Definition of a rare disorder in New Zealand

Information for Manatū Hauora, Ministry of Health

2 May 2023

We're pleased to be involved in the development of a Rare Disorder Strategy for New Zealand. At our most recent meeting on **19 April 2023**, we discussed the definition of a rare disorder and the importance of setting this definition as a first step in progressing the Rare Disorder Strategy. Further to that conversation we are providing this document which outlines clearly our thinking on this issue.

1. Aligning our definition with international benchmarks

We believe this to be an important opportunity to align our strategy with International benchmarks, a move that is particularly important in the Rare Disorders space since global concerted action that is coherent and coordinated is likely to achieve the best impact for patients' families and whānau. The importance of international alignment has been underlined in our recent participation in WHO working groups, who are directing efforts at establishing regional areas of excellence, in our instance focused on the Asia Pacific area.

As you know, New Zealand does not have an official definition of what constitutes a rare disorder. We are advocating for the adoption of an official definition of rare disorders that is in line with international best practice for the reasons outlined above and below.

Citing a prevalence value as a definitional component of what constitutes a rare disorder is important. While a descriptive element to the definition is also useful, a numerical definition enables central elements to a subsequent strategy aimed at developing effective detection, diagnosis, management and treatment of this heterogeneous group of disorders.

These elements include data capture, more precise measures of the cost of rare disorders on the health system, the lives of people affected and society, as well as avoiding scope creep, facilitating inclusion in research, and enabling international collaboration. It will enable involvement in international strategies (for example the recently concluded WHO working group) and bring coherency and comparability to our practices and policies on the international stage. The final reason is especially important

because of the compound challenge we have as a small country developing a Strategy for conditions that affect few people individually.

It is our view therefore that we should adopt the widely held and established definitions of rare disorder (see appendix). That definition is a disorder that affects fewer than or equal to 1 in 2,000 persons, as well as a definition for ultra-rare disorders that affects fewer than or equal to 1 in 50,000 persons.

We wanted to share with you information we have collated regarding definitions of rare disorders internationally, this is attached. Rare Disorders NZ also frequently liaises with experts in the field of rare disorders and it may be useful to consult them to baseline our decisions (such as this definition) going forward. These introductions can be arranged as needed.

Rare Disorders NZ would also appreciate the opportunity to be involved in planning who to invite to expert round tables if you choose to go in that direction as this work progresses.

We look forward to working with you further on the strategy.

International definitions of rare disorders	
WHO/ Rare Diseases International (RDI)	RDI, working with a global panel of experts and collaborating with the World Health Organization (WHO) ICD has developed an internationally endorsed Operational Description of Rare Diseases. *A rare disease is a medical condition with a specific pattern of clinical signs, symptoms, and findings that affects fewer than or equal to 1 in 2000 persons living in any World Health Organisation-defined region* of the world.* ***Rare diseases include, but are not limited to, rare genetic** diseases, rare cancers, rare infectious diseases, rare poisonings, rare immune-related diseases, rare idiopathic diseases, and rare undetermined conditions.* *While the frequency of most rare diseases can be described by **prevalence** (the number of cases within a specific population at a given moment or over a specified period), some rare diseases, such as rare cancers and rare infectious diseases, can be more precisely described by **incidence** (the rate of new cases within a specific population over a particular period).* *(*https://www.rarediseasesinternational.org/description-for-rd/*)*

European Union	In the European Union, a rare disease is one that affects no more than 1 person in 2,000. Between 6,000 and 8,000 different rare diseases affect an estimated 30 million people in the EU. (https://research-and-innovation.ec.europa.eu/research-area/health/rare-diseases_en) The EU also uses a definition of "a prevalence of not more than five affected persons per 10 thousand" in their Orphan Drug Regulation (Regulation (EC) No 141/2000 of the European Parliament and of the Council of 16 December 1999 on orphan medicinal products. (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32000R0141) A consortium, the European Rare disease research Coordination and support Action(ERICA) started its work in March 2021, with the aim to coordinate the clinical research activities of the European Reference Networks (ERNs). ERICA unites the expertise of the 24 ERNs creating a collaborative platform to share knowledge and good practices through the assembly of transdisciplinary research groups across the different medical areas. ERICA defines a rare disease as "diseases that affect not more than 1 person per 2000 in the European population" (https://erica-rd.eu/about/erica/)
United Kingdom	The UK Rare Diseases Framework was published by the Department of Health and Social Care in January 2021. A copy of the Framework is available here: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/950651/the-UK-rare-diseases-framework.pdf Definition used in the framework: *A rare disease is defined as a condition which affects less than 1 in 2,000 people. It is currently estimated that there are over 7,000 rare diseases, with new conditions continually being identified as research advances. While 80% of rare diseases have an identified genetic origin, they can also be caused by disordered immunity, infections, allergies, deterioration of body tissues and organs or disruption to development while in the womb.* (Introduction, page 5)

Australia	The National Strategic Action Plan for Rare Disorders was published by the Australian Government, Department of Health, in February 2020. The Action Plan is available here: https://rarevoices.org.au/wp-content/uploads/2020/08/NationalStrategicAPRD.pdf. Rare Voices Australia (RVA) was commissioned by the Australian Government to develop the Action Plan on behalf of the rare disease sector. Definition used in the Action Plan: *What is a rare disease? The most widely accepted definition is that a rare disease is one that affects less than five in 10,000 people 3,4. While estimates of the number of rare diseases may vary between countries and studies, due to differing definitions and challenges with data collection, it is prominently cited that there are more than 7,000 different rare diseases5. The increasing precision of genomic technologies means that new diseases are being discovered regularly6. While individual diseases may be rare, the total number of Australians living with a rare disease is not. Approximately eight per cent of Australians live with a rare disease7. Extrapolated to an Australian population of over 25 million people, this equates to around two million Australians.* (Introduction, page 9) *Rare diseases – according to Orphanet, the portal for rare diseases and orphan drugs, 'Rare diseases are diseases which affect a small number of people compared to the general population and specific issues are raised in relation to their rarity. In Europe, a disease is considered to be rare when it affects 1 person per 2000. While Australia does not have an explicit legislated definition of rare diseases, the Therapeutic Goods Regulations 1990 states that, in order for a medicine to be designated as an orphan drug, it must be intended to treat a condition that affects less than five in 10,000 Australians at the time of application, or to prevent or diagnose a condition that would not be likely to be supplied to more than five in 10,000 Australians each year.* (Appendix 1, Glossary, page 51) Australia also uses the term ultra-rare disease for the purposes to the Life Saving Drugs Program which pays for specific essential medicines to treat patients with ultra-rare and life-threatening diseases. Ultra-rare is defined as a disease with a prevalence of 1:50,000 people or less in the Australian population. (www.health.gov.au/our-work/life-saving-drugs-program/for-medicine-sponsors#medicine-eligibility-criteria). This is different to the Orphan drug designation which uses a definition of a medicine intended to treat a condition that affects fewer than 5 in 10,000 individuals in Australia. Orphan drug designations allow for a waiver of application and evaluation fee for registration in the Australian Register of Therapeutic Goods (ARTG).)

	(www.tga.gov.au/resources/resource/guidance/orphan-drug-designation-eligibility-criteria#designation, www.tga.gov.au/resources/resource/guidance/orphan-drug-designation-eligibility-criteria). Of note, the Action Plan also incorporates forming a definition for undiagnosed rare disease: *3.1.1.2. Develop a nationally-recognised definition of undiagnosed rare diseases in consultation with relevant experts. Using this definition, provide for an undiagnosed rare disease code in an individual's health record that is compatible with Orphacodes, ICD-11 and other relevant classifications. This code could:* ● *raise a flag or alert to health professionals when they access the individual's health record (similar to drug allergy alerts), thus prioritising a diagnostic response and;* ● *support data collection for undiagnosed rare diseases, and hence strategic decision-making, such as service planning. (Priority 3.1, Action 3.11, Page 36)*