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Leveraging Partnerships to Address Cross-Cutting in Maternal and Child Health

ERIK JANUS: Thank you very much. Well, I think it's almost as bizarre for me to find myself here as maybe ya'll find it bizarre based on that description of as to why I'm here. And the why I'm here is contained in that seven-year stint that I did with the government where I spent a few years at D.O.D. working on chemical weapons stuff and then a few years with the State of Michigan where I got called one day to go to a meeting, basically. My boss said, "Hey, will you cover my role at this meeting of meth labs and how the state's going to respond?" Okay, sure, no problem.

Well, three years later, all of a sudden, I realized that I was in way over my head in terms of this issue, so I had to lot of research and I did a lot of outreach and I did a lot of presentations and I did a lot of going around and talking to people and, next thing you know, I had developed a partnering web essentially all over the state just by simply going around and talking to people and offering my sort of technical expertise and opinions on what meth labs are and how they are hazardous.

So, anyway, that's kind of what I want to walk you through essentially as quickly as I can since I don't have much time and I usually do this presentation in about an hour or so. My goals are simple. I just want to look into health hazards of meth labs, maybe point out some unique issues for Maternal and Child Health as they come along. We'll look at really the complex web that follows discovery of a meth lab in terms of identifying it all the way to bringing it to resolution where it's safe to inhabit again. And then we'll talk about partnering and I'll give you some resources for that kind of stuff.

So the problem with meth labs is that they've gone from very overt things that go kaboom to smaller things like toilet tank labs, labs in coolers, labs in soda pop bottles and trunks of cars. So just having them in houses is only part of the issue. Of course, there are ways that people could get exposed to all of these lab scenarios, but I just wanted to point out that it's not just in peoples' bathtubs and things like that anymore.

So I've got good news and I've got bad news. The good news is that current legislation that we have been putting into the states and into the Patriot Act to restrict Psuedophedrin. Psuedophedrin is cold medication. That is the starting product for making meth. That has done a really good job in terms of lowering the number of labs. These are mom and pop labs. This is the stuff that's being made in the back yard essentially. So we crested a wave in about 2003, 2004 and the

legislation that we've started putting in place around the country has now made those labs start to drop. Good news, right?

Also, the number of superlabs; that is, the ones that make a whole lot of meth at a time, the ones that you don't find in somebody's back yard or somebody's house, are also going down due to enforced money for law enforcement, etc., etc.

Now the bad news is, people are still getting meth, people are still doing meth and people are still becoming addicted to meth, and that appears to be increasing. If you notice, your primary emissions have still been going up across the same period of time. Well, we're seeing the labs go down, so they're still getting their meth. They're actually probably getting the meth, if you talk to law enforcement sources, from Mexican superlabs that are being trucked back across the country, and people are buying it on the street now as opposed to making it themselves. Then, of course, we've still got what appears to be a growing dependency issue amongst users of stimulants too. So not only are they using it more, they're buying it off the street, they appear to be also becoming more dependent on it as well. So that's the unfortunate news. So meth is here to stay, it appears.

Now in terms of meth labs and kids, there is a lot of misinformation about this particular facet out there. Now if you look over to the right hand of the slide, you

see the estimates range really from about 20 to 80 percent. If you go look at state websites or look in the media or wherever you're going to get your information about this, some people are claiming that eight of ten meth labs have kids associated with them. Well, at least, according to our states data, what I did was look at the number of labs that we had and then the number of kids taken from those labs. If you look at it that way, the numbers are actually going down. We're finding less kids at labs over time, it appears. Then, of course, in absolute numbers, you know, at the worst, we were looking at 3,600, 3,700 kids being found relative to the about 10,000 labs being found in the country. Again, these numbers appear to be going down too. However, kids do have unique concerns at meth labs for a number of reasons, which we'll get into in a bit.

Okay, now the hazards of meth labs come in many different forms. My particular expertise was really just focusing on that first one. A toxicologist and a risk assessor by training, I focused on environmental exposure to chemicals. I don't really deal with the physical abuse and other aspects that might be caused by living in an unsafe environment such as a lab constitutes. There are biological issues in some of the labs that I've gone and visited myself. I see used syringes on the ground. That's a biohazard, as far as I'm concerned. And then there's, of course, the obvious psychological issues involved with kids that live in these horrible, horrible, horrible situations on top of chemical exposures and other things that may be happening. So that, just in a nutshell, really is glossing over some of the overall hazards.

Now it's important to realize that there are sort of two different ways that meth labs constitute chemical exposure hazards, okay? One is during the actual active cooking process where you have stuff bubbling out of a pot. I'm going to be a little melodramatic here. You've got a lot of stuff bubbling in a pot and vapors are coming out and perhaps there's a kid in that same room, perhaps there's a kid a couple of rooms away. Inhalation of those chemicals in the air is going to be the primary root of exposure and the primary risk to your health in being in that environment at that point in time, okay? Now these cooks can last for hours at some point and now we actually see an actual special case of chemical burn injury that comes out of meth labs. We're starting to see in the biomedical literature now, so this is the active one.

Now the lab that gets busted by the cops, they haul off the bad guys, the kids go to Child Protective Services, maybe go over the aunts. Now you've got an empty house, okay? Former meth lab. Now really the risk is no longer from the stuff in the air. It's in the stuff that has settled out of the air onto surfaces. It's the stuff that's collected on the walls. It's the stuff that's collected in reservoirs like carpets and popcorn ceilings and things that collect chemical vapors essentially.

So at this point, the highest risk really is to crawling children. It's to kids that are going to put their hands in their mouth an awful lot of times a day after coming into contact with a contaminated surface such as a floor or a carpet. So the goal,

obviously, for a former meth lab is to clean it up so that we minimize the risk to that crawling child. A crawling child is going to be the most sensitive receptor, and what do I mean by that? I mean that they're going to preferentially be impacted more, their health is going to be adversely affected more, by being exposed to five units of X as opposed to a 70 kilogram adult who's been exposed to five units of X. The dose you get per body weight is a lot higher as a kid, plus you breath a lot faster as a kid, your metabolic activity is higher, parts of your skin are actually thinner, the blood brain barrier is still leaky, not fully formed. So there's lots of things that are going on as a crawling child that make you more vulnerable to these types of exposures.

Just very quickly, as I told you, we have the split between active labs and former labs. So the acute effect, what's going to happen right away to you from exposures from active labs? Let's say you're the kid in the room or you're the cop, the person in the door while the process is still going on. What could happen to you? Well, I mean, ultimately, convulsions and death are possible, not very likely. What's more likely are these top two categories of really respiratory and dermal and eye irritation.

There's lots of acid gases in the air. There are lots of other things in the air that are essentially immediately irritating and at concentrations that could lead to scarring and burning and things like that. Things like ammonia, for example. You know, a one-time exposure to a high enough vapor cloud of ammonia can leave

you permanently impaired in terms of respiratory function. Then, of course, there are some GI effects and some neurological effects. The neurological effects are mainly from the solvents involved, camp fuel, acetone, things like that.

Things that could happen if you're exposed to an active lab repeatedly include basically, you know, permanent changes in respiratory function and other. Respiratory is really going to drive everything. Now there is this phenomenon of meth melt. I don't know if people have seen it. There's some pretty nasty pictures out there in the general media that show that peoples' teeth start to rot essentially from chronic use of meth, and that could be due from the chronic use of meth and the fact that your body is dried out all the time or it could be due to the fact that you're a meth cook and you're chronically exposed to hydrogen chloride gas which is something that you get chronically exposed to every time you make the drug. That has effects on dental enamel, so maybe it's that part of it.

So now we're moving to the former labs where the risk is residual. These are low-risk exposures from dermal contact, from skin contact to surfaces and subsequent hand to mouth activity. Relative to the inhalation pathway for the active labs, this is a much lower risk. The symptoms you're going to see in folks are going to be similar to what adults exhibit when they take the drug. However, you might not necessarily recognize any overt symptoms in the adults that walk into a former meth lab because of the differences in the weights again. Remember, if you've got a small crawling kid that comes into contact with a

surface, they may exhibit some signs of meth intoxication, whereas an adult may not because they've got a larger amount of weight to distribute that dose across.

This is the big question. What are the chronic long-term health effects from exposure in kids to labs that are not cleaned? I do not have an answer for you. I'm working on it, as I think others are too. But this is really the remaining $64,000 dollar question and this is the key question that will probably wrap up the sort of the meth cleanup issue outside the money, and that is what is a health-based cleanup level that's got to be protective of kids? We don't have that yet. We're working on stuff like that.

But basically what we do know is that there appears to be a growing body of evidence that says it's observed subtle neurological changes in kids that may impact voluntary motion and may impact verbal learning. That's about all we know and that's mainly based off of animal studies.

Anyway, so meth labs and terrorism. What's the connection? I was very skeptical. Well, there really isn't any connection, but (laugh) the issue is the response. How is the response to a meth lab similar to a response to a terrorist event? Actually, they're not that different because they are complex and they involve lots and lots and lots of agencies, as you can see here. That's just, I think, scratching the surface to a certain degree. There are even other groups involved. These are the major, major players. So that's really the connection, in

my mind, in terms of the response. It's only really secondary in complexity to something really big like somebody blowing up a dirty bomb in D.C. or something like that.

Okay, so I'm going to run you really quickly through what happens at a meth lab just so the folks that maybe work with Child Protective Services or other things have an understanding of how these things unfold, because I have found that there's a horrible lack of information chain across some of these groups.

Okay, lab gets identified, maybe it's overtly because it goes kaboom. Maybe it's not because the cops who have been casing it for the last several weeks, they finally got it, whatever. They get the guy, special teams come in, specially trained teams, meth teams, come in, basically make sure the situation is secure and then they call in a DEA subcontractor who's going to come do it with his [inaudible] removal. We'll get to that in a little bit. But basically, you know, it's identified. Some first responder of some type shows up and establishes an incident command at the scene.

Okay, then we've got the DEA folks come in who get called by local or state law enforcement. This is what's most likely to be mistaken as an actual cleanup. You see the guys in the moon suits? They're out there. They're taking stuff out. Looks like they're cleaning up, doesn't it? No, this is a bad, bad, bad mistake to make. Do not assume this is a cleanup. This is the first step in law enforcement

response to a meth lab, which has called specially trained DEA guys in. They get all the chemicals that are going to go kaboom immediately and take them out. You still have residual bits of stuff in the place, assuming they were cooking meth there that you have to deal with.

At some point, as part of the primary response, if there is a child discovered there, there will be Child Protective Services who will be called and will deploy to that site. Hopefully, we'll know what they're doing in terms of having all the information in their head; how to keep themselves safe, how to keep the kid safe, how to keep anybody else with them safe. This is also another thing where there is some best professional judgment involved. However, there are resources out there in terms of protocols for how you deal with this. Anybody who has heard of the Drug Endangered Children program might be familiar with some of these protocols because that's who essentially writes those.

Finally, the tenants are cleared from the house. The owner is going to be responsible for cleaning up the house. Yes, that is the case across all fifty states. There are no exceptions, to my mind. There are no pots of money out there that I'm aware of that can be given to the homeowner to pay for that, with the exception of possibly EPA ground fields money, but we're still working on that.

Then in order for the tenant to get back in the house, there's going to have to probably be some kind of cleanup done by the contractor, maybe by the owner,

and it's got to be to certain specifications. It should be to that level that a crawling child is not going to be impacted by. Now sometimes there are state and local regulations for dealing with this. I am actually chairing an ASTM committee, which is the American Society for Testing and Materials, who creates market-relevant standards for all sorts of thing. What I'm trying to do is create a standard for local government to say, "Here is a template that you can use to characterize the contamination here and cleanup to this level." I don't tell people how to clean up. That's left to them, left to the contractor.

Okay, now the last little bit of this is going to be essentially resources for information. If you are in a state that does not run a Drug Endangered Children program and probably one of every two of you is not because they're only in about 25 states, these are links for you to get set up with that if you are so interested. There are national protocols for medical evaluation of children and child decontamination from meth labs. I helped work on the child decon protocol, actually, and we did that based on the best available science.

Another thing for states who are looking to get into preventing meth issues are you could form a meth task force which can be funded by a number of different ways, the most unique of which would probably be the good old appropriation or earmark by your local senator who decides that he wants to put aside a pot of three million dollars for you to do whatever with. That's not so common. What's

most common are these Department of Justice Byrne grants and the [inaudible] grants for setting up meth task forces specifically.

Now finally, other resources for you in terms of getting basic information, other than lectures like this, of course, would be the law enforcement meth teams. They have their own specialized teams that go and respond to the labs are usually more than happy to do presentations for local health departments, MCH programs, what have you, environmental health programs.

Okay, now this is from one of the national Drug Endangered Children documents and they said -- they're documents that are about setting up a local task force for dealing with meth issues. They suggested the ones that are not in italics. Remember how I said that there's a lot of players involved here? I was involved in the Michigan meth state task force and all the ones in italics are folks that were on our task force that were not suggested that were there and had great input and they were a vital part of it all. A couple that I'd like to point out are the last two. People often forget these two.

The contractor's consultants in business, primarily I mean the folks that are going to do these lab cleanups, by getting them sort of included in the whole process, you can sort of hear their perspective on all of this. And, yes, they're out to make a profit, but they also need to be educated by state and local authorities who may have other education that could be shared with them on Maternal and Child

Health toxicology, risk assessment, you name it. They need the expertise of the other members in that task force in order for them to do a truly safe job, in my opinion. So I was very interested in trying to court them wherever possible when I was in Michigan.

Then finally, the media. We didn't have a regular media member, but we did have a woman that worked for a local newspaper that would show up fairly often and, I'll be darned, she wrote the best articles out of everybody in the entire state, you know. She did so because she went and she made a name for herself at the meth state task force and got to know folks and started actually doing what an investigator journalist is supposed to do (laugh), interview people who know what they're talking about and write about it. You know, it's great.

All right, so I mentioned at the very beginning of this that I kind of found myself developing a partnership web across Michigan and I didn't even realize it. These were the ones that kind of jumped out at me in terms of partnerships that were not existing in the state at the time and I think made things better in terms of having an overall more cohesive response.

The first really important one is local first responders, local environmental health and local MCH Services. And when I say local MCH Services, I'm essentially in my head referring to Child Protective Services, the folks that come up and help house kids and take care of the kids' needs when there's a response at a lab.

You'd be surprised at how little information gets shared across those three groups. My mind was blown whenever I would talk to local law enforcement about meth labs and they would say things like, "Oh, you can't go in there. You'll die." Well, what do you mean? "Well, there's stuff on the walls. It'll kill you." Well, no, it won't (laugh). So I had conversations like this for many, many, many years. I think it helped to some degree, but ultimately when somebody takes the microphone at the local TV station or whatever and sticks it in your face, you're going to probably talk into it whether you know what you're saying or not (laugh). I mean, you know, you don't get that many opportunities to do that.

So this is really important, in my opinion. It's making sure the cops understand the environmental health issues. It's making sure the local health department understands the law enforcement issues. This is a very important concept in the world of emergency preparedness as well. You know, first responders and public health need to try to get on the same page when it comes to emergency response, and we're getting there. We've gotten better. I did the emergency response in Michigan and I saw a change for sure. And the same thing applies to the Child Protective Services, the Maternal and Child Health programs that are involved in that primary response. They need to be made aware of some of the law enforcement issues and some of the environmental/public health issues.

The next one I've noticed was that local Maternal and Child Health Services, healthcare and the treatment professionals, the folks that are going to be dealing

with the kids' parents in treatment, that's another one that I noticed that not necessarily everybody was getting together. To a certain degree, sometimes there wasn't talk between how the kids were being cared for at the hospital if they needed care and the parents at the treatment center. But I don't know a whole lot about that, so I shouldn't speculate.

I mentioned local environmental health and local media. This making sure the media knows what in the hell they're talking about when they write articles about meth labs that say you're going to die when you go in there that the local cop reads and then repeats when the camera is on his face. You know, it's not just important in terms of sort of good journalism; it's just important to get the right information out there. That's a pet peeve of mine.

The finally, you know, local health should try to work with what I call local in-house personnel, which means the folks that are going to go into that house and might be exposed. How do you work with those folks and make sure that they're not necessarily being exposed? And it goes beyond the cleanup contractors. This could be real estate personnel. This could be the guy coming in to do electrical work in your attic. Who knows? That's a really hard one to maintain, though. I didn't get very far with that last one.

Just some other websites so that you're aware. I mentioned some of the grants and things like that. These are good resources to have at your disposal if you just

want some more information. I'll go back and leave that up in a second. Yeah, just wanted to make sure that was my last line.