

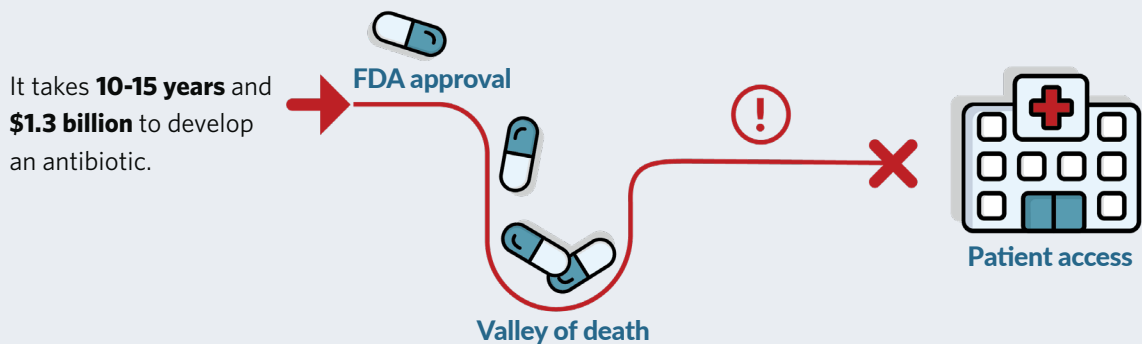
Antibiotic Development Needs Economic Incentives

Current market dynamics put modern health care at risk

The antibiotic market is categorically different from that of other pharmaceuticals. Research and development of any drug is expensive, but antibiotics have comparatively low prices and sales volume.

As a result, the companies making them are going bankrupt, and many potentially lifesaving drugs end up falling into an antibiotic valley of death—dropping out of production before they can reach patients.

Market Challenges Jeopardize Antibiotic Access



Challenges at commercialization/once new antibiotic is approved

Low potential sales volume for newly approved antibiotics.

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Pricing and reimbursement for antibiotics is typically low.

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Market failure

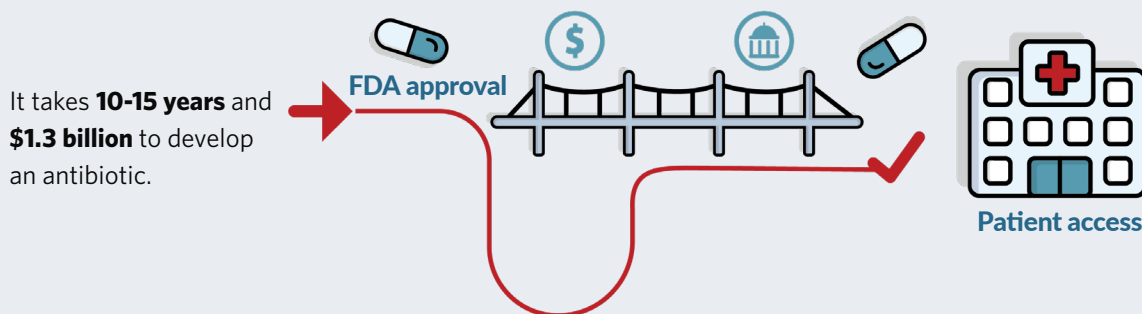
The **combined sales** of all branded antibiotics in the U.S. in 2018 was \$535 million.

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Companies behind **5 of the 15** new antibiotics approved since 2010 have collapsed.

Many authoritative reports and commissions have identified the need for economic pull incentives to stimulate urgently needed antibiotic development and help ensure that patients can access these drugs.

How to Bridge the Antibiotic Valley of Death



Innovative financing mechanism

Innovative financing mechanisms would incentivize companies to invest in development of critically needed antibiotics.

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Reimbursement reform

Reimbursement reform would enable federal health care payers to reimburse hospitals for antibiotics at a fair rate.

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Sustainable antibiotic market

Patient access to new and innovative antibiotics
Reinvigorated antibiotic development

Sources: Wellcome Trust, "It's Time to Fix the Antibiotic Market," accessed Feb. 12, 2021, <https://wellcome.org/what-we-do/our-work/drug-resistant-infections/its-time-fix-broken-antibiotics-market>.

O.J. Wouters et al., "Estimated Research and Development Investment Needed to Bring a New Medicine to Market, 2009-2018," *Journal of the American Medical Association* 323, no. 9 (2020): 844, <https://doi.org/10.1001/jama.2020.1166>.

Needham & Co. LLC, "Antibiotic and Antifungal Update: January 2020" (2020), <https://needham.blumatrix.com/sellside/EmailDocViewer?encrypt=7af51ecf-56b6-4827-bd16-3186a8db8715&mime=pdf&co=needham&id>.

J. Rex, "Tetrphase Sold For \$14m ... And \$600m Goes Up in Smoke!" Antimicrobial Resistance Solutions, Mar. 23, 2020, <https://amr.solutions/2020/03/23/tetrphase-sold-for-14m-and-600m-goes-up-in-smoke/>.

DRIVE-AB, "Revitalizing the Antibiotic Pipeline" (2018), <http://drive-ab.eu/wp-content/uploads/2018/01/CHHJ5467-Drive-AB-Main-Report-180319-WEB.pdf>.