

The Foundation of the American Academy of Ophthalmology
Museum of Vision & Ophthalmic Heritage

**Conversation Between Col. Frank LaPiana, MD (ret.) and
Brig. Gen. Robert Enzenauer, MD**
Bethesda MD, March 31, 2012



Col. Frank LaPiana and Brig. Gen. Robert Enzenauer recorded this conversation on March 31, 2012.



In this excerpt [Dr. LaPiana](#) recounts using post-cataract eye protectors as eye armor during the Viet Nam War. (.mp3 file)

Here, [Dr. Enzenauer](#) discusses winning hearts and minds during his deployment in Afghanistan. (.mp3 file)

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BRIG. GENERAL ROBERT ENZENAUER: I'm Brig. General, Dr. Robert Enzenauer, 58 years old.

COL. FRANK LaPIANA: I'm Frank LaPiana, Colonel, U.S. Army Medical Corps, retired, and I'm 74 years old.

ROBERT: So I guess I'll start. And this really is, I think, a unique opportunity, and it's meant to be, pretty much, a discussion between friends. And having talked to some other people that have participated in this, you often find out things, I think, about colleagues that you didn't know. So I'll start.

I actually recently did my genealogy, so my family... the Enzenauers, that is, came from Ludwigshafen in 1860. And it's interesting, sitting here with two military eye surgeons, my, it would be like great, great grandfather left Germany to escape the Prussian Army at the age of 15 or 16. So he came to Illinois, settled and was a farmer in Illinois. I was the first one to kind of graduate from high school. My father was a World War II veteran, born in 1920, served in the European Theatre, was... landed in Normandy in July. So that was kind of my introduction into the military, although, I was not... was pretty much of a pacifist. I had nobody pushing me into the military. Like my colleague, Col. LaPiana, there was a war going on in the late 60s and early 70s so I had one of those draft numbers. My draft number was 25. So I knew I was going to be doing something. And I competed for an ROTC scholarship and got an ROTC scholarship to University of Missouri at Rolla, had an appointment both to West Point and to the Coast Guard Academy and, much to my mother's disappointment, chose to go to West Point. As far as she was concerned, the Coast Guard Academy sounded like a much better deal in 1970 or '71. So I finished the Academy, was commissioned in the Corps of Engineers, and I'll probably finish there and listen to Col. LaPiana.

FRANK: Well, that's very interesting and relevant in a way. My paternal grandfather emigrated from Sicily in the 1890s. He had been trained as a pharmacist and he served as a pharmacist during the Philippine Insurrection in 1900, subsequently went to medical school at Marquette, and then served as a regimental surgeon with a National Guard division in France in World War I. He did not stay in, but actually practiced a form of eye, ear, nose, and throat medicine, primarily in Chicago. And I have some of his instruments from his practice. And then, he actually tried to come back in active duty at the onset of World War II. They told him he was a bit too old so he volunteered in veterans hospitals instead. So that was a significant influence in my life, though, he never tried to talk me into doing one thing or not doing another. My father was a career Army officer in the Chemical Corps, and my son is now a reserve Signal Corps Warrant Officer. He recently returned from a tour of duty in Iraq and Afghanistan. So there's a longstanding, four generational, at least, military tradition in the family, though none of us are militaristic or chest thumpers, we just believe when it's your turn you take it and do the best you can.

ROBERT: So for me, after I went to West Point I was commissioned in '75 and the Vietnam War had shut down and there was a...what I thought was a pretty good opportunity to go to medical school. That was prior to the Uniform Services University School of Medicine, so I ended up going to the University of Missouri and graduated in 1979. My real mentors were primary care doctors, and the University of Missouri was definitely kind of a primary care strongly influenced place. So I competed and... I should back up and say I met my wife there, who...we're still married 33 years later. She was interested in doing general surgery so I tell everybody she married the Army and I married her student loans. So she joined the service, went to real hardship duty in Tripler Army Medical Center, Honolulu, Hawaii, where I did a pediatrics internship and residency, and then practiced pediatrics for two years.

It was kind of during that time I thought that those ophthalmologists really seemed like they enjoyed themselves, so I started the competition to do a second residency. And the Army said, 'The heck with you, you're a pediatrician.' So... and because of West Point and medical school I had a very, very long commitment. So I chose to be a flight surgeon for two years because the flight surgeons... certainly many of the ophthalmologists I knew

in the service had been flight surgeons and seemed to enjoy it. So I volunteered to be a flight surgeon in Fort Campbell, was a flight surgeon from '84 to '86, and then threw my hat back into the ring for a residency in ophthalmology. And, sir, I actually think you might have actually been the consultant when I was selected—is that correct?—in '86.

FRANK: I was the consultant later but not in '86.

ROBERT: Okay, so you were a consultant then when I was a fellow. So, anyway, was selected for ophthalmology residency at Fitzsimons Army Medical Center in Colorado, and actually kept my house at Fort Campbell, Kentucky because my wife liked it there, and we figured when I finished my residency we'd sure try really hard to go back to Fort Campbell, Kentucky for my utilization tour. As it turns out, the needs of the Army fit in with kind of my personal interests, and since I had been a practicing flight surgeon for two years, and since I'd been a practicing pediatrician for two years, there was a need for pediatric ophthalmology when I finished my residency. And so I think that was it, I think Col. LaPiana was, indeed, the consultant when I was selected for fellowship, which would have been, like, in '89. So I did my fellowship in pediatric ophthalmology at Toronto Sick Children's, and then returned to Fitzsimons thinking that was my last move. That was not to be the case, but I certainly was my introduction as far as, when I was at Fitzsimons, besides being one of the staff ophthalmologists and the Assistant Chief and ultimately the Chief, I was also the senior flight surgeon for the medical center. So I was doing flight physicals for the Green Berets and the pilots, and that was my introduction to the more operational side of the force.

FRANK: Now, my career path was quite different. I started my undergraduate work at George Washington University thinking, probably, of pursuing a degree in history, which was my first love. And had two years of Air Force ROTC because Army ROTC wasn't offered, and then left G.W., went to the University of San Francisco, which did not have an ROTC program at all, to complete my undergraduate work, and then came back to George Washington University for medical school.

In those days... again, this was before, unfortunately, the Uniformed Services University was opened. I certainly would have applied there if it

had been. There was a Senior Student Program. And my father had commissioned me in the Medical Service Corp in 1959, so in 1961, I was able to come on active duty as a Second Lieutenant in the Medical Service Corps with my duty station being the George Washington University School of Medicine. Two-twenty-two-fifty a month was the pay for a Second Lieutenant with dependents. I had a wife and a child at that point. But that certainly helped. And then I was able to after graduation perform a rotating internship at Walter Reed from '62 to '63.

At that point I was reasonably sure that I wanted to do ophthalmology, but not 100%. And in those days it was traditional for those Army physicians who became ophthalmology residents to have had a utilization tour in the field. And growing up in World War II, like all little boys, I wanted to either be a paratrooper or a fighter pilot. And I couldn't be a fighter pilot so I volunteered for the airborne and spent a year with the 82nd Airborne at Fort Bragg, serving as a battalion surgeon and as a Medical Company Commander—very instructive, learned a lot about the line that subsequently served me quite well. I had a good friend I had been an intern with who had gone immediately to Special Forces and he convinced me that that would be something worth doing. So I was able to join Special Forces after a year in the 82nd, and served as a Third Special Forces Group Surgeon, and also commanded two teams deployed to Africa—one a military medical training team to Ethiopia, and another, a Gemini recovery team to Kano, Nigeria. Again, experiences that proved subsequently very valuable to me in my efforts to develop eye protection for the soldier because I learned a great deal about what soldiers will and will not accept even for their own protection.

So at that point, after three years of enjoying myself, getting a lot of exercise, making a lot of friends, I came back to Reed for my residency in ophthalmology, '66- to '69. Excellent training in those days. Good staff, great consultants, superb patient material, lots and lots of work, it was a great time and a great place to train, and I came out of my residency feeling very well prepared for whatever came next.

At that point I had not served in Vietnam, I was a regular Army officer and I felt that if you're in the regular Army and there's a war on and you haven't gone yet, you should volunteer. So I volunteered to go to Vietnam and spent

a year at the Third Field Hospital in running the eye clinic there, able to work with Vietnamese Army ophthalmologists at the nearby major Vietnamese Army Hospital, able to teach medical students, do some charity work. On balance, even though I missed my family as all of us do when we're deployed, had a very valuable, positive, professional experience in that country. And I was also able to initiate the eye armor development effort that I had wanted to, because I had become convinced in Unconventional Warfare School, where a fellow in front of me in a night maneuver, got swatted in the eye with a tree branch and had to be evacuated, my own street-wear glasses protected my eye, convinced me that, you know, we had to find a way to protect the soldiers' eye... the emmetrope side particularly, and I was able to test some primitive prototype eye armor in Vietnam on troops of the First Air Cav Division up in Phouc Vinh. I also formed ideas as to how eye care in war had to be and could be improved.

After that I came home and was fortunate enough to be granted a fellowship in ophthalmic pathology at the AFIP under Dr. Zimmerman, a marvelous experience that I'll always be grateful for. And then moved over... back to Reed on staff, basically, as what now would be termed Program Director. We didn't call it Program Director. We called it Assistant Chief in those days, but that's really what it amounted to, trying to run the training program for the Chief, Col. Appleton.

And those were very interesting, demanding years. To me it was a time of transition in ophthalmology education from the apprentice model to the academic model. And a number of us, Paul Whitmore, Ken Kramer, who were also staff men, and I, felt that we needed to definitively make that transition which meant dividing up the eye service into specific rotations of care, for example, a retina rotation, a plastics rotation, a cornea anterior segment rotation, and a pediatric rotation, and to have fellowship-trained people to run these various rotations to provide the best possible care for our extraordinarily complex patients, and to provide the best possible training for our residents. And we were able, all of us working long and hard for a lot of years, to bring that about, and ended up with the kind of academic, I think, high quality training program that the Army really needed, and that I think continues on to this day. So that was very satisfying too.

I did a preceptorship in ocular plastics with John Yassin and Jerry Shannon which had become my major interest, and subsequently limited myself to ophthalmic plastic and orbital surgery which I enjoyed doing very much. It let me work with neurosurgeons, plastic surgeons, ENT surgeons, and I really enjoyed that interaction. I had worked with a very skilled maxillofacial surgeon on mid-face trauma cases in Vietnam at the Third field, and with a plastic surgeon, Pete Peterson, who became an excellent friend and teacher. And all that stimulated my interest in concentrating on that subspecialty in ophthalmology which I subsequently did.

Other major interests... well, fortunately, at Reed, there was no shortage of things to be interested in and pursue, and to get help with. And I was able to do that. But what continued to concern me most was the development of eye protection for emmetropic servicemen and the enhancement of eye care provided in war. I came out of Vietnam convinced that we needed to upgrade the quality of our practice of ophthalmology in war, as we needed to develop eye protection, and worked on those two issues for the remainder of my military career until I retired in 1995. And with the help, encouragement, support of many people within and without of the Department of Defense, including many members of the Academy, it was finally possible to, through a lot of effort for a lot of years, develop and have approved troop acceptable eye protection, eye armor, which is now being worn today, as we see in the newspaper when we see pictures of our forces deployed in Afghanistan.

Also, we were able to... and, again, working with many other people... no one ever does anything in the Department of Defense, or perhaps anywhere else, by him or herself. It takes combined efforts of many, many dedicated people. We were able to change the general approaches to the management of eye care in the theater of operations. And I was very happy to see, in Gulf War I that Tom Mader was the in-theater consultant, that there was computerized tomography, there were operating microscopes, there were fellowship-trained ophthalmologists there providing the kind of care that our soldiers and marines needed.

So I had a very satisfying 34 years, and I am very happy to have been able to do what I did, and serve with the people I was able to work with, and I consider myself very fortunate.

ROBERT: Well, certainly, you won't say it but I'll say it. I mean, for decades you were the premier oculo-plastics expert in the military, I think, for all three services. And also, the eye armor, as somebody that deployed downrange to both Afghanistan and Iraq, I really think that that is an incredible legacy because there's finally stuff now that the troops will wear.

So I'm really intrigued about the first stuff that you were using in Vietnam. Were you... did the fabrication labs make it? Were you buying stuff off the shelf? What were you doing to try and get these soldiers in Vietnam to wear something to protect their eyes?

FRANK: It's very interesting. You know, Pasteur once observed that chance favors the prepared mind. What had happened near the end of my residency was that I happened to be looking through one of our journals and I came upon an advertisement for the Younger Med Optic Postoperative... Post Cataract Eye Guard, which was made of injection molded polycarbonate, two millimeters thick, in a wraparound configuration. And this was made, as the name implies, to protect the eyes of those who had undergone intracapsular cataract surgery. And a thought struck me, 'You know, this might be something that we could at least use as a prototype, as a point of departure.' So Col. Appleton was able to convince the Surgeon General to spend some of his discretionary funds and purchased a lot of these Younger Med Optic Post Operative Cataract Guard, and shipped them to me in Vietnam.

So at that point, I took them out on a training site where troops coming into the First Air Cav would train before being deployed to the field. I wanted to make sure that they did not create any type of a hazard for the troops that they could see well enough through them not to hurt themselves or hurt anybody else. That part of it worked out. And then, I was able to work with the First Air Cav Division Surgeon, who was very cooperative, in continuing these investigations at the training site. Unfortunately the post operative cataract guard had a ring on the back of the lens that was designed to accept a prescription-bearing insert so that the patient could see. And that ring produced, not surprisingly, tremendous distortions for the emmetropes wearing the eye protection. I then took them down to an optical fabricating facility at Cam Ranh Bay and the optometrist down there tried to remove the

back surface ring, but we could not do that without scratching the polycarbonate to the point where it could not be used.

So from those studies, I felt we learned a couple of things. One is, quite obviously, you can injection mold polycarbonate in two millimeter thickness in a form that wraps around to protect the eye on the side where it is highly vulnerable. And you could make it, I felt, troop-acceptable by making it attractive so troops were going to wear it. The eye protective quality of 2mm thick polycarbonate had been established by that time.

So I came back in 1970 with thoughts in mind as to what needed to be done, but I was unable to interest anybody, either within or without the Department of Defense to do it for a variety of reasons. There was a prejudice against war work of any kind on the part of one of the big optical manufacturers. And I was stymied. I could not get anything moving until years later. It was probably the early 80s when I found out about Gargoyles. Gargoyles is again, a form of injection-molded polycarbonate, optical grade, scratch resistant, wraparound configuration that looked good. Clint Eastwood wore a pair in, I think, one of the *Dirty Harry* movies. So I thought, you know, this is something also worth investigating. So we acquired a lot of Gargoyles and started testing them on soldiers and Marines, and learned a lot, positive and negative, about the Gargoyles and what needed to be done.

After those tests Gargoyles were declared interim eye armor by the Army. That led to the creation of a formal Army effort run both by Natick Research and Development Command and the Army Medical Department. That resulted in a multi-year effort to generate troop-acceptable eye armor designed primarily to protect against a major threat to the eyes which was the small fragment threat, but also to protect against the laser threat because at that time there was a major concern about adversaries using laser anti-personnel weapons, and to also create something that could be suitable for wear by the glass-wearing soldier by having an insert carrying device (lens carriers that could be put in the backs of the lens). That effort went on, and on and on, and finally materials were developed and used in the first Gulf War.

Then I retired and was no longer day-to-day involved in this, but I know that the American manufactures, particularly, I think it's called Wiley X ... you know all about that, General... created stuff that really proved to be highly troop-acceptable, it is now type-classified, it is issued in the clothing bag. That was one of the things I argued for decades. We've got to put this material in the clothing bag, make it part of the uniform, give it to the soldier when he comes on active duty, and convince everybody that it's part of the uniform, you wear it just like your boots, you know. Fortunately, all this was accomplished after I retired. That's how the material is being used at the present time, and cutting down eye injuries.

Obviously, the need to further develop, or develop further iterations of eye protection is necessary because threats evolve, and there are threats from IEDs that, I hope, are driving research efforts to develop more effective forms of eye protection there. And I imagine there are. But that's a long-winded answer to your question.

ROBERT: Well those were, I think, called BLPS—right?—when the first Gulf War? So, Ballistic Laser Eye Protection...

FRANK: Yeah, Ballistic Laser Protective Spectacles, that's it.

ROBERT: Right.

FRANK: I always preferred the term eye armor because that's what it was and it sounded more military, but there were some that did not think that way.

ROBERT: Well, I'm sure you will remember this. When I was at Fitzsimons, one of my residents, who is now a real star in retina, reviewed, literally, just outpatient stuff from the first Gulf War that, fortunately, was pretty short, and the biggest problem, of course, was not the absence of eye protection. It was the fact that the soldiers would often have it on top of their helmet because it made it look like rat patrol, and just little, little things that even like you mentioned, sir, that a standard pair of GI glasses would have kept some of the small particulate stuff going in the eye, whether it was just a corneal abrasion or a penetrating injury. So... and I agree with you, having deployed both to Afghanistan and Iraq, the... again, for the people

that don't have any military background, when he talks about putting it in the clothing bag, we're talking about at the induction station when you see these guys carrying like three bags full us stuff, now they are issued eye armor Wiley X, and it looks cool. And I know when I came back from the first venture overseas I had my Wiley X in my bag. And my son was required to wear my old Wiley X when he cut the grass. You know, and it drove him crazy, but that was his... his challenge is having a dad who's an ophthalmologist, as he wore that.

But it really, I think... I really believe it is an incredible legacy. To me it's very similar... I did my fellowship in Toronto, as I mentioned, and I met a World War II ophthalmologist named Tom Pashby, who was really the driving force for hockey masks and hockey helmets. And when he first was promoting it, the statistic was incredible, like 35 kids were blinded every year playing hockey. And the concern was, 'Oh, if they had hockey helmets with face masks they would play too aggressively.' You know, well, they proved that to be a foolish thought, and, of course with proper eye protection, the number of kids blinded went... as a matter of a fact, almost went away. And the problem then was their fathers playing street hockey not, of course, wearing a helmet. But it really is, I think, very similar now, compared to the Vietnam era, when people would be dying of a gunshot wound to the belly. That doesn't happen anymore. I mean, with the incredible body armor that they have, you just don't see people, you know, that... as you, you know, would have been taking care of in Ton Sanut that had a gut shot, you know, in addition to everything else. So the eye armor, I really, as an ophthalmologist, as you were in combat, too, it really is a legacy because if... the soldiers are coming back, you know, very tragically injured, but the ones, if you can save their sight, it's a real... it's just a real testimonial to...

JENNY BENJAMIN: Can I ask a quick question?

ROBERT: Sure.

JENNY: So, you... Colonel, you said that when you...the protective eyewear has inserts for spectacles. And Dr. Enzenauer, I know that you wear spectacles. So how did it work? When you get the protective eyewear,

do you then go to an Army optometrist to get the inserts, or does your glasses actually... did your glasses fit under the armor eyewear?

ROBERT: Most of them, it will fit over it. Now, since I'm a believer, the glasses I'm wearing right now are polycarbonate. I mean, if I was anywhere and rock flew up, these glasses would protect my eyes just like my ballistic eye protection, the eye armor. And I really like Colonel LaPiana's description. It is eye armor. Just like body armor, it's eye armor, and it will protect you from that. So most of them now, you can wear behind it, but, certainly, you can have prescription-made stuff also.

JENNY: So... and Dr. LaPiana, I was wondering if I could ask you to talk a little bit more about Vietnam and exactly what you did there. I mean, I know you've had... you were already an eye doctor, but how did it happen? Were you looking at casualties? And, were you...did you have to do general surgery as well, or could you still concentrate?

FRANK: The usual procedure at the time I was there, from '69 to '70, was that an ophthalmologist newly arrived in-country would spend a couple of weeks at the 24th Evac, which was, probably, the busiest hospital in Vietnam. I'm not sure of that, but it certainly was very, very busy. The ophthalmologist there was Dale Anderson who had been two years ahead of me in the residency at Reed, and a fine fellow and a great ophthalmologist. I spent two weeks, as I recall there just seeing how things were done, how casualties were managed. Particularly in war in the casualties, quite commonly more than the eye is injured and one ends up working with lots of other people.

At a certain point, then, the newly arrived ophthalmologist would be assigned to either an evacuation hospital or a field hospital where he would function without another ophthalmologist. There would only be one ophthalmologist assigned per hospital. I happened to be assigned, as I mentioned before, to the Third Field. It was interesting there at the Third Field because we would get casualties from the battlefield 10- or 15 minutes after they were wounded, but also we had the opportunity to care for indigent Vietnamese when our time and energies permitted us to do so. There were various religious organizations, the Mennonites, for example, who would actually bring indigent Vietnamese, generally farm people into

us primarily for cataract surgery, though for other problems, too. We also cared for our allies. Occasionally, I would see Australian service members. And then we worked, as I mentioned earlier, with ophthalmologists in the South Vietnamese Army at their main hospital, go over there and scrub with them on cases, and also provide some instruction, some lectures on various aspects of ophthalmology. The Australians had a hospital down at Vung Tau but did not have an ophthalmologist assigned. So on one occasion they had a non-transportable patient and I loaded up all my gear in a helicopter and flew down over the delta to the Australian hospital to try to help that particular individual. It was a multi-faceted year. It provided many opportunities to do a lot of different things, and an opportunity to work with a lot of highly-skilled surgeons that taught me a great deal.

But I came away from that experience, as I had mentioned earlier, convinced that it was possible and necessary to drastically alter the way we practiced eye care in war. That led me to, among other things, review reports of military ophthalmologists as far back as the Crimean War, particularly those ophthalmologists who had served in World War I and World War II, who had written extensively of their experiences, not only the American experience, but also the British experience, and the French experience.

It became quite clear to me that there were basic principles that should govern the provision of eye care in the theater of operations i.e. war. One is, there's no delayed primary closure in ophthalmic surgery. You've got to have expert care available right from the start to take care of the severely injured eye. There's no patch-and-ship to the pro three echelons back if you want to have a viable eye. The ophthalmologist must have the support of trained individuals who are used to working with ophthalmologists. It's very, very difficult when you sit down, you know, to operate and you have someone assisting you who is highly conscientious but has never seen an eye before. And you have to have the right equipment which, sad to say, we generally did not have in Vietnam, or at least, there wasn't as much as there should have been. The ophthalmologists really needed to be a member of a head and neck team. The only way to handle this kind of trauma is to have the neurosurgeon there, the ENT surgeon, the maxillofacial surgeon, plastic surgeon, so everybody can get together and do their part of taking care of the causality.

This is the way it actually worked, on the ground: we had a big open triage area right in the center of the hospital, and when casualties would come in we would all be notified. We, all the surgeons, basically, would report to the triage area. There was a head triage officer, in our case a thoracic surgeon, an extraordinarily skilled guy, and we would all walk around examining the casualties who were lying out in the open air on litters, assessing their various injuries and setting priorities for care. You know, who would go first, who would go second, what team would do this, what team would do that. Triage really works. It's really the only way to do it.

So then you would get busy and do it, and when you weren't busy taking care of eyes, you would be first assisting a general surgeon debriding a leg, or whatever was needed. So the more general surgery military ophthalmologists can learn, the better they're going to be able to do their job. And that's why I always advocated doing surgical internships. Get as much surgery under your belt as possible, though I must confess, I did not receive very enthusiastic response to that suggestion. For some reason I never understood, though ophthalmology is a surgical specialty, there seems to be less enthusiasm for surgery as surgery than I would expect. But that's another matter.

So Vietnam really taught me a lot about what we needed to do and how we needed to do it. And, as I said earlier, it took working with many, many other people, as was true of the eye armor effort. And, you know, apropos of that, I sometimes feel I'm given more credit for that than I deserve because the success was the result of input by scores, and scores of people to make this happen. But we were able to make significant alterations in the way eye care is practiced in war, and I was really glad to see that.

ROBERT: And, sir, let me just say, you know, you were the leader of the team. And if it had failed you would have been blamed. So I think you should take credit for the success of a great team.

I'm impressed with what Col. LaPiana is saying about some of the equipment he had because it takes a while for the military-like medical supply system to catch up with the war. And, I don't think we ever talked about this but, when I deployed, first to Afghanistan in 2002 with the National Guard, my sets kits and outfits was... still had mimeographed stuff

in it from 1978. And it's certainly better now. You know, you get 10 years of war and you kind of used up all the old stuff and you get issued new stuff. But that's a problem in any war. And the tacticians will say that you're normally fighting the last war when you land. And I don't know how many years it takes, sir, to catch up, but it really is, in some ways, a problem with the supple.

I'm sure... I would add I'm sure that it... it's interesting... you mentioned Dr. Anderson, because I'll just remind you he was one of the Vietnam veterans that we did an oral history on. It's on the Museum of Vision, *A Great American Who Lives in Colorado*. But a lot of the stuff, both in Col. LaPiana's war and in my war, I think winning the hearts and minds aspect can't be underrated because he's taken out cataracts... when I was in Afghanistan, even though it wasn't my primary duty, I was doing a lot of strabismus surgery and a lot of things that, you do enough of that, and then they realize that they'll tell you where the bad guys live, and it often can save you from being attacked. And the people that never got that, you know... I would be at some staff meeting, and it would be great because you would hear somebody complaining, you know, like, 20 miles away that they're getting shelled every day, and, you know, we hadn't gotten shelled, like, in a month, and I think it's because we were really leading forward doing village work. And I would be curious. I mean, they were called, at that time, Medical Civic Action Programs, MEDCAPs. And the Army still does it, but in the interest of different pots of money, depending where you're at they can be called MEDRETEs, which is Medical Readiness Training Exercise. And that just means there's a different pot of money. If you don't have money for, you know, civic action, you have money for training. And, I know, early on in the war in Afghanistan, I really do believe, because my Special Forces Team... same thing when Dr. LaPiana was in Africa, the Special Forces guys, we'd go way out in the woods... or way out in the jungle, or whatever, and be dealing with the locals on a very personal basis, and when they see... especially a child, they... you say, 'Oh, my doc can fix that.' You know, and they'd be the same thing. And you fix that kid's eye, all of the sudden they're bringing you food, and the bombs aren't hitting your fort operating base anymore.

FRANK: One additional matter pertaining to the provision of eye care in the theater of operations in war that I feel very strongly about is that because eye

medicine and surgery in war is so different from anything else that we experience stateside, even different from the trauma that we see in major trauma centers stateside, there has to be in the three armed services, at least one ophthalmologist who has been in a war, who has had that personal experience of what's it like, so that that individual can guide additional developments regarding provision of equipment, and training of personnel. If you don't have that mindset, if you haven't had that experience, it's impossible, in my opinion, to project yourself adequately into that role. So, if nothing else, coming out of our recent wars in Southwest Asia, I think we should, at least for a while, have, I hope, enough war-experienced ophthalmologists who can develop matters in preparation for whatever comes next.

ROBERT: What I think is a real positive change, and I don't know when it started—I'm sure Col. LaPiana can say—after Vietnam, Army ophthalmology kind of created a combat casualty course for ophthalmology... for ophthalmologists. Do you remember when that started?

FRANK: That actually started with Howard Cohen's phaco frag course at Letterman Army Medical Center in probably the early 80s, which then evolved into the Ocular Trauma Course that was subsequently moved to the Uniform Services University when Letterman closed and is ongoing. At the time, at least, it was the only course of its type for military surgeons. We developed a course deliberately designed to take third-year residents of the Army, Navy, and Air Force, and tried to give them some insights into what ophthalmology and war is really like.

ROBERT: What I will add, though, that... in some ways things, but in some ways they don't change at all. I was in Afghanistan during what was called OEF2, so Operation Enduring Freedom, the second iteration. And, if you remember, that was the 'mission accomplished' event. And because nobody knew what to expect, and I think, looking back, we, meaning the American Military, was gearing up to go into Iraq, there was not an ophthalmologist assigned to the second hospital that was in Afghanistan. It was a reserve hospital, a good hospital, but they didn't have an ophthalmologist. And the reason it drove me absolutely crazy is I knew I was going over there, I... and like Col. LaPiana, I had some background, and I was more senior, and I

knew as soon as I landed I was going to be, you know, involved in some way with ophthalmology. So I tried to go through the Army Supply System and requisition an optometry set. And you have to understand that, you know, what's an optometry set? A division optometry set would have a slit lamp, and have a chair, it would have the lenses, it would at least have eye stuff. But in the Army's, you know, unique wisdom, I was a battalion surgeon for a Special Forces battalion, like Col. LaPiana was the group surgeon for a Special Forces group, and there's not a line item for an eye doctor in that group. So it doesn't matter how many qualifications you had after your name, I could not requisition the eye stuff. And I was very fortunate, I had some very generous colleagues, who when they knew I was going over there... as a matter of fact, Stu Farris who is an ocular plastic surgeon in Springfield, Illinois, Wilt Waterhouse who is a retina specialist in Grand Junction, Colorado, I said, 'Hey, guys, you know, I'm over here and I don't have anything.' So they sent me... Wilt Waterhouse sent me a portable indirect. Dr. Farris and Dr. Durkes [?], whatever, literally got together, literally, the rudiments of a Simcoe IA so I could do a manual cataract, some Wexcel, so I literally had the basic... almost like Col. LaPiana was saying, what I could put on a helicopter and go somewhere. I at least had the basic equipment that I could use to perform emergency eye surgery. Because the hospital that was in Bagram, which was the main hospital area at that time, because they didn't have an ophthalmologist assigned, they in their medical supply didn't have the eye stuff. And it was in some ways almost the meatball surgery that M.A.S.H. talked about. I am proud to say that when I was deployed, two of my Special Forces soldiers were injured in an improvised explosive device, they both had eye injuries, and... what Col. LaPiana said, I think, is the most important thing, is that with eye injuries you need to fix it right then and you can't put a patch on it. What he's mentioning is a fairly well accepted tenet of general combat surgery is a thing called delayed primary closure, which means you have this big gaping wound, it's got dirt, and, you know, water buffalo feces, and, you know, any kind of thing you can imagine, and especially in the combat zone of a humid place like Vietnam, and if you closed them right away they all got infected. So it was accepted that you clean it out and at some point in time later you would kind of put your heads together and close it. Well, that just doesn't work in ophthalmology. You have to perform a primary closure. So what I'm very gratified to say is that the two soldiers that both had eye injuries, I was able to do emergency surgery on them. One had a

secondary surgery in Germany, the other one had a secondary surgery, as a matter of fact, at your alma mater, Walter Reed, and they both survived, both retained their vision. And, without bragging, I think it wouldn't have happened if they didn't have emergency eye care.

But, again, because they didn't have an ophthalmologist, you would appreciate this, Col. LaPiana, the scope that was at this old hospital, again, a reserve hospital, was a Wild microscope that was the exact same model I used as a resident in 1986. What made it hard is, you know, they didn't have an ophthalmologist, so it was just like in the back con ex [?] when they shipped it, they didn't have a foot pedal. So I could not adjust the scope to my patient. I had to adjust the patient to the operating microscope which, again, leaves for great stories.

But I did, because there wasn't an ophthalmologist in theater, I'm sure I was doing exactly the same stuff the Col. LaPiana was doing decades before in Vietnam. They would bring in... injured children in and there's no... you know, there's no nationality written on an injured child. And, very similar, again, I'm sure it's the same as in Vietnam because the kids don't have anybody armor, you know, the kids don't have eye protection. So we were dealing with fairly massive injuries, exactly like Col. LaPiana was describing, and it would be a team. The maxillofacial surgeon would be doing his thing and maybe the general surgeon would be doing their thing, and certainly everybody recognized that if there was an eye problem, the only thing that kind of superseded the eye surgeon was the brain surgeon. If a neurosurgery had to be done, they'd be doing that first, but we were really kind of second in line for trying to preserve vision.

An interesting caveat, because they didn't have the eye stuff, I had to perform some enucleations and eviscerations, so basically eyes that maybe the child was injured a week before, and there's no way I could save it. And as a good ocular pathologist knows, there's a very frustrating disease called sympathetic ophthalmia which was known in the Civil War, probably wars before then—it's just I don't know my combat ophthalmology before the Civil War—but if the eye was irreparably damaged it was accepted you should remove it so it didn't cause an immune response in the good eye. Since there wasn't an ophthalmologist, there wasn't the standard implants, so I worked with my Chaplin who was a great American, and he kind of

worked with his church and they literally sent me a whole bag full of marbles, and I'm talking about, you know, the big ones, the little ones, different colors. And, obviously, I didn't care what the color was, but I would kind of figure out which marble, by size, would work the best in the kid's eye socket as, basically, just like the current ones we use that are either silicone or a Medpor. I would send it down and have it sterilized, and that would be my ocular prosthesis. And I got some good pictures of that.

But, again, it really is, you know... that's the one thing I'll say that I do think, unfortunately, some of the newer surgeons, and it's kind of like what Col. LaPiana was saying about we need to be a doctor first. Well, if you're an ophthalmologist in theater you really have to remember you're a surgeon, too. You've got to be able to help out. But you also have to be... you have to be able to be a little creative. Without mentioning names, I did a wonderful training program with a colleague who's a still good friend of mine, but he trained at one of the premier places in the United States, and when he would call for, like, a 6-0 vicryl suture, if they didn't have the exact suture that he was used to using, he was stymied, you know. And I think any good military eye surgeon will say, 'Okay, you don't have 6-0 vicryl. What so you have kind of between 4- and 8 that's absorbable?' And you learn to make due. And I'm happy to... or that was my main concern, that until it really hits the fan a lot of younger trainees, you know, can't really be that creative. And, indeed, now, with the current cataract surgery that is phaco and like no-stitch, unfortunately, there are some eye surgeons that aren't used to putting in stitches.

So... but I think that's a great legacy because the after Vietnam, and again, I think... there's... you never mentioned how many ophthalmologists were in theater, but there would be at least maybe three when... at any one time, wouldn't you think, with the different...

FRANK: In Vietnam during the war?

ROBERT: Yes, sir.

FRANK: There were a lot more than that. And of course it's a function of what period of the war we're discussing. But at the height of the war, I'm estimating now, there were probably at least 10 or 12 in-country because

there were lots of evac hospitals, most of them had an ophthalmologist, there were some field hospitals, they had ophthalmologists. So I would say at least 10 or 12.

JENNY: And each were doing a stint of, what, two years?

FRANK: One year.

JENNY: One year.

FRANK: That was the standard tour, yeah, one year.

ROBERT: And what he's mentioning, too, is that the lowest echelon was a combat support hospital that usually wouldn't have an ophthalmologist, but the next one up is Field—right?—and the next one is a general.

FRANK: Well, in those days, again, we're back in the 60s now, we didn't have combat support hospitals yet. We had battalion aid stations, and then y the Evac Hospital and/or the Field Hospital, and that was it in Vietnam. Beyond that you'd be evacuated either to Tripler or to Germany or all the way back to the United States.

ROBERT: It was a little different, say, in Afghanistan and Iraq. Most of the time there would be one, and at most two ophthalmologists in theater. And it's kind of like he was saying, it's a function of how many people were in... how many soldiers were there, because the military medical support would really be directed by how many troops were there and the level of combat. Recently, even though there had been, say, one combat support hospital in theater, they'd often split it up and there'll be one north and one south, so... like in Iraq there'll be something in Baghdad and there'll be something somewhere else, or in Afghanistan there'll be one in Bagram and one in Kandahar, something...

JENNY: And now... was your time overseas longer than one year in-country? Were you there...or is it still...?

ROBERT: No, so it's still... so the difference between the current conflict and Colonel LaPiana's war is that during the draft they could kind of treat

people however they wanted and it was like either deal with it or get over it. Now it's an all volunteer army, and there really are efforts to try and keep people in rather than just turning them all against military service. So, currently, unless you're a volunteer, as Colonel LaPiana was as far as his Special Forces, and when I deployed I deployed with my Special Forces battalion, and it was a year deployment... ophthalmologists now will generally deploy for 90 days, what they call boots on the ground, so you end up being away from home for four months. And it's not... a lot of the line soldiers think that they're mollycoddling, or, you know, treating the doctors too easy, but in defense to some of the physicians, when that doctor deploys from Fort Campbell or Fort Mead or Fort Pope, that hospital doesn't have their ophthalmologist, so it really is a burden on the soldiers that are back in the States. So that's... most of the deployments are three months for docs, and unless you're the hospital commander or a senior leader that they're keeping them in longer. I don't know if that's... I don't know if that's keeping people in or not but it certainly makes it tolerable.

But, you know, I should mention one thing that I think is definitely different that's going to be a problem. Right now, over 50% of the medical support, medical providers, hospitals, whatever, in uniform are in the reserve component, so... now, certainly since 9/11 most reserve hospitals have been deployed so it's not like you have a group of reservists now that aren't combat ready. Certainly, that was not the case when Desert Storm happened, but it is a problem because we don't have the number of doctors on active duty, certainly as we did when Colonel LaPiana and I were on active duty. I mean, Walter Reed is closed, Letterman is closed, Fitzsimons is closed. And I just can speak for myself as an ophthalmology trainee, when I started in the army there were 12 to 14... if you considered Tripler, Brook, Madigan, Walter Reed, there was like, something like 12 ophthalmology trainee spots for the army. And when I left active duty they were down like to six, and certainly the demands are not less. But it's a real problem because with so much of the stuff in the reserve component we really don't have the robust capability to just say, 'Oh, well, you know, bug the guy at Fort Pope. You know, he can deploy.'

But I do think that combat casualty care course, at least for the active duty, is a big help. The problem with having half the medical support in the reserves is most people, as I am now, as a citizen soldier, have a weekend a month

and two weeks a year, and it's very hard because most of us get paid when we work. You know, and they can't... by law they can't say, 'Well, you know, we won't hire you because you're in the National Guard or you're in the Reserves,' but that's two weeks besides that you're not there, and most of the time you have to do training with your unit. So I don't know a lot of, say, especially surgeons, that could take, say, an extra week out to do a great course, which is a Combat Ophthalmology Training Course. Hopefully, if they got activated and it was available they could do it, but I think that course is given once a year, so timing's everything.

FRANK: Yes.

JENNY: Well, Dr. LaPiana, you were a professor, right, at Uniformed Services University?

FRANK: Yes.

JENNY: And so what is that place like? And do you have any memories of your students that are...?

FRANK: Well, I like to say that the only thing wrong with the Uniformed Services University is that it opened 25 years too late. I would have loved to have gone there. Again, I am fully retired now and have been for some time and no longer participate in the activities of the university. But at the time I was the Chief of the Division of Ophthalmology, we were successful, I like to think, in attracting a lot of the best medical students to do ophthalmology. There was tremendous support from the Walter Reed faculty and the Bethesda faculty to work with the students. We set up a lecture schedule, Introduction to Clinical Ophthalmology, we had laboratory sessions where we taught them the difference between the dilated eye exam and the non-dilated eye exam, we participated in dissection courses where the students dissected eyes and ocular adnexal structures. The faculties at both those institutions put a great deal of effort into working with the students, and I think it paid off in better medical education, in general, for all the medical students, and as I say, in attracting some of the really fine ones to do ophthalmology, which, you know, we were very gratified and very happy to do.

Things are ongoing. As I say, I can't speak to exactly where they are now but things are probably going well, and it's a good thing. There have been... there were questions raised as to whether or not the United States needs a military medical school. Why can't we just, you know, educate everybody in civilian schools? I really believe that because the military is a distinct cultures and, like all cultures, if one is to be able to function effectively within it, one must come to understand it. USU provides the medical student with an opportunity to begin inculcating some of these aspects of military culture that he and she need to accomplish if they are to be most effective as military physicians. I can say medicine in the military is not like practicing medicine anywhere else. The military physician has got to be able not only to take care of his or her patients, but also to understand the mindsets of the leaders, of the line officers, who are basically responsible for everything, accomplishing the mission, but also responsible for the medical care. So the sooner the medical student...and this is my own personal opinion... begins realizing that this is a different world that has to be understood, you know, the better. The plus side is that some find out that they really like it. They like being with soldiers; they like being with career military people; and it becomes a very satisfying professional life.

So I think the American taxpayer definitely gets his and her tax dollars' worth from USU, and I hope that it continues and continues to thrive and prosper.

JENNY: Now, I know there is a school of aero medicine down in Texas that's now closed, but would they have been essentially like a sister school to you, or does it really work independently, the university, from other branches of the military?

FRANK: Well, the Uniformed Services University is basically just like any other school of medicine with additional instruction in military medical matters. It is affiliated with a number of military hospitals, so the medical students get their clinical rotations in their third and fourth years primarily, though not exclusively, in military hospitals. But the School of Aerospace Medicine was really... and you correct me if I'm wrong, General... designed for post graduate study.

ROBERT: Correct.

JENNY: Oh, I see.

ROBERT: And it did a lot of research and it's really a tragedy that it closed, but it's budget cuts. But they did a lot of research that wasn't done anywhere else, nor will it probably be done in the future. As Colonel LaPiana... there's a story, and I'm sure he'll agree with this, the American Military and the Americans really are kind of, I think, coming late to military medicine as far as its own medical school. The oldest medical school in the former Soviet Union is in St. Petersburg, and the Military Medical Academy predates Russia's involvement with Napoleon, so the leading doctors in the old Russian army were graduates of a military medical school. It opened in 1980, as far as the first class graduation, and that actually was even too soon for me. I went to civilian medical school because it didn't exist.

I wanted to hear more about Africa.

FRANK: All right. I'm happy to talk about it. I was assigned at the group surgeon of the Third Special Forces Group when I got a message from the Sergeant Major that the Colonel wanted to see me, the group commander. I marched over to headquarters and saluted. Very impressive World War II veteran, Colonel Bartholomew, said, "We've been tasked to conduct a military medical training team mission in Ethiopia to train medics in the Ethiopian Army up to the level of Special Forces medics." What had precipitated that was a recent skirmish between the Ethiopian Army and the Somali forces, in which every Ethiopian soldier shot in the chest or the abdomen died because there was inadequate or no medical care. So the colonel said, 'You can appoint somebody else, you can take it yourself,' and of course being young and enthusiastic I said, "I'll do it!"

So I was able to assemble a team of three Special Forces medics, one of whom, Paul Campbell, had had extensive experience in Vietnam dealing with the Montagnards, another one was a senior NCO and another one was a junior NCO, but they were all smart and experienced, and Paul particularly was a superb organizer and an administrator.

So we formed our military medical training team, which was part of a larger military training team comprised of line troops who were going over there to

train Ethiopian military in small unit tactics, basically. We deployed over there and established our school in the major Ethiopian Army hospital in Addis Ababa, the capital of Ethiopia, and basically gave the students the same instruction that our own Special Forces medics get. And I'm happy to say I think we accomplished our mission. The brightest student in the class, a young man named Gabriel Woldemichael from Tigre province in Ethiopia, happens to be the smartest student I've ever had the privilege to teach in my life. He subsequently won a scholarship to study medicine in Greece, came to this country, did his internship and residency, and now is in practice I believe in Las Vegas. I've always been very proud of Gabriel, who overcame a lot of obstacles to get that far.

There were some other aspects of our involvement in Ethiopia, shall I say, that were of a more purely military nature, but that I am not at liberty to speak of, and I'll just leave that as it is. But it was a great time and I learned a lot. I really realized that I really enjoy teaching. I never really had done much formal teaching before that, but I really enjoyed being a teacher, and I think that stimulated me to follow a course of academic medicine, which I did for the subsequent rest of my career.

JENNY: What year were you there?

FRANK: I was there in Ethiopia in 1965, January through September or October.

ROBERT: Was it... I'm just curious, was it a battalion-sized thing? I mean, what she would understand is if it was a big group you'd have doctor stuff to do with your own unit, too, so...

FRANK: It was... there were probably four A teams, that's 48 people.

ROBERT: Yeah, so you're talking like a company-size deployment.

FRANK: They, of course, all had their own medics. The Ethiopians have a habit of eating raw beef. They like raw beef, and I mean raw right off the cow. Our Special Forces teams being out with native troops, of course when it came time to enjoy some fresh cow meat they had to participate, too. So I had to treat two of the 18 leaders for beef tapeworm disease, taenia saginata.

Fortunately, I knew how to do that and I had the medicine, so they recovered satisfactorily.

JENNY: Did you say you were in another African country, as well?

FRANK: Yes.

JENNY: Different trip? Same trip?

FRANK: Different trip. This is another interesting story, at least interesting to me. I got back from Ethiopia, and then I went down to the advanced course, the course that Army physicians take, and came back to Fort Bragg in the spring of '66, and the new group command said to me, "We've got a Gemini Recovery Team mission to Kano, Nigeria. Do you want to go?" And I said, "Sure." The plan was to constitute basically a Special Forces A Team, 12 men, and they would fly us all to Kano, Nigeria where we would stay while the Gemini Space Shot was underway in case the capsule, instead of landing in the ocean, came down in the African land mass. If it came down in the African land mass then we would jump in to provide security for the capsule. I said, "Fine." And about a week beforehand, the colonel (a World War II veteran artillery officer, and a very, very smart officer), said to me, "I've just relieved the team commander and I'm making you the team commander." And I said, "Well, Colonel" (I was a captain) "I'm very honored, but, you know, there's a regulation that says medical officers can't command line troops," and there is. He said, "I don't care. Do it anyway." "Yes, Sir. So we went off and we ended in an abandoned airport in Kano, Nigeria, listening on a shortwave radio to the flight of the Gemini team. I can tell you that next to the astronauts there was nobody happier when the thing came down where it should than me. I was talking to the Air Force captain who commanded the C130 that we flew in, (and they had crammed a helicopter into a C130), and I said, "Well, what about diplomatic clearance if the capsule goes down in the African land mass? I mean, are you going to the embassy or the government and say these American paratroops are going to be landing on your land?" He said, "Oh, no, we'll worry about that afterwards." I thought we're all going to end up in a Congolese jail. Fortunately, everything worked out all right. We all got back in one piece.

ROBERT: That's a great story, which I didn't know of, and you've got to understand what a big deal that is. The one thing that's different about Special Forces, any military physician or medic in a regular unit carries what they call the Geneva Convention Card, and it really means you're supposed to be a non-combatant. As a medic you carry a sidearm to protect your patient. And Special Forces, everybody in Special Forces is a shooter, okay? So there's no question whether it was Captain LaPiana in Africa or myself in Afghanistan, we would certainly render aid, but it's a different kind of medical-legal thing, in that everybody's a combatant. But at that time, for the medical officer to be given command of the team, that really does speak a lot, and... but I can also understand, like, 'Oh, we're done. Are we going home now?' because...

JENNY: I would have been sweating it, I must say.

FRANK: It would have been exciting, but excitement I could well afford to live without.

JENNY: Dr. Enzenauer, your deployment seemed a little more planned. Is that the nature of the wars and being in a reserve?

ROBERT: I think that's exactly right. Certainly plans can change as, say, we pull out of Iraq, pull out of Afghanistan, but with 50% of the fighting force being in the Guard and Reserve, there's like a big calendar on the big wall that says, 'Okay, you know, Nevada, it's your turn in three years, and Colorado, it's your turn next year.' And you really have to plan that far ahead when it's citizen soldiers that have to be... there actually is... I should add, there's a thing now that didn't exist called Lifecycle Management. And it really is kind of a three to five-year rotation that you deploy and then the year after deployment you're kind of on a rest and recuperation, and then the second year after that you're kind of refitting, and the next year after that it's a train-up, and then the year before you're technically scheduled, you're really... it's almost like standing in the door as an airborne trooper. You're kind of... you're supposed to deploy the next year, but you're also in the breach if a no-kidding emergency happened, and that's different. So it really is something that certainly anybody wearing a uniform, Guard, Reserve, or active duty, can be called up at any time. They recognize that there has to be

some kind of prior planning, so it's a little bit different than just being called into an office, say, 'Pack your bags, you're leaving for X.' So...

JENNY: I wanted to ask you, Dr. LaPiana, you were at Walter Reed for a long chunk of time, so I just wanted to know about the people you worked with and some of the personalities there.

FRANK: Oh, I'd be delighted to speak to that. It was really, as I mentioned earlier, a wonderful place to train during my residency and a wonderful place to work while I was on staff. What really made it especially significant, I think, were the consultants we had and the access to the AFIP. We had just outstanding leaders in ophthalmology who were happy and willing to serve as our consultants, and then we had Lorenz Zimmerman over at the AFIP, and his staff, especially Ben Fine, Ray Font, Mark Tso, Dan MacLean and Ahmad Hidayat. We were privileged to attend his Thursday afternoon PATH conference, which is the best education I've ever gotten in my life. I was able to spend 30 years on and off doing that. Zimm was very kind and asked us on occasion to present cases for CPC (Clinical Pathologic Correlation). So that, combined with the patient material, and the opportunities to do research, and to work with highly accomplished physicians and surgeons in the hospital was just a marvelous experience, and I consider myself very fortunate.

JENNY: So, Lorenz Zimmerman, I know his name. Are there other folks you worked with?

FRANK: Oh, many. Actually, so as not to overlook anybody who should be mentioned, I made a list of all our great consultants. First of all, John Harry King, who was a very prominent corneal surgeon, who had trained at Reed himself after World War II. Tom Walsh, the neuroophthalmologist from Yale. Bob Welch, the retina surgeon from Wilmer. Ed Maumenee, the Chief at Wilmer at that time, who was just a tremendous teacher. He taught all of us so much about how one should go about teaching residents ophthalmology. You know, he always wanted to know why, and he used the Socratic Method to elicit answers and he was so brilliant. You know, he knew so much, and he was a marvelous teacher. Conner Moss was a good teacher, a general ophthalmologist. Dr. Zimmerman, I've mentioned. Frank Walsh, the Dean of Neuroophthalmology, was our consultant during

residency. Marshall Parks, the pediatric ophthalmologist—wonderful man, great help to all of us. Mel Alper, the orbital surgeon here in town. Mansour Armaly the Chairman at GWU, the glaucoma expert. John Yassin, our ocular plastic consultant for many years—just wonderful, wonderful people.

Also, as a result of the doctor draft, during the 60s, and subsequently, we had some extraordinarily competent ophthalmologists come on active duty for two years of service, which they spent in and around Walter Reed. That includes Lee Jampol, a retina specialist; Steve Waltman, a cornea specialist who was assistant chief at Reed; Danny Gold, medical retina specialist from New York; Terry Earnest, former chairman at the University of Chicago, with whom I was able to do some research; Ed Thomas, a cataract surgeon, Froncie Gutman, former President of the Academy, who was our assistant chief; Ralph Rosenthal, who had been Chief Resident at Wilmer, and probably several others, but those are the names of men who contributed tremendously to the health of the program and to the care of our patients.

Another reason why I stayed as long as I did, which was as long as I could (34 years), is that I always felt that at Reed I had the best chance to practice the best medicine of which I was capable. I could get whatever my patients needed. I could get an MRI if I needed it. I could take the patient up to Wilmer and have Bob Welch look at it if necessary, have Mel Alper look at him for an orbital case. I really felt that there was nothing I couldn't do for my patients, and that in and of itself, I think, would have kept me at Reed, in addition to all the other reasons. We really had marvelous support from all these people and it really helped make the place go.

ROBERT: I would like to say Fitzsimons was kind of the Walter Reed of the West, but it wasn't... but we... that, I think, really was the premier advantage of Walter Reed here in the DC area, was the close affiliation. I don't know if Col. LaPiana remembers necessarily, but at Fitzsimons we didn't have a good ophthalmic pathology experience, even though there was a guy in town who helped out. So at Fitzsimons our residents would come to Walter Reed for six weeks, great experience. And I went to every conference I could, whether it was a neuro conference or... I went to the Parks conferences and whatever. And that's what impressed me was not only was it the premier institution as far as military ophthalmology, it had

such close ties—GW, George Washington, Wilmer, I mean... and that didn't exist anywhere else... and the AFIP, too. Back then before the AFIP had trained all its competition, I mean, fascinating cases from around the world would come to the AFIP, and that was a unique experience.

I'm going to just mention something. I'm writing probably my only book, and probably the best article on hysteria and malingering ever to be published was written by these three guys, Appleton, Kramer, and LaPiana, and it was in the *Survey of Ophthalmology*, I think in the 80s. Anyway, a lot of big series like that came out of Walter Reed because it was kind of a conduit for, I think...

JENNY: Sort of like a think-tank.

ROBERT: Well, and also the tough cases would get sent there, so...

JENNY: Do you have a favorite memory?

FRANK: Well, I'll go into something here that I personally found fascinating and of potential continuing significance: the disease, (or the non-disease) called foveomacular retinitis. When I was in training we would see a large number of soldiers who were either medically retired and drawing disability or were in the process of moving towards that, who were given the diagnosis of this imperfectly understood entity which produced a lesion right in their fovea, left a scar and knocked their vision down. The appearance of that lesion stimulated many of us in Army ophthalmology to ask ourselves (and not just ourselves but also Dr. Maumenee, for example, who was always very skeptical of this) whether or not this could really be sun gazing, could be solar maculopathy, a form of malingering. For lots of reasons, the key one being for the sake of the patient, because in time of war you could be executed for malingering, but also to save the American taxpayer inappropriate payments to individuals, a number of us instituted a number of studies to try to figure this disease out. After many years and many people working together we were able to prove definitively that foveomacular retinitis was in fact solar maculopathy and the diagnosis of foveomacular retinitis is not made anymore.

Why this is important, I think, is that if we are ever so unfortunate as to have to go back to a draft, we can probably expect to see more cases of solar maculopathy and military ophthalmologists have got somehow to know about this so that they can identify it and stop it in its tracks, or we'll be right back to where we were in 1967.

We were actually able to conduct research where we asked patients with intraocular melanomas not involving the fovea if they would sun gaze before enucleation for us, not knowing whether or not this was possible. I mean, who can look at the sun? But, in fact, we showed that it is possible to fixate the sun. It can be done. And the lesions produced we obtained histopathologist evidence for; Mark Tso and I published a paper on that that helped confirm what I was saying before, that really what we were dealing with was solar maculopathy. So that's an example to me of the kind of thing that one was able to do at Reed. You know, you had the patient material, you had the challenge, you had the help and the support, and collegial support to get this important work done.

ROBERT: I just want to add something that... you know, any of us that practice ophthalmology and, you know, I'll get a patient that moves from some town and I'll get the records, but to me the one incredible thing about military ophthalmology is the military moves people, you know, and that soldier finishes his tour of duty at Fort Belvoir, and then goes to Fort Carson or Fort this or Fort that. And, certainly, I can remember, and I know Col. LaPiana kind of recognize this story, it was not uncommon in military ophthalmology that I'd be taking care of somebody who's, you know, really concerned, they'd liked the care that they had at Fitzsimons but now they're going to the East Coast. And I'm sure it's the same.. you know, well, he's been at Reed but now they're going west and what are you going to do? And certainly military ophthalmology is really such a small family that it's easy to say, for example, my specialty... one of my best friends is a guy named Col. Birdsong, and a guy going east... and I said, 'You know, you're going to love this guy.' You know, and he now is no longer at Reed. He's over in Germany finishing his commitment. But a good example, I was stationed in Hawaii, took care of this incredibly nice family. The grandfather of the child I was taking care of, World War II, and Korea, and Vietnam, and he knows who I'm talking about, I think, and I get started, and the guy needed some surgery, a combat veteran, and he's going to Walter

Reed, and Col. LaPiana ended up doing plastic surgery on Col. Conmey, and I think you were also involved with maybe his wife Marie. But that kind of relationship really doesn't exist in the same way in the civilian sector, you know, because... and indeed, when he was training residents at Reed and I was training residents at Fitzsimons, when I'm now at the University of Colorado, when I was at University at Tennessee, sometimes you'd get a letter of recommendation and then you don't know half of these people, but when you're in military ophthalmology the odds are, the guy writing that recommendation I know personally, and I know him very well. There weren't that many of us. So, you know, you're not going to write a letter, you know, 'this guy's a great guy,' when, if he isn't, you're going to have a very personal interaction like, 'you know, he didn't do that well for me.' So.

JENNY: I would love to hear more about what it's like to be a teacher, do you have any good stories about your residents?

FRANK: Well, I have a lot of stories about residents. I have some strongly held views on the subject of resident training, both in and out of the military, having been involved in it for a long time. Probably none of these thoughts are new to anybody, but a couple of things struck me over the course of several decades of teaching residents. One, there are some people who find their way into ophthalmology residencies who never should have been admitted to medical school, sociopaths; two, there are some decent people who are admitted to residencies but lack surgical skills and cannot acquire them, they should not be allowed to become ophthalmologists; and, three, there are some people who have surgical skills but are lazy and sloppy. So I look at it this way. Those of us who run or ran residency training programs are the last barrier against somebody not qualified to practice ophthalmology, to be allowed to do so for the next 30 years. I took that responsibility of trying to eliminate from training programs those individuals whose qualifications to practice competent, compassionate ophthalmology did not exist. Anybody who has been in this job and done that knows how painfully difficult this is, painfully difficult at many different levels, administratively complex, taking inordinate resources of time and energy to eliminate the dysfunctional resident. But it's part of the job, it's something that has to be done, and I think that somehow in my own education in ophthalmology, that subject was never discussed. I've been to many meetings... I remember one AUPO meeting years and years ago, where a

fellow did speak to this in a way. He said, “You got to identify the sociopaths early, and as soon as you do get rid of them because there’s no way to cure them.” That was useful. So I think that that’s a very important requirement for those of us who are chairmen, who are program directors, to protect the American public by keeping the dysfunctional out of ophthalmology.

JENNY: Sort of another job outside of just teaching them...

FRANK: That’s right. Residents present the whole spectrum of human behavior. Some residents you don’t need to anything for, you just say, ‘This is what you need to know. This is what you need to do.’ Fine, you know, they become chief residents. Other residents are slower... it’s like raising kids in many, many ways, you know. Some are a little slower and you work with them and help them. And I think your objective should be to stimulate the high achievers, to motivate them to work up to their potential. “In order to be happy a man must be what he can be,” someone once said, or as Aristotle’s observed he must “realize his nature.” I think there’s a lot of truth to that. Also help the slow learners to come along as long as they’re competent, conscientious and committed. Not everybody has to be a professor and chairman, but it’s the other ones that I talked about that take up inordinate amounts of your time. If you have a conscience I think you have to just be willing to do the hard work to make them find some other line of work.

JENNY: Did any of them ever teach you anything, any of those great residents?

FRANK: Teach me anything? Oh, absolutely, indeed so. I always enjoyed the times when the residents would come back, the graduates of our training program would come back to Reed, to ask them what was good and what was not good about the training program, so what we could do to change it. And frankly, I had a reputation of being... how should we put it?

ROBERT: A taskmaster, sir.

FRANK: Yeah, let’s say that, a taskmaster.

ROBERT: A challenging task master.

FRANK: I did not suffer fools gladly. I was sitting down with one of our graduates who had gotten out of the military and was practicing in Louisiana, and I said, “Well, tell me now, you’ve been out... tell me what was good about your training program and what was bad about it?” He said, “When I was a resident I thought you were too hard on us, but now that I’m out I’m the best trained ophthalmologist in my community, so don’t change a thing.” And I always liked that. I’m sure they didn’t all feel that way though we were fortunate in having some extraordinary graduates who went on to senior positions in ophthalmology.

JENNY: That’s great.

ROBERT: You know, I’ll just add... I do think, and similar to Col. LaPiana, you left active duties around the same time I did, and I was a program director in the civilian sector, also, having been a program director in the military. And I do think program directors really do have a different... they’re the one that has to sign the paper that said this person is competent, and unfortunately you can have other people that the residents think are good guys and, you know, do a moderate amount of work to train a resident, but they might be willing to tolerate sub-par behavior, because they’re not the one that has to sign the paper, and it could be very hard sometimes to kick them, to say, ‘You got to write something that lets me differentiate is this person competent or not.’

A similar story... I fortunately, probably because I hadn’t done as long, didn’t have as many stories in ophthalmology... but when I was a pediatrician at Tripler Army Medical Center... and I know Colonel LaPiana knows Colonel Jim Bass, probably the best teacher I’ve ever dealt with, bar none, I was dealing with a resident, an intern, when I was a senior resident, who I really thought was incompetent, and I felt very strongly about it, and Col. Bass was a guy with a thick Louisiana accent, and he says, ‘You know, Bob, sometimes you have to tolerate mediocrity.’ And I don’t think I tolerated mediocrity very well, probably any less well than Col. LaPiana did, but.

FRANK: My approach at Reed, the thought I always had was we've got to train people who are competent to go out to a war, if necessary function by themselves, and face all these challenges and all these problems of the injured soldier, and there's no room for anybody in that milieu who can't function competently and conscientiously.

ROBERT: I agree with him a lot. There's that whole added stress when you're going to be a competent eye surgeon, but you're not going to be at a hospital where there's maybe somebody across the hall or somebody in the operating room... I mean, you're it, and you've got to be able to do it all. You've got to do a lot of the cooperation that Col. LaPiana described with ENT and... or maxillofacial, and neurosurgery, and maybe have to be like having bombs going off. And that's a really unique challenge, I think, but it's a great opportunity.

FRANK: I'd just like to add before I forget, one of the wonderful things about training at Reed at the time I trained, was the chief, Col. Jack Passmore, superb surgeon and great teacher and an absolute gentleman, and his assistant chief Bob Penner, a very vibrant, very bright, very helpful instructor. They were a wonderful pair. And then the senior residents my first residency year-- in addition to Dale Anderson there was Roger Ewald and Bill Conrad, great teachers who provided tremendously valuable experiences along with Wilson Moak and Frank Quinn second year residents. In those days the first-year resident learned most of what he learned from the second- and third-year residents, and they were just wonderful teachers and I've always been very appreciative.

ROBERT: I think we've said it all but I'll just thank Col. LaPiana because on the archives committee when... since I was the military guy on the committee and they said, 'Well, who in military... who are the leaders in military ophthalmology you have to interview?' Well, it didn't... it wasn't a tough call, so this was a real, I think, opportunity that the Cogan Society was meeting in Maryland, and Col. LaPiana could hit the metro and come be with us today.

FRANK: Well, I feel very honored to be asked and I'm glad to have had an opportunity to put my thoughts out there.

For any who might wish to know more about eye armor development, Vietnam War ophthalmology and/or care of the eye-injured in war, here are three references:

La Piana, Francis G, and Thomas P. Ward. “The Development of Eye Armor for the American Infantryman.” Ophthalmology Clinics of North America 12.3 (1999): 421-434.

La Piana, Francis G. and Albert Hornblass. “Military Ophthalmology in the Vietnam War.” Doc Ophthalmol. 93 (1997) 29-48.

La Piana, FrancisG. and Thomas Mader. “ Chapter 2. Lessons Learned— Eye Care in the Theater of Operations.” Textbooks of Military Medicine: Ophthalmic Care of the Combat Casualty. Office of the Surgeon General: Desk of the Army, 2003.