Meeting challenges in evaluating and measuring functioning in rare diseases: a collaboration between Orphanet and Mapi Research Trust

Annie Olyry1, Gavin McDonough1, Charlotte Rodwell2, Ana Rath3, Catherine Acquadro2, Laure-Lou Perrier2, Celine Desvignes-Gleizes2, Benoit Arnould2

1 INSERM, US14-Orphanet, Plateforme Maladies Rares, 96 rue Didot, 75014, Paris, France; 2 Mapi Research Trust, Lyon, France

**Background**

Rare diseases (RD) often result in a wide spectrum of disabilities, on which information is lacking. There is a need for standardised, curated data on the functional impact of RD to facilitate the identification of relevant Patient Reported/Patient Centered Outcome Measures (PROMs/PCOMs) as well as for the use of validated Quality of Life instruments based on functional outcomes. To address these issues, Orphanet (www.orpha.net) is partnering with Mapi Research Trust (MRT) in order to connect Orphanet to PROQOLID™, MRT’s PROMs/PCOMs database through disease codes.

**Methodology**

A general lack of information on the disabilities associated with rare diseases and the need for compensation result in a negative impact on social care for persons suffering of a RD. For this reason, the Orphanet Disability/Handicap project documents the functional consequences of rare diseases and their impact on quality of life using the Orphanet Functioning Thesaurus, which is derived & adapted from the International Classification of Functioning, Disability and Health – Children and Youth (ICF-CY, WHO 2007).

- **Telephone interviews**
  - Highly structured interview to document functional consequences
  - Consulted: medical experts, medical sector professionals and patient organisations

- **Questionnaire**
  - Questionnaire in 20 themes (in English, French and German) to structure interviews.
  - Based on the Orphanet Functioning Thesaurus

- **Synthesis**
  - Interviews are conducted with one medical expert and one patient organisation, separately to assure accurate annotations for each RD analyzed.
  - A synthesis is performed based on all responses provided

- **Annotation**
  - During the interviews, functional consequences of rare diseases are annotated according to their frequency, severity and temporality.

**Results**

- **PROMS developed in RD**
  - In PROQOLID™, 64 RD were identified to date for which 144 PROM were developed. The RD with the most PROM were sickle cell anemia, spinal cord injuries, cystic fibrosis, all forms of hemophilia A and B and Duchenne Muscular Dystrophy.

- **Regulators’ perspective on PROMS in RD**
  - The EMA and FDA labels review showed that 17.4 % of the orphan drugs included a PROM claim. PROM used in labels were primarily focusing on symptoms (100%), rarely on functioning (4%) or health-related quality of life (12%).

**Conclusion**

Linking these two databases, and providing standardised, curated data, will enable the community to identify PROMs/PCOMs for RD, and is the first step towards validated Quality of Life instruments based on functional outcomes.