First let me say how much I have enjoyed these meetings over the years, now almost a half century. But it was even more fun last night to go to the airport and see a sign that those over 75 years of age don’t need to take off their shoes when going through security. But it got better. I went through security with my shoes on and I got carded!! Airline travel can still be fun.

Alex Langmuir, the man who promoted epidemiology in daily public health practice, used to say that stripped to its basics, epidemiology was nothing more than collecting a numerator and a denominator, calculating a rate, and then interpreting that rate. In practice, of course, it is much more difficult.

Do you look at your job description and wonder, “Is this really what I do?”

I started to think about the job description some years ago when I read an interview with the actor, William Hurt. He was raised in various countries, has a global view, and was asked, “If you had not become an actor, what do you think you would have liked to do?” He said he had been looking at descriptions of various vocations and he thought he would like to be an epidemiologist. He went on to say that the description seemed to cover so many things and he would have enjoyed such an eclectic occupation.

Maybe he didn’t know the half of it. The history is quite clear. The work of epidemiologists has led to:

- Infant mortality reductions that are astounding. Down 95% over one lifetime.
- Life expectancy increases that led my father to have a gain of 12 hours a day over his lifetime of almost 96 years.
- A growing list of diseases of little concern to the vast majority of people.
• And generally apathy – Even those of us in this room don’t often think with gratitude that a group of people did things in the past that now keep us free of cholera, yellow fever, smallpox or polio.

For those of you under 57, the absence of polio is still a miracle and perhaps even a mystery. (It was at the Univ. of Michigan in April 1955 that Tommy Francis announced that the vaccine was “Safe, effective, potent.”) Edward R. Morrow, Fred Friendly and others reported on this fantastic news. Mrs. Hobby, Secretary of HEW, had made no provisions for the government to be involved but the public demanded some action and she finally announced that she would seek an appropriation for vaccine for poor children. But Congress declared no child had to say they were poor to qualify and it was the beginning of the social contract to provide equity for childhood vaccines. It made polio and then vaccines in general a true public health tool, part of the social contract.

Two weeks later – The Cutter incident occurred and suddenly the role of epidemiology was highlighted. Alex Langmuir and his team determined that only one manufacturer was involved in producing unsafe vaccine and furthermore he was able to predict the epidemic curve and the second wave before they actually occurred.

There is a history behind the absence of polio in this country…much of it involving epidemiologists. The collection and interpretation of rates may sound simple but it becomes exceedingly complex.

Therefore, the true job description is often mysterious and complex. They don’t actually use these words when they hire you, but some important components of your job description could be described in other, commonly used words. For example - Fortune Teller.

**FORTUNE TELLER**

You are expected to predict the future. In actual fact we are all blind to the future. But, because you have tools, you are considered to have a window to the future.
It involves collecting the signals and signs (Surveillance systems are so much a part of our world that we forget that the first US national surveillance system for any disease was not developed until I was a teenager. It was for malaria. The second was for polio and I was already in college when the third, for influenza, was developed.

Now, you are expected to collect all the signs and information for myriad conditions and interpret them to predict what will happen next and therefore what decisions should be made. You are a fortune teller.

They won’t use this second word either, but examine your job and you will appreciate a hidden clause in your job description. You are often expected to be a

VENTRILOQUIST

Often you are not the one to give the message. Your mouth piece is the governor or a politician. It was Lyndon Johnson who announced the program to eradicate smallpox. It was Gerald Ford who was the mouth piece for the Swine Flu program.

In my book, I highlight a talk by the Bihar Commissioner of Health as he launched the final effort in a state that was experiencing 1500 new cases of smallpox a day (1 new case each minute)! No one but the Commissioner could have rallied the thousands of workers to the level needed. He had to have the impact of General Patton.

In part, the Commissioner said:

We are meeting today to launch the final phase of smallpox eradication in Bihar State. The world is now depending on our success in this venture and I request your best efforts to see that we do not fail…

Chief emphasis during the next three months will be placed on two activities. The first activity is to find all cases of smallpox…The second activity involves control of each outbreak…Since this strategy has worked well in 27 countries over the past 6 years I fully endorse applying the strategy in Bihar State and propose the highest priority be directed towards smallpox until it has disappeared. I must caution you that the key ingredient
of the campaign will not be words or money or vaccine but will instead be the dedication with which each of you approaches this historical campaign.

I wish you a good meeting, a good campaign and I look forward to the day when we all can enjoy a smallpox-free Bihar State. (4)

I can tell you he had those workers fired up. They were ready to march into battle.

I don’t disclose this in the book…that I wrote his talk the night before, sitting in a hotel room where the kitchen had been sprayed and my room was overrun by cockroaches. I finally had to ignore them as I concentrated on the talk. You see, being the ventriloquist gives you power. Your words are repeated by someone who has the power to move the audience and you have the power to educate that person. Don’t ever feel slighted by being the accurate voice behind the public person. That person thinks you are serving them. On the contrary. They are serving you.

So fortune teller and ventriloquist. But you are also expected to be a…

PROPAGANDIST

The word has now been tainted but its real meaning used to be as publicist, essayist, speaker. And that is what you are. Even when not playing the ventriloquist, you are where you are because you are trusted. And you must take the opportunity to tell truth.

You can give meaning to words and phrases that are picked up by others.

General Marshall didn’t write the Marshall plan. It was written by Will Clayton. It wasn’t first given by Marshall. It was given by Dean Acheson at the Delta State Teacher’s College in Cleveland, Mississippi. But it got meaning when repeated by General Marshall at the Harvard Commencement.

So Will Clayton became a ventriloquist with words…a propagandist. When Churchill came to this country after the Second World War and gave a commencement talk, his phrase, “Iron Curtain,” rang through the land.

No one, at that time, seemed to ask where he had gotten that phrase. It was from a master propagandist. The phrase was used in a speech in December
1944, given by Joseph Goebbels. He then used it the next month, January 1945, in a publication and the speech was copied in the London Times.

But there are other surprises in your job description. You are expected to be a...

**MASTER OF DEVIATION**

It is true that the philosophical basis for public health is social justice. It is also true that the scientific base for public health is epidemiology. That strikes me as very interesting because a century ago we didn’t have a single department of epidemiology in a single school of public health in this country. But then, of course, we didn’t have a single school of public health.

That was still a few years in the future. Then Rockefeller funded the beginning of the school at Johns Hopkins. The Public Health Service made its contribution by seconding Wade Hampton Frost to establish the first department of epidemiology. He had field experiences with yellow fever, tuberculosis, influenza etc. He was a master at teaching, and later became the dean. Now epidemiology is the absolute base for everything we do in the field.

Some of the measures we use are daily fixtures in many fields. The mean and median of course come to mind. But one of the important measures, used by many and understood by some, is standard deviation. It is key in public health because it helps us to identify the disenfranchised. If we are to achieve social justice, we need to understand the distribution around the mean. I challenge public health students to figure out how to make that so understandable that it could become a visual for USA Today. If the world lacks an understanding of it, they still expect you to understand it, hence to become a master of deviation, and to design programs that reach those who fall far below the mean.

Are you getting tired of this attempt to redefine what you do? There is more, because the public absolutely expects you to be a...

**MAGICIAN**
Washington State has a pertussis epidemic. The parents in that state love their children and they make the best decisions they can. But watch elections in this country and you realize that in almost every election, half of the very good people make absolutely ridiculous decisions. In Washington State (and in my own community of Vashon) many have been deluded by Andrew Wakefield. They actually believe they are protecting their children from autism and we have been slow to provide convincing counter arguments.

And so, epidemiologists in Washington State are asked to be magicians and make everything right again when parents don’t do their job on immunization, when legislators cut budgets and provide insufficient support, when opportunist politicians begin to point fingers, and you are supposed to make it all ok. When breaks in sanitation allow hospital infections, when tobacco companies and smokers are responsible for 1000 deaths a day in this country, and when we ignore the information provided by the health departments on tanning booths, exercise or food intake…you are expected to put on the cape of magician.

One of the most important of your jobs sounds illegal but it is the core of your whole being...

REWRITER OF HISTORY

We have all had experience with someone’s account of a program you have been involved with and you realize you don’t recognize the narrative. We say they are rewriting history.

But that is your key priority. The difference is that you are rewriting history before the fact rather than after the fact.

Will Durant defined immortality as the absorption of one’s soul in deathless acts. You are involved in deathless acts.

I talked to the Teachers of Preventive Medicine early this year and said that is the essence of their vocation…to rewrite history before it happens. That is why we don’t have polio and yellow fever and cholera on a regular basis. And
that is what Norman Cousins was talking about in 1975 when he said that the greatest gift the US has given the world is the demonstration that it is possible to plan a rational future.

This makes you a TIME TRAVELER, simultaneously working in several time dimensions.

Two weeks ago I was speaking at a Helen Keller banquet and talking about Mectizan. I had just received a note from a cousin in Cedar Rapids, Iowa who had attended a graduation party. The Lutheran minister showed up with his clerical collar and a small boy kept staring at it. The minister finally asked, “Do you know why I wear this?” And the little boy said, “Yes, to prevent fleas and ticks for up to three months.

So I pointed out that was a three month perspective but Mectizan prevented microfilaria for 12 months. A few days later I spoke at the opening of a Spina Bifida Center at Emory and said that folic acid, in the prevention of Spina Bifida lasts an entire life time. And when you prevent a measles or meningitis death the impact ripples on for as long as people will be on this earth. So you are simultaneously working in multiple time periods. As a Time Traveler.

Finally, two challenges

1. Become the surveillance system for health care delivery. As you have become for hospital infections, do so for all of health care delivery.
2. Direct your power to the problem of poverty. This will make you a clear…

FUTURIST

The single biggest reason you are needed in public health is because of poverty. It is the dominant social determinant of health in every culture.

The problem is of long duration, recognized even before the time of Confucius, commented on for hundreds of years, labeled as distasteful as cannibalism by Martin Luther King and yet of benefit to everyone in this room. We get things cheaper because of people working at minimum wages in
this country and other countries. Poor people subsidize us. That is embarrassing but true.

What could you do? Continue to call it a public health problem. Improve your surveillance systems to highlight the disease discrepancies by income group, enlist corporations, schools, faith groups, the wealthy, to give poor people a voice. (Jim Laney, former President of Emory, has said that FDR became a champion of poor people, not because he had polio, but because he got to know poor people as people while staying at Warm Springs. His interest in the poor was not because he had a handicap…it was because he finally made eye contact with the poor.)

Get to know the poor. When someone leaves poverty, they may again have financial reversals as we have seen lately. But they will never think the same again. Poverty breeds fatalism and fatalism prevents us from taking the steps needed to change our future. Change poverty and you literally re-write the future.

Fortune Teller, ventriloquist, propagandist, Master of Deviation, Magician, re-writer of history, Time Traveler, Futurist. William Hurt is right. This sounds like an exciting vocation.

Lillian Dickson has said, “Life is like a coin. You can spend it any way you wish, but you can only spend it once.” You have chosen well how to spend your coin…and I thank you.