What I would like to do tonight is to tell you a little about the past history of NORA, but particularly to say something about where we are going with NORA. You all are what we call ‘stakeholders’. You’re the people who really say what it is we should be doing, both at NIOSH and internationally, all of us together. This effort of NORA is actually a stakeholder agenda, it’s a national stakeholder agenda. My personal opinion is that it’s been pretty successful. There are about four or five different countries that have taken up a national stakeholder effort based on NORA, and a number of national and international agencies that have used the principle. It’s essentially a principle of saying to the stakeholders, to the people who know - what are the priorities, where should we focus, and let’s leverage together, let’s leverage funds and energies and get moving. You as the stakeholders will participate in telling us where we should go with NORA 2, as we say, the second decade of NORA. How many of you actually participated in NORA 1? In creating the agenda for NORA 1? We have a good selection of hands here. You get to do NORA 2 next. For the rest of you, please participate.
Just to say a little bit first about NIOSH, and then to go on to NORA. NIOSH has about 1400 people. We have an operating budget of about 240 million, of which 38% goes out on the street. It’s local verbiage, but what that means is that those are the funds. So almost 40% of the budget goes out for the kind of things that you are doing, for research, for grants that you can apply for, for programs in states and universities and so on and so forth.
As I think many of you know, NIOSH and OSHA were created by the same act in 1970. OSHA was put in the Department of Labor and given the charge to regulate. NIOSH was put in the Department of Health and Human Services (as it’s now called), and then a little bit later put into the Centers for Disease Control, and our charge is to conduct research. We do that from basic lab research, to research in workplaces. We make recommendations to OSHA on the science of standards - to EPA for agricultural workers, to Department of Transportation for truckers, etc. We’re the recommending people, we try to take the science and make recommendations. In this litigious society in which we find ourselves, where very few standards ever really see light of day, the recommendations become critically important. Because those employers and labor leaders who are able to put the recommendations in place want the right recommendations, that becomes critical. We provide technical assistance.
For example, the law says (this act that created us) that any three workers in any workplace, or labor, or management can ask NIOSH to come in to determine if there is a health hazard. We have a whole group of people who do that kind of thing, among others. Then, what’s particularly pertinent to you, the Act says that we should ensure that there are occupational health professionals. In 1970, when we were created, there weren’t very many around. The effort then was to create programs with universities, like yours, to ensure that there would be appropriate occupational health professionals.
The Act was in 1970. On the 25th anniversary of NIOSH, a lot had improved. John Henshaw (director of NIOSH) in a speech just recently, I haven’t found the statistics to check them but I assume he wouldn’t speak incorrectly, he said that since 1971 (the year after the Act was founded) until the present, that occupational illness and injury rates have dropped by 62%, so we’re all doing something right. Not perfectly - there is still a long way to go. What happened then in 1996 when Linda Rosenstock was the director of NIOSH (I was then working as the Chief of Staff of NIOSH), what Linda did was to bring stakeholders together to say “tell us how NIOSH could do better, what do you think, etc.” Those were the days, like today, when the economy was tight. Corporations were laying off their occupational health professionals because they didn’t contribute to the bottom line. Labor never had money, we didn’t have money. What Linda Rosenstock (she really is the creator of this) said was “why don’t we all just pull together? Why don’t we figure out where are the priorities, and then why don’t we leverage our activities and funds and then move and work in priority areas.” Essentially that was the birthing of NORA - of the National Occupational Research Agenda.
In lightning speed for government, it was between July of ‘95 and March of ‘96 that the basic NORA document was out. We held stakeholder meetings, working meetings, in different parts of the country. We brought people together and essentially said “what are the priority areas for research?” Then we made them vote. You couldn’t just have everything up there, you had to vote. We had a variety of meetings - inside NIOSH, outside NIOSH, in different cities. By January or so it was pretty clear what many of the priority areas were. What we then did was say that in March we would have one big final meeting where everyone is invited to determine the final areas. We produced the draft document, and when the people came in March we broke up into working groups and everyone had the same charge. Three of five, four of six of these meetings had said “this is a priority, you should do it.” There were some that were clear, about seventeen. There was another group where some groups have said these are a priority. (?sentence unclear?) We made the working groups handle those and what emerged from that meeting was a total of twenty-one, that’s how we got to twenty-one. We didn’t intend to get to a particular number, but we did.
Going into NORA, we saw it as a partnership effort, because it was everybody contributing.
We were also committed to ensuring that NORA would be implemented. There are a lot of government programs that have different titles - then the next administration comes in and you get more titles. We really wanted to set up a structure that would ensure that there would be continued focus on the priority areas in occupational health. Those structures, probably familiar now to many of you, were teams. We planned to set up a team for each of the topical areas, turned out to be 21. That would be a mix of NIOSH and non-NIOSH people, and they would have a charge to set a research agenda in that topic. We set up a liaison committee, that was made up of leaders in business and labor and academia and public health professional groups and so on, so that we would continue to maintain stakeholder connections. We set up a federal committee of our partner agencies in the NIH and EPA and so on, where there were overlaps with interests in worker health and safety. We committed to having information mechanisms, and we have a number of those - electronic as well as paper. The bottom line was that this was an agenda, an occupational research agenda and it was research that was the game plan. We started out saying that the research agenda would be aimed at making a difference in a decade, for workers. The attention was focused towards workplaces.
Input into NORA

- Entire OSH community invited
- 500 institutions and stakeholders
- Process:
  - Committees-NIOSH and external
  - Expert working groups
  - Town meetings
  - Public meetings
  - Public docket

The input, the whole community was involved. What was a little bit humorous was that once this got started, nobody wanted to be left out. We did hear from, in the same room, parties that on a normal day wouldn’t really talk to each other. That was kind of interesting. Everybody wanted to get some input, it was really actually quite exciting. There were committees, as I said, working groups, town meetings, and a docket - we kept an open public docket so people could write in, send in, e-mail in.
We set criteria for making your vote at the end when in these various meetings based on the seriousness of the hazard (the numbers of workers exposed), the potential for reducing risk, an expected trend that this particular topic would increase in importance and not get better by itself, that there was a need for research and that there wasn’t a sufficiency already of existing research.
These were the results. This was surprising, because there are only eight topics here that are really disease and injury outcomes. I think, that I went into this and I think many people did, thinking that what we were going to come out with was a series of outcomes, illness and injury outcomes, and that's what we would focus on. Out of the twenty one there are only eight that were actually injury and illness outcomes: Allergic and Irritant Dermatitis, Asthma and Chronic Obstructive Pulmonary Disease (and this second one reminds me to say that we also said we wanted reasonable widgets we didn’t want all lung disease cause you wouldn’t get anywhere. You wanted reasonable size priority topics so you could see that you were actually make some difference), Fertility and Pregnancy Abnormalities, Hearing Loss, Infectious Diseases, Lower Back Disorders, Musculoskeletal Disorders of the Upper Extremities (so there are two musculoskeletal disorders), and Traumatic Injuries.
And then a set of topics which we grouped after the fact and said these are environment workforce topics. Which were emerging technologies, what's coming on the horizon that's going to affect workers? Indoor environment, mixed exposures, what about diesel. We can handle these individual chemicals but when they are together we really don’t have a clue on many of them. Organization of work, this was ‘96, so this is kind of the earlier days of stress psychosocial (factors) or work organization. Special populations at risk, children, young workers, workers with language issues, etc.
This whole bulk of eight research tools and approaches, because what happened in these discussions was that someone would say we need to do this, but we don’t know how to measure it. We need to do that, but we do cancer studies, but we need to wait until the workers are working and dying in the factories. We should really have methods to figure out how early on to know what is going to work. So these are really all research tools and approaches that came out as high priorities, cancer research methods, control technology and personal protective equipment, exposure assessment methods, health services research - that's a key one here, intervention effectiveness research. And this one was intended to be and actually became quite a good cross-cutting priority area, because it’s a research of a type that gets to the question “what works?” To make a change and make a difference for workers and then you figure out does it work. Risk assessment methods, social and economic consequences of workplace illness and injury, and surveillance research methods - not surveillance, but methods. This was a surprising list, but this was the stakeholder issue.
So what came from that was, that was it, the twenty-one priorities - we put out the book, and this is NORA. We set up twenty teams because we put the two musculoskeletals together. It is a research agenda, if you go to our web site, which is cdc.gov/niosh, and you click on the home page on NORA, you’ll come to a page click on the link that says “go to the original NORA web site-the first decade of NORA” and it displays the twenty-one areas and if you click on those it will take you to further information. Currently you can find all the current projects in each of those areas, extramural and intramural NIOSH, and what we’re working on doing is adding all the previous research projects because we have all that brief information. We have easily the front end, the beginning, inside and outside we put a lot of effort into putting in your proposal and you describe a lot of stuff. What we have never done is take the back end - when you finish your research that you have gotten a grant for, you have to close it out. So you write actually an abstract. So we have those and we can put those in here as completed ones. We don’t do that intramurally, we run to the next project, and we put out the paper, we make the documents, but we don’t put a nice little abstract that says this is what we really did.
So, we are stepping back and for those projects that are finished asking the project people to write a final one. So that's not up yet, but eventually it will and that will be a clear way to see in abstract form along the line with references to where the papers are. This is a place where you can go and see the totality of the research in pieces.

Another part of NORA was to leverage, nobody had enough money so how do we leverage. The next two slides show you how we had some success in this. We took the low hanging fruit approach. NIOSH puts 38% of our budget on the streets for academics. So do the other federal agencies, so we went to NIH and said, hi there heart, blood and lung, you have an interest in workers, right? We’ve partnered now with all these NIH institutes, and EPA, and the veterans administration, HRSA and ARC and so on. We've put out different requests for proposals (RFA’s, requests for applications) and also in the general funding system, in the general application system through the NIH, which we participate in.
When you put in an application that has to do with NORA, then we all get to look at it. There are two ways you can get money: by replying to a request for applications, or you can put in your request through the normal grant systems and you have an opportunity get some NORA money. It’s about 30 million a year now, from the partners, from the other agencies, toward NORA.
This one shows the NIOSH contributions to NORA. Over these eight years now, Congress has actually given NIOSH 31 million dollars for NORA over and above our budget. Linda Rosenstock made the commitment early on that any new money we got from NORA’s partnering effort, that 75% of it would go back out on the street for you all, and 25% would be for NIOSH to move NORA programs forward. That’s what we’ve been doing. If you look at the chart here, you see that in FY ‘96 (fiscal year ‘96) which was the first year, we looked at all the projects we were doing and we determined that 15.4 million dollars of our budget really was being spent in those 21 areas. We committed to increase that. If you look at the chart there, you see that we have and that now we spend about 95 million dollars each year in the NORA areas. About half of that is in grants, and the other half is in intramural and co-operative agreements. The co-operative agreements are with the outside as well, so that’s a mix. If you add in the other 30 million dollars, that's about 125 million dollars a year right now that is being spent on these topics - which is what the stakeholders said we should be doing. So that’s good.
How do you obtain research funding?

Go to NIOSH website: www.cdc.gov/niosh

- Click on NORA
- Click on research priorities of interest for National Agenda
- Click on Funding Opportunities

How do you get money? Well you can either go to our website and click on this route, or you can click on funding opportunities and it tells you what to do, or you go to your research counselors and they tell you what to do.
I want to say a little bit about inside NIOSH. We have what we call “Big NORAs”, we have all these catch names here. We have developed some sizable programs, and in the big NORAs we actually made all the inside people do the same thing that you all have to do. We went through an external peer review, so we had proposals and your same materials that you use. The idea was to have programs. We wanted projects that hung together to aim toward a particular outcome. We had them peer reviewed and so on and so forth, and they competed throughout NIOSH. There are 8 programs in place - one in dermal policy, musculoskeletal disorders, asthma, …
… health care workers, work organization, traumatic injuries, and hearing loss. These are all programs that are underway. The first ones are just reaching the end, they all ran about 6 years.
What else has happened with NORA? The teams have been really key. The teams have really tried to think about their particular priority area, and think about how to move it forward in the country. Some of the results from that are agendas. Most of the teams actually have a research agenda for that topic. If you click on “traumatic injuries” on the NORA page that I showed you, you’ll see one option that says research agenda. You click on there and it will say what’s needed - what are the stakeholders saying is needed in traumatic injuries. Those are the things it would be good for you to be pursuing. National conferences - this is a nice national conference! Graduate training - one of my favorite ones there is the organization of workgroup that has worked with the American Psychological Association very intimately for these period of years, and now there are graduate programs in organization of work in universities. It’s been kind of a partnering effort to get those there, and it resulted really from NORA. There are a variety of things working there.
This is another of my favorite ones. This is the Intervention Effectiveness Team. Everybody said “what does that mean? How do you do it?” They were pretty smart. They made this booklet on the left (it’s the first one) for researchers: “A Guide to Evaluating the Effectiveness of Strategies for Preventing Work Injuries.” How do you carry out intervention effectiveness research. That’s been favorably reviewed in a number of journals, and the National Safety Council uses it as a tool in some of the programs uses to teach its member companies. The one on the right just came out, that’s hot off the press. All of these are on the website, and you can also get these from NIOSH if you want the paper copy (either via e-mail or the web or the phone). The one on the right is called “Does it Really Work?” It’s a nice little booklet that’s intended for company use. It says how to carry out an intervention effectiveness effort in the company, in simple terms. The one on the right, I do believe the musculoskeletal disorders team just had a meeting in March with a number of companies, and they committed to undertaking interventions in the workplace and in following them - looking both at costs and examining “does it really work?” They are kind of using this tool. They are going to have another meeting next year to report on what they’ve done.
There are a wide variety of publications that relate to NORA. The one on the bottom right is a research agenda, but the others are all relevant to the different topics.
This one is kind of an interesting one. The Indoor Environment team became aware that the surgeon general is kind of interested in the idea of indoor air issues, so they partnered up and I think brought really good quality science and thinking to that effort. I think in November of 2004 there will be actually a Surgeon General conference and then a report. Those reports tend to have some value and impact, so that’s nice.
This is another very different example. The Fertility Team (they don’t like their name, so now they call themselves the Reproductive Research Team) teamed up with the Engineering Control Team and with a lot of health care entities - both drug makers, drug users, deliverers, health care workers because of this question of exposure of health care workers to the hazards of these drugs - neoplastic drugs and so on. NIOSH has a number of different kinds of publications. One is called an alert. An alert is a little booklet, and it is intended to get your attention. It says “look, here’s a problem. Here’s what we think you need to do about it. Work with us and get back to us.” This alert is on the web. It’s a pre-publication alert, looking for comments. If you have an interest in this area, please feel welcome to go in and do that. That group actually turned out to be a very good working group, and now they are actually thinking about what else can they do together. That was a nice partnering effort.
In summary, what are some of the successes of NORA to date. There is clearly a research agenda with a lot of support. Research is going on. Leveraging of resources is happening. Partnering is happening. In a sense, there’s a new culture - there’s kind of a focus in the nation on focusing these.
NORA had her 8th birthday on April 28th of this year. John Howard is the new NIOSH director - he came in 2 years ago. He tells a story that before he became the director, people said to him “you know about NORA, right?” He was the head of CALOSHA - the California state OSHA plan. He is coming into NIOSH, and people are saying “you know about NORA? Take good care of NORA!” He’d been around long enough to say “Yes, of course!” He came in, and he looked at NORA and said to those of us inside, “You know, NORA is 7 years old, and she has never had a report card. Why don’t we evaluate how NORA is doing.” We’re now in the process of evaluating NORA. I gave you a lot of those front end pieces of information, which are all very positive. Is NORA making a difference in the workplace? That’s really where the question lies. Research takes a while, so that’s what we’re now beginning to look at. We’ve initiated an evaluation. Now we have nice research being presented at NORA symposia.
With NORA starting in ‘96, by the time you get the announcements out and you go through the bureaucracy, it was about ’98 before research was really starting. It takes research 4 or 5 years (if you’re lucky) to get that done. Really, the end products are just now emerging. We had in June a really exciting - were any of you at the June NORA conference in DC? - it was really quite interesting. Tomorrow you’re going to hear lots of your work. This is now the emergence of the results. We find out if it’s working. In 2005 - this is 2004 - in 2005 we will actually be coming back to the stakeholders to say "OK, here’s what’s happened - what about the next decade of NORA? What shape should it have? What should it look like?” I’m bringing this to you, to give you an early warning. You're welcome to start telling us now, but this next thing is truly input from the stakeholders - you guys decide.
Now that we’re evaluating NORA, and thinking about NORA 2, we’re asking everybody what they think. Some of the key people we should ask are our board of scientific counselors. This is a formal committee in the HHS. We asked them what they thought, and they were all very enthusiastic about NORA. In fact, they think that the process used in fact was itself a success. We’re going to use the same process. They are kind of interesting, because we said, “Should we make any midcourse corrections, or should we just keep going till the end?” They said not to make any big midcourse corrections. Focus on the key things to be done by these teams, by the research in this decade, and plan for the next decade. Essentially we’ve taken that advice.
They also suggested that when we think about NORA 2, there are some recommendations they already want to give us. We need to enlarge the active engagement of the stakeholders - including more from the state health departments, more from the regulatory agents, the community, more non-federals, industry associations, small businesses, home workers, media. Thinking about different kinds of stakeholders.
BSC Advice (continued)

• Consideration by stakeholders for inclusion in NORA2
  • Research to practice
  • Outreach
  • Information sharing
  • Age, culture and language
  • Funding by non-Federal partners
  • Gaps in NORA1 priorities
  • Changing workforce
  • Global reach

Then what about other things? They said “you know, in the beginning you said NORA should make a difference in a decade, so you’re really talking about the transformation of research into practice in workplaces, or into policy. You really want to think about emphasizing that, and doing more outreach - information sharing.” Right now NORA is research, it’s not information sharing. So really they are saying, think maybe it shouldn’t be just research. Think about age, culture, language. They said where we really didn’t do a good job, was in getting funding from non-feds. All that money I showed you comes from the feds. From your tax dollar, from my tax dollar. What they said was that because companies, labor - everybody has an interest in worker health - we needed to do more about getting the non-feds to ante up funds, so that the work can be even more work. Look at the gaps. Look at the changing nature of the workplace, and think about being more global. We called it a National occupational research agenda because we wanted to be really clear that this was not a NIOSH occupational research agenda. You look back at that and you say “well, we didn’t mean it should just be national, and not international!” They are saying think about being focused globally.
Then we went to another group - the NORA liaison committee I mentioned earlier - the stakeholder connector group. They said “look, you cannot do the same thing for NORA 2 and turn up the same enthusiasm. You can’t say ‘we did a good job on NORA 1, we’ll just keep going on NORA 2’. You need to create more excitement; you need to think about a fresh approach. “So hmm, what does that mean? No more musculoskeletal, are people talking no more injuries? Ahh, got you worried! What do we mean by a fresh approach? This is genuine; we need to really think about this. There are clearly some areas where you say, “wait a minute, that has to stay!” Maybe some of the topics shouldn’t stay, or should be reformatted.
How are we going to go about this? We call it NORA at 9. NORA just turned 8; in April 2005 NORA will be 9. What we plan to do is to have a document called “NORA at 9” to bring to the stakeholders in April 2005, and then those will be our suggestions and the teams’ suggestions (which is broader than NIOSH) based on our experience. How was it before? What do we think it should be? Then the stakeholders will have from April to December to decide how NORA should be. We’ll publish the book in between January and April. In April 2006, when NORA is 10, we’ll actually begin the second decade. What is this NORA at 9 going to be about? Each team, say the musculoskeletal team, will take a look at how was it before NORA in that topic, what’s happened over the period of time, and what does the team see as still needed emphases and gaps. There will be another part of the document that is separate from the team topics, what were the gaps and other areas. The whole thing will come out to you all saying “ok, now what?”
There are two possibilities that we want to bring already for your consideration, because these are two new initiatives within NIOSH. These are possibilities for some angle on a part of NORA, not the whole, but part of NORA 2.
Although the first one could be all of it. NIOSH is pretty pragmatic, but we are even taking a more serious emphasis on putting the research into practice.
That means doing it with partners, because we’re not in the workplace. We’re assisting, to get things into the workplace or into policy. We are really thinking we really want to do more of that kind of thing. That’s a whole other, in some instances it’s a new set of stakeholders. We’ve just set up an office, Research to Practice. In every division is a person who is assigned to looking at what’s happening in the intramural program, and thinking how might that be helped into practice with partners. That’s the first one. The second one is steps to a healthy US workforce, which I’ll mention in a minute. The first possibility for thinking about could be a whole decade of really looking at the end of delivery into the workplace. I’ve already pretty much said that.
I want to tell you now about the second initiative in NIOSH, which we think has a possibility for being a part of NORA 2. Tommy Thompson, everybody knows him, he’s the US Secretary of Health and Human Services. He’s on an obesity kick, among other things. He’s created this “Steps to a Healthy US,” it’s an initiative of helping human services. It tells you to watch your diet, it’s really health promotion. We work for him really. We work for John Howard, who works for Julie Gardebring, who works for Tommy Thompson. Tommy Thompson said to Julie Gardebring, “CDC does a lot of health promotion, we really want you to be an active part of this,” and she said, “Oh, that’s fine.” Then Julie Gardebring said to John Howard, We’d really like NIOSH to be a part of this.” And John Howard came to the leadership meeting at NIOSH. They really wanted NIOSH to be a part of this, and they came to group meetings. A lot of us had been around a long time, and we said, “only if we do it right”.
In some instances, many instances, when the health promotion people have used in the US (not so much in other countries) when they are doing health promotion in the workplace, they often accept whatever is there in the workplace as kind of a platform, and talk about diet, obesity, exercise and don’t ask any questions about the risks to the workers from the workplace. NIOSH has never been a big enthusiast about health promotion, because there were instances of blame the victim, so to speak. On the other hand, the rest of the world is looking at integrated approaches to health. It’s the same worker, whether the risk came from the house or from the work. We said we’ll do it, but we have to do it right.
Here’s how we already have this effort under way. You already know the left hand side (you probably know both sides), but on the left we’ve got workplace risks. 5500 fatalities in the workplace in 2002, 5 million non-fatal injuries and illnesses, 40 billion direct, 200 billion indirect costs. The lifestyle risks are pretty serious as well. 300,000 people dying from illnesses associated with obesity, almost half a million from smoking, lots of heart disease and stroke, and so on and so on.
The new initiative we’re working on is called “Steps to a Healthier US Workforce.” It’s a lifting of the Tommy Thompson system. It’s intended to be an integrative healthy working, healthy living approach. The idea is to look, in the workplace, at the risks from work and the risks from life for the people. We had a planning meeting in Cincinnati in December. We invited labor, business, health promotion people, workplace people. It was a two day meeting, and it was so exciting because everybody thought this was a grand idea. It was so exciting; they were raring to go when we left the place. I was a little scared, because we really weren't prepared to run forward, we were trying to find out if we should run forward. The answer is absolutely yes. We now have been meeting and greeting with lots of different groups. Business, labor, health promotion and so on. There is a really strong level of enthusiasm.
The next step in this effort is a national conference - you are all welcome. You have the dates in the handout: October 26th - 28th in DC at the George Washington conference center. The purpose of this is to bring the various groups together to look at practices of how this works. And to think about how to do it together. And to really set off on an initiative that will go on about 10 years. Some of the cosponsors thus far, for example, the OSHA Voluntary Protection Program (VPP) group of businesses. There is a major leader in health promotion, the health project. They’re pretty enthusiastic. It’s something whose time has probably come, we should have come to it sooner. We should all think about this, its the same person. This is actually an effort that we’re pretty serious about moving forward, and look for partnering and suggestions and so on and so forth. My e-mail is mfingerhut@cdc.gov. I am happy to hear from any of you. I hope that some of you will think to come to the conference. I think that even in the short time since December, it’s kind of interesting, the health promotion people think about risks (the kind that we’ve just mentioned). They don’t think about ergonomic risks. They don’t think about injuries. They don’t think about road safety. Those are family risks as well as worker risks. When one starts to think about the whole person, and the variety of risks, then you start thinking a little more broadly. It’s clear that we each have something to gain from the other, and that together maybe the workers could be served better.
Thank you for your attention!

That’s it! I thank you for your attention.
Let’s go to the middle question. I showed you an early R2P logo here. We had a contest in NIOSH, and we have a new R2P logo, and it has a clear circular R with a clear circular part. The definition, I really didn't speak correctly here, the definition of Research to Practice is practice to research. It’s kind of this loop, where you have various series. Also, this also relates to your first question, the full definition of research to practice recognizes that there are series - from research, you have your basic research, and your intermediary, and your into practice, and you have your evaluation of whether it works. The research framework with which we are all familiar and operating in is not diminished by that, but it actually tries to put it in a context. In terms of changing the (academic) culture to impact, it’s really difficult enough in the government to do that(change culture). The OMB right now, we used to have Gifford and now we have Hart. The government system is really aimed not at outputs, not the number of publications you have, but rather at outcomes and the changes you make. For research really, it’s not what change did you make by the research, everyone realizes that every piece of research doesn’t make a big change.
But it is if from your research you can show that you are having an influence on the ultimate change. I think there are a couple of things with respect to the framework in academia, and in NIOSH, we’re researchers too. That is the frame in which it is done - that is thinking about the back end and looking toward the front so there’s a clear way that these pieces are ultimately going to get there. Also, I think that there is a clear need for more evaluation research. More intervention effectiveness research, that looks at making an intervention and looks to see if it works. It’s only by knowing what works that we can keep the useful pieces in there. I think that the academic research is not counter to this. I think that a difficulty though, I don’t know how to solve this one, but I think we have a definite interest in trying to do this – is that sometimes, because NIOSH operates through the NIH study section system, and sometimes we have more ivory tower reviewers than are appropriate for the public health needs. That’s an issue for public health itself, but it’s a particular one for us. That one is a little trickier to deal with. I think that this University and others have had good success with NORA moving forward, and I think we will know more when we finish the evaluation of looking at the different kinds of research and how it is played out, but we don’t actually know the answer to that yet.
Question & Answer

Question:

How many industrial partnership programs exist? Let me give you an example. The department of commerce through NIST, has the advanced technology program that partnerships universities with industry, and funds those types of programs and gets industry to cooperate. The department of energy, NSF, has small business investment opportunities for academia to partnership with industry to do various types of research. It seems to me that that kind of paradigm might work in this area, if you supplied the appropriate amount of funds - either through a union or through the industry itself, to partner with academics.

Actually, I think that's a very good suggestion. I will follow up on that, because that's true. Those are partnerships some of which would be natural partners for us, but certainly not all. I think that that's very important. I also think that where we haven’t had adequate partners of similar type is with the state health departments, because they are also active in these areas. I think that's part of what the board of scientific counselors was saying. Try to think outside the usual box of partners.
I wonder also if you might think about partnerships between the academic institutions and NIOSH. There’s a lot going on that seems at times to be overlapping, yet I’ve found it very difficult to partner other than in sharing information - to actually do partnerships, especially from an academic institution towards NIOSH. It’s easy for NIOSH to put out cooperative grants and other kinds of things. I’ve found it hard as an academic to break through into whatever programs are going on at NIOSH. I guess I would suggest that there be more avenues for that type of partnership.

I may not be fully understanding your question, but there are some structures that I think affect to create the situation that you’re mentioning. Some of it is just people are just busy. You’re busy, they’re busy, it would be better if we got busy together. I agree with you. There is this thing called a firewall that we try to maintain between the intramural research and the extramural research. In the crassest terms, I heard this from the NCI (national cancer institute), we would go there with proposals and listen to proposals of others. This internal scientist from the NCI said, it was to practice for the real thing, he said he was going to propose X Y & Z. His boss jumped down his throat and said “you will not do that! That idea has been in the extramural community, you cannot do that!” The internal guy wasn't really ripped off from the extramural community, but it had the potential for being interpreted that way. There is this thing we call a firewall, which tries to protect the people from getting their research taken.
You’re sending applications in, the internal people, they don’t have anything to do with that. Then there’s the cooperative agreement activities. We used to have a system where we did have a NIOSH person who was a grant advisor on each of the grants, and that helped the partnering that you’re talking about. People were talking to each other. I think what I am trying to say to you is that the system tends to make the people worry about things that they maybe don’t even need to worry about. On the other hand, communication and knowing what’s happening is sometimes facilitated by meetings like this. People go to conferences and they communicate. If you have other thoughts on how to increase that, you have my e-mail. I am happy to hear from you. We all know a lot of great researchers who are doing great things. So be in touch if you have any particular thoughts.

With that I thank you all very much, and hope you have a really successful meeting.