

2009 Presidential Address: Mentoring . . . Touching the Future

R. Paul Robertson

Mentoring may be the most important thing we do on a daily basis. It produces some of our greatest experiments and successes, our mentees themselves. Ironically, although we are fond of publishing data from diabetes research, we never publish the results of our mentoring in contemporary literature. We must turn to oral and written history to even define the word “mentoring.” What exactly is it?

A modestly revised version of Greek mythology. The word “mentor” evolved from Homer’s opus, *The Odyssey*. Odysseus (or Ulysses, his other name) was a graduate of Cornell University and became King of Ithaca. He was very conflicted about fighting the Trojan War. To avoid going to battle, he pretended to be crazy by plowing his field with salt. However, the Greek military was suspicious and tested Odysseus by putting his newly born son, Telemachus, in front of his plow. Odysseus stopped plowing to save his son. Having thus demonstrated his sanity and blown his cover, Odysseus joined the army and sailed up the wine-dark Aegean Sea to Troy where he entered graduate school in the Greek War College. His research project was to ascertain the effect of wooden horses on warfare. Before leaving Ithaca, Odysseus had asked an elderly friend named Mentor to provide advice to Telemachus, as well as to his lovely wife Penelope.

After fighting the Trojans for 10 years and defeating them, Odysseus received his first patent for inventing the Trojan horse and in many other ways distinguished himself in wisdom and leadership. He received his PhD in Creative Combat and then started out on his victorious trip home, sailing south and seeing the sights in the Aegean Sea. However, he encountered storms, took several wrong turns, and wound up traveling around the southern Mediterranean, Tyrrhenian, and Ionian seas for 10 more years. This became his first postdoctoral experience. During his travels he escaped the lethargic land of the Lotus eaters in Tunisia; conquered Cyclops, a Sicilian monster; confounded sirens off the coast of Italy by having himself tied to the mast and putting wax in his sailors’ ears; and escaped a six-headed monster in the straits of Messina. Finally, he made his way back home to Ithaca disguised as a beggar.

Faithful Penelope had been fighting off unwelcome suitors those 20 years and failed to recognize Odysseus at

first when he returned. But his faithful old dog did, wagged his tail, and promptly dropped dead of old age. Odysseus then identified himself to his family and to Mentor. Together they hatched a plot to get rid of the suitors. Penelope fetched an old bow used by Odysseus and challenged her suitors to demonstrate their prowess with it. You can see the happy ending coming. None of the suitors were strong enough to string the bow. Odysseus did so easily and with it killed Penelope’s suitors. Like a true mentor, the good counselor Mentor simply faded into the background and took no credit.

Diabetologists as mentors. What does all this have to do with mentoring within the American Diabetes Association (ADA)? As scientists, clinicians, educators, and health care providers, we mentor all day long. We train younger professionals who come into our labs, clinics, and classrooms. They come to learn theory and procedures. They seek our words of wisdom on all sorts of things: how to properly form and test hypotheses, how to run a gel; how to program an insulin pump, how to juggle drugs to prod our patients’ sluggish β -cells, how to formulate optimal diets for our patients, and how to educate the public about social and financial impacts of diabetes. Senior mentees next begin to mentor junior mentees—students and patients—and thus the cycle of mentoring is played forward. Then an amazing thing happens. The very people we are mentoring begin to mentor us. There is a name for this: reverse mentoring. Students and fellows bring us new information from the Internet. On rare and miraculous occasions of unguarded curiosity when their computers are down, they even go to libraries and find information for us from real, rather than virtual, journals.

Many of us have the special privilege of mentoring diabetic patients and their families. We serve as coaches for these truly impressive athletes as they struggle with, adapt to, and overcome major challenges that never seem to relent. If we listen carefully, they also mentor us. They often teach us ways they have discovered to better control their personal glycemic swings. They help us to understand that today’s improved methods of diabetes care are not always available to all people in all cultures.

Perhaps the most intense mentoring we experience comes in the form of study sections, manuscript reviews, and accreditation committees. Admittedly, these experiences may not be always thought of as mentoring—maybe some other kind of experience. Perhaps they represent our own Greek odyssey filled with perceived monsters and dangers such as conflicts of interest, professional jealousies, passive aggressiveness, or at best just plain obtuseness. As an example, think again of Odysseus tied to the mast, feeling helpless. Perhaps he has just submitted his proposal for a junior faculty award. The study section rowing his boat still has wax in the ears and does not appear to be listening.

From the Pacific Northwest Diabetes Research Institute and the University of Washington, Seattle, Washington.

Corresponding author: R. Paul Robertson, President, Medicine and Science, American Diabetes Association, rpr@pnri.org.

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But, in truth, scientific peer review provides valuable mentoring experiences in professional life. My friends in the business world are amazed by this. What group of businessmen would agree to review their colleagues' work with a fine-tooth comb, climb onto airplanes to fly to Washington DC, and then spend days away from their families and their own work to provide valuable consultation? All this with no significant financial compensation. Surely, we are a unique group of professionals mentoring and teaching fellow professionals, which brings me to this year's Scientific Sessions.

Sixty-nine years of annual medicine: science meetings. This annual migration of people interested in diabetes began 69 years ago. The first ADA Scientific Sessions was held in Cleveland, Ohio, in 1941, with 250 physicians in attendance at the Hotel Hollenden (it is curious but noteworthy that Cleveland is located just southwest of a town called Mentor in northeastern Ohio). The program listed a grand total of five presentations. Of interest, it was 14 years later, in 1955, that ADA awarded its first two research fellowships to two young scientists. One of them worked in the laboratory of Dr. Albert Renold. Today, in his memory, the ADA annually grants a prestigious award for mentoring, the Albert Renold Medal. By the mid-1960s, diabetes had tripled in incidence compared with 20 years previously—sounds similar to today's epidemiologic trends. The book entitled *The Journey and the Dream*, a history of ADA, tells us that in 1970 ADA reorganized into a voluntary health agency with the primary goal of funding research. That phrase is worth repeating: with the primary goal of funding diabetes research. When I presented my first ADA talk in 1972 in San Francisco, California, the audience fit into two rooms in the Sheraton Palace Hotel. The program consisted of 62 talks and 108 abstracts, and poster sessions were nonexistent.

Things look very different these days. I don't have all the data for this year's Scientific Sessions, but here is how they looked last year, in 2008:

- Pages in the meeting program: 1,034
- Abstracts presented orally: 397
- Total abstracts submitted: 2,879
- Attendance: 20,562
- Attendees from the Americas: 59%
- Attendees from Europe: 35%
- Attendees from Asia and the Pacific: 6%

The medical and scientific progress that attracts us to this meeting has come at a price. We now meet in gargantuan halls that no hotel in Cleveland could accommodate. We encounter more strangers than we greet familiar colleagues. The Greek god Hermes comes to mind. We all could use his winged feet, or at least track shoes, to get from one session to another. Our sheer size limits the number of cities that can handle us. Old timers suffer from painful nostalgia of smaller meetings 40 years ago. Our Scientific Sessions is increasingly confronted with enormity and anonymity.

To keep a human dimension to this large meeting, steps we have already taken include keeping some interest groups in one meeting room for most of the Scientific Sessions. Doing this conveys the sense of a smaller meeting but still enables attendees to go to the larger sessions and exhibit hall. We are exploring whether we should expand this concept to other interest groups.

Certainly, we do not want to lose the opportunity to hear what is going on in all areas related to diabetes. We know that learning about developments in one area of science often gives us ideas about what we might do in our own area of expertise. However, we need to find more effective ways of providing easier access for younger scientists and clinicians to their more established colleagues in a more social, user-friendly environment. This will facilitate exchange of ideas and experiences as well as identify new academic and employment opportunities for postdoctorate scholars and faculty.

Working as one ADA. I mentioned earlier that ADA and the field of diabetes have grown enormously in the past 69 years. Yet the number of research awards we give has barely grown at all. Recognition of excellence is an important aspect of our professional lives, so we have begun to reexamine how we do it. Recently, ADA has convened a dedicated group that studied this issue, and it has recommended an award process that will more completely recognize the excellence in our various disciplines. Stay tuned; you will hear more about this later in the year.

In other important news, we have just begun a series of meetings with The Endocrine Society. Our joint goal is to identify how we can work together to foster quality medical care and to influence public policy issues. This seems only sensible given our limited resources and the huge amount of work in diabetes and obesity we can tackle together.

This meeting is focused on reporting progress in medicine and science, which raises the question, what have we accomplished during all the years since 1941? Thumbing through abstract books published over the past 40 years relates clearly that the scientific and clinical material presented at our meetings has greatly escalated in quality and quantity. Yet, the cure of diabetes continues to elude us. The current global epidemic of diabetes tells us we are not winning this war. The startling appearance of type 2 diabetes in our youth alarms us. The parallel epidemic in obesity greatly compounds the problem of diabetes. These incontrovertible facts reinforce the obvious that we must work harder, think more creatively, and achieve our scientific goals more quickly.

This is easily said but hard to do. Just dreaming about accelerating diabetes research will not do the job. A successful response to these demands will come only at a price. We must seriously increase the fiscal support of research provided by ADA as well as all potential funding sources to more vigorously fund research that will allow us to overcome this disease. In terms of ADA funding, there is good and bad news. The good news is we have had a steep rise in research funding since the mid-1990s. The bad news is that research support reached a plateau over the past 4 years. Other good news is that the number of grants funded by ADA has not decreased over the past year, when some organizations severely cut back their funding of diabetes research altogether. The worst news is that fundraising by ADA and its investment portfolio have been hit especially hard by the economy in 2009. This has led to a layoff of ADA staff nationally as well as a decrease in funds available to support our research program. Consequently, we had to do something to manage this problem.

The choices for ADA research were to stop funding new grants completely beginning July 2009 or to find a way to distribute less money evenly among all grantees. The

Executive Committee decided it is just not acceptable to stop funding new research. There are too many new ideas, exciting opportunities, and excellent diabetes investigators to permit this. Consequently, our strategy will be to administratively decrease budgets of our new and current grants, in roughly the same manner we have seen at the National Institutes of Health over the past 2 years. This is certainly discouraging but not devastating news. Although painful, this strategy will allow us to ensure that the ADA research program is still open for business and still funding new research. We will use the message that ADA is still funding new research as a strong incentive for greater fundraising so that we can become financially whole again.

Moreover, the Executive Committee of ADA has resolved that as soon as the economic situation at ADA recovers, the first program to be financially restored will be its research program. ADA recognizes that we have come too far to falter. We have had too many glimpses of cures on the horizon to bog down in despair. We know that failure is not an option. We have trained too many young basic and clinical scientists to abandon their futures, which once again brings me back to mentoring.

We as an organization and as individuals must mentor society and government about the need to fund diabetes research. We need to let people know what it will take to translate our scientific and clinical knowledge into prevention and more successful clinical management of diabetes. We need to educate one another about the massive strides ADA has made in issues of advocacy for patients with diabetes and their families. We need to appreciate and support the ADA's relentless efforts to raise more money and make us a more effective organization. We must remember that we are all colleagues on this journey.

Our biggest fundraising event throughout the nation takes place in October. Its name is Step Out. We need to thank our fundraisers for what they have done in the past and now ask them to work even harder. Those of us from the U.S. need to participate more fully in these fundraising events by walking further, golfing better, biking longer, running faster, contacting more potential donors, and digging deeper into our own pockets to fund ADA research.

The various interest groups in ADA are major resources for our mission. They have been immensely successful in many ways. Yet, we are smart enough to realize that we will get further faster by working together as one large force to reach our many objectives. Borrowing a page from President Obama's playbook, let me say that the best plan is for there to be no separate departments for Science and Medicine ADA, no Fundraising ADA, no Administration ADA, no Advocacy ADA, and no Education and Health Care ADA. The best plan is for there to be only one ADA

and that ADA is all of us working together to do what we must do to gain control over this disease and all its complications.

Personal lessons learned from mentees. I want to finish this address by focusing on the futures of the younger scientists and clinicians we have mentored. I have been privileged to mentor many special people at the Universities of Washington, Colorado, and Minnesota. It is their hard work and dedication that led to our publications. During all these years, I have learned something special from each of them: examples of reverse mentoring. We know that training and supporting young people such as these have become increasingly more complicated for a variety of reasons. This makes our jobs as mentors even more essential. We know our mentoring will provide more promise for the future than anything else we can do. We know that our greatest personal legacies will be the provision of tomorrow's leaders.

This causes us to consider: what are the characteristics of a successful mentor? Here are some of the lessons my mentees have taught me.

To mentor is:

- to be a selfless senior colleague
- to listen and understand personal and professional dilemmas
- to teach mentees problem-solving skills but, at the same time, refrain as much as possible from solving problems for them
- to follow up on mentoring sessions to hear outcomes of decisions made and to consider alternative courses of action when needed
- to guide firmly initially but increasingly let go at the earliest opportunity
- to maintain strict confidentiality
- to encourage and celebrate and to give spontaneous hugs and high fives whenever and wherever warranted
- to understand that when serious personal interventions are needed, they should be provided and although this can be difficult, to understand it is the essence of being loyal
- to stand back and take quiet personal pride in mentees' successes and to avoid taking any credit for them
- to suffer in silence around junior colleagues when one's own personal problems with grant or manuscript reviews plague us and to focus on encouraging, not discouraging, the dedicated men and women who come to us to learn and to carry our batons and their torches into the future
- above all, to always remember that, to paraphrase astronaut Christa McCullough's inspiring words, when we mentor, we touch the future. It can be an awesome experience.