonderful developments over those 50 years. Along with that same time, there's been this massive development of the internet and communication ability.

Have you found that the ability or different ways of communicating have made a difference to growing your teaching efforts and to making it simpler for folks in Africa, in developing countries, to be able to communicate more easily amongst themselves?

Angela
It's certainly been revolutionary.

You know, back when we were planning the World Congress in 2000, it was revolutionary to be able to register online and that was barely doable then. It's been important. I certainly see in sub-Saharan Africa – and I'm sure it's the same in Asia or wherever – people have skipped sort of a generation of communication devices, [from] where they never had phones at home to everybody having a cell phone because it's cheap, and now everybody has a smartphone. And that makes an enormous difference. That

improves communication. WhatsApp [instant messaging smartphone app] is an absolute miracle if you like, and that is the predominant method. That allows me, and people like me all over the world, to keep in touch, whereas before that it was quite tricky. What's still missing is fast, cheap internet to allow, for instance, downloading of materials and so on. That's still a bit of a challenge so. You can't rely on that, particularly in the periphery. In terms of using these kinds of things for education, we certainly do and COVID forced that issue as you know. It works, but there is nothing like being in the room running a workshop with people, where there's time to talk, time to discuss, time to interact, time to ask questions. That free-wheeling type of discussion, which is essential, is much more difficult to do on Zoom [teleconferencing application] or some other things. So, Zoom is good for sort of "black and white" education. I think it's really hard to beat person to person. Although we weren't able to do that during COVID, we're doing it again now. Yes, it's more expensive. We're able to use some mixes of the two to try and get the best of all worlds, to get the personal touch but also to reinforce the learning by electronic means, if you like. That's really where it is, I think, anyway.

Sue
Having been through the half century, there's a whole lot of young'uns coming up, going to do their half century. What would you like to say to the anesthesia residents around today and the younger staff?

Is there any message you think that would benefit them and benefit global health and global anesthesia?

Angela
I think the overpowering message that I would like to give to the residents in anesthesia, to the young staff, is to get involved. I for one – and I'm sure you too, Sue, and many, many people – always feel we have to give back.

Look at all that we have been so lucky to receive. We need to give something back by getting involved. It depends on what you're interested in [is] what you get involved in. It's important to be involved in organized medicine. Not everybody can do that, but you might find you want to be involved in some teaching. You know, maybe if you're in obstetric anaesthesia, it's getting involved in teaching the prenatal course so there's an anesthesia presence there. For sure, you need to have an anesthesia seat at the table to be heard. That's one lesson I've learned everywhere; if you don't have a seat at the table, you won't be heard. So, it's really important to have a strong voice and to be there and to do that. Then, you know, when the time comes and you're able to offer your knowledge and your assistance to someone less well off – it doesn't have to be in Africa – it might be just by saying, "Well, I can teach a webinar or I could be part of a discussion group," or whatever that works for you. In some way you need to get involved because if the whole world says, "Oh, you know, I don't have time. I'm too busy," or whatever, everything will collapse.

You know it always seems like if you want something done, you ask somebody who's really busy, and they always seem to find the time to say yes. So, saying, "Well, I don't have time," that doesn't work for me.

I think there's always time. It's just how you choose to commit it.

I used to always tell hospital administrators, there's always money. It's just where you want to spend it!

So, it is with us. There's always time. It's just how you want to spend it.

Sue
That is the most perfect point for us to close this conversation, I think.

Thank you, Angela. We've had a good run and you have given so much to the world and to anesthesiology over the years. I'd like to thank you, just from myself, and I on behalf of everyone else!

Angela
Thank you!