

from three universities: Boston University, the University of Kentucky, and the University of Louisville. Other awards include the Meritorious Service Award and the Distinguished Service Award from the US Department of Health Education and Welfare, the Fédération Dentaire International Award of Merit, the Outstanding Pro-

fessional Award from the Pierre Fauchard Academy, and the AAPHD's Distinguished Service Award. He has been honored as alumnus of the year by both the University of Louisville and the University of California, Berkeley School of Public Health.

John, all of us in dental public health

are grateful for your hard work and the many contributions to our field. It is my pleasure to introduce the 1997 recipient of the John W. Knutson Distinguished Service Award of the Oral Health Section of the American Public Health Association—Dr. John C. Greene.

## Remarks by Dr. John C. Greene on Receiving the John W. Knutson Distinguished Service Award

**John C. Greene, DMD, MPH**

I want to thank the Oral Health Section of the APHA for presenting me with the 1997 John W. Knutson Distinguished Service Award. I am deeply touched by this prestigious honor. It means a great deal to me to join the ranks of those giants in dental public health who have been so honored before. I have had the privilege of meeting all of the previous awardees and have worked with or for many of them. To be listed with them is a great honor, indeed, and one which I shall always cherish. Special thanks to Dr. Jared Fine, Oral Health Section chair, Dr. Esther Colchamiro, Awards Committee chair, and to the Awards Committee for this great honor. Many thanks also to Dr. Christopher Fox and the Colgate Oral Pharmaceuticals of the Colgate Palmolive Company for making this award ceremony possible and for the generous honorarium.

This award has very special meaning for me since it was established in honor of Dr. John W. Knutson, who was my mentor for two years while he was chief dental officer of the US Public Health Service. Dr. Knutson was a visionary leader who by his stature, position, personality, and persuasion had a major impact on dentistry worldwide. He was active not only in the PHS, but also in the American Public Health Association (the first dentist to serve as its president), the American Dental Association, the Fédération Dentaire Internationale, and the World Health Organization. Dr. Knutson was a man of considerable physi-

cal stature, personal presence, and professional standing. He set high standards for himself and for those around him. I found him to be very thoughtful and caring, with a great sense of humor. Working for him was a high point in my career and I am very thankful for that honor and privilege.

I want to thank Dr. Bird for his generous introduction. I especially appreciate all of the effort he went to, to check on my background. He was very flattering and I appreciate the fact that he shared only positive things that he learned about me and my career. Now I would like to provide some balance to this picture, or as Paul Harvey would say, "Now for the rest of the story." I hope you will indulge me as I take you on an informal walk through a few aspects of my career and tell you about some things that never appeared in print.

I didn't start out to be a public health dentist—or even a dentist, for that matter. My goal was to be a gentleman farmer in the Lexington, Kentucky, area. But after returning from a short tour in the Navy during world War II, I went to the University of Louisville School of Dentistry. After graduation I applied for an internship in the US Public Health Service. The PHS regional dental consultant contacted Professor Robinson at the University of Louisville, and asked him what he thought about me and whether he would recommend me for the internship. He said he didn't know much about me except that I graduated with

an excellent record and that I used to sleep through his classes in public health. He said he had checked on me to see why I slept so much in class and after he found out what my schedule was he felt sorry for me and just let me sleep. You see, I had to work to be able to pay tuition and living costs and I was so tired on Monday mornings when his classes were held I used to sit in the back of the room and sleep.

After my PHS internship in Chicago, I was transferred to San Francisco to be a member of the hospital dental staff. I developed a keen interest in oral surgery and filled out my application for oral surgery training by the PHS. But before I could mail it, I received transfer orders to the San Francisco regional office. It seemed that a fellow Kentuckian, Dr. George Nevitt, had taken an interest in me and requested that I be assigned to his office. That was my first exposure to dental public health—not by choice, but by assignment. I asked Dr. Nevitt what I was supposed to do, since dental public health was all new to me. He took me to the adjoining office and introduced me to Mr. Jack Vermillion and asked him to give me an orientation and to tell me what to do. Jack gave me a huge stack of books and papers to read and gave me a rapid course in dental public health, which was the beginning of my public health career. It also was the beginning of a special personal and professional relationship that has endured these many years.

While I was in the regional office, a psychiatrist suggested that people who are mentally retarded from birth might have compromised immune systems and might have more periodontal problems than others. Jack Vermillion and I began to try to figure out a way to test that hypothesis. That led to a search for a systematic way to evaluate oral hygiene status. Since none was available, Jack Vermillion and I devised the Oral Hygiene Index (OHI). This very involved study yielded no significant conclusions other than that mouths with poor oral hygiene had more periodontal disease. The study was not published, but the OHI was, some time later.

Two years later, while I was thinking about going into private practice, Dr. Donald Galagan called and asked if I would like to be assigned to the Center for Disease Control (CDC) in Atlanta as a member of the Epidemic Intelligence Service (EIS) to become a dental epidemiologist. I accepted the new assignment and went to Atlanta, where I had six weeks of intense indoctrination in acute disease epidemiology before being assigned to a field station at the University of Kansas Medical Center in Kansas City. There I worked with a team of epidemiologists who chased epidemics around the country. We investigated such outbreaks as equine encephalitis, food poisoning, polio-like diseases, and clusters of cases of histoplasmosis. We also attended numerous conferences.

One conference on valley fever was held in Scottsdale, Arizona. It seemed interminably long and boring, so a young physician with whom I had driven to the meeting and I drove to Guaymas, Mexico, and went deep-sea fishing. We fished for two days, but didn't even get a nibble. But before we left we had our picture taken with two huge sailfish that were conveniently hanging on the dock. When we returned to Kansas City we showed off our pictures to our fellow workers at the field station. They were so impressed with the fish picture that we decided to play along for a while and let them think we had caught them. As time went by, it became more embarrassing to tell the whole story. A few months later another young physician said he would like to go deep-sea fishing for marlin out of Mazatlán, Mexico, and invited me to go with him since I was so experienced. We ar-

ranged to go and on the first day out he hooked a huge marlin and turned to me and said, "John, what do I do now?" That's when I told him that I had never caught a big fish in my life, but that I would get the skipper of our boat to help. Pat was so upset with me that I thought I had lost a good friend forever. But since we both had such fantastic luck that day (we each caught a 9 1/2 foot marlin) we became even closer friends. I learned again that it is always better to tell the whole truth and not to mislead anyone, even in jest.

On my return to Atlanta following the Kansas City assignment, I attended an annual EIS conference. After one of the presentations I stood up to ask a question of the presenter and a beautiful young lady brought me a microphone. After the meeting was over I asked who she was and where she worked. I quickly followed up and located her in an office in CDC. That young lady and I will be celebrating our 40th wedding anniversary next week!

While in Atlanta I first met Dr. Al Russell, who had developed the Periodontal Index (PI). He was with NIDR and was working with Dr. Polly Ayers to gather periodontal information on schoolchildren. At his request, I worked some with him and used the OHI in addition to the PI. Soon after that I received a call from Dr. Knutson asking me to go to India to help them study their periodontal problems. He had received a request from the chief dental officer of India through the WHO. Dr. Knutson and Dr. Russell wanted me to promote the use of the PI in India. Since I was not a periodontist they arranged to have Dr. Sigurd Ramfjord, a renowned periodontist, go as well. Dr. Ramfjord also had been developing an index of periodontal disease and plaque that he wanted to promote in India. When we arrived in Bombay, we found out that a two-week training conference had been arranged for us to teach faculty from their 13 dental schools how to conduct epidemiologic studies of periodontal disease. So during those two weeks we taught them how to use the Russell and the Ramfjord indexes.

After the training conference was over, we conducted field training for dental faculty while examining teenagers in villages near Bombay. I used the PI and the OHI and Ramfjord used

the Ramfjord Index on the same people. While it was never published, a later comparison of the data gathered using the two quite different approaches on the same individuals reached the same conclusion. That is, there is a close association between plaque and the presence and severity of periodontal disease.

One day, after we had been there about two months, Dr. Ramfjord said there was something he thought he should tell me. He had had a conversation with Col. N. N. Berry, the chief dental officer in India and Prime Minister Nehru's dentist. Col. Berry wanted to have long-term help with their periodontal problems and he wanted to know what Dr. Ramfjord thought about having me assigned there to provide the help they needed. Dr. Ramfjord told him he thought I would do a great job, but that he thought I had other ideas. He knew I was getting mail almost every day from a young lady in Atlanta and that I was anxious to get home. Col. Berry said that to keep me there he would call Dr. Knutson and have him assign me there long term. Dr. Ramfjord told me that if I wanted to go home I had better do so quickly before Col. Berry talked to Dr. Knutson. So I thanked him profusely and got on the next plane I could get without clearing it with either Col. Berry or Dr. Knutson. A few months later Gwen and I were married in Atlanta.

We were married in November and in February we were transferred to NIDR to work with Al Russell. He was a great teacher and brilliant epidemiologist from whom I learned a great deal in the short time I had with him before being transferred to be assistant to Dr. Knutson. Dr. Knutson was another excellent teacher. He took me with him to many meetings and conferences so I could see how the government worked at that level and he insisted that I find time to continue my work in dental epidemiology.

While I was in Dr. Knutson's office, I was invited to go with a nutrition survey team to Ecuador for two months. Dr. Ernest Leatherwood and I were to gather dental data and relate that to the nutrition information collected by experts from several universities. The whole trip was a fascinating experience. One particular side venture that Dr. Leatherwood and I took was especially interesting and intrigu-

ing. We decided to follow up on an obscure news article that described an unusual observation made by some missionaries living in the jungles of the headwaters of the Amazon River. They reported that they had found a tribe of Indians who had no tooth decay, but their teeth had black stain. This tribe of Jívaro Indians was described as head hunters and very primitive. We flew into the jungle on a missionary supply plane to see what we could find. Sure enough, the Jívaro Indians we saw had no tooth decay and no significant periodontal disease that we could see, even in people we judged to be over 40 years of age. They did have black stain on their teeth that they said came from berries they chewed periodically to "keep the bugs out of their teeth." We found no traces of fluoride in the water and an analysis of the berries at NIDR yielded no clues as to what role they may have played in contributing to good oral health.

A special treat for us was watching two women make their native alcoholic beverage—"cheecha." Two women cooked roots of a special plant in a large pot over an open fire. While one stirred the other one watched for lumps to come to the surface and grabbed them with her fingers and chewed them up and spat them back into the pot. They kept taking turns stirring and chewing and spitting until it was done. I don't know how long it takes for this whole process to work and for the yeast-laden brew to ferment. But it was a sight to behold and noisy to listen to. When they offered us an opportunity to taste their fine product, we quickly disappeared into the jungle. On my return, Gwen met me and my nine-foot blow gun at the airport to welcome me back after the two-month sojourn in Ecuador.

After receiving an MPH degree in epidemiology at the University of California, I was assigned to the Division of Dental Health's Dental Health Center in San Francisco. I was able to convince Jack Vermillion to move from division headquarters to join me and we started a number of interesting programs in dental epidemiology. It was at that time that Jack and I published the simplified version of the Oral Hygiene Index.

After I had enjoyed five exciting years at the Dental Health Center, Dr. Viron Diefenbach asked me to join him as deputy director of the Division of



*Dr. John Greene examining children in Ecuador, 1959 (Nutrition Survey).*

Dental Health in Washington. About a week after I arrived, I received an urgent phone call from the surgeon general telling me that because Dr. Diefenbach was out of town he needed me to go to New York that night to give a talk to the Bronx Dental Society. The congressman who had planned to be their guest speaker would not be able to go. He didn't want to listen to any of my excuses, so he told me to drop everything and go. I called the congressman and asked him if I could have a copy of the remarks he had planned to use, but he refused to let me have them because he might want to use them at another time. I found one of Dr. Diefenbach's old speeches and then called the president of the dental society in New York. I told him I would be there provided that he would promise to meet my plane, take me to the meeting, and explain to the audience that due to my tight schedule I would not be able to take any questions and that I had to leave immediately to get back to Washington. (I didn't want any questions because I had no idea what I was talking about!) It worked and I got out alive. That was my introduction to the Washington political scene!

Dr. Diefenbach was an excellent mentor. He was a visionary, creative, and energetic leader. For example, he proposed that we consider the merger of the Division of Dental Health and the NIDR to create a national institute of dental health. Staff of the two organizations held numerous confidential meetings to work out the details of

such a merger. In retrospect, I believe it is unfortunate that such a merger never came about. It would have given the institute a broader scope and might have enabled the programs of the dental division and the Dental Health Center to continue much longer.

Following Dr. Diefenbach's retirement, I became division director before moving up to be director of the Bureau of Health Resources Development. After being in that role only six months, the court ordered President Nixon to spend the congressional appropriation that he had impounded. As bureau director I suddenly had the responsibility for spending 1.4 billion dollars in six months, by court order. That was an amazing experience. I never knew I had so many friends or how difficult it would be to spend that much money, but with the help of an outstanding executive officer, Ed Deyer, we managed.

My selection to be the first non-physician deputy surgeon general came as a tremendous surprise. Dr. Richmond was another great mentor and became a valued friend. That tour of duty took me to places and put me in situations I never even dreamed of and provided me with invaluable experience. I considered it forced career development. The surgeon general maintained a horrendous schedule. I never knew when his schedule might change or when I might have to fill in for him. For example, one time Mrs. Carter, on only a few hours' notice,

asked Dr. Richmond to accompany her to Cambodia. So, in a matter of two days I spoke at a black tie dinner for the Friends of Harvard, gave an address at the American Hospital Association, and held a press conference on breast cancer at the Waldorf Astoria in New York. None of these dealt with dentistry. Serving as deputy surgeon general was a great privilege for which I am most grateful.

I retired from the PHS on a Friday and started as dean of the University of California San Francisco School of Dentistry on the following Monday. My introduction to this new role was a real surprise. The student body president came by to pay a courtesy visit on my first day. Before he left my office, however, he let me know that the students were planning to boycott the school clinics the next week because they didn't like the way the school was being run. What a welcome for a new dean! Fortunately, it gave me an excuse to meet with the students and address their concerns during my first week.

Becoming dean as a nonclinician, a nonacademician, a federal bureaucrat, and a nonalum of the University of California was another great challenge for me. But, fortunately, with the valuable experience gained in public health, and the help of some remarkable faculty, staff, and students it

turned out to be a fabulous experience for me and the school has survived and continues to do well.

I would like to leave you with a few thoughts about the future. During my 45 years in the profession I have seen tremendous improvement in the status of oral health in this country. Just look at one indicator—edentulism. It used to be almost automatic to lose your teeth by age 65. But today the prevalence of edentulism is so low that dental schools are finding it difficult to find enough cases for students to get even minimal experience in making complete dentures. I am convinced that the impressive progress that has been made in the past four decades would not have been made if it were not for the persistent work of those in dental public health. I believe the key has been persistence—persistence in conducting research to identify the problems, finding practical approaches to prevention, developing a preventively oriented work force, educating the public, and carrying our message that oral health matters beyond the dental community.

But all segments of our society have not shared equally in that improvement. Thirty years ago this month I spoke at both the Dental Health Section of the APHA and the AAPHD and at that time I and others spoke of the uneven access to good oral health and the need for us in public health to do

something about it. Unfortunately, that problem still exists today. I was optimistic about the future then and I remain so today. I believe that if we continue to persist and seek ways to improve access to oral health we will continue to make a difference.

I would like to challenge you to make a renewed commitment to that cause and to never become so contented or complacent that you fail to speak out or speak up when there is an opportunity to convey the message that oral health matters, to anyone who will listen. Oral health matters to everyone, not just to those who can afford it. If you don't have oral health, you are not healthy, as Dr. Koop has said, and if you are not healthy, your quality of life is compromised. While you are doing all of that, be flexible, seize the opportunities that come your way, and make the best of them. In the meantime enjoy life! Take time to go fishing, to go to a few baseball games, and to be with family and friends.

To sum up, I have thoroughly enjoyed my multifaceted career in dental public health, which was made possible by so many, many wonderful, talented, and dedicated people, too many to try to name. It is on behalf of all those people to whom I am so deeply indebted that I gratefully accept this prestigious award honoring Dr. John W. Knutson. Thank you.