Message from the President

National Rehabilitation Center for Persons with Disabilities (NRCD) is a national organization conducting provision of medical care and welfare services, development of new technologies and assisting products, research contributing to national policies, human resources development of rehabilitation professionals and international cooperation to support independent life and social participation of persons with disabilities.

NRCD was established in 1979. The needs for NRCD have changed in accordance with the subsequent social changes. In order to adapt to the changes in social needs, the function of National Rehabilitation Center for the Disabled was restructured to be an organization focusing on full range of disabilities, and the center was renamed “National Rehabilitation Center for Persons with Disabilities” in 2008.

For higher brain dysfunctions caused by head injury or cerebral vascular accident (CVA) and developmental disorders, NRCD provides medical rehabilitation aiming at their independence in hospital and social rehabilitation aiming at social participation and returning to work in Rehabilitation Services Bureau. In addition to these services, NRCD has Information and Support Center to collect, analyze and provide domestic and international information. Research Institute conducts development of assistive products and technologies as well as fundamental research for such disabilities.

Furthermore, NRCD has been working on rehabilitation for cervical cord injury, spinal cord injury, elderly persons with amputation and so on that are hard to treated by other medical and welfare organizations. Today we have started rehabilitation for stuttering and low vision which rehabilitation services are under development in Japan, providing the information nationwide.

NRCD is also working on health promotion and healthy life expectancy of persons with disabilities. We disseminate and cultivate rehabilitation methods through various short-term training programs. We accept visits and training not only from Japan, but also from overseas.

We would like to appreciate your support and cooperation. Your visit to our center would be cordially appreciated.

The NRCD History

1979: Established National Rehabilitation Center for the Disabled to provide comprehensive rehabilitation services (3 rehabilitation centers for physical disabilities, hearing and speech disorders, and visual disabilities were integrated into this center).

2008: Renamed Japanese title of the Center, removed “Physical” to contribute to wide range of disabilities in accordance with a reform of government measures. Information and Support Center for Persons with Developmental Disorders was transferred to NRCD from the Ministry of Health, Labour and Welfare (Renamed in 2011).

2010: Established Rehabilitation Services Bureau for integrated management and services among Training Center of NRCD, other national rehabilitation centers for persons with visual disabilities, and physical disabilities, and institution for children with intellectual disability.


Established Information and Support Center for Persons with Higher Brain Dysfunctions.

Purpose of Establishment/ Services

Purpose of Establishment

The National Rehabilitation Center for Persons with Disabilities (NRCD) provides advanced and comprehensive healthcare, medical care, and welfare services to assist persons with disabilities (PWDs) in maintaining and recovering their overall living functions under an integrated system that provides services ranging from medical care to vocational training. Our mission is to promote independence and social participation of PWDs through our services. As a core institution for rehabilitation for PWDs, the NRCD also takes a leading role in the research and development of rehabilitation techniques and assistive products, and the cultivation of specialists in rehabilitation.

To better contribute to promotion of scientific evidence-based medical care and welfare policies, the NRCD assesses and analyzes clinical data on disabilities. All our divisions work together to offer user-oriented services, conduct research on disabilities, reduce the functional limitations and develop the abilities of PWDs utilizing the most advanced scientific resources as we broadly disseminate research results with the goal of being a rehabilitation center capable of leading the next generation.

Services

- **Medical Rehabilitation Services for PWDs**
  The Hospital offers diagnosis, treatment, and medical rehabilitation for PWDs and potential PWDs.

- **Welfare Services for PWDs**
  As a designated support facility, the Rehabilitation Services Bureau places a priority on understanding PWDs and providing welfare services that meet individual needs.

- **Research and Development of Assistive Technologies, Products and Systems**
  The Research Institute conducts research on assistive technologies, products and systems to promote independence, social participation, and the improvement of QOL for PWDs.

- **Cultivation of Rehabilitation Professionals**
  The College cultivates rehabilitation specialists and provides training for specialists engaged in rehabilitation for PWDs.

- **Health Promotion, Sports Science Support for PWDs**
  The Hospital provides support for health promotion of PWDs and medical conditioning of athletes with disabilities, including doping consultations.

- **Rehabilitation Information Collection and Provision Services**
  The NRCD acquires information regarding rehabilitation both at home and abroad, and makes it available to PWDs and relevant people.

- **International Cooperation in Rehabilitation**
  The NCRD cooperates with WHO and relevant organizations, and provides support to developing countries utilizing its rehabilitation technologies.

The NRCD Logo

The logo of the NRCD was selected from among designs created by users and staff at the NRCD and National Vocational Rehabilitation Center for Persons with Disabilities to commemorate the International Year of Disabled Persons, 1981.

This logo expresses:

1. Motivation, intention and continual effort for rehabilitation, and friendship and trust.
2. Users and staff striving to improve themselves in a wide range of fields in society based on the NRCD.
3. A firm hand used for sign language, reading braille, working, improving vocational skills.

(Designed by Ritsuo Sumida: October 1981)
International Cooperation

To Support Enhancement of Rehabilitation

The NRCD shares its techniques to promote rehabilitation in developing countries and cooperates with international organizations and other overseas institutions.

NRCD Activities Throughout the World

As a WHO Collaborating Centre for Disability Prevention and Rehabilitation, the NRCD has supported WHO’s policies and programs for more than 20 years since 1995. The NRCD conducts activities based on the WHO Terms of Reference and Plan of Work to promote the enhancement of rehabilitation in the Western Pacific Region.

The NRCD also performs the following activities:
• Information exchange among WHO collaborating centres.
• Cooperation in development of international standard conducted by WHO.
• Organization of international seminars, etc.
• Participation in WHO meetings.

Technical Cooperation for Overseas Specialists in Rehabilitation

The NRCD provides technical training programs to trainees from overseas, and dispatches staff to developing countries to provide on-site training and assessment in cooperation with the Japan International Cooperation Agency (JICA).
• More than 850 specialists from approximately 60 countries and regions undergo training at the NRCD.
• The NRCD dispatches approximately 180 staff to countries in Asia and Latin America.

Providing Information on Rehabilitation Techniques

The NRCD creates manuals containing specific methods and information on rehabilitation, and distributes them to more than 30 countries in the Asia-Pacific Region as well as publishing on the NRCD’s Web.

Collaboration with Overseas Institutions

The NRCD entered an agreement for mutual cooperation with rehabilitation centers in China and Korea in 2011, and has continued cooperation through technical exchanges among rehabilitation specialists, the provision of academic information, and the organization of symposiums and seminars.

Introduction of NRCD Activities to Overseas Visitors

Since establishment in 1979, the NRCD has introduced its rehabilitation services, research, and education activities to approximately 10,000 visitors from about 160 countries of all the World.
**A Seating Clinic leading to Employment Support for Persons with Spinal Cord Injuries**

Collaboration between the hospital and the research institute

Persons with spinal cord injury require an electric or manual wheelchair, a cushion that prevents bedsores, and other pieces of equipment for comfort and safety at work. At the Seating Clinic, the Hospital staff assess individual physical functions, and the Research Institute staff selects devices. Then both make adjustments to devices and user environment. We measure sitting pressure, and then teach individuals to select the appropriate cushions and reduce sitting pressure to promote safety and comfort at work.

**Pressure Ulcer Prevention Class**

A wheelchair cushion molded to the shape and features of the pelvis, as well as its high pressure dispersion capacity and stability.

**Caring Children with Congenital Limb Deficiencies, and Supporting Para-Sports and Recreation through the Development of Assistive Devices**

We make and fit prostheses and devices to children with congenital limb deficiency according to their needs in daily life. The supporting team includes OTs, PTs, Gymnasts, POs, Researchers and MDs.

![Myoelectric upper limb prosthesis for children](image1)

![Upper limb prosthesis for gymnastics bar](image2)

![Rice bowl holder](image3)

We support safe of athletes with disabilities through development of devices for sports.

![Wheelchair rugby knee protector](image4)

![Eye shade and protective wear used for goalball](image5)

**Support for Persons with Cervical Cord Injury: Welfare Services for People with Disabilities**

Training for Independent Living

We provide physical and occupational therapy, remedial gymnastics, automobile and computer training, and more based on individualized support plans created to accommodate physical conditions, all under careful medical management, to support persons with quadriplegia to lead independent lifestyle in their communities. We also provide support through continual training in cooperation with the NRCD Hospital and other recovery rehabilitation hospitals in each area to improve individual activity of daily living (ADL). The rate of persons who complete the program and shift to vocational and other training is 36%, the rate of persons who return to school is 18%, and the rate of persons who return to independent living at home account for 46%.

![Bathing Training (OT)](image6)

![Transfer Training (PT)](image7)

**Rehabilitation for Spinal Cord Injury in an Aging Society**

The Hospital treats approximately 100 inpatients with spinal cord injury each year (60% are with cervical cord injury). Persons aged 65 years and older account for approximately 20%, a figure that has been increasing. In addition to the treatment for the fresh cases, the hospital specializes in treatment for dysfunction developing over long periods of time among chronic patients. The rehabilitation we provide is aimed not only at improving activities of daily living, but also includes gait training utilizing equipment and load relievers, and adjustment of support devices. In addition, we provide instruction for bathing and toilet, and exercise therapy according to individual conditions for independent living in the local community.

![Body Weight-supported Gait Training](image8)
Rehabilitation for Visual Impairment

Rehabilitation Services (Training for Independent Living)
The NRCD helps visually impaired persons gain the knowledge and skill needed to reduce difficulties encountered in life. We help persons enjoy smooth and fulfilling lifestyles through support and training based on individual conditions and training plans (introduction of assistive tools/daily activity training, training for computer and braille, orientation and mobility training).

After rehabilitation and training, 60% return to independent living at home, 30% enroll in programs for manipulative therapists (anma, massage and shiatsu), acupuncture therapist, and moxibustion therapist, and 10% enroll in vocational training programs.

Low-vision Clinic and Retinitis Pigmentosa
The Low-vision Clinic at the NRCD Hospital has a wide range of visually impaired patients. In FY 2014, 38% of the patients who visited the Low-vision Clinic had retinitis pigmentosa, the most common primary disease then and in previous years. The hospital provides low-vision care in cooperation with ophthalmologists, orthoptists, and Instructors of Social Adjustment Training as well as professionals in the field of visual impairment in other departments at the NRCD, including the Rehabilitation Services Bureau, the College, and the Research Institute, the Hospital’s most outstanding feature.

Low-vision Clinic and Retinitis Pigmentosa

Training for Certification in Manipulative, Acupuncture, and Moxibustion Therapy for Visually Impaired Persons
Manipulative, acupuncture, and moxibustion therapy certification is a traditional vocational path for visually impaired persons in Japan to ensure financial independence. These are national certificates, which enable participation in the national healthcare system.

The NRCD provides support designed to help visually impaired persons acquire certification and secure work as therapists. The time required to complete the programs is between 3 and 5 years. The approximately 900 hours of classwork includes lectures and clinical practice that teach the skills required to pass the national tests and become professional therapists.

The rate of persons who acquire certification is about 80%, and more than 70% of them find employment as health keepers at companies, hospitals, and facilities for the elderly, or open private clinics.

Low-vision Training
Orientation and Mobility Training
Clinical Practice
Class

Low-vision Training

Light Shielding Glasses
(These are effective in reducing glare, especially for the visually impaired.)

Closed Circuit Television (CCTV)
(Enlarged up to approx. 60 zoom)

Research on Retinal Degeneration and Regeneration
Working in cooperation with the Department of Ophthalmology, the Department of Rehabilitation for Sensory Functions conducts research in molecular biology to develop new diagnostic and therapeutic methods for retinitis pigmentosa (RP), a genetic disease that slowly destroys vision due to retinal cellular degeneration.

We screened persons with candidate genes for the disease and discovered that a mutation of the EYS gene is the cause in many patients. Meanwhile, we created and analyzed induced photoreceptor-like cells (an in vitro model of RP) from skin fibroblasts of patients with RP utilizing the regeneration techniques.

Light Shielding Glasses
(These are effective in reducing glare, especially for the visually impaired.)

Research on Retinal Degeneration and Regeneration
The Department of Speech-Language-Hearing Therapy evaluates and treats problems of speech, language, and hearing in infants to adults. Our comprehensive therapies include following:

**Aphasia, Higher Brain Dysfunction, and Dysphagia**

We provide therapies for aphasia (difficulties in speaking, listening, reading and writing), higher brain dysfunctions (attention dysfunction, executive dysfunction, memory disorder) and dysphagia in collaboration with other NRCD staff. Not only improving functions, we can also suggest aids to meet each person’s needs. Our skilled programs help our clients to return to their school or work.

*“Who is doing what?”*  
We use cute pictures so that children can enjoy our therapy.

*“Which is the same?”*  
Hiragana is the first letters for Japanese children to learn.

*“Let’s match pictures and words”*  
To understand written words, we use both Chinese characters and Hiragana for rehabilitation for aphasia.

*“Let’s move the items as I tell you.”*  
In order to assess language comprehension, we observe how the client follows our directions.

**Language Development Disorders**

We assess language and communication development. Then our clients and their parents can choose to have therapy at NRCD or at other facilities in their neighborhood (we have a referral list). We make recommendations how to help the children with language difficulties to the professionals who take care of them (other therapists, day care staff and teachers). We hold workshops for public health nurses working in nearby cities for better understanding of language development disorders.

*“Which is the same?”*  
Hiragana is the first letters for Japanese children to learn.

**Hearing Disorders**

We provide individualized rehabilitation for clients with hearing disabilities utilizing hearing aids and cochlear implants, complemented with thorough causal diagnosis. We employ technologies developed through joint research, including genetic analysis for hearing loss covered by health insurance, detailed hearing examination, image diagnosis, and testing for congenital cytomegalovirus infection utilizing a preserved umbilical cord.

*“Can you hear this?”*  
Hearing test for children.

*“Can you hear this?”*  
Mapping (activating and programming) the cochlear implant which gives electrical stimulation to the inner ear.

**Stuttering/Stammering**

We comprehensively assess stuttering and stammering for individualized treatment. Clients aged 18 and above are seen at the Adult Stuttering Consultation Clinic and the others are seen at the Language Clinic before being scheduled for therapy. The Hospital provides highly comprehensive and effective therapy with a wide range of training methods prescribed for individual conditions. Although the period required for therapy and the level of improvement varies among clients, the disorder is more likely to improve greatly in half a year. Along with the treatment, we are working on understanding the pathological mechanisms of stuttering, and on developing new methods for evaluation, support and treatment of persons who stutter.

*“My name is…”*  
Roleplay to ready for the difficult situations like job interview.

*“Let’s Talk Slowly and Smoothly.”*  
Practice of speaking fluently during reading and free conversation designed to reduce dysfluency and improve communication.
For Persons with Developmental Disorders

Information and Support Center for Persons with Developmental Disorders

The information and Support Center for Persons with Developmental Disorders disseminates support methods for developmental disorders and promotes understanding among nations through the approaches shown below.

- Institutional Training
  - Self-Understanding
  - Understanding Social Norms
  - Understanding Others
- Workplace Experience Training
- Event Participation
- Support for Employment Preparation
- Storage Management

Accumulation of Knowledge

Information Collection and Analysis
Information Dissemination and Enlightenment
Research study on Support for Persons with Developmental Disorders

Subjects
- Persons with Developmental Disorders and their Families
- The General Public
- Support Centers for Persons with Developmental Disorders
- Service providers (Medical Care, Healthcare, Welfare, Education, Employment, etc.)

Promoting Understanding of Developmental Disorders & Dissemination of Support Measures

Department of Medical Treatment (3)

Our new Department of Medical Treatment (3) includes Pediatrics and Child & Adolescent Psychiatry. This department cares for children with developmental disorders. Based on the history of the NRCD, we also treat persons with developmental disorders who also have visual or hearing disabilities, and provide daycare services for adolescents with developmental disorders that are usually not handled by other facilities.

Employment Transition Support Program for Persons with Developmental Disorders

Because we believe that learning from experience is important, we provide support for persons with developmental disorders through three major opportunities: Institutional training; Workplace experience training, and event participation.

Investigation of Cognitive Characteristics in Developmental Disorders, and Development of New Support Methods

Persons with autism spectrum disorders have difficulty in integrating multiple sensory inputs, which interferes with somatic sensation and causes difficulty in daily life.

We conduct research on multisensory processing and body image in order to develop innovative support methods and information providing methods for persons with developmental disorders.

Day Care Services (Making Cake)
Leading Role as a National Facility

This Center serves as a base for 100 nationwide support institutions involved in the HBD support promotion project. This project promotes comprehensive rehabilitation services ranging from diagnostic assessment to employment, school enrolment and social participation for persons with HBDs.

We disseminate information and engage in enlightenment activities through seminars and nationwide councils to increase awareness about this project among health care professionals.

We collect information regarding support for the HBD and make it available through the website and other media.

We also provide information and consultations to regional support institutions upon their requests.

Rehabilitation for Higher Brain Dysfunctions

At the Psychiatry Unit of the hospital professionals in a wide range of fields work together to diagnose and treat patients with higher brain dysfunctions by providing comprehensive cognitive rehabilitation designed to promote social participation.

Research on Brain Mechanisms Underlying Language Processing

To understand language and speak smoothly, cognitive resources such as working memory, which processes large amount of information on a temporary basis, are essential in addition to the core language capability. We conduct research with the aim of clarifying the mechanism by which core language capability works in concert with other cognitive functions to increase the effectiveness of rehabilitation for aphasia and other speech disorders.

The region of brain responsible for typical speech disorders (blue) is thought to function with the working memory region (yellow) and the region associated with meaning and conceptualization (green). When these regions are not working together, language disorders may occur.
Improving and maintaining health in persons with disabilities and chronic diseases can be a challenge. We focus on preventing secondary disabilities and obstacles to independent life, and on nutrition and exercise guidance targeting obesity and physical deterioration in PWDs. The gymnasium is used by an average of 40 people per day, 30% of whom use wheelchairs. We also organize health classes six times per year, and provide programs designed to prevent metabolic syndrome in individuals residing at support facilities.

This project was established to develop information support system utilizing PaPeRo, a communication robot produced by NEC, as a platform to maintain and improve independent living for elderly persons with cognitive dysfunctions. Working in cooperation with the elderly, long-term care facilities, assistive product distributors, universities, and other research institutions, we promote research utilizing IRT and ICT technologies for the development of robot systems capable of assisting both elderly persons with cognitive dysfunctions and related stakeholders.

The NRCD College cultivates professionals capable of working as pioneers and leaders in the field of rehabilitation in Japan. Each Department was established as a first in Japan, and graduates have been taking leadership positions in their specialized fields, as faculty members and as researchers to contribute to the development of rehabilitation in Japan.

In collaboration with the Hospital, Research Institute, and Rehabilitation Services Bureau at the NRCD, leading persons in each field give extremely practical lectures on clinical conditions.

### Development of Information Support Robots for Persons with Dementia

**Nutrition Guidance**

An example of information support

**Health Promotion through Exercise**

Staff of the daycare will be here to pick you up soon.

Oh dear, is it time already?

Before heading out, how about going to the bathroom?

Okay, I'll be right back.

### Development of Human Resources

#### Cultivation of Professionals

**Pioneers and Leaders in Each Field**

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<table>
<thead>
<tr>
<th>Department</th>
<th>Foundation</th>
<th>Purpose</th>
<th>Capacity (Total)</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech-Language-Hearing Therapy (ST)</td>
<td>1971</td>
<td>Cultivating speech-language-hearing therapists in rehabilitation for hearing disabilities, speech and language disorders, and dysphagia.</td>
<td>60 (30 for each year)</td>
<td>2 years</td>
</tr>
<tr>
<td>Prosthetics and Orthotics (PO)</td>
<td>1982</td>
<td>Cultivating prosthetists and orthotists in the fabrication and fitting of prostheses and Orthoses (casting, fabricating, and fitting).</td>
<td>30 (10 for each year)</td>
<td>3 years</td>
</tr>
<tr>
<td>Rehabilitation Worker for Persons with Visual Disabilities (RV)</td>
<td>1990</td>
<td>Cultivating engineers specializing in training for independent living for persons with visual disabilities.</td>
<td>40 (20 for each year)</td>
<td>2 years</td>
</tr>
<tr>
<td>Sign Language Interpretation (SI)</td>
<td>1990</td>
<td>Cultivating sign language interpreters promoting communication for persons with hearing disabilities.</td>
<td>60 (30 for each year)</td>
<td>2 years</td>
</tr>
<tr>
<td>Inclusive Physical Education (IP)</td>
<td>1991</td>
<td>Cultivating engineers specializing in exercise, sports, and physical education to promote health for persons with disabilities.</td>
<td>40 (20 for each year)</td>
<td>2 years</td>
</tr>
<tr>
<td>Support Worker for Children with Intellectual Disabilities (CI)</td>
<td>1963</td>
<td>Cultivating professionals that support children with intellectual and developmental disabilities in the field of medical care, welfare, and education.</td>
<td>40</td>
<td>1 year</td>
</tr>
</tbody>
</table>

### Training for Professionals Engaged in Rehabilitation

The NRCD College provides training for rehabilitation service professionals in Japan designed to improve their knowledge and skill based on the most updated knowledge and technology, and empirical verification data on case study.

We also organize 30 types of seminars for physicians, nurses, speech-language-hearing therapists, prosthetists, and other professionals engaged in welfare services for people with disabilities. Each year, approximately 2,000 people participate in these seminars.
Disaster Preparedness for Persons with Disabilities

To enable persons with disabilities to prepare for disaster, we created accessible disaster prevention manuals and education programs. We also help PWDs prepare for disaster in cooperation with neighborhood associations, local governments, and service providers, and seek the most effective support in each community. The results of our project have been presented at the 3rd United Nations World Conference on Disaster Risk Reduction and on other occasions. http://www.rehab.go.jp/ri/fukushi/ykitamura/kitayamayayoi_e.html

The NRCD Fashion Event

Fashion Show and Exhibition

The NRCD Collection was created to suggest comfortable and stylish fashions for persons with disabilities. We believe this leads to the improvement of clothing, which in turn leads to the improvement of QOL and promotes social participation. The collection is an opportunity for both users and manufacturers to exchange information in cooperation with many companies and organizations.

Organization

- Promoting collaboration among departments and divisions for priority matters in NRCD project management, and enforcing measures.
- Handling personnel affairs, budget management and building maintenance.
- Collecting and providing information on rehabilitation for PWDs, and promoting international cooperation projects.
- Providing consultations, support for daily and social life, training necessary for improving living capabilities and employment.
- Providing support and guidance for children with severe intellectual disabilities.
- Providing treatment, medical examinations, and training for rehabilitation for PWDs.
- Conducting research and surveys on rehabilitation for PWDs.
- Cultivating rehabilitation professionals for PWDs and providing training for rehabilitation professionals.

Multimedia DAISY

Disaster Prevention and Support Handbook CD.

Poster announcements on a copy for individuals with hearing disabilities.

Disaster Prevention and Support Handbook Window.
**Building and Site**

- **Construction begun:** September, 1976
- **Opening:** July, 1979
- **Site area:** 225,180 m²
- **Floor space of buildings:** 101,467 m²

**Details**
- **Hospital:** 19,956 m²
- **Rehabilitation Services Bureau:** 13,481 m²
- **Dormitory:** 17,552 m²
- **Gymnasium:** 3,703 m²
- **Research Institute:** 5,585 m²
- **Prosthetics & Orthotics Laboratory:** 1,675 m²
- **College:** 8,475 m²
- **College Dormitory:** 4,344 m²
- **P. & O. Course, College:** 1,394 m²
- **Administration Building & others:** 25,302 m²

(As of August 2016)

**Map of the Center**

[Map of the Center with labeled buildings and site areas]