

News Release Dated December 19, 2023

Company: Japan System Techniques Co., Ltd.
Representative: Takeaki Hirabayashi, President and CEO
Stock code: 4323, Tokyo Stock Exchange, Prime Market
Contact: Taku Hirabayashi, Director and Officer
Tel: +81-6-4560-1000

**Provision of Medical Big Data for Osaka Metropolitan University Analysis of
the Relationship between Outings During the Pandemic
and Lifestyle Disease Medical Expenses**

Japan System Techniques Co., Ltd. (JAST) is supplying medical big data for the purpose of supporting data analysis performed by a research group led by Senior Lecturer Haruka Kato and Professor Atsushi Takizawa of the Graduate School of Human Life and Ecology at Osaka Metropolitan University. The details are as per attached.

This matter will have only a negligible effect on JAST's consolidated results of operations in the fiscal year ending March 2024. An announcement will be made promptly if there is any additional information that should be disclosed.

December 19, 2023
Japan System Techniques Co., Ltd.

**Provision of Medical Big Data for Osaka Metropolitan University Analysis of
the Relationship between Outings During the Pandemic
and Lifestyle Disease Medical Expenses**

Japan System Techniques Co., Ltd. (JAST) is supplying medical big data for the purpose of supporting data analysis performed by a research group led by Senior Lecturer Haruka Kato and Professor Atsushi Takizawa of the Graduate School of Human Life and Ecology at Osaka Metropolitan University. This research project is conducted as part of an agreement for cooperation between JAST and the Graduate School of Human Life and Ecology, Osaka Metropolitan University.



■ **Summary of the Research Project**

At the Graduate School of Human Life and Ecology at Osaka Metropolitan University, a research group led by Haruka Kato and Atsushi Takizawa performed an analysis to determine the relationship between the activities of residents of large cities using specific categories of transportation and medical expenses for treating lifestyle diseases. Data during the coronavirus pandemic between April 2020 and September 2021 were used for this research. Analysis revealed that, using January 13, 2020 as the pre-pandemic basis value (100%), outings by foot exceeding the 70% level resulted in lower lifestyle disease medical expenses in all prefectures of Japan. Furthermore, when outings by automobile exceeded the 80% level in all areas of Japan other than metropolitan areas, expenses for treating lifestyle diseases increased. Overall, this research demonstrated the existence of a relationship between the methods people used for outings and the change in lifestyle disease medical expenses. This information will serve as a guideline for the types of outings and transportation that should be used during a pandemic to lower expenses for treating lifestyle diseases.

For this research project, JAST supplied JAST medical data sets (note 1) as part of the agreement for mutual cooperation between JAST and Osaka Metropolitan University.

The results of this research were explained in an article in the November 25, 2023 issue of an International academic journal called the Journal of Transport & Health.



The World Health Organization has declared the end of the global health emergency that was caused by the COVID-19 pandemic. Currently, work is under way to assess measures that were used to prevent the spread of infections during the pandemic. In particular, this work requires interdisciplinary research using the comprehensive knowledge that is one of the strengths of Osaka Metropolitan University. I hope that the results of this research will be used as basic data for determining ways to combat future pandemics.

Haruka Kato, Senior Lecturer

■ **Background of the Research Project**

Restrictions that prevented people from going out during the pandemic had the benefits of holding down the number of infections and maintaining sufficient capacity for hospital care. However, there were reports of many health problems caused by these restrictions. Lifestyle diseases were the greatest threat to living a long and healthy life even before the pandemic started. Furthermore, as a significant percentage of total healthcare expenditures in Japan, expenses for treating lifestyle diseases have become a serious social problem.

■ **Upcoming Activities**

JAST and the Graduate School of Human Life and Ecology, Osaka Metropolitan University have concluded an agreement for cooperation to “Promote Research in the Healthcare Field using Medical Big Data.” This agreement enables JAST to support the development of new preventive drugs to extend healthy life expectancy and improve quality of life (QOL) at all stages of life. Moreover, JAST’s aim is to contribute to society in the overall healthcare field by supporting research projects in collaboration with local governments and other partners.

■ **The Future Co-Creation Laboratory of JAST**

The Future Co-Creation Laboratory of JAST is a medical big data business with the mission of using the digital transformation of health care backed by medical big data (health insurance invoice data (note 2), health check-up data and other data) to solve issues at healthcare facilities and insurance companies and organizations. This laboratory will continue to analyze information obtained from research activities in order to raise the value of JAST’s data and create more ways to solve the issues of customers.

Operations of The Future Co-Creation Laboratory also contribute to accomplishing Sustainable Development Goals number three, good health and well-being, and nine, industry, innovation and infrastructure. These activities include the use of medical big data to enable people to stay healthy and the use of alliances with the academic sector for joint research and the development of products.



Note 1: JAST medical data sets

The provision of JAST medical data sets started in November 2022 by using Amazon Web Service (AWS). The data sets include disease categories based on ICD-10, patient gender and age, number of hospital beds, number of patients in each prefecture, and the cost of health care. Customers who are using AWS can access data provided by JAST for developing new products, performing research projects, conducting marketing activities and other purposes.

Note 2: Health insurance invoices

When an individual receives a medical treatment covered by insurance, the healthcare institution sends an invoice listing the procedures and amounts due to the insurance company or organization. For medical and dental care, an invoice listing the procedures and amounts due is sent. For pharmacies, an invoice listing the drugs supplied and amounts due is sent. For nurses visiting individuals at home, an invoice listing home nursing care services and amounts due is sent. One invoice for each patient and individual healthcare institution is prepared every month. Invoices contain information about the reasons that individuals received medical care, the cost of the care and other items. JAST converts this information into a database for subsequent utilization.

■ Inquiries

Japan System Techniques Co., Ltd.

The Future Co-Creation Laboratory

Contact for more information (redirected to an external website): <https://www.jastlab.jast.jp/contact/>

Website of The Future Co-Creation Laboratory: <https://www.jastlab.jast.jp/>

Graduate School of Human Life and Ecology, Osaka Metropolitan University

Senior Lecturer, Haruka Kato

E-mail: haruka-kato@omu.ac.jp