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COAL WORKERS' PNEUMOCONIOSIS SELECT COMMITTEE

Members present:

Mrs JR Miller MP (Chair)
Mr JN Costigan MP
Mr CD Crawford MP
Mr JP Kelly MP
Hon. LJ Springborg MP

Counsel assisting:

Mr B McMillan (Barrister at Law)

Staff present:

Dr J Dewar (Research Director)
Ms L Pretty (Principal Research Officer)

PUBLIC HEARING—INQUIRY INTO COAL WORKERS' PNEUMOCONIOSIS

TRANSCRIPT OF PROCEEDINGS

WEDNESDAY, 15 MARCH 2017

Brisbane

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Committee met at 9.32 am

CHAIR: Good morning. I declare open the public hearing of the coal workers' pneumoconiosis inquiry. Thank you for your attendance here today. My name is Jo-Ann Miller, the member for Bundamba and chair of the Coal Workers' Pneumoconiosis Select Committee. The other committee members here with me today are: the Hon. Lawrence Springborg, deputy chair and the member for Southern Downs; Craig Crawford, the member for Barron River; Jason Costigan, the member for Whitsunday; and Joe Kelly, the member for Greenslopes, who will be joining us later this morning. Mr Shane Knuth, the member for Dalrymple, is unable to be here with us today and has given his apologies.

Those here today should note that the hearing is being broadcast and transcribed by Hansard and that the media may be present so you may be filmed or photographed. Before we commence, I ask that all mobile phones or any other electronic devices be switched off or put into silent mode. For the benefit of Hansard, I ask that witnesses please state your name and position when you first speak and speak clearly into the microphone. These proceedings are similar to those in the Queensland parliament and are subject to the Legislative Assembly's standing rules and orders. The guide for appearing as a witness before the committee has been provided to those appearing today. The committee will also observe schedules 3 and 8 of the standing orders.

COHEN, Dr Robert, Director of Occupational Lung Disease, Division of Pulmonary and Critical Care Medicine, Feinberg School of Medicine, Northwestern University

CHAIR: I welcome Dr Robert Cohen of Northwestern University and the University of Illinois at Chicago. Dr Cohen, I thank you most sincerely for travelling from Chicago to make yourself available to speak to the committee here today. For the record, could you please state your name and the capacity in which you appear before this committee?

Dr Cohen: Good morning. I want to thank you for inviting me. It is really an honour to be here and I am very grateful for this opportunity. I am a professor of environmental and occupational health science at the University of Illinois's School of Public Health in Chicago. I am also a professor of medicine at Northwestern University's Feinberg School of Medicine and I direct the occupational lung disease program at Northwestern.

CHAIR: Thank you very much. I will now go to our counsel assisting for brief questions initially then we will come back to the committee.

Mr McMILLAN: Dr Cohen, for the purposes of the record, I would like to ask you a bit more about your professional and occupational background, particularly in relation to coal workers' pneumoconiosis. You have indicated that you hold professorial appointments at two eminent universities in the United States. Could you outline for us briefly your other academic and medical background?

Dr Cohen: Certainly. I am a board certified pulmonologist, and I think you call that a respirologist over here, a respiratory physician. I am also certified in internal medicine and critical care medicine. I am a NIOSH certified B reader, which means that I have been certified to classify images according to the ILO standards since 1998. I have directed the Black Lung Clinics Program in Chicago, which was initially at Cook County Hospital, where I worked for 33 years, and it has now been moved over to the University of Illinois. Since the early 1990s, I have been the medical director for the federally funded black lung clinics in the United States. These are clinics that are funded to diagnose, treat and provide rehabilitation services to miners who suffer from black lung, funded by the US Department of Health and Human Services Health Resources and Services Administration. I have been that director since the mid-1990s.

My interest in black lung really began in the late 1980s at Cook County where I began working with miners who had emigrated from Appalachia, the coalmining regions in the eastern United States, to Chicago. Since that point, I have become more and more interested in this disease. I have done a large amount of research on this disease. I also then began consulting with the US government, working with the US Mine Safety and Health Administration, also known as MSHA, on a number of

projects. I work with the US Department of Labor, which is charged with managing a compensation program and medical treatment program for miners through the Office of Workers' Compensation Programs at the US Department of Labor, specifically within the Division of Coal Mine Workers' Compensation.

My work has also been as a contractor for NIOSH, which is part of the US Centers for Disease Control, the National Institute for Occupational Safety and Health. Specifically, I work with the respiratory health division, which is located in Morgantown, West Virginia. My work for NIOSH has been as a project consulting content officer for chest imaging for occupational lung disease. Right now we are working on developing new International Labour Organization standards for digital imaging for pneumoconiosis and for occupational lung disease. We are also working on a new training syllabus to use digital imaging and working on new examinations for our B reading program, which has been the certification program that is used in the US and also internationally to train physicians to classify images for pneumoconiosis.

Mr McMILLAN: Briefly, in the last two years, you have assisted the Queensland government in a couple of ways in their response to the re-identification of coal workers' pneumoconiosis. First of all, you were part of the team of experts engaged under the Monash review to review the respiratory component of the coal workers' health scheme.

Dr Cohen: Actually, the very first thing I did was I began working with Vale corporation, which is one of the coalmining companies here in Queensland, who engaged me to review chest X-rays on all of their active coalminers working at the Carborough Downs mine. I had the opportunity to visit Australia about one year ago and speak with 300 miners in Moranbah, which was a very nice visit. I had the opportunity to go underground and visit the mine and then work with the Vale executives on reviewing those X-rays and identifying some issues there. Shortly after that, I became involved with working with the Queensland Department of Natural Resources and Mines, and I worked in partnership with colleagues from the Monash University in Melbourne to do a review of the Coal Workers' Health Surveillance Program.

Mr McMILLAN: The committee members and I will ask you questions about that in detail later, but I will just close off on your current engagement with the Queensland government. You and your team are also now the sole providers to the Queensland government of B reading services for chest X-rays of Queensland coalminers?

Dr Cohen: That is correct. We have been working with them since last year. We have a process in place now where we are receiving DICOM images, which are the medical information electronic images of chest X-rays. We read them in a blinded dual reader pattern, where we have two people read and then we give a result based on the agreement between those readers. We have been providing that information to the department here in Queensland.

Mr McMILLAN: Thank you very much, Dr Cohen.

CHAIR: Thank you, counsel assisting. Dr Cohen, can you provide us with some information about what you will be doing here this week?

Dr Cohen: It seems like an action packed week for me this week. My plan here this week was originally mainly focused on providing testimony today. Yesterday I had the opportunity to meet with miners who have black lung through the union, the CFMEU, and talk with them about their concerns about black lung. Tomorrow I plan to participate in a forum that is organised by WorkCover Australia to mainly share our experiences for workers compensation for black lung in the United States—some of the issues that we have and how we go about this both in good and sometimes not so good ways in the US. I expect that we will have the opportunity to discuss issues of workers compensation with many stakeholders at that meeting.

In the morning I also plan to meet with physicians from the Wesley Hospital who are doing a study on black lung here in Queensland. We wanted to meet with them and talk about their work and get the opportunity to see if we can actually start doing some research and evaluation of some of the cases that are being seen here in Queensland. On Friday I have plans to meet with the Department of Natural Resources and Mines staff to review our collaborative work together and some of the plans in moving forward for the coalminers health scheme here in Queensland.

CHAIR: Dr Cohen, just for the benefit of the parliamentary record, the CFMEU Mining and Energy Division has significantly contributed to your travel here, that you are not being paid. The parliament of Queensland has also said that it will contribute \$5,000, most probably for your return airfare to the United States. I thank you very much for your assistance. I also say to the senior executives of WorkCover and the department—which you have very generously given free of your Brisbane

time—that this committee expects WorkCover and the Department of Natural Resources and Mines to make a significant contribution to your University of Illinois mining and safety health fund to continue this research that you are now talking about in relation to the Wesley Hospital. I say to the directors-general of these agencies that I will be watching what they are doing and that I also plan to ask questions in the estimates committee process later this year in relation to whatever contribution they have made or intend to make. Thank you, Dr Cohen, for your generosity in your time and for your generosity as well in being here today. I would like to pass to the deputy chair for questions.

Mr SPRINGBORG: Thank you very much. I also welcome you, Dr Cohen. I also thank you for your expertise and the very genuine way that you are going about assisting our state in getting to the bottom of this significant and gross failure of public administration. I thank you very much for the assistance and the openness of yourself and your colleagues when I and the chair and our party visited your place of work only recently. We very much appreciate it and we certainly do appreciate your assistance.

I would like to take you to the circumstances in the United States. We have been struggling to understand as a committee how apparently the incidence of black lung in Queensland miraculously ceased to exist in 1984 yet in the United States it has continued to be an ever-present threat for coal workers since that time. I understand that in the United States the prevalence rate amongst coal workers is between two per cent and 12 per cent. Is that correct?

Dr Cohen: That is correct, depending on the region.

Mr SPRINGBORG: In the time that you have been collecting statistics in the United States, it has never, ever fallen below 2,000 coal workers in 100,000?

Dr Cohen: That is right. It has never fallen below that. I think we would have been very surprised had it gone to zero.

Mr SPRINGBORG: In your professional field, had you or your colleagues ever questioned or discussed how we had this country that in many ways was similar to the United States yet we had been able to supposedly eradicate black lung?

Dr Cohen: This actually was a major topic of conversation during the rule making and efforts that were going on in the United States to lower our dust standards. In the very first Obama administration, the US Mine Safety and Health Administration developed a program called End Black Lung-Act Now and proposed the lowering of the dust standards in the United States, which were two milligrams per metre cubed since about 1973. The laws to lower them were passed in 1970 and there was a three-year run-in period. We still were seeing many cases of black lung that were found on chest X-ray. We were also seeing cases of miners developing severe and significant lung function impairment and then we were seeing cases of even the most severe forms of the disease. That made us decide that we really needed to lower our standards from two—the proposal that NIOSH had back in 1996 was to 1 milligram per metre cubed.

Then when we talked to many of our mining engineering colleagues and others, they pointed out the experience here in Australia. They said that the standards here, for example in Queensland, were higher than our standards; they were three milligrams per metre cubed, yet the disease had been eliminated in Australia and there were no cases. That was when I first became aware of the Australian experience and I was fascinated and somewhat intrigued in trying to figure how that could be possible. There were some articles that were published showing that the cases were declining and becoming non-existent and the standards were what they were. We received some opposition from people who wanted to maintain the standards in the US at two and not lower them, citing the Australian experience.

I must say that we really did not have an explanation. We had theories and ideas. Then it became a little bit more clear when I became involved with this project that perhaps black lung had not been eliminated—I would say that is the most likely scenario—but in fact rediscovered and that people maybe were not as vigilant in looking for this disease. If you do not look for something, you may not actually find it.

CHAIR: Dr Cohen, you have always believed that in Australia and in Queensland in particular there have been black lung cases but they have never been diagnosed?

Dr Cohen: If you looked at things from a very fundamental point of view, if you have a large population mining coal—and Queensland I believe has 30,000 miners and maybe there are 50,000 in the country—and you are mining significant quantities of coal—and I think more than 600 million tonnes of coal in Australia and 250 or 240 million in Queensland—and not have one single case sort of boggles the imagination. That is something that really should ring alarm bells and make people

think, 'We're not looking carefully.' If you found a few cases that would be more plausible and believable, 'We have a program in place. We are looking for this disease and we are finding a few but perhaps not very severe disease,' but to see nothing I think is something that public health officials should take note of. Then you would wonder if there was something wrong with the surveillance as opposed to congratulating yourself that you have eliminated the disease.

Mr SPRINGBORG: The chair touched on my question which was, 'Do you believe that black lung was eradicated in Queensland?' I think you have answered that question. I also understand that in the context of the United States—and we have a very large coal industry in Queensland and you have a very large coal industry in the United States. In fact, there is not a big difference volumetrically in exports. I also understand that there have been tens of thousands of deaths of coal workers or former coal workers in the United States. If I remember the figures rightly, there have been as many as 70,000 circumstances in the United States in the last 10 years where former coal workers have had their death certificates marked with black lung being the principal or significant contributing cause of their death. Are you aware of the fact that there are thousands of coal workers or former coal workers in the United States for whom black lung is the significant, contributing or major cause of death?

Dr Cohen: Yes, that is correct. I think those numbers are probably significant underestimates because when people die if the certifying coroner, who may not even be a physician, does not think about that or ask the family about that—they may have died of a heart attack but they may not have known that they were struggling and their heart was working harder because of their underlying lung disease. These types of mortality certifications usually are underestimates of the numbers. It is very substantial. There are thousands of people who have had coal workers' pneumoconiosis, making them much more susceptible to dying at a younger age.

Mr SPRINGBORG: Would we in Queensland then be justified in coming to the conclusion that many Queensland coal workers have gone to their graves since the so-called eradication of black lung in Queensland where black lung was the principal or contributing cause of their death?

Dr Cohen: I would have to say that that is a very likely scenario. If physicians and the communities believe that this disease was eradicated and somebody dies of a respiratory death they would not likely certify that or think about black lung as part of that. If imaging for black lung and knowledge about the disease also declined as the number of cases declined, they would not think about that as well.

The other thing that I think many physicians and the community do not realise is that coalmine dust causes obstructive lung disease. It causes emphysema, chronic bronchitis and lung function impairment in many ways very similar to tobacco smoke. If you had a miner who died of any of these diseases, they would not have taken into account the contribution of coalmine dust exposure to their lung disease and, therefore, again underestimated the proportion of the disease.

Mr SPRINGBORG: I think you have touched on my next question, which was that those who have done the diagnosis or written the cause of death may have attributed it to something which was similar—some other obstructive lung disease.

Dr Cohen: That is correct.

Mr SPRINGBORG: You have obviously been engaged because of your world-leading credentials in the area of diagnostics to assist Queensland to get to the bottom of this. You have had the opportunity, along with your team, to read a significant number of images—X-rays—that have been sent to you. How many have you read to date?

Dr Cohen: We have read 2,369 I believe that were part of this most recent engagement with the Queensland Department of Natural Resources and Mines. There was also work that we did for Vale where we read 300 and I read an additional 500 X-rays as part of a Monash review. In total it was well above 3,000 images of coalminers from Queensland that I have had the chance to look at.

Mr SPRINGBORG: They are generally people who are currently working in the coal industry? There are some historical images that you have viewed, but generally they are current workers?

Dr Cohen: I would say that over 95 per cent are active coalminers, the people who are actively working in the industry. I have seen some former miners that people have sent X-rays for us to take a look at. I would say it is overwhelmingly active miners and that there are many former miners whose images we have not had the opportunity to review yet.

Mr SPRINGBORG: That is probably hundreds of thousands in actual fact that you will never get the chance to review, so we will never really know what their underlying circumstances were, that is the former miners?

Dr Cohen: That is correct.

Mr SPRINGBORG: How many other images do you have at the moment that are awaiting the reading by you or your team?

Dr Cohen: I think that we are catching up quite a bit. We may have a thousand or so images still to be read. I would have to check with my staff to see exactly how many are yet to be returned. As the department opened up chest X-ray screens to surface miners in January of this year and as people are participating more and more, the floodgates have opened. Right now we have four B readers who are working for our program reading these images and we are in the process of trying to find a fifth B reader in order to be able to accommodate the volume. From a side job it is now becoming something that is taking up a large part of my time.

Mr SPRINGBORG: We are grateful that you are doing it, Dr Cohen. In terms of reading those images, we have become aware as a committee of the critical importance of quality control around taking the images to make sure that they are unobstructed and that you can get the best possible view in the area of diagnostics. What is the percentage of images that you and your team are receiving that is not of a standard that is good enough to give an effective diagnosis? It may be that one lung is obscured or there is another obstruction over that lung?

Dr Cohen: I would say that one thing that is a bit disappointing is that the percentage of images that is of a quality that degrades our ability to read them is still around 20 per cent. I think that is what we found in the Monash review. Even looking through the data most recently of this whole body of X-rays that we have read, 20 per cent or quality 3 or worse—the International Labour Organisation has a four point classification for quality of images. Quality 1 is perfect, a really nice image. Everything has a great contrast. You can see into all the lung fields very well and nothing is obscuring your view. Quality 2 means that there is a very minor imperfection. Somebody may be slightly rotated or slightly tilted back, but you can see enough to make a pretty accurate diagnosis. The way we have been grading it, quality 3 means that there is something that really does impair things a little bit, but we still try to get some information from it.

Quality 4 is also called 'unreadable' and we will not even make a judgement; we just say, 'Send us another image.' We have been trying to be generous because we know that if we read something unreadable then the miner has to come in again, get another X-ray and they often will not be able to work. We try to do that as little as possible. On the other hand, we may be doing a disservice by letting people work without having had the highest quality screening. I would say that is clearly an area for improvement. One of the very common types of quality issues that we see is that the scapula, or the shoulder blades, are over the chest, obscuring the lung fields. When you take a chest X-ray if your shoulder blades are back they cover the chest. They have to be on the side of the chest so that you can see the window of the chest very well. That is something that is easy to do and is not being done in all cases.

There are many issues with contrast in terms of how the picture is taken. You get the idea that the X-ray was shot with not as much attention as really is necessary to get a very good quality image. In part, I think it is that chest X-ray has become less of an important diagnostic tool in general medical practice because so much of what we do now relies on CT scanning. As a pulmonologist in clinical practice, if I see anything abnormal on a chest X-ray we send them right to CT scan. Mostly chest X-rays are used to look for the position of a ventilator tube, an intravenous line, a broken bone or something. Taking a high-quality chest X-ray to look at the lung parenchyma, which is the tissue of the lung substance itself, is a bit of an art that you want to make sure you are doing very, very well and I think that is where we are suffering a bit in the work here. We have struggled with that in the United States and I can share a little bit about how we deal with that. That is still a real problem here in what we are seeing.

Mr SPRINGBORG: Thank you very much. We might come to that in a moment in further follow-up questions. If I understand what you just said, despite the fact that we have had the Monash review, which identified the quality of images as being one of the critical limiting factors, you are still seeing a significant number of recently taken X-rays where there is still obstruction or the quality is not good enough to be able to properly read them and it is still running at about 10 or 15 per cent?

Dr Cohen: I would say it is closer to 20 per cent. It is images where there is some impairment of our ability to classify the image in the best possible way. It is these issues that we are talking about. Some significant number—we do not like to see any quality 3 or unreadable images. We will accept 1s and 2s, so we try to keep that number well below five per cent. If we have an image that is not good, they should reshoot it. It is digital; you do not even have to develop the image like the old days. It pops up on the computer screen, so the technician should notice this and then reshoot the image if they did not get a good one.

Mr SPRINGBORG: Obviously you have had expertise in this, as many people in the US have, over a period of time. Have you offered your services to Queensland officials to assist with training with regard to radiography or more particularly in the area of radiology with regard to B readers?

Dr Cohen: Yes, we have had this discussion. I think I was discussing this with the Department of Natural Resources and Mines even in late 2015.

Mr SPRINGBORG: It was 18 months ago or close to that?

Dr Cohen: Something like that. I think we were discussing the initial finding—which was very disturbing—that there were cases that were being misdiagnosed. People had abnormalities that were consistent with coal workers' pneumoconiosis and people were diagnosing other diseases, and there were issues with being able to classify the images correctly according to International Labour Organization standards. As part of the work that I do with NIOSH we provide training courses for radiologists and chest physicians and others who want to learn how to classify images according to International Labour Organization standards, which really is the only way that you should look at chest imaging for dust exposed workers to be able to classify them in a scientific, rigorous way that is reproducible and will give important information to public health officials about the health of that population.

That program which we have, we are charged by the International Labour Organization; it is not an American thing. It is an international thing run by the ILO, but NIOSH has contracted with the ILO to update and develop and run this program. I think it is very useful. Many radiologists are wonderful at chest imaging and wonderful at diagnostic and clinical imaging, but the purpose of this program is to make sure that you apply these standards in a very rigorous way and that you can identify early disease and then classify things in a way so that you can communicate it for epidemiological purposes and scientific and public health purposes. That is not something that is necessarily completely understood just as part of your general medical chest training or radiology training, and we provide that education and teaching program.

NIOSH offers this program internationally as well as in the United States, and if you look at our website NIOSH has conducted courses in Chile and Italy. We had a course last year in Thailand, which is not too far from here. Usually if NIOSH gets a request from a governmental agency or a university or other organisation, we will put together a program—it is a one-week course—training people that know how to read images but who need this bit of special training in order to understand how to use this classification system. We offered that possibility a number of times.

CHAIR: Was it ever taken up?

Dr Cohen: Not to date.

CHAIR: The department did not take up the offer of yourself and the NIOSH team to provide this training?

Dr Cohen: Right. I understand there were a number of political reasons internally and that there was opposition to this course, and I think that may have played a role. I can only say at this point that we have not had that opportunity. We would still very much like to do that and we would be happy to. Every time I have come to Australia my colleagues at NIOSH tell me, 'Let us know quickly, because we have to put it on the budget for next year.' We cannot just come in a month or two: we need to plan ahead. It still remains to be scheduled.

CHAIR: You would have provided this training basically for free?

Dr Cohen: No, it is not for free. NIOSH has a budget because I think it is about \$30,000 to provide the course. We have done this in Italy where the organisation can make money out of it because the radiologists pay for continuing education and this training. It is very useful education and training. It depends on the country. When we have done it in South Africa or other countries where physicians may not have many resources, then governmental agencies will take the cost. Many people that organise these charge tuition for the participants and they are able to defray some of the costs to the government or the academic institution.

Mr SPRINGBORG: Basically, if your offer of expertise was taken up 18 months ago we could have at least had something sometime in the last 12 months where we had enhanced quality with regard to radiographers taking the image and enhanced competence for our radiologists reading the image. At the same time as a First World state in a First World country—Queensland—was turning that down, we had Third World countries in South America, Asia and Africa, which have quite abysmal records of safety and health amongst their workers, taking up your offer to upskill those in the area of diagnostics and reading?

Dr Cohen: Yes, there certainly have been those courses. I think it would have provided some significant usefulness here in Queensland, and you probably would be in a position where you could have a similar system to our B reading system in place now. You would have had trained radiologists.

Mr SPRINGBORG: As a consequence of this you now have B readers based in places like Thailand, Japan, South Africa and South America even, as I understand it, and we have only just now—as a consequence of Australians going to your course, whether they be in Italy or the United States—got our first two B readers in Australia only in the last week or so?

Dr Cohen: That is right. I understand there are two Australian B readers who did not even take our formal course. I arranged for them to meet with my colleagues in Morgantown a day or so before the test. They went through a tutorial, and two of the physicians passed the test and that is fantastic. I have tried to reassure radiologists and physicians here, who may be concerned that they may not pass, that 50 per cent of the US takers of this test fail. It is a bit difficult because of the ability to really calibrate your eyes and your vision and see exactly the opacities that we are talking about and classify them correctly. One of the big focuses is to find the earliest changes and not to over-read it so that we are not diagnosing too many cases and not to under-read it so that we are missing cases. A lot of the exam is focused on those very early signs and it takes a bit of calibration of your brain and your work, so it is not an easy test.

I think at that sitting there were four people who sat for it and two of them passed, which is what happens in the US: about 50 per cent of the people who take it pass; then when you retake it or restudy it a higher percentage pass, but it just takes a bit of work. It is not a one-year fellowship, it is not two years, it is not a month; it is really just taking a course that would help you understand the system and calibrate it. I do not believe it is that onerous, but you might not pass. There is that risk, and maybe that is what some people are afraid of.

Mr SPRINGBORG: How many B readers are there in the United States?

Dr Cohen: About 200.

Mr SPRINGBORG: You have about 200 readers and you have a coal workforce of around about 140,000-150,000 as I understand it.

Dr Cohen: Right. I would say that for active working miners it is probably closer to 80,000 in recent years since our industry has had some major shutdowns.

Mr SPRINGBORG: We have tens of thousands and we have two B readers now. Fortunately, we can call upon your resources and you have 200 B readers who can read images for 80,000 active workers. Dr Cohen, the other critical aspect when it comes to diagnostics is lung function testing and spirometry, and we really understood that when we went to your facility in Chicago. We thank you very much and the miner who agreed to let us be part of his diagnostic journey. What are your observations and recommendations around the quality of spirometry or lung function testing? There are deficiencies in our current system in that too, are there not?

Dr Cohen: There are. I have not had opportunity to do anything further than what we reported in the Monash report, but those findings were astounding and disturbing in that the quality of the spirometry was also very poor. I think that spirometry and lung function testing is, if not the same, maybe even more important than chest imaging because spirometry and lung function is really what correlates with someone's impairment, whether or not they are short of breath. You might have an abnormal X-ray with some scars but your lung function might be preserved; conversely, you could have a relatively normal chest X-ray but have emphysema or chronic obstructive pulmonary disease from coalmine dust and be very severely impaired and at great risk. Lung function is critical and it is not something that is impossible to do well. It is not that it is incredibly expensive or difficult, but it requires attention, it requires training and it does require certifying your staff.

The work that we do for the Coal Workers' Health Surveillance Program in the United States does that. We provide a 16-hour training course for anyone who is going to administer spirometry, and they have to successfully complete the course. The site that is providing the spirometry and testing has to submit the data from those tests and it is reviewed for quality, and if they are giving us poor quality results we do not let them do it. They cannot be a site for surveillance or for that work. I cannot emphasise enough how important it is, but it is also again not that hard. There are wonderful institutions here in Australia that are great respiratory hospitals and thoracic services which I believe could provide this support, and NIOSH certainly has a wonderful course that is available online but we could also share it. We offered to do that as well. I am a NIOSH course director for spirometry, and at the University of Illinois we do the course twice a year. We have provided it for all of our black lung clinics. I do the course at our black lung clinic conferences, so it is eminently doable.

One other point about spirometry is that the equipment is important. These devices, which are \$5,000 to maybe \$10,000, are not incredibly expensive. They are much cheaper than X-ray equipment. NIOSH has done a careful review of all the spirometry manufacturers to make sure that they meet the standards that are necessary to provide good diagnostic testing. We pay attention to the equipment; we pay attention to how the equipment is maintained; we pay attention to the training of the technician; and then we pay attention to the interpretation of the physician. They have to submit their interpretation, and we look at it in a quality assurance way to make sure that they know what they are doing and that they know how to interpret lung function testing.

Mr SPRINGBORG: You would obviously be aware that our officials here have recently put out a couple of directions papers where they are seeking to invent a process of more competent X-ray and X-ray analysis and spirometry. Do you consider that that is reinventing the wheel, given the available resources and knowledge that you have in the United States around the availability of several things such as this from NIOSH and MSHA, which have all been done in conjunction with yourself and also the online training, particularly with regard to spirometry?

Dr Cohen: I think that certainly I would recommend that the department review all the material that is available from NIOSH. We have had the Coal Workers' Health Surveillance Program nationally in the United States since the passage of the Federal Coal Mine Health and Safety Act, and we have been doing spirometry and all this imaging work for these populations for many, many years in a very coordinated and organised way. We have spent millions developing these materials and this training and the certifications. The American College of Radiology just finished completion of a contract for almost \$1 million to review the educational materials for the B reading program, and we are now reviewing that syllabus and we are going to be posting that shortly. It seems to me it would be a shame not to take advantage of it. I do not believe the US government will charge a nickel to Queensland. We believe that this is to be provided as a service to any government or organisation that cares for mineral dust exposed workers. Certainly it could and should be adapted for Queensland, so I would not just take it without reviewing it and making sure that it meets your needs, but it is a good starting point.

Mr SPRINGBORG: Thank you very much, Dr Cohen. I will come to my final question, but I may think of some others as we go through the course of our discussions today. We have the three forms of pneumoconiosis: asbestosis, coal workers' pneumoconiosis and silicosis. What are your observations or concerns regarding silicosis? That is something that as a committee we have become concerned about during the course of our investigations, given the fact that there are co-diagnosis issues with regard to that. You might have coal workers who are exposed to high levels of silica and coal dust or other mine workers who are exposed to high levels of silica. What is your experience in the US with regard to the incidence of silicosis amongst those who are involved in the mining and quarrying industry? Is it reasonably easy as a competent diagnostician to separate from classic CWP, and how much is there a relationship between CWP and silicosis?

Dr Cohen: That is a great question. It is a huge concern to us in the United States as well. People who work in coalmining are exposed to what we call coalmine dust. We do not say 'coal dust'. We say 'coalmine dust' because the dust that is generated in a coalmine is often mixed with other minerals. The geology is not pure. When you are cutting in a coal seam it is often mixed with rock or other minerals and there are other contaminants in it, so it is coalmine dust.

Many jobs in mining can have a very high percentage of quartz or silica. Particularly for underground miners who are roof vaulters, who drill into the hard rock top to secure the roof and prevent roof falls, that is very high silica content. Surface coalmine drillers are very heavily exposed, and we have had cases of progressive massive fibrosis outbreaks in our surface coalmine drillers. They are drilling through the overburden, that hard rock, in order to blow it up and remove it and then get down to the coal seam as they do their strip mining, or open-cut mining as you call it here.

People who are developing mines and in mine development—when you are cutting through rock to get down to a coal seam or you might come across a geological fault, you cut through rock to get above or get back down to the coal seam—have heavy silica exposures, and silica is much more toxic than coal dust. Coal dust is not benign. It is not healthy, but silica is 100 times more toxic, especially when it is freshly fractured silica. You take a rock and you blast it, you drill it, you break it. That particle has a very reactive surface and that surface reactivity adds to its toxicity and causes much more damage to the lungs. In the United States I participated in the research that has looked at the chest X-ray imaging of our coalminers with rapidly progressive pneumoconiosis. We see this very rapidly progressive form and many of them have these r-type opacities—that is, the round opacities that have a diameter between three millimetres and nine millimetres, and that is often

associated with high silica, and many of our miners have that pattern. I recently published a paper on the pathology of our miners with rapidly progressive disease and we actually saw it was silicosis—accelerated silicosis—and a lot of silica that was there. I would not say that that is our only problem, but you are very correct to pay attention to silica—to the percentage of silica in the dust—and to be concerned about it, because we think that that is a significant part of our problem in this resurgent pneumoconiosis and this epidemic of hundreds of cases of PMF that we are seeing in the United States.

Mr SPRINGBORG: Thank you very much, Dr Cohen. I appreciate that.

Mr COSTIGAN: Dr Cohen, welcome back to Queensland. With regard to the situation with the two B readers, what happens if there is a conflicting view?

Dr Cohen: That is a great question. The NIOSH protocol and the way that we read X-rays in the United States is with a panel of B readers. Even though there are 200 B readers in the United States, NIOSH chooses from among them those that have the highest scores and those that have academic backgrounds and are independent to be on the government panel. If the two readers agree within one major category of the ILO standards, then they just take that reading as considered final, except for if someone reads it as 0/1 which means negative for pneumoconiosis versus 1/0 which is positive—it is that border—then we require a third adjudication reading and whichever that third adjudicator comes in as—and they do not know that they are an adjudicator—

Mr COSTIGAN: They are like a video ref, if you like?

Dr Cohen: That is exactly right, although—

Mr COSTIGAN: And then a decision is made accordingly?

Dr Cohen: Exactly. There are occasions where potentially someone could read 0/1, the next guy could read 1/1 and the next one reads 2/1, so each one has a different category and then we go for a fourth and a fifth reading. We have not had that necessity for the Queensland project at this point, although we have people that we can use. We have four B readers and I would say maybe five per cent of our readings require adjudication or less where they have to go to a third reader to make that tie breaker decision.

Mr COSTIGAN: Very good; thank you. Earlier in answering a question from the deputy chair and member for Southern Downs you said that your approach is very coordinated and very organised. How would you describe the Queensland approach to this issue in your own words, Dr Cohen?

Dr Cohen: I think that it is interesting to compare these two countries. In the United States I think we have a very organised and careful testing program with high-quality images and quality control and feedback and all that kind of stuff, but we have very low participation. Of our mining workforce that is active only 30 per cent or 40 per cent participate because it is not mandatory, so we have great data on a few people. You, on the other hand, in Queensland have wonderful participation. Everybody has to participate in the coalminers health scheme in order to work and you have the potential to have data on all of these miners such as lung function, X-ray imaging and all that stuff, but the quality of the testing—at least up until this moment, and I think that this committee is a sign of things changing for the better—has been poor, so you have got everybody but you see nothing. We have great ability to see things but we have fewer people, and we still see a lot. I do not want to make it seem like we do not and it is not like you do not see anything, but I think that is the difference. You have great participation. You have the components that are there, but in some cases I would say the components are almost ceremonial rather than real—that is, you do ceremonial spirometry in that it is like, 'Take a deep breath and blow it out hard.' It is a nice ceremony, but in reality the data is not useable or you do the imaging in a way that you have an image and you can say you have it but you may not look at it or if you look at it the person who is reading it was not informed why they were reading it or was not trained how to read it. There are many issues there which you are clearly addressing.

CHAIR: Dr Cohen, just for your information, we have had evidence before the committee that in one particular mining town the local barista making coffee for the townsfolk was also part time taking chest X-rays, so that might go to some of our understanding in relation to why there have been poor quality X-rays taken.

Mr SPRINGBORG: Not poor reading.

Mr COSTIGAN: Dr Cohen, you mentioned under the Obama administration the End Black Lung—Act Now campaign. Are you surprised we have not seen anything like that rolled out here in Queensland?

Dr Cohen: I think that you have to first have acknowledgement that there is a problem; there is nothing to end if you think you do not have it. We have passed that stage and now that you know that you have it I think that End Black Lung here is a perfect campaign slogan, and with the resources that the government seems to have here you should be able to make great strides. I think it would be difficult to eliminate it completely, but I think you could make great progress.

Mr COSTIGAN: In one of your earlier responses in relation to the perception of retired miners, I can recall this committee meeting in Collinsville in the north Bowen Basin in late November last year where we heard from retired miners—my old mate Croaky comes to mind and Jack Dempsey, two of the great men of Collinsville and the coalmining industry. They were very adamant in giving evidence, Dr Cohen, that many of their old mates are in the cemetery as a result of black lung. We have heard your evidence here today and to say that we find it interesting is an understatement. Do you think they are on to something there—that their fallen comrades are in the cemetery because of black lung?

Dr Cohen: I think that that is something that is very, very possible. In terms of this exposure if you do not look for it, people think they are just getting older. They think they are ageing. I am slowing down. I am 58 and I will see a 58-year-old miner who cannot move very well and they think that that is because of their age, but I can get around pretty good. As a lung doctor I have not had that coal dust exposure for all those years and I think that people, because it is gradual and because it is insidious and creeps up on people, do not realise it and they do not understand that.

Mr COSTIGAN: We have had witnesses come before the committee, Dr Cohen, as this has unravelled who have literally taken the committee on a journey. We have been to our coal ports and had a look there. Do you have any views in relation to the risk of coal port workers developing CWP or being diagnosed with CWP? You call it coalmine dust; obviously it is about to go around the world from our coal ports. What is your take on that?

Dr Cohen: I think that workers who transport and handle coal are at risk, and that includes, in our country, railroad workers. A lot of our coal is moved on barges on rivers, so that includes barge workers and river workers and then the workers at our ports who are exporting coal. They have these conveyor belts that are loading and pouring mountains of coal into the hold of a ship and when it is falling it generates huge amounts of dust and those workers would be at risk and I think that we would have to do surveillance. Very early on in this process we had a saying in medical school that if you do not take a temperature you will not find a fever. Mostly that was lazy medical students who did not want to take a temperature because then they would have to do blood tests and work, so it was like, 'We just don't take a temperature and we won't have to do any work. We can go back to sleep.' The equivalent of that in public health is not having a good medical surveillance program. If you do not take the temperature of the population you will not find disease and you do not have to worry about it. I think these workers are exposed to a dust that we know can cause respiratory illness and we need to look at them and see if they are sick or not and then we can make more appropriate decisions.

Mr COSTIGAN: With regard to the two accredited B readers that we have in Australia at the moment as of what—was it a week ago, two weeks ago?

Dr Cohen: Correct.

Mr COSTIGAN: Where are they, Dr Cohen?

Dr Cohen: I am not sure if their names are available for public release, but they are in Queensland in Brisbane.

Mr COSTIGAN: Just wrapping up, Dr Cohen, do you think one day as a jurisdiction Queensland should aim to have a NIOSH type facility as we tackle this problem?

Dr Cohen: I think so. It makes perfect sense in that you have 30,000 coalminers and maybe in the States we have 80,000, so it is maybe double the size, but it would make very good sense to have a central facility that organises the surveillance and collects the data. It is very important to analyse that data when you do it as well—not just to send the results to the individual miner, but the department needs to look at it from a very high altitude so you can see the bigger picture and you can see there might be five cases of 1/0 from one mine and nothing anywhere else. That one mine may have a problem and then the department could focus on that, so looking at that data as well as just collecting it and going through the process of securing an individual's health is also helpful.

Mr COSTIGAN: Thank you, Dr Cohen.

CHAIR: For your benefit, Dr Cohen, there has been evidence before this committee as well that the chest X-ray films were held by the Department of Natural Resources and Mines in broom cupboards as well as in shipping containers. Yesterday this committee actually saw the shipping containers where the X-rays were held and I think it would be true to say that this committee was Brisbane

quite shocked and disgusted and was dismayed at the treatment of people’s personal records, including those X-rays. We also understand as well that the department used a tick-and-flick basic form in relation to the medical information and that no-one in the department, from what we have been able to gather here, actually read the medical reports, so that is the low-line basis on which we are coming from in this committee. Would you have any comments on that at all, Dr Cohen, because we as a committee have been gobsmacked by this evidence?

Dr Cohen: That is a word that I have started to use in the United States—that we are gobsmacked—but nobody understands it when I say it, but it is jaw dropping, which is the same thing. It is appalling. I do not know the history or why that happened, but the fact that the circumstances that you describe are true and that happened is appalling—that is, the medical information was not recorded, was not analysed and was not read and you have X-rays that are not preserved. In the basement at NIOSH we have X-rays going back decades, it is a carefully humidity controlled room and we can pull out an X-ray on a miner and see what happened years ago if we need it for comparison or if the miner needs it for medical purposes. It is a medical record and there are very strict laws about how to maintain that. They can request it from NIOSH. We actually have the capability of scanning the analogue images—the old films—and we have a very high-quality scanner so that we can even send that image electronically if we need to. Clearly you are paying very close attention to it and that cannot happen anymore.

CHAIR: We hope it does not happen anymore. We certainly had a look at the shipping container yesterday and there is nothing in it at present.

Mr CRAWFORD: Dr Cohen, thank you for coming out to Australia. I also want to thank you for the work and the guidance that you have provided to our workforce over the last months and years. What we have found after travelling and speaking to families and speaking to coal workers is that you are well heard of. They probably do not recognise you by face like Bruce Springsteen or someone like that, but there are plenty of miners out there who ‘know of this bloke called Cohen’ or ‘this doctor from the States’ or something like that, and I know that some of them are actually in this room and I am sure there are plenty watching the broadcast as well. I have a couple of questions, even though most have already been covered. You mentioned the Vale visit earlier at Carborough Downs, and we also went and visited Vale at Carborough Downs very early in this inquiry and they were very good to us. Could you expand a little bit on how that came about and what happened during that visit that you talked about earlier?

Dr Cohen: Sure. That was a really exciting opportunity for me because initially when the first few cases were discovered I had the opportunity to review X-rays at the United Mine Workers convention in Las Vegas, of all places. Mr Smyth as the president of the CFMEU had gone to that meeting and I gave a lecture to the convention about black lung and spoke to the mineworkers that were present about black lung and he approached me and showed me images of some miners that they had concerns about. I looked at those images and they are quite consistent with black lung and that is what I mentioned to him. I believe that several of those miners came from the Carborough Downs mine. I think those cases became confirmed and that was part of the initial clarion call that there is a problem here in Queensland—that we have new cases. Then I was contacted by a Dr Eddie Foley, who was the nominated medical adviser for Carborough Downs, and he convinced the operators of that mine to have me review X-rays of every one of those miners. Andrew Vella is the name of the site executive, I think.

Mr CRAWFORD: That is right.

Dr Cohen: A very nice guy. That company hired me to look at their miners. I think that they were concerned that a couple of their miners had the disease and, unlike some companies that might react by trying to bury it, or hide it, or not look at it, they took the approach of, ‘Let’s see what we’ve really got going on here. Our miners are very concerned.’ I thought it was very broad and forward thinking of them to take that approach. They took X-rays of every single miner. They sent them over to us. We looked at them. They actually paid for me to come a year ago and talk with all of their miners.

It was a bit of a busy week, because I spoke with six different groups of miners on three shifts on two fly-in fly-out rotations and getting up at six in the morning and meeting them. They were wonderful. These guys were bright, they were concerned, they had great questions, they wanted to know what was going on. It was a really wonderful opportunity to very intimately meet the Australian mining workforce and I was very impressed. We found disease there. We got CTs and it was concerning. It was not a massive, horrible epidemic, but it was something that need to be addressed. I think that was a great example of how the mining industry could or should react to this problem.

Mr CRAWFORD: Do you remember what sort of questions they were asking you when you spoke to the miners?

Dr Cohen: They were very concerned about their prognosis—'What does this mean in terms of my ability to continue to work underground or in higher exposure jobs?' 'What does this mean in terms of my mortality, my ability to do things later in life?' I gave each of these work group shifts a nice lecture on black lung disease and what it is and what it is not. I think that people need to know the facts and there was very little education in their workforce about black lung. I think it set them much more at ease. My impression was—and Mr Vella told me and the mineworkers from the CFMEU who were also there, the union and the management together—that the workers felt very good about that knowledge.

I could not tell them that everything is going to be wonderful and there is no problem, but that this is the reality of it. I think that is what needs to be done—'What is the reality? What can we do to protect people? How can I prevent this disease?' and so forth.

Mr CRAWFORD: Once a miner has a diagnosis, can it be rectified? Can it be repaired? What is the process for a miner with black lung, assuming that they might be in, say, their 30s, 40s or 50s, going forwards?

Dr Cohen: Unfortunately, it is irreversible. There really is not any data that we can reverse what damage has already been done. The scarring process in the lungs cannot be reversed. If you develop emphysema, which I call Swiss cheese lung—you get these holes in your lung where the inflammatory process chews up the lung tissue leaving a space where there used to be a nice functioning air sac and blood vessels and that is gone—that cannot be repaired. But you can prevent any further progression. You can try to reduce any further exposure to respiratory hazards.

Some people develop airways inflammation. They get an asthmatic component. Their airways are twitchy, they get narrowed, they can wheeze. We can treat that with bronchodilator medications—inhalers and sprays. For people who have more advanced disease, we can provide something called pulmonary rehabilitation—a special exercise program for lung disease patients that we may talk about later as well. That is an important thing that we can do. Smoking cessation is a huge thing. Anything else in your life that is a respiratory hazard in addition to your occupational exposure needs to be addressed, but we cannot reverse the damage that has already been done.

Mr CRAWFORD: Thank you. I think we will talk about the rehabilitation later on.

CHAIR: Thank you. I would now look to go to counsel assisting, Ben McMillan.

Mr McMILLAN: Thank you, madam chair. Dr Cohen, I want to touch on a few matters briefly before we have the morning break. You said in your opening evidence that so far you have reviewed something in the order of 3,000 X-rays of Queensland coalminers?

Dr Cohen: That is correct.

Mr McMILLAN: Are they X-rays predominantly of underground coalmine workers?

Dr Cohen: That is correct.

Mr McMILLAN: Have you reviewed any X-rays of surface coalmine workers?

Dr Cohen: I believe that I have.

Mr McMILLAN: Of the 3,000-odd X-rays that you and your team have already reviewed, what percentage of those would be surface workers?

Dr Cohen: I cannot tell you that because, unfortunately, as part of the work that I am doing I do not have a lot of work history on these miners. I think something that may be helpful moving forward is to round up a dataset that goes along with the X-rays. I have been providing more of a technical service in looking at the X-ray, looking at the quality and providing an adjudicated reading, but I think what we could do and what we do for our research in many other bits of work is to analyse those results in relation to the work histories. Are these surface miners? What job titles? What tenure do they have? I think that is something that I would be very interested in in working with the Queensland government and getting more deeply into that data.

Mr McMILLAN: Have you asked the Queensland government to provide you with any of that data?

Dr Cohen: They have provided readings of the radiologist who has read it in Australia, although we have not really worked out a deal where we can get the funding that we need to enter that data—so if I get data but do not have the resources or permission to analyse it. I think that would be a very important thing going forward to do.

CHAIR: Just excuse me there. I would just like to take that a little bit further, please, Dr Cohen. I understand that the department pays the University of Illinois to B read the X-rays. How much would that be approximately?

Dr Cohen: I believe that our current contract is \$60 for an adjudicated B reading for each image they send. That includes getting the electronic transfer, distributing that image to the readers, getting back the reading and then our data analyst takes all the readings and compares them to see if they meet the criteria for agreement. If they disagree, then we have to send it to a third reader, adjudicate it and analyse that data. We provide an ILO form in PDF format back to the department, which I believe they then distribute to the nominated medical advisers for use in the surveillance scheme.

CHAIR: Dr Cohen, you are providing this service to our government and to our industry for \$60, which is, in fact, less than the AMA recommended schedule fee for an Australian to see a general practitioner in their own suburb. I wanted to say to you that you are obviously doing this work mostly out of the goodness of your heart, by the sounds of it, because we cannot do that service for that amount of money in Australia. Can I thank you for that. Maybe you might like to review it because, when you have a look at it, you should be provided with the money that you are requesting to be able to do this further work, given that you are doing it so cheaply in comparison with Australian Medical Association rates. Counsel assisting?

Mr McMILLAN: Just to take up the chair's question, Dr Cohen, for \$60 per image, that image is reviewed by not one, but a minimum of two expert medical physicians?

Dr Cohen: That is right.

Mr McMILLAN: With postgraduate qualifications and specialist training in B reading?

Dr Cohen: That is correct.

Mr McMILLAN: In addition to that there is data analysis and administrative work associated with your team?

Dr Cohen: Yes. I think that I probably could not be accused of being a very good businessperson. Most of my work that we do is all research based and population based for public health. My motivation for getting into this in the very beginning was as a public health service and to help this population here, and we have been struggling and working hard with the government to meet the volume. I am looking forward to my discussion with the department and I hope that we can meet this and improve our turnaround times. We have not been able to turn around things as quickly as we wanted to, given the massive resources that are required for this and a bit of an underestimate of the job entailed.

Mr McMILLAN: I will come back shortly to the other work you and your team also do, which is critically important. I will go back to the X-rays that you have already read. Have you been able to form any view about, first of all, the dataset that you have had access to and the prevalence of coal workers' pneumoconiosis in the Queensland coalmining workforce?

Dr Cohen: We looked at some of our data. Some of these cases that we read as positive, when we read an X-ray, or read it as positive for pneumoconiosis, it is adjudicated, which means that there are two people who read it. The way that the process has been outlined by the department is that they often then get CT scans and these cases are confirmed and go through the system.

After our original readings, often the loop has not been closed on some of those cases. I do not know how they have been adjudicated in terms of the CT scans. We have read some, but not large numbers of those final CTs. The X-rays that we have read is about one per cent, maybe a bit more, that are positive at one/zero or greater, but then the final process and determination, I cannot tell you how that happens.

In the US, we report those cases. The miner would get a letter that says, 'The NIOSH panel of B readers have read your X-rays and you have a one/zero X-ray.' That miner would be eligible for part 90 rights—they are called—to apply for a low-dust job under the part 90 program that MSHA operates.

Here, the positive B reading goes through a further adjudication process. The NMAs evaluate it. They put it in context. They may get other imaging and other findings. That is what I can tell you. It is about maybe a bit more than one per cent.

Mr McMILLAN: How many of the 3,000-odd X-rays that you and your team have read have you classified as early stage coal workers' pneumoconiosis?

Dr Cohen: The ones that we have—this is excluding the Vale data and the Monash data—I would say that we have 30 out of maybe the 2,300 that are positive at one/zero or greater.

Mr McMILLAN: You may be aware that the Department of Natural Resources and Mines in Queensland has formally confirmed 19 cases of coal workers' pneumoconiosis in Queensland. This committee understands that a 20th coal worker has recently been formally diagnosed. Those numbers—30 in 2,300 with a population of some 30,000 coalmine workers in Queensland—would suggest that there are hundreds, if not thousands, more cases yet to be discovered.

Dr Cohen: Correct. Again, I would make the caveat that the quality issues of the X-rays have been something that we struggle with. I do not know what has happened. Again, something that I think would be useful going forward is to close the loop on those positive cases—look at the data, look at the CTs and see where they stand. Certainly, there is a problem here. It is not a disease that, unfortunately, has been eradicated.

Mr McMILLAN: In 2010, three of your colleagues from NIOSH, Mr Colinet, Mr Joy and Mr Landen, published a comparative analysis of data. I think that you might have referred to this earlier in your evidence. In their research, they were particularly interested in looking at the differences between Australia and the United States. You are familiar with the article I am referring to?

Dr Cohen: I am indeed, yes.

Mr McMILLAN: For the purposes of the record, the article is *Coal workers' pneumoconiosis prevalence disparity between Australia and the United States* and it was published on 19 October 2010—more than six years ago. Their research found that a comparison of mean respirable dust concentrations between the United States and New South Wales and Queensland at that time suggested that average dust concentrations in Queensland were significantly higher than they were in the United States. Their research indicates, for example, using the longwall operator similar exposure group, that mean dust concentrations over a five-year period—between 1995 and 2000—in the United States was 1.4 milligrams per cubic metre of air whereas in Queensland, with the same similar exposure group, the average concentration was 2.63. This is a period during which I think you have indicated that thousands of United States coalmine workers were being diagnosed with pneumoconioses and that was a significant, or a contributing, cause of their deaths. Is it not reasonable to conclude that, in 2010, with dust exposures higher than in the United States, thousands of Queensland coalminers were being exposed to levels of dust that significantly increased their risk of developing coal workers' pneumoconiosis?

Dr Cohen: That is a reasonable conclusion.

Mr McMILLAN: Madam chair, is this a convenient time?

CHAIR: We would now like to break for 15 minutes. Dr Cohen, if you would like to have a cup of tea or coffee, that would be great. We will be back here at 11 o'clock this morning.

Proceedings suspended from 10.44 am to 11.06 am

CHAIR: We are now back in session. Counsel assisting, Mr Ben McMillan, is in the midst of asking questions of our guest here this morning, Dr Bob Cohen, from the University of Illinois, Chicago, United States of America.

Mr McMILLAN: Dr Cohen, in the course of your evidence already today you noted that the occupational exposure limit for respirable coalmine dust in the United States up until very recently was two milligrams per cubic metre of air and I think you indicated that that had been the standard since 1973 and the introduction of the coalmining legislation at that time.

Dr Cohen: That's correct. In 1970 the Federal Coal Mine Health and Safety Act was passed. It was actually passed in '69 but it went into effect in 1970. There was a three-year period where the levels were three milligrams per meter cubed but by 1973 the final permissible exposure limit that was mandated by the Mine Safety and Health Administration was two milligrams per metre cubed of an eight hour time weighted average.

Mr McMILLAN: The Queensland standard over the relevant period has been three milligrams per metre cubed of air. Is there any reason to think that the coalmining environment in the United States as opposed to Queensland is so substantially different that that increase in the respirable dust level wouldn't have exposed workers to a higher level of risk?

Dr Cohen: I am not sure what the Queensland government based their three milligram per metre cubed standard on. I can tell you that our standard was based on British data from the pneumoconiosis field research trials that were done in the 1950s and 60s. It seemed that with a two milligram per metre cubed level, based on British data, that we thought there would be a very low chance of disease and that is what the States based it on. Over the years our data has shown that

even two milligrams per metre cubed was not protective and in 1996 NIOSH recommended, in a document that we call a criteria document, a new exposure limit of one milligram. That was '96. It took us until 2014 to actually get it lowered and it was sort of a compromise between industry and science and labour to only lower it to 1.5. But again the data for Queensland I don't know, especially since there isn't good surveillance data in Queensland to base that on. If you had an excellent surveillance system showing very, very low rates of disease then maybe it would make sense.

Mr McMILLAN: In your opinion was there adequate scientific data to underpin and support the recommendation in 1996 for a level of one milligram per metre cubed?

Dr Cohen: I think the evidence was very strong in 1996 and it was summarised in that criteria document which looked at a number of different disease outcomes of coalmine dust exposure. It looked at the rate of radiologic disease, the scars on the chest X-ray, but it also looked at this lung function data which had not been focused on enough initially and that data showed there were specific rates of lung function impairment associated with coalmine dust exposure that probably weren't connected enough under the old standard. It also looked at the rates of emphysema in these mining populations and the data was also again showing that the level of two milligram per metre cubed probably was not sufficient.

Mr McMILLAN: At the time that that data and scientific research was published was it peer reviewed?

Dr Cohen: It was extensively peer reviewed. All NIOSH publications are, especially when they issue a criteria document which means a new recommendation. There was actually a committee that was formed by the Secretary of Labor at that time to review the evidence and that upheld that standard. Actually, when the new legislation was proposed, this new regulation to lower the law, a bulletin was published, called a current intelligence bulletin, where NIOSH reviewed all the data since the 1996 document and that was somewhere I think in 2010, I can't remember exactly the date, but that was used by MSHA in the rule making for this new lowered standard, the new dust regulations. I actually served as a reviewer for that document, looking at all the data published since 1996. I think those documents would be useful to have available: the criteria document of 1996 and the current intelligence bulletin.

Mr McMILLAN: Both those documents are generally published and available to the world at large?

Dr Cohen: They are easily accessible on the NIOSH website.

Mr McMILLAN: The scientific research underpinning those criteria documents is also published by NIOSH, is it not?

Dr Cohen: Absolutely, and they cite all of the peer reviewed literature, all of the research that was published internationally that relates to coalmine dust exposure and workers' respiratory health.

Mr McMILLAN: Going back to 1996 there was a reliable body of scientific evidence for an occupational exposure limit for coalmine dust of one milligram per metre cubed of air that was available to regulators in Queensland and elsewhere?

Dr Cohen: Yes, that's correct.

Mr McMILLAN: All of that data was reviewed again in or about 2010 by NIOSH and a range of scientific experts and that recommendation was confirmed?

Dr Cohen: That is correct.

Mr McMILLAN: As a result a political process, ultimately the United States moved to an occupational exposure limit of 1.5 milligrams per metre cubed of air?

Dr Cohen: That's correct, and that new dust standard also included a number of recommendations about sampling. There were many loopholes or many problems with the old sampling that was allowing two milligrams per metre cubed. Coalmines were able to lower their production rate to 50 per cent of their normal rate in order to have dust samples that met the criteria. Now you can't do that anymore, it has to be at least 80 per cent of your production. Whole shift sampling is now done whereas before you didn't have to sample during an entire working shift in order to get these. A number of changes were instituted to make the sampling more representative of the true exposures in the mines and also to lower that limit. They also included the new technology of a continuous personal dust monitor where miners can real-time look at the dust they are exposed to and not only record if there are exceedences but actually change the conditions and reduce their exposures.

Mr McMILLAN: I will come back to that additional regulatory environment in the United States shortly. I wanted to ask further about the setting of the occupational exposure limit. I referred you to the research by your colleagues from NIOSH that was conducted in 2010 earlier in the course of your evidence. Their review of average dust concentrations in Queensland between 1995 and 2000 suggested average dust concentrations for longwall operators of between 2.3 and 2.9 milligrams per metre cubed of air. Based on that historical body of scientific data that you have had access to, that would suggest that exposures of that level are still dangerous.

Dr Cohen: That's correct. The data showed that the two milligrams per metre cubed is probably not protective and I think that in general this type of data probably does underestimate some of the real conditions. Often when there is sampling by government inspectors or others the conditions are a bit better than the day-to-day exposures.

Mr McMILLAN: To the extent that any coalmine workers in Queensland were working in that level of dust without respiratory protection, they were exposed to a dangerous level of dust being inhaled into their lungs?

Dr Cohen: I would say they are certainly at risk for coalmine dust lung disease as a result of those exposures.

Mr McMILLAN: Can I ask you to give a little more evidence about the difference between coalmine dust lung disease as a general category and coal workers' pneumoconiosis specifically and whether regulators in Queensland pursuant to the recommendations of this committee should consider coalmine dust lung diseases more generally as a concern for coalmine workers?

Dr Cohen: I think they absolutely should. Coalmine dust exposure results in a number of different diseases in the lungs. It is a spectrum of disease. It is not one stereotyped response of the lungs. People have focused on the coal workers' pneumoconiosis or the scarring process in the lungs because it is somewhat dramatic on chest X-ray. You see these dots, you see these opacities and these scars and that is impressive. Coalmine dust exposure does damage the airways and it damages the airways in a fashion very similar to tobacco smoke, causing irritation of the bronchi, it causes swelling of the lining of the airways, the mucosa it is called, it causes hypertrophy of the mucus producing glands, the glands within the airways that produce a nice layer of mucus which normally serves as a protection but when they are overdeveloped it produces excess mucus, swelling of that lining and therefore narrowing and constriction of the airways leading to airflow obstruction. In our patients who suffer from that it is called chronic bronchitis. They cough and produce phlegm most days of the week for several months out of the year, at least three months, and many years in a row. They can cough every morning. We all know miners and maybe family members who are smokers who get up and they might just mention they are clearing their pipes or something like that but they have cough and phlegm. That is chronic bronchitis. That is a manifestation of coalmine dust exposure as well.

Mr McMILLAN: Is there any doubt in your mind that a coalmine worker who has worked and been exposed to coalmine dust over a lifetime of working, that that exposure has contributed or could have contributed significantly to the development of chronic bronchitis, emphysema or other diseases other than CWP?

Dr Cohen: No, there is no doubt. It is very, very clear in a host of literature, in studies of miners from the UK, from France, from Germany, from the United States, that coalmine dust exposure is significantly associated with coughs, sputum production, wheezing, shortness of breath and the disease of chronic bronchitis. It is very clear that it is associated with emphysema, which is a diagnosis that is made anatomically, unlike chronic bronchitis which is a symptom-made diagnosis. If you tell your physician you cough and you have phlegm for that many days out of that many months and that many years you have the diagnosis. But emphysema is made by looking at X-ray or CT scanning or pathology. If you have got holes in your lung, the Swiss cheese lung that I call it, where the lung has been self-consumed by these inflammatory responses, then you have got emphysema. That has been very clearly associated with coalmine dust exposure as well. Probably the seminal article is by a group of NIOSH investigators. Eileen Kuempel at NIOSH with other colleagues looked at autopsied coalminers from the US and they had very good exposure estimates for coal dust and they had great smoking histories and they quantified how many holes in the lung there was. They called it an emphysema severity score. In that study it was even more potent than tobacco smoke exposure. There are many studies from South Africa and other countries, looking at emphysema scores and clearly showing that it is caused by coalmine dust exposure. If we do not look for these diseases by looking at lung function or thinking about emphysema as an occupational disease caused by coal dust, then we are really omitting a very important part of that spectrum of disease.

Mr McMILLAN: In terms of understanding the health effects on a working population of people who work in and around coal, it is essential, as I take your evidence, to look at the broad spectrum of diseases that coal dust causes?

Dr Cohen: Absolutely, which means we want to look for those diseases, but we also want to screen for the early stages of those diseases. It is fine if we diagnose it when it is advanced and then we can provide treatment, but we have lost the opportunity to prevent progression. When we think of coalmine dust lung diseases, we need to think of primary prevention, secondary prevention and tertiary prevention. Primary is the dust control; preventing any disease to begin with. That is where we need to talk about the dust levels that you were asking me about. Secondary prevention is when we identify the disease early, in its earlier stages, so we prevent further exposure and mitigate the disease progress, so that we can perhaps prevent them from developing worse disease. Then tertiary prevention is really treatment for people who already have disease, such as our miners who are taking inhalers, antibiotics, vaccinations, physical therapy and pulmonary rehab. That is tertiary prevention. We need to focus as much as we can on these earlier preventive stages if we are going to really help the population in the best way.

Mr McMILLAN: This committee has received a significant volume of evidence from miners and retired miners who have respiratory symptoms and have been told by their various medical service providers that they might have chronic obstructive airway disease, emphysema, asthma, bronchitis. Where those workers have had a history of working in and around coal dust, is it likely that that dust has contributed to those illnesses?

Dr Cohen: I think the evidence would support that. The toxicity or the potency of coalmine dust and tobacco smoke are relatively equipotent. In other words, if you have mined for one year underground and you have lung function impairment and you smoked a pack a day for one year, you are going to have approximately the same amount of damage to the lung from those exposures. If we have miners who have mined for 20 years or 30 years and they smoked a pack a day for a similar amount of time, that mining exposure is probably half of their disease. The evidence is that it is likely additive exposures. It is not multiplicative, as you see with some other diseases, but it is additive and therefore, I think, significantly contributing to those diseases.

Mr McMILLAN: Is there any reason to think that a train driver who has been loading trains with coal for 30 years or a tugboat captain or linesman who has been standing underneath the coal loader of a ship for 30 years would not have had the same exposure and be at the same risk?

Dr Cohen: It would be hard to think that they would not. The exposure data would need to be measured and you would obviously need to know more about that population. It would certainly raise the question that these workers are exposed and should be evaluated. Their occupation is not something without risk.

Mr McMILLAN: In the course of your research over 30 years, have you been able to establish positively any safe level of exposure to coalmine dust?

Dr Cohen: I do not know that there is a safe level. In other words, is there a threshold effect where, below that threshold, nobody gets disease and above the threshold people get disease, because the other side of the question is the susceptibility or the sensitivity of the worker. We have some workers who are more sensitive to dust than other workers. For example, we know with smoking that someone might have a relative who smoked two packs a day for 60 years and is fine—120 pack years of smoking—and, on the other hand, we see people who smoke maybe one pack a day for 10 or 15 years and have very severe emphysema. The same is true of mineral dust exposed workers. There may be workers who ultimately will still be susceptible at lower levels, but we have to figure out a practical reasonable way using the best scientific evidence to minimise the rates of disease. That is what these exposure limits attempt to do.

Mr McMILLAN: In the course of your work with the Department of Natural Resources and Mines and the Vale Corporation in Queensland, are you aware of any cases of progressive massive fibrosis in the Queensland workforce?

Dr Cohen: I am not.

Mr McMILLAN: The cases that have so far been confirmed of coal workers pneumoconiosis are an earlier stage of disease than PMF?

Dr Cohen: That is correct; the cases are of simple pneumoconiosis.

Mr McMILLAN: Have you turned your mind to why there might have been an outbreak of PMF in the United States? My reading has suggested thousands of cases have recently been discovered in the United States, but there is not an as advanced level of disease in Queensland, to the best of our knowledge.

Dr Cohen: That is right. We are a very concerned about what we are seeing in the United States. We have seen a report in the United States Centre for Disease Control and Prevention publication known as the *Morbidity mortality weekly report*, MMWR, just in December, of 60 case was of PMF from one radiologist clinic in eastern Kentucky. That is astounding. There has now been an investigative journalism report by our national public radio, the United States national investigative journalism radio service, of our black lung clinics. We found one clinic that reported 600 cases. Some attorneys who care for compensation benefits for miners in the Appalachian region have reported close to 900 cases, so it is not thousands but it might be a couple of thousand, which is absolutely unconscionable. To have this many cases of this incredibly advanced disease in the 21st century is appalling. We are investigating that.

There are some theories and the theories that we are looking at are the following: one has been the exposure to increased levels of silica. Some of those folks are from narrow seam coalmines, which may be four foot and some are even as low as three feet. I have seen 24-inch coal that people have talked about mining on their bellies, using equipment that is very low. It is impossible for me to imagine lying on my belly and mining coal like that. They are taking a lot of rock above and below the seams. The technology for cleaning coal at coal preparation plants has improved, such that you can take 40 or 60 per cent waste rock and clean it very efficiently and make a profit, so there is less attention to only mining the coal. You can take a bunch of rock, which is a huge exposure to silica, and still make it profitable. That may be part of it.

Also, our miners are working double shifts, overtime, six days a week. That is huge numbers of hours of exposure with much less time in between to cough up the dust and clear their lungs and maybe overwhelming the defensive mechanisms of the lungs to dust in a way that had not occurred before. That is another theory.

The other theory is that the enforcement of our dust exposures in some of these mines may be not very well done and there may be massive overexposures in certain mines in certain areas. There has been an association with small mines, in other words, mines of 50 workers or less, which tend to be less capitalised and less investment in those mining companies and, therefore, perhaps less attention to health and safety, but also it is coming from some large mines. It is not exclusively the small mines.

We are really concerned. We are investigating. I was testifying for a roundtable discussion called by Congressman Bobby Scott of Virginia in Washington DC on Capitol Hill about a week ago. It is an interesting opportunity for me to testify before the US Congress and then be here at Parliament House in Queensland, testifying before the members of parliament here. The testimony was exactly this: what is the cause of this outbreak of PMF in the United States? They were very concerned about the costs in healthcare to our government, to our trust fund for black lung victims. Our clinics were discussing what it is going to take to take care of these patients who will be coming through our system and are coming through our system now.

Mr McMILLAN: In terms of what Queensland should learn from that, is it the fact that health surveillance is not mandatory or required amongst the coalmining workforce in the United States is significant? Workers there are not required to undergo health surveillance, so may decline to participate in routine testing until late in their careers?

Dr Cohen: That is an excellent point. In fact, in the report from the Kentucky radiologists office, very few of those miners ever participated in surveillance. The only time that they came to the attention of the system was after their careers were finished and they were laid off or were too sick to work, and then they finally appeared at the federal black lung screening program for compensation. Our system of surveillance failed them. There are reasons for that, because the participation is voluntary and in some cases in some states there may be retribution against miners who participate in surveillance. We have issues in terms of our concerns about protecting miners who want to go through surveillance, protecting their jobs and that has been a huge problem for us.

Mr McMILLAN: Would you agree that, up until very recently, the coal workers health surveillance scheme in Queensland has failed the coalmine workers of Queensland?

Dr Cohen: I think that is actually a fair statement.

Mr McMILLAN: Can I ask you, please, about treatment and rehabilitation options and protocols for workers diagnosed with CWP or other coalmine dust lung diseases. I am particularly interested if you could explain to the committee about the role of pulmonary rehabilitation in, first of all, early stage treatment and rehab for workers exposed to coalmine dust?

Dr Cohen: That is a great question. I think we discussed a little bit earlier that, in general, this disease is irreversible. We can mitigate symptoms and we can try to make people feel better. We treat the obstructive component with the inhaled medications. We treat exacerbations where people develop infections and bronchitis with antibiotics. We try to prevent infections with influenza and pneumococcal vaccinations to make sure that we have them as protected as we possibly can. Beyond that, there is not much more in terms of treatment and there is no treatment for the scarring process. This PMF, the fibrosis of the lungs, is not really treatable. There are some medications that are being used for other fibrotic lung diseases that do provide some treatment, but they have not been tested in this disease and there is no evidence that they help.

In terms of treatment, the Chinese have massive pneumoconiosis problems in their coalmines. They have six million coalminers in China. They have a massive system of hospitals that do lung washing. It is called whole lung lavage, where they take the miners—and I had the opportunity to visit these hospitals—and they put them in the operating room. They put a tube in their windpipe and then they lavage 20 to 25 litres of fluid to wash the dust out of the lungs. There is no evidence that really results in any significant long-term improvement. Whole lung lavage, although they are very fond of it there, may work in very acute dust exposures and getting the dust out, but for chronically exposed workers who already have scar tissue there is really not great evidence that it does anything.

The only therapy that may work for these advanced patients is lung transplantation. We have transplanted a number of coalminers in the United States. They seem to do as well as other fibrotic lung diseases. It is an incredibly expensive procedure. I know you have it available in Australia as well. There are hundreds of thousands of dollars in diagnostic testing and surgical costs. The cost of immunosuppression post transplant to keep the patient from rejecting the lung graft is also hugely expensive.

That really does leave pulmonary rehab therapy to treat our patients. I think that that is a hugely important therapy. It is a program of pulmonary rehab. There are three types: phase 1, phase 2 and phase 3. Phase 1 is a type of pulmonary rehab that we use on hospitalised patients. Someone with lung disease who is sick with pneumonia we try to exercise in the hospital, even on ventilators. We have taken patients with advanced lung disease and exercised them hooked up to a ventilator so they do not get deconditioned.

The most common form is phase 2 which is an outpatient pulmonary rehab program. It consists of exercise therapy. We say that we take our patients from being pulmonary patients and make them into pulmonary athletes. We try to get them to believe that they can be physically active again and do things that they could not do before. Usually it is over eight to 10 weeks, 30 to 36 sessions, of outpatient therapy where they go in and get some education and have discussions about how to take care of their lung disease and use their medications, but the main focus is on exercise.

For all of us we know that exercise is a huge thing for our health and it makes a big difference, but even more so for pulmonary patients who feel short of breath and therefore do not exercise. Their muscles melt away. They get incredibly deconditioned. Then they feel even more short of breath because they are so deconditioned. Then they exercise even less. It is a downward spiral of deconditioning that leads to very poor outcomes.

In this pulmonary rehab we put them on cycle ergometers. We use treadmills. We use upper extremity ergometers where you use your arms to turn a cycle. We use free weights. We take them and train them, even if we have to turn up their oxygen to 10 litres a minute. We will take somebody on home oxygen, put them on a treadmill, crank up the oxygen and let them exercise safely so that we can improve their conditioning.

Pulmonary rehab, after these programs, especially if the patients continue it, has led to very good outcomes, very clearly associated with decreased shortness of breath with their activities of daily living—we call it decrease dyspnoea. They have an increased quality of life on a number of different measures of quality of life scales. They have shorter hospital stays if they get admitted to the hospital for exacerbations of lung diseases. There is evidence that it increases survival. Those patients who participate in it, complete it and continue it will live longer than those who do not.

It is really an effective therapy, but it is labour intensive. You need respiratory therapists and physical therapists. We usually involve dietitians and sometimes psychologists to help with the depression and other comorbidities of these pulmonary diseases. That is phase 2.

Phase 3 is maintenance. After they complete phase 2 we have them come twice a week to do continuing sessions. The other component of this is pulmonary support groups. We call them better breathers clubs. There are many different names in different places. The bottom line is that the

patients support each other. Our miners will sit down and talk about how they deal with their shortness of breath, how they deal with their grandkids, how they can chase their grandkids when they cannot breathe so well and all kinds of issues that relate to life with advanced lung disease.

Our US Department of Labor funds pulmonary rehab for our miners who are impaired. I think it should be a really important part of the therapies that are offered to anybody with advanced lung disease, but certainly this very vulnerable population that has black lung.

Mr McMILLAN: Did the Monash review consider the role of pulmonary review at all in the coal workers health scheme?

Dr Cohen: I do not recall. It may have been mentioned briefly. The Monash program was really directed at the coalminers health scheme which was much more a fitness for work program in the current formulation and there was very little attention to compensation issues, therapy and rehab. That is very important and should be a component of taking care of this population.

Mr McMILLAN: Do you know whether pulmonary rehab is being offered to any of the coalminers in Queensland who have been diagnosed with coal workers' pneumoconiosis?

Dr Cohen: I do not know.

Mr McMILLAN: Should it be?

Dr Cohen: Yes.

CHAIR: Just excuse me for a moment, counsel assisting. Dr Cohen you have talked about silicosis often this morning. Even though this inquiry is about coal workers' pneumoconiosis, we have many tunnels under Brisbane—for example, we have Legacy Way and the Clem 7 tunnel—where they take out a lot of rock. Would those workers maybe have silicosis or should they be tested for silicosis?

Dr Cohen: I hope you do not mean to tell me that they are not being tested for silicosis?

CHAIR: I doubt that they are or have been. Whilst the coal workers have to have a fit to work type of medical assessment where they get X-rays, I am just wondering if you could comment in relation to the massive tunnels underneath this city where they have massive machines taking out rock. Do you have any comments in relation to that? There would be quite a lot of workers who have worked on these tunnels in Brisbane?

Dr Cohen: We have had huge attention paid to that in the United States for the first time in 40 years. The United States Occupational Safety and Health Administration, OSHA, cares for workers other than miners—MSHA is tasked with protecting the mining population—including construction workers. In the United States there are probably 1.8 million construction workers who are exposed to hazardous levels of silica. Silica is probably more dangerous than coalmine dust. We talked about the toxicities earlier. Quarriers, tunnelers, metal miners—anyone who is disturbing the earth's crust and drilling through rock is at risk for quartz and silica exposure.

There should be industrial hygiene monitoring of the exposure levels. We just lowered our exposure level to silica from 0.1 milligram per metre cubed to 50 micrograms or 0.05 milligrams per metre cubed because of the horrendous diseases that occur from silica. Aside from the diseases we have already talked about for coalmine dust, silica is actually a lung carcinogen. It is an International Agency for Research on Cancer, IARC, class 1 human carcinogen. It causes renal disease and causes other autoimmune diseases like rheumatoid arthritis and other things.

Silica exposure is a huge problem. Our new law also mandates surveillance for silica. Workers who are exposed to more than 25 micrograms for more than three months out of the year must undergo spirometry, chest X-ray with B reading and medical surveillance. I recommend that.

CHAIR: Thank you very much.

Mr KELLY: Does that also extend to the agricultural sector and people working at grain silos and those sorts of things?

Dr Cohen: There is silica in soil. Agricultural dust does have silica in it and there is silicosis reported in agricultural workers. Grain dust is not associated with silicosis but is clearly associated with COPD, chronic bronchitis and lung function impairment. That green dust exposure is enormous.

There is actually the story in the United States of the dust bowls in the era of the 1920s and 1930s and the Great Depression. Some of the early chest X-rays that were done for tuberculosis actually picked up silicosis because the people who lived in the dust bowl in the states where they were breathing in these massive dust storms had significant silica exposure and we were seeing silicosis. I think there is monitoring in agricultural workers. The new laws in the United States do cover agricultural workers.

It is a bit different in terms of when the law kicks in, but it is also for construction workers and maritime industry workers. There is silica in sand in various maritime applications. Then there is hydraulic fracturing for harvesting natural gas. There is a lot of silica used in that industry. All those groups of workers are covered by that new law.

CHAIR: I will now go back to Ben McMillan, counsel assisting.

Mr McMILLAN: Is there a difference between diagnosis and classification of pneumoconiosis under the ILO scale?

Dr Cohen: Yes, there is. The ILO scale is really classifying a pattern of opacities or dots on a chest X-ray. We sit in a room and look at the X-ray. We look at those opacities and scars and classify it based on a standard image next to it that is one of the ILO standards to give it a certain grade or classification. That report then has to be taken by the clinicians who care for that person and put into the context of their occupational history, other exposures and other diseases and a conclusion made as to whether or not they think that that pattern on that X-ray represents pneumoconiosis.

When I do the classifications for the Queensland department I am only doing that comparison to the standard. Then that information has to be put in the context of the miner's history and then a decision made as to whether they need further testing. They may or may not. It may be enough with the miner's history to make a diagnosis, but there may be other things to think about.

Mr McMILLAN: For the diagnostic purpose, for the physician who is presented with a patient who is complaining of respiratory symptoms, what information does that clinician need to accurately and reliably diagnosis a coalmine dust lung disease?

Dr Cohen: They really need a very accurate and carefully performed occupational history. Every job that that person has had over their lifetime should be elicited. You then go over the exposures and try to quantify in your mind what the exposures were.

When we take a smoking history we count up how many cigarettes per day over how many years and we come up with something called pack years. For mining we would want to know how many years underground, surface, at the face, outbye—we call it in the states; a little bit further back from production—and quantify in your mind what that intensity of exposure was for that miner and then make sure there are no other diseases that you think could cause it.

If they are having fevers and chills and coughing up blood and phlegm maybe they have tuberculosis and you want to make sure they do not. That looks a bit different. You would want to exclude other causes. Then you put it together. If you need additional testing you can get that or you may be able to just reach a diagnosis.

Mr McMILLAN: More than 20 individual current and former coalmine workers have appeared before this committee. I think I have asked most of them in the course of their working lives in the coalmining industry in Queensland whether they had ever been asked by the doctor conducting their coal workers health assessment about their occupational exposure to dust. I do not think any of them said that they had ever been asked that question by their doctor. Is there any hope that those doctors could have accurately and reliably diagnosed a coalmine dust disease without the information?

Dr Cohen: Is this a trick question?

Mr McMILLAN: It is not.

Dr Cohen: No. One of the hallmarks of occupational medicine practitioners—the thing that we teach over and over and pound into our residents and interns and trainees—is how to take an occupational history, which means how to go through each job to let the worker teach you about the job. As doctors we are pretty ignorant about most of these jobs and most of these processes. When someone tells me they are chipper or grinder in the steel industry and my resident writes that down I ask the resident: 'What is a chipper? Is that a chipper fellow?' No, it is somebody that takes the steel out of the mould and grinds sand off. They have to ask those questions. It really takes a very detailed open-minded physician to let the patients teach us about their jobs and teach us about their exposures and then we learn a little bit more about it and be more sophisticated with the next one. It has to be detailed. That is really what a good occupational physician should be best at.

Mr McMILLAN: The Monash review of the coal workers' health scheme made a number of significant recommendations about changes that should be made to that scheme. Were you involved in the development of those recommendations?

Dr Cohen: Yes, I was.

Mr McMILLAN: Have you reflected upon those recommendations and do you wish to make any further comment for this committee's consideration about them and whether or not they should be adopted in their entirety or with amendment?

Dr Cohen: I have not reviewed them prior to this testimony, but I think that they were fairly comprehensive. They were reasonable and good recommendations. We did not get into necessarily the nitty-gritty details about how to implement those findings, but the general concepts of certifying providers that take X-rays, training providers that read X-rays, certifying clinics that do spirometry—all of those things are very important. It is going to be up to the department and to the health system here in Queensland to figure out how to implement that. I am sure I would be able to provide additional information or advice on any specific recommendations if there are any questions.

Mr McMILLAN: I will come to that in a moment. You indicated in your earlier evidence that your involvement in Queensland's response to the re-identification of coal workers' pneumoconiosis started at Carborough Downs, essentially, with the Vale organisation.

Dr Cohen: That is correct.

Mr McMILLAN: Was that as a result of that organisation approaching you to assist them to know what to do?

Dr Cohen: Yes. They approached me through their NMA, Dr Foley.

Mr McMILLAN: As part of that engagement, you reviewed all of the chest X-rays that had been taken of their workforce.

Dr Cohen: That is correct.

Mr McMILLAN: Officers of that company, including Mr Vella, have given evidence to this committee. They went about a process of encouraging their entire workforce to have new chest X-rays taken.

Dr Cohen: They did.

Mr McMILLAN: Did you provide any guidance to them about the particular skills that the radiographer who was to take those X-rays would need to have?

Dr Cohen: I did not. I think they had contracts with certain providers and they used those existing systems.

Mr McMILLAN: What was the level of problems in that sample group with the X-rays that you saw? I think you told the deputy chair earlier that about 20 per cent of X-rays that you are seeing coming through the DNRM process are quality three or below. In that smaller sample from Vale, was the rate of poor quality X-rays the same?

Dr Cohen: I do not recall what it was specifically for Vale. It was significant and probably of that same order of magnitude. It was about the same order of magnitude for the 500 or so that we reviewed as part of the Monash review which were de-identified images from a number of different mines. It seems to be a fairly consistent number.

Mr McMILLAN: With the X-rays that you were provided by DNRM, did they provide any indication as to where those X-rays were taken or by whom?

Dr Cohen: They do.

Mr McMILLAN: Are you able to provide, and have you provided, to the department some guidance about the people who are taking X-rays who perhaps should not be?

Dr Cohen: We have that capability. We have not been formally asked or funded to do that, but we can certainly do that.

Mr McMILLAN: I take it that you are saying that that would be good.

Dr Cohen: I think it could be very useful. It would identify—I think we would want to do a number of things. I would say that we should look at the providers that are consistently providing quality problems. We should identify the specific quality problem, feed it back to those providers and see if they improve. If they improve then keep them as providers. If not, they should be removed from whatever list, if there is such a list—which I do not believe there is—of certified or authorised providers. I think that it would be very important to do that. The reason we have not done it is that it takes a significant investment in resources to gather that data, analyse it and report it. We are struggling just to do the minimum that we have been contracted to do.

Mr McMILLAN: Could Queensland people be trained to look for those concerns as well as part of that B reader training course?

Dr Cohen: Absolutely. I think that even the department—the folks who are uploading X-rays now for us from Queensland—notice now when part of a test is missing. They are not radiology folks; they are technical administrative people. If the costophrenic angle, which is the very bottom of the chest on the lateral edge, is cut off, they have been requesting that they get a new X-ray. Some more obvious ones were where half the top of the chest is missing.

CHAIR: You are joking!

Dr Cohen: No.

Mr COSTIGAN: Are they in that 20 per cent of unreadable category?

Dr Cohen: Some where they are missing a large part—a significant cut-off or things like that. Those are a smaller percentage which are that egregious. I think that it would be very easy to train anybody to recognise some of these quite obvious quality issues and concerns.

Mr SPRINGBORG: On that, are we talking about old style film X-rays or are we talking about the new style digital X-rays?

Dr Cohen: It is digital. All of this is digital.

Mr SPRINGBORG: So, again, an X-ray is taken and it is displayed to the radiographer in real time and anyone could see that—you could train a monkey to see that—yet they are still basically putting it on a disc and sending it over to you or electronically sending it over to you.

Dr Cohen: In some small number of cases, yes. There are more subtle quality issues in many more. I think that would need to be investigated, whereas the breakdown—is it a problem in what they transmitted to the department? Often the department has to request a new image, and we get that new image and it is fine. I must say that in some cases when you miss part of the chest—there are two images. Someone takes the bottom part and then they take the top part and they send you both, and that is fine. The department may only transmit one of those to us, so that has happened. We are training—I think there is a lot of room for improvement here.

CHAIR: I think that is an understatement, Dr Cohen.

Dr Cohen: These quality issues are eminently fixable.

CHAIR: But there has to be a will to fix it.

Dr Cohen: There has to be a will and there has to be an organised system. I do not know that the department really has a mechanism—and that is something I hope to find out this week—on how they provide feedback on quality to the providers. That is very important. I do not think that there is a mechanism that I am aware of yet for certification of providers. Maybe they have given testimony that is different, but I think that should have been implemented immediately. Any time you are radiating somebody for an exam and it is not great quality then you are exposing someone to a hazard—radiation—and you are not accomplishing the desired goal.

CHAIR: Dr Cohen, we have had evidence before the committee where some miners who have gone from mine to mine have had six X-rays in five years. Do you have any comment to make on that?

Dr Cohen: It is not necessary. You do not want to not get this surveillance, but you do not want to cause harm. We have this old-fashioned saying in medicine: do no harm. I think that should apply to public health as well. We do not need to overradiate people. I think that is excessive.

Mr McMILLAN: Dr Cohen, I want to ask you some more questions about your involvement in the Monash review. That review group was tasked with a fairly big task of reviewing the respiratory component of the coal workers' health scheme. I think you were asked as part of that review to review some 500 chest X-rays.

Dr Cohen: That is correct.

Mr McMILLAN: You have already given some evidence about the rate of problems that you discovered with those X-rays. Were you involved at all in the review team's work in reviewing the work of the Health Surveillance Unit in Queensland, which is part of the Department of Natural Resources and Mines and tasked with the responsibility for managing the records of the coal workers' health scheme?

Dr Cohen: We were part of it in that we served on the committee and the Monash group would discuss their findings. We would review the reports and edit the reports. We did not actually get the opportunity to visit the HSU. When I was here that never happened. That was mostly the Monash team that, I believe, did that. We participated in discussions about what they found and helped with the report.

Mr McMILLAN: Are you aware that the Health Surveillance Unit within the department has employed for at least the last 12 years an occupational physician to assist them with their work?

Dr Cohen: I was aware that that person was employed there, but I never had the opportunity to meet or have a conversation with that person.

Mr McMILLAN: That person at the relevant time was Dr David Smith. He has given evidence to this committee. Did Dr Smith make a submission to the Monash review?

Dr Cohen: Not that I ever saw. We had a number of committee meetings and conference calls over that whole period of the Monash review, and there was no communication from him.

Mr McMILLAN: How did the Monash review team think that it could properly review the work of the Health Surveillance Unit without having any input from its occupational physician?

Dr Cohen: That is an interesting question. Again, it is one of these sort of mind-boggling things. As the University of Illinois group, it was a bit sensitive what we were able to do. Initially when we were contacted I had proposed this review and outlined what we should do. It was very important to the department—I am not sure what the factors were—that we do it in partnership with an Australian group, which was Malcolm Sim and the group at Monash. They divided up the work. Because the Monash group had no B readers and no-one who was really experienced in chest X-ray imaging, that was the main task that fell to us. I did not get the opportunity to get more involved in the design of the review other than those tasks and to comment whenever we could on certain things. It was very unusual that we did not get the opportunity to meet with the medical leadership. We met with the administrative leadership and the project officer—the person who was tasked from the department to manage the review.

CHAIR: Dr Cohen, your group from the University of Illinois would have made an offer to the Department of Natural Resources and Mines to do this work yourselves. Was it the department that said it had to be done through Monash University? Can you walk us through that? You are obviously the world expert in relation to coal workers' pneumoconiosis. Can you walk us through what actually happened there? It would benefit the committee to understand why Monash got involved in it in the first place.

Dr Cohen: Shortly after finding out these first cases that the CFMEU brought to the mineworkers convention and then my work at Vale I wrote up a detailed proposal about how we could help review the health surveillance system. I sent it to the department. I believe it was—I cannot remember the gentleman. I do not believe he is there now. James Purtill was one of the directors.

Mr McMILLAN: Was it by any chance Mr Paul Harrison?

Dr Cohen: Perhaps. I think that was the name. That sounds familiar. We were told at that point that it was quite a sensitive issue and that it could not just been an American group that did this work—that it had to be an Australian based group.

CHAIR: Did they say why? Just to get to the detail, Dr Cohen, you and your group put forward a detailed case on how you could assist the department as well as our mineworkers in relation to coal workers' pneumoconiosis. You are the world expert, but the department said no, they had to use an Australian group.

Dr Cohen: Right and they actually asked me who I thought would be good to work with in Australia because they did not know any such group. Dr Sim and I co-chaired a session together at the epidemiology conference in occupational health that we held at the University of Illinois. It was an international occupational epidemiology conference. He was an occupational physician here in Melbourne, Australia. He seemed like a very nice fellow. He is the editor of *Occupational Environmental Medicine*, very credentialed. I said, 'There is the group at Monash. Dr Sim is an expert, not in coalmining or mining but he is an occupationally excellently trained epidemiology person.' I gave them his name. The next thing I heard was that they were contracting—they wanted to have us work with them, but it had to be through Monash. They actually would not even contract with us directly.

CHAIR: Why not? Did they say why not? Dr Cohen, it just seems ridiculous to me that the department would not contract you directly, that they have gone through this circumnavigated process to be able to have some sort of review.

Dr Cohen: In retrospect it seems a bit funny because they are now contracting with us directly.

CHAIR: Exactly.

Dr Cohen: But at that time they said it had to be through Monash, and it took I think eight or 10 months to get the contracts through because we had to—

CHAIR: A delay of eight to 10 months just to get the contracts through! That is shameful, Dr Cohen, when we have men being diagnosed in Australia, in Queensland, and it took the department eight to 10 months just to get the contracts through.

Mr COSTIGAN: It was a long, drawn-out backflip.

Dr Cohen: We actually did a huge amount of work without getting paid. We did the work for many, many months and then only at the very end did we get paid for that work because it took so long.

CHAIR: So you started the work to assist miners who have been diagnosed with the disease and only at—well, you took a risk that you may or may not get paid?

Dr Cohen: That is right; we were at risk. Because it was an Australian agency and it was an Australian university we would have no recourse if we were not paid. The university was getting quite angry at me for all the resources that we committed. Plus I am paying radiologists who are not at my university but whom I subcontracted. I was paying them out of my university research funds and therefore was at risk if they did not get paid. I trusted Malcolm and the group, but they had to get a master contract with Monash and Monash then had to subcontract to us. It was incredibly circuitous and convoluted to say the least.

CHAIR: And unnecessary.

Mr McMILLAN: Just to be clear, Dr Cohen, while Professor Sim is a world-renowned expert in occupational medicine and epidemiology, he has no experience whatsoever in coalmining, does he?

Dr Cohen: That is correct.

Mr McMILLAN: Indeed, no-one in his team had any recognised expertise in the mining industry or in coalmining specifically?

Dr Cohen: That is correct.

Mr McMILLAN: All of that expertise came from you and your team?

Dr Cohen: I think the mining specific expertise, the imaging expertise, was with our group.

Mr McMILLAN: In a review of a coal worker's health scheme, surely it is critical that the people doing that review understand the coalmining industry and the environment in which coalminers work.

Dr Cohen: I think that would be extremely helpful.

Mr McMILLAN: Nevertheless, a comprehensive report of that review was completed and you endorsed the recommendations of that review.

Dr Cohen: Absolutely, that is right.

Mr McMILLAN: I want to ask you specifically about your review of Queensland hospital data as part of that team's review. At chapter 15 of the review report there is an analysis explained. It states—

To assist the review, Queensland Health undertook a preliminary search of its public hospital data to identify patients who had been hospitalised with CWP within the last five years.

That search was conducted using a particular code for pneumoconiosis and that resulted in unhelpful results. Ultimately, as I understand what is provided in the report, DNRM provided a list to Queensland Health of some 100,000 former and current coalminers and that was compared against Queensland public hospital records for people who might have had admissions for respiratory conditions. As a result of that review, 21 coalminers were identified by Queensland Health who had had admissions and 11 of those were identified as possible or probable CWP cases. Are you able to speak to those findings at all?

Dr Cohen: No, that was data that Malcolm's group obtained. We did not have access to that data.

Mr McMILLAN: You were not given access to that data?

Dr Cohen: No, we were not.

Mr McMILLAN: Is that data that you would have liked to have access to?

Dr Cohen: It would have been very interesting to take a look at that data and sit down and talk to them in that way, but we did not have that opportunity.

Mr McMILLAN: Do you know whether any of those 11 identified individuals are among the now 19 confirmed cases of CWP in Queensland?

Dr Cohen: I do not.

Mr McMILLAN: Is it possible that there are 11 additional people who have yet to be investigated?

Dr Cohen: It is very possible.

Mr McMILLAN: And the person with world-leading experience in analysing that data was not given access to it—namely, you?

Dr Cohen: I did not have access to it.

Mr McMILLAN: Dr Cohen, can you tell us anything about any trends you might have observed in the health of Queensland coalminers' lungs from the 3,000-odd X-rays that you have already looked at?

Dr Cohen: I think that trending would be difficult in that we would want more time in between examinations. Most of the examinations have been very, very recent exams, and we are seeing many of the very young miners as well. I do not know what age you can start mining here, but I did see some 19-year-olds I think. What is the age you can start mining? I am not quite sure.

CHAIR: Eighteen.

Dr Cohen: I saw some early X-rays of quite young miners. I think that the main groups we have been seeing have been mostly younger miners. I would be very interested in seeing more of the older and especially former miners to get a better picture of this whole population. I think we are now collecting data that will be useful for trend analysis in the future because we are starting to get organised data.

CHAIR: You are not funded for that at the moment, are you?

Dr Cohen: Not at the moment.

Mr McMILLAN: In taking up the evidence that you gave earlier, even for the data that you are looking at you are not funded to do any kind of analysis of the work history, a miner's occupational exposure or anything of that nature?

Dr Cohen: Correct. We are not funded to look at tenure exposure. We have age and we have gender, or sex, of the miner, but we do not have any other information such as smoking history and all the other information that is part of the health scheme physical.

Mr McMILLAN: Similarly, you do not have the occupational group that that miner has worked in, whether they are a longwall operator, a roof bolter or a shearer driver?

Dr Cohen: Correct.

Mr McMILLAN: I understand that you and your colleagues have developed a comprehensive training package that is available online that I have had the opportunity to have a look at to train those medical professionals and others who work with people in the coal industry and the mining industry generally about coal workers' pneumoconiosis and the types of jobs that coal workers do. Can you talk to us about what that suite of training involves and how it came to be?

Dr Cohen: Yes. We were funded by the US Department of Labor, Office of Workers' Compensation Programs, Division of Coal Mine Workers' Compensation to provide this training because of a bit of a crisis that we were also facing in the United States regarding the examination of coalminers. We had an investigative journalism report of our X-ray reading program for compensation programs that revealed some very highly trained, academically credible people were being paid by the industry to read images as negative. One example was a rather famous professor from John Hopkins University who read 1,500 chest X-ray images as negative. Many cases were proven later by autopsy or other very clear medical evidence to have advanced disease. It seemed that there was corruption in that system, which drew a lot of attention to the whole diagnostic program and how we monitor the readings. You can train people and they can pass a test, but you cannot control their ethics so that was a big concern.

The US Department of Labor for the first time funded an organised curriculum to train physicians who were evaluating miners for black lung, and we got that contract at the University of Illinois. We developed four modules for the training of physicians that they could take and then get American Medical Association continuing medical education credit which we need to get licensed. It was worth maybe \$800 to \$1,000 which they could get for free if they would take that course and do the little test at the end to learn about black lung.

There was one module on 'What is this disease?' which many people do not know about. They do not know about COPD or emphysema and all the stuff that we have talked about today. Module 2 was on basic testing—how to take the occupational history. There is a lot of material in there on that

and how to do basic lung function testing. Module 3 is on advanced testing including chest imaging, the role of CT scanning and the role of more advanced pulmonary function testing and exercise testing. Module 4 is putting it all together to make a diagnostic conclusion—some of what we have been talking about here. How do you put the test results together with all the diagnostic and occupational history to make a conclusion, and then to talk about whether or not somebody is disabled. Those four modules are accompanied by supplemental modules on coalmining jobs and coalmining technology, and it is extensively referenced with all the medical literature. That was completed maybe two years ago or so. That was something that I thought would be a useful resource here or anywhere where someone is taking care of coalminers.

Mr McMILLAN: And that training is available free of charge to medical practitioners and those working with coalminers?

Dr Cohen: Anybody who wants to do it for any reason. The only restriction is that if you want to get the CME credit from the University of Illinois College of Medicine you have to be a licensed physician in the United States and then you can get it for free, but anybody can take it and anybody can use it.

CHAIR: So the department could have done a simple Google search and up would pop your training course?

Dr Cohen: I think so. It is on the US Department of Labor's black lung site, because they funded it so they refer to it for all their providers. If you went to the US Department of Labor, if you went to the University of Illinois, if you Google 'Black Lung Center of Excellence'—

CHAIR: It all comes up.

Dr Cohen: It should come up. We told them. It is something that we shared right from the beginning because we were quite proud of the fact that we had just completed this project and thought it might be helpful.

CHAIR: So you told our Department of Natural Resources and Mines about this; that it was available?

Dr Cohen: Yes.

Mr McMILLAN: When did you tell them that?

Dr Cohen: Very early on. This is something we told Professor Sim and the group that that is available; that that is an option. Again, I do not quite understand the position and the politics of things here. I do not know if because it was a US product it might have been an issue, but coal is coal and humans are human and we actually speak English or sort of.

Mr McMILLAN: When you say 'very early on', Dr Cohen, you mean very early on in your involvement in Queensland's response to CWP?

Dr Cohen: That is correct.

Mr McMILLAN: Can we say—I do not need you to nail it down to a particular day—that at least in 2015 the Department of Natural Resources and Mines in Queensland was aware of this training resource that was available on the US Department of Labor website?

Dr Cohen: I believe so.

Mr McMILLAN: The Sim review, of which you were a part, made a number of very significant criticisms of the current coal workers health scheme as it relates to nominated medical advisers. Among those criticisms and recommendations were that those advisers should have better training to understand the environment in which they work, the occupational groups of coalminers that they were assessing and so on. Isn't that precisely what that online training is intended to address?

Dr Cohen: Yes. I think it is very, very applicable. There are a few things there that might not be as directly appropriate such as some of the training regarding our specific compensation rules, but the modules that talk about what is this disease, how do you test for it, all the imaging and the ILO interpretation are all entirely applicable. Only the very last thing about our criteria for what constitutes disability, which I think would still be interesting for them to think about, may not be directly applicable.

Mr McMILLAN: There is a specific section, as I think you just indicated, about the insurance regime and compensation in the United States which would obviously need significant amendment, but at least from my review of the resources the vast bulk of those training resources are equally applicable to the Queensland coalmining environment as they are to the United States.

Dr Cohen: I would say so.

Mr McMILLAN: Would you commend those resources to nominated medical advisers who might wish, off their own bat, to take up some further training to better familiarise themselves with those resources?

Dr Cohen: I would recommend it and I would be very interested in their feedback. We would be happy to modify or learn from what people think here. I think it should be something that we continuously improve. I would love to see it used here. It would be quite nice.

Mr McMILLAN: I think for those watching via the broadcast or on television it is worth noting that those resources are available simply upon registration to get a login to track who is using that resource.

Dr Cohen: Right. We just wanted demographic information so we could track utilisation. It is at publichealthlearning.com, which is the University of Illinois's public health teaching website. We do not get any money from this. We do not have any advertising or anything like that.

Mr McMILLAN: You have mentioned a number of times in your evidence that we need to start taking the temperature of the Queensland population. I think that was your expression. How far should health surveillance go for workers involved in coalmining and the transportation and handling of coal in Queensland? First of all, should surveillance continue beyond retirement?

Dr Cohen: I think that is a great question because there is evidence in the literature that coalmine dust lung diseases can progress absent further exposure. Even though you are not getting any dust exposure any more, you can still have progression of your disease radiologically and also physiologically—that is, your lung function can get worse. I think it should certainly be offered. You would have a hard time mandating it for that population, but I think it should be available.

In the United States, we offer this black lung evaluation for anyone who ever worked in coalmining. They do not have to have a certain minimum number of years. If they worked as a coalminer and they can prove that, they can get the black lung evaluation, which includes history, physical, chest X-ray, lung function testing and actually exercise testing with blood gas assessment—oxygen levels in the blood. That kind of a system is indicated.

Mr McMILLAN: Beyond the actual coalmine, should surveillance be extended to rail workers, port workers and power station workers who handle coal?

Dr Cohen: I think so. Unless we can do that surveillance and get data to see how we are doing, it would be another case of just not taking your temperature. How can we say, 'Don't take a temperature of someone who has a risk'? If there is no risk, then that is fine. I think it would probably be helpful to get some dust sampling data to see a bit more about that. It would make sense to me.

Mr McMILLAN: I take it that as part of the global effort to end black lung it is critical that that data, when gathered, is freely shared by researchers such as yourself with other researchers in other countries to understand the prevalence and development of CWP or the combatting of it?

Dr Cohen: I think it is really important never to have unpublished data. If there are reports, if there is information out there, it should be written up and it should be published so that people can learn from it.

Mr McMILLAN: Does that mean that a health surveillance program in Queensland should also include a significant research component?

Dr Cohen: Absolutely yes. If you look at the NIOSH program as an example and how many publications about coalmining and coalmining health come out of NIOSH, it is really very good. They have three or four full-time epidemiologists working there and people like me who are occupational pulmonologists whose research is in coalmining and mineral dust exposed workers. I think that sort of a team would be an important group to have here.

Mr McMILLAN: Can I ask you to imagine a perfect world and tell us what a gold standard health surveillance program for mining workers should look like?

Dr Cohen: I think it should include the basic things that we have been discussing today, which is a carefully taken occupational history with their jobs and exposure so we know what the workers' risks are. The health surveillance for the respiratory side should include high-quality chest X-ray imaging with interpretation and classification of that image by a physician who is trained in the ILO system and competent in using that system.

I think at some point in the future we may end up moving to low-dose CT scanning. That is something that is on the horizon. We are not quite there yet for mass population screening but that is something that will be in the not-too-distant future. We do not really have a certification system or test

available for that so it is probably a bit in the distance but that is coming. Then we need really high-quality lung function testing which would be certainly, at a bare minimum, spirometry that is done to all the standards that we have talked about.

I would add to that diffusion testing, which is a simple resting lung function test. We do not do it in the States. We do it in some field studies but it is actually a test that measures the gas exchanging part of the lung. It is a test where you inhale a breath of a test gas that measures the ability of the lung's gas transfer capability. I would add that. It is not incredibly expensive. This is only for the best of all possible worlds' discussion. Finally, I would make sure that all of that data is centrally recorded and analysed and looked at based on the exposures, the workplace, all of the results, trying to identify early disease, feeding back to the miners, their physicians and the workplace those results so that interventions can be made and decisions made about the population as a whole.

Mr McMILLAN: Coalmines tend not to be in the middle of major cities and coalminers, although less so nowadays, tend not to live in major cities. In the United States, there is a network of black lung clinics throughout the Appalachian region and in other mining areas as I understand it. Could you talk us through what we should be looking at in terms of giving coalminers access to a gold standard health surveillance program? Where do we need to have clinics? Do we need, for example, a mobile unit such as is used by NIOSH? Could you explain to the committee what your recommendation would be for a gold standard system?

Dr Cohen: The system that we have is a system that is geared towards surveillance so that group is mainly doing the chest X-rays, spirometry and histories in order to see how people are doing. Then there is a system of clinics that are designed to provide treatment services and deal a little bit more with the disability evaluations and compensation issues.

Mr McMILLAN: Is that where the pulmonary rehab takes place?

Dr Cohen: That is where the pulmonary rehab takes place. Those clinics are the black lung clinics that are funded by HRSA, the Health Resources and Services Administration. That is the one that I am the medical director for the black lung clinics association. That is the one that provides treatment, disability evaluations and some screening evaluations as well. I think they have to be funded. I do not know exactly how people survive here in terms of the cost of medicine and having a clinic, but there may be a role for a grant program like ours to fund clinics in more rural areas that are a bit more remote to make sure they can at least provide those minimum services and then maybe more advanced services at fewer locations. For example, we in Chicago and our group at National Jewish Hospital in Denver provide more advanced services, and then there are rural clinics that provide the basic services and refer people to us for more complicated disease. That type of a system might be able to be replicated here.

The surveillance piece of it also has to be clearly certified and evaluated that these providers have to be well trained and documented to be providing good service with continuing quality assurance. A mobile unit has a role because there are some places that are a bit too remote. You can get these digital X-ray units on a trailer easily. They are not that hard to do, and the spirometry is compact. I think a mobile unit that provides that basic screening surveillance has a very useful role to play. Given the nature of the Australian coalmining communities that are quite rural like ours as well, I think it would make sense.

Mr COSTIGAN: Can I just jump in there. Dr Cohen, it would be no different to what we have with our breast screening vans that travel the length and breadth of Queensland. You are suggesting to the committee—if not recommending, I dare say—that we have similar vans going through the Bowen Basin, for example, to plug into those communities or vice versa.

Dr Cohen: I think so, because in our NIOSH van we have X-ray technicians who are very well trained. They know how to take X-rays and they know how to do spirometry. It is something that can be done every five years or you could schedule these things with them. The advent of digital technology means it can all be transmitted and read in cities where you have the radiology or certified folks to do it. You do not have to worry about the old days of taking that film and lugging it all over the place to get it read. You just zoom it over the internet.

CHAIR: Dr Cohen, for your information I just say that a part of the department called Simtars has a gas van but there is no health surveillance van.

Dr Cohen: What is a gas van?

CHAIR: There is a van set up that can read gas levels—methane, et cetera—but there is no such van in relation to the health of the miners.

Dr Cohen: There is no reason. Our van actually had an analog system initially in 2005 when we started the enhanced coal workers surveillance program and then it went digital quite quickly. I think it is quite easy to do. It takes money, it takes a bit of investment, but it may be cheaper than having all of these clinics taking bad tests in remote locations.

Mr McMILLAN: Dr Cohen, as you are no doubt aware, in Queensland we have an almost universal public health system. Ordinary Australians have access to an exceptionally high standard of health care through the public health system. Do you have a view about whether a health surveillance program for mine workers should be part of the public health system or in a separate entity such as NIOSH or something similar to the United States model?

Dr Cohen: I think if your public health system has good clinics that provide X-ray and provide lung function—which is critical for the general population also; these are not services unique to miners—then it would be fine to do that as long as they were quality controlled, but the data has to be centralised in a unit that is specifically organised to analyse and feed back. That would have to be something special.

CHAIR: Counsel assisting, would now be a good time to break for lunch?

Mr McMILLAN: Yes.

CHAIR: Can I say to the people in the public gallery that there is a cafeteria on the fifth floor and you are more than welcome to stay in the parliamentary precinct for lunch. We will reconvene at 1.30.

Proceedings suspended from 12.26 pm to 1.29 pm

CHAIR: We are now resuming the hearing of the Coal Workers' Pneumoconiosis Select Committee. We have stood down Dr Cohen for a short period of time to take evidence from Greg Dalliston.

DALLISTON, Mr Greg, Industry Safety and Health Representative, Queensland District, Construction, Forestry, Mining and Energy Union

CHAIR: Greg is the Industry Safety and Health Representative of the Queensland district of the CFMEU. He is currently a member of the Coal Mining Safety and Health Advisory Committee and he is currently on the Queensland board of examiners to assess candidates for statutory mining certificates as legislated under the Coalmining Safety and Health Act 1999. Greg also holds a mine deputy's certificate of competency. Greg, you have heard the evidence this morning in relation to the tunnels such as Legacy Way and the Clem 7 tunnel et cetera.

Mr Dalliston: Yes.

CHAIR: I understand that you went into the tunnels with someone from the mines department. Would you like to tell us the history of that and what happened please?

Mr Dalliston: I have been district union inspector since 1993. When they were doing the tunnels out towards the Toombul Shopping Centre—I do not know which one it is; the one towards the airport. Thiess was doing those tunnels. Robbie Clark was one of our safety reps—site safety and health rep at a mine. He had the safety rep job with the tunnels. We organised with Brian Lyne, the chief inspector of mines at the time, to go out there and have a look at the tunnelling and see what it was like. They came under the Workplace Health and Safety Act at the time, so we did not have any powers to go and look at the tunnels. When we went out we went through the dust. It was pretty dusty. When we asked for the silica records they showed the levels of silica they were picking up were six times the legal limit that we had for coalmining at the time—plus higher.

CHAIR: Just to stop you there, the dust off the tunnels was six times the legal limit of what was mandated for coalmines?

Mr Dalliston: Yes, six times plus the legal limit.

Mr SPRINGBORG: I understand that that is 0.1 of a milligram?

Mr Dalliston: Yes.

Mr SPRINGBORG: This was 0.6 of a milligram per cubic metre?

Mr Dalliston: They had readings over one milligram per cubic metre.

Mr SPRINGBORG: That is more than 10 times.

Mr Dalliston: When we were there they were 0.6 but they had readings over one, so they were exposing people—the blokes who were working there. When we raised it with Thiess and with the safety manager, the safety manager did not last much longer after that. He was either moved or left and we were not allowed to go back. We did not get back to have a look. I did raise it with Brian Lyne. Workplace health and safety look after those and they never used to go near any of the mining stuff. There was no-one going out to have a look at any of that.

CHAIR: Do you recall the workers ever raising an issue about the silica? I know you only went down there once and thank the lord that you did so you could alert us today to those silica levels. It would not happen in a coalmine, would it?

Mr Dalliston: No, because they have protection. They could raise it at least with someone—with the inspector or with us to go and stop that part of the operation. None of the workers said much about it. We had a talk to them about working in there. Even Brian Lyne, the chief inspector, had a talk to them about working in the dust. The only other thing was a lot of the coalmine workers were ex-Ipswich workers working in Central Queensland and were trying to get back to work down here somewhere, so they were looking at the tunnelling. I said to them, 'I wouldn't be working in those tunnels if I were you.'

CHAIR: Because of the silica levels?

Mr Dalliston: Yes. Silica is way worse than coal dust, and we did not know the stuff we know now about the coal dust and the dust disease. We just knew at the time when we were working in the mines that you could refuse to work in dust. If you refuse to work in dust and if they tried taking any action we used to go on strike. We are not allowed to do that anymore, but that was the way out. You came out of the dust and you just refused to go back in there, but these blokes were working in it pretty consistently. It was a big area with slow ventilation as well. Those tunnels were big tunnels and there was not much air movement so it made it worse.

CHAIR: Are there any other questions. Do you have anything else to add, Mr Dalliston?

Mr Dalliston: On the dust stuff?

CHAIR: Yes.

Mr Dalliston: No, just that I have been very surprised by Dr Cohen's evidence that he has given. The Health Surveillance Unit—you can see I did not speak to them. I was on the review of the act from 1994—we put the new act in during 2001. Back then the Health Surveillance Unit was four people and went to one, and you know what one person can do: not much. As far as I was aware the Health Surveillance Unit used to have about four people doing some of the work, but in 1993 we ended up with the 1998 health board for the medicals—that got rolled into the current legislation. I helped Mr Smyth do a submission on that over Christmas. You have already got all that.

CHAIR: Yes.

Mr COSTIGAN: In your words, how would you describe the HSU?

Mr Dalliston: I know there are ladies here.

Mr COSTIGAN: Yes, of course.

Mr Dalliston: The answer we got when we asked about the Health Surveillance Unit—Brian Lyne was chief inspector for a while. He was shifted sideways. He did a presentation to the annual safety conference up in Townsville I think in 2002. He had to give a presentation on what health surveillance should look like: it needed funding and it needed everything else. The answer we got back after we had the meetings back in Brisbane with the department from Stewart Bell and Peter Minnihan at the time was that they had to do it within the budget they had. All of a sudden the three or four people we had who were doing something—Les Winn and a few of those people and Bruce Ham—moved on and we ended up with a doctor part-time. I think it was two or three days a week and so there was no funding. All that happened is the records went into a big bundle and never got touched.

Mr SPRINGBORG: When did you say that was—

CHAIR: A shipping container.

Mr SPRINGBORG: When did you say that was when you had that presentation in Townsville?

Mr Dalliston: I am sure it was August—the annual safety conference—

Mr COSTIGAN: It was 2002.

Mr Dalliston: Yes, 2002. I have a copy of it somewhere. I think Smyth might have tabled it. I am not sure.

Mr SPRINGBORG: That probably would have followed on from the review that was done?

Mr Dalliston: Yes. I was the relief person of the CFMEU on that review, but I think I only went to about two meetings. I looked at some minutes the other day for that—or at Christmas when I did the review for Smyth. Andrew Vickers sat on most of that and I think he has given evidence. That review was done around 2002.

Mr SPRINGBORG: Can I ask you a further question on that? We pursued the issue as to why the recommendations were not necessarily implemented. We were told that there may have been some resistance from the tripartite individuals involved. To me tripartite basically means government, industry and union reps. Based on what you said, there did not appear to be any resistance from your union towards the implementation of what was recommended.

Mr Dalliston: I wrote a pretty detailed report that I gave to Stephen Smyth while he was away over Christmas. I think it was handed in around the middle of January. I wrote most of that from the research and from when I was at those meetings. The only objection we have was the government of the day were trying to put the health order, which was an order by itself—and it was referred to at the back of the Coal Mining Act and regulations as an order that would stay in place. We wanted that to stay because mining companies wanted to control the health medicals—not the health surveillance, but health medicals. They wanted to have total control and not have the designated things which would allow them to only look at those things. We opposed that. Most of the other things we actually supported. I think there were 20 recommendations and we supported about 18 of those. The two that we did not support was giving total control of medicals to the mining companies themselves. We wanted something so that we knew what was going to happen to workers in the health system, which was the medicals you have, the X-rays, colourblind test, hearing test—those types of things. We supported all those, and that is in a written submission to your inquiry.

Mr KELLY: Thanks, Greg, for appearing here today. Is your union receiving any reports of members who have worked in these tunnels who have been diagnosed with silicosis at all?

Mr Dalliston: No, if they were a member of a union, they would all have been a member of the AWU. Until recently the AWU and the ourselves did not talk too much. Now with the current review of the legislation taking place, we are working closely with the AWU and the CFMEU construction division to make sure we get some proper health stuff in the current review of the mining legislation which is taking place in a hurry now.

Mr KELLY: In terms of other areas that your union covers, do you have coverage in quarrying or anywhere else where silica might be an issue?

Mr Dalliston: We only cover coalmines. We are not allowed into them as a safety rep, but our industrial people cover the coal ports and the power stations. I know there has been some concern at some of those since CWP came up as to how much they could be affected, so we are talking to some of those people plus some of the community around Oakey, Millmerran and Dalby. They have been asking us questions about what dust disease is and could they get it from living close to the mine and stuff like that. No, we do not cover any quarries and we do not cover metalliferous mining.

Mr KELLY: Would it be your view that the sorts of dust mitigation and monitoring that happens in coalmining should be happening in these tunnels as well during periods of active tunnelling?

Mr Dalliston: Definitely. It does not matter where you work, workers should be getting health surveillance. It is something you expect from the people you are working for. They are supposed to supply a safe place to work and safe plant. If you are working anywhere where there is any potential hazard, whether it be lead in the lead mines or dust in the tunnels or out in the quarries mostly owned by councils and government, there should be some type of monitoring. Depending on the amount of work and the amount of dust that can be generated, there should be an increase in both monitoring of the individuals and the atmosphere.

CHAIR: Thank you very much for appearing today and giving your evidence. I would now like to recall Dr Bob Cohen thanks.

COHEN, Dr Robert, Director of Occupational Lung Disease, Division of Pulmonary and Critical Care Medicine, Feinberg School of Medicine, Northwestern University

CHAIR: Thank you, Dr Cohen, for returning to the inquiry. I would now like to call counsel assisting, Ben McMillan.

Mr McMILLAN: Dr Cohen, I want to take up some of the questions I asked you earlier about your involvement initially with the Department of Natural Resources and Mines and then with the Monash review. When you first made the offer to the Department of Natural Resources and Mines to provide them with assistance in reviewing their health surveillance program, was that done in any formal way? Was it done in writing or was it simply a verbal offer over the telephone? How was that offer communicated?

Dr Cohen: I wrote a proposal from the University of Illinois and sent it in.

Mr McMILLAN: When you say 'a proposal', what did that proposal consist of?

Dr Cohen: It consisted of an outline of the general topic areas that we thought should be reviewed and a proposal for how we could do that through the University of Illinois. I do not recall whether we had a budget. We might have had a very rough budget with it. It was a formal written document.

Mr McMILLAN: What was the response of the department to that proposal initially?

Dr Cohen: There was no response for a little while and then we understood that they wanted to do some sort of a review, but then the issue came up of not being able to do it directly with us and working with an Australian academic group. That is when we suggested working with the Monash group.

Mr McMILLAN: How did you come to that understanding?

Dr Cohen: In communications with the department. I would have to search back to see if there were email communications. I think I had a phone conversation with some of the leadership of the department. I am not sure if it was Mr Harris or Mr Purtill that I had a conversation with at that time. There was a gentleman who was Shane Hansford, one of the department administrators, who was working on the project with whom we also had discussions.

Mr McMILLAN: They told you essentially that they would not be able to engage you on the basis of the fact that you were not an Australian based researcher?

Dr Cohen: Right. There seemed to be some difficulty in working with us directly—the department contracting with the US group directly. At that time there was some problem with that.

Mr McMILLAN: The terms of reference were ultimately formed for the review team that was engaged through Monash University and you have seen those terms of reference?

Dr Cohen: Yes.

Mr McMILLAN: Do those terms of reference bear any resemblance to the proposal that you made to the Department of Natural Resources and Mines in Queensland?

Dr Cohen: Yes, there was a lot of overlap.

Mr McMILLAN: Is it fair to say in your assessment that the department took your proposal and used it as the basis for the terms of reference to engage the Monash review team?

Dr Cohen: I think that the department clearly wanted to do—or they seemed interested in what we wanted to do. My understanding was that they could not do it with us directly, so they were figuring out a way to do it and so they did this indirectly through Monash.

Mr McMILLAN: When the department approached you more recently and engaged you and your team directly for the purposes of providing B reader services, did you ask them why it was that now they were able to or authorised to engage you directly whereas previously they had not been?

Dr Cohen: No. I thought it was interesting that that problem seemed to have been resolved. I did not get into the political intricacies of why it was possible now but had not been possible before.

Mr McMILLAN: Did anyone seek to offer some explanation for that apparent change in position?

Dr Cohen: No.

Mr McMILLAN: I asked you before the lunch break for your recommendations to the committee about a gold standard health surveillance program, and you helpfully gave fairly detailed evidence about that. I wanted to ask you specifically about the current Health Surveillance Unit within the Department of Natural Resources and Mines and the resourcing of that department. The Department of Natural Resources and Mines has provided the committee with an organisational structure for that

unit, and without disclosing the names of the officers that work there or the levels at which they are employed, I can say generally to you that that unit currently consists of: a manager with a background in mining engineering; a part-time doctor who is an advanced trainee in occupational medicine but not a registered specialist who works 0.6 of a full-time position to the equivalent of three days a week; seven permanent administrative staff; and 13 temporary administrative staff who are working on processing a backlog of health records. Does that strike you as an adequate basis to provide any kind of meaningful health surveillance program for an industry the size of Queensland's mining industry?

Dr Cohen: It seems that they would be stretched a bit thin with that staffing level.

Mr McMILLAN: Would you expect to see a greater level of clinical professional staff within a health surveillance unit of that nature?

Dr Cohen: Given the fact that they are supervising medical evaluations on 30,000 miners, I think that at least a full-time-equivalent physician trained in occupational medicine or trained in pulmonary occupational disease would be very, very important for that kind of work.

Mr McMILLAN: What type of experience would you hope that that person would have in occupational medicine?

Dr Cohen: I think they should have significant experience in taking care of exposed populations. Maybe not necessarily coalmining, but if they had had experience with other populations and dealing with data from those populations that would be very helpful to supervise this level of activity and this high-risk population.

Mr McMILLAN: At the very least that person should be a registered specialist, shouldn't they?

Dr Cohen: Yes. I would say so, yes.

Mr McMILLAN: Can I ask about the compensation scheme in the United States—and I appreciate that it is significantly different from that which exists in Queensland—but I am interested particularly in the assistance you can provide the committee on this issue. To be eligible for compensation under the Queensland workers compensation scheme for an occupational dust disease, a worker would have to demonstrate that an injury sustained in the course of their employment is a significant contributing factor to their level of disability. How would workers go about demonstrating that, for example, their respiratory symptoms which caused them a level of disability are significantly contributed to by their occupation in mining?

Dr Cohen: The most important testing for that is resting and exercise pulmonary function testing, so the imaging is really only helpful as a marker of exposure. In the United States you can be totally disabled if you have progressive massive fibrosis on imaging and then you do not need any further disability evaluation. If they have a PMF x-ray, then they are by law considered totally disabled and they would win compensation. If they only have simple pneumoconiosis, then you have to prove physiologic impairment on lung function testing. The impairment can be obstructive in a pattern, it can be restrictive or it can be mixed. Then you have to look very carefully at the exposures and any other diseases and try and decide whether or not you think the coalmine dust was a significant contributing factor.

Unless they have another disease such as asthma since childhood—even that could be exacerbated by the work—or if they all of a sudden developed a very severe pneumonia with massive lung scarring and before that they were perfectly fine, then that impairment would be from the pneumonia or from some other illness. But if it is a gradually progressive disease and it is clear that the coalmine dust exposure would result in that pattern, then it is usually considered to be a significant impairment. We look at the level of impairment then to decide disability. Based on the degree of impaired, under the federal system people have to have impairment that is usually 60 per cent of reference or less to be considered totally disabled, and then they get the full medical benefits as well as cash benefits to them and their survivor or to their children if they should pass away.

Mr McMILLAN: If, for example, a coalmine worker or other coal worker has significant respiratory symptoms but has a long history of smoking, is it possible through diagnostic testing or otherwise to positively say that their exposure to coal dust is a significant contributing cause of their injury?

Dr Cohen: Yes, it is. There was a major lawsuit in Great Britain brought by smoking coalminers against the British Coal Board reviewing the evidence of tobacco smoke and coal dust to try to sort out that difference. The fact of the matter is that if someone is sensitive to the effects of cigarette smoke they are also going to be sensitive to the dust, and as I talked about earlier, the toxicity is relatively equal. Then it just becomes a standard of what is significant. If you had a person who only mined for four years and smoked two packs a day for 40 years they would have an 80-pack-a-year

history of smoking and maybe just four years of mining, then maybe that coalmine dust exposure would not be as significant to their COPD or emphysema. If the exposures are comparable, and they often are—people have worked 20 or 30 years in mining and they smoked a pack a day for 30 years—then those exposures are of the same order of magnitude, and those miners prevail in our compensation system and they get compensated.

It was not easy, because it took a lot of science and a lot of political pushing and regulatory changes to get obstructive impairments recognised by our regulations, but in 2010 at the end of the Clinton administration we passed new black lung regulations that specifically acknowledged that obstructive impairments and restrictive impairments were a form of coalmine dust lung disease and would be compensable under our black lung laws. That was a major victory for miners, because many of them suffered from COPD and in the past they had to fight very, very hard to get compensated for that type of impairment.

Mr McMILLAN: To the extent that there may be former or retired miners listening to your evidence or reading the transcript who have symptoms and who think they may be disabled, but they have been smokers, there is good reason to think that they may be able to still access some form of compensation if they can establish their history of exposure to dust?

Dr Cohen: I think so. My understanding of the Australian compensation system is very new and very incomplete. If it is correct that it just has to have coalmine dust exposure be a significant contributor and not necessarily the only or main contributor, then they would be the same as in the US and would certainly have a valid case and should be compensable, because coalmine dust clearly does cause emphysema, COPD and chronic bronchitis. Those are the main causes of morbidity, so those miners should be eligible under your laws.

Mr McMILLAN: The Department of Natural Resources and Mines has established a project group essentially to respond to the Monash review. Part of the work of that project group, as I understand it, has been to prepare some position papers about the delivery of spirometry as part of the Coal Mine Workers' Health Scheme and chest X-ray screening for that scheme. Only this week that group has published a position paper in relation to each of those issues dated 13 March. Have you seen those position papers?

Dr Cohen: I just received them in the last day or so.

Mr McMILLAN: Were you asked to contribute to their development at all?

Dr Cohen: I remember reviewing some documents early on. I do not believe I saw the most recent version, but I do believe that that will be part of our discussions with the department on Friday.

Mr McMILLAN: The annexure to those two papers includes consultation paper feedback from a number of entities that are described as stakeholders. I do not see your name or that of the University of Illinois on that list anywhere. I take it that you have not been formally asked for any kind of contribution to those papers at this stage?

Dr Cohen: That is correct.

Mr McMILLAN: I note that the closing date for submissions from the general public in those papers is 22 March, some nine days after they were published. Do you think that is sufficient time to gather public information on those sort of proposals?

Dr Cohen: What you are saying is they were just published now?

Mr McMILLAN: On 13 March and public consultation closes on 22 March.

Dr Cohen: It seems a bit brief.

Mr McMILLAN: Have you had the opportunity as yet to read those in detail?

Dr Cohen: I looked at them a little bit, but I must admit I was a bit jet-lagged.

Mr McMILLAN: I do not wish to impose upon you, but do you have any comment to make at this stage about the proposals that are contained in those papers?

Dr Cohen: I just briefly remember that in the X-ray—and I may be misremembering—they were proposing that there be at one point just one B reader and then another person that may or may not be a certified B reader or someone that has been certified to interpret images. I would encourage them to consider continuing the program they started with us with two certified folks, and I think they should be able to do that going forward. I may be remembering incorrectly, but I think that may have been in there. I have not really reviewed the spirometry one in great detail.

Mr McMILLAN: Should your team be invited to provide their very extensive expertise in assisting with this review, assuming there was appropriate compensation would you be willing to assist?

Dr Cohen: Yes.

Mr McMILLAN: Thank you, Madam Chair. Thank you very much, Dr Cohen.

CHAIR: Mr Kelly, member for Greenslopes, I think you have some questions.

Mr KELLY: I have some questions, thank you. My apologies: I was late this morning, Dr Cohen. In 1983 or 1984, I think it was, we conducted a major health surveillance exercise here in the state of Queensland. I believe we screened something like 7,000 coal workers at that stage: 700 or so were found to have some form of lung disease not necessarily confirmed as being related to coal dust; 75 cases were identified of CWP. That is 10 per cent and 1 per cent. As someone who works in this field, are they significant numbers in terms of any disease to be present in a population from an occupational health perspective?

Dr Cohen: Ten per cent of your population is significant. These were active working miners, who by definition are people that are healthy enough to go down and do heavy manual labour every day, so to have 10 per cent of that workforce identified with a lung disease is significant.

Mr KELLY: The one per cent that had some stage of CWP, we are then led to believe that in 1985 and beyond that disease disappeared from the state of Queensland. Is that technically possible in this type of disease process?

Dr Cohen: It is possible; it is incredibly unlikely. I suppose it is possible, but it would not just disappear from one year to the next. Just based on the way this disease would exist in a population you would have a dwindling of it. You might have 75 in that year and then you might have 50 the next year or 40. If you had incredible controls and were doing the right thing in terms of dust management and controls then you might have a pattern like that, but all of a sudden to decrease to zero beggars the imagination.

Mr KELLY: Yes, I would have thought from an epidemiological perspective your graph is going to go up and down rather than flatline and stay flatlined.

Dr Cohen: That is right. That is more consistent with something else artefactual going on.

Mr KELLY: In 1984 we did a big round of surveillance. If health surveillance was occurring properly in that situation you would have thought that, other than new miners coming into the system from 1984 onwards, in 1985 you would have expected most of those miners to get a recheck, the ones that were still actively mining. You would have expected at that point that we might pick up some other cases of CWP even if there had been no x-raying between 1984 and 1985; would that be a fair assumption?

Dr Cohen: Usually our approach is to X-ray every five years and then you would expect to have some new incident cases, and that would have been a normal sort of epidemiologic pattern if you are surveying for this disease. That would have been the approach.

Mr KELLY: I think about, say, something like malaria. If malaria suddenly disappeared in three countries in the tropics, Papua New Guinea and Malawi, that would spark a degree of intellectual curiosity and perhaps even some research amongst medical professionals and researchers I would imagine.

Dr Cohen: It would be an astounding finding and people would want to either replicate it or maybe people would come and investigate so they could replicate that experience and get rid of malaria from their country. I guess we should have sent teams over from the US to evaluate things here so we could have eliminated black lung in our country as well.

Mr KELLY: Yes. I notice from your centre of excellence website that you have been in this field since 1992 and possibly before that; I am just going off what is on the website. Was there any interest in international literature circles or journals around the fact that we had a state in Australia—I think two states—where effectively black lung was eliminated? Was there discussion, research, people saying, 'How has this occurred and how do we replicate it in our country?'

Dr Cohen: Yes, there was. Especially at the time of the rule making, there was a lot of controversy in the United States because some people were advocating that we do not need to lower our standards because in Queensland they have a three milligram standard and they got rid of black lung so we do not need to change anything in the US and so many of us were saying, 'How did they possibly get rid of it?' That is when I mentioned in other questioning that that was when I became very intrigued with the Australian experience but did not get the opportunity to come and really find out for myself until more recently.

Mr KELLY: Did you have any interactions with officials from Australia either from business or government or from unions and did you pose questions to them around how we had achieved this outcome?

Dr Cohen: I did not but my colleagues at NIOSH had visits from some Australian colleagues from Queensland and I believe that the chair, Mrs Miller, and Mr Springborg actually spoke with my colleagues at NIOSH about those interactions. My colleagues from NIOSH were amazed at the reports from the Australians at that time and could not quite figure it out. I think they still left those interactions perplexed as to how that happened. I do not know if you remember anything else about that.

Mr KELLY: You mentioned in your testimony earlier the fact that people are working longer hours per day and more days per week. Is there research that backs that if you are doing extended periods of overtime—not just an extra couple of hours here and there periodically but consistently doing longer days and doing more of them each week—does that increase your risk and your chance of developing a disease like CWP?

Dr Cohen: That is one of the things that we are exploring. There is research on dust handling in the lung that would implicate overwhelming the dust-handling mechanisms of the lungs and the defences of the lungs. We have not got direct research on that specific question in humans right now, but I think that is something that we are definitely looking at to see if we can pin down these as risk factors for people who are developing rapidly progressive disease and disease in general.

Mr KELLY: We cannot necessarily from a clinical perspective make recommendations that you need to have a certain period off per day or a certain number of days off per week in relation to dust in a coalmine?

Dr Cohen: I think the main thing that we would really want to focus on is making those mines safe for as long as people are down there, but it is something that we will be looking at.

Mr KELLY: You also talked about the age of miners and the fact that there are some very youthful miners at 18 going down and working in mines in Queensland. We know that the body changes over the course of its life and at different times we would be more susceptible to different issues. Is age a factor in increasing your risk to something like CWP?

Dr Cohen: I think there might be if you are very, very young and your lungs have not fully developed. Your lungs may be fully developed by the age of 23 or 24 when you have reached your maximum development, so potentially the young men and women who are 18 years old may be at a bit more risk. There is also information that in terms of lung function the decline in relation to exposure is much more rapid in your early career, so people's inflammation or response to the dust may occur in their early years of mining and then it is not quite so rapid a decline as they are more experienced. Those two things point to a bit more sensitivity in perhaps younger individuals.

Mr KELLY: I want to talk a little bit about the Health Surveillance Unit. The system here in Queensland is seen to be one where responsibility for diagnosis and monitoring rested with a local GP either in the pay of the company or not and then that information was relayed on to the Health Surveillance Unit. The Health Surveillance Unit did not seem to play any role in terms of actually assessing that data. In the system in the United States, does the health surveillance occur at the point of patient to doctor or does it occur at some other point where there is another body reviewing the decisions or the actions of that particular medical officer?

Dr Cohen: The initial on-site chest imaging is read by a radiologist or a practitioner at the site where the X-ray is taken and any immediate issues such as a tumour or potential tumour or anything that needs to be dealt with immediately is dealt with on site. Then the X-rays are transmitted to the central unit where they are read again for pneumoconiosis and then any other findings as well would be documented there. If the reviewer at NIOSH in the central reviewing panel saw a tumour, they would also note it and send a letter to the miner and then the data is organised in a way that the miner receives a letter. If they have pneumoconiosis, it will say that your X-ray was positive and it explains their rights under the part 90 system so that they can choose to exercise it or not, and that information only goes to the miner so that they can evaluate it. The data is then aggregated and analysed at NIOSH in terms of more general patterns and other findings that would apply to a specific population or to an area that might have more difficulty than others and that data is then published, but the individual miners are not identified in that data so that there could be no retribution or any fallout for them. So it is a local level and then at a central level clinically and then there is a scientific evaluation and then more of a population health evaluation.

Mr KELLY: This problem has been going on for over 30 years where supposedly this disease disappeared but many years later it has re-emerged. There is supposedly a body of data out there in the form of old analogue X-ray slides. Is there value in going back and trying to assess and analyse those slides or should we be re-establishing a proper Health Surveillance Unit and actually surveilling everybody who might be at risk going forward?

Dr Cohen: I think that the second option is probably the most effective, so any miner who is actively mining should have a good-quality X-ray reviewed. If it is negative, then their old X-rays really make no difference because in all likelihood they were negative; it is not a disease that goes away. Anyone who is a former miner should also have that option open to them as well because they may have an X-ray from the time they were actively mining in that warehouse that has not been reviewed and we could see if they are negative now. If any former miner gets a good quality X-ray, it is read now and they are negative now, again their previous imaging is moot because it would not have been positive back then. The only issue might be a forensic analysis. If you have some people who are positive, you might want to go back and see if their previous imaging was positive and ask, 'Did we miss this opportunity to prevent them from getting worse disease?' I would say maybe not to throw out those images but to keep them and organise them at least, but the use for them would be that latter one that I spoke of—that is, if a former miner comes in and they have a higher category pneumoconiosis now, was it there before or not? It would not change the outcome so it may not be worth the money, but it would be helpful to understand the burden of what we could have done.

Mr KELLY: You mentioned pulmonary rehabilitation and word for word what you were describing is what I would have done in my last job with a person with COPD. Does the equivalent of a Health Surveillance Unit in the United States, either in one state or in the country generally, have a role in implementing and monitoring or managing that pulmonary rehabilitation or is that something that should be done by the general health system once somebody is identified and diagnosed?

Dr Cohen: I think that issues of treatment and therapy, as well as compensation, probably reside with a clinical service and maybe not as much with a medical surveillance unit, but I think that our system where we fund clinics to do this work specifically for this population is not a bad model because this population has exposures that not every general practitioner might understand. The pulmonary rehab is generally useful for COPD or for other lung disease patients, but it should be made available to this population because they are at much higher risk because of the dust and then other exposures. I think it would be important, which is something we struggle with, that the surveillance data and the compensation data sets talk to each other and that these agencies interact and work together, because the compensation may be able to feed back information to the surveillance group. People who show up needing compensation may have missed opportunities for surveillance or there may be things the surveillance unit could learn from it, and we have only just started linking those data sets in the US. They have not been linked before. I think that you might learn from our mistakes and not keep them entirely separate, but there should be close coordination between those clinics that treat and rehab patients with black lung and those that are performing surveillance for it.

Mr KELLY: I think we have plenty of our own mistakes that we are learning from, but that concept of the compensation and the surveillance talking to one another is interesting. We have had reported here in Australia a situation where someone has been compensated but that has not triggered any action or even awareness in the surveillance units that that has occurred. Is the situation similar in the States where if somebody somehow goes to the GP and gets a correct diagnosis of CWP without ever coming through a surveillance program and then goes and seeks compensation, would that trigger action in the surveillance unit in the United States?

Dr Cohen: No, and I think I mentioned earlier the situation of these massive outbreaks of progressive massive fibrosis in Central Appalachia. The outbreak that was just reported from Kentucky are those 60 cases. Almost none of them showed up in the surveillance program, and our surveillance program, which is voluntary, misses two-thirds or 60 per cent of our miners, so we have learned that they have to talk to each other. This is a project that I actually worked in starting with NIOSH and with the Department of Labor and for the first time we linked those data sets using workers' social security numbers and we found a large number of miners in surveillance that never ended up in compensation which, in some ways, might be good because they never got so sick but a very large number of people that showed up in compensation that never participated in surveillance, and that is a missed opportunity right there. There was overlap where people did do both, but these systems need to talk to each other. We have also looked at state workers compensation systems, not just the federal system, and found that many people that showed up getting state workers comp were never reported to the appropriate agency. We did a project for MSHA, the Mine Safety and Health Administration, using Illinois workers comp data and found a lot of people with disease were never reported to MSHA, and that would have been helpful for them to know.

Mr KELLY: Is the fact that the surveillance program is not compulsory the major contributing factor in the United States in that while you have good surveillance systems you also have high levels of coal workers' pneumoconiosis and coal workers' disease?

Dr Cohen: I think it cannot be anything other than a problem. Surveillance really requires that we have high levels of participation. We learn a lot, even from the 40 per cent or so of people who do participate, but that is a big weakness in our program and we struggle with that. I am not sure, but there would have to be a legislative or a regulatory solution to that for us. It is great to have wonderful tools, but if we do not apply them it is not good; it is okay if you apply tools, but if they are not good tools then you also have a problem.

Mr KELLY: In terms of the B reading process, does B reading still allow for some degree of subjectivity amongst the readers and a capacity for one B reader to arrive at a positive result and another B reader to arrive at a negative result? I would say that is an understatement. It is an incredibly subjective procedure. We have humans in a dark room with the lights off looking at shadows on a monitor, or shadows on a film. It is very subjective, which is why this whole calibration technique with the ILO system is so important to make sure that we are counting the numbers appropriately. It is incredibly subjective. There is inter-reader variability: I read it and somebody else may read it differently, which is why we use this third reader to at least average out some of the variability to make sure that we come to a reasonable conclusion. There is even intra-reader variability: if I read one at the beginning of the morning when my caffeine levels were higher than they were at the end of the day after having looked at 200 other X-rays, I might not have the same reading of that same image. It is very subjective. It is imperfect.

It would be much better if it were like a serum sodium, or a CBC, where you stick a sample into a machine and it pops out with a number. You calibrate the machine. It is pretty accurate. We are not there with imaging. We have looked at some algorithms for CT and being able to try to standardise it, but that is not quite there yet. It is imperfect and that is why we are struggling with quality issues and the variability. It also varies a lot with motivation. We had a problem in the United States where people were paid not to see things. Then there is the situation where people were paid to see things that were not there. So we have those ethical issues as well.

Mr KELLY: Could an environment where medical professionals believe a disease has disappeared contribute to a culture where they may not even be looking for a particular disease in a diagnostic tool?

Dr Cohen: Absolutely. If you are told that it does not exist, then how can you diagnose it? That must have played a huge role.

Mr KELLY: It is not uncommon that diagnostic tools are subjective—that is common across many areas in health care and medicine—but the B reading is only part of a process of diagnosis. Is that correct? You use spirometry. You could use biopsies. You could use CT. Is there anything else that we could use? Do you have to use all of those things to really establish a firm diagnosis?

Dr Cohen: I think that the components for a firm diagnosis include the occupational history. You have to have exposure. If you do not have coalmine dust exposure, you cannot have CWP. I do not care how many opacities you have on your X-ray. The imaging is important. If the imaging is really fairly clear—it is not confusing in terms of the onset, the time course of the process—that is helpful. Then you have to rule out other diseases. That will tell you if you have CWP at least radiologically. Then the lung function tells you about impairment or if you have one of the other forms of coalmine dust lung disease, such as emphysema or chronic bronchitis. Then you have to put it all together with the other exposures—the rest of their work history—and then try to come to a conclusion about causation. That is the process.

The other test that we do use is CT scanning if things look unusual or you have someone who is very obese, for example, and you have vague images or you cannot get a good penetrative image. CT scanning has added a lot. Pathology, we do not do very much. It is very invasive with high risk. Surgical biopsies, or even bronchoscopies with transbronchial biopsies have substantial associated risk. We only do it if we think that there is another disease that could be mimicking this. We do not recommend it routinely, but we certainly do it. I have had cases where a lesion grows rather quickly and I am very concerned about cancer. It might be PMF, but it might be cancer. We will take it out and then we will make the diagnosis.

Mr KELLY: In your clinical opinion, it would be fairly crucial for Australia to have an adequate supply of people capable of doing the B reading, to have an adequate health surveillance capacity here in our country; is that fair to say?

Dr Cohen: Yes. For our coal workers health surveillance program, we have between nine and 12 B readers and they handle the whole program. I, think for Queensland, if you could get five or six people you should be fine to do that and they should be able to cover that.

Mr KELLY: How long would it take to train someone to become a B reader—and not just to train them but for them to become reasonably competent?

Dr Cohen: Recently, we had four Australians who came to the United States and they had a day and a half or a two-day session with my colleagues at NIOSH and two of them passed. So they are now B readers. That took three days, but all of them were trained radiologists with a lot of chest imaging experience, but just had to learn how to use that system. If it were a GP who does not read chest X-rays, they probably would never have passed. The more X-rays you read, the more likely you are going to pass that test. I think it could be done relatively quickly. Certainly, if we offered a course and gave the exam here to 50 radiologists, or however many we could recruit to take a four-day or seven-day course, I bet we could get a small bunch.

Mr KELLY: Thank you.

CHAIR: Thank you very much, member for Greenslopes. Are there any other questions from members of the committee?

Mr SPRINGBORG: I have one on the issue of consistency and standard of readers. When you are talking about differences, it is not so much about not seeing CWP at all; it might be the way you would classify it. Our issue in Queensland is that we were not even noticing it, so we were not seeing it. We are now seeing that pathology can be totally automated and has the algorithms, has the consistency so that it replicates just one after the other. Then you have the issue of whether you remove human beings from it at all, because that means that there are no jobs for anyone. Certainly, in Germany and other places we have totally automated pathology, which is showing very good results over and over again. Do you see the same operating here?

Dr Cohen: Certainly for cytology screening programs, I think they have done really wonderful automated work, which you are describing. I think CT scanning has the potential to lend itself to more automation. There has been some difficulty in calibrating the CT scanner for what constitutes an opacity or a nodule. Differentiating it from blood vessels or from other structures can be a bit difficult. I think that will happen. I was in communication with a Dr Deborah Yates and a colleague from Sydney who put forward a proposal to some Australian technological foundation that funds scientific research to try to develop some CT algorithms. The University of the New Mexico tried this a bit. So people are working on it. Maybe it will be another decade. I think it will come and that will take away some of the subjectivity and I think that it should be very helpful. Then we would have to move to low-dose automated CT scanning, which is coming down in radiation. It will get there—not today, but it will get there.

Mr SPRINGBORG: Thank you.

CHAIR: I now go to counsel assisting for questions.

Mr McMILLAN: Thank you, madam chair. I want to follow up on the questions asked by the member for Greenslopes. He made reference to a claim for workers compensation in the mid 2000s in Queensland for coal workers' pneumoconiosis. I want to ask you about that specifically. Assuming for a moment that these facts are correct: that in or about 1984 there was a massive screening of the Queensland coalmining workforce and 70-odd cases of coal workers' pneumoconiosis were identified. Then for a period of more than a decade it was believed that there was no pneumoconiosis. WorkCover has provided confidentially to the committee details of that particular claim that the member for Greenslopes referred to. In 2004, that particular worker was diagnosed in a Queensland public hospital with coal workers' pneumoconiosis. Should that have been sentinel event for a public health system?

Dr Cohen: Absolutely. I think the concept of sentinel event is very important. When you identify something that is unusual, that could affect other people, it means that you do not just care for that one person; you immediately investigate the circumstances surrounding that case so that you can see if there are other cases or what was the causes of that. That should have triggered some major alarm bells at that time.

Mr McMILLAN: The review work that was undertaken by the Monash team—and I referred to this earlier in my questions—identified 21 Queensland coalminers who had been hospitalised in Queensland public hospitals and coded with the J60 coal workers' pneumoconiosis code. I note that the Monash review report identified that that code is used for a range of other carbon related lung diseases, but the report noted that four of those cases were probably coal workers' pneumoconiosis. Those are people who were hospitalised between 1995 and 2015. Again, each of those cases should have been sentinel events, should they not?

Dr Cohen: Right. This is another example of why these data systems need to talk to each other. Hospital discharge data systems, death certificate data systems, compensation data systems and surveillance data systems need to be coordinated.

Mr McMILLAN: Finally, in that case from 2004, that worker made a claim for workers compensation, which was accepted by WorkCover and, ultimately, the medical assessment tribunal, which is a statutory tribunal established under legislation in Queensland, confirmed that that worker suffered from coal workers' pneumoconiosis in March 2007—a decade ago. What should have flowed from that in terms of investigations as to how that worker came to have that disease?

Dr Cohen: I think it goes to the point that, clearly, the disease was not eradicated. What we all suspected was that it was just overlooked and now it has been rediscovered. Those are all examples of alarm bells that could have been rung and people could have answered that alarm and just started doing exactly what we are doing now, but we could have done it a decade ago.

Mr McMILLAN: Thank you, Dr Cohen.

Mr SPRINGBORG: Dr Cohen, I have just a couple of other questions that follow from that. Earlier in response to a question about risk to other workers who are in a coal dust environment the issue was raised of those working on barges, on tugs, on rail. We have already heard concerns about our port loaders here in Queensland. Are you aware of any incidents of where train drivers have been diagnosed with a coal dust related disease, particularly CWP, in the US, or is it generally a bit further down the chain from the driver?

Dr Cohen: Mostly, I have personally been involved in cases of loaders—people who are loading and unloading those cargo cars, working near those conveyor belts that are dumping in or opening the doors that dump the coal in the hoppers for processing on arrival.

Mr SPRINGBORG: I have one other question. It relates to the issue of real-time monitoring. We have been having some discussions about the PDM3700, which has been significantly adopted by the coal industry and workers, in particular in the United States—obviously, being developed there. It has been taken up throughout the world, including South Africa, South America and China, as a very useful device to provide as close to real-time personal monitoring as you can get. Do you believe that the adoption of such a personal real-time monitoring device is critically important to empower the coal worker themselves and to even further reduce the opportunity for contracting a coal dust related disease, particularly CWP?

Dr Cohen: I do. I would preface that by saying that I am not an industrial hygienist, but I have talked to so many coalminers and I have been on committees that talk about this technology and this equipment. My understanding is that it really allows workers to see right away what the levels are and understand the conditions that are leading to it and change them immediately, which means that they can mitigate those exposures right away as opposed to the old Cyclone pumps, where you take a filter, take a sample during the day, mail it in and a couple of weeks later you get a result. You may not even remember where the ventilation curtain was, where the miner was at that time, what the exact conditions were, so you cannot learn as much from it at all. I think that it is a huge advance. The downside is that you not have real-time silica, but you have a lot of other information.

Mr SPRINGBORG: Sure. I understand that NIOSH, along with MSHA, are doing some work around what might be able to be done with real-time silica with the company that is involved with producing the PDM3700. Certainly, dust has to be a significant part of the equation. We know we can deal with that, but it should not inhibit the rollout of such a device to protect our mineworkers—

Dr Cohen: Absolutely not.

Mr SPRINGBORG:—while we are just waiting for the silica. Hopefully, we can get the silica further down the track.

Dr Cohen: That would be a major disservice to use that as an excuse not to implement this technology now. We can certainly do whatever we can to monitor silica, but that device allows you to see what is going on and make those changes. It is becoming more compact and much more user-friendly.

Mr SPRINGBORG: Thank you very much.

CHAIR: Thank you very much. There being no further questions, Dr Cohen, we would like to thank you for appearing before our committee today. We would like to stand you down now and please welcome Mr Steve Mellor. Thank you.

Dr Cohen: Thank you.

MELLOR, Mr Steve, Private capacity

CHAIR: Thank you very much, Mr Mellor, for being here today. We understand you have travelled down from Mackay and we thank you very much. For the record, could you please state your name, the capacity in which you appear and provide us with a statement?

Mr Mellor: My name is Stephen Mellor. I was an underground coalminer for 11 years. At the moment I am no longer working. I would like to start by thanking the committee again for giving me the chance to sit here before you all today. Since being diagnosed, the difficulties when dealing with the relevant departments has taken a toll on all of us emotionally, physically and financially. From the initial diagnosis from the radiologists, the NMAs and the thoracic specialists we have all received conflicting assessments, inconsistent treatment and future health prognoses and differing advice regarding future employment. Everyone from our private insurance to Centrelink to WorkCover have requested highly sensitive and very personal information that has absolutely no bearing on CWP or how we contracted the disease. These organisations have also required individual periodic medical certificates to be obtained from different doctors that in most cases have to be paid for by us.

As one of three spokespeople for the Dust to Dust campaign instigated by the CFMEU, I thought my experiences could help not only shed some light on where things have gone wrong in the mining industry and the mine medicals in Queensland in the past, but also try to help myself and other sufferers to understand how we contracted this disease which our employers thought had been eradicated. The campaign has continuously pushed for lower dust levels and independent monitoring which hopefully will be complied with, but most importantly I believe the 10 cent levy from the coalmines is the most important part of the campaign. Funds from the levy could assist to educate people still working and entering the industry, plus help fellow sufferers, and the Queensland taxpayers should no longer have to pay the expenses of this travesty.

Just to have your case confirmed as definite CWP by the different administrations like WorkCover and the Department of Mines can be arduous and demanding. To then be advised by WorkCover that you have been assessed as having a zero per cent permanent impairment and offered a lump sum of zero dollars is offensive and humiliating. I cannot help wondering, if the system is not changed, how many other employees of contractors will be tossed to the scrapheap with me. At first I thought the treatment of me by WorkCover would be a burden, but after speaking with other sufferers who are still working on the coalmine sites for these mining giants who are doing risk assessments for sufferers with progressed signs of the disease to re-enter the underground workforce with the same dust mask that we were all wearing when we caught this disease, miners being coerced to attend meetings with management whilst denied any legal representation, those with a 0/1 classification still being told that they can still work on the face with little consequences and concerns as to how much more exposure before they are upgraded to the more higher progressed signs of CWP, mining NMAs doing unannounced home visits on CWP victim employees on weekends, perhaps I may be better off. For guys still in the industry with no signs of CWP, they are still paying for their employment medicals, inductions and, in some cases, the NMA costing up to \$400 each. Coalmines are still using their blacklists to reject contractors and employees from sites who are known to speak up about dust or any type of safety concerns. Permanent employees are still being given misleading information and still being shuffled from crew to crew when they raise concerns. Return roadways, travel and belt roadways are still of poor quality standards with no dust suppression mitigation installed despite repeat requests from the miners. Coalmines are still doing the bulk of their dust monitoring during non-production periods. Unemployed deputies who are known to raise safety issues cannot get employment within the industry. Thank you.

CHAIR: Thank you very much. Steve, you spoke about NMAs, which are doctors employed by the companies, turning up unannounced to your home.

Mr Mellor: It has not happened to me specifically, but I know of two other people that it has happened to, two other diagnosed sufferers. They showed up on a Friday night unannounced, just walked into his house and walked straight out the back and started talking to him about his disease, wanted to know when he was going to go back to work. He was very troubled by it and he came to me and asked if it was happening to all of us and we said no it is not. Everything is happening differently to each of us. We are all getting treated differently. It depends on which mine you came from I suppose is one big thing.

CHAIR: Can you tell us which mine he came from?

Mr Mellor: BMA.

CHAIR: Can you tell us which mine it was?

Mr Mellor: I probably shouldn't.

CHAIR: That is all right. I am just wondering. It was a BMA mine and one of the BMA doctors turned up unannounced to a miner's house on a Friday evening—

Mr Mellor: To ask him when he was going to go into work.

Mr SPRINGBORG: Do you want to go in camera?

CHAIR: Later on we will. In relation to workers comp, were you involved in that, where you get zero compensation?

Mr Mellor: Yes. Last year when I was first diagnosed I went to see Dr Brown. I saw Dr Edwards first and he confirmed it and then I went to see Dr Brown. He gave me the zero percentage. That is pretty much the last I have seen of him. I haven't seen anyone else since that.

CHAIR: Steve, you are not working at the moment?

Mr Mellor: No.

CHAIR: How are you living in terms of money?

Mr Mellor: My father recently passed away so I have had a small inheritance that I have been living off and I have recently been accepted by Newstart Allowance, which I was rejected from at the start.

CHAIR: I think we should go in camera.

Mr KELLY: I have a couple of questions first.

Mr McMILLAN: I do too, Chair.

Mr KELLY: Thank you, Steve, for coming along. It has obviously been a very tough road for you. It sounds like you have received no money from workers compensation and no offer of any support. The role that you had in the mine, were you in a skilled trade like electrical work or something of that nature?

Mr Mellor: I was classed as a specialised operator. I mainly did a lot of longwall moves and those sorts of things.

Mr KELLY: Would you have developed skills in that role that are easily transferable to other industry or other roles outside of underground mining?

Mr Mellor: Outside of underground mining our tickets, everything we have ever done on site, are not recognised outside of the industry. Pretty much you leave the industry with nothing. It doesn't matter how many tickets you have.

Mr KELLY: Have you received advice, given your diagnosis, that you should never engage in underground coalmining again?

Mr Mellor: Yes.

Mr KELLY: Were you offered any support in terms of retraining to move into other industries or other jobs? If you had a desire or interest to do that, was there any support offered whatsoever?

Mr Mellor: WorkCover is about the only one, but they are more focused on trying to get me back out there. They would be happy if I went and collected trolleys for your local shopping centre or delivered pizza just to get me off their tick and flick sheet. Every time I speak to them I get that impression. The quicker they can get me out of their system the quicker they can move on and do whatever they are doing.

Mr KELLY: You do not have to answer this if you do not want to, but do you feel as though your current condition would impair you from performing in other types of occupations or roles outside of underground mining?

Mr Mellor: No, I don't. Hopefully. The doctors have told me that it shouldn't. I haven't had a chance to speak to Dr Cohen yet, but from what I have been told, it might not progress and that is pretty much all I have been told.

Mr KELLY: Have the doctors, physios, nursing staff, anyone, given you any health advice around how to look after yourself so that this disease does not progress?

Mr Mellor: No. Once you are diagnosed you walk out the door and that is it. Nobody wants to talk to you, nobody cares, nobody wants to even help you.

Mr KELLY: No-one suggested, 'Make sure you get a flu shot.' 'If you are on the smokes try to get off them.'?

Mr Mellor: A while ago I read that anyone with a respiratory disease is supposed to have a flu shot so I actually instigated that myself.

Mr KELLY: No-one said try to keep your physical activities at a certain level?

Mr Mellor: No. They are questions I want to ask Dr Cohen.

CHAIR: Counsel Assisting?

Mr McMILLAN: Mr Mellor, has your CWP been classified according to the ILO scale?

Mr Mellor: Yes, it has.

Mr McMILLAN: Are you willing to tell us what that classification was?

Mr Mellor: I am 2/2.

Mr McMILLAN: Have you sought out any pulmonary rehabilitation?

Mr Mellor: After speaking with yourself last week I went back to my GP and he again tried to get me into the respiratory clinic at the Mackay Base Hospital and as of yesterday we are still awaiting a reply.

Mr McMILLAN: Was that the first time you have approached that hospital?

Mr Mellor: No. When I was first diagnosed my GP made an inquiry into that department and they rejected me on the fact that it was black lung.

Mr McMILLAN: Just to be clear, you believe that your GP referred you for pulmonary rehabilitation at the Mackay Base Hospital. When was that?

Mr Mellor: It would have been not long after I was diagnosed last year in April.

Mr McMILLAN: Your understanding is that you were rejected from that clinic on the basis of your diagnosis as having coal workers' pneumoconiosis?

Mr Mellor: Yes. He was informed that nobody there knew anything about black lung disease.

Mr McMILLAN: You have recently asked for another referral and are waiting to hear the results of that?

Mr Mellor: Yes. I rang my GP yesterday and they are still waiting for the results. I have also spoken to four other diagnosed sufferers and they have never heard of the course that you are speaking of either.

Mr McMILLAN: As I understand what you said in your evidence earlier, your workers compensation application has been closed; is that right?

Mr Mellor: Yes.

Mr McMILLAN: So you are no longer receiving cover for medical expenses?

Mr Mellor: They stopped covering my medical expenses after Dr Brown. They have only paid for one doctor. I have paid for everything else.

Mr McMILLAN: Have you contacted them again and asked them to resume paying for further investigations and/or pulmonary rehab?

Mr Mellor: I know after I was diagnosed my GP sent over a bill for three more visits that I did regarding black lung and probably regarding the thing at the base hospital and, no, I'm not aware of it at all.

CHAIR: Mr Mellor, do you have any documentation that verifies what has happened in relation to the GP and the hospital?

Mr Mellor: No, I haven't got anything at the moment. The doctor was away the last couple of days.

CHAIR: That is okay. We would be very interested in that.

Mr Mellor: I will get it to you as soon as I can.

Mr McMILLAN: Have you made a common law claim for damages?

Mr Mellor: Yes, I have.

CHAIR: Thank you. Are there any other questions?

Mr COSTIGAN: Mr Mellor, thanks very much again for coming down today and fronting the committee in Brisbane. Your closest mates, your former colleagues, fellow union members, how familiar are they with your story in relation to the Base, as we call it?

Mr Mellor: I guess everybody knows about me now since I have done a lot of public profile and stuff like that trying to get a bit of awareness out there. I often get workmates I used to work with texting me descriptions of their X-rays and stuff because they don't know who to go to or asking me who to go to. I try to help them where I can or else I direct them to the CFMEU because they usually Brisbane

help us out. Other than that, they know who I am, they know what is happening. Especially contractors. I think a lot of them are scared because if they end up with the disease like me they are gone. We are gone. You are just told to go away with the disease.

Mr COSTIGAN: You were diagnosed in April of last year. Nearly a year on, here we are and, from what you are saying to the committee, the Mackay Base Hospital just does not want to know about you?

Mr Mellor: As far as I know, I don't—yes.

Mr COSTIGAN: Do you feel like you have been brushed, to use the Australian vernacular?

Mr Mellor: I feel like that from every department, not just the Mackay Base Hospital. From the beginning, it is the department of mines, it is the QRC—everybody. They do not want anything to do with us. We have a disease they know nothing about and it seems like they do not want to learn anything about it. It is frustrating for all of us. I speak with a lot of the other diagnosed people regularly and we are just sick of it. We do not know what to do. We cannot go to anybody. Our GPs do not know, because we have all decided to go to GPs who are not NMAs. There is no training or information for the regular GPs out there, let alone the NMAs who were not doing their job anyway. There is no information for anybody. I feel like I could find more about Zika virus in this country than I could about black lung

Mr COSTIGAN: You feel like you are running around in circles and do not know where—

Mr Mellor: Chasing our own tails and nobody is prepared to help us. I have rejection letters from everybody from WorkCover, Newstart. They want more documentation and you do not have the documentation or you have to go to see another doctor

CHAIR: Which you pay for yourself?

Mr Mellor: Yes, we pay for them all.

CHAIR: It is disgusting; absolutely disgusting.

Mr COSTIGAN: Mr Mellor, you have obviously had the support of the CFMEU?

Mr Mellor: Certainly. When I walked out of the doctor's surgery the day I was diagnosed, they were the only ones who gave a damn that I had this. Everybody else turned their backs on us. They were the only guys who really cared for us.

CHAIR: What about your family, Steve? How are they coping?

Mr Mellor: It has been hard on us all, I suppose. I guess they think that we were going to get a lot of the answers that we were going to get and it is not happening. As you said, it has been nearly 12 months. It is just frustrating—frustrating financially and everything.

CHAIR: What happens when you run out of the inheritance money?

Mr Mellor: I will probably have to sell my house.

CHAIR: Steve, this is disgraceful. We live in Australia. We live in Queensland. None of us on this committee want to see that happening to you. None of us want to see that happening.

Mr Mellor: It is frustrating, because I guess we know we live in a fully developed country, a first world country, and we have the technology there. It is almost like they do not want to know anything about it; that the less they can deal with it, the better.

CHAIR: So you have been given the run around, going from doctor to doctor, from workers comp to Centrelink. You have gone to the Mackay Base Hospital. You have done everything in your power to seek help and everybody has been turning you away?

Mr Mellor: It is not just me; it is all the other sufferers.

CHAIR: And all the others, as well.

Mr Mellor: I think that is where we have found a common ground. When we talk to each other, we can relay what problems we are each having. It sort of evens it all out, I suppose. Some of us have worse problems, like doctors just showing up announced. Some of us are not being told the truth by the mining companies they work for.

Mr CRAWFORD: How many other sufferers are you normally in contact with, Steve?

Mr Mellor: I think I am up to about eight or nine now. Keith Stoddard, who is No. 7, is also in contact with about four or five of them. We try to keep in regular contact between all of us.

Mr CRAWFORD: Do you identify by number? It sounds like you identify by number.

Mr Mellor: We even store our numbers in our phones for each other. It is embarrassing and we do not like to use our numbers, but it is, I think, the only way we are going to get heard.

Mr CRAWFORD: What number are you?

Mr Mellor: No. 10. The way that I found out about that—nobody contacted you—it was just published in the local *Daily Mercury*.

Mr COSTIGAN: So you picked up the paper one day and found out that you were No. 10?

Mr Mellor: Yes.

CHAIR: That is outrageous, Steve. Steve, can I just say that this is a bipartisan committee and we will leave no stone unturned to get you help—no stone unturned. I ask you to bear with us for a little while as this committee is still undergoing its proceedings. But whatever it takes, we will look after you and the other sufferers of black lung.

Mr Mellor: Thank you.

CHAIR: It might be a few weeks yet, but we will get that help for you.

Mr Mellor: Thank you very much. I think that is all we need.

CHAIR: Please pass that on to your family and to the other people who are suffering from black lung. We will also get in contact with WorkCover and everyone else, including the Mackay Base Hospital. I would also like to note that your testimony today has moved everyone on this committee and it has moved people in the public gallery, as well. I would like to take a five minute break.

Proceedings suspended from 2.50 pm to 2.55 pm

CHAIR: Thank you very much. We are now resuming the coal workers' pneumoconiosis inquiry. Mr Mellor, I understand that you have some documents available that you would like to give to us confidentially.

Mr Mellor: Yes. I have some medical documents that I have received over the past 12 months from my different doctors. I also have some of the documentation stating from the different departments that have rejected me and my claim.

CHAIR: Thank you very much. We will take those documents confidentially from you. Mr Mellor, can I thank you very much for your appearance here today. If you could just bear with us for a little while longer, we are going to get to the bottom of this. I now go to Counsel Assisting, Ben McMillan.

Mr McMILLAN: Mr Mellor, I have been handed the bundle of legal documents that you have provided to the committee, so please excuse me as I have not read them in their entirety. I want to ask you some specific questions about them, if I can.

Mr Mellor: Yes.

Mr McMILLAN: One of the documents is a denial of liability in the standard form under the Workers Compensation and Rehabilitation Act 2003 by WorkCover. I appreciate that you want these documents generally to be received confidentially because they contain personal medical information and I assure you I will not disclose any of that in the public hearing. The first paragraph of that denial reads as follows—

It is not admitted that the Claimant was exposed to an unreasonable level of coal dust in the various workplaces alleged, that is alleged exposure to coal dust in excess of the applicable exposure standards.

Have you been exposed to coal dust anywhere other than in a coalmine?

Mr Mellor: No, never.

Mr McMILLAN: Is there any other way that you might have inhaled respirable coal dust, other than at work?

Mr Mellor: Unless living in Mackay; that is about it.

Mr McMILLAN: I notice that you also sought, through your superannuation provider, benefits under your total and permanent disability cover and that has also been refused?

Mr Mellor: Yes. They kept asking for more and more documentation, more doctors and then, every time you supplied another doctor's letter, they would ask for more documentation—more and more. It just did not stop.

Mr McMILLAN: That letter includes this paragraph—

After a thorough investigation of all of the evidence supplied our insurer has determined to decline your insurance application due to the evidence provided indicates that there are roles within the mining industry suited to your education, training and experience and your medical requirement to avoid coal dust exposure.

Have you been offered any of those other roles that are apparently available?

Mr Mellor: I would like to know what those roles are. I have asked people and nobody seems to know what that means or what those positions could be. I doubt there are any roles that I could do on a mine site with a 2/2 grading.

Mr McMILLAN: You are aware, of course, from your contact with the other workers who have been diagnosed with CWP in Queensland, that some of them have been reassigned to duties in 'low dust environments' on their mine sites?

Mr Mellor: Yes. I have spoken with a few of those people.

Mr McMILLAN: They at least believe that they are now working in roles where they are not exposed to excess levels of dust?

Mr Mellor: I do not think it is what they believe; I think it is what the mine believes and what they can say about them.

Mr McMILLAN: For example, one of those miners has given evidence to this committee that they are working in the communications—

Mr Mellor: The coms room.

Mr McMILLAN: Have you been offered a job in a coms room by any of your former employers?

Mr Mellor: I was a contractor. Contractors do not work in coms rooms. We only do the stuff down in the hole. We do not work on the surface. You do not see contract companies with multiple people on the surface. It is just the guys underground.

Mr McMILLAN: Have you been offered any explanation by your superannuation provider as to what these supposed other opportunities that you should be pursuing are?

Mr Mellor: No. I just think it is a load of rubbish, the whole document.

Mr McMILLAN: Finally, I want to ask you about a letter that appears to have been written to your solicitors by Ashurst Australia, representing the BMA alliance of coal operations. It is dated 9 February 2017. It appears from the context of that letter that this is a response to a request by your solicitors to engage Dr Cohen as an expert in your case.

Mr Mellor: Yes. It took quite a while to contact Dr Cohen and to get everything in place. He agreed to do so and then, about a week later, after that, BMA sent us that letter

Mr McMILLAN: You are not a patient of Dr Cohen's, are you?

Mr Mellor: No.

Mr McMILLAN: Prior to today, had you ever met Dr Cohen?

Mr Mellor: Yesterday I met him.

Mr McMILLAN: Prior to yesterday?

Mr Mellor: No, never.

Mr McMILLAN: Did he read your X-rays at some stage as part of the B reader process?

Mr Mellor: I believe so, yes.

Mr McMILLAN: To your knowledge that is the extent of his involvement in your case to date?

Mr Mellor: As far as I know he has only seen my CT scan. I have the six other X-rays. I do not think he has seen any of those or knew anything about my occupational history apart from me being an underground coalminer.

Mr McMILLAN: Ashurst have written to your solicitors saying this—

In addition, we also have concerns about Dr Cohen's suitability to be a court-appointed expert in this case for the following reasons: the appointment of Dr Cohen will result in unnecessary costs to the parties; Dr Cohen has previously been briefed by the CFMEU in relation to you and the extent of those instructions are unknown; Dr Cohen has formed part of the diagnostic team for Mr Mellor; Dr Cohen is based in the United States and there will be considerable costs to the parties if he is to give evidence in Queensland; Dr Cohen has been inundated with requests for reports and it is our understanding that Dr Cohen's report will delay the proceedings; there are qualified and experienced Australian experts available to provide the same evidence.

I will take up a number of those matters with Dr Cohen in a moment. Did you provide any of those instructions to your solicitors? Did you tell them that Dr Cohen had been inundated with reports?

Mr Mellor: No, that was the first I heard of any of that—that is, when they sent us that letter.

Mr COSTIGAN: I refer to the document that has been circulated before the committee. I want to go to point 3—denial of liability for this claim. Point 3 states—

The claimant was diagnosed with simple coal miners' pneumoconiosis.

I look forward to Dr Cohen coming back to give evidence at some time. What is the difference between simple coalminers' pneumoconiosis and non-simple coalminers' pneumoconiosis?

Mr Mellor: That is probably a better question for Dr Cohen.

Mr KELLY: I have a question about point 3. It says you were diagnosed on 11 May 2012.

Mr Mellor: No, I was not diagnosed—

Mr KELLY: It states—

The claimant was diagnosed with simple coal miners' pneumoconiosis which became visible on a chest X-ray performed on May 11, 2012.

Mr Mellor: It was not until they reviewed that X-ray in 2016 that they said it. You have a copy of the 2012 X-ray that says that I have no opacities and it is all clear.

Mr KELLY: You were X-rayed in 2012 but you were not told until four years later that that X-ray in 2012 had showed signs of simple CWP?

Mr Mellor: That is correct and there is also speculation that the other X-rays that I have may have some of it on there too.

Mr KELLY: Where was the X-ray performed?

Mr Mellor: All of them were performed in Mackay.

Mr KELLY: Who was the NMA who reviewed that X-ray in 2012? Who was responsible for your care in 2012?

Mr Mellor: I would have to double-check that.

Mr KELLY: But it was an NMA?

Mr Mellor: Definitely, an NMA in Mackay, yes.

Mr KELLY: Allocated to you by the company or what?

Mr Mellor: I would have to check. Because I was a contractor we pay for our own medicals. No company pays for medicals anymore. We had to pay for our own medicals, our own training and our own inductions. BMA will not pay for that for us.

Mr KELLY: Who were you a contractor for? Who was your employer?

Mr Mellor: Over the years I have changed to a few different places.

Mr KELLY: At that time?

Mr Mellor: Undamine Industries.

Mr KELLY: You were given no information that you had simple CWP in 2012 and no advice to discontinue operating in an underground mining environment—in fact, told nothing at all; is that what you are saying?

Mr Mellor: That is exactly what I am saying. They told me I was fine.

CHAIR: Could you stand down please, Mr Mellor.

STEPHEN, Ms Janna, Industry Manager, WorkCover Queensland

WATSON, Mr Bruce, Chief Executive, WorkCover Queensland

CHAIR: I now call Mr Watson and Ms Stephen from WorkCover Queensland. You have heard the testimony, what do you have to say for yourself?

Mr Watson: Clearly, on the record, we have not done good enough in looking after the injured worker. For that I have said my thoughts to Mr Mellor and given a commitment that we will do everything in our power, especially as the new CEO of WorkCover, to make sure that this circumstance is not repeated.

As we have put in evidence here already, there are no claims being stopped or ceased by WorkCover at the moment unless the injured worker requests that in order to proceed to common law. With the short amount of time and the information I just got in this matter—this matter proceeding to common law—there are some things that we can do. We can offer pulmonary rehabilitation if we have the right medical support here in Australia and offer to cover that in a sense. I will immediately look at and am happy to report back to this committee on what else we can do to assist Mr Mellor and others as well.

As you know, and I will not restate it, from my personal background and passion for the mining industry, I can say that I was also moved by what I heard. I can assure you that WorkCover Queensland does care and will right the wrongs and to that I commit to this committee.

CHAIR: Thank you. Will you report back to this committee please in relation to all of those—the one to 20, as we understand it—on that list?

Mr Watson: Yes, we will.

CHAIR: In relation to WorkCover?

Mr Watson: I am happy to.

CHAIR: I think that this committee will now be taking a case management interest in each and every one of those people who have been diagnosed. That is because of the failure of the system, including WorkCover, to look after these men. This will not continue by WorkCover or any self-insured agency. We will be following this on a case-by-case basis until these men receive justice. Is there anything else you want to say?

Mr Watson: I have said, in previous evidence before this committee, that we are learning. This has been a process of learning. I am not here to justify. I am not happy. I have already apologised. We will do better. I can tell you that we are doing better. I am party to the state health reference group—some people in this room have also been attending—that is looking at the issues of rehabilitation, retraining and relocation. The example that has been given here in evidence was exactly discussed yesterday afternoon—especially the impact on labour hire workers and contractors. They do not have the tolerance of or the support of their larger coal owner in the sense of being able to put them in somewhat less dusty roles. That really does ensure that we as the insurer work very closely to support these people in this time of need, and that we will do.

CHAIR: Will you guarantee to this committee that no other coalminer who has been diagnosed with CWP will be treated in such a shocking manner in the future and that they will each be case managed?

Mr Watson: We will do everything in accordance with the law. In fact, we are doing what we can to support any changes to the law to ensure that these people are treated as human beings—the way they should be—being dislodged through no fault of their own.

CHAIR: And losing their houses through no fault of their own?

Mr Watson: Yes.

CHAIR: That should never happen either.

Mr Watson: No.

Mr SPRINGBORG: I am just looking at the denial of claim from WorkCover Queensland. It was signed 40 days ago. Unless I am mistaken, either yourself or other people associated with WorkCover Queensland have been a significant part of this committee and its inquiry since day one. In actual fact, you gave evidence on day one. There have been people who have followed us all around Queensland and heard the harrowing stories in all parts of this state. We were told, I think initially when evidence was given, that you would look after these people. How come 40 days ago you signed a denial of claim like this?

Mr Watson: Firstly, let me say that in my first period of time as CEO I have been looking at all parts of the business. I can assure you that I did not sign that. I would be very surprised, because I have not—

Mr SPRINGBORG: That is true; you did not sign it. Obviously the empathy that you have been indicating here today has not permeated throughout the organisation. The heart-rending circumstances and stories that we have heard have not been permeating through the organisation. It is true that you did not sign it. This is certainly not new. This has been going on for the best part of four or five months in evidence before the committee.

We were told on our first day of this inquiry on 14 October that WorkCover Queensland had been providing WorkCover support for two workers who had confirmed coal workers' pneumoconiosis going back to what we told was 2006. We now understand it is 2004 for at least one of them. Why would they have been paid out or supported by WorkCover Queensland and yet Mr Mellor has not been? Was their level of impairment greater? We have just heard of 2/2 a moment ago. Obviously 2/2 up to the highest category of three is still considered, I understand, simple pneumoconiosis. Then it goes into progressive massive fibrosis. I notice Dr Cohen is nodding his head in agreement. What is the difference? How do you assess these things? We do not expect you to provide individual evidence or circumstances that may identify the other two people who have been supported, but were they worse or better than 2/2?

Ms Stephen: With the other two cases there was a greater level of permanent impairment in their functioning due to their condition. That was where there was that compensation. There may have also been, without trying to identify people, different respiratory conditions on top of CWP which led to a higher level of impairment.

Mr SPRINGBORG: Were they classified in accordance with ILO certification at the time?

Ms Stephen: With one of them I can say yes. With the other I am not 100 per cent certain because that was an earlier diagnosis.

Mr SPRINGBORG: Their level of classification may or may not have been greater than Mr Mellor's based on the standard that we are using today.

Ms Stephen: One was greater based on the standard because my understanding was that it was progressive massive fibrosis.

Mr SPRINGBORG: We actually now do have our first confirmed case of progressive massive fibrosis, which apparently we did not have as of a couple of hours ago because apparently we did not have any in Queensland.

Mr McMILLAN: Mr Deputy Chair, I think it is important for the WorkCover officers to distinguish for the purposes of the evidence between the statutory claims that are made by workers under the Workers' Compensation and Rehabilitation Act which have been approved, including Mr Mellor's claim—those claims are then closed and a common law process is initiated. I believe that that is the denial of claim which is being referred to in the evidence. They are two separate processes.

Mr SPRINGBORG: The others did not relate to a common law claim.

Ms Stephen: No, that is correct. They were statutory claims. The letter that you are referring to that was signed off 40 days ago relates to a common law process that Mr Mellor is currently involved in.

Mr SPRINGBORG: I have two other questions then. My interest has been sparked particularly around the issue that one of the cases that you are paying out is progressive massive fibrosis. Did I hear that right a moment ago?

Ms Stephen: I would probably need to go back—100 per cent in comparison with the ILO. As I say, we can maybe take that on notice and confidentially give you some information regarding that.

CHAIR: That is fine, if you can take that on notice.

Mr SPRINGBORG: I still have the same lingering concern about the way things are being handled. I note here in item 1 it says—

It is not admitted that the claimant was exposed to an unreasonable level of coal dust.

I do not know how the claimant would actually end up with stage 2/2 CWP if it was not an unreasonable level because he has developed some form of CWP.

Mr McMILLAN: I propose to ask Dr Cohen questions about that. With the leave of the chair, can I ask Mr Watson one question?

CHAIR: Yes, that is fine.

Mr McMILLAN: Mr Watson, this denial of claim has been signed by a solicitor acting on your behalf. Will you take it upon yourself to ensure that your solicitors are provided with proper instructions about the approach that you intend for WorkCover to take moving forward?

Mr Watson: I will do.

Mr COSTIGAN: I have one question to Mr Watson or Ms Stephen. I have one observation more than a question, Mr Watson. I go to point 3 again of the documentation which states—

The claimant was diagnosed with simple coal miners' pneumoconiosis.

It is almost as if the solicitor acting on behalf of WorkCover Queensland who signed the correspondence dated 3 February is making out that CWP is no big deal. I find that insulting to those people who have been diagnosed with CWP.

Mr Watson: I would not share that same view.

Mr COSTIGAN: I would hope not.

Mr Watson: There has been a lot of discussion about CWP with our legal panel. I can assure you that I will go back and have further discussions. Every case is taken absolutely seriously. I can tell you that CWP has a heightened focus and care factor at the moment, even though some things would on face value seem not to be doing the right thing and we can do better.

Mr COSTIGAN: Do you accept that that is insulting to those miners and those families? I spoke to the wife of a retired mine worker in my own electorate yesterday who has been diagnosed. I just find it amazing. It is as if it is being dumbed down as if it is not important.

Ms Stephen: My understanding—and I am certainly happy and would like to hear Dr Cohen's opinion at some point in time in relation to that—is that that is how it is diagnosed: simple CWP and then progressive CWP. I do not think it is terminology that is meant offensively. It is actually how it is diagnosed.

Mr COSTIGAN: I accept your answer.

CHAIR: Thank you very much. We will obviously be looking very closely at what WorkCover is up to and we will bring you back before this committee if we have any other evidence. I hope you understand that. I want you to pick up your game and get on with it and look after the workers.

Mr Watson: We will.

CHAIR: Thank you. You can stand down now. I would like to call Dr Cohen back, please.

COHEN, Dr Robert, Director of Occupational Lung Disease, Division of Pulmonary and Critical Care Medicine, Feinberg School of Medicine, Northwestern University

CHAIR: I would like to go to counsel assisting. Thank you, Dr Cohen, for returning.

Mr McMILLAN: Dr Cohen, I appreciate that you have agreed to give evidence to this committee as a world renowned expert in this field and that you have unwittingly been drawn into the mire of a particular case. If you feel uncomfortable answering my questions, please tell me.

Dr Cohen: Okay.

Mr McMILLAN: First of all, in terms of the denial of the claim made by Mr Mellor—you heard me read out the first basis of the denial earlier—is there any way a person can develop coal workers' pneumoconiosis other than by occupational exposure of respirable coal dust?

Dr Cohen: The only way would be if there was an environmental exposure—if he was living next to a coal dump and inhaling dust that was from an environmental cause which is extremely unusual. He seemed to say that there was no such exposure.

Mr McMILLAN: The only other matter that I wanted to raise with you was the matter of the letter from Ashurst Australia lawyers to Mr Mellor's lawyers where they dealt with a number of aspects of why you should not be appointed as an expert. First of all, in fairness to you, did Ashurst approach you at any stage to make inquiries about your fees, availability or other work commitments?

Dr Cohen: No, they did not.

Mr McMILLAN: Did you in fact form any part of the diagnostic team for Mr Mellor?

Dr Cohen: No, I did not.

Mr McMILLAN: In the course of your long career researching, treating and providing expert evidence in relation to black lung disease, has it been common for you to give expert evidence about the degree of impairment that a worker might have as a result of their dust lung disease?

Dr Cohen: Yes, it is very common. I have frequently been an expert.

Mr McMILLAN: Has your involvement in the classification of a person's CWP in the B reader program ever precluded you from giving that evidence?

Dr Cohen: No, it has not. I would just note for the committee that I have read X-rays from Australia basically trying to be of assistance, given the fact that there were some difficulties in finding certified B readers, for the government and for the Vale corporation. The CFMEU has sent me X-rays. A number of the NMAs have referred cases to me. My colleagues put the X-ray up on my work list, I read it and I send it back regardless of who sent it. I am very, very careful—extremely careful—to make sure that I read these as completely objectively and independently; otherwise I will be of no use to anybody if anyone thought there was even a whiff of bias. That has been my practice.

Mr McMILLAN: I will just ask you formally to confirm that, prior to yesterday, had you ever met Stephen Mellor?

Dr Cohen: I had not.

Mr McMILLAN: Is there any basis at all upon which you believe, as an eminently qualified professional expert, that you would have been in a position of conflict to give expert evidence about his case?

Dr Cohen: I cannot imagine. I think this must stem from the fact that his images must have been some of the images that were submitted to me to review and I probably reviewed them and issued a report. But in no way is that any different than any other case that I have read and is not indicative of bias or any other such thing.

Mr McMILLAN: Dr Cohen, thank you very much for being willing to answer those questions. I think it is of most assistance to the committee.

Mr SPRINGBORG: Thank you very much, Dr Cohen. We appreciate the fact that you have had a long and arduous journey to get here. You only hit the ground yesterday and you have been very busy ever since. Thank you for returning to give some more evidence. I also note that Dr Cohen has been reading X-rays on behalf of the Queensland government because we could not read them ourselves.

CHAIR: Yes, on behalf of the Department of Natural Resources and Mines.

Mr SPRINGBORG: We could not actually read them competently ourselves in our own country. You are considered to be an unbiased international expert and renowned enough to be able to do that. When you are called upon to provide expert evidence, do you provide that remotely using teleconferencing facilities or the equivalent in the United States?

Dr Cohen: Often by telephone. In the United States the most common method for providing evidence is the issuing of a report. That usually involves summarising the evidence, reviewing my impression of the imaging and then coming to conclusions and issuing a report. Sometimes it is in the cases of miners that I have seen and examined. In other cases it is entirely based on their records that are sent to me. Then occasionally I am asked to be deposed, which is sworn testimony, and the attorneys from either side or both may be present or by telephone, and we have court reporters who record that testimony. I have never been asked to be actually in a hearing with a judge. It is all by telephone or by—

CHAIR: Telelink or videolink?

Dr Cohen: Yes or by video. I have done videoconferencing as well.

Mr SPRINGBORG: The last time I checked we actually had a telephone connection with the United States, because I rang you around lunchtime. So there you go. Maybe legal counsel would be able to possibly use a telephone. It might be helpful.

Dr Cohen: We have been very successful in teleparticipating in a lot of these committees and conferences by Skype and LinkedIn and other videoconferencing technologies which are very helpful.

CHAIR: Dr Cohen, this letter states that you have been 'inundated with requests for reports and it is our understanding that Dr Cohen's report will delay the proceedings'. That is not factual if they have not contacted you, is it?

Dr Cohen: No. What I usually do is I triage these reports based on when the deadlines are. I must admit that I do not do things much before the deadlines but I make the deadlines—maybe an hour before the deadline.

Mr COSTIGAN: You would make a good newsreader, Dr Cohen.

CHAIR: Dr Cohen, that part of the letter from the lawyer is factually incorrect from your evidence here today. Also, the letter states—

... there are qualified and experienced Australian experts available to provide the same evidence.

That is absolute rubbish. We know that is rubbish given the evidence that we have been receiving for the last few months. You know that is rubbish, Dr Cohen, because we only have had B readers in the last week, and the date of this letter is 9 February. Do you have any comment to make?

Dr Cohen: I think that in terms of being a certified B reader you are correct. There have been none. There are some physicians in Australia who have experience with mining populations and have experience in interpreting these images but none that are currently certified as NIOSH certified B readers. I think there has been a shortage of such positions.

CHAIR: Are there any other comments you would like to make, Dr Cohen, given the fact that this legal firm, Ashurst, has taken your name in vain? They have not contacted you. There are obviously lies in this document. Are there any other comments you would like to make?

Dr Cohen: It is disturbing to see that. Certainly I would be willing to discuss with them or anybody who wanted to use our group in consultation what our workload is and what their deadlines and needs are. It may be that we could fulfil it or we might not, but I think we should have the opportunity to respond.

I can make a quick comment about the simple versus complicated pneumoconiosis because that may be just a terminology issue. Simple pneumoconiosis does refer to any person that has pneumoconiosis with an opacity that is less than a centimetre in diameter. We call anyone with a centimetre diameter complicated as opposed to simple or the other term is progressive massive fibrosis. It is a very confusing nomenclature because I think that if I received a letter saying that I had a simple disease it would seem that somebody would be trying to mitigate it or make light of it. It may not be a term that we need to use in our letters. It is more of a medical term between doctors communicating. It is probably best just communicating the category—a 2/2 pneumoconiosis says the same thing. I can see where people might misinterpret that and be offended by that.

CHAIR: Are there any other questions?

Mr McMILLAN: For the purposes of the record, I should note that the Uniform Civil Procedure Rules in Queensland now require expert evidence to be given by video or telephone link. There is a legislative requirement for witnesses not to be flown to give evidence on an expert basis.

CHAIR: So another mistake in the letter from the lawyer.

Dr Cohen: Madam Chair, might I give one concluding comment? First, I want to thank the committee again for allowing me to come and share our experience and to learn from you and your mistakes as well as you learning from ours. I would also very strenuously offer our resources and our services—the group at the University of Illinois as well as our other colleagues at NIOSH and MSHA. In particular, my group that I work with will be happy to help out in any way going forward. I hope that this relationship continues because it has been very rewarding for us to work with the group here.

CHAIR: Thank you very much, Dr Cohen.

SMYTH, Mrs Kim, Private capacity

CHAIR: Kim, thank you very much for being here this afternoon. You wanted to address the committee. Could you tell us the capacity in which you appear today?

Mrs Smyth: I am here as a coalminer's daughter, coalminer's granddaughter, mother of children who work in the coalmines and wife to a husband who worked in the coalmines. I have four sisters, all of whom are married to coalminers, so we have a pretty vested stake in what is happening at the moment.

I want to bring one thing to your attention. One member of my family has just found out that they have early signs of simple pneumoconiosis. I do not really know the numbers or anything that is involved, so it is the very early stages yet for us, but he was told that he needs to go back to have a CT scan as soon as he can. So, of course, that was something that he needed to do straightaway. He has gone back to do that and was told that it would cost him \$500 to have that done which he is responsible for paying. He then spoke to the girl who was to perform that and she said that had he told her in the first instance that his first X-ray was done for black lung they would have done it with better quality. Because this needs more investigations, he has been asked to get a CT scan.

What we would like to know is, firstly, why should there be any different degree in an X-ray regardless of what you are going for? I am quite concerned about what that means for everybody not only those with black lung. I do not understand that. He said that he will put in a written submission about that to confirm what he was told on the day. I sit here listening to Dr Cohen mention the very small amount that he is charging to review and help Australia with this terrible disease and I am quite sickened to think that somebody who may need further investigations has to come up with \$500 themselves. I am concerned that this will become a major money-making exercise for the X-ray guys when they can charge \$500 for it to be re-reviewed.

CHAIR: Kim, we have had evidence before this committee that if they have a WorkCover claim it will cost them nothing.

Mr Watson: Correct.

CHAIR: That is correct. So who on earth is saying this? Evidence before this committee says that if they have a WorkCover claim it costs nothing, but there are miners who are being told that they have to come up with \$500 for a CT scan.

Mrs Smyth: That is right.

CHAIR: That would stop a lot of them from doing it.

Mrs Smyth: That is the concern that we all have, because there are going to be miners who do not work in the industry anymore who now have to find \$500 to do that. I know there are men who just will not do it. They will not be able to afford to do it in any timely process.

Mr CRAWFORD: Who told him that he had to pay \$500? Was it the X-ray clinic?

Mrs Smyth: Yes.

Mr CRAWFORD: Or was it the company?

Mrs Smyth: He is a contractor so that shows you that the contractors are left to fend for themselves. When he went to get that, he was told at the X-ray place that it is \$500. He left without the CT scan.

CHAIR: Of course he would.

Mrs Smyth: He is not working at the mines at the moment. He left. He said that he needs to consider when he can afford to pay for that.

Mr SPRINGBORG: Thank you very much, Kim, for coming before us and providing your information today. I think I heard you say that this gentleman is prepared to put something formally to our committee.

Mrs Smyth: Yes, he is.

Mr SPRINGBORG: I want to clarify my understanding. He was told by the radiographer that if he had said he was having the chest X-ray for suspected black lung or as part of the black lung screening process they would have done it better.

Mrs Smyth: That is correct. I am not exactly sure of the words she used but from my understanding if she knew it was for black lung, I do not know whether that meant a better quality X-ray or better contrast, but that is what he was told. He is a well-educated man so he will no doubt be able to explain it a lot better than what I have today second-hand.

Mr SPRINGBORG: The whole thing, as I understand it, is about checking that there are not any abnormalities on the lungs principally related to dust exposure in the coal industry, and that could cover a whole gamut of things, black lung being one of them. It is the major thing we are chasing to start with. I find that extraordinary.

CHAIR: So do I.

Mr SPRINGBORG: There are two or three standards of X-ray.

Mrs Smyth: That is what we could not understand.

CHAIR: Can you please ask him to get his submission into us as soon as possible?

Mrs Smyth: Yes. I think he has started it.

CHAIR: Thank you very much.

VERRALL, Mr Percy, Private capacity

CHAIR: Percy, thank you very much for being here this afternoon. You have given evidence before the committee in Ipswich and we thank you very much for that. Percy, we just want to know what has happened since then, which was last year. Could you tell us what has happened in relation to your pneumoconiosis and the effect on your family?

Mr Verrall: For a start, my wife had a nervous breakdown because of my health. The first time I started bleeding was about eight o'clock in the morning and my wife said, 'You're gurgling.' I said, 'Yeah, I can feel it in my chest.'

CHAIR: Bleeding in your lung?

Mr Verrall: My lung was bleeding. I got up, walked through the doorway, turned in the toilet, opened my mouth up and blood just went everywhere. They rushed me to Ipswich Hospital. At four o'clock that afternoon it all started again. I had about five sick bags with about two inches of blood in each one. They kept me in hospital for a week or so. The second time was a few months later. The same thing happened again. They rushed me to hospital and they rushed me straight through to the Mater in Brisbane. I was there for 16 days sucking out all the blood. They found a lump the size of a golf ball in congealed blood. I went down on Thursday. They tried getting that out on Friday morning. They could not do it because I started bleeding. So they let me rest for a few days and took me back in on Wednesday the following week to get it out. They took me in, put me out and all I felt was being rolled over. The next minute I woke up in intensive care because my lung had just had it. The lung surgeon came in a little while later when I was feeling a bit better and said that if I start bleeding again now they have to go in for emergency surgery and take the lung. That is how bad it is inside. They reckon it is really torn up.

I am suffering now with pains in my chest all the time and pressure because the lymph gland here is fighting to support the lung. That is what they said and I have got to put up with it and I can't. I can't do a thing at home. I get exhausted. Even the steps at the front of the building this morning, I was exhausted just walking up them. That is how bad I am with it. I feel sorry for this poor man here who is going to lose his house over it. I know how he is feeling. I would talk to any miners and tell them how I felt and what happened to me and tell them to make up their own minds what they want to do. It has to be fixed for the younger generation coming in. If it does not get fixed for them, they are going to suffer with the same type of thing.

CHAIR: Percy, your wife has been caring for you.

Mr Verrall: Yes.

CHAIR: And now she is very ill.

Mr Verrall: She is seeing a psychiatrist now. That is how bad she has got from it. She has to go back to the psychiatrist next week or the week after. She is breaking down every day. I have to take her for a drive because she cannot stand sitting around in that home.

CHAIR: Percy, who is now caring for both of you?

Mr Verrall: She is.

CHAIR: Who is?

Mr Verrall: She is looking after me and I am doing the best I can to look after her.

CHAIR: So you are struggling to look after each other?

Mr Verrall: I have got to have her with me when I go for a shower because I stop breathing. I have to have a puffer. I carry one with me to help me breathe.

CHAIR: So you look after each other but no-one is caring for both of you.

Mr Verrall: No-one is caring for both of us. My son will come if I need him, but otherwise we have no-one.

CHAIR: For the record, Percy, how old are you now?

Mr Verrall: I am 74. I turned 74 on 6 March.

CHAIR: And you have applied for workers comp?

Mr Verrall: I have left that up to the solicitors to see what is going on. We have put in a claim.

CHAIR: Will workers comp pay for caring for Percy and his wife?

Mr Verrall: I do not know what WorkCover has said to the solicitor.

CHAIR: So what are you supposed to do?

Mr Verrall: Put up with what I can.

CHAIR: That is not good enough, Percy.

Mr Verrall: I am just living on the age pension and the wife gets a carer's pension to help out.

Mr McMILLAN: Mr Verrall, I have only one question. You heard Dr Cohen's evidence earlier today about pulmonary rehabilitation and what a significant impact that can have on your quality of life.

Mr Verrall: When the hospital lined me up for that to go and do exercises, it went for six weeks. After the end of six weeks they said goodbye.

Mr McMILLAN: So you did that pulmonary rehab?

Mr Verrall: I did some exercises to try to build up my strength and the muscles around my chest, but it hasn't helped me at all.

Mr McMILLAN: Thank you.

CHAIR: Percy, is there anything else you would like to say to our committee?

Mr Verrall: I would like to see the committee get stuck into these companies—

CHAIR: We are.

Mr Verrall:—and push them to make better conditions for the miners—all the miners who are working there now and all the new ones who are coming in. If I had my way, they would be shut down for a while until they fixed it up properly.

CHAIR: Percy, a little while ago, we had one of the biggest ones, BMA, who refused to come before this committee except by summons, so you can imagine our opinion of their—

Mr Verrall: Well, BHP is no better.

CHAIR: No, but you can imagine the committee's view in relation to having to summons the biggest coal producer in Australia.

Mr Verrall: They think they can get away with everything. They cannot. They have to look after their members because their members are the ones who are making the money for them. They have to look after them and say, 'If you're sick, we have to get you better.'

CHAIR: Percy, can you pass on to your wife the thanks of our committee for looking after you. Can you also pass on to her that we hope she gets better soon.

Mr Verrall: I am hoping so too. Thanks very much for having me talk to you.

CHAIR: Give her a hug from us. Thank you, Percy. Ladies and gentlemen, that concludes our hearing this afternoon. I thank Dr Cohen, Steve Mellor, Kim Smyth and Percy Verrall for your evidence here today. We value your input. We will not let you down. We are a bipartisan committee. We will make sure to the best extent possible as a committee of this parliament that you are case managed, even if we have to do that ourselves as a committee. The record of what you said today will be in the *Hansard* and that will be available on the parliamentary webpage. Once that becomes available, the committee secretariat will provide all witnesses with a copy of the draft transcript for you to make any corrections if necessary.

Can I say to WorkCover and any other self-insured WorkCover operators that we will be following everything you do very closely from this point on—not to say that we have not in the past. We will not tolerate any coalminers getting these letters that have upset them and their families. It is not on. It is not to happen anymore. We will be following this at our future hearings. I now declare this meeting closed.

Committee adjourned at 3.47 pm