



## Medical Research Investment Rates Rise in Asia, Fall in US



A study which appears in the 13 January issue of *JAMA* reports that the funding of medical research rose across the world, especially in Asian countries, between 2004 and 2012. Notably, China tripled its investment from \$2.6 billion in 2004 to \$9.7 billion in 2012. The global growth of medical research investments comes despite a decline in the share of funding from the United States government and US companies.

Medical research plays an important role in health advances which contribute to improved population health and longevity. Historically, the US has been a leading source of medical research funding, with more than half of the world's investments originating in the US over several decades. Between 2004 and 2012, the total US share of global research funding dropped from 57 percent to 44 percent.

### Shrinking Share of US Investments

The study was led by Hamilton Moses III, MD. Dr. Moses is affiliated with the Alerion Institute and Alerion Advisors LLC in North Garden, Virginia and the Johns Hopkins School of Medicine in Baltimore, Maryland. He and his colleagues were interested in comparing medical research in the US with other developed countries. They looked at publicly-available data from 1994 to 2012 which related to the patterns of international involvement in medical research support and approvals for new drugs and devices. They also evaluated data pertaining to medical patents and publications from 1981 to 2011.

Between 1994 and 2004, biomedical, pharmaceutical and health services research funding grew at a rate of six percent per year. Investments then began to decline to 0.8 percent per year, decreasing in three of the last five years between 2004 to 2012. Furthermore, the US share of life science patents dropped from 57 percent to 51 percent between 1981 and 2011. The US share of patents considered to be the most valuable fell from 73 percent to 59 percent in that time period.

### Funding Allocations Not Proportional to Burden

The main findings of the research included a reduction in investment from science industries. Early-stage research was reduced in favour of bio-engineered drugs, medical devices and late-stage clinical trials for rare diseases and cancer. In particular, cancer and HIV/AIDS received funding which exceeded their proportional disease burden, based on US disability alone. Cancer accounted for 16 percent of the National Institutes of Health (NIH) funding and a quarter of all current clinical trials for medicines.

When the researchers compared investment in service innovation for 22 industries, they found that health systems and private insurers were at the bottom of the list in terms of percent of revenue (0.1 percent and 0.04

percent, respectively). Health services research includes care access, cost and quality, as well as the health and well-being of individuals, communities and populations. This type of research garnered a tiny fraction (0.2 to 0.3 percent) of national health expenditures between 2003 and 2011. That is a 20-fold difference when compared with total medical research funding. If service firms would reach median research and development funding, there would be an annual increment of \$8 billion to \$15 billion.

The authors conclude that the coming decade could see a shift in who leads future funding efforts. "The analysis underscores the need for the United States to find new sources to support medical research, if the clinical value of its past science investment and opportunities to improve care are to be fully realised. Substantial new private resources are feasible, though public funding can play a greater role. Both will require non-traditional approaches if they are to be politically and economically realistic. Given global trends, the United States will relinquish its historical innovation lead in the next decade unless such measures are undertaken," they wrote.

Source: [JAMA](#)

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Published on : Tue, 13 Jan 2015