PRO ANALYSIS

WHAT YOU NEED TO KNOW ABOUT

Disease Testing

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PRO POINTS

- **Toward the start of the coronavirus crisis, the CDC** distributed an FDA-authorized test to state public health agencies, but most couldn't get it to work. At the same time, FDA restricted deployment of laboratory developed tests from hospitals and private labs. On Feb. 29, the agency relented and allowed them to use LDTs prior to FDA approval.

- **The government's problems with coronavirus** testing reenergized a debate over how to regulate LDTs, which can detect pathogens and assess blood levels of proteins and chemicals to aid in disease diagnosis.

- **The FDA regulates so-called in-vitro diagnostics** — test kits produced by firms like Roche Diagnostics and Hologic — and also has the legal power to regulate LDTs. The agency usually refrains from exercising that authority except to stop questionable practices, such as misleading pharmacogenomic testing – and in emergencies like the coronavirus pandemic.

HOW WE GOT HERE

- In 2014, FDA issued draft guidance to formally place LDTs within its regulatory purview. It dropped the guidance after President Donald Trump's election, however.

- U.S. testing for the coronavirus has lagged behind that of other countries. U.S. and German scientists each developed tests in January. But while the German system worked well and was distributed by the World Health Organization to countries around the world, the CDC system initially had problems after being distributed to state public health laboratories beginning Feb. 7. Thousands of people who had symptoms or might have been exposed to Covid-19 patients were unable to get tested. This created uncertainty about the disease's spread and the risks of infecting vulnerable elderly and chronically ill people.

- The Trump administration gave mixed and erroneous messages about the availability of testing. For example, on March 6, Trump falsely stated that anyone who wanted a test could get one. Later, Trump falsely blamed the Obama administration for FDA regulations he said had slowed the production of tests by hospitals or medical centers.

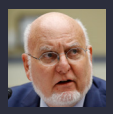
Recent regulatory and legislative action on lab-developed testing

Oct. 3 2014	FDA issues **draft guidance** that would give it power to oversee laboratory-developed tests (LDTs). Following President Donald Trump's election victory, FDA drops the guidance process.
Dec. 6 2018	Bipartisan introduction of **VALID Act**, which would put FDA in charge of regulation of LDTs as well as in-vitro diagnostic tests. The two types of tests would be merged into a single category FDA would regulate at its discretion, focusing on new types of tests and tests where a false report could result in serious harm.
Jan. 21, 2020	Less than two weeks after China releases the sequence of the **Covid-19 virus**, the WHO and CDC separately announce protocols for making a test for the virus.
Feb. 7, 2020	CDC sends its first coronavirus tests to state public health labs. Within days, most **state labs report problems** with the test to CDC. Public health and hospital-system labs are starting to develop their own tests, but FDA has announced on Feb. 4 that it will require an Emergency Use Authorization for these LDTs.
Feb. 29, 2020	**FDA reverses course** and says it will enable public health labs, as well as qualified labs in hospital systems, to use and distribute their own tests for the virus.
March 5, 2020	Bipartisan, bicameral **reintroduction** of the VALID Act.
March 16, 2020	FDA **further liberalizes** its policy, allowing state laboratories to produce their own coronavirus tests without pursuing Emergency Use Authorization from the FDA. It also widens its guidance beyond hospital laboratories to include commercial manufacturers of test kits, and announces it will allow labs that verify the accuracy of their tests to sell and distribute them for 15 business days before submitting an Emergency Use Authorization.

Trump appears to have been referring to the 2007 HHS guidance regarding FDA's Emergency Use Authorization powers, which first were employed during the H1N1 flu pandemic two years later. The EUA is designed to give FDA regulatory flexibility during a public health emergency while protecting the population from slipshod or fraudulent products.

As the disease continued to spread, the administration gave regulatory flexibility for the use of coronavirus LDTs on Feb. 29, and on March 16 it further relaxed its regulatory regime, allowing states to authorize laboratories to test for virus without FDA intervention. The FDA also announced that high-complexity labs, which include an estimated 5,000 commercial and hospital operations, could start using or distributing new diagnostic tests without prior review as long as they sought authorization from the agency within 15 days of the tests' release.

POWER PLAYERS



CDC Director Robert Redfield
He decided to have the CDC develop its own testing protocol, forgoing the WHO test developed by German scientists. Experts say Redfield's decision was in keeping with CDC's traditional approach — the agency used its own tests for Zika, SARS, MERS and numerous flu viruses.

FDA Commissioner Stephen Hahn
New on the job, Hahn has had to wrestle with FDA's complicated regulatory legacy on clinical tests amid an accelerating coronavirus pandemic. After the CDC test's failure and growing alarm about the paucity of available testing, Hahn eventually went further than observers had anticipated in loosening the agency's rules for emergency use.

American Clinical Laboratory Association President Julie Khani
Her group, which has long opposed FDA regulation of LDTs, has been more cautious about the VALID Act than the medical device community. Khani has said that if FDA does assume responsibility for LDTs — currently overseen by the CMS under the 1988 Clinical Laboratory Improvement Act — it must continue to recognize the difference between LDTs and in-vitro diagnostics. ACLA likes the current arrangement because it gives commercial and hospital laboratories considerable flexibility in deploying tests.

WHAT'S NEXT

FDA has sought to balance risk and benefit in an unprecedented emergency. By giving states, hospitals and commercial labs more leeway it risks the release of faulty tests, but it has required the laboratories to meet verification thresholds — if they fail to do so, they potentially risk recalls, lawsuits or reputational harm.

Testing began to ramp up in mid-March as commercial laboratories implemented procedures that can process tens of thousands of tests a day. As of March 17, the CDC and public health laboratories had conducted 32,000 tests, commercial laboratories had done about 27,000 and hospitals had done thousands more.

Which tests would be subject to the VALID Act's framework?

FULLY COVERED BY ACT

- **All tests not otherwise exempted** that are "intended to be used in the collection, preparation, analysis, or in vitro clinical examination of specimens for the purpose of identifying, diagnosing, screening, measuring, detecting, predicting, prognosing, analyzing, or monitoring a disease or condition, or selecting, monitoring or informing therapy or treatment for a disease or condition."

  This includes test protocols, test platforms, specimen collection articles and components not intended solely for use in the development of another vitro clinical test.

FULLY OR PARTIALLY EXEMPTED

TYPE OF TEST	EXEMPTED FROM...
Public health, employer and law enforcement	All requirements
Rare diseases (<10,000 individuals per year)	Pre-market review
Manual tests	All requirements
Low-risk IVCTs	Pre-market review
Technology certified IVCTs	Pre-market review
Low volume tests (5 or fewer patients per year)	Pre-market review, quality system, notification
Grandfathered tests (introduced before VALID Act enactment)	Most requirements except registration/listing, adverse reporting

Matching bipartisan House and Senate bills were reintroduced in early March that would overhaul the regulation of all diagnostic tests, giving FDA authority to oversee both in-vitro and laboratory-developed tests. The two types of tests would no longer be considered separate categories, but would be regulated on the basis of their risk to patients. The VALID Act, introduced by Reps. Larry Bucshon (R-Ind.) and Diana DeGette (D-Colo.) and Sens. Michael Bennet (D-Colo.) and Richard Burr (R-N.C.), would also allow testing companies to submit new testing technologies for approval, then use them to develop specific tests without further review. The bill would also codify some aspects of FDA's Emergency Use Authorization powers. VALID's prospects aren't certain; although much FDA and industry input has gone into shaping the rule, industry and government agencies have tussled over testing regulation for nearly three decades.