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Barbara J. Evans & Ellen Wright Clayton, *Deadly Delay: The FDA's Role in America's COVID-Testing Debacle*, 130 YALE L.J. F. 78 (2020-2021).

ALWD 6th ed.

Evans, B. J.; Clayton, E. ., *Deadly Delay: The FDA's Role in America's COVID-Testing Debacle*, 130 Yale L.J. F. 78 (2020-2021).

APA 7th ed.

Evans, B. J., & Clayton, E. (2020-2021). *Deadly Delay: The FDA's Role in America's COVID-Testing Debacle*. *Yale Law Journal Forum*, 130, 78-100.

Chicago 17th ed.

Barbara J. Evans; Ellen Wright Clayton, "Deadly Delay: The FDA's Role in America's COVID-Testing Debacle," *Yale Law Journal Forum* 130 (2020-2021): 78-100

McGill Guide 9th ed.

Barbara J Evans & Ellen Wright Clayton, "Deadly Delay: The FDA's Role in America's COVID-Testing Debacle" (2020-2021) 130 Yale LJ F 78.

AGLC 4th ed.

Barbara J Evans and Ellen Wright Clayton, 'Deadly Delay: The FDA's Role in America's COVID-Testing Debacle' (2020-2021) 130 Yale Law Journal Forum 78.

MLA 8th ed.

Evans, Barbara J., and Ellen Wright Clayton. "Deadly Delay: The FDA's Role in America's COVID-Testing Debacle." *Yale Law Journal Forum*, 130, 2020-2021, p. 78-100. HeinOnline.

OSCOLA 4th ed.

Barbara J Evans and Ellen Wright Clayton, 'Deadly Delay: The FDA's Role in America's COVID-Testing Debacle' (2020-2021) 130 Yale LJ F 78

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Deadly Delay: The FDA's Role in America's COVID-Testing Debacle

Barbara J. Evans and Ellen Wright Clayton

ABSTRACT. In response to the COVID-19 pandemic, the U.S. Food and Drug Administration (FDA) published a series of 2020 guidance documents on how to seek Emergency Use Authorizations (EUAs) for new SARS-CoV-2 tests. These guidance documents suggest EUAs are needed for laboratory-developed tests (LDTs), a type of test created and used in-house by high-complexity clinical laboratories that already are regulated by the Clinical Laboratory Improvement Amendments of 1988 (CLIA). These CLIA-regulated laboratories traditionally have provided a rapid response to emerging epidemics. Many laboratories viewed the FDA's 2020 guidance documents as having a practical binding effect even though the FDA lacked clear statutory authority to require EUAs for LDTs developed at CLIA-compliant high-complexity laboratories. The FDA's guidance documents led to decreased availability of testing, particularly in the early stages of the pandemic, which contributed to the catastrophic course of the COVID-19 pandemic in the United States.

This Essay concludes that the FDA lacks authority to require EUAs for COVID-related LDTs and that the FDA's intervention, in key respects, just replicates protections CLIA already provides. The Essay then discusses recently proposed legislation, known as the VALID Act of 2020, which would expand the FDA's authority to regulate LDTs. While spurred by longstanding concerns about tests used in genomics and precision medicine, the VALID Act's reach is much broader and would have harmful consequences for more traditional tests, including tests for emerging communicable diseases. Before Congress acts on specific legislative proposals, a much broader, more inclusive, nuanced, and evidence-informed dialogue about diagnostic-testing policy is needed.

INTRODUCTION

This Essay examines actions by the FDA that reportedly contributed to the delayed rollout of tests for COVID-19 in the United States in early 2020. These delays potentially foreclosed opportunities to arrest widespread community

transmission of the disease.¹ When a contaminated reagent slowed deployment of a COVID-19 test from the Centers for Disease Control and Prevention (CDC), other entities such as diagnostic test manufacturers and research, clinical, and public health laboratories were poised to fill the void. Actions by the FDA allegedly delayed or even halted some of their efforts.² This Essay finds that while some of the FDA's actions had strong statutory support, for others the agency's legal authority was less clear. The FDA's interference in areas Congress had not authorized the agency to regulate was an overreach, possibly the deadliest regulatory overreach in U.S. history.

The COVID-19 testing debacle reveals the perils of fighting a prior war instead of the war one is in. This Essay traces how policies the FDA applied to COVID-19 testing flowed, in large part, from ongoing efforts to modernize the FDA's regulatory scheme to address genetic and genomic testing and precision medicine. Those policies inadvertently may have hamstrung regulation of more traditional diagnostic tests, including tests for emerging communicable diseases.

While nothing will buy back time already lost, the COVID-19 outbreak casts a useful light on flaws in recent laboratory-testing policy. These flaws need correction, both to improve oversight during the current crisis and to avert future problems. COVID-19 is not the last pandemic. Hundreds of different coronaviruses circulate in pigs, cats, camels, and bats.³ Over the past two decades, a handful of those viruses jumped to humans.⁴ More will do so on a crowded planet where human and animal habitats increasingly overlap.⁵ Coronaviruses are just one subset of viruses, and viruses are just one type of pathogen. Future

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1. See, e.g., Editorial, *The Epic Failure of Coronavirus Testing in America*, N.Y. TIMES (Mar. 19, 2020), <https://www.nytimes.com/2020/03/19/opinion/coronavirus-testing.html> [<https://perma.cc/WD22-JCB6>]; see also James Glanz & Campbell Robertson, *Lockdown Delays Cost at Least 36,000 Lives, Data Show*, N.Y. TIMES (May 20, 2020), <https://www.nytimes.com/2020/05/20/us/coronavirus-distancing-deaths.html> [<https://perma.cc/4NUB-H4QB>] (discussing how small delays significantly increased COVID-19 death tolls in the United States); Sen Pei, Sasikiran Kandula & Jeffrey Shaman, *Differential Effects of Intervention Timing on COVID-19 Spread in the United States*, MEDRXIV (May 29, 2020), <https://www.medrxiv.org/content/10.1101/2020.05.15.20103655v2.full.pdf> [<https://perma.cc/G4XN-ESXX>] (same).
 2. See *infra* notes 34-37 and accompanying text.
 3. Nat'l Inst. of Allergy & Infectious Diseases, *Coronaviruses*, NAT'L INSTS. HEALTH (May 19, 2020), <https://www.niaid.nih.gov/diseases-conditions/coronaviruses> [<https://perma.cc/7B6D-LATB>].
 4. *Id.*
 5. Ferris Jabr, *How Humanity Unleashed a Flood of New Diseases*, N.Y. TIMES MAG. (June 17, 2020) <https://www.nytimes.com/2020/06/17/magazine/animal-disease-covid.html> [<https://perma.cc/U2BY-BAWJ>].

pandemics may be worse – possibly much worse – than this one.⁶ Lessons from the current pandemic might still help us in the next one. This Essay offers recommendations for Congress on reform of diagnostic-testing policy.

I. THE FDA'S ASSERTED AUTHORITY TO REGULATE CLINICAL LABORATORY SERVICES DURING EMERGENCIES

On January 31, 2020, the U.S. Department of Health and Human Services (HHS) declared a public health emergency related to COVID-19,⁷ the disease caused by the SARS-CoV-2 virus. This declaration triggered⁸ the FDA's authorities under sections 564, 564A, and 564B of the Food, Drug, and Cosmetic Act.⁹ Section 564, enacted after the September 11 attacks, allows the FDA to grant EUAs for medical products that the FDA has not yet cleared or approved as safe and effective.¹⁰

Section 564 allows the FDA to grant EUAs only for medical *products*, which the statute defines as “drug[s], device[s], or biological product[s].”¹¹ It grants no new powers for the FDA to regulate clinical laboratory *services*. The essential distinction is that products are inanimate things such as test instruments, machines, chemical reagents, and testing software, whereas services are provided by humans exercising expert professional judgment (for example, diagnosing whether a patient does or does not have a specific disease or medical condition).¹² Laboratory testing relies on a mix of products and skilled human services, with the roles of humans and machines closely integrated and, at times,

6. See, e.g., Antoine Flahault & Patrick Zylberman, *Influenza Pandemics: Past, Present, and Future Challenges*, 32 PUB. HEALTH REVS. 319, 319-22 (2010) (discussing the severity of pandemic threats from influenza).
7. Alex M. Azar II, *Determination that a Public Health Emergency Exists*, U.S. DEP'T HEALTH & HUM. SERVS. (Jan. 31, 2020), <https://www.phe.gov/emergency/news/healthactions/phe/Pages/2019-nCoV.aspx> [<https://perma.cc/246V-H5LU>]. The declaration was renewed on April 21, 2020, effective April 26, 2020. Alex M. Azar II, *Renewal of Determination that a Public Health Emergency Exists*, U.S. DEP'T HEALTH & HUM. SERVS. (Apr. 21, 2020), <https://www.phe.gov/emergency/news/healthactions/phe/Pages/covid19-21apr2020.aspx> [<https://perma.cc/QE9E-6K7F>].
8. Determination of Public Health Emergency, 85 Fed. Reg. 7316 (Feb. 7, 2020).
9. 21 U.S.C. §§ 360bbb-3, -3a, -3b (2018).
10. See National Defense Authorization Act for Fiscal Year 2004, Pub. L. No. 108-136, § 1603(a), 117 Stat. 1392, 1684 (2003) (codified as amended at 21 U.S.C. § 360bbb-3 (2018)) (adding section 564 to the Food, Drug, and Cosmetic Act).
11. 21 U.S.C. § 360bbb-3(a)(1) (2018).
12. See Ctr. for Devices & Radiological Health, *Optimizing FDA's Regulatory Oversight of Next-Generation Sequencing Diagnostic Tests*, U.S. FOOD & DRUG ADMIN. 19 (Feb. 20, 2015), <http://wayback.archive-it.org/7993/20170113000324/http://www.fda.gov/downloads>

hard to distinguish.¹³ The FDA is charged with regulating the “test itself” but not the “learned expert[s]” who use the test to provide laboratory services and, historically, has displayed careful respect for the distinction.¹⁴

Clinical laboratory services are separately regulated under the CLIA statute¹⁵ and its implementing regulations,¹⁶ administered by the Centers for Medicare and Medicaid Services (CMS) rather than by the FDA. The CLIA regulations focus on the quality of laboratory services – for example, whether personnel are suitably qualified, follow appropriate policies and procedures, maintain proper records, and work under adequate supervision and controls.¹⁷ Laboratories subject to CLIA must obtain one of five types of CLIA certificates from CMS, depending on the complexity of the testing the laboratory plans to perform.¹⁸

The FDA fulfills one crucial duty related to CLIA: the FDA categorizes the diagnostic products it regulates in terms of whether they are suitable for use only by CLIA-certified high-complexity laboratories, as opposed to laboratories certified for less-complex testing under CLIA.¹⁹ Section 564 similarly allows the

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[<https://perma.cc/EF8Y-Z7QG>] (statement of Dr. David Litwack) (noting, in the context of testing for genetic variants, that “when we get to a learned expert looking at variants, list of variants, and interpreting, you know, that is probably going to lie outside the test itself”).

13. See Barbara J. Evans, Gail Javitt, Ralph Hall, Megan Robertson, Pilar Ossorio, Susan M. Wolf, Thomas Morgan & Ellen Wright Clayton, *How Can Law and Policy Advance Genomic Analysis and Interpretation for Clinical Care?*, 48 J.L. MED. & ETHICS 44, 47 (2020) (discussing the interpretation of genetic test results).
14. See Ctr. for Devices & Radiological Health, *supra* note 12, at 19.
15. Clinical Laboratory Improvement Amendments of 1988, Pub. L. No. 100-578, 102 Stat. 2903 (codified as amended at 42 U.S.C. § 263a (2018)).
16. 42 C.F.R. §§ 493.1-.1850 (2020).
17. See, e.g., 42 C.F.R. §§ 493.1357-.1407, .1443-.1461 (2020) (setting out the required qualifications and responsibilities for laboratory directors, supervisory personnel, and other employees at laboratories performing tests of various complexities); *id.* at §§ 493.1105, .1251, .1283 (2020) (providing detailed requirements for maintaining and retaining records and making records available to state inspectors and accreditation bodies authorized to conduct periodic surveys under CLIA).
18. See 42 C.F.R. § 493.2 (2020) (defining five types of CLIA certificates that allow laboratories to conduct tests of differing levels of complexity); see also *id.* § 493.17 (2020) (describing criteria regulators consider when determining a test’s level of complexity). Generally speaking, low-complexity tests are those that require minimal scientific and technical knowledge to perform and for which testing materials are stable, reliable, or prepackaged and require little special handling. *Id.* In contrast, high-complexity tests (of which genomic tests are an example) require special knowledge, skills, training, and special handling to perform accurately. *Id.*
19. See U.S. FOOD & DRUG ADMIN., ADMINISTRATIVE PROCEDURES FOR CLIA CATEGORIZATION: GUIDANCE FOR INDUSTRY AND FOOD AND DRUG ADMINISTRATION STAFF (Oct. 2017), <https://www.fda.gov/media/71065/download> [<https://perma.cc/B4K5-MWZT>].

FDA, when granting EUAs for diagnostic products, to specify the types of laboratories authorized to use them.²⁰ The FDA does not, however, regulate the laboratories or establish standards for the clinical-testing services they provide; those tasks fall to CMS under CLIA.

In responding to the COVID-19 emergency, the FDA asserted that its emergency powers under section 564 encompass the power to regulate clinical laboratory services. This Essay questions whether that is a defensible interpretation. Congress has never clearly authorized the FDA to regulate clinical laboratory services,²¹ nor did the Obama Administration's FDA claim it could require EUAs for such services in a January 2017 guidance document interpreting its powers under section 564.²² The notion that the FDA can require EUAs for clinical laboratory services emerged in a series of guidance documents dated February

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20. 21 U.S.C. § 360bbb-3(m) (2018); *see also* U.S. FOOD & DRUG ADMIN., EMERGENCY USE AUTHORIZATION OF MEDICAL PRODUCTS AND RELATED AUTHORITIES: GUIDANCE FOR INDUSTRY AND OTHER STAKEHOLDERS 28 (Jan. 2017) [hereinafter EMERGENCY USE AUTHORIZATION], <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/emergency-use-authorization-medical-products-and-related-authorities> [<https://perma.cc/Q6JK-8E3T>] (interpreting 21 U.S.C. § 360bbb-3(m) as allowing the FDA, when issuing an EUA for a diagnostic device, “to indicate whether the test can be performed at a point-of-care setting or only in a laboratory able to handle more complex tests”).
21. *See, e.g.*, Paul D. Clement & Lawrence H. Tribe, *Laboratory Testing Services, as the Practice of Medicine, Cannot Be Regulated as Medical Devices*, AM. CLINICAL LAB. ASS'N (Jan. 7, 2015), <https://www.acla.com/wp-content/uploads/2015/01/Tribe-Clement-White-Paper-1-6-15.pdf> [<https://perma.cc/44QL-N6FJ>] (arguing that Congress has distinguished laboratory testing services from medical devices); Jonathan R. Genzen, Jeffrey S. Mohlman, Jerry L. Lynch, Michael W. Squires & Ronald W. Weiss, *Laboratory-Developed Tests: A Legislative and Regulatory Review*, 63 CLINICAL CHEMISTRY 1575, 1582 (Oct. 2017) (tracing the debate about whether laboratory-developed tests (LDTs) are devices and concluding that “[i]t is unlikely that interpretation of current statutes and regulations can fully resolve these issues”).
22. *See* EMERGENCY USE AUTHORIZATION, *supra* note 20 (describing the agency's interpretation of the authorities conferred by sections 564, 564A, and 564B of the Food, Drug, and Cosmetic Act).

29,²³ March 16,²⁴ May 4,²⁵ and May 11, 2020.²⁶ These represented evolving versions of the FDA's policy on EUAs for COVID-19 diagnostic tests, and this Essay focuses on the May 11 guidance, the latest version available at the time of writing. The 2020 dates on these documents mark them as policies of the Trump Administration, which bears responsibility for any delays in COVID-19 testing these policies caused—despite its attempts to pin blame on the Obama Administration.²⁷

As if in tacit admission that the FDA might lack authority to do some of the things it was doing in response to COVID-19, Congress introduced new legislation on March 5, 2020. That legislation, known as the Verifying Accurate Leading-edge IVCT [*in vitro* clinical test] Development (VALID) Act of 2020, would empower the FDA to regulate LDTs, which traditionally have been treated as part of CLIA-regulated clinical laboratory services rather than as FDA-regulated medical devices.²⁸ Earlier versions of the proposed VALID Act had been circulating in Washington for several years after an abortive FDA attempt to regulate LDTs through an October 2014 draft guidance document.²⁹ In 2016, the agency

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23. U.S. FOOD & DRUG ADMIN., POLICY FOR DIAGNOSTICS TESTING IN LABORATORIES CERTIFIED TO PERFORM HIGH COMPLEXITY TESTING UNDER CLIA PRIOR TO EMERGENCY USE AUTHORIZATION FOR CORONAVIRUS DISEASE-2019 DURING THE PUBLIC HEALTH EMERGENCY POLICY FOR CORONAVIRUS DISEASE-2019 TESTS DURING THE PUBLIC HEALTH EMERGENCY (Feb. 29, 2020) [hereinafter POLICY FOR CORONAVIRUS DISEASE (Feb. 29, 2020)] <https://www.regulations.gov/contentStreamer?documentId=FDA-2020-D-0987-0007&attachmentNumber=1&contentType=pdf> [<https://perma.cc/26NA-6B3V>].
 24. U.S. FOOD & DRUG ADMIN., POLICY FOR CORONAVIRUS DISEASE-2019 TESTS DURING THE PUBLIC HEALTH EMERGENCY (Mar. 16, 2020) (on file with author) [hereinafter POLICY FOR CORONAVIRUS DISEASE (Mar. 16, 2020)].
 25. U.S. FOOD & DRUG ADMIN., POLICY FOR CORONAVIRUS DISEASE-2019 TESTS DURING THE PUBLIC HEALTH EMERGENCY (REVISED) (May 4, 2020) (on file with author) [hereinafter POLICY FOR CORONAVIRUS DISEASE (May 4, 2020)].
 26. U.S. FOOD & DRUG ADMIN., POLICY FOR CORONAVIRUS DISEASE-2019 TESTS DURING THE PUBLIC HEALTH EMERGENCY (REVISED) (May 11, 2020), [hereinafter POLICY FOR CORONAVIRUS DISEASE (May 11, 2020)], <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/policy-coronavirus-disease-2019-tests-during-public-health-emergency-revised> [<https://perma.cc/QF6U-NE6T>].
 27. See Jessica McDonald, *Trump's Misplaced Blame on Obama for Coronavirus Tests*, FACTCHECK.ORG (Mar. 6, 2020), <https://www.factcheck.org/2020/03/trumps-misplaced-blame-on-obama-for-coronavirus-tests> [<https://perma.cc/X4DG-HZKT>].
 28. H.R. 6102, 116th Cong. (2020) (companion to S. 3404, 116th Cong. (2020)).
 29. U.S. FOOD & DRUG ADMIN., DRAFT GUIDANCE FOR INDUSTRY, FOOD AND DRUG ADMINISTRATION STAFF, AND CLINICAL LABORATORIES; FRAMEWORK FOR REGULATORY OVERSIGHT OF LABORATORY DEVELOPED TESTS (LTDs) (Oct. 3, 2014) <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/framework-regulatory-oversight-laboratory-developed-tests-ldts> [<https://perma.cc/P5YV-RNXU>].

abandoned that draft LDT guidance amid questions about the agency's jurisdiction to regulate laboratory services.³⁰ Efforts shifted to drafting new legislation to clarify the agency's authority. As the COVID-19 crisis unfolded, proponents of the VALID Act tweaked it to highlight its relevance to current events and introduced identical bills in the Senate and House.³¹

Congress has not, as of yet, enacted the proposed VALID Act. This Essay argues that the delay is fortunate, because the COVID-19 testing debacle displays weaknesses in the VALID Act's approach. The VALID Act would make permanent certain policies that the FDA embraced in its 2020 guidance documents on EUAs for COVID-19 testing.³² This Essay explores why these policies are problematic when applied to LDTs for emerging infectious diseases. The VALID Act would grant the FDA a broad mandate to regulate all categories of LDTs across the board, without nuancing this mandate for specific types of LDTs or confirming that FDA oversight adds value for all of them. The VALID Act's approach, whatever its merits may be for LDTs used in genomic testing and precision medicine, caused deadly delays when applied to LDTs for SARS-CoV-2 testing. Even if the VALID Act's approach may be suitable for some categories of LDTs, the proposed legislation needs careful tailoring before being applied to all LDTs.

Several years ago, Paul Clement and Lawrence Tribe observed that “[m]any clinical laboratories track world trends regarding infectious diseases and have demonstrated immediate or near-immediate responses to infectious diseases ranging from SARS to H1N1 and Avian Influenza.”³³ American laboratories similarly rose to the occasion during the COVID-19 epidemic. Late in January, a research laboratory in Seattle geared up to conduct COVID-19 testing on nasal swabs already collected as part of an ongoing flu study.³⁴ But on February 16, they were ordered to stop for want of an FDA approval to conduct COVID-19

30. See Thomas M. Burton, *FDA Backs off Plans to Issue Rules Governing Lab-Developed Tests*, WALL ST. J. (Nov. 21, 2016, 8:41 AM ET), <https://www.wsj.com/articles/fda-backs-off-plans-to-issue-rules-governing-lab-developed-tests-1479529259> [https://perma.cc/C9GN-NA43]; see also *Discussion Paper on Laboratory Developed Tests (LDTs)*, FOOD & DRUG ADMIN. (Jan. 13, 2017), <https://www.fda.gov/media/102367/download> [https://perma.cc/K8GQ-7VL7] (explaining that the U.S. Food and Drug Administration (FDA) had abandoned its draft LDT guidance because public comments revealed more complexity and stakeholder resistance than the FDA initially anticipated).

31. See H.R. 6102; S. 3404.

32. See POLICY FOR CORONAVIRUS DISEASE (Feb. 29, 2020), *supra* note 23; POLICY FOR CORONAVIRUS DISEASE (Mar. 16, 2020), *supra* note 24; POLICY FOR CORONAVIRUS DISEASE (May 4, 2020), *supra* note 25; POLICY FOR CORONAVIRUS DISEASE (May 11, 2020), *supra* note 26.

33. Clement & Tribe, *supra* note 21, at 18.

34. Sheri Fink & Mark Baker, *'It's Just Everywhere Already': How Delays in Testing Set Back the U.S. Coronavirus Response*, N.Y. TIMES (Mar. 10, 2020), <https://www.nytimes.com/2020/03/10/us/coronavirus-testing-delays.html> [https://perma.cc/XWZ2-MLAE].

testing.³⁵ Another laboratory director reports that “February was a frustrating month for my laboratory. We wanted to make tests to detect the virus that causes COVID-19. . . . The Food and Drug Administration told us to stop.”³⁶ In May 2020, the FDA instructed a COVID-testing partnership including a state public health authority, academic laboratories, and the Gates Foundation to “[p]lease discontinue patient testing and return of diagnostic results to patients until proper authorization is obtained.”³⁷

Laboratory-testing services long have been the front line of the nation’s rapid response to emerging infectious diseases. Clement and Tribe issued a warning that in 2015 seemed overwrought but, in light of recent events, now seems prophetic: “In these fast-moving life-or-death situations, awaiting . . . the completion of FDA’s clearance procedures could entail potentially catastrophic delays, with disastrous consequences for patient care.”³⁸ A flood of dispiriting headlines early in 2020 confirms that their concern was not undue: “How the Coronavirus Became an American Catastrophe”;³⁹ “‘Massive Blindspot’: Missing Data in COVID Pandemic Leaves US Vulnerable”;⁴⁰ “A Mayor Accepts a Nightmare: The COVID Tests Won’t Come”;⁴¹ “‘We’re in Big Trouble’: Microsoft Co-

35. *Id.*

36. Brian H. Shirts, *We’ll See More Shortages of Diagnostic Tests if the FDA Has Its Way*, STAT (Apr. 15, 2020), <https://www.statnews.com/2020/04/15/diagnostic-tests-shortages-fda-decision> [<https://perma.cc/9S68-3G26>].

37. Mike Baker, *F.D.A. Halts Coronavirus Testing Program Backed by Bill Gates*, N.Y. TIMES (May 15, 2020), <https://www.nytimes.com/2020/05/15/us/coronavirus-testing-seattle-bill-gates.html> [<https://perma.cc/YW3E-92XS>] (quoting a memorandum from the FDA).

38. Clement & Tribe, *supra* note 21, at 18.

39. Alexis C. Madrigal & Robinson Meyer, *How the Coronavirus Became an American Catastrophe*, ATLANTIC (Mar. 21, 2020), <https://www.theatlantic.com/health/archive/2020/03/how-many-americans-are-sick-lost-february/608521> [<https://perma.cc/2VXQ-EES8>].

40. Ella Torres, *‘Massive Blindspot’: Missing Data in COVID Pandemic Leaves US Vulnerable*, ABC NEWS (Apr. 17, 2020, 2:16 AM), <https://abcnews.go.com/Health/massive-blindspot-missing-data-covid-pandemic-leaves-us/story?id=70094182> [<https://perma.cc/63BD-4S3M>].

41. Erin Banco, *A Mayor Accepts a Nightmare: The COVID Tests Won’t Come*, DAILY BEAST (May 4, 2020, 4:41 AM ET), <https://www.thedailybeast.com/a-mayor-accepts-a-nightmare-the-covid-tests-wont-come> [<https://perma.cc/WG97-NVS3>].

Founder Bill Gates Slams the ‘Mismanagement’ of the Coronavirus Testing System and Warns We Can’t ‘Wave a Wand’ to Get the Economy Back to Normal’;⁴² and “It’s Too Late to Avoid Disaster, but There Are Still Things We Can Do.”⁴³

One thing Americans can do is to ask whether the FDA’s 2020 EUA policies reflected a lawful exercise of the agency’s authority to regulate LDTs. If the agency overreached its current legal authority, the question is whether the FDA’s authority should be expanded, as the VALID Act would do, to encompass the powers that the FDA asserted (but did not have) in its 2020 EUA policies. To the extent those policies delayed the nation’s response to the recent pandemic, the proposed legislation is fundamentally flawed and needs major modification – to avert future harm – before Congress should consider it.

II. DID THE FDA OVERREACH IN REGULATING COVID-19 TESTS?

Congress grants the FDA authority to regulate medical devices, which Congress defines in a way that includes instruments, apparatuses, machines, reagents, and related articles or components that are intended for use in the diagnosis, prevention, cure, mitigation, or treatment of disease.⁴⁴ This definition encompasses *in vitro* diagnostic (IVD) products, which are test kits manufactured by third parties and sold to clinical laboratories for use in collecting, preparing, and examining specimens from the human body to diagnose disease or determine a person’s state of health.⁴⁵ There is no question that the FDA can regulate test kits, and the agency is squarely within its authority to require EUAs for COVID-related test kits, sample collection kits, and other IVD products that the agency has not yet cleared or approved.⁴⁶ As of July 21, 2020, the agency had granted EUAs for 150 IVD products.⁴⁷

42. Francis Mulraney, ‘We’re in Big Trouble’: Microsoft Co-founder Bill Gates Slams the ‘Mismanagement’ of the Coronavirus Testing System and Warns We Can’t ‘Wave a Wand’ to Get the Economy Back to Normal, DAILY MAIL (Apr. 9, 2020, 6:34 PM EDT), <https://www.dailymail.co.uk/news/article-8206405/Were-big-trouble-Microsoft-founder-Bill-Gates-warns-coronavirus-testing-improve.html> [<https://perma.cc/Q9DK-BNDZ>].

43. Michael T. Osterholm & Mark Olshaker, Opinion, *It’s Too Late to Avoid Disaster, but There Are Still Things We Can Do*, N.Y. TIMES (Mar. 27, 2020), <https://www.nytimes.com/2020/03/27/opinion/coronavirus-trump-testing-shortages.html> [<https://perma.cc/AUN5-RRTH>].

44. 21 U.S.C. § 321(h) (2018).

45. 21 C.F.R. § 809.3(a) (2020).

46. 21 U.S.C. § 360bbb-3 (2018).

47. *Emergency Use Authorization: Emergency Use Authorization (EUA) Information, and List of All Current EUAs*, FOOD & DRUG ADMIN., <https://www.fda.gov/emergency-preparedness-and-response/mcm-legal-regulatory-and-policy-framework/emergency-use-authorization#covidinvitrodev> [<https://perma.cc/43DN-AASV>].

Instead of purchasing ready-made test kits, some laboratories have the necessary expertise to create their own LDTs in-house. The FDA defines an LDT as an IVD that is “intended for clinical use and designed, manufactured, and used *within a single laboratory*.”⁴⁸ Here, a single laboratory means a facility with a single certificate to operate under the CLIA regulations, and the FDA and CMS both maintain that LDTs should only be developed and used at laboratories qualified to perform high-complexity testing under CLIA.⁴⁹

If a CLIA-certified high-complexity laboratory creates a test exclusively for use at its own facility, the test is an LDT. An LDT supports the delivery of a laboratory's CLIA-regulated professional services and traditionally has been treated as part of those services rather than as a medical device in its own right.⁵⁰ This concept is similar to tort doctrines that protect physicians and hospitals from strict product liability in situations where the healthcare provider charges for a medical device as part of a larger transaction to provide surgical services to implant the device. Technically, the healthcare provider is a device seller and seemingly could face strict product liability if the device proves defective, but courts tend to shield providers on the theory that providing the surgical services – rather than selling the device – was the main point of the transaction.⁵¹

If the same laboratory creates the same test and shares it for use by other laboratories, the test is no longer an LDT. A critical distinction between LDTs and FDA-regulated IVDs is that the former are used by those who designed them whereas IVDs are designed for use by third parties and hence at a minimum require greater attention to operability. By sharing the test, the laboratory crosses a jurisdictional line and becomes an FDA-regulated IVD product manufacturer. On February 4, the FDA granted its first COVID-related EUA for a diagnostic

48. U.S. FOOD & DRUG ADMIN., DRAFT GUIDANCE FOR INDUSTRY, FOOD AND DRUG ADMINISTRATION STAFF, AND CLINICAL LABORATORIES; FRAMEWORK FOR REGULATORY OVERSIGHT OF LABORATORY DEVELOPED TESTS (LTDs) 5 (Oct. 3, 2014) (emphasis added), <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/framework-regulatory-oversight-laboratory-developed-tests-ldts> [<https://perma.cc/4XWF-LVU2>]. Note that the use “within a single laboratory” does not preclude the laboratory from testing specimens collected at external clinics and hospitals and reporting results back to those facilities for use in patient care. It merely precludes the laboratory that created an LDT from sharing the LDT with other laboratories for their use, because doing so would amount to manufacturing a test kit for shipment to the other laboratories and would subject the first laboratory to FDA regulation as a test kit manufacturer.

49. *Id.* at 5 n.5; CTRS. FOR MEDICARE & MEDICAID SERVS., U.S. DEP'T OF HEALTH & HUM. SERVS., CLIA OVERVIEW: WHAT IS CMS'S AUTHORITY REGARDING LABORATORY DEVELOPED TESTS (LDTs) AND HOW DOES IT DIFFER FROM FDA'S AUTHORITY? 3 (Oct. 22, 2013), https://www.cms.gov/Regulations-and-Guidance/Legislation/CLIA/Downloads/LDT-and-CLIA_FAQs.pdf [<https://perma.cc/99PD-6H39>].

50. See, e.g., Clement & Tribe, *supra* note 21, at 4-6.

51. See, e.g., Royer v. Catholic Med. Ctr., 741 A.2d 74 (N.H. 1999).

test kit developed by a CDC laboratory.⁵² The test was not an LDT because the CDC intended to ship the test kits for use by other laboratories. In effect, the CDC laboratory was manufacturing an IVD product and the FDA properly required it to seek an EUA.

The FDA's 2020 EUA guidance documents⁵³ entered shaky statutory ground, however, by suggesting that the FDA can require EUAs for LDTs that CLIA-certified, high-complexity laboratories develop for their own use. Technically, LDTs do seem to fit the definition of an FDA-regulable medical device; they consist of instruments, apparatuses, machines, reagents, and related articles that are "intended for use in the diagnosis[,] . . . cure, mitigation, treatment, or prevention of disease."⁵⁴ However, LDTs serve as a technical aid that extends the perceptual and cognitive capabilities of licensed laboratory professionals who actually render the diagnosis and bear responsibility if it is wrong. If a doctor crafts a new pair of reading glasses to use when writing prescriptions, the glasses are not an FDA-regulable medical device even though the doctor intends them for use in treatment of disease.⁵⁵ They are an aid to the doctor's professional services, and if they are inadequate in ways that place patients at risk, that is a matter for oversight by the physician's licensing authority and through exposure to tort liability. More generally, if every instrument, apparatus, machine, reagent, or related article that healthcare professionals use while diagnosing and treating patients was deemed to be a medical device, virtually everything in clinics and laboratories would be subject to FDA regulation.

LDTs, as part of clinical laboratory services, traditionally have been subject to the CLIA regulatory framework.⁵⁶ CLIA-certified laboratories receive federal oversight, including oversight of their LDTs, under the CLIA regulations.⁵⁷ The CLIA program requires CLIA-compliant laboratories to hire scientifically qualified personnel and to follow rigorous testing and record-keeping procedures.⁵⁸ CLIA also oversees the analytical validity of tests—that is, how well a test

52. Letter from Denise M. Hinton, Chief Scientist, Food & Drug Admin., to Robert R. Redfield, Dir., Ctrs. for Disease Control & Prevention 1 (Mar. 15, 2020), <https://www.fda.gov/media/134919/download> [<https://perma.cc/6K6E-KTWG>].

53. See *supra* notes 23-26.

54. 21 U.S.C. § 321(h) (2018).

55. *Id.*

56. See generally Clement & Tribe, *supra* note 21 (tracing this history).

57. 42 C.F.R. § 493 (2020).

58. See, e.g., *id.* §§ 493.1357, .1405-.1407, .1443-.1461 (setting out required qualifications and responsibilities for laboratory directors, supervisory personnel, and other employees at laboratories performing tests of various complexities); *id.* §§ 493.1105, .1251, .1283 (providing detailed requirements for maintaining and retaining records and making records available to state inspectors and accreditation bodies authorized to conduct periodic surveys under CLIA).

measures its “analyte,” the property or characteristic the test aims to detect⁵⁹ – considering factors such as the test’s accuracy, its rate of false positives and negatives, and its reliability in the sense of repeatedly producing the same result on similar biospecimens.⁶⁰ Laboratories introducing a new LDT must validate its accuracy before placing it in service⁶¹ and must conduct periodic proficiency tests to check its performance on specimens where the correct result has already been determined by other methods.⁶² CLIA calls for the results of these validation procedures and proficiency tests to be reviewed during periodic surveys by state inspectors or authorized accreditation bodies.⁶³ Laboratories in two states (New York and Washington) are CLIA-exempt and receive oversight by state laboratory regulators whose requirements CMS has determined are equal to or more stringent than CLIA’s requirements.⁶⁴

The Human Genome Project in the 1990s sparked a critique of the CLIA program, centered on whether CLIA provides an adequate regulatory framework for genetic and genomic LDTs.⁶⁵ A major concern is that CLIA addresses only

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59. See *id.* § 493.2 (defining the term “analyte” as “a substance or constituent for which the laboratory conducts testing,” for purposes of the CLIA regulations).
 60. See CTRS. FOR MEDICARE & MEDICAID SERVS., *supra* note 49 (summarizing CLIA’s requirements); see also *Enhancing the Oversight of Genetic Tests: Recommendations of the SACGT, SECRETARY’S ADVISORY COMMITTEE ON GENETIC TESTING* 15 n.10 (July 2000), https://osp.od.nih.gov/wp-content/uploads/2013/11/oversight_report.pdf [<https://perma.cc/4QD2-8TR4>] (defining analytical validity).
 61. See CTRS. FOR MEDICARE & MEDICAID SERVS., *supra* note 49, at 2 (“Under the CLIA regulations, when a laboratory uses a test system that has not received FDA clearance or approval, such as a LDT, the laboratory may not release any test results prior to establishing certain performance characteristics relating to analytical validity for the use of that test system in the laboratory’s own environment, see 42 C.F.R. 493.1253(b)(2) (establishment of performance specifications).”).
 62. See 42 U.S.C. § 263a(f)(3) (2018) (describing CLIA’s proficiency testing program).
 63. See CTRS. FOR MEDICARE & MEDICAID SERVS., U.S. DEP’T OF HEALTH & HUM. SERVS., CLINICAL LABORATORY IMPROVEMENT AMENDMENTS (CLIA) STATE SURVEY AGENCY CONTACTS, <https://www.cms.gov/Regulations-and-Guidance/Legislation/CLIA/Downloads/CLIASA.pdf> [<https://perma.cc/RX8Z-TM47>] (listing state bodies authorized to conduct CLIA inspections); CTRS. FOR MEDICARE & MEDICAID SERVS., LIST OF APPROVED ACCREDITATION ORGANIZATIONS UNDER THE CLINICAL LABORATORY IMPROVEMENT AMENDMENTS (CLIA), <https://www.cms.gov/Regulations-and-Guidance/Legislation/CLIA/Downloads/AOList.pdf> [<https://perma.cc/32HT-3P8W>] (listing the accreditation bodies that the Centers for Medicare and Medicaid Services (CMS) has approved).
 64. CTRS. FOR MEDICARE & MEDICAID SERVS., U.S. DEP’T OF HEALTH & HUM. SERVS., LIST OF EXEMPT STATES UNDER THE CLINICAL LABORATORY IMPROVEMENT AMENDMENTS (CLIA), <https://www.cms.gov/Regulations-and-Guidance/Legislation/CLIA/Downloads/ExemptStatesList.pdf> [<https://perma.cc/2G59-HW5G>].
 65. See, e.g., NAT’L INSTS. OF HEALTH-DEP’T OF ENERGY WORKING GRP. ON ETHICAL, LEGAL & SOC. IMPLICATIONS OF HUMAN GENOME RESEARCH, TASK FORCE ON GENETIC TESTING, PROMOTING

analytical validity, but not clinical validity.⁶⁶ Clinical validity “refers to the accuracy with which a test predicts the presence or absence of a clinical condition or predisposition” to disease.⁶⁷ It depends not so much on attributes of the test itself as on the state of scientific knowledge more generally: is there a strong and well-validated association between having a particular analyte (such as the presence or absence of a particular genetic variant in a person’s genome) and having a specific health condition?⁶⁸

With traditional diagnostic tests, such as a test for strep infection, analytical validity or accurate detection of the analyte (i.e., the presence or absence of streptococcus) provides useful information to guide clinical care. With genomic tests, merely detecting an analyte (a particular genetic variant) does not always provide clinically useful information to guide diagnostic or treatment decisions. Scientists may not yet know how the variant affects human health, or people who have the variant may exhibit differing physical manifestations of disease—or none at all—for reasons not always understood. Thus, even an analytically valid genetic test may not offer meaningful insight into the person’s health.⁶⁹

Another concern about CLIA is that it has not always been vigorously enforced. A 2006 report by the United States Government Accountability Office documented lax enforcement of CLIA’s statutory requirements, including the proficiency-testing program that is central to CLIA’s oversight of analytical validity.⁷⁰ There also are logistical and practical differences between CLIA and FDA regulation. For example, CLIA ensures review of laboratories’ validation and proficiency-testing data during biennial surveys that may occur months after a laboratory has introduced a new LDT, whereas the FDA ostensibly requires prior review of IVD products before they can be used⁷¹ (although, in reality, only one percent of FDA-regulated medical devices pass through its premarket approval

SAFE AND EFFECTIVE GENETIC TESTING IN THE UNITED STATES ch. 2 (Neil A. Holtzman & Michael S. Watson eds., 1997), <https://www.genome.gov/10001733/genetic-testing-report> [<https://perma.cc/KG4W-AV6R>]; SEC’Y’S ADVISORY COMM. ON GENETIC TESTING, *supra* note 60, 8-9.

66. See CTRS. FOR MEDICARE & MEDICAID SERVS., *supra* note 49, at 2 (“CMS’[s] CLIA program does *not* address the clinical validity of any test.”).

67. SEC’Y’S ADVISORY COMM. ON GENETIC TESTING, *supra* note 60, at 15 n.11 (defining clinical validity).

68. Simon Sanderson, Ron Zimmern, Mark Kroese, Julian Higgins, Christine Patch & Jon Emery, *How Can the Evaluation of Genetic Tests be Enhanced? Lessons Learned from the ACCE Framework and Evaluating Genetic Tests in the United Kingdom*, 7 *GENETICS MED.* 495, 495-500 (2015).

69. Wylie Burke, *Clinical Validity and Clinical Utility of Genetic Tests*, 81 *CURRENT PROTOCOLS IN HUM. GENETICS* 9.15.1 (2014).

70. See U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-06-416, *CLINICAL LAB QUALITY: CMS AND SURVEY OVERSIGHT SHOULD BE STRENGTHENED* 33 (2006).

71. See CTRS. FOR MEDICARE & MEDICAID SERVS., *supra* note 49, at 3.

process that requires a data-driven review of safety and effectiveness).⁷² The FDA also has adverse-event reporting and surveillance systems aimed at detecting problems after IVD products move into clinical use.⁷³

The FDA's response to the COVID-19 pandemic revealed an agency that has been under intense pressure for over twenty years to address perceived weaknesses in CLIA's oversight of genetic and genomic LDTs. The agency appeared to presume that CLIA is inadequate and the FDA needs to step up. Whether this CLIA critique, which centers on genetic and genomic testing, has any relevance to COVID-19 testing is not clear. The FDA's May 11, 2020 guidance sets out policies for two types of COVID-19 LDTs: diagnostic tests to detect presence of the SARS-CoV-2 virus and serological/antibody tests to detect antibodies humans produce when exposed to it.⁷⁴ COVID-19 diagnostic tests do employ certain genetic-testing techniques (e.g., polymerase chain reaction to make copies of the analyte), and they detect RNA of the coronavirus pathogen, but they are not human genetic tests of the type for which the FDA's genetic-testing policies were designed.

COVID-19 diagnostic tests are the type of traditional diagnostic tests for which the CLIA program was originally designed. Accurately detecting the analyte (i.e., the SARS-CoV-2 virus) provides clinically significant information that is useful in managing patient care and public health. Unlike genetic tests, where there may be significant scientific debate about the clinical significance of particular genetic variants, there is little dispute among scientists that having SARS-CoV-2 in your body is a bad thing. With serological/antibody tests that purport to detect antibodies against SARS-CoV-2, there is more room to question the clinical validity of an analytically valid test result. Scientists still are unsure whether having antibodies confers future immunity, and for how long. Nevertheless, an analytically valid finding that a person has COVID-19 antibodies is clinically significant because it confirms an infection in the past. As long as antibody tests are marketed and reported in ways that refrain from making groundless claims (e.g., "Congratulations! You are immune!"),⁷⁵ there is no reason why

72. See INST. OF MED., MEDICAL DEVICES AND THE PUBLIC'S HEALTH: THE FDA 510(K) CLEARANCE PROCESS AT 35 YEARS 4 (2011).

73. *Id.* at 129-33 (discussing the strengths and weaknesses of FDA's adverse-event reporting and medical device surveillance systems).

74. See POLICY FOR CORONAVIRUS DISEASE (May 11, 2020), *supra* note 26, at 4, 5 n.3.

75. Whether the presence of antibodies should be used to determine, for example, who can go to work, as a so-called "immunity passport," is outside the purview of either the FDA or CMS's CLIA program, or the scope of this Essay. For a discussion of immunity passports, see Natalie Kofler & Françoise Baylis, *Ten Reasons Why Immunity Passports Are a Bad Idea*, 581 NATURE 379 (2020) (listing practical and ethical objections to such uses).

analytically valid, CLIA-regulated antibody LDTs should not move in U.S. commerce, just as Congress, by enacting the CLIA statute, intended them to move.

Even though section 564 grants no new authority for the FDA to regulate clinical laboratory services,⁷⁶ the agency's May 11, 2020 guidance on EUAs for COVID-19 LDTs cites section 564 as its source of statutory authority.⁷⁷ The guidance calls for LDTs to be "validated prior to use"⁷⁸ and suggests validation procedures that "should be performed to ensure analytical and clinical validity."⁷⁹ At first blush, the FDA seems to be adding value; isn't it better to confirm analytical *and* clinical validity, rather than analytical validity alone? On closer inspection, the guidance's validation procedures scarcely venture beyond the analytical validation that CLIA already requires. For example, the FDA directs laboratories to assess limits of an LDT's ability to detect the property or characteristic it purports to detect⁸⁰ and whether the LDT gives concordant results on samples that already have been tested using other available methods.⁸¹ These FDA procedures "to ensure analytical and clinical validity"⁸² simply echo CLIA's analytical validity requirements. CLIA-certified high-complexity clinical laboratories already must internally validate their LDTs before placing them in service, and they must "proficiency test" their LDTs by comparing performance on specimens already tested using alternative methods. The FDA's procedures do nothing to address clinical validity.

As under CLIA, the FDA performs no independent validation of its own. Instead, the agency relies on a laboratory's skilled personnel to conduct their own validation procedures, focusing on analytical validity. The only difference lies in the timing of regulatory review of the data. CLIA's surveys are biennial, whereas the FDA's guidance calls on laboratories to submit data on their LDTs within fifteen days of commencing testing under an EUA. Perhaps that adds value, but one could debate whether, in the midst of a rapidly unfolding national emergency, America's small cohort of highly skilled, CLIA-certified laboratory personnel were best utilized by having them complete unfamiliar paperwork to submit data to an unfamiliar regulator that apparently lacked authority to require them to do so.⁸³

76. See *supra* notes 11-22 and accompanying text.

77. See POLICY FOR CORONAVIRUS DISEASE (May 11, 2020), *supra* note 26, at 6.

78. *Id.* at 8.

79. *Id.*; see also *id.* at 17-20 (describing the procedures).

80. *Id.* at 18.

81. *Id.* at 18-19.

82. *Id.* at 8.

83. See Julia Ioffe, *The Infuriating Story of How the Government Stalled Coronavirus Testing*, GQ (Mar. 16, 2020), <https://www.gq.com/story/inside-americas-coronavirus-testing-crisis>

Does this imply that the FDA's 2020 EUA guidances were unlawful? The answer is no, but that answer rests on an obscure legal fine point. Agency guidance documents are nonbinding, which means they have no legal force independent of the statutes and regulations they interpret or implement.⁸⁴ The FDA did not actually *force* laboratories to do things that the agency has no power to require; the agency merely *recommended* they do so. "Nonbinding" means that the FDA cannot punish a laboratory for failing to comply with an FDA guidance document and instead would have to prove that the laboratory violated the underlying statute (in this case, section 564) that the guidance purports to interpret.⁸⁵ When a guidance lacks statutory foundation, an agency would never be able to prove that.

The May 11 guidance clearly states that it "do[es] not establish legally enforceable responsibilities" and "should be viewed only as recommendations."⁸⁶ It merely "encourages" CLIA-certified high-complexity laboratories to submit EUAs for their LDTs.⁸⁷ It says "laboratories should notify FDA" after they complete the validation process and "recommends" that they submit a completed EUA request within fifteen days.⁸⁸ It warns that if this is not done, the "FDA intends to remove the laboratory from its website listing of laboratories that have notified FDA and may take additional actions as appropriate."⁸⁹ The first part of this threat is innocuous: the FDA will stop saying you complied with its guidance if you did not comply with it. The part about "additional actions" sounds more threatening. Still, taking additional action "as appropriate" may amount to taking no action if an agency lacks legal authority to force you to do as it recommends.

A laboratory with alert legal counsel would know that guidance documents are nonbinding and might realize when an agency's guidance is at odds with the law. That does not imply that the laboratory is free to disregard the guidance.

[<https://perma.cc/6856-MJXE>] (outlining the highly burdensome, and at times duplicative, FDA paperwork requirements to which one Seattle clinical laboratory was subjected as it struggled to bring a COVID-19 diagnostic test onstream).

84. See Mark Seidenfeld, *Substituting Substantive for Procedural Review of Guidance Documents*, 90 TEX. L. REV. 331, 334 n.14, 347 (2011) ("This [lack of independent legal force] means that a person who is alleged to have violated an agency's regulatory law must be shown to have violated the underlying statute or legislative rule [i.e., regulation] that the agency is implementing; it is not sufficient for the agency to demonstrate that the person violated [the guidance document].").

85. *Id.* at 347.

86. POLICY FOR CORONAVIRUS DISEASE (May 11, 2020), *supra* note 26, at 5.

87. *Id.* at 7.

88. *Id.* at 9.

89. *Id.* at 9.

Nonbinding guidances often induce “grudging compliance, ‘even when the doubts as to the lawfulness of the [guidance] are substantial.’”⁹⁰ The practical reality is that even a flawed guidance document “still establishes the law for all those unwilling to pay the expense, or suffer the ill-will of challenging the agency in court.”⁹¹ When that happens, a guidance is said to be “practical[ly] binding”⁹² even though the agency could not actually enforce it.⁹³

Laboratories, staffed by busy scientists with little expertise in regulatory affairs and passionate about obtaining accurate test results, are an easy mark for regulators seeking to use guidance documents to work around inconvenient statutes. They often comply with flawed guidance documents out of the mistaken belief that anything a regulator says must be legally required and, in any event, not worth the trouble to fight. This is not the first time an HHS agency has used guidance to regulate laboratories in ways that Congress, when enacting federal statutes, never envisioned. Another recent instance was a guidance document that CMS posted on its CLIA web site, without notice or comment, to implement a policy that the CLIA statute clearly does not seem to support.⁹⁴ The FDA’s 2020 COVID-19 EUA guidance may be another example. Section 564 does not clearly allow the FDA to require EUAs for LDTs, but as of July 21, 2020, thirty-seven clinical laboratories had given practical binding effect to the guidance. They duly applied for and were granted EUAs for COVID diagnostic LDTs.⁹⁵

90. Sean Croston, *The Petition Is Mightier than the Sword: Rediscovering an Old Weapon in the Battles Over ‘Regulation Through Guidance’*, 63 ADMIN. L. REV. 381, 387 (2011) (quoting William Funk, *A Primer on Nonlegislative Rules*, 53 ADMIN. L. REV. 1321, 1340 (2001)).

91. Nina A. Mendelson, *Regulatory Beneficiaries and Informal Agency Policymaking*, 92 CORNELL L. REV. 397, 400 (2007) (quoting Todd D. Rakoff, *The Choice Between Formal and Informal Modes of Administrative Regulation*, 52 ADMIN. L. REV. 159, 167 (2000)).

92. See Robert A. Anthony, *Interpretive Rules, Policy Statements, Guidances, Manuals, and the Like – Should Federal Agencies Use Them to Bind the Public?*, 41 DUKE L.J. 1311, 1315 (1992).

93. See *Appalachian Power Co. v. EPA*, 208 F.3d 1015, 1021 (D.C. Cir. 2000) (observing that guidance “can as a practical matter, have a binding effect. If an agency acts as if a document issued at headquarters is controlling in the field, if it treats the document in the same manner as it treats a legislative rule . . . [and] if it leads private parties . . . to believe that [the agency] will [apply the policy expressed in the document], then the agency’s document is for all practical purposes ‘binding.’”).

94. See Barbara J. Evans & Susan M. Wolf, *A Faustian Bargain that Undermines Research Participants’ Privacy Rights and Return of Results*, 71 FLA. L. REV. 1281 (2019) (discussing CMS’s use of guidance to implement policies not supported by the CLIA statute); Jason Bobe & George Church, *PDF that Blocks Study Participants from Getting Their Own Data Needs to Go*, STATNEWS (June 29, 2020), <https://www.statnews.com/2020/06/29/unsigned-pdf-stifles-researchers-from-sharing-data-with-participants> [<https://perma.cc/DP9B-94RQ>].

95. *Emergency Use Authorization: Emergency Use Authorization (EUA) Information, and List of All Current EUAs*, U.S. FOOD & DRUG ADMIN. (July 10, 2020), <https://www.fda.gov/emergency>

III. HOW DID THIS HAPPEN, AND WHAT CAN BE LEARNED?

As a focus of legal scholarship, the regulation of clinical laboratory testing resembles baseball, with long innings of boredom broken by intermittent—very intermittent—moments when what is happening on the field seems important and exciting to spectators. The recent American COVID-19-testing debacle is the latest “baseball moment” when laboratory testing draws scholarly interest. It is the third such moment in sixty years.

The first began in the 1960s and focused scholarly concern on problems with inaccurate testing. Enactment of Medicare and Medicaid legislation in mid-1965 made the federal government a major payor for clinical laboratory testing services.⁹⁶ An array of new and increasingly complex testing technologies were moving into wider use at that same time, raising concern that federal dollars might be wasted on low-quality tests. An example was that the use of Papanicolaou (Pap) tests for cervical cancer screening expanded from thirty percent of women in 1960 to fifty percent in 1970 and eighty percent in 1980,⁹⁷ despite perceived concerns with test accuracy.⁹⁸ These trends prompted calls for federal oversight of laboratory testing, a traditional area of state regulation,⁹⁹ and Congress enacted the Clinical Laboratory Improvement Act of 1967.¹⁰⁰ Jurisdictional limits of the 1967 statute allowed some low-quality laboratories to escape federal oversight, and a public scandal erupted in the 1980s when inaccurate Pap tests subjected healthy women to needless treatment while many affected women

-preparedness-and-response/mcm-legal-regulatory-and-policy-framework/emergency-use-authorization [https://perma.cc/NQ49-PX2V].

96. CMS' Program History, CTRS. FOR MEDICARE & MEDICAID SERVS. (Jan. 13, 2020, 2:44 PM) <https://www.cms.gov/About-CMS/Agency-Information/History> [https://perma.cc/Z5XU-22RA].
97. Marguerite B. Vigliani, *Whatever Happened to the Annual Pap Smear?*, 2013 R.I. MED. J. 36, 36 (January).
98. William J. Frable, *Proficiency Testing for Cytologists: Where Science, Biology, and Government Regulations Collide*, 105 CANCER CYTOPATHOLOGY 119, 120 (2005).
99. Barbara J. Evans, *HIPAA's Individual Right of Access to Genomic Data: Reconciling Safety and Civil Rights*, 102 AM. J. HUM. GENETICS 5, 6 (2018) (pointing out that laboratory testing was traditionally regulated by the states as part of the practice of medicine).
100. Clinical Laboratories Improvement Act of 1967, Pub. L. No. 90-174, 81 Stat. 536 (codified at 42 U.S.C. § 263a (1982)).

went undiagnosed.¹⁰¹ Today's CLIA statute,¹⁰² enacted in 1988, expanded federal oversight to address those concerns.

Advances in genetics posed the second round of policy challenges. A governmental task force formed in 1991 felt genetic tests raise unique regulatory and policy issues.¹⁰³ Most of the commercially available genetic tests in the 1990s were LDTs, and the FDA came under pressure to play a larger role in regulating genetic LDTs.¹⁰⁴ It was in this era, in 1992, that the FDA first claimed it had authority to regulate LDTs as medical devices.¹⁰⁵ The FDA's failed 2014 LDT guidance¹⁰⁶ and the more recent VALID Act legislative proposal¹⁰⁷ reflect ongoing efforts to address these challenges.

An important insight, however, was lost along the way. Early calls for the FDA to expand its oversight of genetic LDTs in the 1990s were rooted in genetic exceptionalism, the notion that "genetic tests should be treated differently from other laboratory tests for oversight purposes."¹⁰⁸ By 2008, however, the Secretary's Advisory Committee for Genetics, Health, and Society observed a growing

101. Ctrs. for Medicare & Medicaid Servs., *CMS Initiatives to Improve Quality of Laboratory Testing Under the CLIA Program*, U.S. DEP'T OF HEALTH & HUM. SERVS. 1 (July 2006), <https://www.cms.gov/Regulations-and-Guidance/Legislation/CLIA/Downloads/060630BackgrounderrEG.pdf> [<http://perma.cc/6DL8-6WRY>].
102. Clinical Laboratory Improvement Amendments Act of 1988, Pub. L. No. 100-578, 102 Stat. 2903 (codified as amended at 42 U.S.C. § 263a (2018)).
103. *Enhancing the Oversight of Genetic Tests: Recommendations of the SACGT*, *supra* note 60, at 13 (discussing the formation and findings of the National Institutes of Health (NIH)-Department of Energy (DOE) Task Force on Genetic Testing and its Joint NIH-DOE Committee to Evaluate the Ethical-Legal, and Social Implications Program of the Human Genome Project).
104. *See supra* notes 65-72 and accompanying text.
105. *See* Clement & Tribe, *supra* note 21, at 6 n.1 (tracing FDA's first assertion of authority to regulate LDTs to 1992).
106. U.S. FOOD & DRUG ADMIN., DRAFT GUIDANCE FOR INDUSTRY, FOOD AND DRUG ADMINISTRATION STAFF, AND CLINICAL LABORATORIES; FRAMEWORK FOR REGULATORY OVERSIGHT OF LABORATORY DEVELOPED TESTS (LTDs) (Oct. 3, 2014) <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/framework-regulatory-oversight-laboratory-developed-tests-ltds> [<https://perma.cc/P5YV-RNXU>].
107. *See* H.R. 6102, 116th Cong. (2020) (companion to S. 3404, 116th Cong. (2020)).
108. *See* Secretary's Advisory Committee on Genetics, Health, and Society, *U.S. System of Oversight of Genetic Testing: A Response to the Charge of the Secretary of Health and Human Services*, U.S. DEP'T HEALTH & HUM. SERVS., 17-20 (April 2008), https://osp.od.nih.gov/wp-content/uploads/2013/11/SACGHS_oversight_report.pdf [<https://perma.cc/53LB-TUZP>] (citing and reviewing 1990s literature on genetic exceptionalism); *see also* COMMITTEE ON ASSESSING GENETIC RISKS, *ASSESSING GENETIC RISKS: IMPLICATIONS FOR HEALTH AND SOCIAL POLICY* 11-14 (Lori B. Andrews, Jane E. Fullarton, Neil A. Holtzman & Arno G. Motulsky eds., 1994) (expressing the view that genetic tests present special concerns that may require tailored regulatory frameworks).

trend to reject exceptionalist approaches.¹⁰⁹ This trend colored the FDA's subsequent policies, which favor uniform approaches for all LDTs, eschewing more tailored approaches that would address particular problems posed by genetic, genomic, and other modern molecular diagnostic tests while leaving policies for more traditional tests undisturbed. The FDA's 2014 draft LDT guidance discussed how modern LDT technology has evolved and differs greatly from the traditional types of CLIA-regulated LDTs.¹¹⁰ Yet instead of developing the oversight needed for more complex tests, it proposed a unitary framework in which the FDA would regulate all LDTs. Without exploring the possible consequences, traditional types of CLIA-regulated LDTs, including tests for communicable diseases, got swept up in the push to modernize the regulation of genetic and genomic testing.

The third policy challenge is the current one, in which the consequences of that approach are only too clear. A worldwide pandemic casts doubt on the wisdom of one-size-fits-all policy solutions that grant the FDA broad power to regulate all LDTs, regardless of type. Such solutions reject the notion that complexity and risk matter, yet the COVID-19-testing debacle displays why they do matter. COVID-19 raises a question: Have policies crafted to address genetic testing weakened the nation's response to communicable diseases?

The proposed VALID Act would solidify the FDA's authority to regulate clinical laboratories, granting powers that the FDA asserted without a clear statutory basis in its 2020 COVID-19 EUA guidance documents as well as imposing significant new FDA regulatory burdens on research laboratories.¹¹¹ Before enacting that legislation, there should be a thorough review of how FDA oversight

109. Secretary's Advisory Committee on Genetics, Health, and Society, *supra* note 108, at 20; see Gail H. Javitt, *In Search of a Coherent Framework: Options for FDA Oversight of Genetic Tests*, 62 FOOD & DRUG L.J. 617 (2007); Mark A. Rothstein, *Genetic Exceptionalism and Legislative Pragmatism*, 35 J.L. MED. & ETHICS 59 (2007).

110. U.S. FOOD & DRUG ADMIN., DRAFT GUIDANCE FOR INDUSTRY, FOOD AND DRUG ADMINISTRATION STAFF, AND CLINICAL LABORATORIES; FRAMEWORK FOR REGULATORY OVERSIGHT OF LABORATORY DEVELOPED TESTS (LTDs) 7-8 (Oct. 3, 2014) <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/framework-regulatory-oversight-laboratory-developed-tests-ltds> [<https://perma.cc/P5YV-RNXU>].

111. For example, 42 C.F.R. § 493.3(b)(2) (2020) provides a research exception under the CLIA statute that has the effect of completely excluding a research laboratory from CLIA jurisdiction and exempting the laboratory from CLIA regulation altogether, so long as the laboratory avoids reporting results for use in clinical health care. The VALID Act provides a far more limited "research exemption" that places a research laboratory under FDA's jurisdiction, then exempts it from many of the VALID Act's requirements such as the requirement to obtain pre-market approval for novel tests, but then makes research laboratories comply with section 578R of the VALID Act, which mirrors the cumbersome and time-consuming Investigational Device Exemption requirements at Part 812 of the FDA's existing medical device regulations. H.R. 6102, 116th Cong. § 587a(m) (2020). The result, under the VALID Act, is a

performed during the COVID-19 crisis. Did it add value beyond what CLIA regulation of CLIA-certified, high-complexity laboratories already provides? Did it cause delays and distract laboratory personnel from higher-priority tasks in the midst of an emergency?

It also will be crucial for Congress to hold hearings to ensure all stakeholders in the genetic and diagnostic-testing industries are heard before acting on the proposed VALID Act. The independent Diagnostic Test Working Group, affiliated with ten of America's largest diagnostic device manufacturers and large commercial clinical laboratories, provided input on the VALID Act and engaged lobbyists to work with the Senate, House, and the FDA.¹¹² Its efforts began the month after the FDA published its October 2014 draft LDT guidance¹¹³ and produced a concept document for regulatory and legislative reforms the following March.¹¹⁴ However, “[s]mall or single-source labs, proprietary labs, and drug companies” were absent from “this drafting process.”¹¹⁵ Their voices need to be heard.

Large commercial test manufacturers and clinical laboratories undoubtedly bring enormous expertise to the table, but they do not represent the diagnostics industry as a whole or the patients and healthcare providers who rely on that industry. Large IVD product manufacturers have chafed under the uneven playing field created when their IVD products are subject to slow and costly FDA regulatory review while similar LDTs enjoy a faster pathway to market under the CLIA regulations.¹¹⁶ These concerns are especially intense in the emerging field

far more cumbersome and costly regulatory process for “exempt” research laboratories than what they currently experience under CLIA.

112. *Lobbying by Diagnostic Test Working Group (DTWG)*, PROPUBLICA, <https://projects.propublica.org/represent/lobbying/300937310> [<https://perma.cc/ZE8H-23YU>] (listing affiliated organizations as Roche Diagnostics, Laboratory Corporation of America Holdings, Mayo Clinic, ARUP Laboratories, Becton, Dickinson and Company, Myriad Genetics, Abbott Laboratories, Quest Diagnostics, Siemens Corporation, and BD Diagnostics).

113. *Id.*

114. Diagnostic Test Working Grp., *A Proposed Regulatory Framework for In Vitro Clinical Tests*, (Mar. 5, 2015), https://www.genomeweb.com/sites/default/files/downloads/news/dtwg_final_proposal.pdf [<https://perma.cc/R24W-BABJ>].

115. Turna Ray, *Small Group of Labs, Dx Manufacturers Float Alternative to FDA LDT Guidance*, GENOMEWEB (Apr. 17, 2015), <https://www.genomeweb.com/policy-legislation/small-group-labs-dx-manufacturers-float-alternative-fda-ldt-guidance> [<https://perma.cc/5HTP-HG39>].

116. *Id.*; see Jonathan R. Genzen, *Regulation of Laboratory-Developed Tests: A Clinical Laboratory Perspective*, 152 AM. J. CLINICAL PATHOLOGY 122 (2019); Aaron L. Josephson, *The VALID Act, Aiming to Reform the Regulation of Diagnostic Products, Is Finally Introduced in Congress*, MINTZ (Mar. 12, 2020), <https://www.mintz.com/insights-center/viewpoints/2146/2020-03-12-valid-act-aiming-reform-regulation-diagnostic-products> [<https://perma.cc/T4LA-XQQ7>].

of precision medicine.¹¹⁷ Large clinical laboratories, while not eager to be subject to FDA oversight, deliver testing services at sufficient volumes to defray the user fees and other costs of FDA regulation and potentially might benefit if FDA regulatory barriers hinder entry by smaller competitors. In recent years, a series of court decisions undercut patent eligibility for the kinds of discovery that drive innovation in genetic and other diagnostic testing.¹¹⁸ The VALID Act would erect FDA regulatory barriers that confer a significant competitive advantage to large test manufacturers and clinical laboratories that previously enjoyed patent monopolies, now lost.¹¹⁹ What impact would that have on patients for whom genetic and other advanced diagnostic testing is often already unaffordable? Might tests become even less affordable if new FDA regulatory costs are factored in? “During the approval process, the FDA . . . can’t consider the cost to patients.”¹²⁰ And what are the impacts on America’s vibrant genomic research laboratories, which CLIA shields from burdensome federal regulation¹²¹ but which would face far more significant regulatory burdens under the VALID Act’s “research exemption”?¹²² Congress needs answers to these and many other questions before acting on legislative proposals.

CONCLUSION

Setting aside debates about statutory authority, the FDA’s 2020 EUA guidances for COVID-19 testing had a practical binding effect. They subjected laboratory services to FDA oversight that may have cost time in a context where lost time meant lost lives. It will be critical to understand whether FDA’s review, which essentially duplicated the internal validation procedures laboratories already must perform under CLIA, added sufficient value to make the cost of delay and burdens on smaller labs worthwhile. It also is crucial to ask whether one-

117. See Ray, *supra* note 115 (noting that the non-level playing field is a particular concern for companion diagnostics, the pharmacogenetic tests used in personalized medicine, for which the FDA often requires a rigorous premarket review to which CLIA-regulated LDTs are not subject); see also Shirts, *supra* note 36 (alleging that the VALID Act was driven by a desire to have monopolies on companion diagnostics used in cancer care).

118. See *Alice Corp. Pty. Ltd., v. CLS Bank Int’l*, 573 U.S. 208 (2014); *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576 (2013); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012).

119. See Shirts, *supra* note 36 (“The VALID Act will give the FDA power to create more monopolies in diagnostic tests.”)

120. *Id.*

121. See 42 C.F.R. § 493.3(b)(2) (2020) (carving out an exception from CLIA regulation for research laboratories that meet certain conditions).

122. See *supra* note 111, explaining the difference between CLIA’s research exemption and the “research exemption” under the VALID Act.

size-fits-all FDA jurisdiction to regulate all LDTs, as proposed in the VALID Act, is good policy. Genetic, genomic, and other advanced molecular diagnostic tests may raise special concerns that require tailored policy solutions. These policies, however, should be pursued without disturbing policies that have performed well for many decades for more traditional types of tests, including tests for emerging infectious diseases. Before Congress acts on specific legislative proposals, there needs to be a much broader, more inclusive, nuanced, and evidence-informed dialogue about diagnostic-testing policy.

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Research for this Essay was funded by National Institutes of Health (NIH), National Human Genome Research Institute (NHGRI), National Cancer Institute (NCI) grant R01HG008605 on "LawSeqSM: Building a Sound Legal Foundation for Translating Genomics into Clinical Application." The content is solely the responsibility of the authors and does not necessarily represent the official views of NIH, NHGRI, NCI, or other participants in the LawSeqSM project. Neither author has conflicts of interest to disclose.