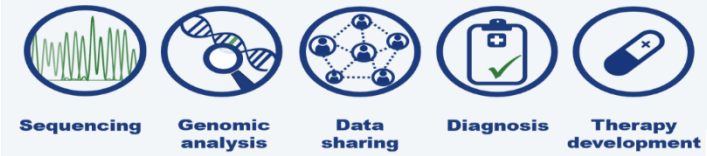
PPHF
PEOPLE TO PEOPLE HEALTH FOUNDATION

Rare Disease Ecosystem in India: Analysis to Action

Review Summary

Care for Rare



Context

This paper provides highlights from the review process on Rare Disease done by PPHF in technical partnership with Takeda. The purpose of the review was finding synergies which can help foster a positive impact in Rare Disease communities through shared common value, programmes and resources. This will enable key stakeholders to understand the need of addressing the cause and bring solutions. It was conducted in an open, inclusive and participatory manner. The focus was on seeking learning lessons and identifying the "best model". PPHF greatly appreciated the opportunity to be a part of this review and is honoured to take up the agenda items forward.

Globally, some 7,000 rare diseases have been identified and only 5 percent have treatments, representing a significant unmet need for patients. The underlying causes of rare diseases can be difficult to identity and the symptoms of the diseases are often quite different for each patient, making rare diseases very difficult to diagnose. Rare diseases present unimaginable burdens and challenges to patients who are affected, to the family and clinicians who care for them, and to the investigators who study their conditions. The challenges largely involve diagnosis, receiving optimal care, and affording disease-specific medications on the patient and family front. Clinicians who care for affected individuals must have thorough knowledge and experience in managing such patients, and the availability of local experts and of standard guidelines. The field of rare diseases is complex, heterogeneous, continuously evolving and suffers from a deficit of medical and scientific knowledge. So far about 450 rare diseases have been recorded in India. Rare diseases disproportionately impact children: 50% of new cases are in children and are responsible for 35% of deaths before the age of 1 year, 10% between the ages of 1 and 5 years and 12% between 5 and 15 years. The impact on families is often catastrophic in terms of emotional as well as financial drain, as the cost of treatment is prohibitively high. Rare diseases are of low prevalence and individually rare, collectively they affect a considerable proportion of the population in any country, which according to generally accepted international research is – between 6% and 8%. Rare diseases pose unique challenges to society and healthcare systems. Many countries including India do not have tailored policy frameworks today and there still is a large unmet medical need for Rare Diseases. Key factors that continue to have an impact on the burden of disease:

- Lack of knowledge and training
- Lack of awareness and information (rare diseases are genetic therefore exists for generations)
- Lack or delay of diagnosis
- Natural history of the disease - Aetiology of the disease and physiopathology remain unknown and/or there is not much insight into the natural history of these diseases
- Lack of treatment
- Inequity in terms of accessibility of the treatments (not yet priority, reimbursements, pricing)
- Access to medical care

There are several factors and stakeholders involved in addressing rare diseases in India. Their networks are key to influencing the policy and program decision-making processes, but little is known about their positioning in the disease landscape. With full awareness about these facts, PPHF and Takeda entered a technical collaboration to better understand the complex, inter-connected and diversity about the prevention and control of Rare diseases. The technical meetings helped to visualize and understand situations. The discussions allowed the team to also understand the informal interactions that cannot be understood by merely studying documents concerning formal policymaking procedures. The overall objective of the exercise was to enable better understanding of key opportunities and the main challenges to improve the policy understanding and implementation in Indian context. The exercise aimed to address a specific objective of understanding the exchange of advocacy, information and funding as a means of engaging in or influencing policy and program decisions in India.

The key learning that came from all the formal and informal discussions, desktop reviews etc. was that there is a need of a supportive policy environment to foster care and management and empower patients and their communities in India. *India has a draft Rare Disease Policy waiting for release.* Different stakeholders like industry bodies, government, patient advocacy groups, judiciary, government think tanks and knowledge partners Niti Aayog, AIIMS, ICMR etc. are putting in extreme individual efforts to improve environment and challenges of rare diseases in their individual capacities. Hence there is a pressing need for National platform to Collaborate on Prevention, Diagnosis and Treatment of Rare Diseases" representing a positive step for the government helping to formulate measures to combat rare diseases and this initiative would portends a number of efforts in the future. Substantial attempts are urgently needed, and society is still calling for the enactment of legislation and accompanying regulations on rare diseases and orphan drugs.

In addition, PPHF conducted follow up meetings with eminent knowledge leaders from the field of rare diseases, industry partners, private partners and MoHFW to have a 360-degree view and double sure the insight on the rare diseases not only in India but globally.

Review Process

Considering the importance of Rare Diseases for achieving health goal of India, PPHF facilitated a review process to understand the policy and program from leaders in the central and state government, experts and industry along with review of secondary and published information. The purpose of the review was:

To analyze the available evidence and develop some priority action agenda for Rare Diseases in India. The key features of the process included:

- Identification of key stakeholders to understand their prospective on this topic and
- Literature Review- Review of accessible publications, journals, reports etc. on public domain
- Identification of key evidence gaps, where additional knowledge needs to be generated
- Preparation of a summary report and action agenda

The PPHF team identified existing evidence for the review from India and other countries through a literature review as well as direct requests for information from experts working in this field. The team initially identified 20 documents. Out of these 10 documents were short-listed based on the criteria that the document should have: evaluated results at the outcome or impact level and recently updated information.

Considering Takeda's technical expertise and experience in Rare Diseases PPHF signed a technical agreement with Takeda to achieve following objectives:

- Support and share with the overview and background of the entire RD landscape in India and global insights on RD.
- Share insights on the background, current status, challenges and gaps in respect of the RD Policy in India
- Provide information of the relevant stakeholders in the RD space.
- Share global best practices on RD

Team also interacted with the various members of the committees formed by the government of India for providing suggestions towards framing of a 'national policy on treatment of 17 Rare Disease: **Committee** under Professor V.K. Paul, Head, Department of Pediatrics, AIIMS, New Delhi – 'Prioritisation of Therapy for Rare Genetic Disorders'. **Sub-committee** on rare diseases in India, under Prof. I.C. Verma, Director, Institute of Medical Genetics Genomics, Sir Ganga Ram Hospital – 'Guidelines for Therapy and Management'. **A high-powered interdisciplinary Committee** on rare diseases under the Chairpersonship of Dr. Deepak K. Tempe, Dean, Maulana Azad Medical College (MAMC), New Delhi.

The committees specifically cautioned that when resources in the public health system are limited, appropriate choices need to be made considering the larger canvas of health problems that affect the population and the economic consequences of each life saved. In conclusion, acknowledging the severity and impact of rare diseases on patients and their families; the directions of the Hon'ble High Court of Delhi and the consequent recommendation of the government sub-committee, there is a need to chalk out a roadmap for facilitating access to treatment for rare diseases. However, keeping in mind the prohibitive cost of treatment and the other formidable challenges

as discussed, appreciated from the perspective of public health principle of evidence, informed resource allocation for garnering optimal outcome for the resources allocated, makes it imperative that the same be done in a phased manner.

List of experts participated in the series of meetings

Efforts were made to interact and meet representations from MoH&FW, WHO, NHM, AIIMS, IQVIA, ICMR, NCDC, Industry Partner (Pharma Industry, IT Industry), Technology Partners: (IBM, Google, Apple Inc, Microsoft,)Academic and Media Partners, Ministry of Commerce, Ministry of Chemical & Fertilizers, Ministry of Corporate Affairs, Ministry of Finance, PAGs, Private and public professionals involved in rare diseases management, national and international NGOs. Team reviewed and discussed with the following experts:

1. Mr. Nilambuj Sharan, Joint Secretary, MoHFW
2. Dr. Himanshu Chauhan and his team of consultants – Deputy Director, NCDC
3. Dr. VK Paul – Member Niti Aayog
4. Dr. Madhilika Kabra, AIIMS, Delhi
5. Takeda team: Mr.Vineet Singhal (MD), Mr. Gopal Aggarwal, Mr.Jitendra Kumar, Ms. Nilovna Ghosh
6. Members of FICCI health and pharmaceutical team
7. Aequitas team – Dr. Bobby John and Dr. Nalini Khaushik
8. Ms. Katie Kawasaki, Representations from NORD – National Organization for Rare Diseases, USA
9. Dr. Meenakshi Bhat, Consultant in Clinical Genetics
10. Dr. Bhavya Kumar Jain – Ranchi Orchid hospital
11. Team Organization for Rare Diseases India

List of documents reviewed

1. National policy for treatment of rare diseases, Ministry of Health and Family Welfare Government of India
2. Information Note, Rare diseases in selected places, Research Office Legislative Council Secretariat, IN07/16-17
3. Rare Disease UK: The Rare Reality – an insight into the patient and family experience of rare disease, January 2016.
4. https://www.who.int/bulletin/volumes/90/6/12-020612/en/
5. Constitution of an Inter-Ministerial Consultative Committee to coordinate and steer the initiatives of different Ministries and Departments on Rare Diseases as laid out in the National Policy for Treatment of Rare Diseases.
6. The role of patient organizations in the rare disease ecosystem in India: an interview-based study Mohua Chakraborty Choudhury and Gayatri Saberwal: 2019
7. Guidelines for treatment of Rare Diseases under RAN – Feb 2019, MoHFW
8. https://rarediseases.org/get-involved/educate/educational-initiatives/
9. White paper on OPPI recommendation to the ongoing India policy revisions
10. Political declaration of the High-level meeting on UHC: President of General Assembly, September 2019
11. National Rare Disease Plan (NRDP) Summary of research components for each NRDP element, India

12. European Medicines Agency. European public assessment reports. Retrieved April9,2017,http://www.ema.europa.eu/ema/index.jsp?curl=pages/medicines/landing/epar_search.jsp
13. Global Genes. Statistics and Figures on Prevalence of Genetic and Rare Disease.RetrievedApril9,2017,https://globalgenes.org/rare-diseases-factsstatistics/
14. FAQs on Rare Diseases, National Centre for Advancing Transitional Sciences; https://rarediseases.info.nih.gov/diseases/pages/31/faqs-about-rare-diseases
15. Review of 11 national policies for rare diseases in the context of key patient needs, March 2017, Safiyya Dharssi, Durhane Wong-Rieger, Matthew Harold & Sharon Terry
16. A compilation of national plans, policies and government actions for rare diseases in 23 countries November 2018, Neil Khosla and Rodolfo Valdez,
17. Experts call for action to make National Rare Diseases Policy a reality, June 2019 by Press office
18. European Policy Framework for rare diseases – Eurordis, https://www.eurordis.org › eu-policy-framework
19. Bhattacharya, S., et al. (2016). Rare Diseases in India: Current Knowledge and New Possibilities [Electronic version]. Proceedings of the Indian National Science Academy, 82(4).
20. https://healthfinder.gov/FindServices/SearchContext.aspx?topic=315&show=1

Lessons learned and possible pathways

The lack of scientific knowledge and quality information on the disease often results in a delay in diagnosis. Also, the need for appropriate quality health care engenders inequalities and difficulties in access to treatment and care. This often results in heavy social and financial burdens on patients. As mentioned, due to the broad diversity of disorders and relatively common symptoms which can hide underlying rare diseases, initial misdiagnosis is common. In addition, symptoms differ not only from disease to disease, but also from patient to patient suffering from the same disease. Due to the rarity and diversity of rare diseases, research needs to be international to ensure that experts, researchers and clinicians are connected, that clinical trials are multinational and that patients can benefit from the pooling of resources across borders. Initiatives such as the European Reference Networks (networks of centres of expertise and healthcare providers that facilitate cross-border research and healthcare), the International Rare Disease Research Consortium and the EU Framework Programme for Research and Innovation Horizon 2020 support international, connected research.

A supportive policy environment is therefore necessary to foster care and management and empower patients and their wider communities in India. Central government considered reformulation of Rare disease policy. Special technical committee has been assigned to review the existing policy. New policy is to be released by MoHFW soon. Government has recognized the exorbitant cost of treatment for rare diseases; thus, the policy seeks to strike a balance between access to treatment and health system sustainability. New policy hopefully would prioritize prevention, awareness generation, capacity building and access to affordable treatment, insurance coverage and reimbursements, convergence and collaborations.

Immediate possible solutions to synergize collaborative efforts on Rare Diseases

Solutions include constituting an inter-ministerial Consultative Committee at National Level; Technical cum Administrative Committee at Central as well as State levels for management and release of corpus funds and for developing technical criteria/guidelines; Creating a corpus fund at Central and State Level for treatment of rare diseases on the basis of technical criteria developed by the Technical cum Administrative committee. Creating a Web-based application for online application process to apply for funding support from the corpus funds and create a patient registry for rare diseases housed in ICMR. As per current knowledge, developing materials for generating awareness in the general public, patients and their families and for training of health care providers; developing Rare Diseases Cell within MoHFW, ICMR in the Ministry of Chemicals and Fertilizers to be the nodal for the activities related to rare diseases.

Urgent actions that organisations like PPHF can undertake to strengthen the implementation are as follows:

a) Develop materials for generating awareness in the general public, patients, their families and health care providers.
b) Develop and conduct training programmes of health care providers on rare diseases
c) Initiative to prioritize the needs of people suffering with Rare Disease by bringing together diverse partners, discussing challenges, innovation and strengthening the nation's commitment towards delivery of greater impetus and better outcomes for all. The initiative should be able to generate dialogues, build synergies and bring forward a concrete and actionable comprehensive charter as an outcome and reinforce commitment on it for the cause.
d) Support development of centres of excellence for diagnosis and treatment of rare diseases
e) Advocate pre-conception and antenatal genetic counseling and screening in a targeted manner, or otherwise, provide options to parents to prevent conception or birth of a child with a rare genetic disease
f) Support development of a multi-sectoral convergent framework for tackling rare diseases
g) Comprehensive and consistent efforts to encourage partnership between industry body, NGOs, PAGs, IT, Media, CoE, MOH&FW, Ministry of State etc. As an outcome of technical discussions with Takeda, ICMR, MoH, NCDC, and other key stakeholders, PPHF feels empowered and capacitated to galvanize the system and create a sense of urgency around the issue of implementation of the Rare Disease Policy in India through a series of regional and national level consultations and follow-up actions to improve the policy and Implementation guidelines.

PPHF is exploring with national and state governments of North, South, West and East Regions to organize national and regional consultations to better understand critical drivers, strategies and solutions for Rare Diseases. The purpose of the consultation

will be to bring together representatives from government, national and international non-governmental agencies, civil societies, policy and program implementers, private sector and others, to exchange and share their experiences and ideas about addressing policy gaps and operational challenges on Rare Diseases.

The Objectives of the Consultations will be as follows:

1 To facilitate creative thinking to address policy and program gaps on Rare Diseases in India
2 To produce list of priority actions for effective policy formulation on Rare Diseases.
3 To re-energize the Rare Diseases stakeholders and increase collaboration and commitment to take the selected actions forward
4 Gain alignment, roll-out and commitment of all stakeholders like industry body, PAGs, Startups, IT industry, Pharma Industry, NGOs, policymakers and government on the Rare Disease Policy.
5 Focus on finding ways in which partnerships and innovation can deliver greater resources and better outcomes for all stakeholders.
6 Encouraging and enabling all stakeholders to identify and commit to tangible plans of action to achieve potential solutions to address access barriers for rare diseases

Summary

The review process is a useful approach to develop possible pathways to address the challenges on Rare Diseases in India through secondary review of documents/ publications, interaction with experts, industries and program leaders, informing program planning, and assisting with decision making. The PPHF experience shows that this process is most valuable to identity critical steps and action points on Rare Diseases in India.

It has been conducted in an open, inclusive and participatory manner. The focus was on learning lessons, not identifying the “best model”. The audience is clear, and the evidence is reviewed from their perspective (i.e., in this case, the evidence was reviewed for application in Government programming). The PPHF greatly appreciated the opportunity to be a part of this review and is honoured to take the agenda items forward.

PPHF acknowledges Takeda for their technical contribution help us to develop this document