Press Release

Medical Research Often Fails to Meet Actual Needs

A new study involving researchers from the University of Mannheim shows that diseases such as diabetes and addiction are on the rise worldwide, but research into them is lagging behind and is only taking place in a few countries.

Global health research does not adequately address diseases that are responsible for the majority of the global burden of disease. This is the conclusion of a recent long-term study that used artificial intelligence to link around 8.6 million scientific publications with data on the burden of disease over the past 20 years. The paper has been published in the renowned journal “Nature Medicine”.

The key finding is that the gap between research and the actual burden of disease has halved since 1999 – a sign that global health research is increasingly aligned with actual needs. However, the reason for this is rather unexpected: The decline is mainly due to the fact that communicable diseases such as HIV/AIDS, malaria, and tuberculosis are on the decline. They now account for a much smaller proportion of the global burden of disease than they did two decades ago. At the same time, non-communicable diseases – such as cardiovascular diseases, addictions, and diabetes – have increased globally. However, research has not yet adapted to this shift.

“Until now, we knew that research and disease burden often do not go together – but how this imbalance has changed over time was largely unknown,” explains Professor Dr. Marc Lerchenmüller, corresponding author of the study.

Global diseases, local research
The study shows a clear dichotomy: The disease burden of locally occurring infectious diseases has decreased significantly. As a result, the gap between research and disease burden in this area has narrowed by around 75 percent.

The situation is different for chronic, non-communicable diseases: Here the gap has increased by 25 percent. Diabetes is also becoming a widespread disease in South America and some Asian countries, for example. “Non-communicable diseases are a global problem – but research into them has so far mainly taken place in Western countries and is lagging

behind the global increase in the disease burden," states Dr. Leo Schmallenbach, first author of the study.

These opposing developments are responsible for the fact that the balance has improved considerably at first glance. However, if the focus of research does not change, the gap is likely to widen again in the coming decades and may even grow by a third by 2050, the researchers warn.

What is needed now
According to the study, the high dependence of international health research on U.S. public funding is a particular concern. According to the Mannheim economists, a further decline in these funds would significantly accelerate the existing undesirable trend.

To better adapt research to global health needs, the authors of the study call for greater international collaboration, an open science policy – for example through and mandatory data sharing – and partnerships on an equal footing. This is the only way that science can also reach the regions that have been underserved to date – but are particularly hard hit.

The study
Schmallenbach, L., Bley, M., Bärnighausen. T.W., Sugimoto, C.R., Lerchenmüller, C., Lerchenmüller, M. *Global distribution of research efforts, disease burden, and impact of US public funding withdrawal*. Nature Medicine (2025). https://doi.org/10.1038/s41591-025-03923-0

Contact:
Professor Dr. Marc Lerchenmüller
Assistant Professor of Technological Innovation and Management
University of Mannheim
Phone: +49 621 181-1604
E-mail: marc.lerchenmüller@uni-mannheim.de

Dr. Leo Schmallenbach
Habilitation candidate at the Chair of Organization and Innovation
University of Mannheim
Phone: +49 621 181-1600
E-mail: schmallenbach@uni-mannheim.de

Yvonne Kaul
Research Communication
University of Mannheim
Phone: +49 621 181-1266
E-mail: kaul@uni-mannheim.de