Table 1. Timing of complete data and samples, by timepoint and location

| Location | Item                  | Total n | no | %   | n   | %   |
|----------|-----------------------|---------|----|-----|-----|-----|
| At home  | Pain scale tM         | 47      | 0  | 0.0 | 47  | 100.0 |
|          | Pain scale t1         | 47      | 18 | 38.3| 29  | 61.7  |
|          | Saliva sample t1      | 41      | 16 | 39.0| 25  | 61.0  |
|          | Pain scale t2         | 47      | 13 | 27.7| 34  | 72.3  |
|          | Saliva sample t2      | 38      | 6  | 15.8| 32  | 84.2  |
|          | All                   | 220     | 53 | 24.1| 167 | 75.9  |
| Inpatient| Pain scale tM         | 47      | 0  | 0.0 | 47  | 100.0 |
|          | Pain scale t1         | 47      | 27 | 57.4| 20  | 42.6  |
|          | Saliva sample t1      | 38      | 20 | 52.6| 18  | 47.4  |
|          | Pain scale t2         | 47      | 21 | 44.7| 26  | 55.3  |
|          | Saliva sample t2      | 39      | 17 | 43.6| 22  | 56.4  |
|          | All                   | 218     | 85 | 39.0| 133 | 61.0  |
| All      | Pain scale tM         | 94      | 0  | 0.0 | 94  | 100.0 |
|          | Pain scale t1         | 94      | 45 | 47.9| 49  | 52.1  |
|          | Saliva sample t1      | 79      | 36 | 45.6| 43  | 54.4  |
|          | Pain scale t2         | 94      | 34 | 36.2| 60  | 63.8  |
|          | Saliva sample t2      | 77      | 23 | 29.9| 54  | 70.1  |
|          | All                   | 438     | 138| 31.5| 300 | 68.5  |

Table 2. Complete and correct data and samples when timing as a correctness factor is neglected (i.e. all data collected within one calendar day are correct)

| Location | Item                  | Total n | No | %   | Yes | %   |
|----------|-----------------------|---------|----|-----|-----|-----|
| At home  | Pain scale            | 153     | 12 | 7.8 | 141 | 92.2 |
|          | Saliva sample         | 102     | 26 | 25.5| 76  | 74.5 |
|          | All                   | 255     | 38 | 14.9| 217 | 85.1 |
| Inpatient| Pain scale            | 150     | 9  | 6.0 | 141 | 94.0 |
|          | Saliva sample         | 100     | 27 | 27.0| 73  | 73.0 |
|          | All                   | 250     | 36 | 14.4| 214 | 85.6 |
| All      | Pain scale            | 303     | 21 | 6.9 | 282 | 93.1 |
|          | Saliva sample         | 202     | 53 | 26.2| 149 | 73.8 |
|          | All                   | 505     | 74 | 14.7| 431 | 85.3 |
Table 3. Caregiver feasibility questionnaire

| Question                                                                 | n  | %   |
|-------------------------------------------------------------------------|----|-----|
| What statement(s) apply in your opinion? (n=15)                          |    |     |
| I think clinical studies at home are a good idea                         | 9  | 60.0|
| I don’t think clinical studies at home are a good idea                   | 1  | 6.7 |
| I am not sure                                                            | 5  | 33.3|
| How were the aims of the study explained to you? (n=15)                  |    |     |
| Very well                                                               | 9  | 60.0|
| Well                                                                    | 5  | 33.3|
| Sufficiently                                                            | 1  | 6.7 |
| Not well                                                                | 0  | 0.0 |
| Not well at all                                                         | 0  | 0.0 |
| How were your tasks during the conduct of the study explained to you? (n=15) |    |     |
| Very well                                                               | 4  | 26.7|
| Well                                                                    | 8  | 53.3|
| Sufficiently                                                            | 3  | 20.0|
| Not well                                                                | 0  | 0.0 |
| Not well at all                                                         | 0  | 0.0 |
| How user-friendly do you rate the mobile application? (n=15)             |    |     |
| Great                                                                   | 6  | 40.0|
| Ok                                                                      | 8  | 53.3|
| Unusable                                                                | 1  | 6.7 |
| Who has mainly collected data and samples in the hospital? (n=16)        |    |     |
| Mother                                                                  | 9  | 56.2|
| Father                                                                  | 1  | 6.2 |
| Both parents                                                            | 3  | 18.8|
| Study Nurse                                                             | 3  | 18.8|
| Child                                                                   | 0  | 0.0 |
| Other                                                                   | 0  | 0.0 |
| Who has mainly collected data and samples in at home? (n=15)             |    |     |
| Mother                                                                  | 11 | 73.3|
| Father                                                                  | 1  | 6.7 |
| Both parents                                                            | 3  | 20.0|
| Study Nurse                                                             | 0  | 0.0 |
| Child                                                                   | 0  | 0.0 |
| Other                                                                   | 0  | 0.0 |
| How feasible were the study procedures for you in the hospital? (ntot=15) |    |     |
| Very easy                                                               | 4  | 26.6|
| Easy                                                                    | 10 | 66.7|
| Difficult                                                               | 1  | 6.7 |
| Very difficult                                                          | 0  | 0.0 |
| How feasible were the study procedures for you at home? (n=15)           |    |     |
| Very easy                                                               | 2  | 13.3|
### Table 4. Main difficulties experienced by caregivers during conduct of study

| Difficulty Description                                                                 | n  | %   |
|----------------------------------------------------------------------------------------|----|-----|
| It was sometimes difficult to follow the study procedures (i.e. timing of data collection) | 13 | 86.7|
| There were technical issues with the mobile application                                  | 3  | 20.0|
| My child did not want to participate, i.e. provide saliva samples                       | 3  | 20.0|
| I was not able to contact the study personnel                                            | 2  | 13.3|
| It took too much time to follow the study procedures                                     | 1  | 6.7 |
| I did not experience any difficulties                                                   | 1  | 6.7 |
| Other                                                                                  | 3  | 20.0|