Few now question the high rates of autism reported in the United States, estimated anywhere from one in 175 to one in 166. However, the question of whether these high rates represent a rapid, real increase in the incidence of autism is surprisingly controversial. Influential observers such as Harvey Fineberg, president of the Institute of Medicine, have asserted, “It’s…clear that the definition [of autism] was broadened markedly in the 1980s and 1990s, and there were increased incentives to recognize children from increased awareness and availability of services. No one knows with certainty what part of the increase is genuine, a genuine increase in numbers, and what part is from increased recognition of people who were already there but not previously recognized.”

For those of us who live with a child with autism, the notion that just two decades ago we might have missed the diagnosis of something like 90 percent of affected children seems to hardly merit serious discussion. However, surprisingly few scientists, epidemiologists and public health officials have questioned the claims of major figures such as Fineberg. Many take the attitude that since we cannot perform the ideal studies to measure autism trends retrospectively, we can never know the true answer to the question of whether autism rates have gone up. Along with this attitude goes a lack of urgency and a presumption that the answer to this question has little importance. This line of thinking further begs the most basic questions of epidemiology: What can the specific location (in space and time) of the autism epidemic teach us about its roots?

On the question of time trends, I will offer this assertion: There can be little doubt at this point that real rates have risen sharply. Explaining away a tenfold increase requires proof of a hypothesis of large-scale diagnostic error. This is a simple and testable hypothesis. Numerous tests of the diagnostic error hypothesis are available, and the theory of large-scale error fails every test. In plain terms, the theory is false; the epidemic is real.

Why does this matter? With respect to the strategic direction of autism science, I submit that the most important question is that of time trends.

To make this point more specific, consider for a moment the resource implications of four positions regarding time trends:

1. **“We don’t know” if the increases are real or if there is just greater awareness of the disorder and better diagnosis.** As long as doubt about time trends persists, so does the case for the status quo in the management of autism science. Given this view, major changes in the direction and amount of funding can be reasonably deferred.

2. **“It doesn’t matter” whether rates are going up—it’s enough to recognize that they are high.** Treating the recent high autism rates as a kind of discovery, a surprising but otherwise unremarkable bit of health news, permits research planners to embrace a higher priority for autism spending without resolving the hard questions that the time trends raise. If rates truly have gone up, then how should we judge the decision to allocate millions of research dollars based on the assumption that autism is a rare, genetically driven disorder? Obviously, we should view it as a flawed plan. This second position, therefore, encourages ongoing reward for unproductive science.

3. **“Let’s rule out” certain inconvenient environmental hypotheses, such as vaccines and their preservatives.**

The timing of the sharp increases in autism rates offers important clues regarding the pathogenic processes underlying neurological development in otherwise typical children. Yet this third position, which imposes arbitrary and selective placement of restrictions on the scope of environmental research, places blinders on scientists at a time when we can little afford the luxury of selective ignorance. When we need environmental science to proceed with the maximum degree of flexibility, this position suggests we restrict research into plausible (and scientifically supported) environmental agents such as mercury and childhood vaccines simply because, if implicated more fully in pathogenesis, that knowledge raises uncomfortable implications.

4. **“We have a crisis” and, therefore, we must treat the investigation into the environmental causes of autism rates as a national public health emergency.** The only rationally defensible position, when one confronts the fact and the timing of the increased rates of autism, is to recognize that we are in an emergency situation. Emergencies greatly simplify decision rules, require the removal of resource constraints, require clear strategies and creative exploration of solutions, require a suspension of the assignment of blame until causation can be established, and eventually require the assignment of accountability and the extraction of lessons for the future. But does this position guide the strategic governance of autism science today? Unfortunately, it does not.

Until we come to grips with the question of time trends, autism science will perform poorly. We cannot afford to wait.

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