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A "Good Death" For Whom? Quality of Spouse's Death and Psychological Distress among Older Widowed Persons*

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Ethicists, policy makers, and care providers are increasingly concerned with helping the dying elderly to experience a "good death." A "good death" is characterized by physical comfort, social support, acceptance, and appropriate medical care, and it should minimize psychological distress for the dying and their families. I identify the predictors of death quality and evaluate how the quality of an older adult's death affects the surviving spouse's psychological adjustment six months after the loss. Analyses use Changing Lives of Older Couples (CLOC) data, a prospective study of married persons ages 65 and older. Positive spousal relationships during the final days increase survivors' yearning yet reduce their anger. Having a spouse die a painful death is associated with elevated anxiety, yearning, and intrusive thoughts. The perception of physician negligence is associated with elevated anger. These findings suggest that improved end-of-life care and pain management will benefit both the dying and their bereaved spouses.

End-of-life care in the United States has improved drastically over the past two decades, yet dying patients and their families still report tremendous dissatisfaction with their treatment (Field and Cassel 1997; Pierce 1999; Singer, Martin, and Kelner 1999; SUPPORT Principal

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Investigators 1995). Policy makers and ethicists have responded by trying to define and ensure a "good death" for the dying elderly (Emanuel and Emanuel 1998). The cornerstone of "good death" (Webb 1997) or "dying well" (Byock 1996) is end-of-life medical treatment that minimizes avoidable pain, and that matches patients' and family members' preferences. A "good death" also encompasses important social, psychological, and philosophical elements, such as maintaining close relationships with loved ones during the final days, accepting one's impending death, dying at the end of a long and fulfilling life, and not feeling like a burden to loved ones (Emanuel and Emanuel 1998; Singer et al. 1999; Smith 2000; Steinhauser et al. 2000; Webb 1997).

The guiding assumption of the "dying well" movement is that a "good death" is less distressing for the patient. However, little is known about how frequent (or possible) a "good death" is, or the factors that predict who will experience a "good death." Although much research explores subgroup differences in adults' risk of mortality (e.g., Preston and Taubman 1994), few studies explore whether death *quality* is stratified by social or economic characteristics. Socioeconomic resources

may enable some to demand (and pay for) better care, to interact more effectively with health care professionals, and to arrange the physical environment in accordance with the dying patient's needs.

A further assumption is that a "good death" is less distressing for the dying person's family (Field and Cassel 1997; National Hospice Organization 1998; Teno, McNiff, and Lynn 2000). Clinical studies and focus group data reveal that family members are less satisfied with end-of-life care when their dying relative is subject to pain and social isolation (Kirchhoff et al. 2002; Pierce 1999; SUPPORT Principal Investigators 1995); however, I know of no study that systematically examines linkages between death quality and psychological distress of recently bereaved older adults. Rather, most bereavement research focuses on either the simple relationship between widowhood and psychological distress (e.g., Zisook and Shuchter 1991) or characteristics of the survivor that protect against distress (e.g., Martin Matthews 1991; Stroebe and Schut 2001; Umberson, Wortman, and Kessler 1992).

I use data from the Changing Lives of Older Couples survey, a prospective study of late-life bereavement, to investigate (1) the frequency and predictors of eight conceptually-derived aspects of death quality, and (2) whether and how the quality of spousal death affects psychological distress among older widowed persons six months after the loss. Understanding the linkage between death quality and older widowed persons' well-being is critically important, as older adults now die of chronic illnesses requiring long-term formal and informal care (Bradley et al. 2000). Interventions to improve end-of-life care may have important ramifications for surviving spouses, as well as dying patients.

THEORETICAL BACKGROUND

The "Good Death"

Advanced medical technologies allow the dying elderly to increase the length, though not necessarily the quality, of their lives (Field and Cassel 1997; SUPPORT Principal Investigators 1995). During the final days of life, the majority of dying elderly are non-ambulatory, short of breath, and unable to eat, and they

have limited mobility, cognitive functioning difficulty, considerable pain, and difficulty recognizing family members (Brock and Foley 1998). The terminally ill (Singer et al. 1999), their families (Pierce 1999), and health care providers (Kirchhoff et al. 2002; SUPPORT Principal Investigators 1995) report considerable dissatisfaction with end-of-life care, and offer very similar characterizations of how they believe death should be experienced.

Conceptualizations of the "good death" typically include the following attributes: dying persons should be aware of and at peace with their impending deaths; the dying should be surrounded by loved ones; death should occur at the end of a long and full life; the dying process should not be burdensome to others; the death should be relatively pain- and distress-free; and the dying (or their families) should control decisions about end-of-life treatment (Field and Cassel 1997; Hospice Education Institute 2001; National Hospice Organization 1998; Pierce 1999; Singer et al. 1999; Steinhauser et al. 2000).

Policy makers and care providers have developed programs geared explicitly toward promoting this "good death" ideal (Field and Cassel 1997). The Patient Self-Determination Act (U.S. Congress 1990) requires all government-funded health care providers to give patients the opportunity to complete an advance directive, a document that states one's end-of-life treatment preferences. The hospice movement shares a similar set of goals: to "promote relief from pain . . . integrate the psychological and spiritual aspects of patient care; offer a support system to help patients live as actively as possible until death . . . and help the family cope during the patient's illness, and in their own bereavement" (Hospice Education Institute 2001:1–2).

Although the "good death" is upheld as an ideal toward which care providers, the dying, and their kin should strive, death quality may be linked inevitably to death cause and suddenness. Persons who die suddenly may have had neither the time nor foresight to discuss end-of-life issues with family members (Carr et al. 2001). In contrast, persons who die of terminal illnesses have the time to discuss their death with family members and to resolve "unfinished" psychological and practical business (Blauner 1966), yet they also are more likely to experience pain and discomfort (Foley 1993; Sengstaken and King 1993). The

idealized "good death" may be impossible to achieve. Rather, there may be two distinct paths to "dying well"—one sudden and one anticipated, with each requiring different interventions and practices to promote patient and family well-being.

Death Quality and Psychological Adjustment of the Survivor

Does the quality of spousal death affect the surviving partner's psychological adjustment to the loss? Attachment theory and stress theories provide a framework for understanding how and why spousal death quality may affect older widowed persons' adjustment to loss. Attachment theory proposes that when a close emotional bond is severed—whether through death or separation—the grief process follows (Bowlby 1980). The dissolution of emotionally and socially significant ties may elicit the strongest psychological reactions (Bowlby 1980; Carr et al. 2000). This perspective suggests that one component of the "good death"—positive relationships with spouse prior to death—may be associated with elevated grief among the widowed, at least in the early stages of bereavement. If the final days together bring the spouses closer to one another, then the loss of one's partner and confidante may be particularly profound.1

I expect that several other aspects of end-oflife social relationships will lead to lower levels of post-loss psychological distress. Bereaved persons who were with their ailing spouse at the moment of death have been found to cope better with the loss than those who were not present (Bennett and Vidal-Hall 2000; Fiewiger and Smilowitz 1984–85). The widowed also may adjust better to the loss if they address "unfinished business" and achieve closure with the dying (Blauner 1966). The intentional resolution of past conflicts and concerns is only possible, however, if the couple is aware of the impending death. Thus, I expect that both the dying spouse's acceptance of death and dying in the presence of the spouse will reduce psychological distress among the bereaved.

The stress paradigm proposes that psychological distress results when demands outstrip one's coping abilities and resources (Pearlin et al. 1981). The extent to which a stressful event, such as spousal death, affects psychological

distress may be contingent on characteristics of that stressor, including its expectedness, controllability, duration, and co-occurrence with other stressors (Pearlin et al. 1981; Pearlin 1982; Thoits 1983, 1995). Anticipated life events are less stressful than unexpected ones because individuals have time to prepare practically and psychologically (George 1993; Pearlin 1982; Thoits 1983). Uncontrollable stressors are particularly harmful, because they engender feelings of helplessness (Thoits 1983, 1995). Chronic stressors are more difficult than acute or short-lived stressors, as they are more likely to deplete one's coping resources and to occur in conjunction with concurrent or successive stressors (Holmes and Rahe 1967; Johnson and Catalano 1983). Concurrent stressors are particularly distressing for older adults who may have few resources for coping with closely-spaced or overlapping adversities (Johnson and Catalano 1983).

Drawing on these assumptions, I hypothesize that several aspects of the dying processincluding burdensome caregiving needs, severe pain experienced by the dying patient, and difficult interactions with health care professionals—may tax older adults' coping resources, leaving them vulnerable once the death actually occurs (George and Gwyther 1986; Johnson and Catalano 1983). Intensive caregiving demands could elevate distress levels among older adults who may be managing their own physical health problems. Older adults who see their spouse subject to physical pain or inappropriate medical care may be particularly distressed by their inability to control the health care process. I also expect that one indicator of a "bad death," dying in a nursing home, will create less distress for bereaved spouses, as nursing home usage spares them from difficult caregiving duties (Rosenthal, Sulman and Marshall, 1992).

In sum, ethicists, patients, family members and health care providers offer virtually identical characterizations of the "good death," yet little is known about who experiences a good death. Moreover, researchers have not evaluated systematically whether a "good death" is less distressing for the bereaved spouse than a death that occurs under more dire circumstances. This research uses data from a prospective study of older bereaved spouses to explore the correlates and psychological consequences of spousal death quality.

DATA AND METHODS

Data

The Changing Lives of Older Couples is a prospective study of a two-stage area probability sample of 1,532 married persons from the Detroit Standardized Metropolitan Statistical Area. All respondents are non-institutionalized, English-speaking members of a married couple where the husband was age 65 or older. Women were over-sampled, to maximize the number of respondents who would experience spousal loss during the study period. Baseline (i.e., pre-loss) face-to-face interviews were conducted from June 1987 through April 1988. The response rate for the baseline interview was 68 percent, which is consistent with the response rate from other Detroit area studies in that period (see Carr and Utz 2002 for further detail).

Spousal loss was monitored using monthly death record tapes provided by the State of Michigan and by reading the daily obituaries in Detroit-area newspapers. The National Death Index and direct ascertainment of death certificates were used to confirm deaths and obtain causes of death. Of the 335 respondents known to have lost a spouse during the study period, 316 were contacted for possible interview (19 persons, or 6% had died during the interim). Of the 316 contacted, 263 persons (83%) participated in at least one of the three interviews which were conducted six months (wave 1), 18 months (wave 2), and 48 months (wave 3) after the death.

This analysis is based on the 250 widowed persons (215 women and 35 men) interviewed at the six-month follow up, or 79 percent of the 316 living respondents who lost a spouse.² The data are weighted to adjust for unequal probabilities of selection and differential response rate at baseline, thus the final weighted sample comprises 210 widowed persons (151 women and 59 men). The analysis is limited to the sixmonth followup only, as the early stages of bereavement are most distressing and the effects of death quality are likely to be most acute during this period (Zisook and Shuchter 1991).

Dependent Variables

Two general (i.e., depression and anxiety)

and seven loss-related (i.e., yearning, intrusive thoughts, anger, shock, despair, grief-related anxiety, and overall grief) dimensions of psychological distress at the 6-month follow-up are considered. Depression ($\alpha = .83$) is assessed with a subset of nine negative items from the 20-item Center for Epidemiologic Studies depression scale (Radloff 1977). Anxiety ($\alpha = .86$) is measured with 10 items from the Symptom Checklist 90 Revised (Derogatis and Cleary 1977). The six subcomponents of grief considered here are: yearning $(\alpha = .75)$, intrusive thoughts $(\alpha = .66)$, anger $(\alpha = .68)$, shock $(\alpha = .77)$, despair $(\alpha = .64)$, and loss-related anxiety ($\alpha = .71$). Overall grief ($\alpha = .86$) is the average of the six subscale scores. Items were drawn from widely used grief scales including the Bereavement Index (Jacobs, Kasl, and Ostfeld 1986), Present Feelings About Loss (Singh and Raphael 1981), and the Texas Revised Inventory of Grief (Zisook, Devaul, and Click 1982). The dependent variables are standardized for ease of interpretation and comparison across indicators. Question wordings are presented in Appendix A.

Independent Variables

Quality of death. Eight aspects of death quality are considered: the dying person's acceptance of his or her impending death, pain during the final days, timeliness of death, spousal interactions during the final days, dying in the presence of family members, dying in a nursing home, degree of burden to family members, and having led a full and rewarding life prior to death.³ Each indicator characterizes the dying experience of the now-deceased spouse, and is based on the surviving spouse's retrospective report obtained six months following the death.

Acceptance ($\alpha = .86$) is a three-item standardized scale based on the respondent's level of agreement with three statements: "My spouse was at peace with the idea of dying"; "Was your spouse aware that she or he was dying"; and "Did you and your husband/wife talk about the fact that she or he might die?"

Three aspects of social support during the final days are considered. Being with one's spouse at the moment of death is a dummy variable set equal to 1 (0 = not present). Living in a nursing home prior to death is a dummy

variable indicating those now-deceased spouses who lived in a nursing home at the baseline interview. The study did not evaluate retrospectively at wave 1 whether one's spouse lived in a nursing home immediately prior to death. Thus, the baseline indicator under-represents the total number of spouses living in nursing homes prior to death, and over-represents those who resided in nursing homes for the longest durations. Positive relationship with partner prior to death is based on the surviving spouse's evaluation of the statement, "In the weeks before (his/her) death, things between my (husband/wife) and me were going well." Response categories are very true, somewhat true, a little true, and not true at all. Because of the skewed response distribution (i.e., 81% reported "very true"), responses are recoded as a dichotomous variable where 1 indicates "very true."

Burden on surviving spouse ($\alpha = .91$) is a three-item standardized scale which reflects the extent to which the dying spouse's caregiving needs burdened the surviving spouse. The scale is based on the average number of hours of care given per week, and the perceived stressfulness and intrusiveness of giving (or arranging) care. Hours of care per week were evaluated at the wave 1 interview, with the question, "During the last six months of his/her life, about how many hours a week did you spend providing physical care for your husband/wife." Perceived strain of caregiving is evaluated with the question, "During the six months before (she/he) died, how stressful was it for you to care for your spouse, or to arrange for his/her care? Was it very stressful, quite stressful, somewhat stressful, not too stressful, or not at all stressful?" Perceived intrusiveness of caregiving was evaluated with the question, "How much did caring for your spouse while (she/he) was ill keep you from carrying out other responsibilities in your life? Would you say a great deal, somewhat, a little, or not at all?" The scale is based on the averaged standardized scores of the above three items.

The belief that one's spouse led a full life is based on the respondent's evaluation of the statement, "My spouse lived a full life." Response categories are very true, somewhat true, a little true, and not true at all. Because of the skewed response distribution (i.e., 82% reported "very true"), responses are recoded as a dichotomous variable where 1 indicates

"very true." *Death timeliness* is measured as the spouse's age (in years) at death.

Two indicators of appropriate end-of-life care are considered: pain and negligence. Pain is evaluated retrospectively with the item, "My spouse's illness was physically painful for (him/her). Is this very true, somewhat, a little, or not true at all?" A dichotomous variable is set equal to 1 for responses true" or "somewhat true." "very Negligence by health care providers is based on responses to two questions. A respondent is first asked whether someone contributed to his or her spouse's death, and is then asked who and what contributed to the death. Responses indicating "doctor/hospital incompetence or negligence" are coded as 1.

An overall index score representing "good death" was computed by summing the total number of "positive" death attributes described above: spouse was at peace with idea of dying, spouse was aware of impending death, respondent and spouse discussed the death, respondent was with spouse at the moment of death, spouse *not* residing in nursing home during final days, respondent and spouse got along well during final days, the dying person did not rely on spouse for caregiving, the spouse led a full life, the spouse was not in pain, and the spouse did not receive negligent care. Index scores could range from 0 through 10; the lowest score in the sample was 3.

Objective death characteristics. Death suddenness is evaluated retrospectively at the wave 1 interview with the question, "How long before your spouse's death did you realize that (she/he) was going to die?" Respondents could report the duration in hours, days, weeks, months, years, or "no warning/minutes." Responses were recoded into three dichotomous variables: sudden death refers to deaths where the survivor had "no warning," advanced forewarning refers to deaths where the survivor had six months or more forewarning, and the reference category is less than six months forewarning but more than a few minutes. Cause of death refers to the primary cause of spouse's death. Dichotomous variables indicate deaths due to cancer (28%), heart disease (43%), and all other causes (29%). Zero-order correlations among all death characteristics are shown in Appendix B.

Confounding factors. The surviving spouse's retrospective evaluation of death quality and his or her psychological adjustment to widowhood may reflect his or her preloss attitudes and psychological well-being. For example, depressed persons tend to offer more negative appraisals of past and present experiences and relationships (Teasdale, Taylor, and Fogarty 1980). Thus, several potential confounders are controlled in the analysis.

Depression and anxiety at baseline are measured exactly the same way as the six-month follow-up measure (Derogatis and Cleary 1977; Radloff 1977). Marital quality ($\alpha = .88$) is a scale based on seven items: (1) "how much does your spouse make you feel loved and cared for"; (2) "how much is your spouse willing to listen when you need to talk about your worries and problems;" (3) "there are some serious difficulties in our marriage" (reversecoded); (4) "thinking about your marriage as a whole, how often do you feel happy about it"; (5) "taking all things together, how satisfied are you with your marriage"; (6) "how often do you feel bothered or upset by your marriage" (reverse-coded); (7) "my spouse doesn't treat me as well as I deserve to be treated" (reversecoded).

Religiosity ($\alpha = .83$) is based on responses to four questions about religious beliefs and participation: (1) "in general, how important are religious or spiritual beliefs in your day-today life"; (2) "how often do you usually attend religious services"; (3) "when you have problems or difficulties in your family, work, or personal life, how often do you seek spiritual comfort and support"; and (4) "when you have decisions to make in your everyday life, how often do you ask yourself what God would want you to do." Attitudes toward death ($\alpha =$.57) is a scale based on the respondent's level of agreement with the following four statements: (1) "death is simply part of the process of life"; (2) "I don't see any point in worrying about death"; (3) "I would neither fear death nor welcome it"; and (4) "I am resigned to the fact that we all have to die." Both scales are standardized.

Spouse health at baseline is assessed with the question, "How would you rate your spouse's health at the present time? Would you say it is excellent, very good, good, fair or poor?" Responses of fair and poor are coded 1; all others are coded as 0. Respondent's *physical health* at baseline is assessed with the question, "How would you rate your health at the present time? Would you say it is excellent, very good, good, fair or poor?" Responses of fair and poor are coded 1, and all others are coded as 0.

Demographic and control variables. Control variables include age; sex (1 = female); education (ranging from 3 to 17 or more years of completed schooling); total household income at baseline (natural log of income); and home ownership at baseline (1 = owns home). The analyses control for the duration (in months) between the baseline and wave 1 interviews. All wave 1 interviews were conducted six months following spousal death, yet the duration between the baseline and wave 1 interviews ranges from nine to 76 months due to variation in the timing of spousal deaths. Baseline assessments are more temporally distant for those who lost their spouses at later dates.

RESULTS

Sample Characteristics

Table 1 presents descriptive statistics for all independent variables used in the analysis. Means and standard deviations are presented for the total sample (column 1), persons whose spouses died suddenly (column 2), and persons whose spouses died with some forewarning (column 3). Two-tailed t-tests reveal that sudden and anticipated deaths are significantly different in terms of nearly all death quality attributes.

Sudden deaths (versus anticipated deaths) spare the decedent of two negative aspects of the dying process: physical pain (18 versus 47%, $p \le .001$) and high levels of dependence on his or her spouse for care (standardized scores of -.34 versus $.27, p \le .001$). Spouses of those who died suddenly provided only 12 hours of care per week prior to the death, compared to 34 hours per week among survivors whose spouses died after a forewarning period ($p \le .001$). Those who die suddenly, however, are far less likely to have accepted the idea of dying (as evaluated by their surviving spouse). Persons who died suddenly are less likely to

TABLE 1. Summary of Means and Standard Deviations for All Independent Variables, by Death Suddenness

| | Tot Sample (1 | | | dden (N = 75) | | anticipated th (N = 135) |
|---|------------------|-----------------|-----------|------------------|------------|--------------------------|
| | Sample (1 | 1 – 210) | Death | (14 - 73) | Dea | an (14 – 155) |
| Independent Variables | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| "Good Death" Indicators" | 6.18 | 1.50 | 5.80 | 1.20 | 6.38 | 1.60** |
| Good death index (Range: 0-10) | | | | | | |
| Acceptance/Closure | | | | | | |
| Acceptance of death scale | .00 | 1.00 | 58 | .59 | .32 | 1.01*** |
| (standardized) | 2.5 | | | | 40 | 50*** |
| Spouse at peace with idea of dying | .36 | .44 | .11 | .31 | .49 | .50*** .48*** |
| Spouse was aware that s/he was dying | .46 | .50 | .16 | .37 | .64 .37 | .48*** |
| Respondent and spouse discussed | .25 | .43 | .03 | .17 | .37 | .49*** |
| spouse's impending death | | | | | | |
| Social Support | .44 | .50 | .37 | .49 | .48 | .50 |
| Respondent was with spouse at moment of death | .44 | .50 | .57 | .49 | .40 | .50 |
| Spouse lived in nursing home at | .05 | .22 | .01 | .08 | .07 | .26* |
| baseline | .03 | .22 | .01 | .00 | .07 | .20 |
| Good relationship with spouse during | .80 | .40 | .80 | .40 | .80 | .40 |
| final weeks | .00 | .40 | .00 | .10 | .00 | .10 |
| Burden to Others | | | | | | |
| Hours per week respondent provided | 25.84 | 37.66 | 11.67 | 27.78 | 33.73 | 40.15*** |
| care | 23.01 | 37.00 | 11.07 | 27.70 | 30.75 | |
| Stress of caregiving to dying spouse | .00 | 1.00 | 45 | .78 | .25 | 1.03*** |
| (standardized) | .00 | 1.00 | | 170 | | 1.00 |
| Intrusiveness of caregiving to dying | .00 | 1.00 | 41 | .83 | .23 | 1.02*** |
| spouse (standardized) | .00 | 1.00 | | | | |
| Overall burden of caregiving | .00 | 1.00 | 34 | .68 | .27 | .88*** |
| (standardized) | | | | | | |
| Death Timeliness | | | | | | |
| Spouse lived a full life prior to death | .84 | .37 | .82 | .39 | .85 | .36 |
| Spouse age at death | 75.80 | 6.97 | 76.20 | 6.51 | 75.63 | 7.23 |
| Appropriate Care | | | | | | |
| Spouse in pain prior to death | .37 | .48 | .18 | .39 | .47 | .50*** |
| Physicians or hospital were | .07 | .26 | .06 | .24 | .07 | .27 |
| responsible for death | | | | | | |
| Other Death Characteristics | | | | | | |
| Cause of death: cancer | .28 | .45 | .12 | .33 | .36 | .48*** |
| Cause of death: heart disease | .43 | .50 | .62 | .49 | .32 | .47** |
| Cause of death: "other" condition | .29 | .46 | .25 | .44 | .32 | .47 |
| Baseline Psychological Traits | | | | | | |
| Depression, baseline (standardized) | .07 | .98 | .02 | 1.01 | .09 | .96 |
| Anxiety, baseline (standardized) | .00 | .76 | 01 | .89 | .01 | .68 |
| Religiosity, baseline | .13 | .96 | .15 | 1.02 | .12 | .92 |
| Attitudes toward death, | 05 | 1.05 | .12 | .97 | 15 | 1.08 |
| baseline (standardized) | | | | | | |
| Marital quality, baseline | 04 | .79 | 08 | .82 | 01 | .77 |
| (standardized) | | | | | | |
| Demographic and Control Variables | | | | | | |
| Respondent in poor health, baseline | .33 | .47 | .27 | .45 | .36 | .48 |
| Spouse in poor health, baseline | .60 | .49 | .51 | .50 | .65 | .48* |
| Sex (1 = female) | .72 | .45 | .75 | .44 | .70 | .46 |
| Age | 70.56 | 6.94 | 71.01 | 6.98 | 70.31 | 6.93 |
| Years of education | 11.27 | 2.92 | 11.38 | 2.64 | 11.20 | 3.07 |
| Own home, baseline | .92 | .28 | .93 | .26 | .92 | .28 |
| Income, baseline | 21,049.00 | 16,417.00 | 18,487.00 | 13,777.00 | 22,475.00 | 17,604.00 |
| Natural log of income | 1.32 | .52 | 1.24 | .52 | 1.36 | .52 |
| Months between baseline and wave 1 | 36.35 | 18.41 | 37.18 | 17.91 | 35.88 | 18.73 |
| interview | | | | | | |

^{*} $p \le .05$ ** $p \le .01$ *** $p \le .001$ (two-tailed tests)
Two-tailed t-tests were used to assess significant differences between sudden and non-sudden deaths. N values are weighted.

have been at peace with the idea of dying (11 versus 50%, $p \le .001$), to be aware that they were dying (16 versus 64%, $p \le .001$), and to have discussed their impending death with their spouse (3 versus 37%, $p \le .001$).

Persons who die suddenly are significantly more likely to die of heart disease (62 versus 32%, $p \le .001$), less likely to die of cancer (12 versus 36%, $p \le .001$), and less likely to have been in poor health at the baseline interview (51 versus 65%, $p \le .001$). Overall, those who died after a period of forewarning have a significantly greater number of positive death attributes than those who died suddenly (6.4 versus 5.8; $p \le .01$).

Who Experiences a "Good Death?"

Table 2 shows the predictors of selected death quality indicators. Ordinary least squares regression models are estimated for continuous outcomes (models 1 through 3), and logistic regression models are used to predict the dichotomous outcomes (models 4 through 8). Overall, the analyses show that death cause and suddenness are the most powerful predictors of death quality, as evaluated by the surviving spouse.

The dying person's acceptance of his or her death is predicted by death timing only (model 2). Those who die following an illness lasting six months or longer have significantly higher levels of death acceptance (b = .561, $p \le .001$), while those who died suddenly have significantly lower levels of death acceptance (b = -.603, $p \le .001$), compared to those who had a forewarning period of less than six months. Age at death is inversely related to death acceptance (b = -.023); advanced age may bring cognitive decline or impairment, thus rendering the dying person less able to discuss (or acknowledge) their impending death.

The degree to which the dying patient was a burden to their surviving spouse is also a function of death timing (model 3): Sudden deaths are less burdensome (b = -.254, $p \le .05$). Long-awaited deaths (b = .35, $p \le .01$) and deaths by cancer (b = .41, $p \le .01$) increase caregiving burden. Women report more burdensome caregiving than do men. Religiosity is inversely related to reports of burdensome care, while pre-loss anxiety is associated with more burdensome care.

Whether the spouses were together at the

moment of death (model 4) is related to just one variable: age. The older a person is at death, the less likely he or she is to die in the presence of his or her spouse $(p \le .05)$. Spousal relationships during the final days (model 5) are predicted by just one variable: baseline marital quality. This suggests that spousal relationships may not change drastically during the final days together; rather, interpersonal relationships during the final days may represent a continuation of the relationship quality established years earlier. Evaluations that one's spouse led a full life (model 6) are predicted by spouse's age at death. Each additional year of age is associated with a 14 percent increase in the odds that the surviving spouse evaluated the decedent's life as "very full." Widowed persons whose spouses died of cancer are only 20 percent as likely as others to say that their partner had a full life, perhaps reflecting the toll that cancer takes on one's capacity to lead a full and active life.

Painful deaths (model 7) are significantly linked to death cause and timing, as well as sociodemographic and psychological characteristics of the surviving spouse. Persons who died with more than six months forewarning are 3.5 times as those with intermediate levels of forewarning to have experienced serious pain $(p \le .01)$. Similarly, those dying of heart disease are significantly less likely to experience pain (compared to those dying from "other" causes). A painful death is stratified somewhat along social class lines; more highly educated persons are less likely to report that their spouse had a painful death. Bereaved persons with high pre-loss anxiety levels are more likely to report that their spouse died a painful death $(p \le .05)$, while highly religious spouses are less likely to report painful deaths.

Physician or hospital negligence (model 8) is negatively related to cancer and heart disease deaths (compared to "other"). Deaths which are blamed on medical negligence appear to be deaths occurring to the relatively young, and deaths due to non-normative causes. Income and gender are positively related to reports of negligence, perhaps reflecting higher standards for care or greater knowledge of appropriate medical care among wealthier persons and women. In sum, the results suggest that death quality reflects death cause and timing. Death quality is not strongly linked to socioeconomic resources, nor the pre-loss psy-

TABLE 2. Predictors of Selected Death Quality Indicators

| | OLS | OLS Regression Coefficients | ients | | Logisitic | Logisitic Regression Results (odds ratios) | (odds ratios) | |
|--------------------------------------|-----------------------|-----------------------------|-------------------|-------------------|------------|--|---------------|------------|
| | Model 1 Good Death | Model 2 | Model 3 Rurden to | Model 4 R With Sp | Model 5 | Model 6 | Model 7 | Model 8 |
| Independent Variables | Index | of Death | Survivor | at Death | Relations | Full Life | Severe Pain | Neglience |
| Death Cause and Timing | | | | | | | | |
| Spouse age at death | 009 | 023* | 260. | *424 | 1.02 | 1.13** | 766. | +608 |
| Spouse in fair/poor health, baseline | 440* | 087 | .267* | 1.08 | .701 | .579 | 2.03+ | .845 |
| Sudden death | **969`- | 603*** | 254* | .789 | 868. | .413 | 629 | 1.88 |
| > 6 months forewarning of death | .272 | .561*** | .335** | 666. | .803 | 1.04 | 3.52** | 1.03 |
| Cause of death: Cancer | .229 | .324+ | .412** | 1.75 | .723 | .203* | 2.47‡ | .162* |
| Cause of death: Heart Disease | *965 | 690. | 189 | .788 | .862 | .892 | .370* | *101* |
| Demographics and SES | | | | | | | | |
| Gender | 077 | .199 | .324* | 609 | .601 | .469 | 1.17 | 4.86† |
| Education, in years | .00 | 043+ | 013 | 1.03 | .924 | 1.07 | *698 | 808. |
| Income (natural log), baseline | 384 | .014 | 660. | .767 | .936 | 1.59 | .428 | 3.33* |
| Own home, baseline | ÷685: | .031 | 326+ | 1.27 | 2.01 | 1.31 | 1.32 | .431 |
| Race (Black $= 1$) | .061 | 077 | .092 | .811 | 1.91 | 3.19 | .929 | 1.03 |
| Psychological Characteristics | | | | | | | | |
| Depression (CES-D), baseline | 075 | 116 | .026 | 1.23 | 1.04 | 1.03 | .916 | 1.04 |
| Anxiety, baseline | 134 | .103 | .126* | 1.24 | .982 | .539+ | 2.00* | 1.37 |
| Marital warmth, baseline | .221+ | 013 | 019 | 1.11 | 1.91** | 1.5 | 1.05 | 1.02 |
| Religiosity, baseline | .191 | .005 | 137* | 1.05 | 1.26 | 1.26 | .712+ | 1.41 |
| Attitudes toward death, baseline | .010 | .058 | 004 | .967 | .764 | .927 | .992 | 1.01 |
| Intercept | 6.63 | 2.04 | .044 | | | | | |
| Adjusted r-squared | 680: | .229 | .276 | | | | | |
| Chi-square (d.f.) | | | | 22.02 (17) | 21.55 (17) | 45.63; 17 | 68.73 (17) | 34.46 (17) |
| | | | | | | | | |

† $p \le .10 * p \le .05 ** p < .01 *** p \le .001$ (two-tailed tests) Unstandardized OLS regression coefficients and exponentiated betas (odds ratios) are presented above.

chological characteristics of the surviving spouse.

Does Death Quality Affect Survivor's Psychological Distress?

The second objective is to explore whether psychological distress following spousal death is affected by qualitative aspects of the dying experience. I first calculated zero-order correlations among the ten death-quality indicators and nine psychological distress outcomes at the six-month followup. Just nine of the 90 possible correlations were statistically significant at the $p \le .05$ level (tables are available from the author). The statistical relationships were evaluated a second time, using ordinary least squares regression models. The effect of each death-quality indicator on each of the psychological outcomes was evaluated, and objective death characteristics, demographic variables, and possible confounding factors were adjusted. These models were estimated to address the possibility that objective characteristics (such as death suddenness) may suppress the effects of the death quality variables, or that the relationship between death quality and psychological distress is partially spurious. The regression analyses confirmed that only a few of the relationships between death quality and psychological distress are statistically significant. Three dimensions of "good death" are unrelated to survivors' psychological distress: spouse's acceptance of his or her impending death, caregiving burden, and having led a full life.

Table 3 summarizes OLS regression models where at least one death quality indicator is a significant predictor of the survivor's psychological distress. Yearning (column 1), the desire to recover one's relationship with the deceased, is related significantly to two death quality indicators: positive relations with spouse during final days and spouse's pain prior to death. Widowed persons who report that their marital relationship was going very well during the final days have yearning scores nearly one-half standard deviation higher than those with less positive evaluations of the relationship. Those reporting that their spouse was in pain also report significantly higher levels of yearning for their deceased spouse six months after the loss (b = $.353; p \le .05$).

Intrusive thoughts (column 2), a symptom conceptually similar to post-traumatic stress disorder, is linked significantly to two death quality indicators: being with one's spouse at the moment of death and spouse's pain prior to death. Those whose spouses were in pain report intrusive thoughts scores which are nearly one-half standard deviation higher than others. Being with one's spouse at the moment they die, believed to be an important indicator of "good death" for the decedent, also is protective for the survivor; it reduces intrusive thoughts levels by roughly one-third of a standard deviation.

Anger (column 3) is affected by physician negligence and marital quality during the final days. Surviving spouses who report that the death was due, in part, to physician negligence report significantly higher levels of anger six months after the loss (b = .698, $p \le .01$). Positive interactions with one's spouse shortly prior to their death, in contrast, protect against high levels of anger. Highly religious persons report significantly less anger about their spouses' deaths.

Loss-related anxiety (column 4) is affected by pain and whether the spouse was in a nursing home. Although nursing home residence is believed to be bad for the dying patient, as it removes him or her from their family, placing one's spouse in a nursing home is linked to significantly lower levels of post-loss anxiety among the surviving spouse (b = -.85, $p \le .01$). Older survivors report significantly lower levels of anxiety, perhaps suggesting that older adults are better prepared for the challenges facing the newly bereaved.

DISCUSSION

This research had two major objectives: to identify the factors that affect the likelihood of "dying well" and to explore whether psychological adjustment among older bereaved persons is affected by the nature and quality of spousal death. The analyses revealed four important conclusions. First, qualitative aspects of "dying well" are best predicted by *objective* characteristics of the death, including its cause, suddenness, and timing. Second, there is no evidence that three aspects of "dying well" are related to the survivor's psychological distress following the loss: the extent to which the deceased spouse had

TABLE 3. OLS Regression Predicting Psychological Distress Among Bereaved Spouses at Six-Month Followup

| ronowup | | | | |
|---------------------------------|----------|-----------|---------|--------------|
| | | Model 2 | | |
| | Model 1 | Intrusive | Model 3 | Model 4 |
| | Yearning | Thoughts | Anger | Anxiety |
| Good Death Indicators | | | | |
| Positive relations with spouse | .467** | | 325* | |
| during final days | (.175) | | (.171) | |
| Spouse in pain prior to death | .353* | .448** | | .301† |
| | (.166) | (.170) | | (.169) |
| Spouses were together | | 336* | | |
| at moment of death | | (.143) | | |
| Physician or hospital | | | .698** | |
| responsible for death | | | (.274) | |
| Dying spouse in nursing home | | | | 8 49* |
| prior to death | | | | (.367) |
| Objective Death Characteristics | | | | |
| Spouse's age at death | 003 | .001 | 013 | .022† |
| • | (.015) | (.015) | (.014) | (.014) |
| Sudden death | 061 | .245 | .016 | .148 |
| | (.194) | (.167) | (.160) | (.161) |
| > 6 months forewarning | 227 | 073 | 035 | .447* |
| _ | (.175) | (.181) | (.169) | (.181) |
| Cause of death: Cancer | .047 | 276 | 272 | 128 |
| | (.198) | (.207) | (.197) | (.198) |
| Cause of death: Heart disease | .051 | .183 | 251 | .152 |
| | (.169) | (.175) | (.170) | (.171) |
| Psychological Characteristics | | | | |
| Acceptance of death, baseline | .045 | 023 | 093 | 079 |
| (standardized) | (.068) | (.071) | (.068) | (.069) |
| Religiosity, baseline | 099 | 057 | 242*** | .001 |
| (standardized) | (.073) | (.076) | (.073) | (.073) |
| Marital quality, baseline | .265** | .099 | | .017 |
| (standardized) | (.100) | (.101) | (.097) | (.099) |
| Constant | -2.29 | .096 | 2.33 | 106 |
| | (1.04) | (1.07) | (1.05) | (1.01) |
| Adjusted r-square | .137 | .071 | .146 | .137 |

[†] $p \le .10 * p \le .05 ** p \le .01 *** p \le .001$ (two-tailed tests)

Note: Unstandardized regression coefficients and standard errors are presented.

All models adjust for demographic characteristics (age, sex, education income, home ownership) and possible confounding factors (respondent's depression, anxiety and self-rated health at baseline, decedent's baseline health).

accepted their impending death; whether the deceased spouse led a full life; and the extent to which the death imposed a caregiving burden on the surviving spouse. Third, social interactions between the dying patient and spouse and the quality of the dying patient's medical care are significant predictors of the surviving spouse's psychological distress. Finally, religious beliefs affect both how the bereaved interpret their spouses' final days and their psychological health following the loss.

Death Timing and Death Quality

Quality of death is best predicted by *objective* characteristics of the death, including timing, suddenness, and cause. Importantly, there may be two paths to the "good death," each

requiring different interventions and practices to ensure survivor and patient well-being. For instance, sudden deaths are less painful for the dying, yet they also rob the married couple of their time to discuss and understand the impending dying process. Programs that encourage discussions and practical plans pertaining to end-of-life issues among the healthy and young-old may help to ensure that persons who experience sudden widowhood have resolved their unfinished psychological and practical business prior to the loss. In contrast, anticipated deaths (such as deaths due to cancer) provide the dying person the time to accept their condition and to discuss their death with others, yet these deaths often bring pain and burdensome caregiving demands. Increased availability of pain management programs may be beneficial to the surviving spouses of those dying from chronic illnesses.

Death quality is not stratified by social class. Although economic resources may help to delay illness and mortality (Preston and Taubman 1994), money cannot buy a "good death." Socioeconomic resources are related significantly to only one death quality attribute: pain. Bereaved spouses with higher levels of education are less likely to report that their dying partner was in pain. Yet these findings should not be accepted as evidence that death and dying are egalitarian processes. The economically disadvantaged are more likely to die prematurely—a hallmark of a "bad" death (Emanuel and Emanuel 1998; Smith 2000; Webb 1997)—and thus were excluded from the Changing Lives of Older Couples sample, by design.

"Good" for the Dying, Not the Bereaved

Three attributes which scholars have described as critical components of the "good death"—having led a full life, accepting one's impending death, and not being burdensome to family members—are unrelated to spouse's psychological distress six months following the loss. The latter finding is most surprising: Although caregiving may create physical and emotional strains for the caregiver, the longer-term psychological consequences are negligible in the sample. The psychological stress created by caregiving may be balanced by rewards such as increased closeness with an ill spouse (Hinrichsen, Hernandez, and Pollack 1992) or a heightened sense of purpose (O'Bryant, Straw, and Meddaugh 1990).

The Importance of Appropriate Care and Positive Interactions

Marital interactions at the end of life and appropriate physical care are critically important for widowed persons' psychological adjustment to loss. Being with one's spouse at the moment of death protects the widowed person from intrusive thoughts during the first six months of bereavement. Similarly, positive and high-quality spousal interactions during the final days are linked to significantly lower levels of anger among the

bereaved. However, consistent with attachment theory, positive spousal relationships are also related to more yearning in the first six months following loss. Persons with the strongest and closest attachments to their spouses may have painful periods of missing their partner (Bowlby 1980; Carr et al. 2000), yet they do not manifest more potentially harmful symptoms, such as anger. Anger is a particularly difficult symptom of loss, as it is linked to social isolation and rejection of social support among the bereaved (Parkes 1970).

Widowed persons' evaluations of their spouses' end-of-life care are powerful influences on psychological distress six months after the loss.4 Deaths that are attributed in part to physician negligence increase anger (compared to deaths without perceived negligence), while painful deaths are associated with more yearning, anxiety, and intrusive thoughts. One aspect of the dying process presumed to be "bad" for the dying patient is protective to the survivor; nursing home usage is linked to reduced anxiety among the surviving spouses. This finding is consistent with one of the core themes of stress theory: The institutionalization process may prepare spouses for the separation of widowhood and may spare them from the strains of direct caregiving, thus easing the psychological transition to widowhood.

Religion Shapes End-of-life Experiences

Religiosity protects the bereaved from high levels of anger and influences widowed persons' appraisals of the dying process. Widowed persons who had higher levels of (pre-loss) religious participation and reliance on religious coping reported significantly lower anger levels. Likewise, religious persons were less likely to report that their spouses were in pain during the final days, and they report less burdensome caregiving. An explication of the ways that religion affects coping is beyond the scope of this paper; yet these findings support recent claims that religion may provide meaning to older adults as they grapple with loss and the knowledge of their own impending deaths (Neimeyer 2001). Future research should focus on identifying aspects of religion that are protective to the older bereaved, given that religiosity is a broad concept comprising social support and participation, world views, and cultural practices and beliefs.

Limitations and Future Directions

One important aspect of "dying well," patient and family control over the type and duration of end-of-life care, was not considered in this study because treatment preferences were not measured in the Changing Lives of Older Couples data. Theoretical writings on "good death" emphasize that death quality reflects a concordance between the end-of-life treatment preferences of the dying person (or family members) and the actual experiences encountered in one's final days. The extent to which this concordance affects psychological distress of the survivor is an important line of inquiry. Recent legislation such as the Patient Self-Determination Act and moves by the American Medical Association (1996) and American Geriatrics Society (1995) to ensure the widespread use of advance directives and "living wills" are creating a sociolegal climate where dying patients will have more opportunities to state their wishes for how, when, and where they die. The implications of these choices for surviving family and friends are unknown. Future research is needed on the full array of consequences of end-oflife decisions, including the emotional consequences for family members when their treatment preferences diverge from the dying patient's (or from other family members').

Another core component of "dying well" is being cognitively intact, able to communicate, and aware of one's surrounding (Pierce 1999; Singer et al. 1999). By this definition, some illnesses and health conditions, such as Alzheimer's disease, delirium, or senile dementia may offer little hope of a "good death" (Brietbart, Chochinov, and Passik 1999). Yet, unlike other anticipated deaths which provide a time for discussions and closure, these illnesses may prevent the dying from establishing close and meaningful communication with loved ones and finding meaning in the dying process. Future research should explore the unique psychological consequences of widowhood among persons whose spouses suffered severe or prolonged cognitive impairment at the end of life.

A further limitation is that measures of death quality were evaluated solely from the surviving spouse's perspective. These reports may be biased, given that family members and care givers tend to rate the dying person's quality of life as poorer than the dying person's own report (Bretscher et al. 1999). Future research should explore the extent to which observers' appraisals of their spouses' final days agree with the dying patients' evaluations, and whether dying patients' evaluations of their death quality affects psychological adjustment of newly bereaved spouses. Finally, future research should explore ethnic, religious, and cultural variation in definitions of the "good death" and attitudes toward end-oflife issues, more generally. This information may be instrumental in developing culturallysensitive programs to assist bereaved elders.

Despite these limitations, this research has several important implications for health care policy and practice. A common concern among the families of persons who die in hospitals or other care facilities is that they do not have a place conducive to meaningful conversations with the dying (Hays et al. 1999; Pierce 1999). Efforts by care providers to ensure close contact between the dying and their kin will both enhance the well-being of the patient (Chappell 1991) and protect the survivor against the problematic grief symptoms of intrusive thoughts and anger.

These findings also suggest that improved end-of-life care and pain management programs may also enable a smoother transition to widowhood. However, access to pain management programs such as hospice, a formalized approach to the provision of palliative care, is often limited, especially for the financially disadvantaged. **Federal** requirements Medicare reimbursement state that a dying person must have a six-month survival limit in order to receive reimbursement for hospice. Health care providers and professional organizations could react to these constraints by developing consensus statements about appropriate end-of-life care or by improving the regulatory monitoring of end-of-life care. Such efforts may help to improve the quality of endof-life care and may shift physician efforts to pain management rather than medically futile attempts at prolonging life (Teno et al. 2000).

Scholars widely agree that comfort should be a primary goal of end-of-life care, with efforts focused on pain management and the minimization of psychological distress (Bradley

et al. 2000; Miller et al. 2000; Teno et al. 2000). Such efforts may enhance the wellbeing of bereaved spouses, as well as the dying.

APPENDIX A. Items Used to Construct Psychological Distress Measures

Depression (CES-D) ($\alpha = .83$)

I felt depressed.

I felt that everything I did was an effort.

My sleep was restless.

I felt lonely.

People were unfriendly.

I did not feel like eating. My appetite was poor.

I felt sad.

I felt that people disliked me.

I could not "get going."

Anxiety (SCL-90) ($\alpha = .86$)

Nervousness or shakiness

Trembling

Feeling suddenly scared for no reason

Feeling fearful

Heart pounding or racing

Feeling tense and keyed up

Spells of terror and panic

Feeling so restless you couldn't sit still

Feeling that something bad is going to happen to you Had thoughts and images of a frightening nature

Loss-related anxiety ($\alpha = .71$)

Afraid of what is ahead Felt anxious or unsettled

Worried about how you would manage your day-to-day affairs

Despair ($\alpha = .64$) Life seemed empty

Felt empty inside

Felt life had lost its meaning

Shock ($\alpha = .77$)

Felt in a state of shock

Couldn't believe what was happening

Felt emotionally numb

Anger ($\alpha = .68$)

Felt resentful or bitter about death

Felt death was unfair

Felt anger toward God

Yearning (α = .75)

Longing to have him/her with you Painful waves of missing him/her

Feelings of intense pain and grief Feelings of grief or loneliness

Intrusive thoughts ($\alpha = .66$)

Difficulty falling asleep, thoughts of him/her kept com-

ing into your mind

Tried to block out memories or thoughts of him/her Couldn't get thoughts about him/her out of my head

APPENDIX B. Zero-Order Correlations among Spousal Death Characteristics

| | | | Y | | | | | | | | | | | | |
|------------------------------------|-------|------|-------------|------|--------------|-------|------|-------|-------|------|-------|------|--------|--------|------|
| | (1) | (2) | (3) | (4) | (5) | (9) | (7) | 8) | 6) | (10) | (11) | (12) | (13) | (14) | (15) |
| (1) Acceptance of death | 1 | | | | | | | | | | | | | | |
| (2) With spouse at death | .03 | | | | | | | | | | | | | | |
| (3) Spouse in nursing home | .01 | .14 | | | | | | | | | | | | | |
| (4) Got along well, final days | 09 | 90: | 01 | | | | | | | | | | | | |
| (5) Burden to spouse | .28** | .12 | 03 | 20** | - | | | | | | | | | | |
| (6) Spouse led full life | 20** | 15* | 16* | .14* | 19** | | | | | | | | | | |
| (7) Spouse age at death | 14* | 19** | 90.– | .03 | 02 | .23** | İ | | | | | | | | |
| (8) Spouse in physical pain | .38** | .05 | 03 | 13 | **0 <i>L</i> | 14* | 02 | | | | | | | | |
| (9) Negligent M.D./hospital | 60: | 90: | 90.– | 60: | .16* | 06 | 20** | .18* | 1 | | | | | | |
| (10) Cause of Death: Cancer | .26** | .17* | .0 | 01 | .30** | 21** | 16* | .26** | 02 | | | | | | |
| (11) Cause of Death: Heart disease | 17* | 15* | 17* | 05 | 25** | .07 | 9. | 30** | 15* | 54** | I | | | | |
| (12) Cause of Death: Other | 06 | 01 | .17* | 90: | 03 | .14* | Π. | 80: | .18** | 40** | 56** | 1 | | | |
| (13) No warning | 43** | 11 | 15* | .01 | 33** | 04 | 9: | 29** | 03 | 26** | .29** | 07 | 1 | | |
| (14) < 6 months, forewarning | 60: | 9. | 14 * | 9. | .01 | .03 | 90.– | 05 | 01 | .14* | 12 | 01 | 55** | | |
| (15) > 6 months, forewarning | .37** | .07 | .31** | 04 | 35** | .01 | .02 | 36** | .05 | .12 | *** | 80 | - 47** | _ 47** | 1 |

NOTES

- 1. Although psychoanalytic perspectives suggest that conflicted and ambivalent marital relationships are associated with greater psychological distress after loss (Freud 1917), recent empirical research shows that the widowhood transition is most difficult for those in warm, close, and interdependent marriages (Carr et al. 2000).
- 2. Logistic regression models were estimated to identify the predictors of non-participation in the six-month followup interview. Baseline demographic and socioeconomic characteristics, physical and mental health, and spouse's physical health were evaluated as potential predictors of sample attrition. Age, baseline anxiety, and not being a home owner significantly increased risk of nonparticipation, thus these indicators are controlled in the multivariate analysis. Nonetheless, caution should be taken in generalizing these findings to the elderly population at large, as older, more anxious, and residentially mobile persons may be under-represented in the analytic sample.
- 3. Exploratory and confirmatory factor analyses were conducted to ascertain whether the individual death quality items formed conceptually and statistically distinct subscales. Separate analyses were conducted for the entire sample (N = 210), and the sudden death (N = 75) and anticipated death (N =135) subgroups. Generally similar findings emerged for each of the three samples. The factor analyses confirmed the two aggregated scales of death acceptance ($\alpha = .86$) and caregiving burden ($\alpha = .91$). However, the analyses did not yield subscales for the theoretically-guided dimensions of social support, timeliness, and appropriate care (complete results are available upon request). Moreover, the subscales generated had low reliability scores, seldom surpassing .2. For example, age at death and having led a full life may be conceptualized as indicators of "death timeliness," yet a scale comprising these two dimensions has a reliability score of roughly .1. Thus, each of these indicators is considered separately (rather than as components of an aggregated scale) in all analyses.
- 4. In order to evaluate whether these statistical relationships are endogenous (e.g., anger leads to recollections that the death was

painful), structural equation models were estimated, and non-recursive (i.e., two-way) relationships were evaluated. The analyses revealed that anger does not affect reports of physician negligence or survivor pain; rather, anger is a consequence of care quality.

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