Interview with Dr. Ted Miclau
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1. **How much of your professional time do you dedicate to global orthopedic work including research, education, organizational and clinical activities? And how has it changed over your career?**
   Currently, I spend approximately 15-20% on these activities. This is in part because so much of my research interests, administrative, and leadership work also includes international medicine - our group is very involved in this area. Thus, I end up spending a lot of my time during the week doing this type of work.

   Recognize that if someone has a 20-year career, then this is a different type of question to answer because a lot of this type of academic work only started taking off about 10 years ago in Orthopaedic Surgery. Our center was one of the first to start building academic relationships and resident rotations. In the beginning, this work was mainly through medical tourism or volunteerism, and if you weren't into doing that, your options were limited. Now it is very much an academic pursuit. It's not just that you are taking time off of work to do clinical work, now you can write papers on this and apply for grants. Our group has been involved in writing grants through the NIH Fogarty Institute. Like other institutions, our university has a Global Health Sciences Program that we are working to integrate with, which contributes to more cross-disciplinary scholarly activities than used be available in the past.

   Overall, I'd say probably it's been a relatively linear increase in time dedication. It's definitely increased recently over the last two to three years, since we have a lot of new faculty interested in this work and, with new funding, new dedicated staff. And this new staff requires interaction, to work on all these things as a team.

2. **How often do you travel to your internationally based sites and how long do you visit for?**
   My particular area of interest (everyone has a particular area that they are interested in) is in developing education and research capacity in Latin America. What that requires is the identification of key targets, not just opinion leaders, but people who actually run things, that we try to engage with to participate in exchange of information with each other and us. We also try to build capacity through them, and often that's through national meetings. It can be through other new organizations like one that we have supported through UCSF, such as ACTUAR (Asociación de Cirujanos Traumatólogos de las Américas), which has monthly

meetings and involves doing research projects. Interactive involvement teaches members things like how to get ethics approval, work on experimental design, enter data, and ultimately it helps them to publish. However, most importantly, it creates a research effort that involves them collaborating with each other. Overall, we are fortunate in our group that our group's compensation model is a salary-based one, and not purely RVU-based, which enables those interested to participate in international activities.

3. **How is this worked into your clinical practice?**
   The beauty of trauma is that you can show up, be on call and do cases. Between my academic and administrative work, my own major focus is doing cases when I'm on call. For me to be able to work a day a week doing international activities and also travel, being a trauma person has really helped that. The way that our group works is that there are teams, so when someone is away, their colleagues can cover, and in turn, when their colleagues are away, they can cover.

4. **How have you been able to financially support your international work (e.g. grants, individual donations, institutional support, etc)?**
   It is very difficult to get grants, and extramural funding to support salaries is extremely difficult. You often can get it for small projects. Philanthropic funding is the same way. It would be unusual for you to find a source of philanthropic funding that is large enough to sustain your group and, in particular, pay for time that faculty need to participate. So, we haven't had that. To date, all of our faculty is salaried, so our group collaboratively puts all grants and clinical revenue into [a single] bucket. It's included in the salary as part of the baseline, and so we've been able to succeed because we have a centrally based financial model [that supports these endeavors].

5. **What do you think we as trainees should know as we look forward to starting our careers in terms of groups we should identify or items we should negotiate for in contracts in order to continue to do global orthopedic work?**
   This is a larger discussion because if global orthopedics is becoming an academic pursuit, then you need to treat it like an academic pursuit. For instance, you need [to ask for] a certain amount of time and resources for your particular interest.

   The big difference between doing this type of work and basic research program, (and I do both types of work) is that with basic research work you can develop this work locally and have a certain amount of time blocked out. You could, with basic science, come in with a specific amount of start-up funding that would allow you buy equipment and fund a technologist, so that you could apply for a grant. With global

work, it is difficult to find grants to do this, so you need to have institutional support to financially manage this, which makes it a more difficult negotiation.

Also, if you are going to travel, this requires a different amount of commitment and how that will be viewed by those in the group. Some may not view this in a very positive way. For instance, people might be upset that Dr. Smith isn't around for two weeks while he's in Africa. Having faculty members recruited to do this work requires insight, leadership, and commitment, as well as take a separate type of negation.

Finally, you have to realize that extramural funding sources are very scarce. It's not a process of building up preliminary work so you can apply to NIH, which you should definitely try to do if at all possible. Thus, one has to rely on a philanthropic donations or your departmental commitment to do this. The other thing that trainees should be advised to do when seeking positions is to look for a place that is already successful in this arena. It is the same when you are starting other types of research, such as a basic science lab; if you don't have an infrastructure, it will be very difficult for you to succeed. If you do succeed, it will take a while because you will have to build that infrastructure. If you go to a place that already has an infrastructure, then you will have a better opportunity to succeed and you will do it a lot faster, which may be the difference between you continuing to do it and you not doing; usually if you can't get it going 3-5 years, then people tend to do what they know and what is the pathway of lesser-resistance, which means default to [solely] clinical work.

6. **What do you think are the high impact, emerging opportunities or major questions in the area that you particularly work in?**
   The emerging opportunities include the ability to develop approaches that are not just one-off medical visits. We have the opportunity to engage with educational and research interests either between institutions or within groups of committed orthopedic surgeons. I do think groups like ACTUAR and COACT, as well as a handful of other organizations that are multi-intuitional, are opportunities for individuals. Individuals no longer have to create their connections from scratch and may even have funding to support their work.

   There is still the opportunity to do all the volunteerism, and I think that these organizations are better funded then they were in the past. However, I personally believe that highest impact activities are those that impart educational opportunities and network internationally to empower the local leaders and the national/regional/local orthopedic communities to address what they need to

address. If you can get them asking the questions and answering the issues, that is more effective than someone else trying to address those issues for them.