

**THE HISTORIC DEVELOPMENT OF WORKER'S COMPENSATION  
WITH EMPHASIS ON ITS MOST RECENT MANIFESTATION  
IN COAL WORKER'S PNEUMOCONIOSIS LEGISLATION**

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Compensation law has paralleled the growth of civilization, and provides an excellent window into humanity's evolutionary growth in understanding of appropriate ways to deal with violence and injury inherent in life. When violent death or maiming occurred in primitive societies vengeance or "justice" was sought by the friends and family of the injured person. It was left to their judgment, or capacity to inflict, retribution on the offender. The end result was often an endless cycle of clan based violence that proved to be ruinous to the peoples and cultures involved.

Societies everywhere tried to control or to limit such retributive violence, and to reserve the right to authorize or to inflict such "justice" to some governing individual or body removed from the aggrieved clan. The Cherokee, the major tribe of the Southeastern United States, provide an excellent example. The tribal council, which was an elected body, upon consideration, could chose to award a legalized assassination to the family or friends of an injured person.<sup>(1)</sup>

About 1700 BC the Mesopotamian society governed by King Hammurabi left one of the first written legal codes addressing the issue of judicially limited 'compensation' for an injury to an individual. The right to make this retribution was removed from the aggrieved citizens, and was reserved to a government official. It was also limited to an equivalent injury, hence the "eye for an eye, and a tooth for a tooth" principle.<sup>(2)</sup> This principle was carried over to the "Law of Moses", as found in the Bible. This legal doctrine was the historic basis for the codes of many of the peoples of Europe and elsewhere.

This was a doubtless improvement in the more basic doctrine of undefined and unlimited retribution randomly implemented by the people themselves. It was much less disruptive to society.

However, the various Germanic tribes, such as the Franks, Anglo-Saxons, and the Danes found that even this restraint caused societal problems. For example, if one murdered man left one family without a provider, then execution of his offender left the tribe with two families that others had to provide for. The first evolutionary step in the law was that the offender could buy his way out of execution by financially supporting his victim's family. It proved to be a short philosophical step to formalize the amount of money involved to a one time lump payment of a legally specified sum. This sum of money became known as the "man money", or "weregild".

The first Germanic tribes to invade England were the Anglo-Saxons. The Danes occupied northeastern England years later. Both had versions of weregild in their cultures. After years of fighting, the Danes and Anglo-Saxons signed a peace treaty with each other. Since the Danish version of the weregild law was more highly developed, and more democratic, its version was adopted. Thus it is said that the principle of compensating injury with a legally specified sum of money came from the "Dane Law" of England. It is deeply imbedded in English Common law, which is the basis for American Law.<sup>(3)</sup>

The growth in the abstract understanding of financial responsibility for physical injury to a person grew from premeditated violence, to accidental violence, to unintentional industrial injury. In 2050 BC the law of Samaria contained a payment scale for specific injuries to a worker's body parts. It was a 'no fault' system. Similarly civilizations as diverse as the Mediterranean and Chinese had comparable legal systems.<sup>(4)</sup>

All modern American compensation law is based on these historic developments.

In the early 19<sup>th</sup> Century in England various illnesses previously thought to have been purely 'medical' were found to be associated with specific occupations. Phthisisologists (an old term for doctors specializing in pulmonary tuberculosis). "It can be further understood, that such occupations as those of needle-pointer, dry grinder, stone-mason, miner, collier, feather-dresser, cotton-manufacturer, etc. may act, at least, as exciting agencies, and probably lay the foundation for phthisis ...". "Dr. Favell exhibited before the Sheffield Medical Society on October 19, 1843, a portion of the superior lobe of the left lung of a razor-grinder, who had died from pneumonia of the right." .... "Also a portion of a lung from a table-knife grinder .... and portions of the lungs of a pen-blade grinder .... and a drawing off the section of the lung of a fork-grinder." A nontubercular affliction was commonly called "grinder's asthma". Dr. G. Calvert Howard of Sheffield maintained that phthisis and grinder's asthma were one and the same disease. "Dr. John Home has given the case of a stone mason, who died of phthisis, and in the centre of many of the tubercles was found an earthy nucleus, which turned out to be of precisely the same character as the stone of the Craighleith quarry, where he had been working." "In workers in

the coal mines, the texture of the lungs has been completely blackened by coal dust, so as to constitute anthracosis. In the case of the steel-workers at Sheffield, we are told by Mr. McKnight, that the fork-grinders, who grind dry, so that the particles are readily received into the air, do not reach the age of thirty-two; whilst the knife-grinders, who work on wet stones, generally live to forty or fifty." A "Dr. Guy" observed that the ratio of phthisis among indoor workers was higher than those working out of doors.<sup>(5)</sup> Several principles were thus identified which a century and a half later were to be the foundation of the coalworker's pneumoconiosis legislation in the United States. Tuberculosis was, of course, caused by an infection with a bacterium that had not yet been discovered. The pulmonary diseases these physicians were describing were caused by industrial exposure to the silica in the sand stone grinding wheels used in finishing the metal tools described, and not by the metal particles produced, by cotton fiber (byssinosis), and to allergy to feathers. People who were unfortunate enough to have these industrial diseases were less able to deal with a tubercular infection than others. Interestingly, these primitive observations also identified preventative measures that were to be written into the 'Black Lung' law. These were applying water to suppress dust, and ventilation to disperse it. In the midtwentieth century the combination of lung disease caused by silica inhalation and by tubercular infection was called 'silicotuberculosis'.

Meanwhile, the industrial revolution was booming in Great Britain, the United States, and in Prussia. Industrial accidents were becoming wholesale social, economic, and political problems. Prussia was engaged in a series of empire building wars that were based on its industrial production. The stresses of these wars; and industrial injuries, illnesses, poverty, and environmental degradations threatened the support of the citizenry. In a masterful stroke Prussian Chancellor Otto von Bismarck solidified the Prussian's support by implementing in 1871 & 1884 the first Social Security system, and the first modern Worker's Compensation Insurance.

Before this legally the compensation process was an adversarial one. If a worker sought compensation for a work related injury he had to sue his employer. Philosophically the issue was a complex one. Take a theoretical case of an employee who had developed an inguinal hernia while working on the job. Was the hernia caused by a congenital weakness in the employee's inguinal canal (an act of God), or by his having attempted to lift too much weight, or by his employer having required him to lift an unreasonable weight? Other employees might have lifted the same weight without getting a hernia. The issue had no answer. Society had a vested interest in getting the injured employee back into productive employment, as did both the employer and the employee. The issue seemed to be inherent in life. Who should pay for its repair? The 'no fault' concept of the Sumerians resurfaced. Litigation in court would be avoided, the employee returned to gainful employment, and the employer relieved of a significant financial burden if the government required that the employer set up an insurance program to cover such injuries. The cost of the insurance would be passed on to the customer of the product being manufactured. Society would pay for the cost of the injury. It seemed not only just,

but functional. After all, society was the benefactor of the product, and the costs would be spread around so that they would not constitute an undue burden on anyone. It seems to be so simple and obvious today, but it was a major conceptual leap for most of the world. Wisconsin passed the first Worker's Compensation Law in the USA in 1911, and Mississippi became the last state to do so in 1948. However, these simple legal arrangements supported Prussia through its consolidation of modern Germany, and three major wars in the next one hundred years.<sup>(4, 6)</sup>

A major academic fight went on for years in the mid twentieth century over the potential roles that silica (sand), anthracite (hard coal), and bituminous coal (soft coal) played in the etiology of lung disease. The 1930 edition of Cecil's Textbook of Medicine stated that "Organic dust is not nearly so harmful as mineral dust, indeed, it is doubtful whether pulmonary fibrosis is ever produced by it alone".<sup>(7)</sup> The 1963 edition of the same text states "Until comparatively recently it was thought that coal dust was innocuous, but it is now clear that coal of all grades can produce a type of pneumoconiosis which differs from classic silicosis. .... It has been suggested that this fibrotic change is linked with the silica content of the coal dust, but the available evidence makes this unlikely. It is thought by others that massive fibrosis is a manifestation of chronic tuberculosis infection."<sup>(8)</sup>

At this point in time my career becomes the focal point of the story. In 1967 I joined the United States Public Health Service as a commissioned officer in its tuberculosis program. I was sent for training at the National Center for Disease Control in Atlanta, and then to its affiliate program at the Battey Tuberculosis Sanitarium in Rome, Georgia. Then I was loaned out to the State of Illinois Tuberculosis Control Division. My main location was the Mount Vernon Tuberculosis Sanitarium, where I had both in and out patient responsibilities. I practiced medical tuberculosis care, and assisted the thoracic surgeon in his surgeries, including thoracotomies and bronchoscopies. In addition I ran four out patient tuberculosis clinics in Southern Illinois in the coal mining region of the state. The local industries also included silica quarrying and fluorspar (which occurs as intrusions in quartz, a form of silica). The region is a hotbed for atypical mycobacteriosis (animal, such as bird, tuberculosis that also infects humans, especially those with mineral pneumoconiosis) and histoplasmosis. This last disease is a fungus infection of the lungs that is related to bird droppings, and looks on chest x-ray just like tuberculosis. The USPHS was desperately trying to be able to tell the differences in these diseases. The major reason that I was sent there was to run the quality control program on the hypospray skin testing program that the State of Illinois was running in an attempt to facilitate this process.<sup>(9)</sup>

While I was stationed at the Mount Vernon TB San, I was asked to start a Respiratory Therapy Department there, and I did so. My last assignment before I left in 1969 was to reread hundreds of ancient x-rays of coal and silica miners who had horrible silicotuberculosis, and to apply the new system of interpreting such films.

While I was there the country was at war with itself over proposed legislation to compensate miners with what was then called anthracosis. This name was derived from anthracite, or hard coal. It was believed by the majority of physicians that the hard edges of anthracite mechanically cut the inside of lungs and caused scarring. Soft coal was adamantly believed to not be a problem. I have been to professional meetings where physicians got up and shouted at each other over this issue. The United Mine Workers' Union was engaged in a no holds barred political fight in Congress over the issue. It passed in 1969.

I had always intended to become a country doctor like my grandfather. But in leaving Mt. Vernon I was offered the job of my boss, who was retiring, as head of TB control in Illinois. It included responsibility for one of the largest sanitariums in the country, the one in Chicago. The United Mine Workers had built a Health Maintenance system in the eastern American coalfields, which included the Miner's Memorial Hospital chain, and clinics staffed by multispecialty physician groups. The Appalachian Regional Commission desired to build a new hospital in Big Stone Gap, which was three miles from where I grew up. That just happened to be the home of the largest independent coal company in the world – the Stonega Coke and Coal Company, later renamed the Westmoreland Company. The miner's union, through their Health and Welfare Fund, and they through their medical group, the Dickenson-Wise Medical Group, offered me the job of opening a clinic for them in Big Stone Gap, with intent to get the hospital opened. They offered one third more salary than the national going rate for a General Practitioner. The federal grant for the hospital would not have been given had I not come. I came the first of August 1969 and worked at the hospital in Wise (the Miner's Memorial Hospital there had been reorganized as the Appalachia Regional Hospital), and worked there until we got Lonesome Pine Hospital in Big Stone Gap opened July 1, 1973. I was asked to found a Respiratory Therapy Department at Wise ARH, and I did so. When Lonesome Pine Hospital opened, I started my third hospital Respiratory Therapy Department there. A ward clerk in the Emergency Room asked to be trained to work in this department, and we took her in. Her name was Joy Fleenor. She worked with me in this capacity for a couple of decades. Her name will come up again.

It soon became obvious why the Miner's Union had wanted me so badly. The UMWA Funds sent me to the first National Conference on Medicine and the Federal Coal Mine Health and Safety Act of 1969 held in Washington DC at the Willard Hotel June 15-18, 1970. It was federally funded, and presented by the University of Southern California and by Howard University. It was the professional launching party for the newly passed Coal Worker's Pneumoconiosis Act. The clinical standards in the law had been politically set by the lawyers and politicians, as the doctors could not agree on those issues. The government had a hard selling job on its hands, as many of the doctors felt that the politicians and lawyers were telling them how to practice medicine.

There were significant differences in this newest of the Worker's Compensation programs and the original ones. Short of actual biopsy of the lung,

doctors did not agree on the diagnostic standards for Coal Worker's Pneumoconiosis. It was difficult to differentiate from smoker's lung, allergic bronchitis, and a genetic defect that predisposed one to chronic obstructive lung disease, atypical mycobacteriosis, silicosis, and histoplasmosis. The law anticipated this problem, and had built into it a presumption of a miner's lung disease being coal worker's pneumoconiosis if he had worked in the mines for twenty years. An entire adversarial industry of doctors and lawyers built up around those patients with less than twenty years employment history. The reading of chest x-rays for 'anthracosis' proved to be extraordinarily subjective, and a matter of opinion among the readers. The number of readers who were paid attention to was reduced to a select few, who were divided into those who could see it and those who could not. These differences in the pneumoconiosis compensation legislation and the standard compensation acts had the practical effects of greatly increasing the costs of the process, and of slowing it down to the point it became dysfunctional. Another functional reality was that the financial risks inherent in being responsible for payment of the awards was so great that there were no insurance companies willing to sell policies to the companies to cover them. Therefore, the financial awards were self insured by the coal companies themselves. The companies fought vigorously against most of the claims because the continued existence of the companies was at risk. The union, the companies, and the employees all had a tiger by the tail. All were holding on for their very continued existence. The law, therefore, underwent a number of revisions, none of which resolved the issues.

On my return from the Pneumoconiosis Conference it was announced that the government was going to fund a Coal Workers' Pneumoconiosis clinic at the Wise ARH. It was to be the only one in Virginia. The medical staff of that hospital voted against it, and I persuaded the Board of Directors of Lonesome Pine Hospital, of which I was a member of the Executive Board, as well as Chief of the Medical Staff, to vote for it. I also was Medical Director of the Big Stone Gap Clinic, which was part of the Dickenson-Wise Medical Group, which was the largest multispeciality medical group in Virginia. As the largest independent coal company in the world was centered in the Big Stone Gap / Appalachia area, and as its Union was the major force behind the legislation and the Pneumoconiosis Clinic, there was no problem in getting the proposed clinic moved from Wise to Lonesome Pine. I received a stipend from the Union Health and Welfare and Retirement Fund for my management responsibilities at the Big Stone Clinic. It was understood that part of my responsibilities included shepherding this clinic into being.

A separate Board of Directors for the Pneumoconiosis Clinic at Lonesome Pine Hospital was set up. Its membership had a number of hospital board members on it, and several extra Union representatives. Dr. Michael Ford, George Sutherland, and I were the only physicians on that board. The agreement with the government regulating the clinic required that it hire a board certified pulmonologist, who would run the clinic on salary. The doctors mentioned above were designated as a search committee to hire this individual. I was that committee's chairman. As physician

recruitment was a part of my responsibilities as Medical Director of the Big Stone Gap Clinic, this job fit right into my portfolio.

The committee interviewed three applicants for the position. They were all trainees from New York City inner city ghetto hospitals. The only one whose English we could understand was Dr. S. K. Paranthaman, whom we hired. We set him up in an office in Appalachia.

The Federal Government continued to refer to the illness over which we were laboring as “anthracosis”. This really bothered me, as it flew in the face of what we were trying to do, which was to compensate, treat, and prevent a disease that was caused by bituminous coal, and not anthracite. Gilda Henry Sturgill was the medical librarian at Lonesome Pine Hospital, and in that capacity was also secretary of the Pneumoconiosis Board. It was she that did most of the telephoning and letter communications with the Federal employees who were administering our program. I dictated a letter to these folks, and Gilda typed it, and may have done some under the table politicking. I proposed that we all agree to stop using the term ‘anthracosis’ and to start using the term ‘black lung’, which was already in common lay usage. The feds happily accepted, and the official term “Black Lung” and “Black Lung Clinic” was born.

Either the Federal program administrators, or the UMWA authorities pushed on the Commonwealth of Virginia’s Community College system to open a training program at Mountain Empire Community College for Respiratory Therapy technicians. Ben Wheless, the MECC administrator responsible for program development, and I as Medical Director, established this program. I remained its Medical Director until my retirement in 2011. The college was kind enough to give me an honorary certificate when I retired for this endeavor. Dr. Joe Smiddy, a pulmonologist with roots in Lee and Wise Counties, provided professional depth to the program.

At this point the Bituminous Coal Operator’s Association began a tremendous push back on the Black Lung legislation. The temporary result was a slow down of cases processed by Dr. Paranthaman’s clinic, and of decreased participation in attendance at the Black Lung Board meetings. There were several results from this political fight. The most important was that the program was saved from extinction. The opinions of the primary care physicians who actually cared for these patients, was given higher consideration than that of the hired gun specialists who fed on the industry, and very importantly a new position of ombudsman was created. Everyone on all sides of the program were thoroughly disgusted with the slowness of the system, and of the cost to the poor miner of hiring professional legal representation to shepherd the applications through the nightmarish labyrinth involved.<sup>(12)</sup>

The Federal administrators of Lonesome Pine’s Black Lung Clinic told the Black Lung Board that they wanted us to hire an ombudsman. I personally spoke at

a board meeting and explained the situation to them, and advocated that they do so. The administration of Westmoreland Coal Company by this point had gained control of the hospital board. They also were heavily involved in the Bituminous Coal Operators' Association's counterattack on the Black Lung legislation. No one said a word concerning the hiring of an ombudsman for Lonesome Pine Hospital's Black Lung Clinic, and my motion died for lack of a second.

At this point in my career I took inventory of myself, and realized that my heart had always been in practicing bedside medicine, and not in administration. I obtained the first certification as a member of the Specialty Board of Family Practice in Wise County, and dedicated my efforts to taking care of the sick miners and their families, many of whom I had grown up with. Dr. Joe Frank Smiddy, a close personal friend, and who had also attended both the undergraduate school and medical school at U. Va. with me, and who had grown up in Jonesville, Big Stone Gap, and in Wise had become a pulmonologist in Kingsport. His grandfather had been a coal miner. He dedicated himself to serving this population. As he likes to say, "he backed me up" at both MECC and in his specialty office he maintained in the Big Stone Gap Clinic building, which I had gotten others to build. The practical way that the Black Lung program functioned was that most of the patients used me as their primary care physician, and Dr. Smiddy as their pulmonologist. Dr. Paranthaman's practice withered. I was not surprised when Lonesome Pine's Black Lung grant came up for renewal, the Federal authorities declined to do so, stating clearly that our failure to hire an ombudsman was the reason.

The telling of all this history was compressed. It actually took a while to unfold. In 1976 Dr. Art Vanzee opened his practice of General Internal Medicine in St. Charles, Virginia, presenting itself to the public as the Stone Mountain Health Services. He and his practice justifiably thrived. He was cooperative with the Black Lung authorities when they approached him about assuming responsibility for the Black Lung Clinic of Lonesome Pine Hospital. He accepted the stipulation that the moved program hire an ombudsman. In 1991 Stone Mountain Health Services opened its Respiratory Care program. They were most fortunate in the hiring of two of their key employees. Mr. Ron Carson, who had worked for Westmoreland Coal Company for about eight months in 1971 - 72, was chosen as ombudsman. He was kind enough to come to talk with me at the beginning. I encouraged him, and through the years referred him many of my patients. He did great work. The other employee was Joy Fleenor, whom I have mentioned above. My respiratory care department at Lonesome Pine Hospital had trained her through a couple of decades of intense clinical experience. She was dearly beloved by our patients. Joy was raised in the St. Charles area, and when black lung patients saw her smiling face in St. Charles they knew that they would be in good hands.<sup>(10, 11)</sup>

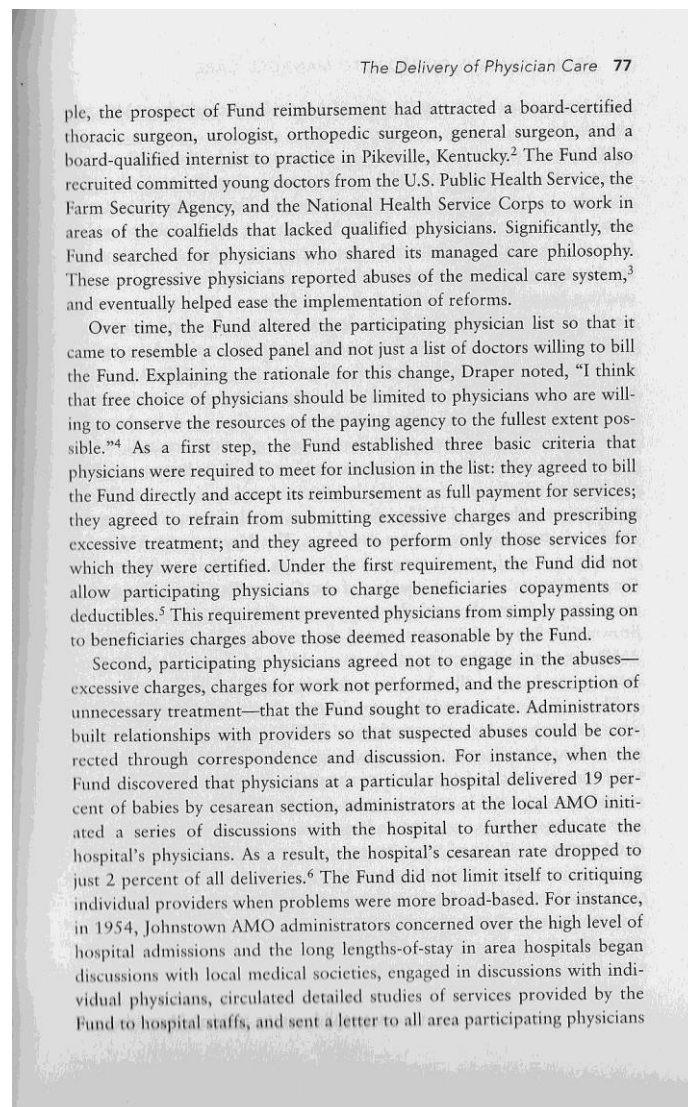
The most recent evolutionary change in the practical application of compensation law has been little noticed, but in fact represents a seismic change in legal compensation philosophy. When both the retirement funds for the coal miners, and the funds in the account to pay black lung benefits fell short of money,



the Federal Government called upon the taxpayer to make up the shortfall. The fruits of this policy change are yet to be seen, but likely will prove to be significant.

## ATTACHMENTS

1 – Years after these events had occurred, Patti and Sam Church presented me with a copy of the book From Company Doctors to Managed Care, the United Mine Workers' Noble Experiment, which documents their Miners' Memorial Hospitals, and their Health Management Care system, of which I was both a low level manager, and a clinician. Sam and I had worked together on many difficult issues, including the Black Lung Clinic program at Lonesome Pine. Sam had been President of the national United Coal Miners of America. On page 77 the book documents their pride in having recruited me. It mentions "physicians from the USPHS". I was the only one.



2 - This is a copy of my telegraphed orders to go by the State of Illinois TB Control offices in the State Capital in Springfield after I had left my federal regional USPHS offices in Chicago on my duty station at Mount Vernon, Illinois.

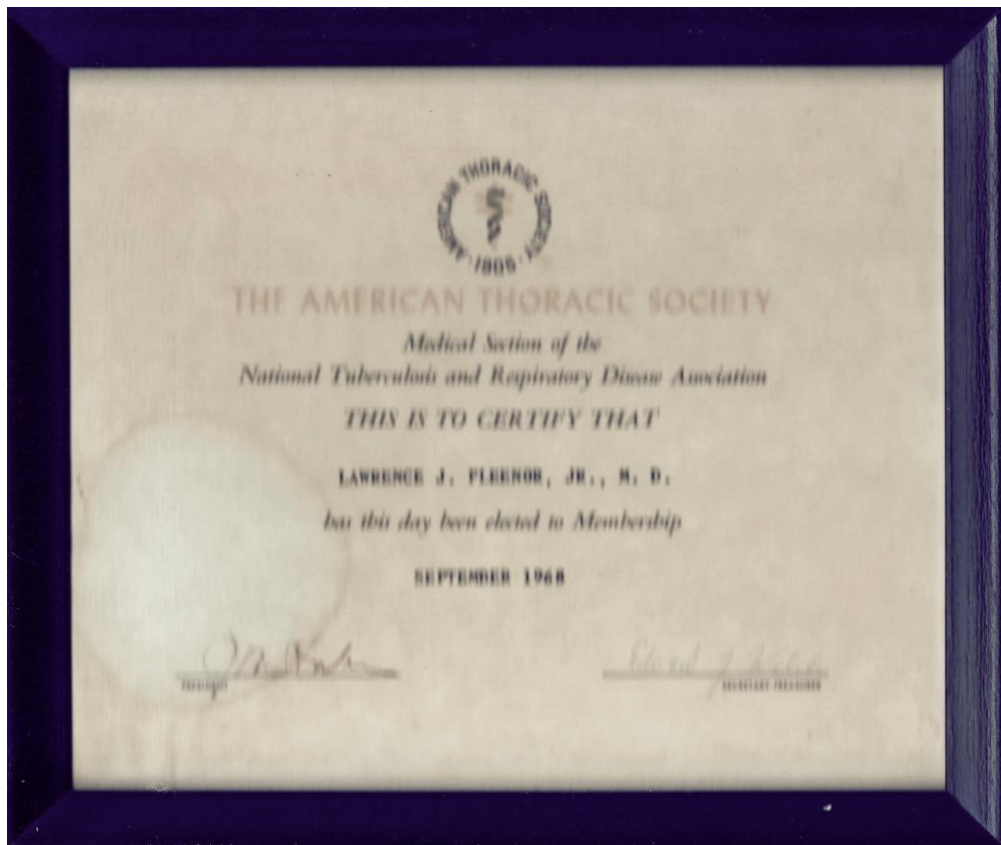
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	LAWRENCE J FLEENOR JR (A SURG (R)	
	477 D ST SLC	TLX
WESTERN UNION TELEX SERVICE	PERSONNEL ORDER 56/67 IS AMENDED AND YOU ARE AUTHORIZED ADDITIONAL TEMPORARY DUTY ENROUTE STATE HEALTH DEPARTMENT, SPRINGFIELD, ILLINOIS FOLLOWING TEMPORARY DUTY IN CHICAGO, ILLINOIS. PERSONNEL ORDER 128 DATED 6-20-67 CONFIRMING OFFICIAL ORDERS WILL BE SENT TO DUTY STATION	
	J M DEES JR OFFICE OF PERSONNEL PUBLIC HEALTH SERVICE	
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1967 JUN 20 PM 2 48  
TELTEX-THIS MESSAGE  
RECEIVED DIRECT FROM  
SENDER VIA W.U. TELEX

3 – This is a copy of my well worn out billfold card certifying my association with the State of Illinois Public Health Department, division of TB Control



4. This is my certificate as a member of the American Thoracic Society.



5 - This is the title page of the book containing the records of the first Federal Pneumoconiosis Conference, to which the Funds of the UMWA sent me.

**PAPERS AND PROCEEDINGS**  
**of the**  
**NATIONAL CONFERENCE ON MEDICINE**  
**AND THE**  
**FEDERAL COAL MINE**  
**HEALTH AND SAFETY ACT OF 1969**

**Public Law 91-173**

**JUNE 15-18, 1970**  
**WASHINGTON, D. C.**

*Conducted by*  
**DIVISION OF ENVIRONMENTAL HEALTH SCIENCES**  
**SCHOOL OF PUBLIC HEALTH, UNIVERSITY OF CALIFORNIA, BERKELEY**  
**AND**  
**DEPARTMENT OF COMMUNITY HEALTH PRACTICE**  
**HOWARD UNIVERSITY COLLEGE OF MEDICINE**

6 - This is a copy of page 58 that documents my participation in the conference mentioned above.

GRADIE R. ROWNTREE, M.D.: Are the coal miners required to take the chest x-ray examination?

LORIN E. KERR, M.D.: No, it is voluntary, except for the new miners. For the new miners it is not voluntary.

→ LAWRENCE J. FLEENOR, JR., M.D.: If a coal miner is injured in his occupation, and loses a toe or a hand or a foot, he is presumed to be partially disabled, and is compensated partially for this. Why is this pulmonary disability considered differently? Why is he either completely disabled or not at all?

EUGENE MITTELMAN: Congress did not want to establish a complete compensation program and it also had a desire to limit to the extent possible the amount of money which this program was going to pay out of the Federal treasury. Those of you who may have followed the congressional debate on this bill, may remember that toward the end the administration was threatening to veto the bill because of the estimated cost of operation. We still don't know how much money this bill will in fact take out of the federal treasury. The original estimate of 80,000 claims at a total cost of some \$200 million during the first year, gradually scaling down after that, is still the official estimate of HEW. They have not yet had enough experience processing claims to make any further modification of that estimate. The main answer to your question was the cost. Congress wanted to take care of the most needy cases. They did not want to expand the program to completely wipe out the last vestige of state workmen's compensation.

WARFIELD GARSON, M.D.: What provisions have been made to protect the confidentiality of medical information and in particular that which may be related to the x-ray? We can protect people into trouble. I recall that in 1945, when the U. S. Public Health Service initiated the first tuberculosis control effort in this country, they made a decision on how they were going to handle x-ray evidence of suspicious heart disease, possible cancer and other things adduced with the film. Under the provisions of the new law what arrangements have been made to assure the reporting of other problems that may not be known to the miner or his physician.

MARCUS M. KEY, M.D.: The evidence of pathology not relating to pneumoconiosis, and here I am thinking of enlarged heart, suspected cancer, suspected tuberculosis, will be reported in most cases by the initial reader of the x-ray film. This is the radiologist, the chest physi-





THE AUTHOR RECEIVING  
THE VIRGINIA SENIOR  
SERVICE AWARD FROM  
VIRGINIA'S GOVERNOR  
RALPH NORTHAM

2019



DR. JOE FRANK SMIDDY  
ATTENDING THE DEDICATION OF THE  
DUFF MANSION HOUSE  
IN WALLEN'S CREEK VALLEY, VA.

HE WAS PROUDLY WEARING THE BELT  
OF HIS FATHER, DR. "POPPA" JOE SMIDDY  
AT THIS FAMILY REUNION

2019

OUR FATHERS WERE FRIENDS,  
WE WERE FRIENDS AND SCHOOL MATES  
FROM COLLEGE THROUGH MEDICAL  
SCHOOL, AND COLLEAGUES  
IN THE CARE OF BLACK LUNG PATIENTS

## Bibliography

- 1 – Ehle, John – Trail of Tears pg. 53
- 2 – Code of Hammurabi - [https://en.wikipedia.org/wiki/Code\\_of\\_Hammurabi](https://en.wikipedia.org/wiki/Code_of_Hammurabi)
- 3 – Weregild - <https://en.wikipedia.org/wiki/Weregild>
- 4 – Guyton, Gregory – A Brief History of Worker's Compensation as referenced  
<https://www.insureon.com/blog/post/2014/05/06/history-of-workers-comp.aspx>
- 5 - Dunglison, Robley, MD., The Practice of Medicine, Treatise on Special Pathology and Therapeutics vol. 1, Third Edition 1848; pgs. 396-398 (first edition 1842) –  
Dunglison was founder of the University of Virginia School of Medicine, and at the  
time he wrote this text he was a professor at Jefferson Medical College in  
Philadelphia
- 6 – Bismarck - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1888620/>
- 7 – Cecil, Russell L. – A Text-Book of Medicine 1930 – pg. 867
- 8 – Cecil – Loeb – Textbook of Medicine 1963 – page 558
- 9 – hypospray gun - [https://en.wikipedia.org/wiki/Jet\\_injector](https://en.wikipedia.org/wiki/Jet_injector)
- 10 – Stone Mountain Health Services  
<https://www.stonemountainhealthservices.org/program-history.html>
- 11 - [http://www.thecoalfieldprogress.com/coalfield\\_progress/news/lewis-award-honors-black-lung-program/article\\_3c4039ed-7f66-5e32-8af4-d21187dfc7ed.html](http://www.thecoalfieldprogress.com/coalfield_progress/news/lewis-award-honors-black-lung-program/article_3c4039ed-7f66-5e32-8af4-d21187dfc7ed.html)
- 12 – “The Black Lung Benefits Reform Act of 1977”  
<https://www.hrsa.gov/get-health-care/conditions/black-lung/index.html>