

Opening Session Keynote Address
American Society for Clinical Pathology 2007 Annual Meeting
October 18, 2007
New Orleans, LA

Out of the Laboratory and Into the World

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Thank you for being here, and by that I don't mean thank you for coming to my talk, I mean thank you for coming to New Orleans. I am well aware that each of you has a limited amount of time and money to devote to your annual CME, and that there are many, many choices for you – many of which offer a lot of reasons for you to choose them over New Orleans. So I know many of you made an active and conscious choice to spend your time and your resources in this city that needs you so very much. This is a gift to this city of immeasurable value, and because this is my hometown, and a city that I will always love dearly – I thank you. And if it were possible for each person in the city of New Orleans to thank you, I am certain that they would be throwing their arms around you and giving you a big fat kiss – on the lips – because we New Orleans people are sort of inappropriate that way. So I am warning you now that this is bound to happen to y'all sometime this week, if it hasn't happened already. So don't take offense – it's just our way.

I want you to think back now, perhaps a long time ago, to a time when you made another defining choice in your life. Think back to the time when you chose your profession – your vocation in life. At that critical cross roads you didn't choose to be a stock broker, or investment banker, or a politician, or restaurant owner, or a lawyer (thank God) – you chose the highest of vocations, the ultimate “service industry” – medicine and healthcare - a calling that puts at the center of your life the taking care of people who are usually in their worst state. You committed your life to a profession that makes them well again if you can, and if you can't to providing them compassion, comfort, and dignity. Some time later you made another decision, when it came to choosing your specialty within the universe of healthcare. You, like me, found your passion in the role of the diagnostician. You realized that all medical care and treatment begins and hinges on figuring out exactly what was wrong with the patient and thus setting in motion and guiding the entire course of their care. So you chose pathology and laboratory medicine as your specialty. Now I suspect that this choice was often met with some lack of understanding, among your colleagues. When you told your non-professional colleagues of your choice – your friends, your family - you probably got (and still get) the usual “pathology – what's that?”

And that set the stage for a conflict, a tension, that I think exists in many of us - and through our specialty as a whole. This conflict arises between our choice of a profession dedicated to taking care of people and our choice of a vocation within our profession that inherently has one degree of separation between you and the patient you have chosen to serve. When we are at our best we are acutely aware that behind each specimen there is a patient and physician needing our critical diagnostic information to take care of that patient. At other times we feel the detachment, and wonder if anyone knows we are down here in the lab – until of course something goes wrong. And in the worst case, our own worst prophecies are true, and we become the lab as the “the black box” that the data magically appears from, and what we do becomes a traded commodity.

I had the chance recently to have some long discussions with a truly remarkable man, Dr. Heinz Hoenecke. He is a pathologist who, since his retirement, has spent the past 17 years bringing the practice of pathology to underserved nations around the world. Dr. Hoenecke summarized the problem this way: We all go into medicine with a flame burning inside of us to take care of people – in medical school it is usually raging wildly, and in residency it is usually focused and brought under control. The oxygen that keeps that flame burning is the experience of direct gratification from our patients. Over their careers, most physicians find their flame waning at times, but typically some patient experience blows a wind on their flame and stokes it. As pathologists we have chosen a path that, by its very nature, requires us to live in an environment that is relatively depleted of this oxygen. So we are at greatest risk for our flame being reduced to a small ember, or going out completely. It is our specific challenge to find creative ways to engage ourselves in a manner in which we fan our own embers back into flames. Because sadly, we are often the only ones who recognized the value of what we do to care for patients.

After my first seven years of practice, I certainly felt the challenge of keeping that internal flame alive. I too sought for ways to fan my own flames, and often wished for a puff of wind to help kindle my own flame. Now my mother, who I see is sitting in the audience along with my father, a pathologist and long time ASCP member told me to always be careful what I wish for. I see their heads nodding in agreement yet again. And I suppose now more than ever, I know what they mean. Because in August of 2005 my wish for that small puff of wind was granted.

My family and I had moved home to New Orleans only a few weeks before the storm hit. I had taken a position as head of anatomic pathology with the Ochsner Clinic here in town. We were still moving into our house when the storm hit. With the help of my parents I evacuated my wife and two daughters, and decided to stay behind and ride the storm out in a local hotel. I was always taught by my father that in times of crisis and need, it is your obligation as a doctor to be there to help in any way you can. In fact, exactly 40 years earlier – almost to the day – my father and one of his fellow residents found themselves paddling in a canoe through the flooded streets of the ninth ward – helping evacuate people after Hurricane Betsy. Well, now it was my turn to live up to that standard.

When the wind died and the city filled with water, in a bizarre series of twists of fate, that, even now, seem to me to be right out of a Twilight Zone episode, I initially found myself “recruited” as the only physician to take care of hundreds of police officers at their makeshift headquarters in the Sheraton hotel. This required me to, with the help of some police officers, break into pharmacies to commandeer the medications. It involved setting up and running a clinic and pharmacy in the hotel bar for very brave, but very scared officers – most of whom had left for work with none of their medications, and who were now faced with the peril of exposure to toxic water, extreme stress, and physical trauma. After that was established, fate led me and a brave policeman, Officer Mark Mornay, who was committed to protecting me, to the New Orleans Convention Center, where 30,000 people were stranded or abandoned, all awaiting some sign of hope or rescue. Officer Mornay and I soon found that for the next 2 days I would have to be the only medical professional present to help take care of these people until help came.

As Marc and I made lap after lap up and down the long expanse of streets in front of the convention center, we wandered through crowds of people in every manner of human suffering and despair, and did what little we could with our voices, our hands, and our presence to try and bring some comfort to these people. I am still haunted by how little we could do. There were dehydrated infants and children, people having seizures and severe asthma attacks, transplant patients who had been without rejection medication for days, patients who had been quickly “discharged” after amputations a mere few days prior, and rows upon rows of the handicapped left in their wheelchairs in the streets. With the city underwater and in areas burning at the same time, it was for all of us, quite simply – the apocalypse.

While we were struggling to do what little we could for the people in the streets, a different and very heroic drama was playing out at my new workplace – the Ochsner clinic. As the only hospital that stayed open throughout the entire ordeal, they were faced with the ultimate hospital medical challenge. And the story of how the chairman, Dr. Bobby Rodwig, and the laboratory manager, Ms. Evelyn Smith and their team of laboratory professionals kept the lab open and functioning throughout this ordeal is nothing short of heroic. I know that both of them, and many others from Ochsner will be here during the meeting, and I encourage each of you to seek them out, and hear their story, and let it inspire you, and take it back home with you to inspire your colleagues.

In the weeks of hell immediately following Katrina, I learned more about other people, about myself, about being a physician, and about being a pathologist than in all my prior experiences in life combined. In fact, I would be a liar if I told you that I had sorted out and understood all that I learned. I am still very much reflecting upon it, processing it, and relearning from it every day – and I hope that I will be learning from it for the rest of my life. It is far beyond the scope of this short talk to even attempt to convey to you most of these reflections, and if I tried, I am sure I would do my own version of the famous New Orleans jazz song – “oh didn’t he ramble”.

But I can tell you that I learned that no matter how savvy you think yourself to be in human behavior, you really have no idea about what people are made of until you see what they become when everything is lost. I learned that often, those who you think are leaders are followers, or even worse, they’re gone. I discovered that those who I may have looked upon as the “least among us” are more often than not filled with a greatness hidden even to them. When a person, who only a week before I and the rest of society would have labeled as a criminal, uses his “skills” to hotwire a bus to help evacuate the handicapped people that more “upstanding” institutions abandoned in the street in their wheelchairs and adult diapers – it tends to put one’s ordered universe in a high speed blender. My list of heroes is no longer just filled with my grey-haired mentors in medical school and residency. Now, it is topped by the police officer who stood by me and helped me attempt to take care of 30,000 people. He risked his life to protect mine and made sure I got home to my family and all of my possessions – even though he knew all along, he had lost all of his. I learned that “the world” sees me first, and most often, only as a doctor and rarely as a “pathologist”. People have a need, and an expectation of you as a doctor when the world goes to hell, and it is your obligation the day you were bestowed that title to do whatever you can to meet that need and live up to their expectations.

And finally, in my role as a pathologist, I was allowed for the first time to see our true value, by seeing what it is like when we are not there. Like George Bailey in the famous old Christmas movie – “It’s a Wonderful Life” – I got to briefly experience a life, a world, in which we don’t exist. As I gave insulin shots to the police officers to manage their diabetes, with each patient’s help we picked a dose and crossed our fingers, having no idea what their blood glucose actually was. As we encountered the transplant patients stranded in the streets, we simply made a guess if they were dehydrated, or in rejection, or both. Unfortunately the flood waters didn’t wash up a functioning iStat so we could figure it out.

Out of this experience, I know you will understand that I have come away with a unique, renewed vision of the importance of our specialty. I don’t think I can say that I have run through the streets kissing everyone in town with the news, like George Bailey did, but I suppose you can say that I have been on a personal mission to tell this story, in hopes that you might indirectly experience a world without you.

But now that the water has receded and life is somewhat back to normal, I am still faced with the challenge that most of you are. Outside of the unspeakable nightmare of an unprecedented natural disaster, how do you find that way to creatively engage with your own specialty so that you are always fanning your flame, reaffirming your own value, and insuring that patients and colleagues recognize your value. Well, I have found one avenue that has been opened by your professional society, the ASCP, that I suspect many of you

don't even know about. And it is my great pride to be the one to tell you about it and encourage you to engage with it. Because the ASCP has opened the road to another, much larger world that is still without you, and desperately needs you.

In 2003 President Bush rolled out a humanitarian plan, that despite political stripe, all would agree is unprecedented in its vision, its scope, and its generosity. This program committed \$15 billion dollars in US funds over 5 years for the treatment of HIV and related diseases in the nations most severely affected by the epidemic. The program is called the President's Emergency Plan for AIDS Relief or PEPFAR. However, shortly after it was launched, there was a realization that we in this room are all too familiar with. It seems as if the role for laboratory medicine and pathology was overlooked. There was the sudden epiphany that it is extremely hard to make decisions about administering expensive anti-retroviral therapy if you can't do a CD4 count on a patient. The scales fell from many eyes when it became painfully apparent that in order to treat the opportunistic infections that define AIDS, one might need the expertise and infrastructure to perform cultures and sensitivities, CBCs, and basic metabolic profiles. Does this sound painfully familiar to you?

To their credit, this "oversight" was rapidly realized and addressed, and your professional society – the ASCP – has taken the lead in meeting this need. Shortly after the necessity for laboratory medicine was "discovered", the CDC approached the ASCP for help in developing laboratory services in the nations deemed at greatest risk. The ASCP formed what is now called the ASCP Institute to respond to this need with a small staff and recruited volunteers. And, in August, 2005 - right about the same time that we in New Orleans were quite literally up to our necks in water – the ASCP deployed its first two major laboratory efforts in Ethiopia and Kenya. Now, as the program begins its third year, sustained laboratory efforts have been established in Guyana, Haiti, Kenya, Lesotho, Namibia, Nigeria, Rwanda, South Africa, Swaziland and Cote d'Ivoire (that's the Ivory Coast for those of you who are not from New Orleans). That is a current total of twelve countries with well-run functioning diagnostic laboratories, where once there were none. By my calculations that is an annual growth rate of 300%. I bet you wish your investment portfolio had done this well.

In each of these countries the ASCP Institute staff and volunteers devote their time and expertise to facilitate the trainings, conduct assessments and provide technical assistance. ASCP Institute volunteer members have created the training materials that are now used all over the world

What is the process by which the ASCP Institute starts with nothing and brings laboratory medicine to these countries?

First, there are in country on-site assessments, which are initial visits to determine the specific needs of the country. They conduct lab site visits, review and modify training materials, and meet with in-country leadership to get their support of the process. Next, there is the Training of the Trainers. Whether the training revolves around Chemistry, Hematology, CD4 counts, Phlebotomy or Laboratory Management, all participants receive intensive primary instruction and then receive training on *how to teach*. All of these trained trainers are then expected to conduct trainings for bench-level medical technologists within their own region and throughout the country. Then there is direct technical assistance – which I should note here is the area in which there is the greatest current need for ASCP volunteers. These volunteers work for up to 3 months within a specific laboratory to provide on the job training to lab professionals or to assist with preparing a lab for accreditation. And finally to help insure the sustainability of the effort in each country, the ASCP Institute has begun a pilot-program in Tanzania revolving around laboratory schools. In this program they have conducted initial assessments to gather current curriculum from five lab schools. They have revised curricula, written objectives, and discussed and practiced teaching techniques. They have procured new equipment, textbooks and computers for all 5 schools. And in March of 2008, the Pre Service Work Group will return

to Tanzania to meet with the school faculty and administrators to present the new curricula that has been developed.

What does success actually look like? Well hopefully the video montage running behind me is giving you some idea. But to bring it into focus a bit better, let me just tell you the story in Ethiopia. After the initial assessment in 2005, there have been a series of four basic trainings and two train the trainers sessions in Chemistry, Hematology and CD4 enumeration. Five volunteers along with graduates of the train the trainer program have expanded efforts outside the capital Addis Ababa to the interior of the country. The ASCP has partnered with Joint Commission International (JCI) to assist the Ethiopia National Reference Lab to prepare for International Accreditation. In a few weeks, a volunteer pathologist from Howard University will arrive to spend two months at the National Reference Lab assisting the laboratory in its preparation for initial inspection. And next week, the members of the Institute will board a plane to Ethiopia to work with the faculty at the laboratory schools of Addis Ababa University and Gondar University to roll out the new curriculum to train the next generation of laboratory professionals. Now I need to emphasize that what I have just listed for you is a status report in only one of twelve countries, and all of this has been achieved in two years by a staff that only recently rose to 9 people, approximately 25 volunteers and with an annual budget of about 2 million dollars. Now I am very, very tempted to suggest that with that track record, the ASCP may want to take on the mission of rebuilding the city of New Orleans, but that may be just a bit off mission.

But beyond the impressive list of achievements, let me emphasize the most important fruit of all of these efforts. To a person, each of the staff members and volunteers paint a picture of indescribable gratitude and sheer joy in the opportunity to learn from the best in the world. And to a person the members and volunteers tell of an experience in which they returned with far more than they gave. I suspect that there is a quality to this experience that made them feel the fire in them start to burn again. Maybe the great truth in all of this is that the best way to rekindle your own fire is by lighting someone else's.

I would like nothing better than to have Harry Connick, Jr out here singing a song that he wrote to celebrate the efforts of the ASCP in Africa. It would be so perfect if Brad and Angelina would walk on down from their house in the French Quarter and announce this admirable effort to you and the world. But in their absence, members of the ASCP, I would like to ask you to join me in thanking the staff and volunteers of ASCP Institute for all that they have done so far.

It is critically important that each of you here understand that this work is not finished. All that I have detailed for you is a beginning – and this is where you come in. The ASCP Institute is in great need of more volunteers willing to commit their time to the development of training resources and provide direct technical assistance. The need spans the spectrum of bench technologist, supervisor, lab manager and pathologists. The ASCP needs not only your direct support through volunteering your time and effort, they need your creativity. I know that in the audience now, that minds are racing with ideas about how to help your specialty flourish where the ASCP has helped it take root.

A major frontier that has yet to be explored is in the realm of anatomic pathology. In the countries that I have described, there is an astounding lack of histopathologists and cytologists. In fact, I learned only last night at dinner that in the country of Tanzania there are 35 million people, and only 12 anatomic pathologists. In fact, I the workload is even heavier today because two of the twelve are here with us today. Both have come to this ASCP meeting to not only learn but also to teach you about the needs of their country. I would like to introduce them to you and ask that you join me in recognizing them now - Dr. Charles Massambu, who is the Assistant Director of Diagnostic Services - Tanzania Ministry of Health and Social Welfare, and Dr. Christina Mwangi, who is the Program Director of Laboratory Infrastructure (CDC-Tanzania). Both of them will be available during the

meeting to talk about their efforts with you. They will be in the Pavilion on the second floor at multiple times tomorrow to specifically visit with interested people.

In speaking with Dr. Massambu and Dr. Mwangi, they confirmed that the lack of effective anatomic pathology infrastructure and knowledge base substantially hinders not only the treatment of HIV infected patients but all patients in their country. To paraphrase what Dr. Massambu told me last night, we need to stop thinking just about the opportunistic infections related to HIV, but begin to focus on the larger picture of opportunistic diseases related to HIV.

And this is the case in most of the countries that I have discussed and others. Take these examples to heart.

Does this boy have tuberculous adenopathy or Burkitt's lymphoma?

Does this man have leprosy or filariasis?

Does this man have a soft tissue sarcoma or a deep tuberculous abscess?

Does this woman have squamous carcinoma, lymphogranuloma venereum, or a soft tissue fungal abscess?

In each case there is no way of knowing and thus no effective treatment without adequate diagnostic knowledge and infrastructure.

Finally, in one of the most telling photographs I have ever seen of the state of anatomic pathology – please take a look at this photograph from a pathology “laboratory” in Zaire. These are specimens – and these leaves with string tied around them are the specimen containers - the picture of a thousand words.

Please as you are here at this meeting – go by and see the staff of the ASCP Institute in the Pavilion on the second floor, and e-mail your contact information with any and all ideas that you have to this address.

I want to conclude and leave you with this quote, which is not just one of my favorites, but for better or worse, I'll admit to you, is the story of my life in two sentences.

*I arise in the morning torn
between the desire to improve the world
and the desire to enjoy the world.
This makes it hard to plan the day.*

--E.B. White

Only a master of language like E.B. White could restore my humility with such economy of words. But I suspect that because you in the audience have taken the time to come and hear what I have to say, I may not be alone – and that this is indeed, each in your unique way, a story of many of your lives, too. And I hope that as you wrestle with this conflict on a daily basis at a personal level, a professional level, and even a spiritual level, that when you plan your day, and plan your career, and plan your life that you will find a way to add your contribution in any way to this effort initiated by the ASCP. This effort can redefine who we are as a profession, who you are as a physician and medical professional, and probably who you are as a person. If you have heard nothing else in this talk, please hear this – the world needs you, the world aches and suffers for want of you, your knowledge, your expertise, and your compassion. Please don't make them continue to cry out for you. Find a way to step out of your laboratory, and into this world.

Thank you.