

Appalachian and Post-Industrial Communities

When the Economy Left and Never Came Back

In regions where deindustrialization has collapsed labor markets, work requirements become not behavioral intervention but administrative mechanism for coverage loss.

Crystal's Story

The coal tippie that once processed 4,000 tons daily stands rusted and silent at the head of the hollow. From the porch of her grandmother's house, where three generations have lived since her grandfather built it with company lumber, Crystal can see the abandoned preparation plant, the empty rail spur, the collapsed conveyor that used to hum twenty-four hours a day. Her father worked there. Her grandfather worked there. Her great-grandfather came from Wales to work there in 1923. The mine closed in 2015. Nothing replaced it.

Crystal is 34 years old and has never held a job that generated a W-2. This is not laziness. This is geography. The county seat, twenty-three miles of winding mountain road away, has a Dollar General, a convenience store attached to a gas station, and the county school system. The Dollar General employs four part-time workers. The convenience store employs two. The school system is not hiring. The hospital that used to be in the county seat closed in 2019, the third of seven hospitals to close in the region that decade.

She patches together income the way everyone in the hollow does. She watches her cousin's children when her cousin drives forty-five minutes each way to work at the Walmart in the next county over. The cousin pays her cash. She sells vegetables from the garden and eggs from the chickens at the swap meet on Route 23 when she can get a ride. She cleans houses for elderly neighbors who pay what they can. She helps her uncle with odd jobs, paid in cash or sometimes in deer meat or firewood. In a good month this might total \$400. In a bad month it might total \$100. None of it generates documentation.

The letter informing Crystal that she must demonstrate 80 hours of monthly work activity to maintain her Medicaid coverage arrives in a P.O. Box at the county seat because mail delivery ended to the hollow in 2012. She retrieves it two weeks after it was sent. The letter explains that she can document employment through pay stubs, verify education or training enrollment, or log volunteer hours with qualifying organizations. It does not explain how someone living in a community where the formal economy has functionally ceased to exist is supposed to accomplish any of these things.

Crystal's situation is not an edge case. It is the modal experience for hundreds of thousands of Medicaid expansion adults living in Appalachian Kentucky, West Virginia, southeastern Ohio, southwestern Virginia, and eastern Tennessee. It extends to the Rust Belt communities of Gary and East Chicago, of Youngstown and Warren, of Flint and Detroit, where steel mills and auto plants once employed hundreds of thousands and now employ fractions of their former workforces. Work requirements designed for functioning labor markets encounter in these regions something different: labor markets that have collapsed and show no signs of recovery.

The Geography of Economic Devastation

The scope of deindustrialization in Appalachia and the Rust Belt represents not temporary downturn but permanent economic transformation that has left entire regions without viable labor markets.

Coal employment provides the starkest illustration. At its peak in 1923, Appalachian coal mining employed over 700,000 workers. By 2024, total U.S. coal mining employment had fallen below 50,000, with most remaining jobs in Wyoming's Powder River Basin rather than the traditional coalfields of Kentucky, West Virginia, and Pennsylvania. Eastern Kentucky alone lost 14,000 mining jobs between 2008 and 2024, dropping from approximately 18,000 miners to under 4,000. The jobs did not relocate. They disappeared, replaced by surface mining techniques that require fewer workers and by natural gas and renewables that require none.

The industries that might have replaced coal never arrived. Manufacturing plants that located in Appalachia in the mid-twentieth century to access cheap labor and weak unions followed the same logic to Mexico, China, and eventually Southeast Asia. The Amazon fulfillment centers and logistics hubs that have become major employers elsewhere located where highways and population density made sense, which is to say not in mountain hollows accessible only by winding two-lane roads.

Labor force participation rates tell the story in numbers. McDowell County, West Virginia, once employed 100,000 coal miners across its operations. By 2024, its total population had fallen to under 18,000, and its labor force participation rate, the share of working-age adults either employed or actively seeking work, had dropped to 30 percent. The national rate exceeds 62 percent. Similar patterns appear across the Appalachian coalfields. Owsley County, Kentucky: labor force participation 32 percent. Mingo County, West Virginia: 31 percent. Morgan County, Tennessee: 35 percent. In these places, the majority of working-age adults have withdrawn from the labor market entirely because the labor market no longer exists in any meaningful sense.

The Rust Belt tells a parallel story through different industry. Youngstown, Ohio lost 50,000 steel jobs when the mills closed between 1977 and 1985. The population of the Youngstown metropolitan area fell from 536,000 in 1970 to 538,000 in 2020, but this stability masks churning: working-age adults left while elderly residents remained. Gary, Indiana employed 30,000 steelworkers in 1970. By 2024, total employment in the city across all industries was under 25,000, and the population had fallen from 175,000 to 69,000. The neighborhoods surrounding the silent mills contain blocks of abandoned houses interspersed with the occupied homes of those who could not or would not leave.

These communities share characteristics that distinguish them from areas experiencing ordinary economic challenges. ***The poverty is not cyclical but structural, reflecting not temporary downturns but permanent loss of the economic base.*** The remaining population is older, sicker, and less mobile than the population that left, creating concentrations of need precisely where services have contracted. The informal economy has partially replaced the formal economy, meaning that work continues but documentation does not exist. Disability income has become the primary household support for substantial portions of the population, not because residents are gaming systems but because generations of dangerous work in mines and mills left lasting physical damage.



The Disability Overlay

West Virginia has the highest disability rate of any state, with 19.5 percent of residents reporting disability compared to the national average of 14 percent. Kentucky ranks second at 19 percent. These are not random variations but consequences of occupational history.

Coal mining is dangerous work that produces distinctive injuries and diseases. Black lung disease, caused by inhalation of coal dust, was thought to be declining as mining mechanized and dust suppression improved. Instead, it is resurging. The National Institute for Occupational Safety and Health documented that the most severe forms of black lung are appearing in younger miners at rates not seen since the 1970s. The shift to thin-seam mining, which cuts through more rock and generates more silica dust, has produced a new epidemic in workers who may be only in their forties or fifties.

Beyond black lung, miners experience back injuries from years of working in confined spaces, knee damage from crawling through low seams, hearing loss from equipment noise, and repetitive stress injuries from operating machinery. Many of these conditions are disabling but do not meet the stringent standards for Social Security disability determination. A fifty-two-year-old former miner with chronic back pain, black lung that has not yet reached the most severe stages, and hearing loss severe enough to prevent most employment may not qualify for SSDI. His capacity for 80 hours of monthly work is essentially zero, but his capacity to navigate disability application processes is also low, and the backlog for disability determination extends years.

Steel and auto workers face parallel patterns. The physical demands of manufacturing work produced generations of workers with industrial injuries that limit work capacity. Environmental contamination in former industrial sites contributes to elevated cancer rates and chronic conditions. The stress and dislocation of economic collapse contributed to the epidemic of deaths of despair, from suicide, overdose, and alcoholism, that has defined post-industrial America.

The intersection of occupational injury, economic collapse, and geographic isolation creates populations where medical exemption rates, if exemptions were accessible, would approach majority levels. But the healthcare infrastructure that would document exemptions has itself collapsed. ***Forty percent of West Virginia's rural hospitals are at risk of closure.*** Seven hospitals have been identified as immediately endangered. When the nearest provider who could complete a medical exemption form is sixty miles away and transportation is unavailable, exemption categories on paper become inaccessible in practice.

Intergenerational Dimensions

The economic collapse is now entering its fourth decade in some communities, creating populations for whom formal employment has never been part of lived experience.

Crystal has never held a W-2 job. Neither has her mother, who was seventeen when the mine closed and pieced together the same informal economy her daughter now navigates. Her grandmother worked briefly at the company store before marriage but has not been employed since 1981. The entire extended family, cousins and aunts and uncles scattered through the hollow and the next hollow over, subsists on combinations of disability income, Social Security, informal work, and family support. This is not cultural dysfunction. It is rational adaptation to an environment where formal employment does not exist.

The implications for work requirement compliance are profound. Verification systems assume that workers can produce pay stubs, employer verification letters, or W-2s. These documents are artifacts of formal employment relationships that Crystal has never experienced. The jobs she has held, watching children, cleaning houses, selling produce, helping with construction, occurred outside any system that generates documentation. She has worked every day of her adult life. She has nothing to show a verification system.

Education pathways face similar structural barriers. Work requirements typically allow compliance through enrollment in education or training programs. The nearest community college is fifty-two miles from Crystal's home. She has no vehicle. Public transportation does not exist. Even if she could reach the college, years of educational disruption during childhood, when her family moved between hollows following informal work, left her without the foundational skills that college enrollment requires. GED programs exist in theory but operate only in the county seat, with schedules that assume transportation access she does not have.

Job training programs designed for displaced workers assume recent attachment to formal employment. They teach resume writing to people who have resumes to write. They teach job search skills to people who live where jobs exist to be found. **They do not know what to do with populations for whom formal employment is as abstract a concept as foreign travel or yacht ownership.**

The Opioid Overlay

Appalachian communities and post-industrial cities experienced the opioid epidemic as an additional trauma layered onto economic collapse. The geography of despair and the geography of addiction overlap almost perfectly.

West Virginia has led the nation in overdose death rates for most of the past decade. Kentucky, Ohio, and Pennsylvania consistently rank in the top ten. The correlation with economic distress is not coincidental. Research by Anne Case and Angus Deaton on deaths of despair documented that mortality increases from suicide, overdose, and alcohol-related causes concentrate precisely in the white working-class communities most affected by deindustrialization. The places where the mills closed, where the mines shut down, where good jobs disappeared and nothing replaced them, these are the places where people turned to opioids to manage pain, both physical pain from decades of dangerous work and psychological pain from the collapse of everything that had given life structure.

For Medicaid members in these communities, substance use disorder creates additional compliance barriers beyond economic conditions. Treatment requires transportation to programs that may be located in distant cities. Recovery requires stability that economic precarity undermines. Relapse triggers non-compliance in multiple programs simultaneously. The intersection of active addiction and work requirements produces coverage termination precisely when treatment is most needed.

The medication-assisted treatment that offers the best outcomes for opioid use disorder requires consistent healthcare access that coverage termination eliminates. Someone in recovery on buprenorphine who loses Medicaid coverage cannot continue treatment. Without treatment, relapse probability increases dramatically. Relapse leads to emergency room visits, overdose hospitalizations, and potentially death. The coverage termination that work requirements produce

becomes a mechanism for killing people, not through malice but through policy design that fails to account for regional conditions.



The Place-Based Exemption Question

The structural impossibility of compliance in these regions raises a fundamental policy question: should work requirements include place-based exemptions that effectively exclude entire communities from requirements?

Kentucky's waiver application includes provisions for counties where unemployment exceeds 150 percent of the state average. In practice, this would exempt most of eastern Kentucky from work requirements. Whether CMS will approve such provisions remains uncertain. ***The conceptual challenge is that place-based exemptions seem to concede that work requirements cannot function in certain regions, raising the question of what purpose they serve there at all.***

The counterargument notes that within even the most economically devastated counties, some individuals are employed. The Dollar General in the county seat does hire workers. The school system does employ teachers and staff. Creating blanket exemptions for entire counties provides exemptions to people who could comply, potentially undermining the behavioral incentives that work requirements are supposed to create.

The behavioral incentive argument has limited force in these contexts. Work requirements assume that people respond to incentives by increasing work effort. In communities where work does not exist to increase effort toward, incentives cannot produce behavioral change. The person exempted in McDowell County cannot respond to work requirements by getting a job because jobs do not exist for them to get. The only behavioral response available is to move, which converts work requirements into population displacement policy. Those who can leave, do. Those who cannot leave, lose coverage.

The alternative framework treats place-based exemptions not as concessions to impossibility but as recognition that work requirements are regional policies masquerading as universal ones. Work requirements might make sense in Columbus, where the labor market functions and employment is available for those who seek it. They make no sense in McArthur, where the labor market does not function and employment is not available regardless of seeking. Applying the same policy to both places treats fundamentally different conditions as identical, producing different outcomes from identical human effort.

The Formal Economy Myth

Work requirement verification systems assume a formal economy that post-industrial communities have partially replaced with informal alternatives.

Crystal's work is real. Watching children enables her cousin to work. Growing vegetables and raising chickens produces food that people eat. Cleaning houses improves the lives of elderly neighbors. These activities have economic value. They require effort and time. They meet any reasonable definition of productive contribution to community wellbeing.

None of them generate documentation that verification systems recognize. The cousin pays in cash. The swap meet operates without receipts. The elderly neighbors pay what they can when they can. This is not tax evasion or off-the-books employment designed to avoid obligations. It is survival in an environment where the formal structures of employment have ceased to function.

Community verification pathways might address this disconnect. A church that organizes volunteer child care could potentially verify members' caregiving hours. A community center coordinating senior assistance could attest to hours spent helping elderly neighbors. A farmers market cooperative could document participation in agricultural production and sales. These verification approaches require infrastructure that verification systems must be designed to accept and that states must choose to implement.

The fraud concern arises immediately. If informal work can be verified through community attestation rather than employer documentation, opportunities for fabricated claims expand. Someone who does not actually watch children could claim caregiving hours with a cousin's cooperation. Someone who does not actually grow vegetables could claim agricultural activity with a neighbor's corroboration. These concerns are not unreasonable.

But the alternative, refusing to recognize any work that lacks formal documentation, excludes communities where formal documentation does not exist. **The policy choice is between imperfect verification of genuine informal work and perfect verification that recognizes no work at all. Neither choice is without costs. The question is whose costs matter more and what values the verification system should express.**

Return to Crystal

The letter gives Crystal thirty days to demonstrate compliance or lose coverage. She has no employer to verify work hours because she has no employer. She has no education enrollment because she cannot reach educational institutions. She has no formal volunteer hours because the organizations that track volunteer hours are located in cities she cannot access.

She has worked every day of her life in a community where the formal economy collapsed before she was born. She is not lazy. She is not refusing to comply. She is caught between policy assumptions and lived reality that bear no relationship to each other.

Under a place-based exemption, Crystal's county would be recognized as a region where work requirements cannot function because work does not exist. She would maintain coverage not through compliance but through acknowledgment that compliance is structurally impossible where she lives.

Under an informal economy verification pathway, Crystal could document her actual work through community attestation. Her cousin could verify caregiving. Her neighbors could verify house cleaning. The swap meet coordinator could verify agricultural sales. The documentation would not meet traditional verification standards, but it would recognize actual productive activity occurring outside systems those standards assume.

Under current verification frameworks, Crystal loses coverage. She has done nothing wrong. She has failed no moral test. She has simply lived in a place where economic forces beyond her control have made compliance impossible regardless of effort or intent.

The policy question is whether work requirements should function as regional displacement pressure, encouraging those who can leave to leave and punishing those who cannot with coverage loss, or whether they should accommodate the reality that some regions require different policy frameworks than others.

Crystal cannot answer that question. She can only wait, watching the rusted tipple from her grandmother's porch, while systems designed for different places and different economies determine whether she will keep her healthcare.

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