

# The ADHD Explosion: A New Book Explores Factors That Have Fueled It

By MELISSA HEALY

“The ADHD Explosion: Myths, Medication, Money and Today’s Push for Performance,” released this week by Oxford University Press, chronicles the steep increase in ADHD diagnoses in the United States over the last two decades. The new book offers provocative evidence that economic pressures and government policies -- not just concern for children’s welfare -- are behind the increase in diagnoses of the psychiatric disorder marked by hyperactivity, disorganization, impulsiveness, inattention and poor academic performance beginning in childhood.

The authors of the new book--psychology professor Stephen P. Hinshaw and health economist Richard M. Scheffler, both of UC Berkeley, are hardly ADHD deniers: They acknowledge ADHD to be a disorder that can hobble the lives of those who have it, and they cite abundant evidence that the prescription stimulant medication used to tame ADHD’s symptoms can bring about remarkable improvement in those with the disorder. Their research is underwritten by the Robert Wood Johnson Foundation, a respected public health philanthropy.

But the line that separates the merely scattered and energetic child from one who fits the disorder’s full clinical criteria is not sharp. And Hinshaw and Scheffler argue that our shifting expectations of our kids’ (and our own) economic and academic performance have tilted the balance in favor of diagnosing an underachieving child and of medicating him or her with the stimulant drugs used to blunt the disorder’s symptoms.

Following is a Q&A with the book’s authors, conducted and edited by Los Angeles Times staff writer Melissa Healy:

**Q. You’ve described the diagnosis and medication of ADHD as “exploding” in the United States, and you’ve chronicled the increase in childhood ADHD diagnoses from 1 in 20 kids in the 1980s and ‘90s to 1 in 9 today—roughly 6.4 million kids between the ages of 4 and 18. Is ADHD at this point an overdiagnosed condition? Or are diagnoses just catching up to the true prevalence of this disorder in the U.S.?**

**Hinshaw:** It looks pretty clear around the world that in any country with compulsory education, the prevalence of ADHD is remarkably similar—around 5% of schoolkids. That’s roughly how frequently you see ADHD diagnosed in Brazil, China, Europe and elsewhere.

But the ADHD diagnosis rate in the U.S. is quite high compared to that of other highly developed countries. If you believe the most current data from the Centers for Disease Control and Prevention, the latest figure is that 11% of all kids 4 to 17 have at some point gotten an ADHD diagnosis from a professional. And after first grade, it’s 20% of all boys and about 10% of all girls. If you believe those data, which appear to be accurate, we have gone too far. That’s higher than the diagnostic rate should be.

There are too many diagnoses made in children on the basis of maybe a 10- to 15-minute visit to a pediatrician’s office, where there’s no corroborating information from the child’s school, no ratings from his or her parents, no thorough history taken of the kid. And at the end of such a brief office visit, a

prescription for stimulant medication is often written. Now, that's a formula for overdiagnosis, since the symptoms of ADHD are also the symptoms of some learning disabilities, of depression, of having been mistreated, or of a chaotic classroom. ADHD too often can be a convenient label to describe problems that have other origins.

But the same very cursory process can lead to underdiagnosis of ADHD. The physician says, "Well, I didn't see her tearing up the waiting room," or, "his parents say he can play video games for six hours straight, so it can't be ADHD." In these instances, the physician doesn't have a sense of the child in the classroom or at home or on the soccer field. And the result can be that the diagnosis is missed, leaving a child struggling. It's problematic either way.

Professional groups—the American Academy of Pediatrics, the American Academy of Child and Adolescent Psychiatry, the American Psychiatric Assn.—have all published very clear guidelines as to what a thorough assessment for ADHD requires. But there's no enforcement of those guidelines. And there's usually no insurance reimbursement to physicians for making such a thorough assessment.

**Scheffler:** Over- and underdiagnosis comes in part from the clinical reality of how the ADHD diagnosis is made. There is no blood test, no brain scan, no X-ray you can point to and say, "There it is!" So it can be a matter of judgment from the parents, clinicians, even the children themselves. There's some fuzziness around the edges of this diagnosis.

In the absence of clear physical basis for a diagnosis, our changing societal expectations and economic conditions can play a role in how willing people are to diagnose and medicate a child for ADHD. After all, this is a disorder whose hallmarks are impulsive, disruptive and inattentive behavior and academic underperformance. So, part of the explosion we have seen in ADHD diagnoses comes from escalating academic pressure that teachers and parents have placed on their children to perform better at school, to get into a better college, to get a good job.

### **Q. What do state policies on educational accountability have to do with ADHD?**

**Scheffler:** There's been a recent history of trying to get our schools to perform better. Fifteen or 20 years ago, the philosophy was to get class sizes down and to fund schools better: In efforts to improve education, the focus was on inputs. Then, with [the federal] No Child Left Behind [law]—and a wide range of state educational accountability measures that came before it—the focus of improving education shifted to output: better test scores, higher graduation rates, etc.

This enormous "push for performance" unleashed a whole new focus on testing, and on generating positive test results. The movement tied school and school district budgets, teachers' salaries, and principals' promotions to these test scores.

But let's look at the incentives this creates for diagnosing ADHD in children who might be bringing down their school's average test scores, or who may be disruptive forces in their classrooms. First, of course, there's this belief that diagnosing and medicating kids with ADHD will help them do better. But it goes beyond that: Once a child is diagnosed with ADHD, the school is also allowed to make accommodations in his or her testing, for instance, which can help him or her get better test scores. And sometimes, diagnosing a child with ADHD allowed the school to exempt that child's scores from the measures by which the school and its administrators are evaluated and either rewarded or punished.

In some sense, we can see the societal pressure pushing everyone to diagnose. These state and eventually federal policies incentivized schools to do that. A fairly clever natural experiment helped us

to measure this effect. One by one in the 1990s, 30 states passed these kinds of accountability laws incentivizing test scores and achievement. Those states were mostly in the U.S. South. And sure enough, through the late 1990s and in the first years of the new century, those states saw dramatically increased rates of ADHD diagnoses.

Then in 2002, along came the No Child Left Behind law, which made these performance-based standards for education the law of the land. The day it takes effect in 2003, the law brings 20 states into this new push-for-performance scheme. And it's targeting public schools, and especially public schools in low-income communities—schools that received a lot of funding for free and reduced-price lunch programs.

**Hinshaw:** Now, the law takes effect in 2003. And, as luck would have it, 2003 is when the CDC conducts the first national survey that asks a representative sample of parents whether their child had ever been diagnosed with ADHD by a professional. And then, four years later, they ask the same question in another representative survey.

By 2007, those states that first got “accountability” under No Child Left Behind in the 2002-2003 school year saw a 59% increase in ADHD diagnoses among their poorest kids, but under 10% in kids from middle- and upper- income families in those states.

Meanwhile, there was no comparable rise in private schools in those states, which were not subject to the new rules of No Child Left Behind. And in the states that already had accountability laws before? Everybody — poor and wealthy — rose about 20% during that period, consistent with the overall national rate of increase.

So when you make accountability “count,” the rates of diagnoses of the poorest kids go up shockingly. Short of designing a randomized control trial to determine whether these policies are driving up diagnoses, that's our clearest evidence. And the evidence is especially strong for schools with a lot of poor kids in them.

**Scheffler:** And there were other factors at work as well: The diagnosis and treatment of ADHD started to become more popular because we passed child health insurance programs back in the 1990s. So if they were diagnosed, they were covered and could get treatment. Most state Medicaid programs started to pay for them as well, making it easier for poor kids to get diagnosed and treated. After years of seeing far higher ADHD diagnosis rates in wealthier kids, we found that the differential in diagnoses between wealthier kids and poor kids disappeared.

**Q. Is ADHD a class thing? An ethnic thing? Who's most likely to get diagnosed and how has that changed as rates of diagnoses have exploded?**

**Hinshaw:** When I was in graduate school 30 years ago, hyperactivity was a white middle-class male phenomenon: ADD (the new name in 1980) was about the disruptive boy--Dennis the Menace. It was the Tom Sawyer syndrome. And the field said girls can't get hyperactivity. We used to think the same things about autism—a wealthy white boy thing--and eating disorders, which only happened to upper-middle-class girls. This, of course, was referral bias: Those were the kids whose parents had the wherewithal to bring them to the specialized clinics that diagnosed these conditions.

Once the field started looking more broadly -- and with changes in health insurance and special-education laws in the 1990s -- we began to see that all of these conditions are equal-opportunity conditions. In ADHD, there is a large genetic undercurrent. But there are also some risk factors that are concentrated

more in low-income families than in higher-income ones: Kids born preterm or at low birth weight are at higher risk of ADHD, as are those whose mothers smoke or drink alcohol during pregnancy.

Today the rate of diagnosis among African American kids is about the same as that for white kids.

Scheffler: Among Hispanics, however, the rate of ADHD diagnosis remains quite low compared to that of non-Hispanic white kids and African American kids. That's despite the fact that diagnosis rates among ethnic groups should be pretty much the same. Certainly, their access to care appears to be lower, and that could help explain it. But culture clearly matters, too, and in ways we don't totally understand. It may be that in Hispanic culture, the behavior of boys who act out and don't conform may be seen in a different light than in other cultures. Recently, however, in California, Hispanic rates of diagnosis have been growing fast.

**Q. The research on ADHD and medication with stimulant drugs makes a couple of things clear: First, the line between those who have ADHD and those who are simply somewhat scattered, dreamy or disorganized is a matter of degree, not a sharp line; and second, that stimulant medication will improve some aspects of cognitive performance in almost everyone. So, why shouldn't we just accept that there is overdiagnosis of ADHD and that stimulants are more widely used than they strictly need to be? Why not accept that some children — and adults — who may not actually suffer from ADHD, but who nevertheless feel they are underperforming in the tasks required of them, are marginally improving their function by taking these medications? Why not accept that using “smart pills” to enhance our academic performance and productivity is a privilege of being a developed society?**

**Scheffler:** So if this is a smart pill, and it helps people who can afford it, why not? Part of me says yes. But I ask myself, what are potential side effects? This class of drugs is probably one of the safest psychiatric drugs used, so why wouldn't we put it in water supply? Because some people will have a bad reaction. And the economist in me says, “OK, suppose side effects are small and insignificant? Who should pay for it?” Is it something that your insurance company should pay for under Obamacare if you don't have a diagnosis, but you'd like to have the medication? It may be something that society as a whole doesn't want to pay for.

And finally, suppose it did work, the question is, is it fair? It's like steroids and sports. Most of us think it's not. It's not a fair way to play the game, and we don't want that. I think society is not very favorably disposed to enhancing people's performance through medication unless they have a clinical reason for it. It's not only the cost and who pays for it, but whether it's the right thing. I think it's not.

**Hinshaw:** Should we accept neuro-enhancement as the wave of the future? I long thought maybe it's a personal choice: After all, we are a productive society; there's a high demand for productivity. But, as this book went to bed, I began seeing some new research, and have been changing my thinking on this.

We know that pretty much anyone who takes a stimulant will stay alert longer. But the question has always been whether, for people who don't really have ADHD, does the medication really improve cognitive performance?

The world's first really good study came out in January 2013, published in the journal *Neuropharmacology*. Researchers from University of Pennsylvania recruited 46 college students and put them in a rigorous experimental trial of stimulants vs. placebo, across seven weeks.

There were 13 rigorous measures of cognitive performance. How many of these measures did these college kids show improvement on? Zero.

But there was a 14th measure: The researchers also asked the subjects, “How much did the drug improve your performance on the tests?” The medication led to a decided improvement on how well the subjects thought they did.

So, it would seem that medication bolsters a false sense of confidence: You feel more alert, you thought you aced it. But you didn't.

There's no doubt that stimulants help everyone stay alert. But in light of this research, there's much more doubt now that they really improve your cognitive performance and thinking if you don't have ADHD, or your symptoms don't position you pretty close to an ADHD diagnosis.

And meanwhile, one crucial side effect isn't often mentioned: If you've got ADHD and your treatment is well monitored, the odds that you'll get addicted to stimulant medications is extremely low by all published accounts. But if you're a normal college student and you start taking this medication, there's up to a 15% likelihood that you'll get addicted to the pills you're taking, and it encourages other pill-popping as well. Plus, it's illegal.