## Additional file 1 – Selected platform indicators and measures, with the combinations of variables considered necessary to calculate them

| | **Registry-based indicators and other measures (further data selections by disease, time period and geographic area are implicit)** | **Combination of variables considered necessary for the computation of the indicator (diagnosis is always considered) (in bold: patient follow-up is required)** | **Remarks** |
|---|---|---|---|
| a) Contribution of RD to morbidity/mortality | | | |
| | Prevalence, per disease and global* | date of diagnosis; **patient city of residence** | |
| | Incidence, per disease and global* | date of diagnosis; date of death; patient city of residence | |
| | Age at death** | Date of birth; Date of death; | Required Source: National Death records; |
| | age at disease onset** | Date of birth; date of onset | |
| | life expectancy at diagnosis*** | date of diagnosis; Date of death; | |
| | disability profile** | **Disability scores** (health profile from a disability generic questionnaire) | Required: agreed reference generic (modular) disability questionnaire among those available; additional use of a reference validated questionnaire specific for the disease or group of diseases is welcome, if available, but it does not support the set of Common Data Elements. |
| | Hospital admissions* | **Hospitalization** | |
| | number and types of transplantations** | **transplantation data** | |
| | number and type of surgeries recorded*** | **Surgeries data** | |
| | number of RD actually diagnosed (and recorded) per Country and per Centre§ | diagnosis | |
| | | | |
| b) Socio-economic impact | | | |
| | Health-related Quality of Life index** | **HRQoL index (utility) score** | Required: agreed validated reference generic QoL questionnaire among those available.<br>Required source: patients, possibly assisted by their association or by physician/nurse |
| | number of patients treated per OD per year** | **OD treatment** | |
| | other cases in the family** | Diagnosis of the relative case | |
| | healthy carriers in the family** | Genetic features of the family | |
| | Contribution of consanguinity | case parents are consanguineous | |

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|---|---|---|---|
| | Impact on education*** | highest education level attained | |
| | Impact on occupation*** | occupational status | |
| | | | |
| c) (Availability of appropriate) Health Services | | | |
| | effectiveness of neonatal screening programs§ (sensitivity) | neonatal screening results | |
| | effectiveness of neonatal screening programs§ (positive predictive value) | neonatal screening results | Required Source: registries including suspect patients |
| | time from disease onset (where reliably feasible) to confirmed diagnosis** | Date of onset; date of diagnosis | |
| | time from 1st report to the health service to confirmed diagnosis** | Date of first report to the health service; date of diagnosis | |
| | ODs actually used (and recorded)§ | **OD treatment** | |
| | number of patients treated per ODs§ | **OD treatment** | |
| | patients' mobility for diagnosis*** | Diagnosis centre city; patient residence city | |
| | patients' mobility for treatment*** | **Treating centre city; patient residence city** | |
| | Number and directory of centres actually making diagnosis§ | ID of Diagnosis Centre | |
| | Activity of centres actually making diagnosis (diseases diagnosed and number of diagnoses per year)§ | date of diagnosis; ID of Diagnosis Centre | |
| | Number and directory of treatment centres§ | **ID of Treatment Centre** | |
| | Activity of treatment centres (diseases treated and number of treated patients per year)§ | **ID of Treatment Centre** | indicated by the RDTF WG as a possibly better indicator; requires the date of record update |
| | | | |
| d) Information, research, technology development | | | |
| | indicators supporting cohort selection and patient recruitment for CT*** | One example of many possible: genetic variation; **patient's willingness to participate; patient contact information; comorbidity.** Additional/alternative **disease-specific clinical data** may be necessary. | |
| | indicators based on disease-specific clinical data (e.g. clinical care benchmarks) | E.g.: Combinations of **disease-specific clinical data** and **treatment data** | |
| | | | |
| e) Equity, EU initiatives | | | |
| | no specific indicators, but comparisons of the defined indicators calculated in the relevant subgroups of patients | | additional data elements required: patient residence Country; diagnosis centre ID (and city and Country); treatment centre ID (and city and Country); |

| | | | |
|---|---|---|---|
| | Health-related Quality of Life index** | **HRQoL index (utility) score** | Required: agreed validated reference generic QoL questionnaire among those available.<br>Required source: patients, possibly assisted by their association or by physician/nurse |
| *These indicators were considered by the RDTF particularly important for surveillance of status and trends | | | |
| § EUROPLAN indicators | | | |
| **These measures are the proposed alternates to the indicators considered by the RDTF | | | |
| ***These are additional measures considered by EPIRARE | | | |