On-screen: Living in the Response—A Decade of Life and Work in the Appalachian Coal Fields Scott Laney, PhD, MPH EIS 2006. April 23, 2024 Sarah Luna Memorial Ted-Style Talk Session 2024 Epidemic Intelligence Service Conference. CDC logo on bottom right.

[APPLAUSE]

SCOTT LANEY: We are currently in the midst of the worst industrial medicine disaster in American history. And I've had the opportunity and responsibility of working on this abomination since I finished EIS over a decade and a half ago.

If you mined coal in the 1950s and '60s, you had about a 50% chance of retiring with black lung disease if you hadn't been crushed to death or blown up in the meantime. And miners are getting fed up with this, and they organized, and they went on strike. In a 1968, there was a coal mine disaster. An explosion in the Farmington Number 9 in West Virginia, about a half an hour away from the NIOSH Office in Morgantown.

Now this wouldn't have necessarily been all that remarkable at the time. We've had a number of explosions in coal mining history, even bigger ones closer to the office. But what made this particular explosion remarkable was that it was the first time that such an event had been nationally televised.

So with the worker movement and the national outrage of seeing these 78 men being burned alive, Congress was moved to pass the Coal Mine Health and Safety Act-- I think I need to go back. After that explosion, Congress passed the Coal Mine Health and Safety Act of 1969. And at the time, researchers predicted that the dust standards proposed in '69 would lead to reductions in the overall prevalence of black lung disease, and that the complete eradication of its most severe manifestation, progressive massive fibrosis. And they were right. It worked.

The prevalence of black lung declined sharply following implementation of the Coal Act. By the late '90s, the prevalence had dropped to below 5%, especially among longer-tenured working miners. But around 2000, there was a reversal. Now, over 5% of long-tenured working miners have black lung. So black lung-- poof, gone in 2000. And now, 5% of men who lace up their boots and go to work every day today, toiling underground while you're sitting here in this air-conditioned office, this room made possible by their efforts, they're working hard and they have black lung.

Now this is a tragedy and it shouldn't be happening. And this represents underground actively-working miners everywhere except Kentucky, Virginia, and West Virginia. For them, it's a different story. Here's the picture for Appalachia.

Currently, the prevalence of black lung in Appalachia is over 20% in actively working long-tenured miners. More than one in five miners with black lung work in the same jobs their dads worked. Their dads and their dads' dads.

Now progressive massive fibrosis, the most severe form of black lung, was nearly eradicated less than 20 years ago, but since then, there's been a steady increase to the point where PMF is now the highest we've seen since we've been tracking it. X-ray of a healthy person. Black lung. Complicated black lung. Progressive massive fibrosis. You don't need to be a radiologist to appreciate that this isn't right. Let's look at pathology.

Healthy, normal lung. PMF. There's virtually no functional area maintained in these lungs, and it's a slow and agonizing way to die. Progressive massive fibrosis looks like this, but it also looks like this.

[VIDEO PLAYBACK]
- And today, now I can't do what I used to do. My hobbies, hunting and-- I like-- we raised Christmas trees. And I can't do what I did, and probably another year I'm probably not going to be able to do that.
[END PLAYBACK]

SCOTT LANEY: This is Chester Fike, a neighbor of mine. The Fikes love Christmas. I don't know how they got started with it because it was before my time out in Preston County, but at some point, Chester and Terry decided to plant a Christmas tree farm up on their place. He'd give some away every year and sell a few, and it's where my family Christmas tree would come from every year.

Well, Chester got his lung transplant, but it wasn't enough. He died a couple months post-transplant. December 18, just before Christmas. He's buried over in a cemetery out by where we live. And these are his explanted lungs. Bilateral PMF in the upper lung fields. Black, black with coal-mined dust. Obliterated. Wrecked with scar tissue.

You know, some people say-- some people say I take my job too personally. And to that, I can only say, you're goddamn right I take this personally. I take this as a personal offense, and you should be offended, too. But Chester isn't the only one. Let me tell you about what happened at Pipestem a few years ago. We are at a small conference in the Mountains of West Virginia to talk about this black lung situation. And a radiologist from Pikeville, Kentucky approached us while we were at a coffee break between sessions. And he told us that he got up in the middle of the night and drove all the way over there specifically to talk to us.

He told us that he was seeing more cases of PMF in the last couple of years and his tiny practice in a strip mall in Eastern Kentucky than we were reporting for the entire nation. Men in their 30s and 40s. He said, "You people need to come down here and see what's going on." So we did.
Normal chest film. What we saw in his office that day. One after another after another. Advanced black lung. PMF. The worst any of us had ever seen. If these lungs could talk.

[VIDEO PLAYBACK]
- My name is Mackie Branham, Jr. I'm currently 39 years old. I live in Ashcamp, Kentucky. Sycamore. I'll be 40 December. I have five beautiful babies and an excellent wife.
[END PLAYBACK]

SCOTT LANEY: A young man completely disabled by advanced black lung. But is this a unique story that we're hearing? Some sort of anomaly that we see? What does Amber Branham think?

[AUDIO PLAYBACK]
- You could probably go to 15 houses up the creek and you'll hear the same story, whether it be black lung or whether it just be a plain, straight laid off. Every one of Elkhorn Creek has been affected by it.
[END PLAYBACK]

SCOTT LANEY: Well, we've been over to Elkhorn Creek. Everyone up Elkhorn Creek has been affected by it. And while we say we don't like looking at these people and thinking of them as statistics, they are. Mackie most certainly is. He shows up as a data point in the state and federal disability data that we monitor. He shows up in the ever-growing caseload at the Pikeville Clinic. Just last year, he's a bilateral lung transplant statistic.

Even though I'm 10 years older than him, the odds are, he's going to show up in the mortality data before I have a chance to retire. He is a statistic. And she'll be an Appalachian statistic, too. Amber will be a statistic when she starts collecting survivor benefits for her and the boys.

Each and every one of the bar graphs we produce at work is built by stacking one after another after another these stories on top of each other, and we are damn mindful of it.

We published this Pikeville story in the MMWR in 2016. 60. 60 cases of PMF. And we continue to investigate cases throughout Appalachia. In 2018, we published findings of 100 more. Just two months ago, in 2024, not 1824, we published our findings and reported over 1,000 more cases.

This is completely senseless and should be unacceptable to anybody that knows about it. But despite our best efforts, through our expansion of public health surveillance, bringing national attention to this topic, it seems that for every rock we kick over, we find another stink. Every time we turn around, we see another case. Another Mackie Branham. Another Chester Fike. Another Elkhorn Creek.

Look, I've been at this for almost 20 years, and I don't have a simple solution that deals with our insatiable desire for cheap electricity. I don't have a quick fix for the type of corporate greed that puts profits over human life. Dealing with the US energy policy and human health is complicated, and it's frankly going to take greater collective social action than I can whip up on my own.

With that said, I'd like to close by sending you away with an uplifting call to action. I mean, I really would like to do that. I'd also like to avoid wantonly violating the Hatch Act.

I guess what I can tell you is this. My small team and I are not going to be dissuaded. We appreciate the human tragedy that this is because we live in it. We see it at the grocery store, in the post office. We see

the oxygen tanks at the high school basketball games. We go to the black lung support group meetings. We go to the funerals.

Despite the seemingly hopeless enormity of it all and the massive corporate and political pressure that wants us to turn a blind eye, we are not going to be deterred from our mission. We are going to keep on doing what we're doing. This is what we signed up for when we went into EIS in the first place. We're going to keep on doing basic epidemiology and public health surveillance in the middle of this public health crisis.

What I'm going to do-- what we're going to do-- is get back into that GSA we drove down here in and drive straight back to West Virginia this weekend and continue to talk out and use science and SAS and every other public health tool that we have at our disposal to eradicate black lung once and for all.

[APPLAUSE]

On-screen text: CDC Logo (in the center). 2024 Epidemic Intelligence Service Conference