nature
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Infectious disease

Editorial Catherine Armitage, Bec Crew, Rebecca Dargie, David Payne **Analysis** Bo Wu, Catherine Cheung **Art & design** Tanner Maxwell, Madeline Hutchinson, Sou Nakamura, Wojtek Urbanek **Production** Jason Rayment, Ian Pope, Nick Bruni, Bob Edenbach, Paul Glaeser **Marketing & PR** Kimberly Petit, Fiona Kyprianou, Katie Baker, Sam Sule **Sales and Partner content** Yuki Fujiwara, Rajdev Narayanasamy, Yosuke Sato, Eri Shimoyama, Amanda Rider, Sara Phillips, Chika Takeda, Lisa Truong, Shoko Hasegawa, Yoshiko Sugita, Samantha Lubey, Michelle Grayson, Marcos Valiente, Grace Sun, Nicole Yu, Sabrina Ma, Rebecca Pan, Jiaqi Shi, Pinky Zhang. **Publishing** Rebecca Jones, Richard Hughes, David Swinbanks.

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Nature editorial offices
The Campus, 4 Crinan Street,
London N1 9XW, UK
Tel: +44 (0)20 7833 4000
Fax: +44 (0)20 7843 4596/7

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COVID-19 brings increased urgency to confronting the societal and scientific challenges posed by infectious disease. In 2020, as the pandemic took hold, the number of articles on infectious disease in the Nature Index database grew by 53.6%, overwhelmingly due to nearly 900 COVID-19 articles published that year.

Despite huge progress in understanding, prevention and treatment over the past century, the human and economic cost of communicable illness, even before the pandemic, was stuck somewhere between staggering and incalculable. A 2020 paper published by the Institute of Labor Economics, a non-profit organization based in Germany, put the economic burden of eight major diseases (HIV/AIDS, malaria, measles, hepatitis, dengue fever, rabies, tuberculosis and yellow fever) at up to US$8 trillion, with more than 156 million life years lost for the year 2016 alone.

For this supplement's data set, a separate set of keywords for each of 83 diseases plus 5 subcategories (for coronavirus and influenza), curated by the Nature Index team, was used to search abstracts and titles in the Dimensions database from Digital Science. This yielded 1.7 million articles for 2000–20, including 9,816 for 2015–20 that are also tracked in the Nature Index database.

The data and stories here shine a light on some of the research, and the people and institutions behind it, that aims to reduce the infectious-disease burden. Two themes emerge. First, many diseases receive research attention that seems disproportionate to their human and economic cost compared with other diseases (see page S18). Second, progress increasingly depends on fresh collaborative, multi-sectoral and transdisciplinary approaches, some of which are highlighted in this supplement.

Catherine Armitage
Chief editor, Nature Index

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On the cover
Influenza viruses (blue) budding from a burst epithelial cell. Lennart Nilsson, Boehringer Ingelheim International/Science Photo Library

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