

The Executive Function Paradox

Jerome's Story - Cognitive Demands That Exceed Cognitive Capacity

Jerome has ADHD. He has always had it. Over thirty-seven years he has learned to manage by keeping things simple, building routines, avoiding systems that require tracking multiple deadlines across different channels. His apartment has a wall calendar, a whiteboard by the door, and a phone that buzzes fifteen minutes before anything important. He stocks up on groceries on the first of every month. He pays rent the day he gets paid. These accommodations work because Jerome designed them himself, around his own brain, with decades of trial and error.

Then he gets a notice about work requirement verification. The deadline is in 45 days. Jerome reads the notice, understands he needs to do something, and puts it aside to deal with later. He does not put it on the calendar because 45 days feels like plenty of time. The notice goes into the pile of papers that accumulate on his kitchen counter, the pile he tells himself he will sort through every weekend and never does.

Forty-four days later, Jerome finds the notice while looking for something else. The deadline is tomorrow. He calls the number on the form but the office is closed. He tries to log into the online portal but cannot remember his password and the reset email goes to an account he no longer uses. He wakes at 5 AM the next morning, spends three hours navigating the system, and finally submits his documentation at 11:47 AM. The deadline was noon. He made it.

But the system shows his employer verification is incomplete. He needs additional documentation he does not have. The grace period expires before he can obtain it. His Medicaid terminates.

Jerome did not decide not to comply. His brain does not process "45 days from now" the way the system assumes everyone's brain does. He failed not because he refused to meet requirements but because the requirements assumed a cognitive architecture he does not possess.

What Compliance Requires

Work requirement verification is not a single task but a cascade of cognitive demands, each modest in isolation but substantial in combination. Understanding why populations struggle to comply requires mapping these demands explicitly.

Planning and initiation represent the first hurdle. The person must recognize that a task needs doing, formulate an intention to do it, and actually begin. This sounds trivial until you consider that depression fundamentally impairs initiation, that ADHD disrupts the connection between intention and action, that chronic pain depletes the energy needed to start anything beyond survival. The notice arrives. The person must not merely understand what it says but translate understanding into planned action and then execute the plan.

Working memory must track multiple elements simultaneously: what activities qualify, how many hours are required, where documents are located, which deadline applies, what the appeal process involves if something goes wrong. Standard working memory capacity holds roughly four items. Work requirement compliance may require tracking a dozen. The person who cannot hold all the relevant information in mind at once will miss something.

Prospective memory refers to remembering to do something in the future. This is different from retrospective memory, which recalls what has already happened. Prospective memory is notoriously unreliable even in people without cognitive impairment. It requires maintaining an

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intention over time, monitoring the environment for cues that trigger action, and interrupting ongoing activity to execute the remembered task. A verification deadline in 45 days taxes prospective memory systems that struggle with anything beyond a few days.

Attention management becomes necessary when completing multi-step forms, reading dense instructions, or navigating bureaucratic language. Sustained attention is required to work through a twenty-minute online process without becoming distracted or giving up. Selective attention is required to identify relevant information amid irrelevant details. Both are impaired by anxiety, depression, chronic pain, and the cognitive taxation of poverty itself.

Cognitive flexibility allows adjustment when circumstances change. The employer moves the deadline, the required form changes, the verification portal updates its interface. People with rigid cognitive styles struggle to adapt to shifting requirements. Those who have laboriously learned one system may not be able to transfer that learning when the system changes.

Organization demands maintaining records, locating documents, tracking correspondence, and filing materials for future retrieval. This is the executive function perhaps most obviously impaired by unstable housing, chaotic living situations, and the constant mobility that poverty often requires. Someone who has moved three times in the past year may not know where their pay stubs are.

Time management requires meeting deadlines despite competing demands on limited time. It requires accurate estimation of how long tasks will take, appropriate prioritization among tasks, and allocation of sufficient time before deadlines expire. Research consistently shows that people underestimate task duration, that stress degrades time estimation accuracy, and that poverty compresses the time horizon within which people can effectively plan.

Each demand is manageable for someone with intact executive function, stable circumstances, and adequate support. The combination becomes formidable. And the populations subject to work requirements are precisely those most likely to face impairment in multiple domains simultaneously.

The Cognitive Profiles of Expansion Populations

The Medicaid expansion population is not a random sample of the American public. It is a population defined by income below 138 percent of the federal poverty level, which means it is a population shaped by the cognitive consequences of poverty, the mental health conditions that correlate with economic hardship, and the disabilities that prevent full labor market participation.

Depression affects roughly 20 percent of the Medicaid expansion population, substantially higher than the general population rate. Depression impairs future orientation, making distant deadlines feel abstract and unreal. It depletes initiative, making the first step of any task feel insurmountable. It disrupts concentration, making form completion exhausting. It induces avoidance, making threatening tasks like documentation easier to ignore than address. A person in a depressive episode may understand perfectly well that they need to verify their work hours. Understanding does not translate into action when the connection between intention and behavior has been severed.

Anxiety affects a similar proportion. **Anxiety's relationship with compliance is paradoxical: it can motivate action but also trigger avoidance.** The anxious person who worries about coverage loss may be highly motivated to comply, but the same anxiety can make interaction with bureaucratic systems overwhelming. Forms that trigger panic do not get completed. Deadlines that

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provoke dread do not get met. The anticipatory anxiety of possible failure can itself prevent the action that would prevent failure.

ADHD is substantially more prevalent among low-income populations than commonly recognized, in part because it is underdiagnosed outside affluent populations with access to psychiatric evaluation. ADHD directly impairs the executive functions that compliance requires: working memory, prospective memory, time management, organization, and initiation. The person with ADHD may not lack the ability to comply but the consistency. They may succeed three months and fail the fourth, not because anything changed except the random fluctuation of symptoms.

Substance use disorders affect roughly 10-15 percent of the expansion population. Active addiction disrupts virtually every executive function. Recovery itself requires such intensive cognitive effort that administrative compliance may be crowded out. Treatment participation, which may qualify as a work requirement activity, itself depletes the cognitive resources needed to document that participation.

Chronic pain affects nearly a quarter of the expansion population. Pain is cognitively expensive. Research shows that people in chronic pain perform worse on tests of attention, working memory, and processing speed. The cognitive fog that accompanies persistent pain is not imaginary; it reflects genuine depletion of mental resources. The person managing chronic pain may have less cognitive capacity available for bureaucratic navigation than they had before the pain began.

But these clinical categories understate the challenge, because they treat cognitive limitation as pathology to be accommodated through exemptions.

The more fundamental issue is what poverty itself does to cognition.

Sendhil Mullainathan and Eldar Shafir's research demonstrates that scarcity captures cognitive bandwidth. In studies of both American shoppers and Indian farmers, inducing financial concerns reduced performance on tests of fluid intelligence and cognitive control. The effect was equivalent to losing 13 IQ points or a full night's sleep. This was not about intelligence as a stable trait but about available cognitive capacity in moments of scarcity.

Poverty is a permanent state of scarcity-induced cognitive taxation. The mental bandwidth consumed by managing insufficient resources, making impossible tradeoffs, and worrying about financial catastrophe is bandwidth unavailable for other tasks. **The expansion population does not merely happen to have high rates of depression, ADHD, and chronic pain. It experiences chronic depletion of the cognitive resources that compliance requires, regardless of clinical diagnosis.**

The Paradox Articulated

Work requirements demand executive function. Populations subject to work requirements disproportionately have compromised executive function. **The conditions that lead people to need Medicaid often impair the cognitive capacity to maintain Medicaid.**

This is the executive function paradox, and it is not an edge case affecting marginal populations. It is the central challenge of work requirement administration. The modal expansion adult is not someone with intact executive function who simply needs motivation to work. The modal expansion adult is someone whose cognitive resources are already strained by poverty, whose mental health may be compromised, whose circumstances create constant cognitive load, and

whose relationship with bureaucratic systems has historically been characterized by confusion and failure.

Systems designed by policy professionals for policy professionals assume cognitive resources that the target population does not possess. The people who design verification portals have stable internet access, familiarity with online forms, intact working memory, and calendars that track deadlines automatically. They cannot easily imagine what the same system looks like to someone whose phone is their only internet access, who has never completed an online government form successfully, who cannot hold multi-step instructions in mind, and who has no functioning system for remembering future tasks.

The result is systematic mismatch. **Requirements that seem reasonable to designers become impossible for significant portions of the target population.** Not impossible in the sense of unwilling to comply, but impossible in the sense of genuinely unable to marshal the cognitive resources compliance requires.

When 18,000 people lost coverage in Arkansas, the explanation was not that 18,000 people decided they did not want healthcare. The explanation was that the verification system assumed cognitive capacities that substantial portions of the population did not possess. Online-only reporting assumed digital literacy and reliable internet access. Monthly deadlines assumed intact prospective memory. Complex documentation assumed organizational capacity that unstable circumstances erode. The system was designed for people who do not need Medicaid.

Design for Actual Humans

What would verification systems look like if designed around the cognitive profiles of actual expansion populations rather than the cognitive profiles of the people designing the systems?

Shorter timelines with more frequent touchpoints outperform long runways that rely on prospective memory. A deadline in 7 days is more actionable than a deadline in 45 days because it falls within the time horizon that human memory reliably tracks. Monthly reminders are more effective than quarterly notices because they maintain salience. The counterintuitive finding from behavioral research is that more frequent deadlines can produce better compliance than less frequent ones, because each deadline falls within the window where prospective memory functions.

Pre-population of forms reduces working memory demands. If the system already knows the person's employer, address, and reported income, pre-filling this information eliminates the cognitive load of recalling and entering it. The person confirms what the system knows rather than reconstructing it from memory. Pre-population also reduces errors, which create their own compliance cascades when forms are rejected for inconsistencies.

Automated data matching eliminates planning and initiation requirements entirely. If the state matches unemployment insurance wage records to Medicaid eligibility files, the person need do nothing. No initiation, no planning, no prospective memory, no form completion, no deadline tracking. The cognitive load shifts from the person with impaired executive function to the system with infinite capacity for administrative tasks.

Single-channel communication reduces attention management burden. When verification notices arrive by mail, text, email, and portal notification, the person must track multiple channels and integrate information across them. When all communication arrives through one channel matched to the person's circumstances, the attention management burden shrinks. For someone

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without reliable internet, that channel may be mail or phone. For someone who does not check mail, that channel may be text.

Default enrollment for those who qualify reduces cognitive load to zero. If data matching demonstrates that someone is working, presumptive compliance eliminates any cognitive demand whatsoever. The person maintains coverage not because they successfully navigated the system but because the system successfully navigated itself.

The common thread is shifting cognitive burden from populations with depleted cognitive resources to systems with unlimited administrative capacity. Every requirement imposed on beneficiaries should prompt the question: can this instead be accomplished through data matching, pre-population, or default rules? If so, the beneficiary-facing requirement causes unnecessary coverage loss among people unable to meet it.

The Boundary Problem

But design solutions cannot fully resolve the executive function paradox, because some people genuinely cannot navigate any system that assumes average cognitive capacity, no matter how well designed.

Where does accommodation end? If cognitive limitation prevents compliance with even minimal requirements, is that limitation an exemption-qualifying disability? The person with severe ADHD who cannot reliably remember deadlines, the person with treatment-resistant depression who cannot initiate paperwork, the person with cognitive impairment from chronic pain who cannot complete multi-step processes. Are these people unable to work, or merely unable to prove they are working?

The tension between treating executive function limitations as design challenges versus medical conditions has no clean resolution. Design improvements can reduce the population who fails for cognitive reasons, but they cannot eliminate it. Some residual group will fail any verification system that requires proactive human action.

Current exemption frameworks do not clearly address this residual group. SSI/SSDI recipients are typically exempt because their disabilities have already been federally adjudicated. But many people with significant cognitive limitations do not qualify for federal disability programs, either because their limitations do not meet the strict criteria or because they have been unable to navigate the application process itself. The same executive function deficits that prevent work requirement compliance also prevent disability application completion.

This creates a paradox within the paradox. Proving inability to comply requires compliance with a different set of requirements. Exemption documentation often demands the same cognitive capacities as verification documentation. The person unable to complete a work verification form may also be unable to complete an exemption application form. The system punishes cognitive limitation by requiring people to demonstrate cognitive limitation through processes that cognitive limitation prevents.

Some states have begun to address this through navigator-initiated exemptions, where community health workers or care coordinators can initiate exemption processes on behalf of members rather than waiting for members to self-identify. This shifts the burden of identification from the person who cannot self-identify to people positioned to recognize who needs help. But even this approach assumes that the cognitively limited person is connected to

services that include such navigators, an assumption that fails for the most isolated and disconnected.

The uncomfortable truth may be that work requirements are fundamentally incompatible with certain cognitive profiles. No design accommodation can make requirements workable for someone whose disability is precisely the inability to navigate requirements. The policy question then becomes whether to accept coverage loss among this population as an unavoidable cost of the system, or to acknowledge that some people require categorical exemption from any system requiring proactive compliance.

Return to Jerome

What happens to Jerome's coverage depends entirely on whether the system was designed with people like him in mind.

In a system designed for policy professionals, Jerome loses coverage. He missed a deadline because his brain processes time differently than the system assumes. He failed to obtain documentation because the system required organizational capacity he does not possess. His termination reflects system success: a person failed to comply and suffered consequences. The record shows procedural correctness.

In a system designed for actual humans, Jerome might never face a deadline he could miss. Automated data matching might verify his employment without his involvement. A text reminder three days before any deadline might catch him before failure occurs. A grace period after technical non-compliance might allow him to complete what he attempted. Navigator outreach after missed verification might reconnect him before termination.

The difference between these systems is not technical complexity but design philosophy. The first system asks: how can we verify compliance? The second asks: how can we prevent coverage loss among people who are actually complying?

Jerome works forty hours a week. He pays his rent, maintains his apartment, holds down his job. He has ADHD, not a defective character. His brain processes time, remembers tasks, and initiates action differently than the norm. A healthcare system that loses him to administrative complexity has not succeeded at verification. It has failed at its fundamental purpose of providing healthcare to people who need it.

The executive function paradox is not a problem to be solved by better form design or clearer instructions. It is a structural mismatch between policy assumptions and population realities. Resolving it requires acknowledging that the cognitive demands of compliance fall hardest on populations least equipped to meet them, and designing systems that account for this basic fact of the population they serve.

Previous in series: Article 15A, "Allostatic Load and Administrative Burden: When Systems Cause the Harm They're Meant to Treat"

Next in series: Article 15C, "Behavioral Design for Compliance Systems: From Catching Failure to Enabling Success"

References

1. Diamond, Adele. "Executive Functions." *Annual Review of Psychology* 64 (2013): 135-168.

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2. Mani, Anandi, Sendhil Mullainathan, Eldar Shafir, and Jiaying Zhao. "Poverty Impedes Cognitive Function." *Science* 341, no. 6149 (2013): 976-980.
3. Mullainathan, Sendhil, and Eldar Shafir. *Scarcity: Why Having Too Little Means So Much*. New York: Times Books, 2013.
4. Barkley, Russell A. *Executive Functions: What They Are, How They Work, and Why They Evolved*. New York: Guilford Press, 2012.
5. Herd, Pamela, and Donald P. Moynihan. *Administrative Burden: Policymaking by Other Means*. New York: Russell Sage Foundation, 2018.
6. Snyder, Hannah R. "Major Depressive Disorder Is Associated with Broad Impairments on Neuropsychological Measures of Executive Function: A Meta-Analysis and Review." *Psychological Bulletin* 139, no. 1 (2013): 81-132.
7. Moriarty, Orla, Brian E. McGuire, and David P. Finn. "The Effect of Pain on Cognitive Function: A Review of Clinical and Preclinical Research." *Progress in Neurobiology* 93, no. 3 (2011): 385-404.
8. Kliegel, Matthias, and Peter A. Altgassen. "The Added Value of an Applied Perspective in Cognitive Aging Research." *Psychology and Aging* 21, no. 4 (2006): 746-753.
9. Nigg, Joel T. "Attention-Deficit/Hyperactivity Disorder and Adverse Health Outcomes." *Clinical Psychology Review* 33, no. 2 (2013): 215-228.
10. Sommers, Benjamin D., Anna L. Goldman, Robert J. Blendon, E. John Orav, and Arnold M. Epstein. "Medicaid Work Requirements: Results from the First Year in Arkansas." *New England Journal of Medicine* 381, no. 11 (2019): 1073-1082.
11. Einstein, Gilles O., and Mark A. McDaniel. "Prospective Memory: Multiple Retrieval Processes." *Current Directions in Psychological Science* 14, no. 6 (2005): 286-290.
12. Shah, Anuj K., Sendhil Mullainathan, and Eldar Shafir. "Some Consequences of Having Too Little." *Science* 338, no. 6107 (2012): 682-685.
13. Gennetian, Lisa A., and Eldar Shafir. "The Persistence of Poverty in the Context of Financial Instability: A Behavioral Perspective." *Journal of Policy Analysis and Management* 34, no. 4 (2015): 904-936.
14. Baekgaard, Martin, and Donald P. Moynihan. "Human Capital and Administrative Burden: The Role of Cognitive Resources in Citizen-State Interactions." *Public Administration Review* 80, no. 1 (2020): 127-136.