Additional file 1: Health-related quality of life instruments in relation to requirements for a burden of disease instrument for asthma and DM2

1.1: Search terms for asthma and DM2 respectively

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(((Patient Reported Outcome Measures[Mesh]) OR Patient Reported Outcome Measure[Title/Abstract])
 OR PROM[Title/Abstract])) OR ((Global Burden of Disease[Mesh]) OR Burden of Disease[Title/Abstract])
 OR ((Quality of Life[Mesh]) OR Quality of Life[Title/Abstract]) OR QoL[Title/Abstract])
 OR ((Disease Management[Mesh]) OR Disease Management[Title/Abstract]))
 AND ((Surveys and Questionnaires[Mesh]) OR questionnaire[Title/Abstract])
 AND ((Asthma[Mesh]) OR asthma[Title/Abstract])
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(((Patient Reported Outcome Measures[Mesh]) OR Patient Reported Outcome Measure[Title/Abstract])
 OR PROM[Title/Abstract])) OR ((Global Burden of Disease[Mesh]) OR Burden of Disease[Title/Abstract])
 OR ((Quality of Life[Mesh]) OR Quality of Life[Title/Abstract]) OR QoL[Title/Abstract])
 OR ((Disease Management[Mesh]) OR Disease Management[Title/Abstract]))
 AND ((Surveys and Questionnaires[Mesh]) OR questionnaire[Title/Abstract])
 AND ((Diabetes Mellitus[Mesh]) OR Diabetes[Title/Abstract]
 OR Diabetes Mellitus[Title/Abstract] OR DM[Title/Abstract] OR DM2[Title/Abstract])
```
| Tool       | Symptoms | Emotions | Limitations | Social experience | Treatment | Patient input | Completeness ≤10 min. | Self-administered | Sub + total score | Clinical usability | Validity | Reliability | Responsiveness |
|------------|----------|----------|-------------|-------------------|-----------|---------------|-----------------------|-------------------|-----------------|------------------|----------|-------------|----------------|
| ABP4       | ✓        | ✓        | ✓           | X                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| ACCI2      | ✓        | X        | ✓           | X                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| ACQ3       | ✓        | X        | ✓           | ✓                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| ACT4       | ✓        | X        | ✓           | ✓                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| A-IQOLS5   | X        | ✓        | ✓           | X                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| AIS-6x     | ✓        | ✓        | ✓           | ✓                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| AQ209      | ✓        | ✓        | ✓           | ✓                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| AQL-5D8    | ✓        | ✓        | ✓           | ✓                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| AQLQ(S)9   | ✓        | ✓        | ✓           | X                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| AQLQ-S10   | ✓        | ✓        | ✓           | ✓                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| ASC11      | ✓        | ✓        | X           | X                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| ASD12      | ✓        | X        | ✓           | X                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| ASI13      | ✓        | ✓        | ✓           | X                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| ASU14      | ✓        | X        | X           | ✓                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| ATAQ16     | ✓        | ✓        | ✓           | X                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| CARAT(10)16| ✓        | ✓        | X           | X                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| CRQ-SR17   | ✓        | ✓        | X           | X                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| LASS9      | ✓        | X        | X           | ✓                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| LWAQ18     | ✓        | ✓        | ✓           | ✓                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| MAQLQ-Marks20 | ✓        | ✓        | ✓           | ✓                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| Mini-AQLQ22| ✓        | ✓        | X           | X                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| Qol-RHQ23  | ✓        | ✓        | ✓           | ✓                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| RAND-ACM24 | ✓        | X        | ✓           | X                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| RAND-IQOL-1224 | ✓        | ✓        | ✓           | ✓                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| RCP3Q25    | ✓        | ✓        | X           | X                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| Rhinasthma | ✓        | ✓        | X           | X                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| RIQ-MON1026| ✓        | ✓        | ✓           | X                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| SAQ27      | ✓        | ✓        | ✓           | ✓                 | ✓         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
| SGQR28     | ✓        | ✓        | ✓           | X                 | X         | ✓             | ✓                     | ✓                 | ✓               | ✓                | ✓        | ✓           | ✓              |
1 Asthma Bother Profile 2 Asthma Control and Communication Instrument 3 Asthma Control Questionnaire 4 Asthma Control Test 5 Asthma Impact on Quality of Life Scale 6 Asthma Impact Survey 6 7 Airways Questionnaire-20 8 Asthma Quality of Life utility index - 5 Dimensions 9 Asthma Quality of Life Questionnaire (Standardized) 10 Asthma Quality of Life Questionnaire-Sydney 11 Asthma Symptom Checklist 12 Asthma Symptom Diary 13 Asthma Short Form 14 Asthma Symptom Utility Index 15 Asthma Therapy Assessment Questionnaire 16 Control of Allergic Rhinitis and Asthma Test 17 Chronic Respiratory Questionnaire-Self Reported 18 Lara Asthma Symptom Scale 19 Living With Asthma Questionnaire 20 Modified Asthma Quality of Life Questionnaire-Marks 21 Mini-Asthma Quality of Life Questionnaire 22 Quality of Life for Respiratory Illness Questionnaire 23 RAND Asthma Control Measure 24 RAND Negative Impact of Asthma on Quality of Life-12 25 Royal College of Physicians 3-Questions 26 Respiratory Illness Questionnaire Monitoring-10 27 Severe Asthma Questionnaire 28 Saint George Respiratory Questionnaire

*reliability is doubtful, among others, if test-retest is not performed*
### Table S1.3: Properties of DM2 questionnaires measuring quality of life

| Requirements for a burden of disease instrument | Tool meets requirements | **Tool does not meet requirements** | **~ Doubtful** | ? Information not found in the literature |
|-----------------------------------------------|------------------------|----------------------------------|----------------|------------------------------------------|
| **Symptoms**                                  | ✓                      | ✓                                | ✓              | ✓                                        |
| **Emotions**                                  | ✓                      | ✓                                | ✓              | ✓                                        |
| **Limitations**                               | ✓                      | ✓                                | ✓              | ✓                                        |
| **Social experiences**                        | ✓                      | ✓                                | ✓              | ✓                                        |
| **Treatment**                                 | ✓                      | ✓                                | ✓              | ✓                                        |
| **Patient input**                             | ✓                      | ✓                                | ✓              | ✓                                        |
| **Completion time ≤10 min.**                   | ✓                      | ✓                                | ✓              | ✓                                        |
| **Self-administered**                         | ✓                      | ✓                                | ✓              | ✓                                        |
| **Sub + total score**                         | ✓                      | ✓                                | ✓              | ✓                                        |
| **Clinical usability**                        | ✓                      | ✓                                | ✓              | ✓                                        |
| **Validity**                                  | ✓                      | ✓                                | ✓              | ✓                                        |
| **Reliability**                               | ✓                      | ✓                                | ✓              | ✓                                        |
| **Responsiveness**                            | ✓                      | ✓                                | ✓              | ✓                                        |

| **ADDQoL**                                    | ✓                      | ✓                                | ✓              | ✓                                        |
| **ADI**                                       | ✓                      | ✓                                | ✓              | ✓                                        |
| **D-39**                                      | ✓                      | ✓                                | ✓              | ✓                                        |
| **DCP**                                       | ✓                      | ✓                                | ✓              | ✓                                        |
| **DHS**                                       | ✓                      | ✓                                | ✓              | ✓                                        |
| **DHP-18**                                    | ✓                      | ✓                                | ✓              | ✓                                        |
| **DIMS**                                      | ✓                      | ✓                                | ✓              | ✓                                        |
| **DOQ-30**                                    | ✓                      | ✓                                | ✓              | ✓                                        |
| **DQOLCTQ**                                   | ✓                      | ✓                                | ✓              | ✓                                        |
| **DQOL**                                      | ✓                      | ✓                                | ✓              | ✓                                        |
| **DQOL-BCI**                                  | ✓                      | ✓                                | ✓              | ✓                                        |
| **DQOL-RBCI**                                 | ✓                      | ✓                                | ✓              | ✓                                        |
| **EDBS**                                      | ✓                      | ✓                                | ✓              | ✓                                        |
| **MDQ**                                       | ✓                      | ✓                                | ✓              | ✓                                        |
| **PAID**                                      | ✓                      | ✓                                | ✓              | ✓                                        |
| **PAID-5**                                    | ✓                      | ✓                                | ✓              | ✓                                        |

1 Audit of Diabetes-Dependent Quality of Life 2 Appraisal of Diabetes Scale 3 Diabetes-39 4 Diabetes Care Profile 5 Diabetes Distress Scale 6 Diabetes Health Profile-18 7 Diabetes Impact Measurement Scale 8 Diabetes Obstacles Questionnaire-30 9 Diabetes Quality of Life Clinical Trial Questionnaire 10 Diabetes Quality of Life Measure 11 Diabetes Quality of Life – Brief Clinical Inventory 12 Diabetes Quality of Life – Revised 13 Diabetes Symptom Checklist – Revised 14 Elderly Diabetes Burden Scale 15 Multidimensional Diabetes Questionnaire 16 Problem Areas in Diabetes 17 Problem Areas in Diabetes –5

*reliability is doubtful, among others, if test-retest is not performed*