

## Online Supplement 1

Missing data in splitted and whole datasets

| Item ID | Text   | Dataset EFA    |                    | Dataset CFA    |                    | Dataset whole  |                    |
|---------|--|----------------|--------------------|----------------|--------------------|----------------|--------------------|
|         |  | % missing data | % ,does-not-apply' | % missing data | % ,does-not-apply' | % missing data | % ,does-not-apply' |
| Q01     | Ease of getting appointment in urgent cases  | 4.7            | 0.0                | 4.0            | 0.0                | 4.3            | 0.0                |
| Q02     | Treatment by staff at the reception  | 2.7            | 0.0                | 1.9            | 0.0                | 2.3            | 0.0                |
| Q03     | Clear explanation of things  | 3.6            | 0.0                | 2.4            | 0.0                | 3.0            | 0.0                |
| Q04     | Sufficient information in order to understand condition and treatment  | 3.2            | 0.0                | 2.4            | 0.0                | 2.8            | 0.0                |
| Q05     | Risks and benefits of planned treatment clearly explained  | 3.9            | 0.0                | 3.0            | 0.0                | 3.5            | 0.0                |
| Q06     | Different treatment options addressed and risks and benefits addressed and explained   | 5.3            | 6.7                | 4.4            | 5.3                | 4.8            | 6.0                |
| Q07     | Sufficient opportunity to ask questions about condition and treatment  | 2.9            | 0.0                | 2.5            | 0.0                | 2.7            | 0.0                |
| Q08     | Patients felt taken seriously  | 2.9            | 0.0                | 2.8            | 0.0                | 2.9            | 0.0                |
| Q09     | Doctor ensures understanding of explanations   | 4.1            | 0.0                | 3.4            | 0.0                | 3.7            | 0.0                |
| Q10     | Patients feel they can address very personal or sensible issues in relation to their condition or treatment                        | 3.7            | 0.0                | 3.2            | 0.0                | 3.5            | 0.0                |
| Q11     | Encouraged to voice worries and fears related to condition and/or treatment  | 5.0            | 0.0                | 4.2            | 0.0                | 4.6            | 0.0                |
| Q12     | Whole medical history is taken into account if necessary   | 3.7            | 9.2                | 3.6            | 8.6                | 3.6            | 8.9                |
| Q13     | Patient preferences are taken into account   | 4.7            | 8.4                | 4.4            | 9.8                | 4.5            | 9.1                |
| Q14     | Family or others allowed to be present during appointment  | 3.9            | 25.8               | 3.8            | 26.8               | 3.8            | 26.3               |
| Q15.1   | Clear explanation of purpose of newly prescribed medication  | 4.4            | 9.9                | 3.9            | 11.0               | 4.2            | 10.5               |
| Q15.2   | Clear explanation of how to take newly prescribed medication (dose, frequency, timing, etc.)                                       | 7.7            | 8.7                | 7.4            | 9.5                | 7.6            | 9.1                |
| Q15.3   | Clear explanation of side effects of newly prescribed medication that should be reported in order to make adjustments if necessary | 6.5            | 8.3                | 6.5            | 9.2                | 6.5            | 8.8                |
| Q16     | Test results not available when needed   | 10.1           | 0.0                | 8.8            | 0.0                | 9.5            | 0.0                |
| Q17     | Patients are asked about medication or treatment prescribed by other doctors   | 4.6            | 10.1               | 4.0            | 9.5                | 4.3            | 9.8                |
| Q18     | Experience of error in the last 12 months*   | 5.3            | 15.3               | 3.5            | 14.0               | 4.4            | 14.7               |
| Q19     | Harm due to error experienced  | 81.2           | 11.6               | 81.9           | 10.9               | 81.5           | 11.3               |
| Q20     | Apology received for error experienced   | 28.9           | 47.4               | 26.6           | 50.8               | 27.8           | 49.1               |

\*Screening question for Q19 and Q20

## Online Supplement 2

EFA factor loadings and communalities

| Item ID | Text   | Factor |     |     | Communality |
|---------|--|--------|-----|-----|-------------|
|         |  | 1      | 2   | 3   |             |
| Q03     | Clear explanation of things  | 0.9    |     |     | 0.7         |
| Q04     | Sufficient information in order to understand condition and treatment  | 0.8    |     |     | 0.7         |
| Q07     | Sufficient opportunity to ask questions about condition and treatment  | 0.6    |     |     | 0.5         |
| Q08     | Patients felt taken seriously  | 0.6    |     |     | 0.4         |
| Q05     | Risks and benefits of planned treatment clearly explained  | 0.5    |     |     | 0.6         |
| Q06     | Different treatment options addressed and risks and benefits addressed and explained   | 0.4    |     |     | 0.6         |
| Q11     | Encouraged to voice worries and fears related to condition and/or treatment  |        | 0.7 |     | 0.5         |
| Q09     | Doctor ensures understanding of explanations   |        | 0.6 |     | 0.5         |
| Q13     | Patient preferences are taken into account   |        | 0.4 |     | 0.5         |
| Q10     | Patients feel they can address very personal or sensible issues in relation to their condition or treatment                        |        | 0.4 |     | 0.5         |
| Q15.3   | Clear explanation of side effects of newly prescribed medication that should be reported in order to make adjustments if necessary |        |     | 0.9 | 0.7         |
| Q15.1   | Clear explanation of purpose of newly prescribed medication  |        |     | 0.7 | 0.7         |
| Q15.2   | Clear explanation of how to take newly prescribed medication (dose, frequency, timing, etc.)                                       |        |     | 0.5 | 0.5         |
| Q17     | Patients are asked about medication or treatment prescribed by other doctors   |        |     | 0.4 | 0.3         |

## EFA excluded items

| Item |   | Reason for exclusion from EFA-model |   | Reason for keeping item in the questionnaire   |
|------|---|-------------------------------------|---|--|
| ID   | text  |                                     |   |  |
| Q01  | Ease of getting an appointment in urgent cases            | communality <0.3                    | Single item in access dimension   | Considered important item in the literature, as well as by Delphi-panel and patients participating in cognitive interviews |
| Q02  | Treatment by staff at the reception                       | communality <0.3                    | Single item interaction with reception staff  | Considered important item by Delphi-panel and patients participating in cognitive interviews                               |
| Q12  | Whole medical history is taken into account if necessary  | multiple factor loading >0.4        | Factor loadings on factor 2 and 3   | Considered important item by Delphi-panel and patients participating in cognitive interviews                               |
| Q14  | Family or others allowed to be present during appointment | > 15% missing data                  | Single item. involvement of family/friends. item with highest percentage 'does not apply answers' (26%) | Considered important item by Delphi-panel and patients participating in cognitive interviews                               |
| Q16  | Test results not available when needed                    | communality <0.3                    | Single item in care coordination dimension  | Considered important item in the literature, as well as by Delphi-panel and patients participating in cognitive interviews |
| Q18  | Experience of error in the last 12 months                 | > 15% missing data                  | Dichotomous item  | Considered important item by Delphi-panel and patients participating in cognitive interviews;                              |
| Q19  | Harm due to error experienced                             | > 15% missing data                  | Dichotomous item, filtered question   | Considered important item by Delphi-panel and patients participating in cognitive interviews                               |
| Q20  | Apology received for error experienced                    | > 15% missing data                  | Filtered question   | Considered important item by Delphi-panel and patients participating in cognitive interviews                               |

## Online Supplement 3

Dunn Bonferroni post hoc comparisons and effect size Cohen's d

|                             |                        | Subgroups   | z                       | p      | Cohen's d |
|-----------------------------|------------------------|---|-------------------------|--------|-----------|
| Self-reported health status | Factor 1               | Excellent vs. good                                    | -3.29                   | 0.01   | -0.09     |
|                             |                        | Excellent vs. fair                                    | -4.14                   | <0.001 | -0.14     |
|                             |                        | Excellent vs. poor                                    | -4.82                   | <0.001 | -0.25     |
|                             |                        | Very good vs. poor                                    | -3.40                   | 0.007  | -0.12     |
|                             |                        | Good vs. poor   | -3.12                   | 0.018  | -0.09     |
|                             | Factor 2               | Excellent vs. very good                               | -4.97                   | <0.001 | -0.17     |
|                             |                        | Excellent vs. good                                    | -5.44                   | <0.001 | -0.14     |
|                             |                        | Excellent vs. moderate                                | -6.48                   | <0.001 | -0.22     |
|                             |                        | Excellent vs. poor                                    | -5.04                   | <0.001 | -0.26     |
|                             |                        | Factor 3  | Excellent vs. very good | -5.02  | <0.001    |
|                             | Excellent vs. good     |   | -5.46                   | <0.001 | -0.14     |
|                             | Excellent vs. moderate |   | -5.76                   | <0.001 | -0.19     |
| Excellent vs poor           | -4.68                  |   | <0.001                  | -0.24  |           |
| Age (years)                 | Factor 1               | 60-64 vs. 25-39                                       | 3.87                    | 0.001  | 0.13      |
|                             |                        | 60-64 vs. 18-24                                       | 5.45                    | <0.001 | 0.26      |
|                             |                        | >65 vs. 18-24   | 5.55                    | 0.001  | 0.11      |
|                             |                        | 40-59 vs. 25-39                                       | 3.58                    | 0.004  | 0.09      |
|                             |                        | 40-59 vs. 18-24                                       | 5.26                    | <0.001 | 0.15      |
|                             |                        | 25-39 vs. 18-24                                       | 2.83                    | 0.05   | 0.10      |
|                             | Factor 2               | 60-64 vs. 18-24                                       | 3.96                    | 0.001  | 0.19      |
|                             |                        | >65 vs. 25-39   | 3.36                    | 0.008  | 0.09      |
|                             |                        | >65 vs. 18-24   | 4.43                    | <0.001 | 0.15      |
|                             |                        | 40-59 vs. 18-24                                       | 3.71                    | 0.002  | 0.10      |
|                             | Factor 3               | >65 vs. 25-39   | 3.69                    | 0.002  | 0.10      |
|                             |                        | >65 vs. 18-24   | 4.00                    | 0.001  | 0.13      |
| 60-64 vs. 18-24             |                        | 3.07  | 0.022                   | 0.15   |           |
| Education                   | Factor 2               | No degree vs. vocational degree                       | 2.14                    | 0.031  | 0.06      |
|                             |                        | No degree vs. Intermediate secondary school           | 2.18                    | 0.029  | 0.10      |
|                             |                        | No degree vs. university degree                       | 2.72                    | 0.007  | 0.11      |
|                             |                        | No degree vs. Grammar school (A-level)                | 2.75                    | 0.006  | 0.15      |
|                             |                        | Secondary general school vs. university degree        | 2.61                    | 0.009  | 0.08      |
|                             |                        | Secondary general school vs. Grammar school (A-level) | 2.47                    | 0.013  | 0.09      |
|                             | Factor 3               | No degree vs. vocational degree                       | 2.98                    | 0.044  | 0.09      |
|                             |                        | No degree vs. Grammar school (A-level)                | 3.71                    | 0.003  | 0.20      |
|                             |                        | Secondary general school vs. Grammar school (A-level) | 3.27                    | 0.016  | 0.12      |

z=standardized test statistic

## Online Supplement 4

Practice means compared to overall mean ("average practice")

| Practice ID        | n   | Factor 1<br>Communication &<br>Information |      |            | Factor 2<br>Rapport & Participation |      |            | Factor 3<br>Medication Safety |      |            |
|--------------------|-----|--|------|------------|-------------------------------------|------|------------|-------------------------------|------|------------|
|                    |     | mean                                       | SE   | 95% CI     | mean                                | SE   | 95% CI     | mean                          | SE   | 95% CI     |
| P1                 | 137 | 1.16*                                      | 0.03 | 1.10, 1.21 | 1.28*                               | 0.05 | 1.19, 1.37 | 1.18*                         | 0.03 | 1.11, 1.24 |
| P2                 | 211 | 1.19*                                      | 0.02 | 1.14, 1.24 | 1.43*                               | 0.04 | 1.35, 1.51 | 1.45                          | 0.04 | 1.37, 1.54 |
| P3                 | 163 | 1.22*                                      | 0.03 | 1.17, 1.27 | 1.43*                               | 0.04 | 1.35, 1.51 | 1.46                          | 0.05 | 1.36, 1.56 |
| P4                 | 222 | 1.22*                                      | 0.02 | 1.18, 1.27 | 1.54                                | 0.04 | 1.47, 1.61 | 1.50                          | 0.04 | 1.42, 1.57 |
| P5                 | 221 | 1.28                                       | 0.03 | 1.23, 1.33 | 1.58                                | 0.04 | 1.51, 1.66 | 1.59                          | 0.04 | 1.51, 1.67 |
| P6                 | 133 | 1.33                                       | 0.04 | 1.26, 1.41 | 1.59                                | 0.06 | 1.47, 1.70 | 1.44                          | 0.05 | 1.34, 1.53 |
| P7                 | 45  | 1.35                                       | 0.07 | 1.22, 1.48 | 1.77                                | 0.11 | 1.54, 1.99 | 1.58                          | 0.11 | 1.36, 1.80 |
| P8                 | 67  | 1.36                                       | 0.06 | 1.25, 1.47 | 1.61                                | 0.08 | 1.46, 1.77 | 1.48                          | 0.07 | 1.34, 1.62 |
| P9                 | 119 | 1.36                                       | 0.05 | 1.27, 1.45 | 1.88                                | 0.08 | 1.73, 2.02 | 1.65                          | 0.08 | 1.49, 1.80 |
| P10                | 221 | 1.37                                       | 0.03 | 1.31, 1.43 | 1.75                                | 0.05 | 1.66, 1.84 | 1.56                          | 0.05 | 1.47, 1.66 |
| P11                | 194 | 1.37                                       | 0.03 | 1.31, 1.43 | 1.58                                | 0.04 | 1.49, 1.66 | 1.56                          | 0.05 | 1.47, 1.65 |
| P12                | 142 | 1.38                                       | 0.04 | 1.30, 1.46 | 1.53                                | 0.05 | 1.43, 1.63 | 1.41                          | 0.05 | 1.30, 1.52 |
| P13                | 91  | 1.45                                       | 0.07 | 1.32, 1.57 | 1.87                                | 0.10 | 1.68, 2.06 | 1.58                          | 0.09 | 1.39, 1.76 |
| P14                | 136 | 1.47                                       | 0.05 | 1.38, 1.57 | 1.80                                | 0.07 | 1.66, 1.94 | 1.48                          | 0.06 | 1.37, 1.60 |
| P15                | 140 | 1.47                                       | 0.06 | 1.36, 1.59 | 1.75                                | 0.07 | 1.60, 1.90 | 1.45                          | 0.06 | 1.34, 1.56 |
| P16                | 135 | 1.51                                       | 0.05 | 1.40, 1.61 | 1.66                                | 0.06 | 1.53, 1.79 | 1.59                          | 0.06 | 1.47, 1.71 |
| P17                | 228 | 1.55*                                      | 0.04 | 1.48, 1.62 | 1.82                                | 0.05 | 1.72, 1.91 | 1.68                          | 0.05 | 1.59, 1.77 |
| P18                | 200 | 1.62*                                      | 0.05 | 1.51, 1.72 | 1.90*                               | 0.06 | 1.78, 2.01 | 1.71*                         | 0.06 | 1.60, 1.82 |
| P19                | 154 | 1.88*                                      | 0.05 | 1.77, 1.98 | 2.08*                               | 0.06 | 1.96, 2.20 | 1.83*                         | 0.07 | 1.71, 1.96 |
| "average practice" |     | 1.40                                       | 0.04 | 1.32, 1.47 | 1.67                                | 0.04 | 1.59, 1.76 | 1.54                          | 0.03 | 1.47, 1.60 |

\*p&lt;0.05

SE=standard error

CI=confidence interval

## Online Supplement 5

## ASK-ME questionnaire

| ID    | Question text  | Answer Options  |
|-------|--|---|
| Q1    | How easy is it in urgent cases to get an appointment as soon as you need it?   | Very easy / Easy / Neither easy nor difficult / Difficult / Very difficult                            |
| Q2    | Does the staff at the reception desk treat you as you want to be treated?  | Always / Often / Sometimes / Rarely / Never   |
| Q3    | Does your doctor explain things to you in a way that is easy to understand?  | Always / Often / Sometimes / Rarely / Never   |
| Q4    | Are you given sufficient information to understand your condition and treatment?   | Always / Often / Sometimes / Rarely / Never   |
| Q5    | Does your doctor clearly explain the risks and benefits of the planned treatment?  | Always / Often / Sometimes / Rarely / Never   |
| Q6    | Does your doctor address and explain the risks and benefits of <i>different</i> treatment options for your condition?                          | Always / Often / Sometimes / Rarely / Never / Not sure whether there are different options in my case |
| Q7    | Are you given sufficient opportunity to ask questions about condition and treatment?   | Always / Often / Sometimes / Rarely / Never   |
| Q8    | Do you feel that your reports are taken seriously?   | Always / Often / Sometimes / Rarely / Never   |
| Q9    | Does your doctor ensure that you understood the explanations (e.g. by giving you the opportunity to repeat the information in your own words)? | Always / Often / Sometimes / Rarely / Never   |
| Q10   | Do you feel that you can talk to your doctor about very personal or sensible issues in relation to your condition or treatment?                | Always / Often / Sometimes / Rarely / Never   |
| Q11   | Does your doctor encourage you to voice any worries and fears you may have related to condition and/or treatment?                              | Always / Often / Sometimes / Rarely / Never   |
| Q12   | Does your doctor take your whole medical history into account if necessary?  | Always / Often / Sometimes / Rarely / Never / I cannot assess this                                    |
| Q13   | Are your preferences considered in decisions about your care and treatment?  | Always / Often / Sometimes / Rarely / Never   |
| Q14   | Are significant others allowed to be present during your appointment with the doctor?  | Always / Often / Sometimes / Rarely / Never / Not necessary or haven't been in this situation yet     |
| Q15_1 | When you receive a new prescription, does your doctor clearly explain the purpose of the new medication?                                       | Always / Often / Sometimes / Rarely / Never / Not necessary or I don't receive new medication         |

|       |  |   |
|-------|--|---|
| Q15_2 | When you receive a new prescription, does your doctor clearly explain how to take the new medication (dose, frequency, timing, etc.)?  | Always / Often / Sometimes / Rarely / Never / Not necessary or I don't receive new medication |
| Q15_3 | When you receive a new prescription, does your doctor clearly explain the side effects of the new medication that you should report to adjust the prescription if necessary? | Always / Often / Sometimes / Rarely / Never / Not necessary or I don't receive new medication |
| Q16   | Does it happen that your test results are not available although they are needed for diagnosis or for planning your treatment (e.g. blood test, X-rays, etc.)?               | Always / Often / Sometimes / Rarely / Never   |
| Q17   | Does your doctor ask about medication or treatment that you have been prescribed by other doctors?   | Always / Often / Sometimes / Rarely / Never / I don't have other doctors                      |
| Q18   | Thinking of your care in the last 12 months:<br>As far as you can tell, did an error occur in your care?   | Yes / No / Not sure / I cannot assess this  |
| Q19   | If an error occurred, did you experience any harm because of this error (e.g. pain, physical or mental health problems)  | Yes / No / Not sure / I cannot assess this  |
| Q20   | If an error occurs in your care, do you receive an apology?  | Always / Often / Sometimes / Rarely / Never / Did not experience error                        |