

## REACH II MEASURES

The battery of measures developed and used in the REACH II project will be administered to the dyads at baseline and 6 months post-intervention. As shown in Table 1, the battery includes sociodemographic information, measures of caregiver and care recipient health, measures of care recipient functioning, mental health indicators, caregiver burden, social support, quality of care, risk assessment, and service utilization. All participants will complete a project evaluation form at the 6-month assessment point (Tables 2, 3, 4). This questionnaire assesses the caregiver's satisfaction with the project and the caregiver's perceptions of the REACH II Caregiver Network (CTIS system). The REACH II Caregiver Network (CTIS system) also collects real time data on system usage variables such as frequency of use, features selected, individuals contacted, length of call, time and date of call, use of help feature, and duration of feature use per call. Protocols are in place for analysis of these data.

If a care recipient dies during the course of the project, the caregiver will be asked to complete a bereavement battery (Table 3). If the care recipient is placed in an assisted living or nursing home during the course of the project, the caregiver will be asked to complete a placement battery (Table 4). If the caregiver withdraws from the study and does not agree to complete a follow-up battery, a discontinued battery will be administered if caregiver agrees to it.

The primary outcome is a multivariate measure comprised of indicators in five domains: depressive symptoms, burden, self care, social support, and change in problem behaviors. We predict that overall, individuals assigned to active treatment will demonstrate better outcomes on our composite multivariate measure than individuals assigned to the control condition.

**Table 1. Baseline Battery Measures**

| Category                              | Name of Measure/Form                                  | Citation/Source                          | Items | Time      | Comments   | $\alpha$ |
|---------------------------------------|---|--|-------|-----------|--|----------|
| <b>Demographic information</b>        | CG/CR demographic                                     | REACH I, 1995                            | 21    | 8 min     | Provides basic descriptive data on CGs and CRs.  | N/A      |
| <b>CR cognition</b>                   | MMSE  | Folstein et al., 1975                    | 11    | 12 min*   | * Note: this time will not count in CG interview length  | .829     |
| <b>CR quality of care</b>             | Personal Appearance                                   | Various sources                          | 13    | 2 min     | Interviewer observation of CR's personal appearance  |          |
| <b>CR physical impairment</b>         | ADL/IADL  | Katz et al., 1963<br>Lawton et al., 1969 | 18    | 12 min    | CG proxy report of CR functioning  | .836     |
| <b>CR behavior</b>                    | Revised Memory and Problem Behavior Checklist (RMBPC) | Teri et al., 1992                        | 31    | 15 min    | CG proxy report of the problems CR is experiencing   | .785     |
| <b>Burden</b>                         | Revised Memory and Problem Behavior Checklist (RMBPC) | Teri et al., 1992                        | 31    | see above | CG is asked about the burden of each behavior  | .785     |
|                                       | Burden Interview                                      | Zarit et al, 1985                        | 12    | 5 min     | Items ask about role strain and personal strain in the caregiver   |          |
| <b>Positive aspects of caregiving</b> | Positive Aspects of Caregiving                        | REACH I, 1995                            | 11    | 3 min     | Based in part on other measures of positive aspects (e.g., Lawton et al., 1991)  | .906     |
| <b>Vigilance demands</b>              | Vigilance   | REACH I, 1995                            | 4     | 3 min     | Items ask about time spent supervising CR  |          |
| <b>Desire to institutionalize</b>     | Desire to Institutionalize                            | Morycz, 1985                             | 6     | 3 min     | Assesses the CG's desire to institutionalize the CR  |          |
| <b>CR medications</b>                 | CR Medications  | REACH I, 1995                            | 2     | N/A       | Prescription and non-prescription meds from brown bag are listed/coded at sites; length depends on number of meds taken                                      | N/A      |
| <b>CG medications</b>                 | CG Medications  | CHS                                      | 2     | N/A       | Prescription and non-prescription meds from brown bag are listed/coded at sites; length depends on number of meds taken                                      | N/A      |
| <b>CG depression</b>                  | CES-D   | Radloff, 1977                            | 13    | 6 min     | Contains 12 of the original 20 CES-D items plus a question regarding the cg's improvement in mood in the past six month.                                     |          |
| <b>Sleep quality</b>                  | CG sleep quality                                      | Pittsburgh Sleep questionnaire           | 2     | 1 min     | Measures sleep quality   |          |
| <b>Self care and health behaviors</b> | CG self care  | REACH I, 1995                            | 4     | 1 min     | Measures ability to care for oneself   |          |
| <b>Comorbidities</b>                  | Comorbidity   | (Juster, 1993)                           | 13    | 5 min     | Measures comorbidity.  |          |
| <b>Illness and work</b>               | Illness and work                                      |  | 3     | 1 min     | Ask time lost at work and activities due to illness  |          |
| <b>Overall health</b>                 | Overall health  | Various sources                          | 3     | 1 min     | Assesses CG's view of own general health   |          |
| <b>Symptoms</b>                       | CG symptoms   | Jenkins, Kreger, & Hurst, 1980           | 21    | 5 min     | Measures health symptoms.  |          |
| <b>CG disability</b>                  | CG disability   | Schulz, Newsom, Mittelmark, et al, 1997. | 2     | 1 min     | Level of disability  |          |
| <b>Received support</b>               | Received support                                      | Krause, 1995; Barrera et al., 1981       | 3     | 8 min     | ISSB as modified by Krause   |          |
| <b>Social interaction</b>             | Lubben Social Network Index (SNI)                     | Lubben, 1988;                            | 4     | N/A       | Eliminates helping, and living arrangement questions   |          |
| <b>Negative interaction</b>           | Negative Interaction Subscale                         | Krause, 1995                             | 4     | N/A       | Interpersonal conflict   |          |
| <b>Satisfaction with support</b>      | Satisfaction with Support                             | Krause, 1995                             | 4     | N/A       | Tangible, emotional, information support   |          |
| <b>CG religiosity/spirituality</b>    | Religiosity/Spiritual Coping                          | Pargament, et al, 1998<br>REACH I, 1995  | 9     | 4 min     | Assess CG's religiosity and the degree to which their faith helps them cope with stress  |          |
| <b>CG social activities</b>           | Social activities                                     | REACH I, 1995                            | 7     | 4 min     | Satisfaction with the amount of time spent engaging in recreational activities   | .835     |
| <b>CG quality of care</b>             | Quality of Care                                       | Various sources                          | 40    | 8 min     | Evaluates living environment, aspects of abuse, and exemplary caregiving   |          |
| <b>CG risk</b>                        | Risk Appraisal  | Various sources                          | 51    | 10 min    | Questions form an indicator of risk for the CG. Evaluates education, safety, caregiving skills, social support, caregiver emotional and physical well-being. |          |
| <b>Service utilization</b>            | Formal Care and Services                              | REACH I                                  | 19    | 14 min    | Includes in-home services & medical services; obtains info about CG and CR and data for cost estimates   | N/A      |
| <b>Cost</b>                           | Formal Care and Services                              | REACH I                                  | 19    | see above | Follow-up questions of frequency of use, difficulty with paying for services, and desire for services unable to afford                                       | N/A      |

Total time estimate for full battery = 115 mins.

**Table 2. Follow-up Battery Measures**

| Category                              | Name of Measure/Form                                  | Citation/Source                          | Items | Time      | Comments   | $\alpha$ |
|---------------------------------------|---|--|-------|-----------|--|----------|
| <b>Demographic information</b>        | Follow-up Sociodemographics                           | REACH I, 1995                            | 7     | 5 min     | Modified CG/CR sociodemographic form to fit follow-up situation  | N/A      |
| <b>CR cognition</b>                   | MMSE  | Folstein et al., 1975                    | 11    | 12 min*   | * Note: this time will not count in CG interview length  | .829     |
| <b>CR quality of care</b>             | Personal Appearance                                   | Various sources                          | 13    | 2 min     | Interviewer observation of CR's personal appearance  |          |
| <b>CR physical impairment</b>         | ADL/IADL  | Katz et al., 1963<br>Lawton et al., 1969 | 18    | 12 min    | CG proxy report of CR functioning  | .836     |
| <b>CR behavior</b>                    | Revised Memory and Problem Behavior Checklist (RMBPC) | Teri et al., 1992                        | 31    | 15 min    | CG proxy report of the problems CR is experiencing   | .785     |
| <b>Burden</b>                         | Revised Memory and Problem Behavior Checklist (RMBPC) | Teri et al., 1992                        | 31    | see above | CG is asked about the burden of each behavior  | .785     |
|                                       | Burden Interview                                      | Zarit et al, 1985                        | 12    | 5 min     | Items ask about role strain and personal strain in the caregiver   |          |
| <b>Positive aspects of caregiving</b> | Positive Aspects of Caregiving                        | REACH I, 1995                            | 11    | 3 min     | Based in part on other measures of positive aspects (e.g., Lawton et al., 1991)  | .906     |
| <b>Vigilance demands</b>              | Vigilance   | REACH I, 1995                            | 4     | 3 min     | Items ask about time spent supervising CR  |          |
| <b>Desire to institutionalize</b>     | Desire to Institutionalize                            | Morycz, 1985                             | 6     | 3 min     | Assesses the CG's desire to institutionalize the CR  |          |
| <b>CR medications</b>                 | CR Medications  | REACH I, 1995                            | 2     | N/A       | Prescription and non-prescription meds from brown bag are listed/coded at sites; length depends on number of meds taken                                      | N/A      |
| <b>CG medications</b>                 | CG Medications  | CHS                                      | 2     | N/A       | Prescription and non-prescription meds from brown bag are listed/coded at sites; length depends on number of meds taken                                      | N/A      |
| <b>CG depression</b>                  | CES-D   | Radloff, 1977                            | 13    | 6 min     | Contains 12 of the original 20 CES-D items plus a question regarding the cg's improvement in mood in the past six month.                                     |          |
| <b>Sleep quality</b>                  | CG sleep quality                                      | Pittsburgh Sleep questionnaire           | 2     | 1 min     | Measures sleep quality   |          |
| <b>Self care</b>                      | CG self care  | REACH I, 1995                            | 2     | 1 min     | Measures ability to care for oneself   |          |
| <b>Comorbidities</b>                  | Comorbidity   | (Juster, 1993)                           | 12    | 5 min     | Measures comorbidity.  |          |
| <b>Symptoms</b>                       | CG symptoms   | Jenkins, Kreger, & Hurst, 1980           | 21    | 5 min     | Measures health symptoms.  |          |
| <b>CG disability</b>                  | CG disability   | Schulz, Newsom, Mittelmark, et al, 1997. | 2     | 1 min     | Level of disability  |          |
| <b>Received support</b>               | Received support                                      | Krause, 1995; Barrera et al., 1981       | 3     | 2 min     | ISSB as modified by Krause   |          |
| <b>Social interaction</b>             | Lubben Social Network Index (SNI)                     | Lubben, 1988;                            | 4     | 2 min     | Eliminates helping, and living arrangement questions   |          |
| <b>Negative interaction</b>           | Negative Interaction Subscale                         | Krause, 1995                             | 4     | 2 min     | Interpersonal conflict   |          |
| <b>Satisfaction with support</b>      | Satisfaction with Support                             | Krause, 1995                             | 4     | 2 min     | Tangible, emotional, information support   |          |
| <b>CG religiosity/spirituality</b>    | Transition Religiosity/Spiritual Coping               | Pargament et al., 1998<br>REACH I, 1995  | 8     | 4 min     | Modified versions of Religiosity Form, dropping item that is unlikely to change over the course of the study.  |          |
| <b>CG social activities</b>           | Social activities                                     | REACH I, 1995                            | 7     | 4 min     | Satisfaction with the amount of time spent engaging in recreational activities   | .835     |
| <b>CG quality of care</b>             | Quality of Care                                       | Various sources                          | 40    | 8 min     | Evaluates living environment, aspects of abuse, and exemplary caregiving   |          |
| <b>CG risk</b>                        | Risk Appraisal  | Various sources                          | 51    | 10 min    | Questions form an indicator of risk for the CG. Evaluates education, safety, caregiving skills, social support, caregiver emotional and physical well-being. |          |
| <b>Service utilization</b>            | Formal Care and Services                              | REACH I                                  | 19    | 14 min    | Includes in-home services & medical services; obtains info about CG and CR and data for cost estimates   | N/A      |
| <b>Cost</b>                           | Formal Care and Services                              | REACH I                                  | 19    | see above | Follow-up questions of frequency of use, difficulty with paying for services, and desire for services unable to afford                                       | N/A      |
| <b>Program evaluation</b>             | Program Evaluation Form                               | REACH I                                  | 21    | 10 min    | Items relate to satisfaction and social validity of the intervention and perception of the CTIS system.  | N/A      |

**Table 3. Bereavement Battery Measures**

| Category                         | Name of Measure/Form                | Citation/Source                          | Items | Time estimate | Comments   |
|----------------------------------|-------------------------------------|--|-------|---------------|--|
| <b>Demographics</b>              | Bereavement Sociodemographics       | REACH I                                  | 6     | 4 min         | Modified CG/CR sociodemographic form to fit bereavement situation.   |
| <b>Service utilization/cost</b>  | Transition Formal Care and Services | REACH I                                  | 15    | 10 min        | Modified version of the Formal Care and Services form  |
| <b>Sleep quality</b>             | CG sleep quality                    | Pittsburgh Sleep questionnaire           | 2     | 1 min         | Measures sleep quality   |
| <b>Self care</b>                 | CG self care                        | REACH I, 1995                            | 2     | 1 min         | Measures ability to care for oneself   |
| <b>Comorbidities</b>             | Comorbidity                         | (Juster, 1993)                           | 12    | 5 min         | Measures comorbidity.  |
| <b>Symptoms</b>                  | CG symptoms                         | Jenkins, Kreger, & Hurst, 1980           | 21    | 5 min         | Measures health symptoms.  |
| <b>CG disability</b>             | CG disability                       | Schulz, Newsom, Mittelmark, et al, 1997. | 2     | 1 min         | Level of disability  |
| <b>CG depression</b>             | CES-D                               | Radloff, 1977                            | 13    | 6 min         | Contains 12 of the original 20 CES-D items plus a question regarding the cg's improvement in mood in the past six month. |
| <b>Received support</b>          | Received support                    | Krause, 1995; Barrera et al., 1981       | 3     | 2 min         | Modified Social Support form to fit bereavement.   |
| <b>Social interaction</b>        | Lubben Social Network Index (SNI)   | Lubben, 1988;                            | 4     | 2 min         | Modified Social Support form to fit bereavement.   |
| <b>Negative interaction</b>      | Negative Interaction Subscale       | Krause, 1995                             | 4     | 2 min         | Modified Social Support form to fit bereavement.   |
| <b>Satisfaction with support</b> | Satisfaction with Support           | Krause, 1995                             | 4     | 2 min         | Modified Social Support form to fit bereavement.   |
| <b>CG Grief</b>                  | Bereavement                         | Various sources                          | 25    | 8 min         | TRIG designed to measure grief-related depression; Circumstances Surrounding Death examines CG preparedness              |
| <b>CG social activities</b>      | Social activities                   | REACH I, 1995                            | 7     | 4 min         | Satisfaction with the amount of time spent engaging in recreational activities   |
| <b>CG Risk</b>                   | Bereavement Risk Appraisal          | Various sources                          | 25    | 10 min        | Modified risk appraisal to fit bereavement situation.  |
| <b>CG medications</b>            | CG Medications                      | CHS                                      | 2     | N/A           | Prescription and non-prescription meds from brown bag are listed/coded at sites; length depends on number of meds taken  |
| <b>Program evaluation</b>        | Program Evaluation Form             | REACH I                                  | 21    | 10 min        | Items relate to satisfaction and social validity of the intervention and perception of the CTIS system.                  |

**Table 4. Placement Battery Measures**

| Category                         | Name of Measure/Form   | Citation/Source                          | Items | Time estimate | Comments   |
|----------------------------------|--|--|-------|---------------|--|
| <b>Demographics</b>              | Placement Sociodemographics                                      | REACH I                                  | 9     | 8 min         | Modified CG/CR sociodemographic form to fit placement situation.   |
| <b>CR behavior</b>               | Transition Revised Memory and Behavior Problem Checklist (RMBPC) | Teri, 1992                               | 3     | 5 min         | Assesses perceived change in CR's cognition, behavior and mood   |
| <b>CG burden</b>                 | Transition Burden Interview                                      | Zarit, 1985                              | 11    | 5 min         | Measure of caregiver burden through questions which address role strain and personal strain of CG                        |
| <b>Service utilization/cost</b>  | Transition Formal Care and Services                              | REACH I                                  | 15    | 10 min        | Modified version of the Formal Care and Services form  |
| <b>Sleep quality</b>             | CG sleep quality   | Pittsburgh Sleep questionnaire           | 2     | 1 min         | Measures sleep quality   |
| <b>Self care</b>                 | CG self care   | REACH I, 1995                            | 2     | 1 min         | Measures ability to care for oneself   |
| <b>Comorbidities</b>             | Comorbidity  | (Juster, 1993)                           | 12    | 5 min         | Measures comorbidity.  |
| <b>Symptoms</b>                  | CG symptoms  | Jenkins, Kreger, & Hurst, 1980           | 21    | 5 min         | Measures health symptoms.  |
| <b>CG disability</b>             | CG disability  | Schulz, Newsom, Mittelmark, et al, 1997. | 2     | 1 min         | Level of disability  |
| <b>CG depression</b>             | CES-D  | Radloff, 1977                            | 13    | 6 min         | Contains 12 of the original 20 CES-D items plus a question regarding the cg's improvement in mood in the past six month. |
| <b>Received support</b>          | Received support   | Krause, 1995; Barrera et al., 1981       | 3     | 2 min         | Modified Social Support form to fit placement.   |
| <b>Social interaction</b>        | Lubben Social Network Index (SNI)                                | Lubben, 1988;                            | 4     | 2 min         | Modified Social Support form to fit placement.   |
| <b>Negative interaction</b>      | Negative Interaction Subscale                                    | Krause, 1995                             | 4     | 2 min         | Modified Social Support form to fit placement.   |
| <b>Satisfaction with support</b> | Satisfaction with Support  | Krause, 1995                             | 4     | 2 min         | Modified Social Support form to fit placement.   |
| <b>CG religiosity</b>            | Transition Religiosity/Spiritual Coping                          | Pargament et al., 1998<br>REACH I, 1995  | 8     | 4 min         | Modified versions of Religiosity Form, dropping item that is unlikely to change over the course of the study.            |
| <b>CG social activities</b>      | Social activities  | REACH I, 1995                            | 7     | 4 min         | Satisfaction with the amount of time spent engaging in recreational activities   |
| <b>CR placement</b>              | Placement  | REACH I                                  | 16    | 8 min         | Measures extent of help provided by CG, perceived problems with facility, cost of institutionalization                   |
| <b>CG risk</b>                   | Placement Risk Appraisal   | Various sources                          | 27    | 10 min        | Modified risk appraisal to fit placement.  |
| <b>CG medications</b>            | CG Medications   | CHS                                      | 2     | N/A           | Prescription and non-prescription meds from brown bag are listed/coded at sites; length depends on number of meds taken  |
| <b>Program evaluation</b>        | Program Evaluation Form  | REACH I                                  | 21    | 10 min        | Items relate to satisfaction and social validity of the intervention and perception of the CTIS system.                  |

**Table 5. Discontinued Battery Measures**

| Category                           | Name of Measure/Form   | Citation/Source                    | Items | Time estimate | Comments   |
|------------------------------------|--|------------------------------------|-------|---------------|--|
| <b>CR behavior</b>                 | Transition Revised Memory and Behavior Problem Checklist (RMBPC) | Teri, 1992                         | 3     | 5 min         | Assesses perceived change in CR's cognition, behavior and mood   |
| <b>CG burden</b>                   | Transition Burden Interview                                      | Zarit, 1985                        | 11    | 5 min         | Measure of caregiver burden through questions which address role strain and personal strain of CG                        |
| <b>CG depression</b>               | CES-D  | Radloff, 1977                      | 13    | 6 min         | Contains 12 of the original 20 CES-D items plus a question regarding the cg's improvement in mood in the past six month. |
| <b>Received support</b>            | Received support   | Krause, 1995; Barrera et al., 1981 | 3     | 2 min         | Modified Social Support form to fit discontinued battery.  |
| <b>Social interaction</b>          | Lubben Social Network Index (SNI)                                | Lubben, 1988;                      | 4     | 2 min         | Modified Social Support form to fit discontinued battery.  |
| <b>Negative interaction</b>        | Negative Interaction Subscale                                    | Krause, 1995                       | 4     | 2 min         | Modified Social Support form to fit discontinued battery.  |
| <b>Satisfaction with support</b>   | Satisfaction with Support  | Krause, 1995                       | 4     | 2 min         | Modified Social Support form to fit discontinued battery.  |
| <b>CG preventative health risk</b> | Preventative Health  | Various sources                    | 13    | 5 min         | Modified risk appraisal –only CG preventative health items.  |