



5. Conclusion

In this survey, we identified challenges from the perspective of healthcare professionals in five areas (1. Basic and applied research, 2. Development and clinical trials, 3. Diagnosis, 4. Treatment and prognosis management, 5. Disease awareness) and analyzed their underlying causes. Furthermore, we clarified expectations of each stakeholder (pharmaceutical industry, academic societies, patient advocacy groups, and the government) and organized the ideal form for improving medical care for rare diseases, specific response measures and their roles.

As detailed in this report, there are numerous challenges in the diagnosis and treatment of rare diseases. Notably, delayed diagnoses, limited treatment options, and difficulties for patients in accessing information are among the key challenges. Overcoming these challenges necessitates the cooperation and collaboration of all stakeholders, not only in enhancing diagnostic techniques and developing new treatments but also in strengthening patient support. Additionally, it is crucial to deepen public understanding of the challenges associated with rare diseases through awareness campaigns.

This survey also targeted healthcare professionals who have been leading the way in rare disease medicine in specific medical departments and disease areas in Japan. By expanding and delving deeper into the survey population in the future, we aim to further concretize the challenges and expectations identified in this survey and advance towards realizing the envisioned ideal state.

We, IRUD, RDCJ and JPMA, express our respect for the energetic activities and significant contributions of all those involved to date. We are committed to working in collaboration with stakeholders to address the diverse challenges surrounding healthcare professionals identified in this survey, with the goal of creating a more livable society for patients with rare diseases and their families.



6. References

- a. (JP) Survey on challenges faced by patients with rare diseases, Japan Pharmaceutical Manufacturers Association, Rare and Intractable Disease Task Force
<https://www.jpma.or.jp/shared/pdf/20230209.pdf>
- b. 7,000 challenges: The basis and burden of rare diseases, Science, 2021/03/11
<https://www.science.org/content/webinar/7000-challenges-basis-and-burden-rare-diseases>
- c. FDA Orphan Drug Designation 101, U.S. Food and Drug Administration
https://www.ema.europa.eu/en/documents/presentation/presentation-fda-orphan-drug-designation-101-james-h-reese_en.pdf
- d. (JP) Materials from the Ministry of Health, Labor and Welfare's Designated Intractable Disease Review Committee, Ministry of Health, Labor and Welfare (JP)
<https://www.mhlw.go.jp/file/05-Shingikai-10601000-Daijinkanboukouseikagakuka-Kouseikagakuka/0000184562.pdf>
- e. REGULATION (EC) No 141/2000 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 1999 on orphan medicinal products, Official Journal of the European Communities
<https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2000:018:0001:0005:en:PDF>
- f. (JP) Overview of the designation system for rare disease drugs, rare disease medical devices, and rare disease regenerative medicine products, Ministry of Health, Labor and Welfare
<https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/0000068484.html>
- g. (JP) List of designated intractable diseases and individual clinical investigation records, Ministry of Health, Labor and Welfare, Designated intractable diseases effective from April 1, 2024
https://www.mhlw.go.jp/stf/newpage_36011.html
- h. IFPMA, RARE DISEASES: shaping a future with no-one left behind
<https://www.healthpolicypartnership.com/app/uploads/Rare-diseases-Shaping-a-future-with-no-one-left-behind.pdf>
- i. Global use cases (USA, UK, Australia, India)
[USA]
FDA'S ORPHAN DRUG MODERNIZATION PLAN
<https://www.fda.gov/media/106012/download>
National Organization for Rare Disorders
<https://rarediseases.org/>
Rare diseases clinical research network
<https://www.rarediseasesnetwork.org/>
Medicare Part D Coverage and Reimbursement of Orphan Drugs
<https://www.ncbi.nlm.nih.gov/books/NBK56190/>



What Rare Disease Patient Advocacy Groups Are Doing to Mitigate the Effects of Disparities

<https://meridian.allenpress.com/aph/article/21/2/35/483290/What-Rare-Disease-Patient-Advocacy-Groups-Are>

[United Kingdom]

Genetic Alliance UK

<https://geneticalliance.org.uk/>

Gov. UK - Orphan register

<https://www.gov.uk/government/publications/orphan-registered-medicinal-products/orphan-register>

National Disease Registration Service

<https://digital.nhs.uk/ndrs>

England Rare Diseases Action Plan 2024: main report

<https://www.gov.uk/government/publications/england-rare-diseases-action-plan-2024/england-rare-diseases-action-plan-2024-main-report>

[Australia]

Rare Voices Australia

<https://rarevoices.org.au/>

Orphan drugs in Australia

<https://www.orpha.net/en/other-information/about-orphan-drugs?stapage=australia>

The Rare Awareness Rare Education (RARE) Portal

<https://rareportal.org.au/>

Rare Diseases NSW

<https://rarediseasesnsw.org.au/>

Government of Western Australia Department of Health

<https://www.health.wa.gov.au/>

Australian children living with rare diseases: health service use and barriers to accessing care

<https://pmc.ncbi.nlm.nih.gov/articles/PMC9848027/>

[India]

Indian Organization for Rare Diseases (IORD)

<https://www.rarediseases.in/>

RARE-X

<https://rare-x.org/>

Department of Health and Family Welfare - Institutions Treating Rare Diseases

https://rarediseases.mohfw.gov.in/Hospital_Treating_Rare_Diseases

Baseline Knowledge of Rare Diseases in India - A Survey

<https://www.clinmedjournals.org/articles/ijrdd/international-journal-of-rare-diseases-and-disorders-ijrdd-2-008.php?jid=ijrdd>

A survey of awareness of diagnosis and treatment of rare diseases among healthcare professionals and researchers in India

<https://pubmed.ncbi.nlm.nih.gov/37795705/>

7. Authors and acknowledgments

IRUD

IRUD involves diverse people, including doctors, genome researchers, genetic counselors, coordinators, data scientists, research assistants and administrative staff. This survey was executed with the cooperation of many people, primarily the IRUD Clinical Specialty Subcommittee / Diagnostic Committee. We would like to express our deep gratitude to all those who cooperated and we hope that you will continue to support the fourth term of the IRUD project, which began in April 2024. We sincerely hope that this survey report will serve as a catalyst for improving the environment surrounding patients and healthcare professionals regarding intractable and rare diseases.



Hidehiro Mizusawa
PI, IRUD
President Emeritus,
President Special Advisor,
National Center of Neurology and
Psychiatry (NCNP)



Shinji Kosugi
Specially Appointed Professor,
Kyoto University



Naomi chi Matsumoto
Professor / Department of Human
Genetics
Yokohama City University
Graduate School of Medicine



Kenjiro Kosaki
Director and Professor,
Center for Medical Genetics
Keio University School of Medicine



Tadashi Kaname
Director,
Department of Genome Medicine,
National Center for Child Health
and Development



Atsushi Sugie
Associate Professor,
Brain Research Institute,
Niigata University

CONTACT

IRUD Coordinating Center
Initiative on Rare and Undiagnosed
Diseases

Email: irud@ncnp.go.jp

Web: <https://www.amed.go.jp/en/program/IRUD/>



Rare Disease Consortium Japan was established on February 29, 2024, as an organization that promotes medical research and drug discovery for rare diseases, with collaboration amongst industry, academia, the public, and private sectors at its core with the aim of realizing patient-centered medical services. The fact that we were able to conduct the 'Survey on the challenges faced by healthcare professionals in rare diseases' in collaboration with the JPMA and IRUD was a valuable opportunity to give momentum to our organization's activities. We would like to express our sincere gratitude to all those involved who provided their support and cooperation in carrying out this project.



Yoshitsugu Aoki
Director, Department of Molecular Therapy,
National Institute of Neuroscience,
National Center of Neurology and Psychiatry (NCNP)
Representative, Rare Disease Consortium Japan



Hideo Miki
Mitsubishi Tanabe Pharma Corporation
Secretary General,
Rare Disease Consortium Japan



Naoto Inukai
Takeda Pharmaceutical Co. Ltd.
Chief Industrial Secretary,
Rare Disease Consortium Japan

CONTACT

RDCJ Secretariat, Department of Molecular Therapy
National Center of Neurology and Psychiatry, Institute of
Neurology

Tel: +81-42-346-1720

FAX : +81-42-346-1750

Email: jdenshi-ijmu@ncnp.go.jp

Web: https://www.ncnp.go.jp/nin/guide/r_dna2/rdcj_en.html



Rare and Intractable Disease Task Force

Japan Pharmaceutical Manufacturers Association (JPMA) organized Rare and Intractable Disease Task Force in 2021 to pay tribute to the dedicated activities and significant contributions of those involved in intractable and rare diseases and to play a part in this effort. In 2023, we executed and published a 'Survey on the challenges faced by healthcare professionals in rare diseases', compiled a recommendation on rare and intractable diseases and are working with relevant parties to resolve these challenges. We would like to express our sincere gratitude to all those involved for their support and cooperation in conducting the survey on the challenges facing healthcare professionals in rare diseases and in compiling this report.



Hifumi Koizumi
Astellas Pharma Inc.
Leader, Rare and Intractable Disease
Task Force



Taro Uemura
Takeda Pharmaceutical Co., Ltd.
Sub-Leader, Rare and Intractable
Disease Task Force



Ichiro Tamatomi
Astellas Pharma Inc.



Toshiyuki Karumori
Pfizer Japan Inc.

Noboru Yamamoto, Eisai Co., Ltd.

Takao Abe, Sanofi K.K.

Hitomi Nakatani, Daiichi Sankyo Co., Ltd.

CONTACT

Japan Pharmaceutical Manufacturers Association

Address: Nihonbashi Life Science Building, 2-3-11

Nihonbashi Honcho, Chuo-ku, Tokyo 103-0023

TEL. +81-3-3241-0326

FAX. +81-3-3242-1767

Web: <https://www.jpma.or.jp/english/index.html>



EY Parthenon Health & Life Sciences team has developed feasible strategies that go beyond the traditional framework of consulting to ensure sustainable development of healthcare system for the next 100 years and provides optimal services to all stakeholders across industries. Leveraging our global network and scale, members with diverse expertise we have organically collaborated with a wide range of stakeholders to conceive and implement problem-solving solutions that transcend the boundaries of private, public and academic sectors. In this survey, we supported the planning and management of the survey together with IRUD, RDCJ and JPMA. We would like to express our sincere gratitude to all involved parties, and we will continue to aim to build a better working world for all those involved in rare diseases.



Taichi Kido
Engagement Partners



Shunsuke Arami
Engagement Manager



Shan Wang



Saki Uikusu

Sosuke Sakaguchi

RiinaAnne Wooden

Ayako Ikemoto CTH Design Studio

Aya Horiguchi CTH Design Studio

CONTACT

EY Strategy & Consulting Co., Ltd.

Contact us [here](https://www.ey.com/en_jp/services/strategy/parthenon)

About EY Parthenon

https://www.ey.com/en_jp/services/strategy/parthenon





Regarding use of this publication

- ▶ To maintain neutrality, this report uses survey data executed by IRUD, RDCJ, and the Japan Pharmaceutical Manufacturers Association (JPMA) on behalf of a third-party organization (EY Strategy & Consulting Co., Ltd.)
- ▶ Although we strive to ensure the accuracy, validity, and timeliness of the information provided in this survey, we do not guarantee it
- ▶ It is prohibited by law to copy, reproduce, screen, publicly transmit, broadcast, lend, translate, or adapt the whole or part of the contents of this publication (text, images, graphs, etc.) without the prior permission of the copyright holder
- ▶ First edition created in November 2024
- ▶ Affiliation, title, etc. are as of the time of the first edition