Can 'supermind design' help tackle depression in Japan?

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The health care sector is at an important crossroads. With new diseases emerging and endemic diseases becoming more widespread, the industry is having to explore new ways to face such challenges.

One key concern is depression, which impacts the lives of tens of millions of people worldwide and costs society hundreds of billions of dollars annually. It was this challenge that recently brought together MIT's Center for Collective Intelligence (CCI) and pharmaceutical company Takeda, headquartered in Japan, to explore new ways to approach complex problems.

Takeda's Center for Scientific Leadership and Innovation (CSLI) identified a specific and particularly difficult health care challenge—depression in Japan—to test-drive new ways of improving health care and of building capabilities in its leadership ranks. The collaboration between Takeda and CCI, which included over 30 Takeda executives from throughout the world and the company, centered around a process of ideation called "supermind design." This process helps innovators "think in systems" and inspires them to tackle problems in a completely unique way. The approach included virtual and in-person sessions to leverage a diverse ecosystem of people, including MIT faculty, students, and affiliates that added new perspectives to the solution.

After a six-month process, CCI and Takeda synthesized all of the ideas generated by the participants and used them to develop a theoretical technology-enabled platform called CareNet. The platform harnesses the ability of groups and increasingly artificially [intelligent machines](link) to both detect depression's signals as soon as possible and also provide the right support to the individuals who are affected by the disease—namely, patients, caregivers, doctors, and others. The technology is unique because it is composed of superminds, or networks of people and machines, that support the user every step of their journey from diagnosis to management of the condition.

The overall collaboration resulted in report that outlines the process and new technology, and is a coalescence of the perspectives of over 60

people who participated in the project from Takeda, CCI, and the wider biomedical community.

Key to the CareNet user experience are networks of people and machines that support users every step of the way across diagnosis and management of the condition. These superminds can help fight depression in Japan by collectively creating options for people, sensing the environment, remembering what has worked, helping people decide, and learning together as a networked group. An important characteristic of this solution is that it focuses on depression but deals with it in an inclusive, stigma-avoiding way that enables a broader set of people to be part of it.

"Human-machine networks," the report concludes "can be sources of systemic resilience in a society where individuals and institutions are left fighting their respective battles individually or through traditional, linear processes."

More information: How Can the Japanese Healthcare System Deal More Effectively with Adult Depression? Harnessing the power of superminds: www.dropbox.com/s/et4k24wih62f8fz/Takeda%20Report-Harnessing%20the%20Power%20of%20a%20Supermind%20FINAL.pdf?dl=0

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