Opinion **Drug prices**

There are solutions to the global drug price problem

We should override patent protection on some medicines and change how R&D is funded

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The gene therapy medicine Zolgensma, made by Novartis, costs a record $2.1m per patient © AP

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Unaffordable medicines are a large and growing global problem. In the US, both President Donald Trump and many of his prospective Democratic opponents are looking for ways to bring prices down.

In the UK, the opposition Labour party has endorsed two potentially far-reaching ideas: override patent protection on excessively priced medicines and change the way pharmaceutical research and development is funded.

Compulsory licensing to remove patent monopolies on drugs like the cystic fibrosis treatment Orkambi could immediately lower prices and expand patient access. Orkambi maker Vertex has been fighting the UK government's efforts to reduce its £105,000 list price since 2015 and rejected a £1bn bulk purchase. Talks have lasted so long that the company destroyed nearly 8,000 packets of expired medicine. Rather than curbing innovation, the authorisation of generic competition after lengthy, failed negotiations would signal that authorities will robustly regulate prices and limit patients' waiting time for drugs.

model relies on potential profits to pull in private investment. This means market returns set R&D priorities. But this model fails to deliver innovation in many areas: antibiotics, rare diseases, outbreak-prone pathogens like Zika, and the neglected diseases of poverty, among others.

Public authorities can and should play a greater role in guiding R&D. The World Health Organization has influenced funders by producing priority lists for missing antibiotics and technologies to combat outbreaks. It makes eminent sense to expand to other disease areas, and to back priorities with government financing.

But public funds should not be given away lightly. Taxpayers already fund much of the discovery and early-stage development of new drugs, the riskiest part of the process. Companies often acquire candidate drugs after they have shown signs of success. Once they go on sale, the public pays again through the high prices enabled by monopolies.

Placing conditions on public R&D grants could help ensure that products benefiting from taxpayer investment are affordable when brought to market. The US National Institutes of Health includes such conditions in its grants. So does the Bill & Melinda Gates Foundation. A French foundation that helped develop the spinal muscular atrophy treatment Zolgensma, made by Novartis, wisely put reasonable pricing conditions on its grants, which authorities may now leverage to push down the record $2.1m per patient list price.

Industry lobbyists insist that limiting prices would halt innovation. But high prices can actually impede innovation in some cases. Consider antibiotics: most large companies have withdrawn from antibiotics R&D because of opportunity cost. Antibiotics can be profitable but those earnings pale in comparison with the return on investment from areas such as cancer. If governments reduced cancer drug prices, it would nudge companies to invest in less lucrative but still profitable areas, and address some unmet needs.

Grants and prizes could fund more R&D, rather than always relying on high monopoly prices. These alternate methods have delivered results for biodefence and neglected diseases, including a £1 per dose cholera vaccine, developed with public, philanthropic and private funds.

UK Labour's proposals have US counterparts: leading Democratic presidential contenders are putting forward alternate R&D incentives, and the EU is reorienting its R&D spending and reviewing its innovation incentives. Ensuring new medicines are affordable globally will require reform across multiple countries. The current proposals suggest that just might be possible.

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