

## **Treatment Market and Attention to Local Health Burden Drives the Global Disparity of Health Research**

**James Evans, Ph. D.**, Associate Professor

with Jae-Mahn Shim, PhD Candidate

Most studies on global health inequality consider unequal health care and socio-economic conditions but neglect inequality in the production of health knowledge relevant to addressing disease burden. We demonstrate this inequality and identify likely causes. We used the two latest disability-adjusted life years (DALYs) for 111 prominent medical conditions, assessed globally and nationally by the World Health Organization. We linked DALYs with MEDLINE articles for each condition to assess the influence of DALY-based global disease burden, compared to the global market for treatment, on the production of relevant MEDLINE articles, systematic reviews, clinical trials and case reports. We then explored how DALYs, wealth, and the production of research within countries contribute to this global pattern. We show that the global treatment market for each condition, but not its global DALYs, had a significant influence on the production of all MEDLINE articles and of case reports for that condition. Underlying this were local processes of health research. Case reports and clinical trials within countries were strongly guided by local DALYs. Systematic reviews and clinical trials were slightly more responsive to global DALYs, and reviews were not influenced by country conditions. Rich and poor countries had very different disease profiles and rich countries publish much more than poor countries. Accordingly, conditions common to rich countries garnered more case and clinical research than those common to poor countries.

Many of the health needs in poor countries do not attract attention among rich country researchers who produce the vast majority of global health knowledge—including clinical trials—in response to their own local needs. This raises concern about the amount of knowledge relevant to poor populations deficient in their own research infrastructure. We recommend measures to address this critical dimension of global health inequality.