

# Family Relationships and Advance Care Planning: Do Supportive and Critical Relations Encourage or Hinder Planning?

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**Objectives.** The effectiveness of advance care planning (ACP) may depend on family members' understanding of patient preferences. However, we know of no studies that explore the association between family relationship dynamics and ACP. ACP includes a living will, durable power of attorney for health care (DPAHC) appointment, and discussions. We evaluated the effects of three aspects of family relations—general family functioning, support and criticism from spouse, and support and criticism from children—on both overall ACP and specific DPAHC designations.

**Method.** Using multinomial logistic regression models and data from a sample of 293 older adults, we estimated the effects of family relationship quality on the likelihood of completing ACP and appointing a spouse or adult child as DPAHC. Analyses controlled for demographic and health characteristics.

**Results.** Better overall family functioning increased the odds of ACP. Higher levels of spousal support increased the odds of holding informal discussions, whereas spousal criticism reduced the odds of naming one's spouse as DPAHC. Both criticism and emotional support from children increased the odds that a child was named as DPAHC.

**Discussion.** Family dynamics affect ACP in complex ways and should be considered when patients and their families discuss end-of-life care and make DPAHC designations.

**Key Words:** Advance care planning—Durable power of attorney for health care—Family relationships—Social support—Social control.

At the end of life, most older adults suffer from chronic illness, physical discomfort, limited mobility, and compromised cognitive functioning. Under such conditions, they may be incapable of making decisions about their own medical treatments (Field & Cassel, 1997). As such, patients who have not formally articulated their preferences regarding end-of-life care may receive unwanted, futile, or costly medical interventions or may not receive those treatments they would have desired (Lambert et al., 2005). Difficult decisions about accepting or rejecting treatments often are left to family members who may not know the patient's preferences or who may disagree with one another or with health care providers about an appropriate course of care. When patients do not formally articulate their treatment preferences, they are more likely to be overtreated than undertreated, contributing to the high costs of medical care in the last 6 months of life; Medicare expenditures average roughly \$28,000 per person during that period (Walling et al., 2010).

In an effort to help ensure that patients' treatment preferences are formally articulated and communicated to care providers, the U.S. Congress passed the Patient Self-Determination Act (PSDA, 1990). This Act requires that federally funded hospitals and nursing homes give patients the opportunity to complete an advance directive (AD).

An AD has two components: a living will, which is a legal document specifying the medical treatments one would like to receive, and a durable power of attorney for health care (DPAHC), which designates a person to make decisions on behalf of the patient if he or she is incapable of doing so. Practitioners also encourage patients to discuss their preferences with family and care providers. Although such discussions are informal and not legally binding, they may help patients clarify and communicate their specific treatment preferences and general values to the persons who may represent them in the formal decision-making process (Doukas & Hardwig, 2003). Practitioners and researchers concur that a two-pronged approach to advance care planning (ACP) that encompasses both formal ADs and informal discussions is more effective than AD completion alone (Carr & Khodyakov, 2007a; Moorman & Carr, 2008). In practice, few people complete ADs in the absence of discussions. Although estimates vary across samples, roughly 90% of persons who do formal ACP also have informal discussions (Carr, 2012a; Carr & Khodyakov, 2007a).

Research based on population surveys documents that family structure affects whether, how, and with whom one engages in ACP; in general, married persons and parents are more likely than never married, divorced, widowed, and

childless persons to do ACP (Carr & Khodyakov, 2007a, b; Kahana, Dan, Kahana, & Kercher, 2004). Qualitative research further suggests that the effectiveness of ACP depends heavily on the cooperation, knowledge, and participation of family members (Kramer, Boelk, & Auer, 2006). However, we know of no studies that systematically evaluate the extent to which subjective aspects of family relationships—including both general family functioning and specific family relationships—affect whether, how, and with whom one prepares for the end of life. Our study takes advantage of a data set that obtained reports from older adults about both their ACP activities and a range of relationship quality assessments. We first examine the extent to which general family functioning affects the overall ACP strategy adopted by all persons in our analytic sample. We next examine the ways that positive and negative attributes of two specific relationships—marital and parent-child—affect the general ACP strategy of married persons and parents, respectively. We further explore whether the quality of one's relationship with spouse and children affects two distinct ACP outcomes: one's general planning strategy (i.e., AD with discussions, discussions only, or neither) and whom one appointed as DPAHC.

#### *Family Relationships and ACP*

A vast literature documents the protective effects of high-quality social relationships on health and health behaviors, where those with close and supportive relationships are more likely than those with tenuous or strained ties to engage in health-enhancing behaviors and enjoy better health (House, Landis, & Umberson, 1988; Kiecolt-Glaser & Newton, 2001). Two main explanatory mechanisms that account for these patterns are social support and social control. Social support perspectives emphasize that persons who have meaningful social ties are psychologically bolstered and encouraged by these ties; they may be more highly motivated to stay healthy for the good of their family members or may find their health enhanced due to the emotional and social support they receive from their kin (House et al., 1988; Thoits, 2011). Social control perspectives, by contrast, focus on the role of significant others in regulating a person's health behaviors (Lewis & Rook, 1999). Significant others directly encourage or cajole one another to engage in positive health behaviors, and these positive behaviors in turn enhance health and well-being.

Our research is motivated by the broad assumption that positive relationships with significant others enhance whereas negative relations impede health-promoting behaviors. We conceptualize ACP as a preventative health behavior, consistent with prior studies documenting that ACP ultimately predicts a better death and dying experience for the patient (Detering, Hancock, Reade, & Silvester, 2010; Teno, Gruneir, Schwartz, Nanda, & Wetle, 2007) and less distress for family members during and following the dying process (Teno et al., 2007). Our analyses and research

propositions are guided by the core themes of social support and social control perspectives.

Consistent with core themes of social support perspectives, we expect that warm and supportive relationships may enhance one's general tendency to engage in ACP and to appoint as DPAHC a family member with whom one maintains a high-quality relationship. First, we expect that persons reporting superior levels of general family functioning and more frequent emotional support from spouse and child will have a greater likelihood of engaging in ACP, relative to persons with poorer quality relationships. For DPAHC appointments, we expect that supportive relationships with one's spouse will increase the likelihood that one names their spouse as their advocate. Similarly, we expect that persons who rate their overall relationships with children positively will be more likely to name a child as DPAHC; however, for persons with more than one child, we cannot ascertain which specific child they designated. Research on older parents' caregiver choices, for example, shows that parents typically name the child with whom they are closest as their "preferred" caregiver in the future (Suitor, Gilligan & Pillemer, 2012). Further, adults often approach ACP with hesitation; thoughts of one's impending illness and ultimate death are potentially distressing and may trigger denial rather than active planning (Carr, 2012a). However, the availability of warm and supportive relationships has been found elsewhere to mitigate against distress and foster positive health behaviors (Thoits, 2011).

Consistent with the themes of social control, we might also expect that persons with high-quality relationships will be motivated to engage in ACP because their spouse or child encourages them to do so (Umberson, Crosnoe, & Reczek, 2010) or because they know that ACP may help to protect their loved ones from difficult decisions regarding end-of-life care (Carr, 2012b). Recent writings on social control perspectives further propose that the effectiveness of social control efforts may depend on the quality of one's relationship with the agent of control (Lewis & Butterfield, 2005). In general, positive interactions and tactics, such as helping and encouraging, are more effective than negative ones, such as reprimanding or nagging. Although we do not have direct measures of family members' behaviors, such as whether they initiated or urged conversations about end-of-life issues, prior theoretical and empirical work suggests that high-quality relationships may foster a loved one's compliance with health behaviors that are widely believed to be beneficial (Lewis & Butterfield, 2005).

The potential association between critical family relations and ACP is more complex, and either of two scenarios is plausible. On one hand, consistent with social support perspectives, critical interactions with a family member could dissuade ACP; a lack of perceived support may make a potentially distressing activity such as ACP even more stressful. Further, one's motivation to protect loved ones from difficult decisions may be minimized

among those with strained family relations. Specific DPAHC appointments also may be affected by relationship strain; a person who has strained relationships with one particular family member may be more highly motivated to name another family member as DPAHC, as a way to ensure that their advocate respects and carries out his or her wishes. Consistent with this proposition, a recent study of older adults' caregiver preferences showed that parents' least "preferred" future caregiver is the child with whom they have a strained relationship (Suitor et al., 2012).

On the other hand, consistent with social control perspectives, frequent criticism could increase the likelihood of ACP and the selection of the critical individual as DPAHC if such critical interactions reflect family members' active engagement and involvement with one another. Critical interactions may reflect concerned "nudging" to uphold a loved one's good health and healthy behaviors (Butterfield & Lewis, 2005). Our data do not capture one's interpretation of their loved one's motivation for being critical; as such, we can only explore whether such critical exchanges enhance or reduce the likelihood of both ACP and specific DPAHC appointments. However, we will also evaluate two-way interaction terms between positive and negative interactions with both children and spouse in an effort to differentiate between critical interactions accompanied by caring and concern, versus those that may be interpreted as controlling or mean spirited.

In sum, although past studies demonstrated that married persons and parents are more likely than unmarried and childless persons to engage in ACP (Carr & Khodyakov, 2007a, b), our study recognizes heterogeneity in these relationships and explores the distinctive ways that general family functioning, positive and negative aspects of marital and parental ties, and combinations of positive and negative interactions may encourage (or impede) ACP. All analyses are adjusted for demographic, socioeconomic, and health characteristics to account for potentially spurious associations between relationship quality and ACP. Prior studies reveal that each of these background characteristics is associated with both family functioning in later life (Silverstein & Giarusso, 2010) and ACP (Carr & Khodyakov, 2007a, b).

## METHOD

### Sample

The New Jersey End of Life study is based on a sample of noninstitutionalized adults aged 55 and older who are residing in New Jersey and receiving medical care on an outpatient basis at two large university hospitals and one comprehensive cancer center in New Jersey. To be eligible for the study, individuals had to speak English or Spanish, have no cognitive limitations, and have a diagnosis of one or more of the following health conditions according to the study sites' databases: colorectal cancer, Type II diabetes,

or congestive heart failure. These three conditions were selected as inclusion criteria because they have relatively high prevalence, thus ensuring that we have adequate sample sizes, and they strike men and women in roughly equal proportions (Federal Interagency Forum on Aging-Related Statistics, 2012). Other high-prevalence conditions, such as breast or prostate cancer, typically strike only one gender and are not comparable in terms of treatment and impact. These were important considerations for a study focused on end-of-life planning; focal conditions required at least some symptoms that affected daily life, given that persons who are asymptomatic may not think about ACP. A fourth group of relatively "healthy" patients seeking care at the study sites also was recruited; they had not been diagnosed with a life-threatening chronic illness (e.g., cancer, heart disease) at the time the database was searched for potential respondents although they could have other less serious conditions such as asthma, arthritis, or high blood pressure. Recruitment was conducted over the telephone from the three participating study sites.

The initial sampling frame included 1,146 patients who were identified as potential study participants by the general internal medicine department at the University of Medicine and Dentistry of New Jersey. Identifications were based on one's membership in one of the four illness categories described earlier. Of these 1,146 persons, 575 respondents met the inclusion criteria in the initial sampling pool. The final sample includes 305 persons who consented to participate, representing 53% of the 575 persons in the sampling frame deemed eligible for study participation. The most common reasons for nonparticipation, given that one was eligible for study participation, included reluctance to participate in research, frailty, and time constraints. Study participants had an average age of 69, and roughly two thirds of participants were women. Trained interviewers conducted 1.5-hr face-to-face structured interviews using computer-assisted personal interview (CAPI) technology; data were collected from 2006 through 2008. The survey obtained information on sociodemographics, health status and behaviors, end-of-life planning, attitudes toward medical treatments, and social relations.

### Measures

*Dependent variables.*—We use a composite indicator that captures the *type(s) of ACP* one engaged in. We initially created four mutually exclusive categories: formal AD (i.e., has living will or DPAHC) only, discussions only, both AD and discussions, or neither. Discussions are assessed with the question: "Have you discussed your future health care plans and preferences with any one? By future health care plans, we mean plans about the types of medical treatment you want or don't want to receive if you become seriously ill in the future." Only 12 persons (3.9%

of the sample) engaged in formal planning only, in the absence of accompanying discussions. We dropped from our analysis these 12 cases because this cell is too small for meaningful analyses; thus our final analytic sample is 293. Bivariate analyses reveal that those who engaged in formal planning only reported significantly poorer overall family functioning and higher levels of parent–child conflict relative to persons who engaged in two-pronged planning or discussions only.

We also investigate the specific DPAHC appointment made. Among married persons, we evaluate whether one *appointed spouse as DPAHC*, appointed another person, or have no DPAHC appointment (reference category). Similarly, among parents of living children, we identify whether they *named a child as DPAHC*, named another person, or have no DPAHC appointment (reference category). For respondents with more than one child, we cannot distinguish which particular child they named.

*Independent variables.—Relationship quality.* Our primary goal is to assess the extent to which general and specific aspects of family functioning affect ACP. *General family functioning* ( $\alpha = .89$ ) is assessed using the 10-item general functioning subscale of the McMaster Family Assessment Device (Epstein, Baldwin, & Bishop, 1983). This scale captures collective decision-making and coordinating family activities. Study participants are asked to indicate their level of agreement with statements such as “In times of crisis we can turn to each other for support” or “We are able to make decisions about how to solve problems.” Scale scores range from 1 to 4 and equal the average of responses across items; higher scores reveal more effective functioning.

We also consider the nature of one’s *marital relationship* and *relationship with children*. Respondents are asked to indicate separately how frequently their spouse and their child(ren) make them feel loved and cared for, are willing to listen when they need to talk about worries or problems, make too many demands on them, and are critical. Response categories are never, rarely, sometimes, and often. Items are drawn from the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988). Factor analyses yielded two subscales: *emotional support*, captured by the first two items, and *negative interactions*, captured by the latter two. Scale alphas for positive interactions are .66 and .64 for spouse and child, respectively. We measured negative interactions using only the single item indicating whether one’s family member is critical because alphas for the two-item negative interaction scales were unacceptably low ( $\alpha < .50$ ). The “demands” item may have not have been a valid relationship indicator for our older participants, upon whom few demands may be imposed. The positive and negative subscales are conceptually and

statistically distinct; the zero-order correlations between the two subscales were  $r = -.235$  for spousal relations and  $r = -.238$  for parent–child relations. In analyses focused on married persons only, we also control for *marital duration* (in years) because it is a correlate of marital quality (VanLaningham, Johnson, & Amato, 2001) and may affect the openness with which spouses discuss sensitive issues such as end-of-life care.

An observed statistical association between family relations and ACP could be spurious if both family relations and ACP are affected by a shared influence. Thus, we consider two sets of influences: demographic characteristics and health.

*Demographic characteristics.* Demographic characteristics include *age*, *gender*, *education*, *race/ethnicity*, *marital status*, and *number of children*. Marital status refers to whether one is currently married/cohabiting versus not currently married (reference group). In preliminary analyses, we used the more fine-grained categories of divorced/separated, never married, and widowed; the unmarried categories did not differ significantly from one another with respect to ACP. We use the dichotomous indicator to ensure adequate cell sizes. Race/ethnicity refers to whether one is non-Hispanic white (reference group) versus a member of an ethnic/racial minority (i.e., non-Hispanic black, Hispanic, or of another ethnicity). Prior analyses show that whites are significantly more likely than other three racial/ethnic groups to engage in ACP (Carr, 2011). To preserve adequate cell sizes and maintain parsimonious multivariate models, we use the simple dichotomous indicator of non-Hispanic white (referred to simply as “white” henceforth) versus not.

*Health characteristics.* We consider three indicators of health: self-rated health, functional limitations, and depressive symptoms. *Self-rated health* is assessed with a standard one-item rating (“How would you rate your health at the present time”); responses of fair and poor are coded as 1, and good or better comprise the reference group. We also adjust for *functional limitations* because compromised daily functioning due to health has been found to affect ACP above and beyond the effects of general health status (Bodnar-Deren, 2011). We use a dummy variable set equal to 1 if a person answered “yes” to either of the following: “In general have you had any of the following problems with your work, housework, or other daily activities as a result of your physical health: accomplished less than you would like and were limited in the kinds of work or activities you could do.” This measure is statistically distinct from self-rated health, as evidenced by the modest zero-order correlation ( $r = .26$ ). *Depressive symptoms* ( $\alpha = .80$ ) are assessed with a subset of nine items from the Center for Epidemiologic Studies Depression (CESD) scale (Radloff, 1977).

Table 1. Means (and Standard Deviations) or Proportions, New Jersey End of Life Study,  $N = 293$ 

	Total sample	Two-pronged ACP <sup>a</sup>	Discussions only <sup>b</sup>	No ACP <sup>c</sup>	<i>F</i> -statistic (df = 2)	Significant subgroup differences
Family relationship characteristics						
General family functioning	3.18 (0.47)	3.21 (0.46)	3.26 (0.42)	3.06 (0.52)	3.69*	<i>bc</i>
Emotional support from spouse <sup>d</sup>	3.67 (0.57)	3.63 (0.59)	3.82 (0.32)	3.62 (0.66)	1.61	
Criticism from spouse <sup>d</sup>	2.63 (0.88)	2.68 (0.83)	2.75 (0.81)	2.43 (1.01)	1.58	
Emotional support from children <sup>e</sup>	3.59 (0.61)	3.58 (0.51)	3.67 (0.62)	3.54 (0.73)	0.79	
Criticism from children <sup>e</sup>	2.10 (0.93)	2.21 (0.92)	2.14 (0.89)	1.87 (0.96)	3.15*	<i>ac</i>
Demographic characteristics						
Women	0.64	0.57	0.72	0.69	2.81*	<i>ab, ac</i>
Ethnic/racial minority	0.45	0.22	0.55	0.77	43.37***	<i>ab, ac, bc</i>
Age (years)	69.13 (8.72)	70.71 (8.58)	68.53 (8.88)	66.94 (8.40)	5.24**	<i>ac</i>
Education (years)	13.93 (4.59)	15.42 (3.97)	13.42 (3.59)	11.82 (5.36)	18.49***	<i>ac, bc</i>
Years married <sup>a</sup>	35.28 (16.88)	36.85 (17.25)	35.97 (16.25)	31.25 (16.37)	1.56	
Currently married	0.52	0.59	0.50	0.44	2.35	
Number of children	3.24 (2.37)	2.89 (2.49)	3.48 (2.16)	3.63 (2.25)	2.94	
Health characteristics						
Self-rated health, fair/poor	0.46	0.41	0.43	0.57	2.67	
Health limits activity (1 = yes)	0.66	0.67	0.68	0.63	0.33	
Center for Epidemiologic Studies	1.17 (1.23)	1.11 (1.11)	1.08 (1.12)	1.38 (1.47)	1.62 (0.20)	
Depression (range: 0–7)						
<i>N</i>	293	141	69	83		
%	100.0	48.1	23.5	28.3		

Notes. Range of responses for all family relationship scales is 1 to 4, where 4 represents higher levels of an attribute. Types of ACP: a = two-pronged, b = discussions only, c = no ACP. Post hoc comparisons were conducted using ANOVA; significant subgroup differences ( $p < .05$ ) are denoted as *ab* = two-pronged ACP versus discussions only; *ac* = two-pronged ACP versus no ACP; and *bc* = discussions only vs. no ACP.

<sup>d</sup>Calculated for 146 currently married persons only.

<sup>e</sup>Calculated for 244 parents of living children only.

Asterisks denote significance level of *F*-statistic, where \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

### Analytic Plan

We first calculate descriptive statistics for all measures, and analysis of variance (ANOVA) with post hoc tests evaluating statistically significant subgroup differences for the three ACP categories; results are presented in Table 1. We next estimate multivariate multinomial logistic regression models predicting the effects of general family functioning on ACP; the three mutually exclusive outcome categories are two-pronged approach (AD and discussions), discussions only, and no planning (omitted category). Results are presented in Table 2; this analysis is focused on the full sample because general family functioning is assessed of all persons ( $N = 293$ ) regardless of marital or parental status.

We then separately analyze the effects of marital quality on the ACP of currently married persons (Table 3,  $n = 146$ ) and parent-child relationship quality on the ACP of parents (Table 4,  $n = 243$ ). Model 1 in Tables 3 and 4 assesses the predictors of overall ACP, whereas Model 2 predicts the specific DPAHC appointments. For married persons (Table 3), we predict whether one appointed a spouse, another person, or had no DPAHC (reference category). For parents (Table 4), we predict whether one appointed a child, another person, or had no DPAHC (reference category). Finally, we evaluated two-way interaction terms between positive and negative relations among spouses and between parents and children in order to evaluate whether the effect of a loved one's criticism on ACP differs significantly based

on whether one also perceives that their family member offers love and emotional support.

## RESULTS

### Descriptive and Bivariate Results

Nearly half (48.1%) of study participants adopted a two-pronged approach to planning, having had discussions and having executed at least one of the two formal components of the AD (i.e., living will or DPAHC). Slightly less than one quarter (23.5%) had discussions only. More than one in four (28.3%) had done no planning. The ANOVA analyses indicate that one's planning strategy is associated significantly with general family functioning, criticism from children, gender, ethnicity, age, and educational attainment. Persons who did no ACP report poorer family functioning than those who did engage in ACP, whereas those who did no planning also reported significantly more frequent criticism from children, relative to those engaging in two-pronged planning. By contrast, we did not find significant differences across the ACP categories with respect to marital relations. Ethnic minorities and persons with lower levels of educational attainment are overrepresented among the non-planners. Persons who engaged in a two-pronged approach to planning are significantly older than those who made no preparations. We did not find significant differences across the planning subgroups with respect to physical, mental, or functional health status.

Table 2. Multinomial Logistic Regression Predicting Advance Care Planning, New Jersey End of Life Study,  $N = 268$ 

	Two-pronged approach	Discussions only
General family functioning	1.88† (0.91 – 3.87)	2.79* (1.24 – 6.27)
Demographic characteristics		
Women	0.86 (0.41 – 1.83)	1.32 (0.59 – 2.97)
Ethnic/racial minority	0.09*** (0.04 – 0.24)	0.37* (0.14 – 0.98)
Age	1.02 (0.98 – 1.07)	1.01 (0.96 – 1.06)
Education	1.12* (1.02 – 1.22)	1.05 (0.95 – 1.15)
Currently married	0.97 (0.45 – 2.08)	1.26 (0.57 – 2.79)
Number of children	1.03 (0.89 – 1.19)	1.04 (0.89 – 1.20)
Health characteristics		
Self-rated health	1.27 (0.57 – 2.80)	0.87 (0.39 – 1.95)
Functional limitations	2.73* (1.23 – 6.05)	2.24† (0.99 – 5.08)
Center for Epidemiologic Studies Depression	1.01 (0.76 – 1.34)	0.95 (0.71 – 1.29)
$\chi^2$ ; d.f.		93.43; 20
Nagelkerke pseudo $R^2$		.34
% ( $n$ )	49.3 (132)	22.8 (61)

Notes. Odds ratios (and 95% confidence intervals) are shown. Omitted category includes persons who did no advance care planning ( $n = 75$ , 28%). Symbols denote statistical significance levels of † $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

### Multivariate Results

*General functioning and ACP.*—The multivariate multinomial logistic model in Table 2 shows that higher levels of family functioning are significantly and positively related to the odds that one had discussions only and are marginally related to adopting a two-pronged approach to planning. With each one-point increase (on a four-point scale) in family functioning, the odds of holding discussions increase by a factor of 2.79 ( $p < .05$ ), and the odds of engaging in both formal and informal preparations nearly doubled (OR = 1.88,  $p < .10$ ), relative to engaging in no ACP.

Three other characteristics are associated with one's planning strategy in the full sample: race, education, and functional limitations. Ethnic and racial minorities are less likely than whites to engage in any of the two forms of ACP, with the largest racial gap evidenced for the two-pronged approach (OR = 0.09,  $p < .001$ ). Unadjusted bivariate analyses show that just one fifth of ethnic minorities but two thirds of whites engage in two-pronged planning. Each additional year of education is associated with a 12% increase in the odds of doing two-pronged ACP. Persons who perceive that their health limits their daily functioning are more than twice as likely as those who do not report functional limitations to engage in the two-pronged approach (OR = 2.73,  $p < .05$ ) or discussions only (OR = 2.24,  $p < .10$ ).

*Spousal relations and ACP.*—We next evaluate the effects of marital relations on one's general ACP planning (Model 1) and specific DPAHC appointment (Model 2) among married persons only, as shown in Table 3. In the models presented here, we simultaneously assess the effects of spousal support and criticism; the two measures are correlated only modestly ( $r = -.24$ ), suggesting that positive and negative

interactions coexist within a single marital relationship (Fincham & Linfield, 1997). In preliminary analyses, we estimated the effect of each marital attribute separately; effects were weaker and model fit poorer in the models including each measure separately (all models available from authors).

Emotional support from spouse increases the odds of having discussions (OR = 4.34,  $p < .05$ ). Neither criticism from spouse nor marital duration is associated with formal ACP. As we found in the full sample, non-White persons are significantly less likely than whites to adopt a two-pronged approach to ACP (OR = 0.06,  $p < .001$ ) or to have discussions (OR = 0.20,  $p < .05$ ).

We next focus on the specific outcome of DPAHC appointments. Slightly more than one half of the 146 married persons had no DPAHC ( $n = 74$ ); of the 72 who did, two thirds ( $n = 48$ ) named their spouse, and one third appointed another person ( $n = 24$ ). Of those 24, nearly all ( $n = 22$ ) named a child. These proportions are almost identical to those documented in other sample surveys of older adults (Carr & Khodyakov, 2007b). As the frequency of spousal criticism increases, the odds of naming one's spouse as DPAHC decreases (OR = 0.66,  $p < .10$ ) although this effect is only marginally significant. Highly educated persons are more likely to name their spouse as DPAHC, relative to having no DPAHC. Consistent with findings reported earlier, ethnic and racial minorities are significantly less likely than whites to have made any DPAHC appointments. The two-way interaction terms between positive and negative relations among spouses were not statistically significant and therefore not included in the final models.

*Parent-child relations and ACP.*—Finally, we investigate the extent to which emotional supportiveness and criticism from children affect ACP. The results in Table 4

Table 3. Multinomial Logistic Regression Predicting Advance Care Planning (ACP) and Durable Power of Attorney for Health Care (DPAHC) Appointment, New Jersey End of Life Study, Married Persons Only,  $n = 146$

	Model 1: ACP		Model 2: DPAHC appointment	
	Two-pronged ACP	Discussions only	Named spouse as DPAHC	Named other person as DPAHC
Emotional support from spouse	1.24 (0.43 – 3.53)	4.34* (1.09 – 17.30)	0.72 (0.30 – 1.71)	0.59 (0.20 – 1.75)
Criticism from spouse	0.95 (0.49 – 1.85)	1.79 (0.85– 3.79)	0.66† (0.37 – 1.19)	0.87 (0.42 – 1.75)
Years married	0.99 (0.96 – 1.03)	0.99 (0.96 – 1.04)	0.99 (0.96 – 1.02)	1.00 (0.96 – 1.04)
Demographic characteristics				
Women	1.27 (0.42 – 3.81)	2.87† (0.87 – 9.48)	0.47 (0.19– 1.18)	0.49 (0.16 – 1.49)
Ethnic/racial minority	0.06*** (0.02 – 0.21)	0.20* (0.05 – 0.76)	0.16** (0.05 – 0.53)	0.26† (0.06 – 1.06)
Age	1.01 (0.93 – 1.10)	0.99 (0.91 – 1.09)	1.02 (0.95 – 1.09)	1.00 (0.92 – 1.08)
Education	1.14† (0.99 – 1.30)	1.01 (0.87 – 1.16)	1.17* (1.04 – 1.32)	1.05 (0.91 – 1.20)
Number of children	1.09 (0.81 – 1.47)	1.05 (0.76 – 1.46)	1.17 (0.89 – 1.52)	0.96 (0.65 – 1.44)
Health characteristics				
Self-rated health	1.13 (0.34 – 3.62)	0.94 (0.28 – 3.18)	0.78 (0.29 – 2.08)	0.51 (0.16 – 1.67)
Functional limitations	2.21 (0.73 – 6.65)	1.92 (0.59 – 6.16)	1.34 (0.52 – 3.47)	4.21* (1.24 – 14.28)
Center for Epidemiologic Studies Depression	1.51 (0.81 – 2.81)	1.42 (0.75 – 2.67)	1.42 (0.85 – 2.36)	0.75 (0.37 – 1.53)
$\chi^2$ ; d.f.		56.84; 22		46.96; 22
Nagelkerke pseudo $R^2$		.37		.32
% ( $n$ )	54.1 (79)	22.6 (33)	32.9 (48)	16.4 (24)

Notes. Odds ratios (and 95% confidence intervals) are shown. Omitted category includes married persons who did no advance care planning ( $n = 34$ , 22.6%) in Model 1 and who did not appoint a DPAHC ( $n = 74$ , 50.7%) in Model 2.

Symbols denote statistical significance levels of † $p < .10$ ;  $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Table 4. Multinomial Logistic Regression Predicting Advance Care Planning (ACP) and Durable Power of Attorney for Health Care (DPAHC) Appointment, New Jersey End of Life Study, Parents of Living Children Only,  $n = 243$

	Model 1: ACP		Model 2: DPAHC appointment	
	Two-pronged ACP	Discussions only	Named child as DPAHC	Named other person as DPAHC
Emotional support from child	1.31 (0.67 – 2.57)	1.50 (0.73 – 3.07)	2.17† (0.99 – 4.76)	0.91 (0.48 – 1.73)
Criticism from child	1.20 (0.78 – 1.85)	1.40 (0.86 – 2.19)	1.64† (0.99 – 2.71)	0.86 (0.57 – 1.29)
Demographic characteristics				
Women	0.99 (0.44 – 2.25)	1.52 (0.64 – 3.57)	0.59 (0.23 – 1.52)	0.54 (0.26 – 1.13)
Ethnic/racial minority	0.10*** (0.04 – 0.26)	0.37† (0.13 – 1.04)	0.10*** (0.03 – 0.33)	0.31* (0.12 – 0.79)
Age	1.02 (0.97 – 1.07)	1.00 (0.95 – 1.05)	1.05 (1.00 – 1.11)	0.99 (0.94 – 1.04)
Education	1.18** (1.06 – 1.30)	1.04 (0.94 – 1.15)	1.07 (0.96 – 1.21)	1.22*** (1.10 – 1.35)
Currently married	1.05 (0.46 – 2.43)	1.32 (0.57 – 3.07)	0.27** (0.10 – 0.71)	2.44* (1.01 – 5.87)
Number of children	1.07 (0.921 – 1.27)	1.05 (0.89 – 1.24)	0.91 (0.71 – 1.15)	1.14 (0.95 – 1.36)
Health characteristics				
Self-rated health	1.16 (0.50 – 2.67)	0.84 (0.37 – 1.94)	1.16 (0.45 – 3.03)	0.98 (0.43 – 2.23)
Functional limitations	2.45* (1.05 – 5.71)	1.97 (0.85 – 4.56)	2.28 (0.82 – 6.35)	1.25 (0.57 – 2.23)
Center for Epidemiologic Studies Depression	0.96 (0.72 – 1.31)	0.93 (0.68 – 1.26)	0.79 (0.50 – 1.24)	1.14 (0.82 – 1.57)
$\chi^2$ ; d.f.		95.61; 22		120.84; 22
Nagelkerke pseudo $R^2$		.37		.46
% ( $n$ )	48.4 (118)	23.0 (56)	17.2 (42)	25.4 (62)

Notes. Odds ratios (and 95% confidence intervals) are shown. Omitted category includes parents who did no advance care planning ( $n = 70$ , 28.7%) in Model 1 and who did not appoint a DPAHC ( $n = 140$ , 57.4%) in Model 2. Symbols denote statistical significance levels of † $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

show no significant effects of either positive or negative interactions with children on ACP strategy. In preliminary analyses, we evaluated the effects of each dimension separately and again found no significant effects. However, for the models predicting specific DPAHC appointments, both higher levels of support and criticism from children increase the odds that one names a child as DPAHC. (OR = 1.64 and 2.17, respectively,  $p < .10$ ). These results are only marginally significant; results were virtually

identical in preliminary models where support and criticism were each entered into the model separately. The distinctive effects of each measure suggest that positive and negative interactions can occur within a single relationship; the zero-order correlation between emotional support and criticism is modest ( $r = -.25$ ). Two-way interaction terms assessing the combined effects of positive and negative interactions were not significant; thus, they are not included in the final models.

The selection of a DPAHC also reflects the availability of candidates to fulfill this role. Currently married parents are less than a third ( $OR = 0.27$ ) as likely as unmarried parents to name a child, yet are 2.4 times as likely to name a person other than the child as their proxy. Sample size precludes us from subdividing the category of “other person” into more fine-grained categories, yet descriptive analyses reveal that 77% of persons (i.e., 48 of 62) in the “other” category are spouses. Thus, older adults may turn to a child as their DPAHC when they do not have a living spouse who can carry out this important task.

Consistent with the analyses for the full sample and married person subsample, race and education are powerful predictors of nearly all ACP outcomes. Ethnic minorities are less likely than whites to have held discussions, to have adopted a two-pronged approach to ACP, and to have named either a child or another person (relative to none) as their DPAHC. Higher education increases the odds that one adopts a two-pronged approach to ACP ( $OR = 1.18, p < .01$ ) and that one bypasses their children and appoints another person as DPAHC ( $OR = 1.22, p < .001$ ).

## DISCUSSION

Our study demonstrated that family relationships affect both whether and how one engages in ACP. We found that emotionally supportive relationships do not uniformly enhance planning, whereas negative relations do not necessarily impede it. Guided by social support and social control perspectives, we also gained insights into the complex ways that marital and parent–child relationships affect one’s selection of a health care advocate or DPAHC. These findings carry potentially important implications for research on the protective effects of ACP and for practitioners who assist patients with ACP.

First, we found that persons reporting superior levels of general family functioning (e.g., sharing thoughts and feelings with one another, collaborative problem solving) were more likely to engage in either form of planning: the two-pronged approach of AD completion and discussion or informal discussions only. Importantly, we found a considerably stronger effect of family functioning on discussions ( $OR = 2.79$ ) compared with the two-pronged approach ( $OR = 1.88$ ). Prior studies have documented that formal planning often is instigated by a professional, whether a health care provider (Carr, 2012b) or a financial or legal planner, who may encourage adults to complete an AD at the same time that they do estate planning (Carr, 2012b). In the course of doing such planning, it is inevitable that one would also have at least some discussion of their end-of-life preferences. However, discussions that occur independently of and are not triggered by formal planning may be more sensitive to family functioning; an older adult’s level of comfort in broaching the potentially difficult topic of end-of-life care may be facilitated when family relationships are marked by open communication and sharing of one’s fears and feelings.

Second, we found that emotionally supportive relationships with one’s spouse are a powerful predictor of discussing one’s end-of-life care preferences although we do not find a similar protective effect for the outcome of two-pronged planning. We suspect that this pattern reflects the same processes described earlier; married persons, in particular, may do ACP when they complete a will (Carr, 2012a), and this action is likely unrelated to the quality of one’s relationship. However, married persons who feel loved and supported by their spouse may feel encouraged and supported as they raise the delicate topic of end-of-life care, a process consistent with core themes of social support perspectives.

Third, we find that critical relationships are not consistently or uniformly associated with either ACP or the selection of DPAHCs. Both social control and support perspectives suggest that critical relationships would dissuade positive health behaviors, either by creating a situation of tension and distrust or by lessening the incentive to engage in protective health behaviors for the good of one’s family members (Lewis & Butterfield, 2005). By contrast, we found that criticism from spouse and child did not significantly predict overall ACP. We further explored whether the effect of criticism would be moderated by positive support in an effort to discern the effects of mean-spirited criticism versus well-intended nudging; again, we found no statistically significant effects.

However, we did find that criticism from one’s spouse reduced the odds that one would name their spouse as DPAHC. It is plausible that individuals name as their DPAHC the person whom they think will listen to them and best represent their views in the end-of-life decision-making process; a spouse who is critical may be perceived as one who will do what they think is best, rather than carry out the wishes of and advocate for the patient. Although classic models of help seeking, such as the hierarchical compensatory model, suggest that older adults will typically turn to their spouse, then children, then other relatives (where available) as potential sources of assistance and support (Cantor, 1979), more recent writings suggest that older adults turn to those whom they viewed as ideally suited to the task for which one needs help (Noelker & Bass, 1994). Our results suggest that married persons will bypass the highly normative choice of spouse as DPAHC when their relationship is problematic.

Among parents, the selection of a DPAHC was affected by the quality of their relationship with child(ren), yet in opposing ways. Consistent with social support perspectives, we found that persons who received more emotional support from their (child)ren had elevated odds of naming a child as DPAHC. Yet we also found that higher levels of criticism from child(ren) also heightened the odds that one would name a child as DPAHC. Although this could be consistent with the social control–based notion of helpful “nudging” (as opposed to problematic nagging; Lewis &



Butterfield, 2005), we were not able to show this analytically, as the two-way interaction terms of support by criticism that we evaluated to try to parse the distinctive effects of warm versus less supportive criticism from children were not statistically significant.

Our results in this context may also reflect the varied nature of older adults' relationships with their children. The measures of support and criticism obtained in our study ask parents about "your children" rather than a specific child. Likewise, our measure of DPAHC selection captures only whether one chose "a child"—we do not know which particular child was named. It is possible that parents of multiple children are thinking about a different child when answering questions assessing support versus criticism. As such, highly supportive relationships with one particular child may increase the odds that one names that child as DPAHC. Likewise, persons who have highly critical relationships with one particular child may also be highly motivated to name another of their children as DPAHC. Research on older parents' selection of a caregiver shows that one's "preferred" caregiver is the child with whom one is closest, whereas parents also hope to avoid enlisting as caregiver the child(ren) with whom they maintain a strained relationship (Suitor et al., 2012). In a similar vein, parents' overall well-being was found to be more strongly affected by their worst-off child than their best-off child; as such, a particularly problematic relationship with one child may spur one to turn to another for support (Fingerman, Chen, Birditt, & Zarit, 2012). Future studies that specify precisely which child was named as DPAHC and that obtain specific child–parent relationship assessments would be invaluable in further delineating the precise ways that parent–child relationships affect ACP among older adults.

#### Limitations

Our conclusions must be interpreted in light of several limitations. First, as noted earlier, our assessments of parent–child interactions did not specify a target child but rather asked about "your children." Thus, we cannot ascertain whether the respondent was referring to the child with whom he or she is closest, most distant, or a composite of one's relationships with all children. Further, the study participants may not have thought about the same child when responding to questions about relationship quality and DPAHC appointments. Because study participants had on average three children, it is possible that criticism from one child increased the odds of appointing a different child as DPAHC.

Second, we obtained data from a single reporter only and thus have a necessarily one-sided appraisal of family relationships. As such, we do not know if a spouse or partner's criticism was intended to be helpful or hurtful. Further, we do not know the patient's interpretation although our

evaluation of two-way interaction terms represented an attempt to better capture a core concept underlying social control theory: helpful nudging (as opposed to problematic nagging). It is possible that the selection of a DPAHC hinges on the potential candidate's health, but we do not have data on family members' health status. For example, a married person may have a very close relationship with a spouse, but if the spouse has dementia, then grown children would be more plausible DPAHC candidates. Spouses also may engage in ACP together, and this action could be triggered by a spouse's health event rather than one's own health condition (Carr, 2012b).

Third, we considered the effects of spousal and parent–child relations separately. To include both in the same model would require that we further reduce our analytic sample to include married parents of currently living children. However, future studies should explore the extent which ACP is affected by multiple social relations. For example, persons with problematic marriages may invest more heavily in and evaluate more positively their relationships with children, and ACP may reflect these adaptations.

Fourth, the cross-sectional design limited our ability to ascertain causal ordering. It is plausible that the tenor of one's end-of-life discussions and decisions would affect family relationship dynamics. Finally, our sample is limited to older adults seeking medical care at a major medical center. Because the PSDA encourages patients to complete an AD, it is possible that their ACP activity was influenced during their contact with medical facilities.

#### Implications

ACP is considered an important step toward the receipt of patient-centered, cost-effective end-of-life care, yet rates of doing so typically range from just 50% to 70% among even the most vulnerable—older adults and persons with serious health concerns (Carr & Khodyakov, 2007a; Perkins, 2007; Silveira, Kim, & Langa, 2010; Teno et al., 2007). Patients who do not engage in ACP put themselves at risk of receiving unwanted and futile care, whereas their kin often are forced to make difficult treatment decisions that may cause friction within the family (Kramer et al., 2006; Teno et al., 2007).

Our findings reveal that those families who are best equipped to make collaborative decisions about end-of-life care and to weather the distress associated with bereavement are precisely the persons who engage in ACP in the first place, those with high levels of family functioning. By contrast, persons who evidence low levels of family functioning, including problematic decision making and communication styles, are the least likely to engage in ACP. As such, difficult and often contentious decisions about end-of-life care are falling to those whose relationships are already strained and who do not have the guidance of an AD or appointed DPAHC.

These results have important implications for both research and health care practice. First, our results suggest that studies documenting an association between lack of ACP and family strain at the end of life (Kramer et al., 2006) may reflect the fact that family relationships were compromised even prior to the patient's end of life, thus potentially challenging the assumption that ACP mitigates against family conflict at the end of life. Second, our study suggests that health care providers who take patients' health histories should consider adding a brief set of questions assessing both positive and negative aspects of one's relationships with spouse, children, and significant others. Further, professionals working with older adults could ask them to honestly appraise their family's problem-solving strategies and to think realistically about each family member's potential to be an effective advocate at the end of life. Interventions developed to facilitate discussions regarding end-of-life care and the selection of an appropriate DPAHC should be tailored to reflect family members' long-standing patterns of communicating and problem solving.

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