

Chapter

2

**Fukushima Health Management Survey
(FHMS)**

Part 1 Overview of the FHMS

1. Background

The Great East Japan Earthquake (Tohoku Earthquake) of March 11, 2011, the resulting massive tsunami, and the accident at TEPCO's Fukushima Daiichi Nuclear Power Plant have caused great damage to Fukushima Prefecture.

The environmental contamination caused by radioactive materials and the damage caused by harmful rumors have had a profound impact on the prefecture's industries, shaking the perceived safety and security of the prefecture to its very core.

In addition, many residents of the prefecture had to live with anxiety over the effects of radiation on their health due to the nuclear accident, and those who had to evacuate had to leave familiar places, which increased their physical and mental stress.

Due to the prolonged impact of the nuclear accident, great anxiety arose from such things as not knowing the amount of radiation they had received, worrying about future health effects, lacking basic information, and variation in the quality of information. In particular, guardians of infants, elementary and junior high school students, and pregnant women were greatly concerned about the effects of radiation exposure on children.

This anxiety and stress, as well as prolonged residence in evacuation shelters, increased the possibilities of deteriorating physical and mental health, and worsening of their underlying diseases.

Under these circumstances, Fukushima Medical University accepted post-disaster patients and played a role as a secondary radiation emergency hospital after the nuclear accident. At the same time, in order to cope with the unprecedented situation of long-term exposure to low-dose radiation, we were commissioned by Fukushima Prefecture to conduct the Fukushima Health Management Survey (FHMS) for the citizens of Fukushima Prefecture, in order to moni-

tor their physical and mental health for the future and to advance safety and security from a medical perspective.

2. Purpose

Following the release of radioactive materials and evacuation of residents after the nuclear accident, the FHMS was launched to estimate external exposure doses of the people in Fukushima Prefecture and to ascertain their health status, essential activities for prevention, early detection, and treatment of disease. The goal is to protect and promote the long-term health of Fukushima residents (Figure 1).¹⁾

The FHMS consists of a Basic Survey to estimate external radiation doses, and four Detailed Surveys: Thyroid Ultrasound Examination (TUE), Comprehensive Health Check (CHC), Mental Health and Lifestyle Survey, and Pregnancy and Birth Survey.

In consideration of radiation due to the nuclear accident, the purpose of the Basic Survey is to estimate external exposure doses of Fukushima residents, based on self-reported location and activities, informing them of the results, and linking such data to the improvement and maintenance of their health into the future.

The TUE is conducted to address long-term health concerns by understanding the condition of children's thyroid glands, even though exposure levels after the nuclear accident in Fukushima are known to be much lower than those of Chernobyl, where childhood thyroid cancer caused by internal exposure to radioactive iodine was found as one of the health problems after the Chernobyl nuclear accident.

The purpose of the CHC is to ascertain the evacuated residents' health status and to use such data for the prevention of lifestyle diseases and early detection and treatment of diseases, since many people had to live as evacuees due to the earthquake and the nuclear accident, and they were anxious about their health because of substantial changes in lifestyle, such as diet and exercise habits, in addition to the loss of opportunity to undergo necessary health checks.

The Mental Health and Lifestyle Survey is designed to assess the physical and mental health

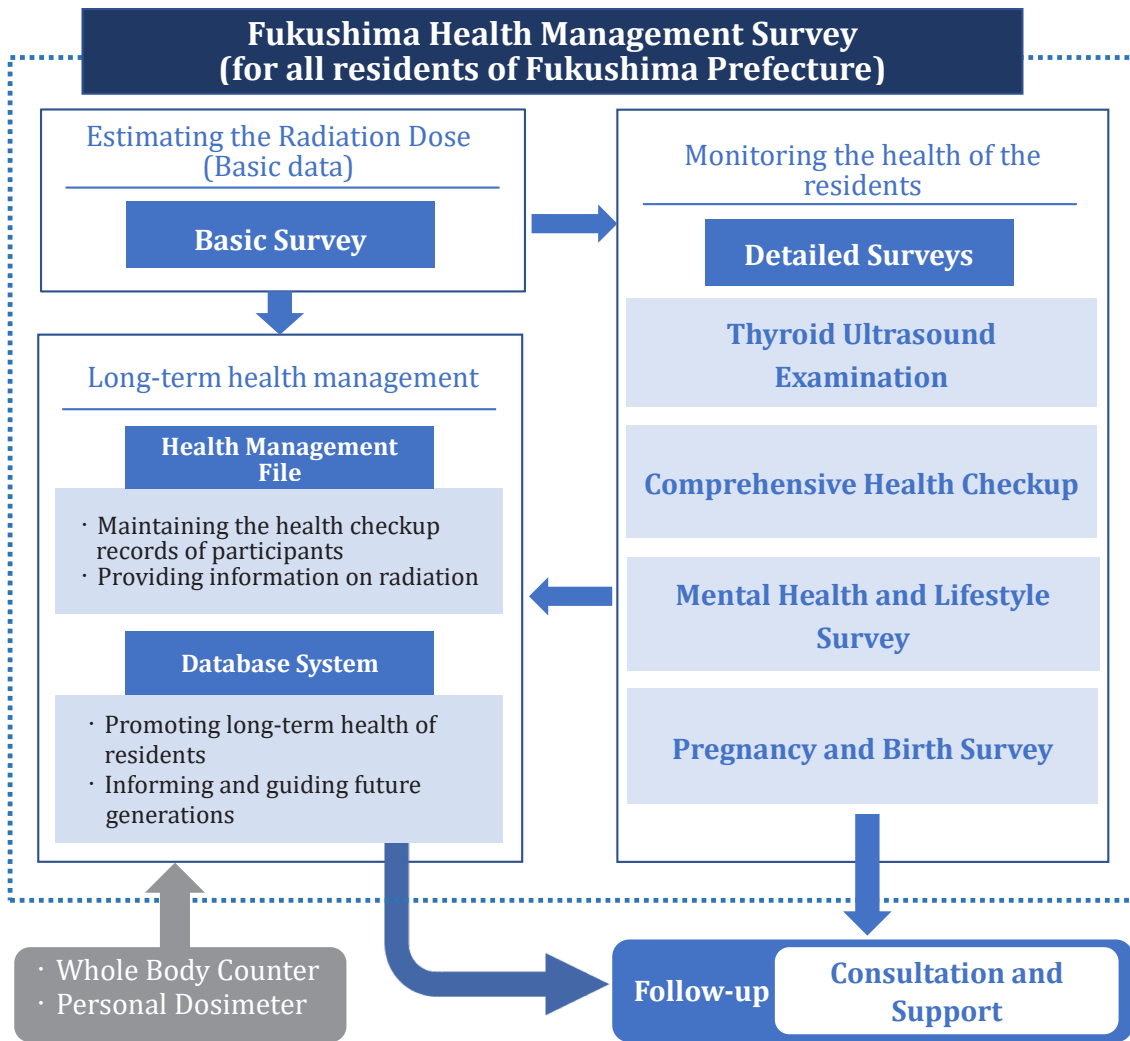


Figure 1. Conceptual design of the Fukushima Health Management Survey¹⁾

and lifestyle of the residents, because many of them feel anxious and stressed by experiencing the earthquake, nuclear accident, and resulting evacuation. Mindful of this, we can provide each of them with individualized health care, medical interventions, and welfare services.

The Pregnancy and Birth Survey aims to address the anxiety that pregnant women and mothers in Fukushima Prefecture have, and provide necessary support through assessing their physical and mental health after the earthquake and the nuclear accident.

3. Role of Fukushima Medical University (FMU)

1) Implementation framework of the FHMS

Fukushima Prefecture is the responsible body to implement the FHMS, and Fukushima Medical University is commissioned to conduct actual surveys as advised by the Fukushima Prefectural Oversight Committee for the FHMS, which is composed of experts (Figure 2).

The Fukushima Prefectural Government, as an administrative body, and Fukushima Medical University – with specialized knowledge and as the only medical university in Fukushima Prefecture – are working together to realize the objectives of monitoring the health of the prefecture's

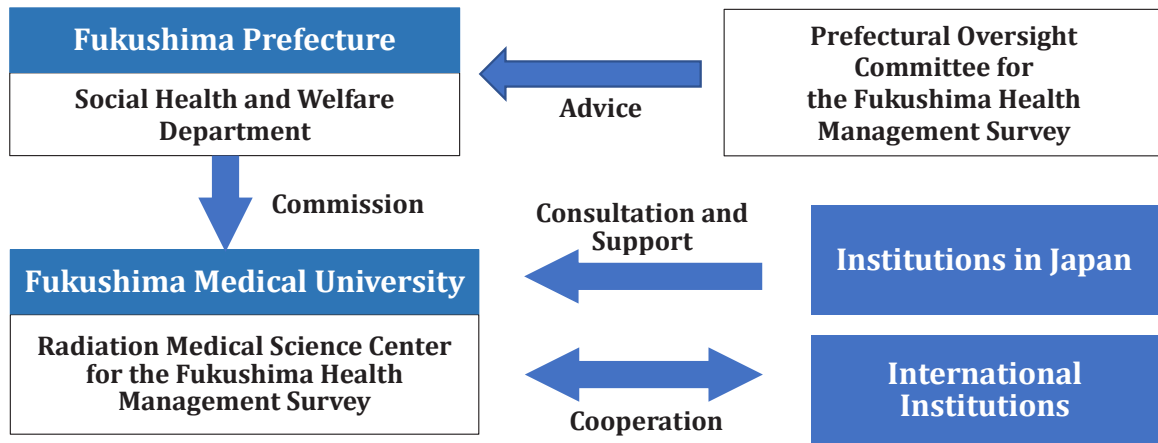


Figure 2. Implementation framework of the FHMS

citizens over the long term and ensuring their safety and security.

(2) Mission assigned to FMU

We believe that our university has been assigned three historical missions in response to the unprecedented nuclear crisis.

The first is to accurately investigate and assess the effects of radiation on health, and to steadily monitor the health of the people of the prefecture for many years to come; the second is to disseminate the findings obtained through the FHMS as intellectual assets common to all humankind, both at home and abroad, and at the same time to contribute internationally; and the third is to foster and produce human resources in fields related to radiation and health.

This means that our university is very different from other universities in that we are directly confronting a unique set of serious problems that have a great impact on society.

4. Establishment of the Radiation Medical Science Center for the FHMS

1) Purpose

The Radiation Medical Science Center for the FHMS was established within Fukushima Medical University, the only medical university in the prefecture, as the organization to conduct the FHMS under commission from Fukushima's prefectural government.

2) History

2011

June 1: Establishment of a Health Survey Section within the Planning and Finance Division of FMU's Administration Office.

September 1: Establishment of the Headquarters for Radiation Medicine Health Management as one of FMU's corporate organizations. Established within the Radiation Medical Science Center for the FHMS (hereinafter "Center") were the Department of Information Management, Department of Epidemiology, and Clinical Department.

2012

April 1: A Health Survey Division was newly established in the Administration Office.

The Department of Public Relations and the Department of International Cooperation were

newly established in the Center.

June 1: The Department of the Basic Survey was separated from the Department of Epidemiology.

The Clinical Department was divided into the Department of Thyroid Ultrasound Examination, the Department of Comprehensive Health Check, the Department of Mental Health and Lifestyle Survey, and the Department of Pregnancy and Birth Survey. The Sakaemachi Office of the Center was established in Sakaemachi, a part of Fukushima City adjacent to the east exit of Fukushima Station.

November 20: The Fukushima Global Medical Science Center was newly established. The Center was positioned under its umbrella.

2013

April 1: The Department of Public Relations was reorganized into the Department of Public Relations and Communication. The Department of Radiation Dose Estimates was newly established.

July 1: The Department of Survey Implementation Management was newly established in the Center.

October 1: The Department of the Basic Survey and the Department of Radiation Dose Estimates were combined into the Department of the Basic Survey and Radiation Dose Estimates. The Department of Mental Health and Lifestyle Survey and Care was newly established.

2014

April 1: Eleven departments of the Center were reorganized into four departments: the Department of the Thyroid Ultrasound Examination, the Department of International Cooperation and Communication, the Department of the Health Survey, and the Department of Epidemiology and Statistics. A new cross-departmental Planning Office was established. The Thyroid Ultrasound Examination Section was established as an internal administrative section of

the Health Survey Division.

2015

April 1: The Department of International Cooperation and Communication and the Department of Epidemiology and Statistics were renamed as offices under the Department of Health Survey Public Support.

2016

December 1: The Sakaemachi Office was closed and moved to Hikarigaoka.

December 11: The Fukushima Global Medical Science Center fully opened.

2018

April 1: The Department of the Health Survey was divided into the Department of the Health Survey and the Department of the Health Survey Personal Support.

3) Current Organizational structure

The following is the organizational chart as of April 1, 2020. The Center now consists of four departments and 14 offices under its executive director and general vice director (Figure 3).

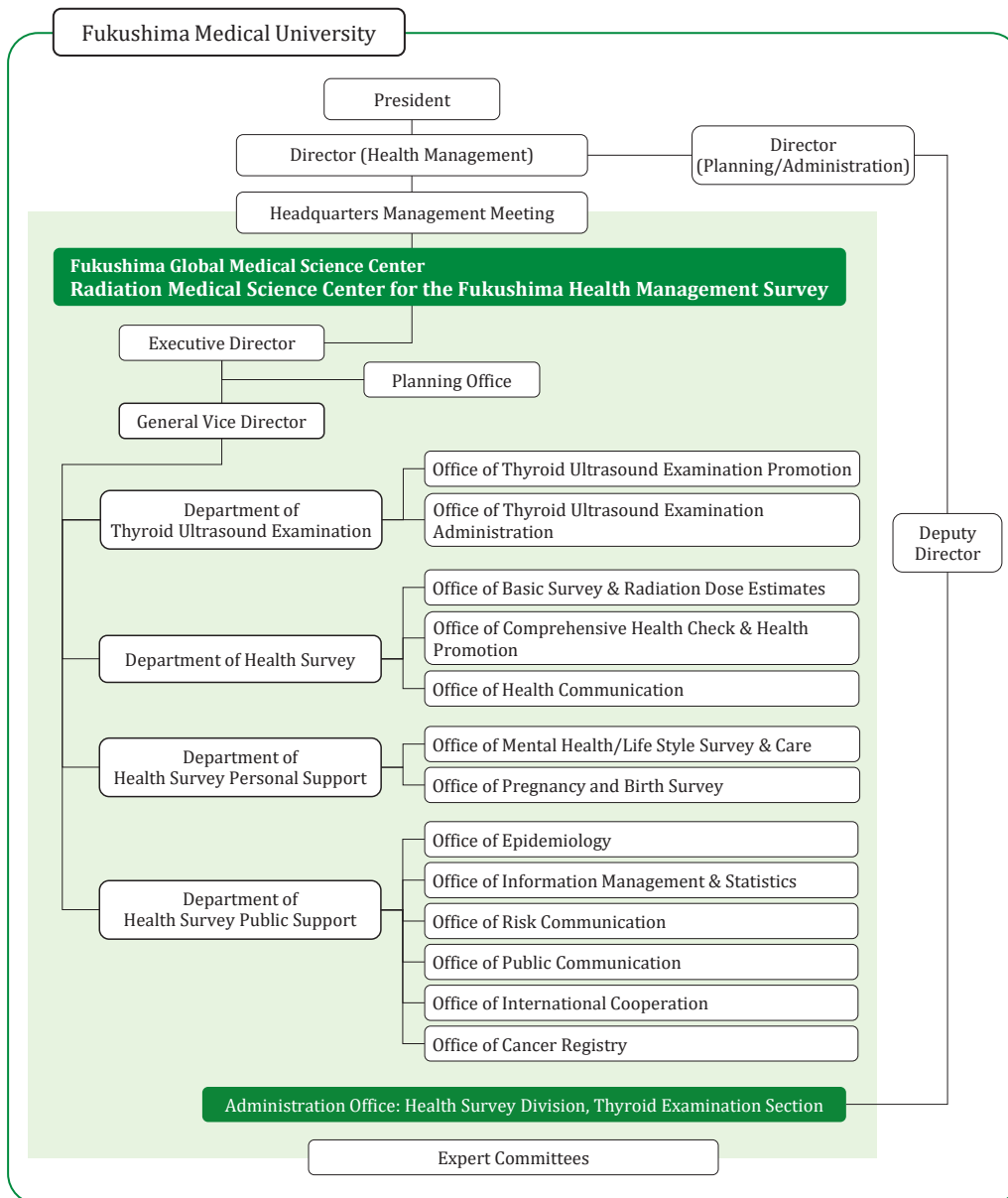


Figure 3. Organization chart of the Radiation Medical Science Center for the FHMS

5. Publication of the results of the FHMS

The details of the results of the FHMS are reported to the Fukushima Prefectural Oversight Committee for the Fukushima Health Management Survey. More detailed data are available in Japanese on the Fukushima Prefecture website.²⁾

A compilation of the Center's publications from 2011 to 2020 is available in the Appendix.

Notes and Sources

- 1) Fukushima Prefecture. "Health of residents of the prefecture," Fukushima Prefecture website, <https://www.pref.fukushima.lg.jp/site/portal-english/en03-03.html> (accessed on Dec. 9, 2020)
- 2) Fukushima Prefecture. "Fukushima Prefectural Oversight Committee for the Fukushima Health Management Survey" (in Japanese) Fukushima Prefecture website, <http://www.pref.fukushima.lg.jp/site/portal/kenkocyoosa-kentoiinkai.html>, (accessed on Dec. 9, 2020)