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BRIEFING

Health and Medical Research in Japan

Health Research Observatory

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Summary

Summary: Key Points

- Most important sectors: private industry and universities
- Government funds universities, research institutes, and research funding agencies; life sciences are a perennial priority area in R&D promotion
- Historically weak ties between basic and applied researchers, but efforts are being made to promote cooperation between universities and industry
- Health and medical research underperforms compared to other R&D areas in Japan and compared to other countries
- Pharmaceutical industry faces challenges
- Recent reforms aim to improve Japan's national contribution to health and medical research

Despite Japan's well-deserved reputation for technological research and development (R&D), its performance in the area of health and medical research compares unfavourably with many of its peers. Fortunately, the Japanese government, faced with the rapid ageing of society and anxious for an additional source of economic growth, recognises the problems and has initiated significant reforms designed to improve the nation's standing in this area.

In Japan, health and medical research is performed largely by universities and private industry, which are dominant in terms of expenditure and number of employed researchers. Public research institutes play a smaller but significant role within the system. Funding for these players comes from private industry, which funds its own research activities, and government, which provides the vast majority of funding to the universities and research institutes through its education and health ministries. The central government also oversees the national university system, as well as the development of drugs and medical devices.

Unfortunately, a lack of communication between the academic and private sectors has hindered Japan's industrial success in the area of health and medical research. Universities in particular have been criticised for being too rigid and unresponsive to the nation's economic and health needs: too often, the innovative discoveries of Japan's universities have not been applied or commercialised. Meanwhile, Japan's relative level of investment in this area of research lags behind other nations. Other problems include a general lack of

skilled clinical researchers (preferably speaking English) and quality facilities, and the high cost of conducting research in Japan.

The result is an undersized contribution to the world's medical knowledge base, despite Japan's strength in some areas of basic biomedical research, such as regenerative medicine. The pharmaceutical industry also faces serious difficulties related to the high costs and slow pace of development, and a declining share of domestic and global markets. Recognising the problems, the government has reformed the universities, making them more independent and competitive, and has introduced new incentives for cooperation with industry. Like the universities, it put its own public research institutes through a similar process of "agencification", granting them greater managerial and budgetary independence. Both universities and research institutes have been made to rely increasingly on competitive grants for their funding. New funds have been made available to local areas for the development of world-class research and educational centres in health, medicine, and other areas, in the hopes of catalysing new industrial clusters. Finally, in its current and previous five-year plans on science and technology, the Japanese government has declared life sciences to be one of its four priority areas for promotion.

Although it is still too soon to judge how successful these new measures have been, some of the early signs have been encouraging. Cooperation between universities and industry is growing. The increased dependence on grant funding seems to have given universities and research institutions a more competitive orientation. The number of new clinical trials has begun to increase, while the rate of clinical trial cost increases has levelled off.