orphanet

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Procedural document:
Rare disease nomenclature in English

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Instituts thématiques
Inserm
Institut national
de la santé et de la recherche médicale

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I. Introduction

1. Purpose/objectives

There is no international consensus so far, on how rare diseases should generally be named. This document aims to define a set of rules to be used in the Orphanet database in order to promote a correct nomenclature. As far as possible the Orphanet nomenclature is:

- Based on clinical practice ;
- Validated by experts of the field;
- Comprehensive;
- Consistent ;
- Stable, as far as possible when taking into account the rate of evolution of scientific knowledge.

A good name must be self-sufficient and should avoid ambiguity with similar diseases.

2. Disclaimer

- This publication is part of Joint Action 677024 RD-ACTION which has received funding from the European Union's Health Programme (2014-2020).

3. Range of application

The present naming rules apply to all disorder entities listed in the Orphanet database, whatever their typology (groups of disorders, disorders or subtypes).
The Orphanet nomenclature of rare diseases is managed by the information scientists in charge of disease inventory and classification, under responsibility of the scientific director. Experts are regularly consulted to adjust decisions.

4. References

Some international biomedical terminologies are consulted to implement the rules defined here:

- International Classification of Diseases, version 10 (ICD-10, edited by the World Health Organization).
- International Classification of Diseases for oncology, version 3 (ICD-O-3, edited by the World Health Organization).
- MeSH (Medical Subject Headings) (http://www.ncbi.nlm.nih.gov/mesh).
- International Union of Pure and Applied Chemistry - IUPAC.
- International Union of Biochemistry and Molecular Biology - IUBMB.
- HUGO Gene Nomenclature Committee - HGNC.
- UniProt knowledgebase – UniProt-KB.
- Fima Lifshitz (ed.), *Pediatric Endocrinology*, New York: Informa Healthcare, cop. 2007, vol. 2, ISBN

978-1-420-04270-2. Ch. 1 “Worrisome Growth”, p.1

Orphanet procedures:

- Orphanet inventory of rare diseases
- Procedures on experts’ selection procedures is going to be published soon.

5. Definitions

Acronyms are included only when actually used in literature: convenience acronyms used in Orphanet summaries that have no use in the scientific community are not included. Several entities can share the same acronym.

Editorial rules are a set of good practices aimed at ensuring some degree of consistency in the nomenclature. They deal with the semantic content of the nomenclature. In contrast with formal rules, they should be regarded as recommendations rather than prescriptions, and are interpreted by the information scientists according to the context of the relevant disease.

Experts mentioned in this procedural document are the health professionals identified by Orphanet as leaders in the medical field for a rare disorder or a group of rare disorders.

Formal rules are designed to ensure consistency of spelling and grammar throughout the Orphanet nomenclature. They do not deal with the semantic content of nomenclature. They form a conventional reference frame; their prescriptions are not supposed to be interpreted, but to be applied whatever the context.

Keywords are significant terms for a disease or group of disease, that are usefully retained for redirecting users to relevant diseases, but do not fit the defining criteria of a preferred name, a synonym or an acronym. Keywords are displayed only in the intermediary disease list produced by a request.

The **ORPHA code** is the unique identifier attributed by the database to each entry.

Preferred terms are usually the most generally accepted name in the medical community. This can be defined by:

- A published consensus;
- The opinion of experts of the relevant medical specialty;
- Compelling predominance of the name in medical literature.

Preferred terms are unique throughout the database, associated to one ORPHA code only.

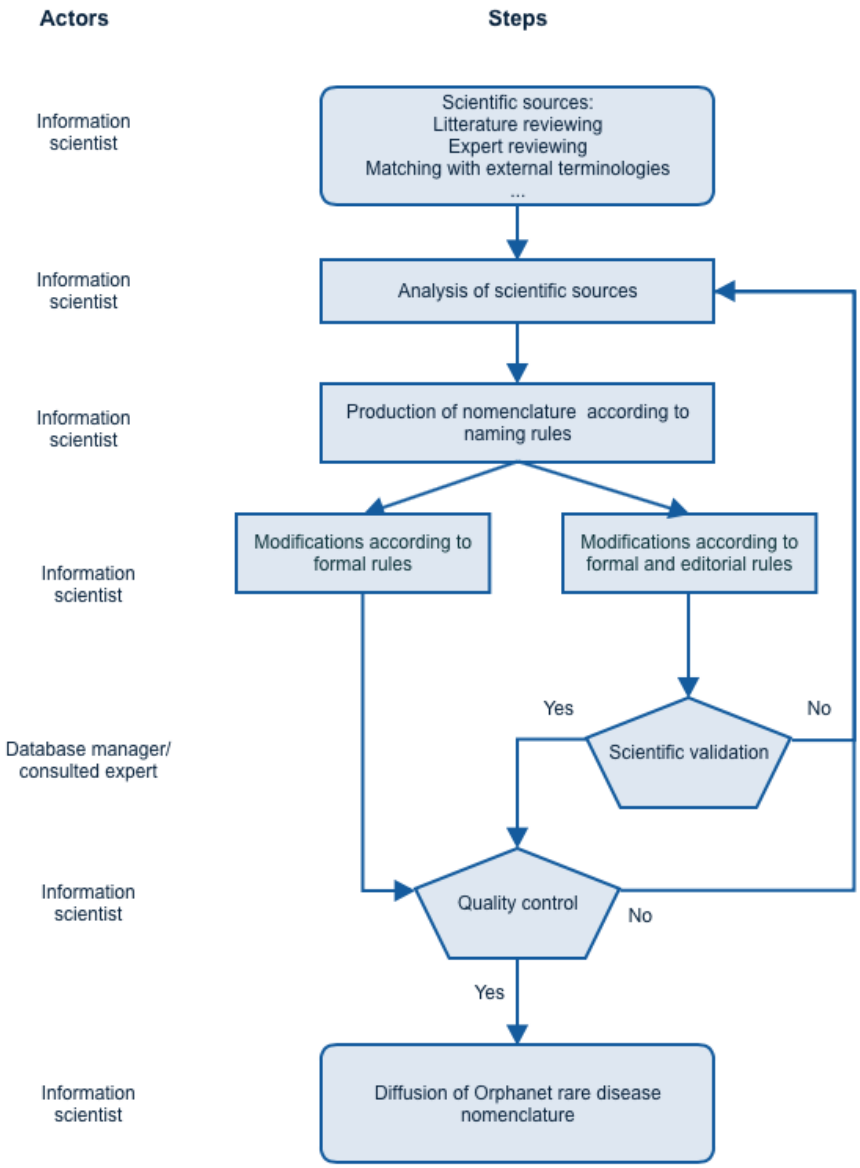
Synonyms are perfect equivalents in scope of the preferred term they are attached to. As many synonyms as necessary are added to a preferred term. Sub entities are not included among synonyms.

6. Filing and updates

This document is updated at least annually or more frequently if necessary by the information scientist in charge of disease inventory and classification. The most up-to-date version is available on the Orphanet website: www.orpha.net/orphacom/cahiers/docs/GB/Disease_naming_rules_in_English_R1_Nom_01.pdf

II. METHODOLOGY

1. Flowchart



2. Description

Data coming from scientific sources are analysed by the information scientist in charge of the rare diseases inventory.

According to the naming rules described below, the information scientist implements modifications of the nomenclature of rare diseases into the Orphanet database. If these modifications are only a result of formal rules, they do not go through scientific validation.

Otherwise, the manager of the rare disease database (i.e. when a semantic rule is applied for internal consistency), or an expert (i.e. when a decision should be done regarding the preferred term *versus* a synonym),

or both, validate the new nomenclature.
Quality control is set up by the information scientist who regularly assesses the implementation of the formal and editorial rules.
Orphanet rare disease nomenclature is released at a variable frequency depending on the channel of dissemination (daily for the website - www.orpha.net -, monthly for the Orphanet download platform - www.orphadata.org - and the Orphanet Rare Disease Ontology – ORDO, and bi-annually for the Orphanet Report Series "List of rare diseases").

III. Naming Rules

1. Formal rules

a) Grammatical number

The general rule is to create every name in the singular, even for groups of diseases.
E.g. *ORPHA93665* *Autoinflammatory syndrome*

Exceptions is made if using the singular would result in an inaccuracy or if using the singular is grammatically impossible.
E.g. ORPHA1200 *Choanal atresia-deafness-cardiac defects-dysmorphism syndrome*

In case of multiple involvement, grammatically plural names are used.
E.g. *ORPHA2505* *Multiple benign circumferential skin creases on limbs*

Attributive nouns, i.e. nouns used like adjectives, have a tendency to remain invariably singular, even if a plural may appear semantically more appropriate:
E.g. ORPHA182095 Interstitial lung disease

b) Diacritics and special letters

They occur quite often in eponyms. The general rule is to keep diacritics of the original language.

E.g.	*ORPHA117*	*Behçet disease (cedilla - Turkish)*
	ORPHA1532	*López-Hernández syndrome* (acute accent - Spanish)
	ORPHA99873	*Hand-Schüller-Christian disease* (umlaut - German)
	ORPHA178333	*Åland Islands eye disease* (ring - Swedish)

However, the implementation of this rule is currently limited by the lack of system support for some additional letters.

c) Greek letters

Greek letters are mentioned by their name spelt in the Roman alphabet, not by their shape in the Greek alphabet.

E.g.	*ORPHA60*	*Alpha-1-antitrypsin deficiency*
	ORPHA100024	*Mu heavy-chain disease*

d) Capital letters

The first letter of every disease name is a capital. The first letter of every proper name is a capital.
When both an acronym and its developed forms are given as possible names of an entity, the letters of the developed form are not capitalised.
E.g. ORPHA2576 MULIBREY nanism has as a synonym the developed form Muscle-liver-brain-eye nanism, not MUscle-LIver-BRain-EYe nanism.

When a disease name is made up of a list of signs, the individual signs are not capitalised.
E.g. ORPHA964 Acromegaly-cutis verticis gyrata-corneal leukoma syndrome

e) English orthographic variants

The general rule is to use American rather than British spellings in the nomenclature. The rationale for this choice is to make copying-and-pasting from and to Pubmed easier, since American spellings predominate in scientific literature.

f) Hypens

i. Compound modifiers

Compound modifiers are made of two or more attributive words used together like an adjective to modify a noun or noun phrase. Their elements are joined by a hyphen.

E.g. *ORPHA297* ***Tick-borne*** *encephalitis*
ORPHA208650 ***Cryopyrin-associated*** *periodic syndrome*

ii. Prefixes

Some prefixes (*co-*, *pre-*, *post-*, *mid-*, *de-*, *non-*, *anti-*, *auto-* etc.) may be fused or hyphenated. Many long-established words, such as *antibody* do not require a hyphen since the prefix is fully fused.
Orphanet's editorial choices are the following:

- Hyphen after *non;*
- Hyphen before proper nouns and abbreviations;
- Hyphen when the prefix applies to an expression rather than a single word;
- Fusion in all other cases.

Examples with *non*:
ORPHA2698 *Non-rhizomelic chondrodysplasia punctata*

Examples with proper nouns and abbreviations:
ORPHA1229 *Pseudo-TORCH syndrome*
ORPHA2981 *Pseudo-Zellweger syndrome*

Examples with expressions:
ORPHA375 *Anti-glomerular basement membrane disease*

Examples with fusion:
ORPHA758 *Pseudoxanthoma elasticum*

Fusion is used even when it puts vowels in hiatus:
ORPHA98375 *Autoimmune hemolytic anemia*

iii. Words made of Greek and Latin stems

A large part of the scientific vocabulary is built from Greek and Latin stems that cannot occur by themselves in English, but are freely associated to create new names. Examples: *cardio-*, *cephalo-*, *cerebro-*, *dermato-*, *entero-*, *naso-*, *oro-* etc. as first elements, *-cyte*, *-emia*, *-pathy*, *-penia*, *-uria* etc. as last elements.
Hyphenation rules for words made of such stems are variable. Orphanet's editorial choice is to fuse the elements in all instances. Variations in spelling are not included as synonyms or keywords.
E.g. *ORPHA101* *Dentatorubropallidoluysian atrophy*

ORPHA2346 Angioosteohypertrophic syndrome

iv. Coordinating hyphens

Coordinating hyphens are used to unite word or expressions at the same level in order to create a compound whose meaning is the addition of the separate element. In the Orphanet nomenclature, this is often used to create a disease name from a list of signs and symptoms or from a list of eponyms.

E.g. *ORPHA261 Emery-Dreifuss muscular dystrophy*

ORPHA2668 Nephropathy-deafness-hyperparathyroidism syndrome

v. Suspended hyphens

Suspended hyphens are used when a prefix or first element of a compound is put in common with several second elements.

E.g. ORPHA280628 Familial progressive hyper- and hypopigmentation

g) Chemical nomenclature

The denomination of chemicals used in rare disease names is based on the interrelated nomenclatures of the IUPAC and the IUBMB.

h) Gene nomenclature

Gene denomination used in disease names follows the international nomenclature of the HGNC. The "approved gene symbol" is used in the preferred term, while the « approved gene name » is used in the synonyms.

i) Protein nomenclature

Protein denomination used in disease names follows the recommendations of the UniProt-KB. When available, "short name" is used in the preferred term, and the expansion is used in the synonyms. Otherwise, "Recommended name" is used. "Alternative name" is not used unless it is widely used in the biomedical literature.

2. General editorial rules

The following rules apply to every cases developed hereafter:

- **Commonly used name in biomedical literature are used as preferred term** no matter what.
- **Actual well-established practice trumps any other editorial rule.**
- When there are several competing denominations, their compatibility with internal editorial rules are assessed to adopt the most appropriate as preferred term.
- When there is no name available from literature, it is attributed by Orphanet in accordance with the editorial rules.

a) Priority to clinical practice

Diseases in the Orphanet database are defined primarily on a clinical basis. The nomenclature accordingly follows a primarily clinical logic. Genetic or aetiological considerations can be used secondarily for additional distinctions.

Diseases are as far as possible are named consistently within the groups of diseases they belong to.

b) Word order

The general rule is that disease names follow the same word order as in normal speech. Qualifiers generally remain where they are grammatically appropriate.
When the normal word order must be broken, a comma is used to introduce a word group that has been rejected at the end.
This is most commonly done to introduce disease subtypes (see below in Paragraph G).

c) Latin expressions

The medical vocabulary contains certain Latin expressions used as quotations, often in parallel with English adaptations. The choice of one of the other possibility is a matter of use, but is consistent across a single group of diseases. The other possibility is put as synonym.
The Latin spelling and word order is respected and not mixed with the English adaptation.
E.g. ORPHA1463 Triatrial heart Vs Cor triatriatum.

d) Former nomenclatures

When the medical community decides to rename a disease or a group of diseases, the preferred term is changed to the new consensus name. Former names are nonetheless retained as synonyms.
E.g. ORPHA2982 preferred term: 46,XX disorder of sex development and synonym: Female pseudohermaphroditism

e) Comparative use of certain words

i. Disease vs. syndrome

Strictly speaking, the word *syndrome* refers to a recognisable and recurring association of signs, symptoms and other characteristic morbid features. The word *disease* means that the underlying cause of this association is known.
Unfortunately, the medical nomenclature does not use the words syndrome and disease consistently.
In the Orphanet nomenclature, the correct use of those words is followed as far as possible, but the actual use in medicine has priority even if it is technically incorrect.

ii. Words referring to transmission or acquisition

To refer to a disease that is genetically determined, the words *familial*, *hereditary*, *genetic*, *constitutional*, *non-acquired* tend to be used indiscriminately in disease names. While several may be appropriate in the same situation, each has a specific meaning and they are not considered as equivalent.
Hereditary is generally used as preferred term. The others are added as synonym only if they are used in the biomedical literature. *Non-acquired* is generally avoided since it is a negative characterisation only.

To refer to the lack of familial transmission, the word *acquired*, *sporadic*, *non-genetic* may be found.
Acquired is used by default. *Sporadic* is generally avoided, since it properly refers to cases, not to diseases. *Non-genetic* is generally avoided, since it is a negative characterisation only.

When two forms of a disease are distinguished by the presence or absence of familial transmission, the opposing terms is by default *hereditary* vs. *acquired* or *genetic* vs. *acquired*. However, the idiosyncrasies of some medical specialties are respected:

- *Acquired* vs. *non-acquired* in endocrinology;
- *Constitutional* vs. *acquired* in haematology.

iii. Congenital

A disease is described as *congenital* when patients are born with the disease or show the signs of the disease at birth. The word is not used when a person is born with a disease that may not be clinically detectable at once at birth.

iv. Essential and idiopathic

Strictly speaking, the words *essential* and *idiopathic* refer to pathological entities without a known aetiology, i.e. for which no cause has been found.
For historical reasons, they are often used incorrectly, because the qualifier tends to persist even after the discovery of an aetiology for a disease formerly described as idiopathic.
For instance, *ORPHA656* is called *Familial idiopathic steroid-resistant nephrotic syndrome*, even if "familial" is strictly speaking not compatible with "idiopathic" and the causal genes are known.
As far as the usage allows it, those words are used in the correct meaning.

v. Classic and typical

These words are used to differentiate similar diseases, with one (labelled *classic* or *typical*) being used as a prototype because it is more common, better known or was described first. The use of *classic* or *typical* follows the usage in biomedical literature.
When the opposition is between a pair of diseases, the second is usually labelled *non-classic* or *atypical*.
The word *classic* is used rather than *classical*.

E.g. *ORPHA325524* *Classic congenital lipoid adrenal hyperplasia due to STAR deficiency*
ORPHA325529 *Non-classic congenital lipoid adrenal hyperplasia due to STAR deficiency*

E.g. *ORPHA90038* *Typical hemolytic-uremic syndrome*
ORPHA2134 *Atypical hemolytic-uremic syndrome*

vi. Isolated and syndromic

The word *isolated* is used in the name of diseases when it is necessary to make the precision that they are not part of a wider syndrome. The word is added even when this is not the case in spoken English: here the need to avoid ambiguity trumps the accordance with actual usage.
E.g. *ORPHA2345* *Isolated Klippel-Feil syndrome*
ORPHA248340 *Isolated delta-storage pool disease*

It is sometimes useful to oppose *isolated* to *syndromic*, the latter usually naming a group of diseases. These are the words used by default.
E.g. *ORPHA718* *Isolated Pierre Robin syndrome*
ORPHA138044 *Syndromic Pierre Robin syndrome*

However, *non-syndromic* vs. *syndromic* may also be used if warranted by a dominant actual usage.
E.g. *ORPHA87884* *Non-syndromic genetic deafness*

ORPHA90642 Syndromic genetic deafness

vii. Anomaly, abnormality and malformation

Anomaly is preferred to *abnormality* in the Orphanet nomenclature.
Malformation is generally avoided.

viii. Defect, deficiency and disability

The following definitions apply to the Orphanet nomenclature:

- *Defect* refers to a developmental anomaly, a pathological or interrupted process.
- *Deficiency* refers to the lack or shortage of a functional entity, typically nutrients or endogenously produced proteins (often enzymes).
- *Disability* refers to the functional consequences of an impairment: visual, auditive, intellectual etc.

ix. Predisposition and. susceptibility

Orphanet nomenclature follows the predominant usage of *predisposition* and *susceptibility* in literature, consistently within disease groups. Notably, these tendencies are observed:

- *Susceptibility* tends to be preferred in genetics;
- *Susceptibility to infection* tends to be preferred in immunology;
- *Predisposition to cancer* is preferred in oncology.

x. Dwarfism and short stature

Dwarfism (synonym *nanism*) and *short stature* have different definitions and are not used indiscriminately.
From Fima Lifshitz (ed.), *Pediatric Endocrinology*, New York: Informa Healthcare, cop. 2007, vol. 2, ISBN 978-1-420-04270-2. Ch. 1 "Worrisome Growth", p.1:

> *Normal ranges in medicine are frequently defines as ± 2 standard deviations (SDs). Thus short stature can be defined as: (i) height below -2 SD for age and gender within the population or (ii) height more than -2 SD below the midparental target height. Dwarfism refers to more severe short stature, defined as height below -3 SD for age and gender norms.*

The Orphanet nomenclature follows the definitions given above.

xi. Poisoning and intoxication

Poisoning refers to the symptoms, illness or death produced by a toxic substance in an organism.
Intoxication may refer to poisoning, but also to the lesser state of stimulation, excitement or stupefaction caused by a psychoactive substance. In this case, it is sometimes used in contrast with *poisoning* to indicate a milder disturbance (e.g. *alcohol intoxication* vs. *acute alcohol poisoning*).
Poisoning is preferred in the Orphanet nomenclature.

f) Common ways of naming diseases

i. After authors

Author names (eponyms) are commonly used in literature but less informative by themselves than naming after clinical features. They are therefore avoided as preferred terms, unless actual usage overwhelmingly prefers eponyms (e.g. *ORPHA881 Turner syndrome*). Author names remain as synonyms:
E.g. ORPHA1200 Choanal atresia-deafness-cardiac defects-dysmorphism syndrome

Synonym: *Burn-McKeown syndrome*

When the clinical naming of the disease is not distinctive enough, an eponym is added to ensure the name's specificity.
Ex: ORPHA2316 Johnson neuroectodermal syndrome

The following formatting rules apply:

- When there are several eponyms, they are separated by a coordinating hyphen;
- For diseases named after a publication with three authors or less, all of the authors are listed;
- For diseases named after a publication with more than three authors, only the first and last authors of the publication are included in the disease name.

The Saxon genitive *'s* is not used after author names, mere juxtaposition is preferred even when the dominant practice is to use the Saxon genitive. This follows the current tendencies in medical nomenclature and the editorial choice of the World Health Organization for the ICD-O-3. The rationale is that the physician(s) that first described the disease neither "owned" it nor suffered from it.
E.g. ORPHA324 Fabry disease

Exceptions can be made to prevent confusions or awkward readings. For instance, *ORPHA99672* is called *Fried's tooth and nail syndrome* to avoid reading *Fried tooth and nail*.

Please note that it does not apply to Saxon genitive with common nouns.
E.g. ORPHA97353 Boxer's dementia
ORPHA99906 Farmer's lung disease

ii. After a list of signs and symptoms

The following format is followed:

- Signs and symptoms are separated by coordinating hyphens;
- The word *syndrome* or *disease*, according to the situation, is added at the end.

E.g.: ORPHA588 Muscle-eye-brain disease
ORPHA178377 Osteosclerosis-developmental delay-craniosynostosis syndrome

Joining by "and" and "with" is generally avoided, unless this is found in the commonly accepted name of the disease.
E.g.: ORPHA257 Epidermolysis bullosa simplex with muscular dystrophy
ORPHA2785 Osteopetrosis with renal tubular acidosis

iii. After a pathological process

The disease name starts with the clinical manifestations followed by "due to" and then the process.
E.g. ORPHA34587 Glycogen storage disease due to LAMP-2 deficiency
ORPHA169090 Combined immunodeficiency due to CRAC channel dysfunction

iv. After a gene or a protein – without specified physiopathology

The disease name starts by the gene or protein name, followed by "related" connected by a hyphen. The format is: *[Gene/protein]-related disease*.

E.g. *ORPHA85451* *Transthyretin-related familial amyloid cardiomyopathy*
ORPHA263463 *CHST3-related skeletal dysplasia*

v. After another disease ("plus", "like", "pseudo")

As far as possible, this practice is avoided in preferred terms.
According to the formal rules, a hyphen is used to connect the prefix *pseudo-* to proper names and acronyms, but fusion is used with common nouns.

E.g. *ORPHA1229* *Pseudo-TORCH syndrome*
ORPHA2978 *Chronic intestinal pseudoobstruction*

A hyphen is always used to connect *-like* to a preceding name.
E.g. ORPHA1149 *Arthrogryposis-like syndrome*

No hyphen or fusion is used to connect *plus* to a preceding name.
E.g. ORPHA709 *Peters plus syndrome*

g) Providing contrast between similar diseases

The following rules apply specifically to similarly-named diseases differentiated by an additional precision, typically numbers, letters, eponyms, clinical specifics, inheritance.
The place of the precisions depends on their number and whether they are used to define a disease as a whole or several of its subtypes.

When the precision is necessary to define the disease, it is put at the beginning of the name.

E.g. *ORPHA70590* *Infantile apnea*
ORPHA99826 *Marburg hemorrhagic fever*

When precisions are used to differentiate several subtypes of the same disease, they are put at the beginning of the name if there is a single precision used as a direct epithet.

E.g. *ORPHA314918* *Mild Canavan disease*
ORPHA314911 *Severe Canavan disease*

They are rejected to the end of the name when introduced by a dedicated word ("type", "form", etc.) or expression ("due to", "without" etc.). See afterwards for the selection of the introductory expression.

Rejection at the end is also used when several precisions are added.

E.g. *ORPHA308552* *Glycogen storage disease due to acid maltase deficiency, infantile onset*
ORPHA308573 *Glycogen storage disease due to acid maltase deficiency, juvenile onset*

i. Identification by numbers or letters

The format is *Disease type [number/letter]*.
For types of disease associated with a number, the number is preferentially in Arabic rather than Roman numerals.

E.g. *ORPHA636* *Neurofibromatosis type 1*
ORPHA895 *Waardenburg syndrome type 2*
ORPHA2295 *Ehlers-Danlos syndrome type 11*

If Roman numerals are overwhelmingly used in actual practice, the variant with Arabic numerals is put as synonym.

E.g. *ORPHA1136* *Arnold-Chiari malformation type II*
ORPHA1136 *Arnold-Chiari malformation type 2 (synonym)*

For types associated with letters, the letters are capitalised.
E.g. ORPHA77292 *Niemann-Pick disease type A*

For types associated with a mix of letters and numbers, no space is introduced: the whole type identifier is treated like an acronym.
E.g. ORPHA93389 *Brachydactyly type A5*

Numbers added to abbreviations (e.g. *CMT1A, LGMD2B,* etc.) are written with or without space, with or without coordinating hyphen, according to dominant usage in literature, but are consistent across the same group of diseases.

ii. Identification by eponyms

Disease types are frequently identified by eponyms, which are proper names variously referring to the authors of the first description, a characteristic geographic location, a specific population affected by the disease.
Eponyms used to differentiate types are rejected at the end of the disease name. The format is: *Disease, [Eponym] type*.

E.g. *ORPHA93302* *Brachyolmia, Maroteaux type*
ORPHA85448 *Familial amyloidosis, Finnish type*
ORPHA275 *Severe combined immunodeficiency, Athabascan type*

iii. Identification by specific involvement

The format is: *Disease, [feature] type* or *Disease, [feature] form*, depending of the dominant usage.
E.g. ORPHA286 *Ehlers-Danlos syndrome, vascular type*
ORPHA254871 *Mitochondrial DNA depletion syndrome, hepatocerebral form*

iv. Identification by age or severity

Types specified by age or severity follow one of these formats:

- *[Age/severity] disease*

E.g. *ORPHA206436* *Infantile Krabbe disease*
ORPHA79253 *Mild phenylketonuria*

- *[Age/type]-onset disease*

E.g. *ORPHA71517* *Rapid-onset dystonia-parkinsonism*
ORPHA247573 *Adult-onset citrullinemia type I*

v. Identification by laterality

A number of developmental anomalies have subtypes for unilateral vs. bilateral involvement. The terms for the subtypes replicate the general term, with an additional qualifier for laterality rejected to the end. The format is: *Anomaly, [unilateral/bilateral]*.

E.g. *ORPHA295036* *Congenital patella dislocation*
ORPHA295234 *Congenital patella dislocation, unilateral*
ORPHA295237 *Congenital patella dislocation, bilateral*

vi. Identification by inheritance

Mentions of inheritance are put at the beginning of the disease name.

E.g. *ORPHA99* *Autosomal dominant cerebellar ataxia*
ORPHA248 *Autosomal recessive hypohidrotic ectodermal dysplasia*

Dominant and *recessive* are always preceded by *autosomal* or *X-linked*.
X-linked is presumed to be recessive when not mentioned otherwise.

vii. Offensive or shocking names

Some names of diseases, syndromes, signs or symptoms used in the past are now felt as offensive. Some can also be shocking. Such names are not included in the Orphanet nomenclature.

E.g. *ORPHA870* *Mongolism* is not used for *Down syndrome*
ORPHA1002 *Suicide headache* is not used for *Cluster headache*
ORPHA2440 *Lobster-claw deformity* is not used for *Split hand-split foot malformation*

Particular case: the expression *mental retardation* has not yet disappeared and is kept in keywords. The current denomination in use is *intellectual disability*.

h) Acronyms as preferred terms

Acronyms are avoided as preferred terms.
If there is compelling evidence that the developed form is hardly used in literature, the developed name is always provided as synonym.

E.g. *ORPHA136* *CADASIL (preferred term)*
ORPHA136 *Cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (synonym)*

3. Specific editorial rules

a) Deletions and duplications of chromosomes

If the anomaly is visible on karyotype, the format is:

- Preferred term : *Monosomy Nnn* or *Trisomy Nnn*
- Synonyms : *Deletion Nnn* or *Duplication Nnn*

If the anomaly is visible only by CGH array, the format is:

- Preferred term : *Nnn microdeletion syndrome* or *Nnn microduplication syndrome*

In all cases, the shorthands are added as synonyms, e.g. *Del(4)(p16.3), Dup(22)(q11.2)*

When several bands are involved, there is no hyphen.

E.g. *ORPHA96123* *Monosomy 22 (preferred term)*
ORPHA96123 *Deletion 22 (synonym)*
ORPHA96123 *Del(22) (synonym)*
ORPHA250999 *2p15p16.1 microdeletion syndrome (preferred term)*
ORPHA250999 *Del(2)(p15p16.1) (synonym)*

b) Metabolic diseases

i. Enzyme deficiencies

For metabolic diseases characterised by either its clinical involvement or the enzyme or the metabolic pathway deficiency, the preferred term is the most commonly accepted term, no matter whether it is the clinical or the metabolic one.

E.g. *ORPHA818* *Smith-Lemli-Opitz syndrome (synonym: 7*-dehydrocholesterol reductase deficiency*)*
ORPHA368 *Glycogen storage disease due to muscle glycogen phosphorylase deficiency (synonym: McArdle disease)*

ii. Use of the suffix -emia and -uria

Many metabolic diseases have names referring to elevated blood or urine rates of a characteristic metabolite, respectively ending in *-emia* or *-uria*. When the two are possible, the name in *-emia* is put as preferred term and the name in *-uria* as synonym.

iii. Glycogen storage diseases

Glycogen storage diseases are commonly identified:

- By numbers - but there has been several conflicting numbering patterns;
- By eponyms - but not all have an eponym.

The editorial choice in the Orphanet nomenclature is:

- To use a reference to the enzyme deficiency in the preferred term;
- To put all alternative names as synonyms.

Glycogen storage disease is always preferred to *glycogenosis* in preferred terms. *Glycogenosis* is used as synonym.

iv. Carboxylic acid or carboxylates

Some carboxylic acids are often more commonly mentioned in physiology under their carboxylate anion form: therefore, *aspartate*, *glutamate*, *pyruvate* are preferred to *aspartic acid*, *glutamic acid*, *pyruvic acid*.
When both forms are found, the dominant use is followed, and the alternative is put as a synonym.

c) Endocrinology

The naming of stimulations and stimulating factors sometimes vacillates between the endings *-tropic* and *-tropin* on one hand (from τρόπος « turn, manner, change ») and *-trophic* and *-trophin* on the other hand (from τροφός « nourishing, nurse »). The Orphanet nomenclature favours the *p*-forms rather than the *ph*-forms.

E.g. *ORPHA759* *Gonadotropin-dependant precocious puberty*

d) Infectiology-parasitology

The names of parasitic and fungal infections can end in *-iasis* or *-osis*. Theoretically, the *-iasis* suffix is used for parasitic diseases and *-osis* for other infections. This rule is applied, the other variants are put as synonym.

For any questions or comments, please contact us: contact.orphanet@inserm.fr

Editor of this procedural document: Bertrand Bellet and Annie Olry - This procedural document has been approved by: Ana Rath - Quality control : Charlotte Gueydan

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