Newly developed support system for link workers enhances quality of support for residents by streamlining the interview process with generative AI

Pilot project to begin in Tokamachi, Niigata Prefecture with the goal of building a healthy, sustainable, future-oriented society by mainstreaming social prescribing.

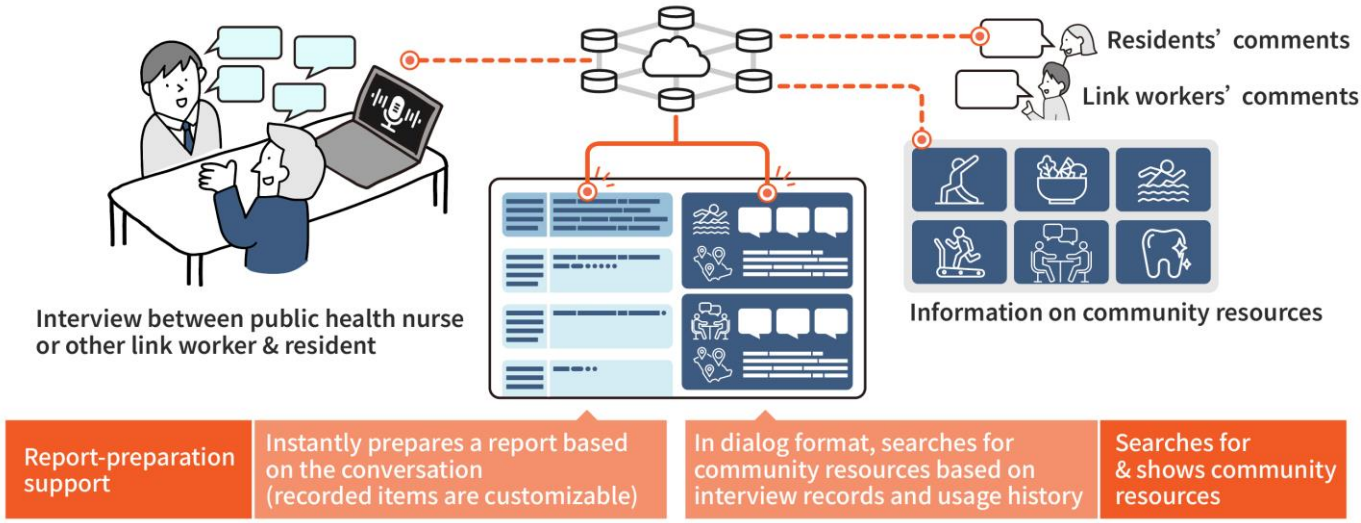

Figure 1. The basic framework of the support system for link workers

Tokyo, August 27, 2025 – Hitachi, Ltd. (TSE: 6501, "Hitachi") and Niigata University have developed a support system for link workers,[*1] utilizing speech recognition and generative AI, with the goal of deploying social prescribing[*2] across multiple communities. Social prescribing is a means of supporting residents' health needs by leveraging community resources. To validate the system's effectiveness, the new support system will be deployed on a trial basis in Tokamachi City, Niigata Prefecture, starting September 1, 2025, as part of the municipality's specific health guidance program.

The system assists link workers (such as public health nurses) in preparing reports on their interviews with residents. Specifically, it converts these interviews to text in real time. It then instantly organizes and summarizes the information required for recommending community resources, including state of health, living conditions, and the type of support sought, on an item-by-item basis. The system thus streamlines link workers' tasks and ensures that no information is missed during interviews. Further, based on the summarized and organized interviews and available data on use of community resources, it identifies potentially useful community resources tailored to residents' needs and wishes, performing searches and showing the results in dialog format.

The trial rollout in Tokamachi will lead to further improvements in functionality; the system will then be deployed in other communities. Meanwhile, steps will be taken to implement and

mainstream social prescribing in the areas of health, medical care, long-term care, and welfare, contributing to building a healthy, sustainable, future-oriented society.

*1 Link worker: A person whose job is to connect people requiring support with government or privately run community programs and services (community resources) that meet residents' health needs.
*2 Social prescribing: A system that "prescribes" linkages with community resources to residents, rather than prescribing medication, as a means of solving their health challenges. In a broad sense, the term encompasses the use of fitness clubs as part of health guidance programs, access to grassroots community hubs in the preventive long-term care field, and other such initiatives.

Background and challenges

Today, Japan faces a serious challenge. While demand for healthcare and long-term care services is rising due to the country's aging population, the declining population has led to a shortage of professionals in those areas. Municipalities with a falling working-age population in particular need to maintain their local healthcare systems in a sustainable way amid limited personnel and resources. Meanwhile, it has become increasingly clear in recent years that social factors such as education, employment status, and living environment significantly affect health and quality of life. For these reasons, there is growing interest in "social prescribing," which involves harnessing a wide range of community resources, including nutrition and exercise classes and community hubs, instead of relying on healthcare facilities alone.

To date, Hitachi and Niigata University have, with the cooperation of the Tokamachi City government, implemented a small-scale pilot program—the Tokamachi Health Prescription Trial—which provides diabetics with referrals to nutritional counseling programs and fitness clubs. This program was found to produce significant improvements in blood sugar control and lead to sustained lifestyle changes. On the other hand, it has also brought problems to light. Link workers, who recommend community resources to people with health conditions, spend a great deal of time and energy drawing up interview records. Moreover, if there is an increase in the number and types of community resources available, the question of how to select resources to recommend arises.

Features of the technologies and solutions developed to address the challenges

Hitachi and Niigata University have therefore jointly developed a task support system utilizing speech recognition and generative AI. This system is designed to enable link workers to do a more efficient job of providing proper support to residents even where healthcare and long-term care professionals are in short supply and community resources are limited. It reduces the burden of preparing interview records and ensures that no information is missed. It also offers a systematic means of selecting the optimum sources of support from the increasingly wide range of community resources available.

1. Report-preparation support: Automated transcription and summation of interviews

The system uses speech recognition technology to convert link workers' interviews with residents to text in real time. Generative AI then organizes and summarizes the text item by item and automatically extracts and sorts the information required for recommending community resources. This significantly eases the burden of preparing records, which has previously been done by hand. In addition, what is said during the interview is instantly summarized and displayed, arranged by item. The system also has a feature that reminds the interviewer of questions they have not asked yet, ensuring that no relevant items are missed. The system thus

enables anyone, regardless of experience or skill level, to prepare records of acceptable quality in a limited timeframe. Moreover, the items to be organized and summarized are customizable, allowing reports to be tailored to the specific field where social prescribing is done.

2. Identifying and recommending community resources using conversational AI

The system has a feature that, using generative AI, identifies potentially useful community resources tailored to residents' needs and wishes by performing searches and showing the results in dialog format. It not only stores basic information about community resources such as each facility's name, location, and the nature of its activities; it can also store information provided by link workers and residents. Generative AI uses this stored information to suggest potentially useful community resources tailored to residents' needs. This makes it less onerous for link workers to gather information when identifying and recommending community resources, enabling them to expeditiously provide residents with appropriate support.

The pilot project in Tokamachi City, Niigata Prefecture

The system's features were examined by a link worker coordinator in the Tokamachi Health Prescription Trial, who commented that it could significantly reduce the amount of work involved in preparing and reviewing interview records to less than a third of the normal level. Accordingly, the report-preparation support feature is to be deployed on a trial basis in Tokamachi beginning September 2025, with people using the feature during interviews that take place in the municipality's specific health guidance program. Based on interviews between public health nurses and individuals eligible for health guidance, records of lifestyle assessments and behavioral goals set will be compiled. The support system for link workers will then be evaluated in terms of how well it reduces workload, ensures that no relevant items are missed, and standardizes recordkeeping.

Comment by Yoshin Nakamura, Director, Health and Welfare Department, Niigata Prefecture

Niigata Prefecture is a geographically diverse place. Besides urban centers, it has mountainous areas, islands, and regions that experience heavy snow. Its people face increasingly complex lifestyle challenges due to a declining population and rapid aging. In this context, "social prescribing," where link workers put people requiring assistance in contact with various community resources, is one promising approach to providing lifestyle support to residents. I'm hopeful that this pilot project in using generative AI to help link workers do their job will generate insights that contribute to solving the many regional challenges facing the prefecture.

Comment by Akira Netsu, Manager, Health Promotion Section, Citizen Welfare Department, Tokamachi City, Niigata Prefecture

In a health guidance session, a public health nurse or registered dietitian interviews an individual and, in the process, assesses their everyday lifestyle routine. Together, as they converse, they think of targets for improving the person's lifestyle and specific actions to take to that end. Keeping a record of the various challenges the person faces in life, along with what they're doing right, is critical to providing them with ongoing support. But simultaneously holding a conversation and keeping a record is a lot of work. This system, I hope, will greatly reduce the work involved in recordkeeping, making it possible to better tailor support to the needs of each individual.

Looking ahead

The trial rollout in Tokamachi will lead to further improvements in the functionality of the support system for link workers. Hitachi aims to further improve the system, which is one of a series of technologies that will help make Lumada 3.0 reality. By enhancing frontline operations through the integration of domain knowledge with AI, the company will contribute to building a harmonized society where personal wellbeing and economic growth are both achievable. Niigata University promotes effective utilization of community resources and is constructing a practical model of social prescribing, looking to address the health needs of individual residents with research and implementation programs rooted in local communities. Going forward, Hitachi and Niigata University will continue to work together on implementing and mainstreaming social prescribing in the areas of health, medical care, long-term care, and welfare, thus contributing to building a healthy, sustainable, future-oriented society.

This initiative is part of a project for the Solution-Driven Co-creative R&D Program for SDGs (SOLVE for SDGs) program, sponsored by the Japan Science Technology Agency (JST) and the Research Institute of Science and Technology for Society (RISTEX). In its solutions creation phase, the R&D project is designed to generate community-driven solutions for a healthy, future-oriented society by leveraging social prescribing and technology with various link workers.

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Niigata University is a major research-oriented university where the humanities and social sciences, natural sciences, and medical and dental sciences work in tandem. Guided by its philosophy of Autonomy and Creativity, it pursues the vision of becoming a front-runner in future life innovation. The university helps communities and industries thrive and grow by engaging in highly original, cutting-edge research, as well as a wide range of basic research. It aims to develop people with advanced problem-solving skills capable of pursuing careers at all levels, from local communities to the international stage, and produce graduates able to make a difference to the society of tomorrow. For more information, visit https://www.niigata-u.ac.jp/en/.

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