

## Prevalence rates for black lung epidemic likely underestimated for coal miners in Appalachia

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Epidemiologists have recently declared coal workers' pneumoconiosis, more commonly known as "black lung disease", an epidemic in the economically underserved areas of "coal country" which include regions in eastern Kentucky, southwestern Virginia and southern West Virginia (USA) (1). In the 1970s, 35% of miners with 25 or more years of work experience were believed to have black lung disease. These estimates dropped considerably in the 1990s to only 5% of miners with comparable work experience. Since 2017, however, estimates have risen to 12% (2).

As someone who comes from a long line of coal miners and has spent the greater part of my life residing in poverty-stricken coal mining communities in Virginia and Kentucky I would like to include some additional dialog to this important discussion. My comments are informed by a combination of research literature on the sociology of Appalachia, and my personal observations from countless interactions with coal miners in non-medical settings.

In coal mining communities there are persistent rumors that most miners have black lung but very few cases will result in compensation benefits for miners. It is very common for miners to be informed by local physicians that they have the classic symptoms of black lung disease and should seek the medical opinion of a specialist (e.g., radiologist, pulmonologist). Miners that subject themselves to testing often are

found to have black lung by a certified B-reader (a federally certified expert eligible to read black lung radiographs) and subsequently file for compensation benefits. Historically speaking, many, if not most, miners find themselves in the familiar position of "he said, she said", as one expert physician confirms the presence of black lung and an expert physician hired by the mining company and/or its insurers denies the presence of the disease. Because physicians typically did not reach a unanimous medical opinion, judges often side with the mining companies due to inconclusive evidence.

Naturally, many miners grow frustrated with the process. It is commonplace to hear the phrase "their [mining company] doctors are bought and paid for" when asking a miner if he will seek verification of black lung, or possibly file another claim. Many miners feel defeated and that they cannot contend with a process that is unjust and biased against them. Miners' suspicions are not unfounded. Physicians that work for mining companies and their insurers have a history of delivering conservative medical opinions compared to other physicians. Further, a recent law approved in Kentucky prohibits licensed, federally certified radiologists from reviewing images relating to black lung cases. The law, however, does permit six pulmonologists, four of whom have known conflicts of interest working for mining companies, to review black lung cases (3).

Comparatively speaking, coal miners tend to present a unique patient population. A considerable proportion of miners are medically disabled and/or have difficulty with mobility. Many also engage in poor lifestyle behaviors, such as smoking tobacco. Legal teams representing mining companies often use these and other factors to raise further doubt about the presence and/or source of black lung disease. As a result, many coal miners continue to believe they have black lung disease given they present the classic symptoms of the disease but feel they cannot prove it because of a factor(s) that often is beyond their control.

Further, many coal miners suffer from a host of mental health problems (e.g., depression, anxiety), engage in other poor lifestyle behaviors (e.g., diet, alcohol) and are reluctant to engage in help-seeking behaviors due to a variety of cultural reasons. Miners typically are poorly educated and reside in economically depressed areas in which fatalistic views are pervasive (4). The prospect of verifying the presence of black lung and pursuing compensation benefits is often viewed as a daunting and resource-intensive endeavor. Concerns of a potential misstep, such as misremembering an event or failing to produce documentation from decades ago that exist only in paper form, offer further dissuasion.

Additionally, questionable information is abounding about the expenses associated with filing a claim. Many miners dogmatically affirm it is too expensive to file a claim, as the current median annual household income in many coal-producing counties approximates \$25,000 and costs associated with filing a claim are believed to cost thousands of dollars (5). Miners already feeling the pinch of limited economic resources often view filing a claim comparable to buying a used lottery ticket.

Collectively, the combination of poor health conditions, low education levels, sparse economic resources, fatalistic

worldviews, pervasive misinformation, previous negative experiences filing a claim, rumors circulating from fellow miners, and expectations of an unjust hearing prevent many miners from pursuing black lung cases. Although the research literature has indicated a decline in black lung cases in recent decades and a sudden uptick reaching “epidemic” levels (1), I am unconvinced that this trend is valid. The socioeconomic and cultural circumstances surrounding coal miners described in this letter are long-standing, thus there is reason to believe estimates of black lung have always been much higher than projected. Further, studies have found wildly inconsistent results, as a recent investigation by National Public Radio (NPR) found there were 10 times as many cases than were reported by federal regulators (2, 6-8). For these reasons, I strongly question the accuracy of government reported estimates and suspect true estimates are greatly underestimated. It is clear that more research is needed. However, this research should also include studies that take into consideration the psychological, social, cultural and economic factors associated with the unique, underserved and vulnerable population most affected by this disease.

## References

1. Voelker R. Black Lung Resurgence Raises New Challenges for Coal Country Physicians. *JAMA*. 2019 Jan 1;321(1):17-19.
2. Blackley DJ, Halldin CN, Laney AS. Continued Increase in Prevalence of Coal Workers' Pneumoconiosis in the United States, 1970-2017. *Am J Public Health*. 2018 Sep;108(9):1220-1222.
3. Berkes H. Kentucky Lawmakers Limit Black Lung Claims Reviews Despite Epidemic. National Public Radio. Published online March 31, 2018. Available at: <https://www.npr.org/2018/03/31/598484688/kentucky-lawmakers-limit-black-lung-claims-reviews-despite-epidemic>. Access January 2, 2019.
4. Robinson C. An exploration of poverty in central Appalachia: Questions of culture, industry, and technology. *Kome*. 2015;3(2):75-89.

5. United States Census Bureau. American Fact Finder. Available at: <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>. Retrieved February 20, 2019.
6. Blackley DJ, Crum JB, Halldin CN, Storey E, Laney AS. Resurgence of Progressive Massive Fibrosis in Coal Miners - Eastern Kentucky, 2016. MMWR Morb Mortal Wkly Rep. 2016 Dec 16;65(49):1385-1389.
7. Berkes H. Advanced Black Lung Cases Surge in Appalachia. Radio broadcast episode]. In T. Balcomb (Supervising Producer), All Things Considered. Washington, DC: National Public Radio. 2016 Dec 15.
8. Berkes H. NPR Continues To Find Hundreds Of Cases Of Advanced Black Lung. NPR. org. July. 2017;1.