



# Think for World, Think for Human

Over many years, the Japanese government has provided proactive aid to developing countries under the philosophy of harmonized international development and humanitarian efforts. In its report published in 1979, the Ministry of Health and Welfare (the present Ministry of Health, Labour and Welfare) stated that it was necessary to establish a center for international cooperation in health and medicine in order to further enhance and strengthen cooperation in these fields, under the belief that it is one of the most socially effective types of humanitarian assistance and directly connected to the basic needs of human living in developing countries. Following many efforts, the International Medical Center of Japan was launched in October 1993. In April 2015, the center was designated as one of the national centers for advanced, specialized medical research aiming to maximize the achievements of R&D. All our activities are undertaken under these shared goals: to examine and treat infectious and other diseases that require an international response; to conduct surveys and research regarding international cooperation in health and medicine for such diseases, dispatch experts in health and medicine, train specialists, and undertake other necessary activities in a comprehensive manner; and, above all, to be the base for Japan's international contributions in health and medicine as the National Center for Advanced and Specialized Medical Care. These are the permanent goals of NCGM in the past, present and future.

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# The 3 Gs of contribution by NCGM to the world

MISSION & PHILOS OP

lobal health contribution

The world was afflicted by Spanish flu in 1918 and COVID-19 in 2020. NCGM continues to undertake proactive medical research and public health activities considering people's health not only in Japan but also across the world. To achieve international harmony through contributions to global health. This is one of our goals.

rand general hospital

As a general hospital that represents Japan, we are able to handle any disease and condition. This is our pride and responsibility. Responding to the needs of the time and envisioning the future, NCGM supports healthcare in an increasingly aging Japan, treating AIDS, hepatitis and other infectious and immune diseases, cancer, and strokes.

ateway to the Precision Medicine

The most advanced medical services in Japan are available at our hospitals. We are aiming to function as a research hub for high-precision genome medicine, Al-based and other types of personalized medicine, and highly advanced medicine. This hub will be used to develop new drugs for AIDS and hepatitis, to transplant pancreatic islet cells for type 1 diabetes, to develop diagnostic and therapeutic methods for malaria and other tropical diseases, and other R&D activities.

#### Philosophy of the National Center for Global Health and Medicine (NCGM)

NCGM contributes to the promotion of people's health and welfare in Japan and around the world in the fields of health and medicine, research, education and international cooperation, while respecting human dignity.

- We at NCGM seek to provide healthcare, research and education of the highest class in the world.
- We broadly publish achievements in healthcare, research, education and international cooperation to the general public.
- We educate and train talented healthcare professionals who will support the future of medicine.
- We function as a bridge with the global health community through health cooperation.

#### Philosophy and basic policy of the Center Hospital and the Kohnodai Hospital

The Center Hospital and the Kohnodai Hospital of NCGM provide the best general healthcare services to overcome diseases and improve health with the aim of contributing to society.

- Integrating treatment and research to provide healthcare services with consideration for patients.
- Providing healthcare services through collaboration among highly-advanced pioneering disciplines.
- Providing safe and effective healthcare and sharing its effects with society at large.
- Focusing efforts on educating and developing high-quality medical professionals with extensive expertise.
- 3 Promoting team-based treatment approach based on mutual trust.

#### **Philosophy of the Research Institute**

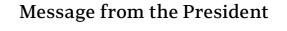
The NCGM Research Institute actively promotes pioneering basic research, translational research, and clinical research, contributing to society by overcoming diseases and promoting health.

#### Mission of the Bureau of International Health Cooperation

Aiming to realize the world where all the people can equally lead healthy lives, the Bureau of International Health Cooperation provides support around the world, including low and middle income countries, to improve healthcare using our expertise and contributes to healthier lives of Japanese people by bringing these experiences back to Japan.

#### **Rights of patients**

As a designated National Center for Advanced and Specialized Medical Care and an advanced treatment hospital, the Hospitals of NCGM respect the personality of each patient, support self-determination by the patient, and provide optimal healthcare based on mutual trust.



National Center for Global Health and Medicine

#### Norihiro Kokudo, President

The National Center for Global Health and Medicine (NCGM) has long history starting from 1868. At present, NCGM is a National Center functioning as a hospital and takes on a diversity of roles. These include undertaking basic medical research directly connected to clinical practice, promoting international health cooperation, and developing human resources at the National College of Nursing, Japan, and other institutions. Its comprehensive, broad range of activities can be expressed as the 3 Gs. The first G stands for "Global health contribution." Starting from healthcare cooperation in Bolivia in the 1980s, NCGM has dispatched more than 4,500 staff members to 134 countries in total. It has provided assistance in overall healthcare policies in Asia, Africa and other countries, including health insurance systems, maternity healthcare, and nurse certification systems.

The second G stands for "Grand general hospital." NCGM specializes in treating AIDS, infectious and immune diseases such as hepatitis, metabolic diseases such as diabetes, child and adolescent psychiatry. It also functions as a general hospital that is able to handle any disease or condition, including cancer and stroke, amidst Japan's increasingly aging population.

The third G stands for "Gateway to the precision medicine." Particularly in genome medicine, NCGM systematically retains the samples of many diseases in the Biobank to utilize along with clinical data in our R&D activities.

In response to the outbreak of COVID-19 in January 2020, NCGM functioned as the National Center for handling infection crisis. We undertook wide-ranging measures including the establishment of PCR test sites, the provision of advanced medical services for patients in moderate to severe condition, the development of new drugs and plasma therapy from recovered patients, support in hotel accommodations for patients in mild condition, and the handling of infection clusters on cruise ships. In particular, NCGM fully exercised its capabilities as a general hospital for advanced medicine in the treatment of patients in severe condition and clinical trials for therapeutic drugs. The NCGM Research Institute is undertaking the analysis of COVID-19 severity factors utilizing the Biobank, the design of new drugs targeted at COVID-19, and the development of vaccines and plasma therapy from recovered patients.

We at NCGM will continue to respond to infectious diseases and other healthcare crises while promoting advanced medicine and R&D activities through close collaboration between the general hospitals and the Research Institute, as well as human resource development and international cooperation.

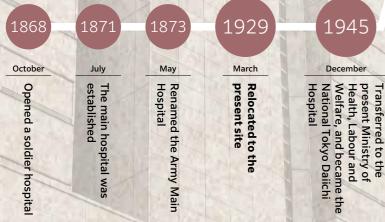
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# Medical services supported by a history of more than 150 years

#### **History and future of NCGM**

The National Center for Global Health and Medicine (NCGM) has its roots in the soldier hospital established in the Yamashita-mon gate in Hibiya, Tokyo, in October 1868. It was relocated to the present site in Toyama district in 1929. After World War II, the operation of the Hospital was transferred to the Ministry of Health and Welfare (the present Ministry of Health, Labour and Welfare), and its history as the National Tokyo Daiichi Hospital began. The Hospital was known to people as "Toichi" for many years. In October 1993, the National Medical Center Hospital was integrated with the National Sanatorium Nakano Hospital to establish the International Medical Center of Japan, as the fourth national center in Japan to play a major role for promoting international health cooperation. There was a reorganization in 2008, and the Kohnodai Hospital of the National Center of Neurology and Psychiatry was renewed as the Kohnodai Hospital of the International Medical Center of Japan. The International Medical Center of Japan was reorganized as an independent administrative agency National Center for Global Health and Medicine (NCGM) in 2010, and was restarted as new general hospitals for further pursuing highly advanced medicine. NCGM was further reorganized as a national research and development agency in 2015. NCGM consists of the Center Hospital, the Kohnodai Hospital, the Research Institute, the Center for Clinical Sciences, the Bureau of International Health Cooperation, the National College of Nursing, and other various organizations. NCGM undertakes research concerning infectious and immune diseases, metabolic diseases such as diabetes, provides advanced general medical services, promotes international cooperation in healthcare, and pursues the comprehensive development of healthcare professionals.

As the frontline for response to COVID-19 in Japan, we at NCGM will strongly promote R&D for the prevention and advanced treatment of diseases, for the sake of the world and of the future.





**OGAI MORI** 

### NCGM and Ogai Mori

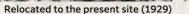
Ogai Mori was born in 1862, the first son of the Mori family, which served as designated doctors for the Tsuwano feudal clan. He was renowned for outstanding intelligence from his childhood, and graduated from the School of Medicine, the University of Tokyo, at 19 years of age in July 1881. He served as the deputy army surgeon at the Tokyo Army Hospital, the predecessor of the Center Hospital of NCGM, for about six months starting from December 1881. Commemorating its 150th anniversary, NCGM awarded Ogai Mori with the title "Special Honorary President." and created a bronze statue to communicate his achievements to later generations.

#### Kohnodai Hospital

1872	1899	1936	1945	1987
Established as sick rooms for the Soldier School, Tokyo Army Development Wing	October  Renamed Kohnodai  Garrison Hospital	November Renamed Kohnodai Army Hospital	Transferred to the present Ministry of Health, Labour and Welfare, and started as the National Kohnodai Hospital	Integrated into the National Center of Neurology and Psychiatry
National I	Medical (	Center Ho	spital	
		4074		1000

ational	Medical	Center H	ospital	
1947	1954	1974	1986	1988
September	July	April	October	April
Opened a subsidiary nursing school	Started the first comprehensive medical checkup service in Japan	Renamed the National Medical Center Hospital; Established the Clinical Research Department	Established the Department of International Medical Cooperation	Established the AIDS Medical Information Center
		1		
	Nationa	l Sanatoriu	ım Nakano	Hospital
	Nationa 1920	1942	1947	Hospital 1967







National Tokyo Daiichi Hospital, front gate

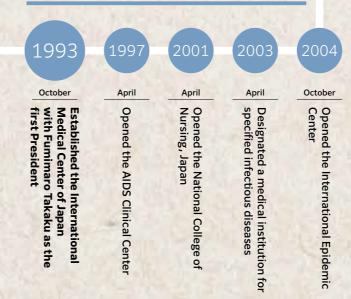


National Medical Center Hospita

#### National Center for Global Health and Medicine (NCGM)

2008	2008	2010	2010	2012	2012	2015	2016	2016	2018
April	October	April	October	May	November	April	April	May	October
Integrated into the International Medical Center of Japan	Established the Research Center Hepatitis and Immunology	Reorganized as an Independent Administrative Agency NCGM Established the Diabetes Research Center and the International Clinical Research Center Established the tertiary department of emergency medicine and critical care at the Center Hospital	Renamed the International Epidemic Center the Disease Control and Prevention Center	Renamed the International Clinical Research Center the Center for Clinical Sciences	The Center Hospital was approved as an advanced treatment hospital	Renamed a National Research and Development Agency NCGM Renamed the Bureau of International Health Cooperation	Established the Medical Genomics Center	The Medical Examination Center was renewed opened at the Center Hospital	Celebrated the 150th anniversary of foundation

#### **International Medical Center of Japan**







Central ward of Center Hospital of the National Center for Global Health and Medicine was completed in August 2010.



# **Response to Health Crises by NCGM**

#### Based on accurate knowledge acquired through a broad range of experiences, we appropriately respond to increasingly diversified, complex health crises.

Starting with medical aid for the Cambodian refugee camp in 1979, NCGM has been active not only in Japan but also in the international community, sending emergency relief teams to countries afflicted by natural disasters and infectious diseases. In the early 2000s, NCGM assisted in controlling the SARS epidemic in China and Vietnam. In addition to health cooperation, NCGM has provided assistance in overall health policies, including local health insurance systems (universal health coverage), maternal and child health, and nurse certification systems. NCGM has dispatched more than 4,500 staff members to 134 countries in total, mainly in Asia and Africa. In 2020, it took a variety of measures to support the response to COVID-19.



Medical aid for Cambodian



The civil war and food crisis in Cambodia resulted in more than 500,000 refugees. Refugee camps were established in the border area with the neighboring country (Thailand). The Japanese government started to provide refugees with medical aid in 1979. The then National Medical Center Hospital (the present NCGM) dispatched physicians and nurses to treat gunshots, landmine wounds and other injuries.

The Japanese Embassy hostage



The Japanese Embassy was attacked by an armed group during a ceremony organized by the Japanese ambassador to Peru, and the group took about 700 persons hostage. The Japanese government sent a medical team including physicians and nurses from the then International Medical Center of Japan (the present NCGM) to the site. The medical team provided the hostages with physical and mental support, and treated patients with trauma caused during forced entry by the army.

The Great Hanshin-Awaji Earthquake



The Great Hanshin-Awaji Earthquake occurred on January 17, 1995. The then Ministry of Health and Welfare dispatched several medical teams consisting of staff at national hospitals to the afflicted areas. The then International Medical Center of Japan (the present NCGM) sent physicians and nurses to provide disaster medical services to afflicted people at a shelter established on the premises of an elementary school in Nagata-ku, Kobe.

**Turkey Earthquake** 



In August 1999, a major earthquake occurred in Western Turkey, and approximately 15,000 fatalities were confirmed. In response, the Japanese government sent an international emergency relief medical team including physicians and nurses from the then International Medical Center of Japan (the present NCGM) to the site. In the afflicted area, the team established a temporary clinic to treat trauma and internal diseases.

**Severe Acute Respiratory** Syndrome (SARS)



In November 2002, SARS broke out in Guangdong Province, China, and spread to many countries including Vietnam and Canada. The Japanese government sent Japan Disaster Relief Teams including physicians from the then International Medical Center of Japan (the present NCGM) to Vietnam and China. At the sites, the team undertook various support activities including the provision of guidance for infection prevention and control, the establishment of model hospitals, and the health management of Japanese residents in the areas.

The Great East Japan Earthquake



The Great East Japan Earthquake occurred on March 11, 2011. NCGM started dispatching disaster medical assistance teams to Sendai and Kesennuma Cities, Miyagi Prefecture, six hours after the occurrence. Subsequently, NCGM dispatched a medical team consisting of various professions to Higashi-matsushima City, and public health specialists to the municipal health center, to provide healthcare support. NCGM also concluded a cooperation agreement with the city, and is providing continuous support as of September 2020.

**Ebola virus disease in the Democratic** Republic of the Congo



An epidemic of Ebola virus disease was identified in Eastern Congo in June 2019, and WHO declared "Public Health Emergency of International Concern." In response to this declaration, the Japanese government dispatched the Infectious Disease Response Team, with the participation of physicians and nurses from NCGM. At the sites, the team provided technical support to strengthen the quarantine system and offered guidance for infection prevention.

Pandemic influenza (H1N1)



After H1N1 was identified in Mexico at the end of April 2009, infection spread across the world. In response, NCGM supported guarantine activities at airports and stop facilities, aiming to strengthen the quarantine system at Narita International Airport. NCGM also sent its staff members to the UN influenza coordination organization to provide support for the prevention of the spread of infection in Asia.

Yellow fever in the Democratic Republic of the Congo



The government of the Democratic Republic of the Congo declared the epidemic of yellow fever in June 2016, and requested assistance from the international community. In response to this request, the Japanese government dispatched the first Infectious Disease Response Team, with the participation of physicians from NCGM. At the site, the team led a vaccination campaign and provided technical support in screening, thereby contributing to the suppression of yellow fever.

**Novel coronavirus infection** (COVID-19)



The COVID-19 infection broke out in Wuhan, China, and immediately spread across the world. NCGM undertook various activities such as conducting health checkup for Japanese people returning from Wuhan on chartered planes, providing support for infection control on the Diamond Princess cruise ship, screening suspected patients, accepting patients in moderate to severe condition, providing expert advice to the administration, and supporting the operation of accommodation facilities for recuperation and monitor the health condition of patients.

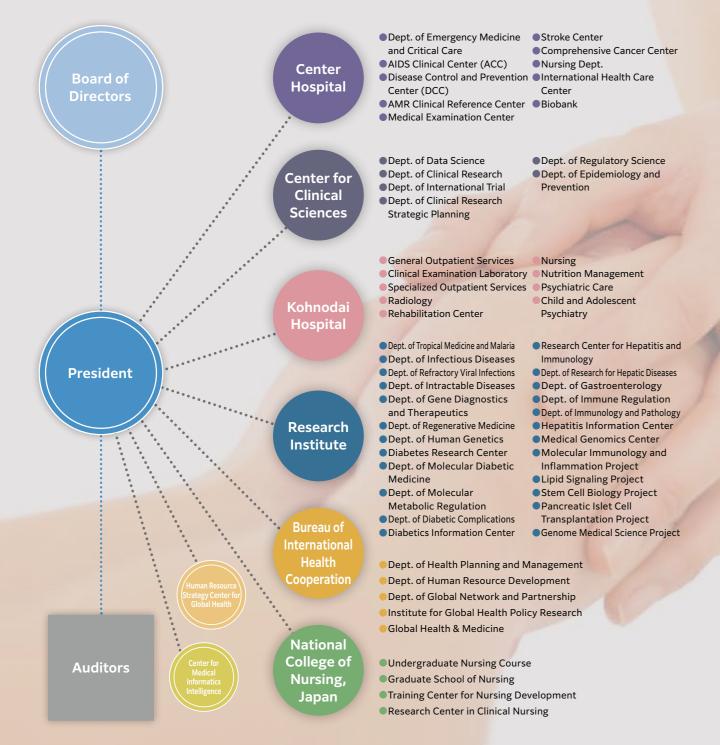
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# **Organization Chart**

### To become an ideal National Center, we pursue research through cooperation among a broad spectrum of departments.

The National Center for Global Health and Medicine (NCGM) consists of the Center Hospital, the Center for Clinical Sciences, the Kohnodai Hospital, the Research Institute, the Bureau of International Health Cooperation, the National College of Nursing, and other departments. NCGM provides advanced general medical services, and promotes diagnosis and treatment particularly concerning diseases that require international handling. NCGM is a National Center for Advanced and Specialized Medical Care that conducts surveys and research regarding international cooperation in health and medicine for such diseases and trains the relevant specialists in a comprehensive manner.





The Center for Clinical Sciences consists of six departments: the Department of Data Science, Department of Clinical Research, Department of International Trial, Department of Clinical Research Strategic Planning, Department of Regulatory Science, and Department of Epidemiology and Prevention. The Center aims at contributing to the health promotion of people by finding new therapies and proposing disease prevention measures.

As a National Center for Advanced and Specialized

Medical Care, the Center Hospital of NCGM handles infectious diseases, metabolic diseases such as diabetes, and other chronic and intractable diseases, while responding to various treatment needs in Japan's

increasingly aging population. The Center Hospital also promotes the R&D and international expansion of

innovative drugs and medical devices, undertakes clinical research of international standards in Japan, and plays a

central role in investigator-initiated clinical trials.



The Hospital was reorganized as the Kohnodai Hospital of the International Medical Center of Japan on April 1, 2008, and was reorganized as an Independent Administrative Agency Kohnodai Hospital of NCGM on April 1, 2010. A general hospital open to the local community, it provides highly advanced medical services, while also providing diagnosis, surveys, research and training services regarding hepatitis, immune and other diseases to Japan and the world.

Research Institute

Hospital

**Center Hospital** 



The National Center for Global Health and Medicine Research Institute (NCGMRI) is an organization that was first positioned as the core of the research department as the base for Japan's international healthcare contributions. It was established in the National Center for Advanced and Specialized Medical Care that was opened by integrating the National Medical Center Hospital with the National Sanatorium Nakano Hospital

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ealth Cooperat



The Bureau of International Health Cooperation was established as the Department of International Medical Cooperation in 1986 in order to promote international cooperation in the healthcare field. Since then, the organization has undertaken various activities in collaboration with the Ministry of Health, Labour and Welfare; the Ministry of Foreign Affairs; JICA; WHO and other institutions in Japan and around the world in order to improve healthcare and public health in pursuit of a society where people of all countries can live in health.

Ministry of Health, Labour and Welfare in 2001. It is an educational institution that trains nursing professionals at the National Center for Advanced and Specialized

College of Nursing, Japa



who have clinical abilities for nursing practice that are required the National Center for Advanced and Specialized Medical Care, which is responsible for national policy medicine. Trainees also develop the ability to make contributions to the international community.



# **Center Hospital**

The Center Hospital is a National Center for Advanced and Specialized Medical Care that was certified as an advanced treatment hospital in 2012. It provides highly advanced medical services for infectious diseases (including emerging and reemerging infectious diseases, HIV and hepatitis), diabetes and metabolic diseases, and other chronic and intractable diseases, and responds to the cancer treatment needs that are becoming increasingly difficult amidst Japan's increasingly aging population. The Center Hospital also accepts the largest number of emergency patients in Tokyo, with emphasis on emergency medicine. From the standpoint of international health cooperation, the Hospital implements education and training for physicians and nurses from overseas countries, and proactively examines overseas tourists and non-Japanese residents in Japan. The Hospital is one of Japan's oldest post-graduate educational institutions and represents the country internationally. It proactively implements early-stage education and post-graduate education for physicians, medical interns, and nurses. The Hospital also focuses on promoting clinical research as a national research and development agency.



Facility outline	
Total number of beds	<b>749</b> beds
General ward	<b>699</b> beds
Tuberculosis ward	<b>22</b> beds
Psychiatry ward	<b>24</b> beds
Infection ward	<b>4</b> heds



#### Enhanced equipment, structures and human resource development that support highly advanced medical services for the world and the future

#### **Department of Hospital**

- Internal medicine
- Pulmonary medicine
- Cardiology
- Diabetes
- Gastroenterology
- •Hematology
- Endocrinology Nephrology
- Neurology

- Psychosomatic medicine Infectious diseases
- Neonatal medicine
- Endoscopy
- Dialysis Palliative care
- Pain clinic
- Allergy
- Rheumatology

- Surgery
- Thoracic surgery
- Cardiovascular surgery Gastroenterological
- Pediatric surgery Orthopedics
- Neurosurgery
- Ophthalmology Plastic and reconstructive Otolaryngology
- Head and neck surgery

Pediatrics

Urology

Obstetrics

Gynecology

- Psychiatry
- Radiation oncology Dermatology
  - Dentistry

Radiology

Oral and maxillofacial surgery

Physical medicine and Rehabilitation

- Anesthesiology
- Pathology
- Emergency medicine (43 departments in total)

#### **Outpatient Reception**

In the outpatient unit, volunteers guide patients and answer their questions regarding procedures for examination. The International Health Care Center has also been established in response to the global era, providing multilingual consultation services to international tourists and non-Japanese patients living in Tokyo.

#### **Electronic Medical Record (EMR) System**

At the same timing of the new central ward opening, we expanded our Hospital information system from order Entry System to EMR System. It allows us to share the patient / medical information among each section, check the information automatically and provide safer and more advanced medical services. Also, the accumulated medical information can be referred and analyzed for the secondary use.

#### **Clinical Research**

Medicine has been advanced by learning patients with various kinds of diseases, which is still important in the present time when medical technology has significantly improved. By gathering and analyzing clinical data with cooperation from patients while ensuring confidentiality, our efforts are focused on research and "Biobank" promotion that can contribute to the development of future medicine.



#### A Operating theater

In the central operating theater we have totally 14 rooms (14 beds) for surgical operation. Among them one is negative pressure room for surgery of infected patients, and six rooms are for video-assisted endoscopic, laparoscopic, and thoracoscopic surgery, and three rooms are bio-clean rooms.

## Angiography and Interventional Radiology

At the Angiography and Interventional Radiology (IVR) division, experienced staff perform advanced vascular diagnosis and IVR procedures using the newest equipment.

## Department of Diagnostic Radiology

**B** ICU

Diagnostic imaging is performed by staff specializing in CT, MRI, general radiography, gastrointestinal fluoroscopy, nuclear medicine testing (scintigraphy and PET), and other

The ICU consists of 10 beds (one

is a negative pressure room), and

provides postoperative management

of highly invasive surgeries, CCU, and

cross-organ systemic management

of the most critically ill patients in

the Hospital in collaboration with

intensivists and various departments.

#### **G** Radiation Oncology

C SCU

The Radiation Oncology Department provides patients with the latest treatment techniques including intensity-modulated radiation therapy, brain stereotactic radiosurgery and stereotactic body radiation therapy.

The SCU has six beds dedicated

to stroke patients (to be

increased to nine beds). The

multi-profession care team

evaluates patients' condition

and pursues early rehabilitation

#### **H** Endoscopy

D NICU-GCU

The Neonatal Intensive Care Unit

has six beds, and the Growing

Care Unit also has 12 beds, for

the general management of

The department is fully equipped with endoscopic devices of the world's highest standard, and provides safe, secure medicine and thorough preventive measures against infectious diseases.

#### Advanced medicine

The Department has 20 beds in aseptic rooms, including four biological clean rooms, performing hematopoietic stem cell transplantation, chemotherapy, and immunosuppression therapy.

#### J Pharmaceutical Department

In addition to the dispensing and preparation of drugs, the Department undertakes various operations regarding drug therapy, including the management of drug information, guidance for patients, and participation in

#### K Laboratory Testing Department

Physiological and biochemical (emergency), general, blood, immunological, microorganism, blood transfusion, and other laboratory tests are performed in this laboratory

#### Special Private Room Ward

This ward is located on the highest floor and is fully equipped with security functions. We provide inpatients with comfortable living full of hospitality during their

# **Department of Emergency Medicine** and Critical Care



## **AIDS Clinical Center** (ACC)



The Department of Emergency Medicine and Critical Care comprises the three departments of Emergency Medicine, General Medicine and Intensive Care Unit, along with the Trauma Center and the Simulation Center. The Department practices our philosophy of "providing safe medical services that satisfy the needs of local society as a tertiary emergency medical facility for the community that treats any kind of emergency patients with any severity around the clock based." At present, we respond to approximately 11,000 patients transferred by ambulance every year, about 11% of which require critical care, mainly from the western part of the 23 wards of Tokyo. The Hospital also functions as one of the disaster bases in Tokyo.

The Emergency Medicine is divided into the outpatient unit and the inpatient ward. The outpatient unit has equipment required for advanced resuscitation, including two resuscitation rooms, six beds for stable patients and a decontamination area with a depressurized isolation room. Besides doctors, nurses and coordinators, medical technologists also work at night in the outpatient unit, enabling prompt blood transfusion, microbiological tests, and physiological tests. The inpatient ward is equipped not only with 13 beds for critical care including an isolation area, but also 19 beds for stepdown including four beds with isolation. In the same floor of the inpatient ward, there are in-situ, well-equipped, simulation training rooms for the liberal use by healthcare workers.



In-situ-simulation training of advance life support



Entrance to the outpatient unit of Department of Emergency Medicine and



Healthcare professionals cooperation for a



The AIDS Clinical Center (ACC) was established in April 1997, following the settlement of a suit filed by hemophilia patients infected with HIV via contaminated blood products, for the purpose of not only providing the relief measures to the hemophilia patients but also ensuring access to HIV care for all people living with HIV regardless of their routes of infections. ACC provides a multidisciplinary care by a team of various healthcare professionals, including coordinator nurses, clinical psychologists, or medical social workers. ACC has also an outpatient clinic for the comprehensive care of HIV-infected hemophilia patients, and opened a sexual health clinic in 2017 to promote preventive medicine against sexually transmitted infections. ACC has a research laboratory and has actively conducted clinical and basic researches on HIV and its comorbidities, including those of international research projects in other Asian countries, which led to more than 400 publications on scientific journals. Our goal is to be among the world's leading hospitals of HIV care.



Gene analysis at the ACC lab

Weekly clinical conference



Outpatient consultation rooms that provide



Clinic for hemophilia patients that provides comprehensive care



The team of our department





# **Disease Control** and Prevention Center (DCC)



### **AMR Clinical Reference** Center



The Disease Control and Prevention Center (DCC) was established in May 2012 by integrating the Department of Infectious Diseases (established in July 2011) into the International Epidemic Center (established in the then International Medical Center of Japan in October 2004) for the purpose of preventing the spread of emerging and reemerging infectious diseases in Japan.

DCC comprises the Department of Infectious Diseases, Travel Clinic, International Infection Control Room, and Antimicrobial Resistance (AMR) Clinical Reference Center (see the right). To cope with infectious diseases that require high specialization and infection issues in Japan and overseas, DCC undertakes the treatment and prevention of infectious diseases, training of infection specialists, epidemiological research, the development of diagnostic methods and drugs/vaccines, and comprehensive advanced initiatives to improve awareness among the general public.

DCC promotes its activities on various occasions in clinical settings, R&D stages and medical policies, based on collaborations with specialists in each field in the National Center for Global Health and Medicine.



Conference of infection specialists

#### At the Center Hospital

#### Clinical Infectious Diseases

In collaboration with General Medicine, DCC provides care to inpatients and outpatients with infectious diseases as well as those who may possibly be infected. DCC manages the Infection Consultation Group to support the care of infected patients in other departments of the Hospital.

#### Travel Clinic

Our Travel Clinic provides travelers with pre-travel health check, immunization, and post-travel care. It is also an official yellow fever vaccine center.

#### Preparedness for Emerging Infectious Diseases

DCC establishes an internal system in preparation for new infectious diseases, supports care at medical institutions in Japan and overseas, and conducts research concerning measures against emerging and reemerging infectious diseases.

#### 2 Human Resource Development

#### Seminar and Training Course

DCC also holds seminars concerning emerging and reemerging infectious diseases, travel medicine, and vaccination.

#### Human Exchange

We have accepted trainees from overseas and worked on infectious diseases in foreign countries.

#### Residency and Fellowship Program

Since 2010, DCC has accepted senior clinical residents (for the general infection program) in collaboration with the AIDS Clinical Center and Pulmonary Medicine. In 2012, DCC opened a clinical fellow program for post-senior resident physicians, and has annually accepted three to four physicians in the sixth year after graduation or later in order to train them as infection specialists.

#### Research

Overseas: Research on the control of multidrug-resistant bacteria at base hospitals in Vietnam

Domestic: DCC conducts many multicenter clinical research projects on new test methods, unapproved drugs, bloodstream infection, etc. for COVID-19, other emerging and reemerging infectious diseases, and imported infectious diseases. DCC also proactively conducts investigator-initiated clinical trials regarding new antimicrobial agents. DCC participates in GeoSentinel, the global surveillance network for the epidemiological research of travel-associated infectious diseases.



Training at a new infectious disease ward



The AMR Clinical Reference Center (a project entrusted from the Ministry of Health, Labour and Welfare) was established in April 2017 in order to promote initiatives based on the National Action Plan on Antimicrobial Resistance (AMR). This Center consists of three divisions, in which diverse staff members are engaged in AMR stewardship while making use of their respective specialties. The Clinical Epidemiology Division sets up and operates healthcare surveillance systems, and undertakes the surveillance of elderly care facilities. The Center also centralizes data from the viewpoint of a one-health approach, in consideration of the necessity for monitoring animals and the natural environment to protect human health. The Pharmacoepidemiology Division surveys the doses of antimicrobials nationwide, and discloses the results of the surveillance. The Division also collects and analyzes data concerning antimicrobial stewardship. The Information and Education Division implements educational activities concerning AMR and antimicrobial stewardship, including seminars for healthcare professionals and the preparation of related materials. The Division also provides information to the general public on its website and at related events.



Exhibition at the NCGM Atrium

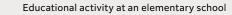


Information provision on the website



Discussion at the Pharmacoepidemiology Division Staff at the Clinical Epidemiology Division







## **Medical Examination** Center



#### **Stroke Center**



The comprehensive medical checkup service in Japan was started on July 12, 1954, as a "short-term hospitalized high-precision physical examination" at the National Tokyo Daiichi Hospital, the predecessor of our Hospital. Subsequently, this system expanded across Japan, referred to as "Ningen (human) Dock." In May 2016, the Medical Examination Center was established based on our achievements and experience over years. It was a new step toward more precision checkup service at our National Center. To promote the early detection and prevention of lifestyle-related diseases, our center provides an enhanced basic examination. At the same time, many innovative tests have been introduced including nasal endoscopy, CT colonography, pancreas and liver "dock", neck vessel assessment, and enhanced brain



examination incorporating cognitive function assessment. The Medical Examination Center proactively collaborates with clinical departments in our Hospital, to strengthen links with subsequent medical services.

Recently, thrombectomy has emerged as a therapy for acute cerebral infarction, with which dramatic improvement in symptoms can be expected. In response to this substantial paradigm shift, our Hospital opened an SCU with six beds in December 2014 (to be increased to nine beds in April 2021), and has contributed to the local community by providing cutting-edge treatment to local patients with acute strokes who are accepted as far as possible on a 24/7 basis. In September 2019, our Hospital was officially certified as a primary stroke center by the Japan Stroke Society for these achievements over many years. We are required to guarantee the quality of stroke medicine by measuring clinical indicators on a periodic basis. At our Hospital, stroke treatment is conducted by a multi-profession team that consists of neurosurgeons (five advisors and two or three specialists), endovascular treatment physicians (one advisor and one specialist), neurologists (three specialists), rehabilitation physicians, emergency physicians, physical therapists, occupational therapists, speech-language-hearing therapists, radiologists, nurses, pharmacists, registered dietitians, and MSWs. The team provides highly specialized treatment immediately following onset.





Rehabilitation Room dedicated to the Stroke Center

#### **Characteristics of our Medical Examination Center**

The Center pursues the world's highest class medical services by providing high-precision examination by skilled technologists, utilizing the latest equipment and medical devices. The reports of comprehensive medical checkups are prepared by dedicated physicians who specialize in examinations and preventive medicine. Reports incorporate comprehensive assessments that lead to subsequent treatment and lifestyle improvements based on the results of examination by specialists in the respective fields of related departments.

If a disease is identified, patients are able to receive a prompt, detailed examination and undergo advanced, specialized treatment at our Center. Upon request from examined persons. we can also introduce the patient to other hospitals on medical

#### **Providing comprehensive medical** checkups to overseas clients

In this era of globalization, our Center accepts not only Japanese but also many overseas clients who want to receive a comprehensive medical checkup, in order to promote preventive medicine from a global viewpoint. We have an outstanding track record in the number of overseas clients accepted among medical examination facilities in Japan. We provide high-quality comprehensive medical checkups to overseas clients just as to domestic clients, aiming at seamless collaborations in medical services by effectively utilizing our abundant connections with overseas healthcare professionals in cooperation with the International Health Care Center.

### **Comprehensive Cancer** Center



#### **Abundant additional options**

Our Medical Examination Center offers abundant additional options according to the requests and convenience of persons who receive examinations. They can select from a one-day examination or a hospitalized examination. It is possible to select from a variety of options that target the early prevention of arteriosclerotic diseases, in addition to the early detection of malignant tumors.



Private room for hospitalized examination





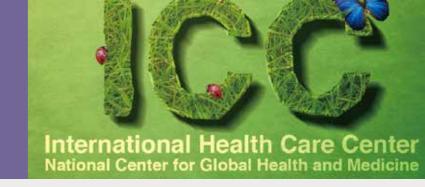
Led by oncologists and in collaboration with related departments, the Center not only provides the best treatment for each cancer patient, but also operates Cancer Survivorship Support recovering cancer patients and Palliative Care for specialized palliation of pain and other agonizing symptoms. As a general hospital that has specialists in each department, we treat cancer patients who have various comorbidities such as the deteriorated function of the heart, kidneys, or liver; mental/nervous diseases; and infectious diseases. We provide treatment tailored for each patient by properly assessing organ functions and other conditions before treatment, and estimating pharmacokinetics and other factors that match the properties of drugs. To provide safe treatment with

anticancer medicines and achieve maximum effects, it is necessary to obtain knowledge and experience from specialists in each department—who are capable of optimal responses to various adverse reactions—as well as from specialized oncologists, palliative care specialists, certified nurses for chemotherapy, and pharmacists who specialize in oncology. Our Hospital has all these necessary factors. Therefore, we can propose the optimal treatment and management for each patient and make possible precision medicine.

# **Nursing Department**



# International Health Care Center



#### 1 Principle of the Nursing Department

To respect life and humanity, both of which are irreplaceable, and strive for warm-hearted nursing.

#### **2** Goals of the Nursing Department

- 1. To focus efforts on providing safe and high-quality nursing
- 2. To create nursing through promoting nursing education and research
- 3. To diligently strive for nursing that can adapt to changes in medical science

#### To develop and improve practical and clinical skills

The Center Hospital is an advanced acute care hospital based on comprehensive model care and provides advanced, pioneering medical services. In the Nursing Department, we develop talented generalists and specialists under their specified philosophy. To develop human resources capable of providing "warm nursing care," we consider it important to establish an environment that values each nurse and enables them to actively provide nursing care. Aiming at high-quality nursing practice, we upgrade the skills of clinical practice among nurses, while implementing enhanced medical safety training. We also promote and support clinical research on nursing.







To efficiently treat non-Japanese nationals at the Center Hospital, the International Health Care Center (ICC) undertakes coordination between non-Japanese patients and more than 40 clinical departments/centers.

ICC members includes three medical coordinators and some 15 medical interpreters/translators (in English, Chinese, Vietnamese, Nepalese, and Myanmar languages). They are supporting face-to-face medical consultations for overseas visitors and non-Japanese residents who cannot adequately understand or speak Japanese, as well as for overseas residents who want to see doctors in our Hospital.

An increasing number of non-Japanese patients visit the Center Hospital year by year. In FY2019, non-Japanese nationals accounted for 13.9% (5,656) out of all first-visit patients, and 6.5% (1,163) of

Online steering committee meeting held to efficiently treat non-Japanese nationals at the Center Hospital

all newly hospitalized patients. Medical interpretation service by external service providers is also available in 19 languages via phone or tablet.

We are also endeavoring to provide training of medical interpretation and exchange information through internal on-the-job training and annual online training for medical interpreters.

#### Biobank





Retention of samples

retaining cells, genes, tissue and other research resources over a long period to be utilized in unspecified medical research projects. The NCGM Biobank is operated at the Center Hospital (Toyama, Shinjuku-ku) and the Kohnodai Hospital (Ichikawa City, Chiba). The Biobank asks patients to provide biological samples (such as blood and surgical tissue) and medical information, with their understanding and consent, and retains the samples under proper management for medical research to help future treatment. Through the Biobank, we aim to utilize the retained samples and information in various research projects in the present and in the future, toward the clarification of disease factors and conditions, as well as the development of new drugs, so that more advanced

Biobank is a nonprofit mechanism (research platform) for

medical services can be provided and more diseases can be cured in the future.

NCGM and the five other national centers for advanced, specialized medical research jointly operate the National Center Biobank Network in order to support more disease-specific research projects.

20



# Center for Clinical Sciences

The Center for Clinical Sciences consists of six departments: the Department of Data Science, Department of Clinical Research, Department of International Trials, Department of Clinical Research Strategic Planning, Department of Regulatory Science, and Department of Epidemiology and Prevention. The Center aims to contribute to the health promotion of people by creating new therapies and proposing disease prevention measures. To achieve this goal, we proactively undertake sponsorinitiated clinical trials, while pursuing solutions for unmet needs in medical settings through investigator-initiated clinical trials. We also conduct a wide range of research activities, from the development of vaccines and test methods to the prevention of disease onset. As the center of clinical and research activities to combat COVID-19, we undertake advanced, innovative research in order for society to restart its activities.



#### Talented researchers at NCGM support clinical research and trials



#### 1 Department of Data Science

This Department pursues improvement in the quality of clinical research by implementing biostatistics, data science research and education/training activities that are indispensable for scientific clinical research. The department also supports researchers through biostatistics consultation service and the operation of the data center at the Joint Center for Researchers, Associates and Clinicians.



This Department undertakes practical support, administration and education/training for clinical trials and research. As a general hospital, NCGM has implemented clinical trials across a broad range. This Department also provides support to conduct highquality, ethical clinical research, such as consultation service for clinical research planning by researchers at NCGM.



#### 3 Department of International Trials

This Department promotes the R&D of drugs, medical devices and evidence-based medicine in cooperation with other countries. To provide better medical services to patients across the world, this Department contributes to global health through various activities including international clinical research and trials, human resource development, industry-academia-government collaborations and regulatory affairs.



#### **Department of Clinical Research Strategic Planning**

For the R&D of therapies and medical devices, the Department promotes and supports industry-academia-government collaborations with a particular focus on contractual affairs and the acquisition of intellectual property rights. The Department also holds events for connecting researchers with companies, and provides incubation support to companies that seek international business expansion.



from the initial development stage of drugs and medical devices to the safety management of clinical studies. The Department also focuses on human resource development in the regulatory science field, based on the comprehensive partnership agreement with the Pharmaceuticals and Medical Devices Agency.



This Department focuses on research regarding the prevention of diabetes and other lifestyle-related diseases. The Department promotes a large-scale cohort study in the relevant field, a resident cohort in Vietnam, and a COVID-19 antibody survey on NCGM staff.



# Supporting the local community and the future with highly advanced medical services



#### 1 General Outpatient Services

As a general hospital open to the local community, the Hospital has departments for Internal Medicine, Surgery, Neurosurgery, Cardiovascular Surgery, Orthopedics, Dermatology, Urology, Gynecology, Ophthalmology, Otolaryngology, Anesthesiology/Pain Clinic, Rehabilitation, Psychiatry, Child and Adolescent Psychiatry, Radiology, Dentistry, and Emergency Medicine. Specialists in each field provide examinations to patients.

# Kohnodai Hospital

On April 1, 2008, the Hospital was recognized and renamed International Medical Center of Japan Kohnodai Hospital, which later became incorporated and renamed the National Center for Global Health and Medicine Kohnodai Hospital on April 1, 2010. Kohnodai Hospital, as a general hospital opens to the community, provides advanced medical services. It also provides, both in Japan and abroad, diagnostic services, surveys, studies and training mainly relating to hepatitis and immunologic diseases.

Facility outline	
Total number of beds	<b>417</b> beds
	<b>277</b> beds
Psychiatry ward	<b>140</b> beds

#### 2 Clinical Examination Laboratory

The laboratory testing division provides physiological tests, including ultrasonography; laboratory tests, including bacteriological tests, and pre-transfusion tests; and pathological tests, including pathological anatomy. The division is designated as a training center by the Japanese Society of Laboratory Medicine sponsored by the Japan Medical Association, the Japanese Society of Pathology, and the Japanese Society of Clinical Cytology.



#### 3 Specialized Outpatient Services

In addition to the general outpatient services, more advanced, specialized medical services are provided in Internal Medicine, which comprises General Internal Medicine and specialized outpatient units including Pulmonary Medicine, Hematology, Infectious Diseases, Diabetes and Endocrinology, Rheumatology and Collagen Diseases, Nephrology, Gastroenterology and Hepatology, Cardiology, Psychosomatic Medicine and Neurology.



The Radiology unit provides the optimal general medical services using the state-of-the-art medical devices. The unit proactively promotes medical collaborations with the local community, making contributions with its cutting-edge medical technology. When patients require precise diagnosis, the unit performs rapid and advanced diagnostic imaging with various imaging devices (such as MDCT, MRI, PET/CT and SPECT).





#### Satisfying the health needs of local residents from a multifaceted viewpoint



#### 5 Rehabilitation Center

This Center has the Physical Therapy Room, (Physical and Mental) Occupational Therapy Rooms, Speech-Language-Hearing Therapy Room, and Day Care Room. Each Room satisfies the relevant Disease-specific Facility Standard I, and pursues improved QOL for patients with physical dysfunctions. In addition to physical dysfunctions, the Center also provides characteristic rehabilitation services including various disorder assessments and treatment for the dysfunctions of patients with mental diseases.



#### **Team Care**

At the Kohnodai Hospital, borders are low among clinical departments, enabling different professionals (including physicians, nurses, workers, psychologists, rehabilitation staff, registered dietitians and pharmacists) to easily collaborate and exercise their respective specialties.

Collaboration enables the professionals to provide care while respecting the QOL and will of patients.

The Hospital also has an ensemble that plays musical instruments to provide relaxation for local residents.

#### 6 Nursing

The Kohnodai Hospital has wards for general diseases and mental diseases, and provides everyday care for the life and mind of patients. To provide mental and physical nursing care to patients and their families, both new and experienced nurses exchange honest opinions and repeatedly practice, receive education, train, and conduct research. The unit also holds nationwide seminars and trains human resources in the fields of child and adolescent psychiatry, eating disorders, hepatitis and immune diseases.



# 10 Emergency psychiatry and comprehensive psychiatric care

The Psychiatry Unit has outpatient functions to treat all types of mental disorders. In addition, a psychiatry emergency care system provides 24/7 services. We provide comprehensive psychiatric treatment for physical complications and complex diseases through collaboration between Psychiatry and various other departments.



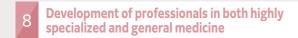
#### 7 Nutrition Management

The Clinical Nutrition Management Department is responsible for nutrition and diet therapy and food service management, which is fundamental to the treatment of all diseases. The Department provides advanced and specialized instructions about nutrition and diet to patients mainly with lifestyle-related diseases, psychosomatic eating disorders, psychiatric complex disorders both individually and collectively on an inpatient and outpatient basis and under the community support system, and involves in clinical nutrition research and other wide range of activities.



# Emergency medical services and collaboration with community healthcare professionals

We actively accept emergency patients who require immediate attention. We will continue to reinforce our emergency medical services as a mission that every medical institution must not forget. Our outpatient department places importance on collaboration with community healthcare professionals to offer advanced testing, diagnostic imaging services and instruction nutrition and diet.



The Kohnodai Hospital not only introduces advanced facilities and technologies, but also devotes its energies to the development of individuals who can utilize them effectively. Various crossfunctional training sessions and seminars are provided, in addition to study meetings within the respective sections. Each staff member increases their highly specialized skills, at the same time improves their capabilities as staff of a national center provide general medical care by increasing their interest in other specialized departments.



#### 12 Child and Adolescent Psychiatry

The Kohnodai Hospital has treated and supported children and adolescents since 1948 to date. In particular, the Hospital is the only national center that has a ward specializing in child and adolescent psychiatry. It has undertaken hospitalized treatment and other clinical activities, and also trains specialists in child and adolescent psychiatry. The Hospital also vigorously collaborates with specialized institutions in Japan and overseas, supports areas afflicted by natural disasters, and conducts various clinical research projects.





# Research Institute

The National Center for Global Health and Medicine Research Institute (NCGMRI) was established in the National Center for Advanced and Specialized Medical Care that was opened by integrating the National Medical Center Hospital with the National Sanatorium Nakano Hospital in 1993. NCGMRI is an organization that was first positioned as the core research department for international healthcare contributions in Japan, with the mission to promote research in all fields of health and medicine that require international cooperation. NCGMRI promotes international research cooperation with developing countries and other overseas countries, and also undertakes basic and clinical research projects in collaboration with the Hospital and the Bureau of International Health Cooperation regarding diseases that pose urgent issues in developing countries (such as infectious diseases and nutrition disorders). NCGMRI also contributes to the development of human resources for international medical research by accepting trainees from Japan and overseas.





#### Researchers constantly work to combat infectious diseases, diabetes/ metabolic diseases, and hepatitis/immune diseases



#### **Feature of the Research Institute**

NCGMRI consists of 14 research departments, 5 project research units, 3 research centers, and 2 information centers as well as a common equipment/service facility, an animal research facility, and a radioisotope facility. In the Institute, approximately 180 staff members are engaged in research activities, including 36 department chiefs/managers and 80 senior researchers.

The International Infectious Disease Division of the Institute primarily focuses on the development of diagnostics and new drugs in fight with emerging and reemerging infectious pathogens. The efforts by the Advanced Medicine Development Division center on the development of advanced knowledge and skills while the Division brings forward translational research using the state-of-the-art technology

in collaboration with clinical departments of NCGM.

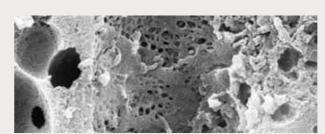
The Diabetes Research Center attempts to clarify the mechanism of diabetes and its complications and improve the treatment of such abnormalities. The Research Center for Hepatitis and Immunology focuses on the identification of new therapeutic modalities of hepatitis, liver cancer, and immune diseases. The Medical Genomics Center promotes research to develop genome-based medicine for clinical

In response to the late 2019 outbreak of novel coronavirus infection (COVID-19), NCGMRI immediately launched multiple new research projects to fight with the pandemic in close collaboration with NCGM Hospital, signifying the Institute's ability to agilely respond to public health threat.

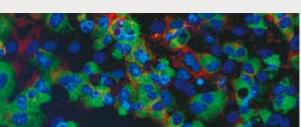


#### **Departments**

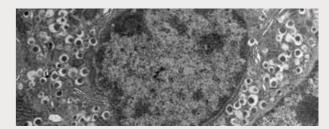
- Dept. of Tropical Medicine and Malaria
- Dept. of Infectious Diseases
- Dept. of Refractory Viral Infections
- Dept. of Intractable Diseases Dept. of Gene Diagnostics
- and Therapeutics Dept. of Regenerative Medicine
- Dept. of Human Genetics
- Diabetes Research Center Dept. of Molecular
- Diabetic Medicine
- Dept. of Molecular Metabolic Regulation Dept. of Diabetic
- Complications
- Diabetics Information Center
- Research Center for Hepatitis and Immunology
- Dept. of Research for Hepatic Diseases
- Dept. of Gastroenterology
- Dept. of Immune Regulation
- Dept. of Immunology and Pathology
- Hepatitis Information Center
- Medical Genomics Center
- Molecular Immunology and Inflammation Project
- Lipid Signaling Project
- Stem Cell Biology Project
- Pancreatic Islet Cell **Transplantation Project**
- Genome Medical Science Project



Electron micrograph of a normal mouse liver sinusoidal



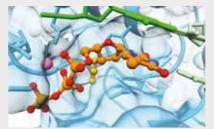
VeroE6 cells infected by SARS-CoV-2 stain in green (showing the presence of virus antigens), while cellular nuclei in blue



Electron micrograph of a pancreatic islet beta cell Many insulin granules are observed in the cytoplasm



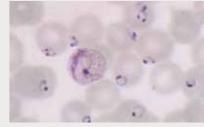
X-ray crystal structure of GRL-2420, an inhibitor of SARS-CoV-2's main protease (M<sup>pro</sup>), complexed with M<sup>pro</sup>



X-ray crystal structure of AZT, the first drug for AIDS, complexed with HIV's reverse transcriptase



Multidrug-resistant Pseudomonas aeruginosa



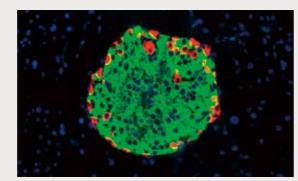
Red blood cells infected with human

# **Research Center for Hepatitis and Immunology**



The Diabetes Research Center was established in 2010 to attain the missions of clarifying the factors for diabetes and developing new methods for diagnosis and treatment.

This Center consists of three research departments (the Department of Molecular Diabetic Medicine, Department of Molecular Metabolic Regulation, and Department of Diabetic Complications), the Department of Pancreatic Islet Cell Transplantation, and the Diabetes and Metabolism Information Center for human resource development, information provision and policy research. To attain its goals, the Diabetes Research Center undertakes basic research concerning diabetes, clinical research for J-DOIT3 and PRISM-J, large-scale registry research projects including J-DREAMS, and other research activities on each level, and promotes projects in an integrated manner to bring the research achievements to society.



Immunohistochemical staining of the pancreatic islets of Langerhans for insulin secretion

The Center links medical services in the Hospital with research

activities at the Research Institute, promotes information provision concerning diabetes, and strives for further development as the central base of diabetes research and practice in Japan.



Briefing seminar for participants in the PRISM-J project



J-DREAMS project



Diabetes awareness improvement event held in concurrence with National Diabetes Week and World Diabetes Day

Meeting to develop new diabetes therapies



Viral hepatitis is an infectious disease of the largest scale in Japan. When left without appropriate treatment, hepatitis becomes chronic and may lead to cirrhosis or liver cancer. Therefore, national measures are required from the viewpoint of patient relief and the reduction of medical expenses. The Research Center for Hepatitis and Immunology consists of four research departments (Hepatic Disease, Immunology and Pathology, Immune Regulation, and Gastroenterology), the Department of Genome Medical Science, and the Hepatitis Information Center. This Center has human resources and research instruments of the highest class in Japan for hepatology, immunology and genome sciences, and undertakes cutting-edge research projects around the world. The research departments aim at contributing to the health and welfare of people by developing methods for diagnosis and treatment by clarifying the pathology of viral hepatitis, cirrhosis and liver cancer, autoimmune diseases, and allergic diseases. The Hepatitis Information Center was established based on the Basic Act on Hepatitis Measures. The Center endeavors to make hepatitis medicine uniform and promotes hepatitis policies in collaboration with the Ministry of Health, Labour and Welfare, municipal governments nationwide, and the 71 cooperating hospitals for liver disease treatment across Japan.

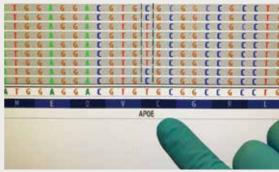


Laboratory

### **Medical Genomics** Center



Genetic counseling at the Genomic Medicine Department, Center Hospital



Clinical interpretation of genome variant information

In recent years, a paradigm shift from traditional medicine to precision medicine has been advocated. Genomic medicine is positioned as a core approach for this paradigm shift. The Medical Genomics Center (MGC) was established in April 2016 as an organization for the development and promotion of genomic medicine in the National Center for Global Health and Medicine. MGC implements both medical research and clinical application, and contributes to the practice in collaboration with the Genomic Medicine Department of the Center Hospital.

The terms "genetic tests" and "medical genetics" have been commonly used. Broadly speaking, "genomic tests" and "genomic medicine" are a developed version of those terms. Genetic tests examine the DNA fragments of specific genes, and are mainly

targeted at hereditary diseases. On the other hand, genomic tests handle genome information for the exhaustive exploration of a variation (group) of focused diseases. The targeted diseases have been gradually increased. MGC tackles diverse requirements in accordance with the progress of genomic R&D and genomic medicine in Japan and overseas, in a strategic and agile manner.



# **Bureau of International Health Cooperation**





#### Care, commitment and communication for a healthier world

#### Innovative international health cooperation

The Bureau promotes comprehensive technical cooperation to resolve public health crises and health issues in low and middle income countries and all other countries and regions, and to reduce health disparity. The Bureau promotes innovative health cooperation in collaboration with various stakeholders including companies, NPOs and international partners.

#### Thinktank function in the global health area

The Bureau cooperates in the global health diplomacy of Japan, making policy proposals based on its knowledge and experience with global health. The Bureau also sends committee members to expert meetings at the WHO and other international institutions. In addition, it shares knowledge as a WHO Collaborating Centre and provides knowledge through international conferences.

#### Human resource development that takes into account global health trends

The Bureau has developed trainees from low and middle income countries into human resources capable of coping with various health issues and public health crises. It has also established a network of such human resources. The Bureau also implements practical classes and training courses in collaboration with Japanese and international institutions in order to develop Japanese human resources in health capable of acting in global settings.

#### Research on issues in global health and medicine

The Bureau promotes research that contributes to solving global health issues through the strategic use of partner institutions and various networks in Japan and overseas. To implement international health cooperation in an effective, efficient manner, the Bureau also undertakes field research and policy research regarding health issues specific to low and middle income countries and healthcare services.

#### International promotion of Japan's healthcare technology and services

The Bureau contributes to improvements in the standards of public health and medicine by developing health system in target countries while promoting the growth of healthcare fields in Japan through the sharing of Japan's experience in health system, the transfer of healthcare technology and services, and the international expansion of high-quality pharmaceuticals and medical devices from Japan.



Promotion of medical safety at the bedside





Vaccination guidance for yellow fever



Accepting international trainees for



Seminar on global health for Japanese



Field epidemiological survey



Advocating Japan's opinions at international conferences





Received the UAE Health Foundation Prize at the World Health Assembly

# **Institute for Global Health Policy Research** (iGHP)



### **Human Resource Strategy Center for Global Health**



#### Philosophy of iGHP

The Institute for Global Health Policy Research (iGHP) was established in October 2016 to promote research on global health policies. Its purpose is to publish Japan's knowledge and achievements as an "advanced health country" and develop related human resources.

#### **Missions of iGHP**

- · Establish scientific evidence regarding global health policies
- · Conduct research on health systems, the assessment of measures, and diplomacy/governance
- · Develop diverse human resources engaged in the research of global health policies
- · Propose policies to the Japanese government and to the world

#### Striving to improve international healthcare policies

To date, research on international healthcare and global health has been conducted at universities and research institutions in Japan, with fewer research sites and at smaller scales than in Europe and the United States. Therefore, systematic activities have not been undertaken in Japan for the assessment and research of various global health measures from the viewpoints of medicine, health science, welfare science, epidemiology, sociology, economics, and medical anthropology. Such activities have also not been conducted for making policy and diplomacy proposals, or to develop human resources in order to achieve these goals.

The missions of iGHP are to establish scientific evidence for promoting global health policies, publish such evidence in Japan and globally, make related policy proposals, and develop human resources. iGHP promotes various projects through close cooperation among three research departments and in collaboration with related institutions in Japan and around the world.





Exterior of iGHP



Office room

On September 21, 2017, the Human Resources Strategy Center for Global Health (HRC-GH) started its operation as project entrusted by the International Affairs Division, Minister's Secretariat, Ministry of Health, Labour and Welfare, to enhance the presence of Japanese staff members in international organizations. The missions of HRC-GH are to strategically expand Japan's human resources for global health policies, enhance their abilities through a lifecycle career development approach, and to contribute to global health agendas. The main activity of HRC-GH is to contribute to career development of Japanese human resources for global health policies and to dispatch them to international organizations. HRC-GH has steadily increased the number of Japanese personnel accepted or promoted at international organizations through providing regular vacancy information to registrants of the Human Resources Registration and Search System, conducting individual career consultation services, examination

URL:https://hrc-gh.ncgm.go.jp Human resource registration and search system: https://hrc-gh-system.ncgm.go.jp/ E-mail: HRC-GH@hosp.ncgm.go.jp

preparation workshops, and seminars and lectures.





Group discussion at a workshop (Osaka site)

#### **Global Health & Medicine**







Global Health & Medicine (journal in English) Print ISSN: 2434 - 9186; Online ISSN: 2434 - 9194

Global Health & Medicine (GHM) is an international. open-access, peer-reviewed journal, published by the National Center for Global Health and Medicine

Launched at the beginning of the new era (Reiwa) in Japan, the Journal covers advances in the areas of clinical sciences, basic sciences, public health, and global health. The Journal accepts submissions from around the world, and all published articles of GHM can be accessed on PubMed. GHM is dedicated to publishing high-quality original research articles that contribute to advancing global health and medicine, with the goal of creating a global information network for global health, basic sciences as well as clinical sciences oriented for clinical application.

URL: https://www.globalhealthmedicine.com E-mail: office@globalhealthmedicine.com





# National College of Nursing, Japan

The National College of Nursing, Japan was launched by the Ministry of Health, Labour and Welfare in 2001. It is an educational institution that trains nursing professionals at the National Center for Advanced and Specialized Medical Care. Seeking an ideal human care strategy with heart-to-heart communication, the College trains nurses and midwives who have clinical abilities for the nursing practice required at the National Center for Advanced and Specialized Medical Care that is responsible for national policy medicine, along with the abilities required to make contributions to the international community. A key feature of College is that students can learn policy medicine and international medicine at the same time. The College has contributed to the development of policy medicine nursing and the development of advanced practical nurses through the establishment of a first term of research courses (including an education course for nurse specialists) that is equivalent to the graduate school master's course in 2005, and of a second term that is equivalent to the doctor's course in 2015.





# Developing a strong sense of humanity with global awareness and Pioneering a new nursing practice



#### **Undergraduate Nursing Course**

The College is a four-year basic nursing education institution that trains nurses and midwives. Upon filing an application to the National Institution for Academic Degrees and Quality Enhancement of Higher Education, a bachelor's degree for nursing is awarded to graduates.

Estimated number of students	400 in Total (100 per grade)		
Term of education	Four years		
Prospective degree	Upon filing an application to the National Institution for Academic Degrees and Quality Enhancement of Higher Education, a bachelor's degree for nursing is awarded to graduates.		



#### **Graduate School of Nursing**

This course is equivalent to the master's and doctoral courses, and trains nurses who have both research abilities and the capabilities of advanced clinical practice. The course is unique in that is promotes policy medicine nursing, which is absent at other nursing graduate schools.

Total number of students	Master's course 30 in total (15 per grade) Doctoral course 9 in total (3 per grade)
Length of program	Master's course two years / Doctoral course three years
Prospective degree	The students will be awarded a Master of nursing science, Doctorate of nursing science by the National Institute for Academic Degrees and Quality Enhancement of Higher Education upon completion of the required program.



# Training Center for Nursing Development

The Center implements a number of courses (including seminars for exercise instructors and short-term training concerning nursing research methods and the latest findings in nursing) for nurses who work at hospitals of the national centers for advanced, specialized medical research, the national sanatoriums for Hansen's disease, and the National Hospital Organization.



#### **Research Center in Clinical Nursing**

This center supports clinical nursing researched of National

Graduate School of Nursing Specialty Fields

#### Policy-Based Functional Nursing

International Nursing / Nursing Education / Nursing Administration & Informatics

#### Advanced Clinical Nursing

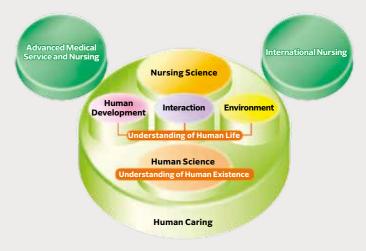
Adult Nursing / Psychiatric & Mental Health Nursing / Maternal & Child Nursing / Gerontological Nursing / Infection Control & Infectious Disease Nursing

#### Education course for nurse specialists

Cancer nursing / Psychiatric nursing / Pediatric nursing / Infectious disease nursing

#### NCNJ seeks an ideal human care strategy with heart-to-heart communication.

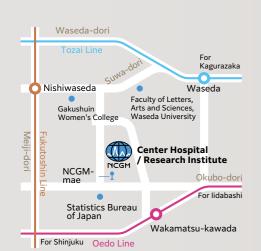
At the College, students primarily learn human sciences and interaction studies to obtain the human understanding that forms the basis of nursing in the first year. Over four years, they learn specialized knowledge and skills of nursing while learning about human growth and development and its relationship with the environment, and systematically integrate such knowledge and skills. Through these courses, we develop the students' strong sense of humanity, advanced capabilities for practical nursing and a greater awareness of the wider world.



Research Institute

Bureau of International Health Cooperation

Center for Clinical Sciences



# Center Hospital of the National Center for Global Health and Medicine / Research Institute

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#### About the logo mark

This symbol represents the pulse of life on earth and our strong wish to maintain health all over the world.





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Kohnodai Hospital of the National Center for Global Health and Medicine

The Research Center for Hepatitis and Immunology

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