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SOCIETY OF LAW, MEDICINE & ETHICS**

THE PUBLIC'S HEALTH AND THE LAW IN THE 21ST CENTURY

HOW DO WE TRANSLATE SCIENCE INTO PUBLIC HEALTH POLICY AND LAW?

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DR. JAMES MARKS: -- Please have people take their seats. My name is Jim Marks, and I'm the Director of the National Center for Chronic Disease Prevention and Health Promotion, and the Moderator of this session. We've got a very full session, so I want us to get started as quickly as we can. This session is, "How Do We Translate Science into Public Health Policy and Law?" And the health officers, elected officials, attorneys and others in the field seek to ground their policymaking in science.

Scientific developments pose new opportunities and challenges for the policymakers, but scientific knowledge is really only one of many factors that influence health policymaking. How does science, how can science, be made more usable for elected officials and other policymakers, is the purpose of this session. We've got a great panel here. You're gonna hear from all of them. I would please ask that we hold questions until the end of all of the speakers. I'll introduce each speaker one after the other -- that is, after each speaker I'll get up and introduce the next.

The first speaker is Dr. Raymond Rawson. Dr. Rawson comes with a very unique background. He has served in the Nevada State Senate since 1984 where he is the Assistant Majority Floor Leader. He's Chairman of the Human Resources and Facilities Committee, Chairman of the Interim Committee on HealthCare and Chairman on the Task Force for the Fund for a Healthy Nevada. He is also a Licensed Dentist, Director of Dental Programs for the University and Community College System of Nevada, a Professor at the Community College of Southern Nevada, Deputy Coroner, Chief Dental Examiner for Clark County, where Las Vegas is, and Director of the Oral Health Access Program for the Robert Wood Johnson Foundation.

He's active in Civic Affairs, he's Chairman of the Standing Committee on Healthcare for the Nevada Legislature and Vice-Chairman of the Reforming States Group. He earned his Bachelor of Science Degree in the First Graduating Class of UNLV, his Doctor of Dental Surgery from Loma Linda and his Master's Degree in Physical Anthropology from the University of Nevada at Las Vegas.

Please join me in welcoming Dr. Rawson.

DR. RAYMOND RAWSON: I'd like to start with a little levity and, you know, I picked fluoride as an issue because it's an issue that all of you are familiar with. But, we could go into a number of different issues, and it would be the same as we talk about the science and the policy

and, basically, we need fluoride -- or, we need Novocain, not fluoride.

Dental caries -- and these are familiar things to you, but this is the science, and the science is sound. It's -- we know how to stop cavities and we know basically what the spread of this disease is. Most of our first graders, almost all of our 17-year-olds. There's 41 million restricted activity days yearly because of dental disease, and we know how to prevent all of it. We know how to strengthen teeth, we know how to eliminate the bacteria, we know how to change diets, we know how to repair the defects.

We know that the science doesn't reach everyone, and that most of the tooth decay that's found in this country today is found in the lower economic group. We know that millions of children are covered for dentistry, and yet they haven't really been able to see a tremendous effect out of that. Basically, 80 percent of those kids suffer without much improvement.

If we looked at the science of this -- and this is just my introduction to everything we talk about now -- the principles are fairly well elucidated. We know that fluoride is a naturally occurring mineral, that it is essentially an essential trace element, that it exists to some degree in all natural water, and that optimal levels will effectively strengthen developing teeth. Now, the public has been frightened in all of this process and the Legislative fights, and they think that it's an unnatural additive that's capable of causing really serious problems. And if you've been through this fight, you know that it's everything from cancer to osteoporosis, to you-name-it -- that fluoride will cause that. There is a history, though, of billions of human doses with a proven efficacy in safety, and we know that the cost/benefit ratio is somewhere in this neighborhood of 80 to one. And so that science, those facts, are pretty compelling.

But, this isn't an issue of facts. It isn't an issue of science. It's argument versus science, and it's the fear that can be developed in those arguments. And to illustrate that, I can show two or three slides that I think show it really more easily than you can just explain it.

The tomato is a genus of South American fruit, specifically in the class of berries. And yet, most of us learn that the tomato was a vegetable. "Eat your vegetables. Eat your tomato." And why is it classified as a vegetable when, scientifically, we know that it's actually a fruit? And the reason is because of a Supreme Court decision. Now, you may think that I manufactured this. There's actually a case from around the turn-of-the-century, and it was New York versus the United Fruit Company, and this went all the way to the U.S. Supreme Court. And, essentially, they could tax vegetables that were coming in across the border into the state, but they couldn't tax fruits and berries. And, of course, they needed the money that came from all of the stuff that was coming into the state.

And -- but, the telling argument here is the -- is the final opinion that was given by the court, and this is just a small excerpt from it. You know, "Since tomatoes are eaten with the main course and not at the end of the meal like fruits and desserts, it is, therefore, to be considered a vegetable." Now, you immediately see it has nothing to do with the science. It has everything to do with what was needed. And so, you can make a generalization that we have an amazing capacity to rationalize our actions to fit the outcome that we desire, and that's what really happens in the public policy arena. And we see amazing things happen through Legislatures,

and City Councils and County Commissions, and so on, and whatever the contingency is at the time.

So, I've put some quick cartoons in here to illustrate quickly the legislative process, and this isn't just about joking. It's -- really has a very serious message to it because this is the way our laws are developed. And if we really understand this process, it can help us very much in trying to translate our science to policy. So, we might look at a Bill as it's introduced and see something like that and, at the next stage as it's amended in Committee, you know, all of the fears, all of the junk science, all the concerns can be expressed and adapted. The opinion polls are read, etc.

And as we go to Second Reading, then it's changed again. And at each stage -- step we can see significant changes -- and they're because of the arguments, not because of the science. And then, finally has incremented, and -- and what was understood. Now, cartoons, yes. But, did they hit it on the nose? You know, absolutely. I mean, this is the process. At each process, it's basically a minefield.

So, let's look at what is needed. You know, we -- when it comes to the fluoride issue, we need public awareness of the extent of dental disease. They need to know how big a problem this is. And then, we need to correlate the fact that if you are unhealthy dentally, that's going to spill over into your overall health. And we need Legislative bodies that are informed and knowledgeable and understand those things, and we need a willingness on their part to really follow the science and to ignore the fear arguments.

Basically, all of that summed up is, we need common sense leadership. Now, what do we get in the process? We see millions of children that are without the benefits of fluoride. We see grossly inadequate disease management. We see costly remediation of dental disease, a large volume of junk science and folklore, and a frightened and tentative population.

And so, how do we get there from seeing what is needed and what we actually get? Well, I just laid out a quick formula. We can pick a Steering Committee, and we can develop a plan to gain broad base support. And then, we can work that plan. You know, we can gather understandable facts, and we can educate a small group of Legislative leaders and we can activate the grassroots network and start getting cards and letters in. We can meet with the Editorial Boards as we progress with this. And then, in that process, someone has to be courageous enough to draft a Bill and to work closely with the press as we get close to the time.

We should produce a significant list of prominent local speakers that aren't afraid to come out on the issue, and have some national experts that are in the wings and ready to come in with concise statements. And in all political processes, we need to count the votes and the commitments before. Now, that lays it out, and a lot of you have been through this process with other things. But, whenever we violate that, whenever we don't follow the systematic approach, basically, the bad arguments win. And again, we've seen that many times.

So, being a Legislator isn't always good, you know. It's a bad job. But, it's probably not the worst job in the world. So -- well, let's blame production, and let's see where we go with the rest of the session.

Thank you.

DR. MARKS: Now I understand the process. Our next speaker is Dr. Jonathan Fielding, who is Director of Public Health and Health Officer for Los Angeles County. He formerly served as the Commissioner for Public Health for the Commonwealth of Massachusetts. He was a founding member of the U.S. Preventive Services Task Force that published *The First Guide to Clinical Preventive Services*, and is the Chair of the U.S. Community Preventive Services Task Force that is currently assessing the effectiveness of health promotion efforts at the community level. He is also Professor of Health Services and Pediatrics at UCLA School of Public Health and Medicine, and the Senior Faculty member at (inaudible) University School of Medicine, Past President of the American College of Preventive Medicine, and formerly served as Chair and Board Member of the California Wellness Foundation. He received his M.D. and M.P.H. degrees from Harvard, and an M.B.A. in Finance from the Wharton School of Business.

Please join me in welcoming Dr. Jonathan Fielding.

DR. JONATHAN FIELDING: No, it didn't. If we can't -- see if we can't get this -- this one should go down. We can just close that one out and bring yours up. (Inaudible).

Now, good. Now, that's wonderful. Thank you very much. I'm glad to be outnumbered by lawyers. I will not give a lawyer-like talk, 'cause I'm not a lawyer. I've construed the charge broadly. I wanna talk about how we get from science to policy. And I wanna thank Tony Moulton of CDC for putting this on. It's a wonderful conference, a very important one, long overdue. Three things I wanna talk about. I'll give some historical information about how we've developed science base and used it, talk about the Community Preventive Services Guide, and talk about a few examples of science to policy translation at the national and local level.

The science base could take a long time. But, the First Council of Health was in Paris in 1802, and then in Boston a few years later for the first time required that there be data on every person buried. Someone would have an epidemiological database. And the famous report of Lemuel Shattuck in 1850 advanced the notion of the routine collection of demographic data.

In the late 19th century, New York City built on the movement for microbiology and lab science by developing the first Public Health Laboratory. Now, we've had great contributions from laws and policy, and a lot of them involved the questions of, "How do you weigh public benefits versus individual choices?" Some is just common sense. How many people have you seen recently driving their cars in the United States on the left-hand side of the road? Okay. We -- everybody drives on the right because it made sense to have everybody drive on the same side. Same with speed limits. It took a while till we codified a Highway Safety Act, or building codes. Again, common sense.

Free market versus health protection has been another theme. Communicable disease is a good prototype. We wound up with water that was first clear, then polluted and finally chlorinated starting in 1908. We had food that became contaminated, and we moved that to a regulatory framework with the Pure Food and Drug Act in 1906 that governed the sale of pre-processed

food to the public. And then, we had rules governing slaughter -- still have some problems. Note: Mad Cow Disease. And then, we've had the tradeoffs between shareholder gain and worker's health. Occupational injury is a very serious cause of death. A number of exposés at the end of the 19th -- beginning of the 20th Century and then Legislation, first by industry -- the mining industry, and then a more omnibus -- for example, The Occupational Safety and Health Act of 1970.

Now, we find ourselves in the 21st Century, and we do have the gift of better methods. We have much improved ways of assessing health risk and assessing threats. We have theory-based interventions. We have coherent theories that give us interventions. We have better ways to assess intervention effectiveness, and we have standard ways to compare the relationship between the cost of our intervention and that health benefit, such as cost per quality or cost per DALY.

Now, I wanna talk about the Community Preventive Services Guide. That's this. There's plenty of information out there and a swarm of people ready to give it to you. You may not even be able to avoid them after this. This is the best source that you may never heard of, and I want to thank Stephanie Zaza, who Chairs the staff of this, and Brad Myers working on dissemination, and their staff's doing a wonderful job.

This is recommendations based on systematic reviews of literature. It's a DHHS initiative. Alan Hinman is here, who is one of the progenitors of this -- founders of this notion, said, "Can we apply what we have in clinical services to population?" He thought so, and others agree. CDC's done a wonderful job of coordinating. This is an independent, nonfederal oversight group, and it provides an evidence-based resource for decision makers to focus on the simple question, "What works?"

Here is the group, and you'll notice that Pat Nolan on the dais with me is going to talk about that, as well. These are the topics we're reviewing. You can see on the left-hand side a bunch of risk behaviors from tobacco to poor nutrition, alcohol abuse and the like, and then on the right-hand side, specific conditions ranging from vaccine preventable diseases to depression and violence. And we also have had a chapter looking at the socio-cultural environment. Two objectives: one, a standard reference for effective information on population-based intervention. What does the scientific evidence tell us about what works? And then, almost equally important is supporting prevention research. We're finding many holes, many opportunities, and hope the funding agencies are listening.

What do we do? We develop a conceptual framework. We search for and retrieve evidence in a systematic way. We have explicit rules for rating the quality of evidence and for summarizing it. We look at effect, size and inter-quartile range, and a lot of those things. And then, we have explicit ways of translating the strength of the evidence, based on the number and types of the studies and what they've shown into findings. So, we will recommend something based on a strong or sufficient evidence. We will say, "There is insufficient evidence," or we may say, as we have in one case, "The evidence is strong, but this intervention does not work." And this is the Web site where you can find all this wonderful material. It's recently been revised and improved.

Here's some examples from what we've found. You can see that there are -- this is -- they range widely from increasing the unit price of tobacco -- excuse me -- to school Physical Education programs. And these again are based on these evidence reviews, and you'll notice that fluoridation is prominent among them. And you can see the outcomes and the benefits. Again, we go into more areas here such as primary seatbelt laws, smoking bans, but there are other kinds of interventions. We have a lot of community programs. Here we have sealants for example, Early Child Development Programs, and the key is that effective implementation requires policy decisions not only on kind of, "What would you like to do?" or "How do you regulate?" but on resource allocation.

If we look at what we know in -- from education and behavior change, we can see that using the best in social science can lead to effective intervention. So, we need to make sure our policies are informed by evidence from the social sciences. And also, from what we know can modify the physical environment to improve population health, such as access to places for physical activity combined with information outreach. And then, we get to the Healthcare system, what most people think makes the biggest difference in healthcare except, of course, for those who have studied what causes health and what causes disease.

And you can see that we need both public and private organizations to have policies that are health promoting. Here are some examples from the review of ways that we've evaluated to improve the systematic provision of appropriate preventive services. The audiences are obviously for the Guide public Health Departments, healthcare delivery systems, anybody who purchases healthcare, government at all levels in both the Legislative and Executive branches, foundations, community organizations and last, and some would say least, academia.

I wanna just give you two other examples of science to policy. One was a query from the Congressional Prevention Coalition -- that's from both Houses and both Parties of those members really interested in prevention. They ask the Partnership for Prevention, which is a non-profit organization trying to help provide this database for policymakers in an understandable way, the following question: "Which policies have the greatest potential to prevent the most disease and injury?" And we evaluated the relative priority of policies based on the strength of evidence for their health impact, the amount of disease and injury that was addressed by the policy and what were the costs? And 80 health policy experts were involved, some generalists, some with very special expertise with generous funding from Robert Wood Johnson Foundation. And we used a standard methodology, 'cause the question asked was, "Well, I'm getting all this information. How can I compare all of this?"

Here are the nine high-impact actions that this group came up with: Increase federal excise tax on tobacco, confirm FDA authority to regulate tobacco, ban smoking in enclosed work places and public places nationwide, provide state incentives for blood alcohol concentration less than .08 and have standard rules for license revocation at least a year, and also fund states for drunk driving enforcement, increase excise taxes on alcoholic beverages -- probably, you know, the real cost of some alcoholic beverages is less than it was 30 or 40 years ago. This generated no controversy: enact a national handgun licensing and registration system operated by the states, water fluoridation, creating incentives both for that and fluoride rinses and dental sealants, create

incentives for states to require daily physical activity classes in secondary schools -- at least in our state, the percentage of kids in secondary schools that are getting regular physical education is diminishing. And, in federal programs, require coverage of those preventive services recommended by the U.S. Preventive Services Task Force.

And now, I'll just close with two -- with two examples locally. We really had a problem with lack of attention to safe food handling/storage practice in Los Angeles County. And then, a TV investigative report was done that showed a lot of well-known restaurants, and back in the kitchen with hidden cameras showing all kind of things that I prefer not to mention. And that lead to both a public and a political outcry for improvement. So, that let us do the things we wanted to do but weren't able to do before, and that was put a new system of grading with prominent posting of ABC in the windows of restaurant, grading demerits based on epidemiology, and not allowing owners to get too many re-inspections, only one per year. So, they have to be ready all the time for an unannounced inspection.

Well, this changed incentives. It lead to studies that show that public health -- public behavior is very much affected by the grades. Those who have higher grades get -- business goes up. If their grade goes down, their receipts go down. The grades below 70 on a 100-point scale went from 3.2 to 0.2, and the C grades went from 7.5 to 1.8 with a significant average increase. And, at the same time, we've shown a decline every year since we put this in place in 1998, reduced reports of food-borne illness.

The last example is Drug Courts. We had a very positive local experience with Drug Courts, when somebody was convicted of possession or use to put them into a drug treatment program. Sounds like a good public health idea. And there's good studies that we and others have done that showed reduced recidivism, improved sobriety and improved social functioning. That means fewer family problems, more likely to be in a job.

But, expansion of this was blocked at the state level, and there was then a voter initiative petition that passed at the state level, and now those convicted of a nonviolent drug related offense get treatment in lieu of jail. So -- and we're in the process of evaluating that. The science was good, but was the will there, especially in a state where everybody wants to be tougher than everybody else in terms of keeping criminals behind bars forever? So, just a few lessons: One, there is more science to informed public health policies. Science isn't always the barrier. Secondly, everybody is pushing science. So, the real question is, "What are the auspices of those who are proposing that they understand what we know, and what is the rigor by which they've come to those conclusions?"

We also see that public interest is often influenced by public visibility, as in the restaurant example, and social movements. If you look early in the 20th Century, a lot of the advances were because there was a strong social sense of social movement and the importance of making improvements in these areas. And finally, that policy comes in many forms. We talked about law and regulation, but it also comes in large part from many decisions at every level in what's funded. And finally, underutilized are decisions that can change incentives.

Thank you.

DR. MARKS: Thank you, Jonathan.

Our next speaker is Dr. Patricia Nolan, who is Director of the Rhode Island Department of Health. Her earlier positions include local public health administration in New York City and in Tucson, Arizona, medical administration with the Arizona Healthcare Cost Containment System, and State Public Health Administration in Illinois and Colorado. She's Board Certified in Preventive Medicine, Adjunct Faculty Member in Community Health at the Brown University School of Medicine, and was past President of the Association of State and Territorial Health Officials. Active with the American Public Health Association, having served on their Executive Board and on the Board of the Alliance to End Childhood Lead Poisoning. She received her Medical Degree from McGill University in Montreal and her Masters in Public Health from Columbia University in New York City.

Please join me in welcoming Dr. Nolan.

DR. PATRICIA A NOLAN: All right, there's a trick. Where's the mouse on this?

DR. FIELDING: The pointer's here -- .

DR. NOLAN: -- Oh, there we go.

DR. FIELDING: Let me just get it up -- which is yours?

DR. NOLAN: That one. You can tell that you're the last one. No, I'm sorry, it's the one underneath here.

DR. FIELDING: Sorry. It's -- .

DR. NOLAN: -- It's the one right there. All right.

DR. FIELDING: You're on.

DR. NOLAN: I failed laptop computer technology. I apologize. I'm gonna pick up on many of the comments that Jonathan has just made and try to look at a particular question, that is, the role of public policy and behavior change.

I think these two questions, "Is chronic disease prevention a legitimate role of government?" and, "Is preventing unhealthy behavior an appropriate subject for public policy and government action," are actually very important questions. And although I might have thought they were only mine, in the previous breakout session that I attended we actually had quite an interesting discussion about just where are the boundaries of public health and the roles of government in intrusion into our private lives? So, these are important and difficult questions.

We have a pretty widely accepted feeling that government has a role in infectious disease control, and that that role can at times be quite intrusive. We also have a fairly strong feeling

about certain environmental issues, that there's someone else is doing it to us, then there's truly a governmental role in controlling it. We're much less clear about those things we do to ourselves. So, thinking about the role of government in managing chronic disease really often gets to deciding whether those are things we're doing to ourselves by choice or things that are being done to us, or that we're doing because we don't understand and we aren't fully informed.

I think that this is a place where science informs the process, but is not the only consideration, and it makes it often a difficult place for public health people to work. Science can really demonstrate the role of healthy behavior -- you're not running the clock on me, do you know that?

DR. MARKS: I do.

DR. NOLAN: Oh, okay.

DR. MARKS: Thank you.

DR. NOLAN: Somebody better tell me when I'm running out of time.

Science can demonstrate the role of healthy behaviors in preventing or mitigating the effects of chronic diseases. We can in fact, as Jonathan just showed you, talk more about what the implications are of certain behaviors and changing those behaviors on our lives. We can also use science to guide the public investment in strategies of behavior change because those are more or less likely to work. Science can really help us in measuring whether the interventions that we have in mind are going to work and what are the characteristics of them that will make them work? But, it's really politics that determines which policies will be adopted and what programs will be funded. I wish I had that set of cartoons from Senator Rawson. I think they expressed this very well.

I want to look at a particular part of behavior change and talk about what we know and what implications that may have for how we approach improving health. First of all, we know that regular physical activity is positively associated with health. In fact, you can run a long list of reasons for having regular physical activity, from diseases that they prevent to the mood changes that regular physical activity can engender. We feel better when we're physically active, even though we may be complaining about our knees a little bit more.

At the same time, as a society we are very clearly surrounded by cues to be physically inactive. Whether those cues are from our transportation system, from our design of buildings and cities or even, interestingly, there's some overlap here between what we do to allow full access by the disabled and what we do to discourage physical activity by all people. Many public policies, in fact, support physical inactivity, from the type of work that we do to what we tax and what we pay for. What we know about behavior is that changing the cues in ways that support increases in physical activity will take a major collective effort.

One of the ways that we can use the public policy system to actually influence this behavior change is in collecting data. We can collect data, which describes the level of physical activity.

Our investment in the behavior risk factor survey alone shows you this kind of science. It also shows us trends and changes in behavior, and it can show us the consequences of policies to try to influence that behavior. Data can help us describe physical inactivity as a problem, and we need to do that because not everyone agrees it is a problem.

When I first went to the state of Rhode Island and looked at some of our statistics about the level of physical inactivity and weight gain in our state, I started out with the idea that perhaps we should really tell some stories. My favorite story would be, "Warning! Your couch can kill you," because people really are not translating what they like to do everyday, sit on the couch, eat potato chips and watch television using the remote control, with their ill health.

Using science to connect the dots. It's a very popular phrase right now. But it's not only about recognizing terrorism. It's also about showing all of the ways in which our environment is encouraging physical inactivity. Whether it's planning and zoning ordinances, whether it's the standards we have for education in our schools, whether it's highway design, these are all things that can influence the level of physical activity, positively or negatively. They are all things that we believe are completely legitimate roles of government, but we don't really inform those decisions with information about the impact on health unless we make a concerted effort to use this data.

Jonathan has already talked to you about the Community Preventive Services Guide. I like this tag line, "A tool for getting the most from our investments in prevention." Because so often, when we talk to the Legislature, to the business community, to the health insurers, they wanna know, "What am I going to get out of this? Am I going to get savings in medical care expenditures?" And we frequently answer that question, "Oh, yes, of course you are." That's not true. If we live longer, we spend more on healthcare just in and of itself. And the way in which we pay for insurance is a strong incentive not to invest in prevention activities and services that have long-term payoffs.

So, the Guide becomes, I think, a really important way for us to look at what kinds of steps are good investments for their return, but the return has to be defined in terms of what we're doing. The Guide strongly recommends school-based physical education. Children are in school. If the school education program, in fact, values physical education and doesn't devalue it because it's not on the test, then physical education gets built into our lifestyle.

The creation of, or enhancement, of access to facilities. You won't be physically active if you can't exercise and be active in a safe place. And community-wide education programs and -- are a very important component because, again, they change the cues. And we also recommend point-of-decision prompts, that is, those little signs at the elevator which say, "Why don't you take the stairs?" Because behavior change is so demanding, it is not easy -- it is, in fact, lifelong -- and because it's not an easy step for government, the other point I really want to make here is that collaboration is an important way to move public policy forward.

We do not -- we define collaboration in our department as "unnatural acts among consenting adults." Collaboration in itself is very difficult. But, it allows us to weave small projects into a community-wide tapestry. And if we can sustain those partnerships by celebration, it's even

better. To give you just a couple of quick examples from Rhode Island: We have adopted a community-based approach to physical activity that was developed by the Irish Heart Association. It's called "Slí na Sláinte," in my not very good Gaelic, or, "Path To Health." We mark urban walkways with mile markers -- not kilometer markers, but we do mark them in half-miles, and we develop community-based programs around those. We try to utilize the community itself to develop these programs. It is in an evaluation stage.

Second, I think very important collaboration, is the one that both Jonathan and I have mentioned, between health and schools. And the healthy schools/healthy kids approach of looking at the entire school environment from the standards for education to the maintenance of the buildings, to the smoking rules that apply to the students and the staff, we send very important messages. And this is government business because these are government-operated places, and our children spend a lot of time there.

And last, one that -- I thought zoning was really about individual sewage disposal systems when I was a local health official. But increasingly, I have become interested in zoning for walkable communities, that physical activity doesn't occur in our communities because they are designed in ways that discourage it. And the collaboration between health and our community planners becomes a very important way of implementing public policy.

Thank you. I don't know how to get rid of it now. That is something I can't -- .

DR. MARKS: -- Thank you, Pat.

Our last speaker is Dr. Kathleen Toomey, who has been Director of the Georgia Division of Public Health since 1993. Earlier, she held a number of positions at CDC in the Division of STD and HIV Prevention, rising to the position of Associate Director. She has received many honors and awards, including the CDC Award for Contributions to the Advancement of Women. She is a member of the Health Promotion Disease Prevention Board of the Institute of Medicine and serves on the Executive Board of the Association of State and Territorial Health Officials.

Her research interests include women's health, reproductive health policy, health services in underserved areas and the epidemiology and prevention of STDs and HIV/AIDS. She is an adjunct -- on the adjunct faculty of the Rollins School of Public Health, the Emory School of Medicine and the Morehouse School of Medicine. She earned her Bachelor's Degree from Smith College, studied as a Fulbright Scholar in Peru and received her Medical and Public Health Degrees from Harvard University.

Please join me in welcoming Dr. Toomey.

DR. KATHLEEN TOOMEY: Thanks very much. It's a pleasure to be here, and particularly so because, believe it or not, this is the first public forum in which I've spoken for the past nine months that isn't bioterrorism related which, perhaps, is a sad statement about the state of public health and the focus at this time, but also is an opportunity. And I'd like to build on some of the ideas that the other ideas have brought forward today.

On your agenda, Russ Toll (sp) actually was to be the speaker in this session. Let me be the first to say I know Russ Toll. Russ Toll is a friend of mine. I am no Russ Toll. And having said that, though, I'd like to give two examples of some policy activities that had taken place here in Georgia, both with Russ and I working together, that helped frame some of our prevention agendas. And it demonstrates that the realm of policy is far-reaching and the more creative you can be, I think, the more you can think about, "What are our spheres of influence and how can we harness those spheres of influence?" You can actually accomplish more than you ever could imagine.

I mean, many of us in public health, when we thought about changing policy, it was always in terms of funding. "Give us some money and we'll go do a chronic disease prevention program." Well, Georgia, like many other states in the United States, is experiencing a major budget shortfall. Actually, I shouldn't say that -- a budget -- this is Georgia. I have to watch what I say. We have -- I have to be very circumspect about how we spend our public dollars in this time of potentially shrinking resources.

And so, given that, we've had to be more creative about how we implement programs and think about what are some of those things that we can do without actually having new money to do so. Russ was -- Russ Toll was head of the Department of Community Health. As Commissioner of Community Health, he had under his sphere of influence not only the Medicaid program, but also the state merit system, which is our public state worker's health insurance program, as well as the Composite Board Of Medical Examiners that -- the physicians Board.

And so, recognizing that you could leverage some fairly progressive policies by having that kind of buying power, Russ did some fairly creative things in partnership with public health, looking at using disproportionate share funding, the DISH hospital funding, setting aside 15 percent of that DISH funding specifically for prevention programs in partnership with public health. This was long before we were told to partner with hospitals for bioterrorism. So, this really was ahead of -- ahead of the curve in terms of recognizing that at the community level, public health working in partnership with hospitals to be able to accomplish a great deal. And through those 15 percent set asides -- so no new money per se, but actually set aside for an existing pot of funds -- we had some of our first programs from school health, from our first programs for cancer screening and prevention, as well as women's health in this state.

You may have heard that our Governor has been very proactive in the area of cancer through the Governor's Cancer Initiative, the Georgia Cancer Coalition. This is a really innovative program which looks at cancer treatment and prevention across the whole spectrum, from early education, intervention and prevention, not only to treatment and research and development, but also the biotech side, trying to use the opportunity to draw in biotech firms as an economic development opportunity as well. It's an incredibly visionary spectrum of activities all supported with the tobacco settlement dollars and leveraging some of the public/private collaborations that we could support.

One of the things that he was able to do very creatively was to look at just coverage -- providing insurance coverage for individuals with cancer in cancer treatment trials. We did this without an insurance mandate. Mandates are always something that are not always embraced by the

business community. You know, we had an insurance mandate for kids undergoing cancer treatment, but not for adults. Simply by the power of persuasion and the support of this coalition and the kind of publicity it would engender, the major insurers here in the state actually joined together and now will support the primary care payments for adults who are undergoing or partaking in clinical trials.

Even in terms of our registry -- enhancing our cancer registry, we were able to leverage some of the hospital contracts. We had moving from a point to direct contracts with direct hospitals to get better dollars, better reimbursement, better scope of services for those dollars. We actually looked at, "How could we improve our registry reporting?" We already have a law. It's already a requirement to report in statute. A statute wasn't going to improve that. We have that statute. It's actually a misdemeanor, and yet we were having a hard time getting our hospitals to report cancer, as well as some of the other notifiable diseases and conditions. Well, in the DCH contracts, we actually wrote in, "You will not get reimbursed for Medicaid or state merit clients unless you report these conditions." And miraculously, our cancer registry reporting improved literally virtually overnight, far more than any of the letters or some of the other sticks that we could have used to do so.

I wanted to go from the -- perhaps the sublime to the -- a little ridiculous, and talk about another initiative that we would have here, because I think it also shows the potential power of not only just persuasion but how you can frame a policy issue in a way that you can garner Legislative support and policymaker support where you might not have thought possible. I participated a few years ago in an Institute of Medicine Panel looking at STD prevention in the United States. It was the hidden epidemic. One of the recommendations that come out of that Institute of Medicine Report was for an insurance mandate for chlamydia screening, recognizing some of the Preventive Services Task Force recommendations in that area.

I never thought such a thing would be possible in Georgia in part because of the strong coalition in the business community opposed to insurance mandates. We started to try to educate on this topic, particularly focusing on women's groups, but also emphasizing some of the cost savings around screening. Just so you know, members of our Legislative delegation -- you may hear more about it later from Representative Nan Orrock who worked with us on this -- were so unknowledgeable about chlamydia that most of them really didn't know what we were talking about. This was the first time they'd heard about it, which probably helped us in essence to do this educational event. I don't think we would have had the same kind of support at hearings if we were talking about syphilis. But, this was something new, so new, in fact, that one of our Legislators actually thought chlamydia was being proposed as a state flower -- I'm not kidding. This is actually true -- and in front of some of the other members of the Georgia delegation, asked me, "When does it bloom?" And I was able to keep a straight face and say, "Well, it depends on who you give it to."

But, at that point I was actually -- all the other members of the Georgia delegation were laughing who heard this exchange. And I was declaring victory at this point because, here in Georgia, we were actually talking about -- we were joking about chlamydia. You know, this was raising this women's health issue to a level of -- to a level that I would not have thought possible in just a short time, where we had not been talking about this before. I had shown some maps with dots

all over the state of Georgia, which I think raised awareness of the fact that this is a local issue. All politics are local. And if your STD is local, that can help garner some support.

But finally, when it actually came to a vote, we had tremendous bipartisan support for this chlamydia initiative, much to our surprise, again, in a strongly anti-mandate kind of Legislature, in part because we were able to frame this issue in a way that met everybody's needs. This was something that saved money, so you could say to the business community, "This will save money." This is clearly a women's issue, so it will broadly -- it had the broad support of a lot of the women's groups. It's potentially a children's issue, and so we had the AAP as well as many other children's groups lobbying because of the potential complications for kids. And actually, some of the Pro-Life groups took a very strong supportive position on this Legislation because it prevented ectopic pregnancy. And so, we had this unusual positive opportunity to educate broadly, not just to Legislature, but then to use that as a springboard for widespread Legislation and policy change around broad STD education.

As a result of this Legislation and the publicity that it got, several of the insurance companies actually published more information. Blue Cross/Blue Shield had a special initiative with -- focusing on their women's health providers and getting them additional information about chlamydia that actually helped raise the level of screening in the state far beyond what the mandate alone might have done. And so, I really think that this is an example of how you can kind of leverage a lot of these different activities through education policy and looking at that broad sphere of influence you have, to think about, "How can we touch these different potential leverage points to actually lead to change?"

I just wanna close by saying I think a real challenge we have now in Public Health, and I certainly am facing this every day, is a huge influx new dollars to public health, specifically focused on bioterrorism, probably the biggest bolus of funding we have ever had, certainly here in the state and in the nation. And the challenge as I see it is, "How can you use that new -- those new resources to broadly support policies and agendas and move beyond just the bioterrorism activities, but actually support a health and policy and prevention agenda will pay dividends every day?" I think that's a challenge ahead, and I think we're up to that task.

Thank you.

DR. MARKS: And I wanna thank all of our speakers for their professionalism in keeping on time and for the breadth of issues that they raised for us in the ways that they have used science to help influence policies. We do have time for questions, so please feel free to go up to the mike and identify the speaker that you wish to have address your question.

Yes?

UNIDENTIFIED WOMAN: Hi. I have a question for Raymond Rawson on water fluoridation. I was wondering if you could tell me which fluoride compound specifically is added to the water supply?

DR. RAWSON: I don't know if this mike is on.

DR. MARKS: Can we have the mike on in front of the speaker?

DR. RAWSON: I can't remember what we added now. We went through the debate and the criticisms, and I'm just blank right now what we added. But, it was added to the Clark County, Nevada System.

UNIDENTIFIED WOMAN: Does anyone else know what compound was added to the water supply? Does anyone know? I mean, I find it kind of strange that if you're preaching science, the state of knowing in a public health atmosphere and you don't know what specific compound was added to the water supply -- I believe that most of the studies have been done on sodium fluoride and not the -- I can't remember personally what compound -- it's tetra something or other. I don't even think it's correct on the CDC Web site. I think it says, tetra, but there's a six in the annotation next to it -- scientific notation -- that's septa, not tetra.

But, if you changed a single modification on a molecule, it can have great effects on the toxicity, and I believe that most of the scientific studies that have been done on it have been done using sodium fluoride and not the compound that's actually added to the water supply.

DR. MARKS: I think we need to move on, 'cause we'll have many people that'll want questions and, really, it sounds like you're getting into a fairly lengthy description of your points-of-view on that.

DR. RAWSON: In fairness, I was asked -- .

UNIDENTIFIED WOMAN: -- But it's not -- I'm not -- .

DR. RAWSON: -- I was asked to describe the process, not to go into the science of what we did. And we have all of that laid out and, in fact, we've developed a library out of the materials on the various sides of the argument. So, essentially what I've described was the process.

DR. MARKS: Thank you.

Yes?

UNIDENTIFIED WOMAN: Hi. I wondered if any of the speakers could also give us examples of using science to stop doing things that don't -- that we know don't work anymore, and sometimes I think we all know that's even harder than getting things started.

DR. RAWSON: You know, science cost benefit has been used in the arguments against child seat restraints in airlines. I mean, when you consider the cost of saving the life of a child, you'll spend several million dollars per life. If you put that into automobile child restraints, it's maybe several thousand dollars per life. If you put it into immunizations it's maybe \$10 per life. And I think science has been used that way to probably prevent us from going into some programs.

DR. NOLAN: One example that I really am aware of is changing the laws that required syphilis testing before marriage. It became very clear that this was neither medically nor from a public health point of view doing useful things, and states used both cost benefit analyses and clinical science to discontinue that particular practice. Other kinds of screening -- I can't think of where there was a specific mandate but, programmatically, certain kinds of screening do get dropped because they aren't really delivering results that -- in the sense that the intervention after the screening is really different than if you didn't do the mandated screening. Those are the ones that come to mind for me.

DR. FIELDING: I'll even give you one on immunizations where there was a -- there was a study done to look at what would happen if you send people out into the communities with low -- relatively low levels of immunizations and basically do one-on-one work trying to reach that high-risk group. And it turned out, at least in this study, which was in Los Angeles, not to be very cost effective compared to the other means that we had. So it made focus on all the other complementary approaches rather than this, because relative cost effectiveness was not very high.

UNIDENTIFIED MAN: Further example on the science issue as opposed to just economic is the policy decision to abandon smallpox vaccination in the United States in 1972, several years before smallpox was eradicated, because the risks associated with vaccination exceeded the benefits at that time. There were no cases of smallpox, no importations, and yet we had, as a result of adverse events, about five deaths a year associated with vaccination. I bring this up because it's a matter of topical interest again.

DR. MARKS: Yes?

MS. DEDE FELDMAN: Senator Dede Feldman from New Mexico, and I'm wondering, as states face Medicaid shortfalls throughout the country, what kind of science-based arguments you are giving to not cut some of these preventative programs and put the money into the Medicaid Program?

DR. TOOMEY: I'm sure my other public health colleagues wanna say a few things. I think the more that you can take some of the examples from the literature and just translate that into -- for us, a Georgia-specific focus, we've been able to maintain some of our coverage, particularly for preventive services, by showing the impact. Even at a time when family planning services were being cut, we used that nice study that Bob Wallace (sp) had did showing that child spacing actually improved or decreased infant mortality as a way to garner widespread support for maintaining funding in the state match for family planning.

But it's a tough sell, and I think the real key for me has been to try to identify what the science is, but put it into a framework that has local application so that, for our policymakers, that they can see that the impact will be there in their own communities. At the same time, trying to be very creative as whether it's with the DISH (?) funding or some of the other Medicaid funding to see how we can expand services and draw down federal dollars in a more creative way, again being - looking at what the opportunities are, what those options are, thinking through programs that might be configured a slightly different way.

For example, our Children First Program is similar to a program in Vermont where it's outreach and education to new mothers and children, and it's a center point for our child health activity. We didn't have enough state dollars to support that, and yet were able to leverage some federal dollars by having that outreach be reimbursable through Medicaid.

So, I think it -- again, it's being creative and looking just beyond the immediate, in thinking how can you frame or re-craft your program in a way that you can rev max -- you know, maximize both the federal reimbursement as well those state dollars.

UNIDENTIFIED WOMAN: And I was hoping that Ray would answer that because I know dental programs, for example, are being targeted in many states as sort of expendable in comparison to some of the other needs.

DR. RAWSON: Well, the problem right now is a political -- it's an argument problem, not a science problem. And Medicaid is formula-based, and it's a mandate. And so, if you had more people go on the Medicaid rolls, it will cost the states more, period. And at a time that revenue is falling, then the states are beginning to cut programs, and the dental program is a voluntary program. So, it's not mandated. I mean, it's mandated for some population, but not for all. So, yes, we're seeing a number of states -- a half a dozen states have cut Medicaid in the last few months for dentistry, and it looks like it's a growing problem.

DR. MARKS: Yes?

UNIDENTIFIED MAN: (Inaudible).

DR. FIELDING: No, it's all right. I was just going to mention in Los Angeles County we're facing a very serious shortfall in terms of our budget for the safety net system, which was a projected deficit of \$700 million dollars in 2005-6. And so, we have to ask the question, "What's the least harm?" Not what's necessarily the best thing to do, but what's the least harm? That's a notion that some people relate to or equate with legalizing drugs. But, I think that notion needs to be broadened in terms of its application. We need to recommend the kind of analysis that says, "As you look at this, what has the least harm?" And you need to factor in social values as well as the science to that. But, I think that that kind of analysis should be done much more before cuts are decided on, which are primarily through a political process not necessarily informed by the science.

MR. MIKE KRUTZER: Mike Krutzer (sp), California Department of Health Services. As somebody who has been working in the area of asthma quite a bit lately, there have been times that we've been discussing disseminating information about "best practices." And the more that we examined this question, the more we realized that there is no real understanding about best practices would be because we don't have any research that really is comparative, that really the best we can come up with is practices that have a high likelihood of success. But, comparing one to the other and figuring out which ones to best translate into one community or another is something we're not yet able to do.

My question for the panel is, "What should be the role of Public Health in actually directing research as opposed to gathering it and assessing it, and what would be the mechanisms by which we would try and do that?"

DR. FIELDING: If we were kings and queens, research priorities might be a little different. I think, based on what I've said and what others have said, one of the important things is to realize what the gaps are, as you've just enunciated for asthma community-based programs. The Guide to Community Preventive Services -- one of the most important products that we have is the research agenda that has come up. We've spent a lot of time on that -- one of our Chapter Development Teams -- to try and say, "What are the greatest opportunities for research? Where are the areas where people thought we knew a lot and we don't know very much?" So, I think that that provides a standardized way of an agenda -- standardized approach to agendaing, and the Guide to Clinical Preventive Services is another source of that where again, the same kind of systematic reviews. These are just two examples.

I think that -- that what's important is to decide what are the criteria, and to try and get a lot of funding sources to agree on that, which is a little difficult because they all have different mandates. So, the same kind of collaboration that one needs in terms of figuring out how to make programs work that Pat talked about are needed, in terms of what are the priorities for research.

DR. MARKS: I want to comment on that a little bit as well because I think that's a very important point. We heard about the description of science here was a large part about the summarization of science. And the process that Jonathan mentioned is, in fact, about summarizing both so we know what we know and where we need to go. And one of the things that's been missing in the public health practice community versus the research community is a feedback loop of where we need the research. And the whole issue of increasing efforts to get prominence for prevention research in community settings is I think, in fact, about building that feedback loop and having the resources to see that it happens.

DR. TOOMEY: Along the same line, I think one of my frustrations has been watching how quickly public funding, whether it be federal or otherwise, goes to NIH for research, you know, real research versus a translation of some of that research into action, which is what we need in Public Health practice. And there isn't that strong community advocacy base to support this kind of operations research, and practical applications, and translational research. And so, I think us collectively in this room need to become advocates of that because that's the only way we will be able to be effective in putting some of the research knowledge we right now have into a programmatic application. But, I think it's that disconnect between the advocacy for research and the NIH model versus research that we're talking about here. A big disconnect.

DR. NOLAN: When one says, "Should public health direct research," the first question is, "So, what's public health?" One of the -- one of the things that has been going on in the arena of cancer control and eradication is to try to bring together a large cross-sect oral interest around one or two or three major issues, instead of what usually amounts to the kind of -- you know, we have a list of 700 problems to take care of, and we'll work our way down them.

It's a very complex system that governs what research has done. Research that isn't related to products, for example, hasn't got the economic cache of research, which is related to product. So, it's easier to find out which cholesterol lowering drug works best, but you can't compare them to, say, physical activity everyday effectively. Those challenges mean, I think, getting at those collaborative tables where the discussions are going on and consistently raising the issues of prevention, population-based activities, and the need for translation from bench to community practice.

DR. FIELDING: I just have one other point, and that is sometimes -- we talked about research, but sometimes it's good to call it by some other name because research for some people means a test tube, and what we're really talking about is the community level. And sometimes we talked about, you know, demonstration project, we talk about assessment, we talk about valuation, in the context that it makes it seem much more practical and usable, not necessarily the idea that it goes into some broad database, which may or may not have applicability.

DR. LAWSON: It seems to me that, "Where's the agenda set?" You know, on the local level, public health is concerned with the needs that show up, and basically, you know, it's STD's, it's poor populations with other communicable diseases and pregnancies, and things like that. And you won't find -- I don't think you'll find, the local money to be able to do this. And so, we have to put that plea out to our national leaders to see that a certain amount of the research dollars go into translating into something that's actually usable and that could be done on a national basis, but I think that it'll have to be in that format.

DR. MARKS: Okay, the last question.

MR. JERRY FREEDMAN: Well, it's actually a comment on this discussion. My name is Jerry Freedman (sp) from Ohio State University College of Medicine and Public Health. In Ohio, we've been somewhat creative using Medicaid dollars for health services research, where we actually have fashioned an interagency agreement through our Board of Regents that offers basically to use university funds for the state match and draw down at a 50 percent level the administrative dollars in using that with the Medicaid program, basically setting their priorities with regard to the types of health services research they feel would be effective in terms of the best utilization of their dollars. And I would certainly recommend that folks who have that capability within their university system or through some other function of state or local government that would have that interest, utilize those dollars as a way you can direct that research.

DR. MARKS: Did you have a comment or a new question?

MR. JIM HUTTON: I'm Jim Hutton (sp), Medical Director of Public Health in Los Angeles County but I also Chair the Department's IRB. And one of the issues that we frequently have to deal with is, "What is research?" So much of what we do in research is also what we do in the regular process of doing our job everyday. And so, sometimes it's difficult to decide whether what's being presented to us is really a research project or just doing the job of surveillance and data gathering that we do as part of our daily routines.

DR. MARKS: Thank you. Thanks again to our speakers.

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