



Satisfaction with Long-Term Services and Supports Across the Continuum of Care

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by

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## 1. Introduction

Paying for long-term services and supports (LTSS) continues to be one of the great financial risks facing Americans during retirement. Current estimates suggest that the annual costs of care in a nursing home are roughly \$81,000 for a semi-private room and that home health care can cost upwards of \$25,000 per year.<sup>1</sup> Given that one in five individuals can expect to spend more than two years in need of care, this represents a significant financial risk. In 2011, expenditures on LTSS totaled \$211 billion or roughly 9% of personal health care spending.<sup>2</sup>

Over the past few years most of the policy discussion having to do with LTSS has focused on the issue of financing. Given the financial risk associated with the need for these types of services, this is not surprising. Yet the financing of care is only one part of the challenge resulting from an aging population. Another challenge relates to service delivery and more specifically, to whether the system of family care and paid care is in place to meet the needs of a population living longer and with more chronic and disabling conditions. There has been a great deal of research done on projecting the service needs of this population and the necessary infrastructure for providing these services.<sup>3,4</sup> The need for additional home health aides, companion services, geriatric nurses, as well as infrastructure investments in an aging nursing home system to care for disabled older adults is well known.

An equally important issue, however, relates to the quality of the services actually being provided across the continuum of care. From the perspective of older adults and their families, the quality of services is on the same level of importance as how to pay for them. This is because LTSS is really about personal care assistance focused on activities that must be performed on a daily basis -- activities of daily living (ADLs) such as bathing, dressing, toileting, transferring and the like. An estimated 69% of Americans aged 65 and older will need LTSS at some point during their remaining lives.<sup>5</sup> However, need for LTSS is not synonymous with need for paid services because most chronically disabled older adults rely largely on unpaid assistance from family members. Whereas Americans aged 65 and older who need LTSS are projected to need it for an average of three years, slightly more than half that time is expected to entail use of paid service providers.<sup>6</sup> This translates to more than a year and a half of paid care. Therefore, the quality of this care is of paramount importance to people making decisions about where to receive it, how to evaluate it, and what might be needed to make it better.

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<sup>1</sup> Market Survey of Long-Term Care Costs (2012). The 2012 MetLife Market Survey of Nursing Home, Assisted Living, Adult Day Services, and Home Care Costs. Met Life Mature Market Institute.

<sup>2</sup> O'Shaughnessy, CV. The Basics: National Spending for Long-Term Services and Supports. National Health Policy Forum, 2013. [http://www.nhpf.org/library/the-basics/Basics\\_LTSS\\_02-01-13.pdf](http://www.nhpf.org/library/the-basics/Basics_LTSS_02-01-13.pdf). Washington, D.C.

<sup>3</sup> Feder, J. and Komisar, H. (2012). The Importance of Federal Financing to the Nation's Long-Term Care Safety Net found at [www.Thescanfoundation.org](http://www.Thescanfoundation.org).

<sup>4</sup> National Spending for Long-Term Services and Supports. (2011). The National Health Policy Forum, Washington, D.C.. March.

<sup>5</sup> Kemper, P. (2011). Long-Term Services and Supports. Presentation to the National Health Policy Forum, Washington, D.C. June.

<sup>6</sup> Ibid, 2011.

## 2. Purpose

The purpose of this paper is to provide new information about how satisfied individuals are with the quality of the care that they are receiving from specific providers across the continuum of care and over time. By using data collected from a sample of private long-term care (LTC) insurance policyholders, we are able to examine issues of quality and satisfaction independent from cost constraints. The presence of LTC insurance, which generally covers all of the costs of home care and assisted living care and about 70% of nursing home care, minimizes or neutralizes the effects of cost on satisfaction levels for this sample. We also identify the factors associated with varying evaluations of quality, and determine whether and how these change over time. More specifically, we intend to answer the following questions:

- Are there changes over time in the level of satisfaction individuals express with the quality of the care that they are receiving in home care, assisted living, and nursing home settings over time?
- What are the specific intrinsic (characteristics associated with the individual) and extrinsic (characteristics associated with the provider) factors related to whether individuals' are satisfied with their service providers?
- Is there a clear relationship between the decision-making process and level of due diligence at the time that options are being considered that affects the subsequent probability of being satisfied with the service?
- What is the extent to which the presence of unpaid family members, reported presence of unmet need, or the service-related objectives or values of the individual influence whether or not there is satisfaction with service providers?

## 3. Data and Method

### *Data*

This project utilizes a very unique and rich private database that was developed by LifePlans under the auspice of the Assistant Secretary for Planning and Evaluation, Office of Disability, Aging and Long-Term Care Policy at the Department of Health and Human Services between 2004 and 2008. The purpose of the study was to obtain a comprehensive demographic, health, and attitudinal profile of individuals with private LTC insurance policies at the time that they begin using paid LTSS, and to understand the factors involved in the decision about how and why to use services in particular care settings (i.e. the home, assisted living or nursing facilities). Equally important, the study focused on understanding how and why people transition between care settings throughout the course of their disability and also assess the role of care management in the process.

The study tracked 1,474 individuals making claims on their long-term care insurance policies over a 28 month period. To qualify for sample inclusion in this analysis, the

individual had to have begun using paid services in their current service setting within the prior 120 day period or were expected to begin using services within 60 days. They also had to have an LTC policy that covered care in all three service modalities (i.e., nursing home, home care, and assisted living).

Each individual was visited in their home where a comprehensive assessment was performed by a registered nurse. The assessment covered information on basic demographics, health, disability and cognitive status, use of care management, and a behavioral evaluation. Information was collected on aspects of claimants' current living situation and physical environment.

After the initial in-person assessment was completed, there was a period of follow-up that consisted of a telephonic interview every four months, over 28 months, with all surviving sample members who were reachable and agreed to continue to be interviewed. Much of the data for the current study are based on the four month telephonic follow-ups that focused on people's experience and evaluation of their providers, changes in their own status, and whether and how their needs were being met. These data had not been analyzed, as it was not the focus of previously published studies.

Clearly, in terms of wealth status, the sample does not resemble the general population of disabled older adults. However, the original study demonstrated that in terms of health and disability status there are no differences between this sample of insured individuals and non-insured disabled older adults. Moreover, because these individuals had insurance coverage for LTSS, and were also likely to be able to contribute greater levels of their own resources should the need arise, income was less of a factor in the equation. The implication is that satisfaction and the evaluation of individual service providers is not confounded by issues related to the ability to pay for services. This enables us to isolate what is really behind the evaluation of service providers. The final analytic sample consists of 1,144 respondents answering the questions related to satisfaction.

### *Method*

We rely on a number of primary methods of analysis to answer the research questions. First, we use simple descriptive analysis to characterize whether a respondent is satisfied with their service provider and track changes over time. We also determine whether or not there are significant associations (correlations) between socio-demographic characteristics and provider characteristics to the probability of being very satisfied. Second, we employ Factor Analysis to gain insights into the underlying dimensions of the general concept of "*satisfaction*." Finally, to understand the independent effects of variables over time, we use Generalized Estimating Equations (GEE) which were first developed by Liang and Zeger (1986) as a method to analyze longitudinal data in which response variables are collected for the same subjects across time.<sup>7</sup> An extension of generalized linear models, GEEs facilitate regression analyses on dependent variables that are not normally distributed. GEEs estimate regression coefficients and standard

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<sup>7</sup> Using Generalized Estimating Equations for Longitudinal Data Analysis , Gary A. Ballinger, Organizational Research Methods 2004 7: 127

errors with sampling distributions that are asymptotically normal, can be applied to test main effects and interactions, and can be used to evaluate categorical or continuous independent variables. GEE estimates are the same as those produced by OLS regression when the dependent variable is normally distributed and no correlation within response is assumed.

In this study, our response variable “satisfaction” and independent variables are measured repeatedly at different points of time. The satisfaction response at any point of time is likely to be highly associated with prior observations, and therefore it is not a completely independent observation, something which can bias results in normal regression models. For that reason the GEE is the most suitable model to uncover the influence of independent variables on our “non-normally” distributed satisfaction response variable.

#### 4. Findings

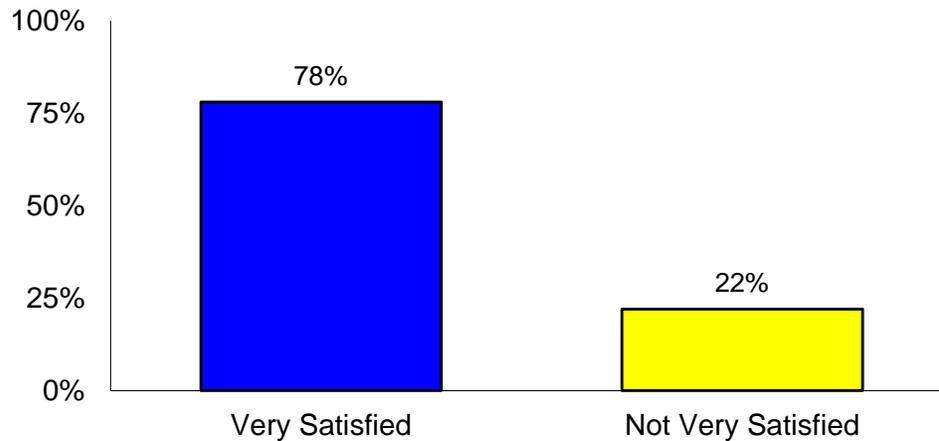
##### *Changes in Satisfaction Level with the Quality of LTSS over Time and by Care Setting*

The fundamental purpose of this research is to understand whether people using LTSS are satisfied with the services they are receiving. In the original study from which this data is derived, there were basic questions that asked respondents about their level of satisfaction with specific service providers, with their choice of service setting (nursing home, home care or assisted living), and whether or not they believed the care they were receiving was meeting their needs. Unless otherwise noted, we classify respondents into one of two categories: very satisfied or not very satisfied with their current paid caregiver, nursing home or assisted living facility.<sup>8</sup> In this sample, roughly four out of five respondents (78%) were very satisfied with their service provider at baseline.

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<sup>8</sup> The exact question from the original survey is as follows: “Overall, are you very satisfied, somewhat satisfied, somewhat dissatisfied or very dissatisfied with your current paid caregiver (for HC), your current nursing home or your current assisted living facility?” Individuals who answered somewhat satisfied, somewhat dissatisfied or very dissatisfied are classified as “not very satisfied” for the purposes of this analysis.

Figure 1: Distribution of Satisfaction at time of Baseline Interview



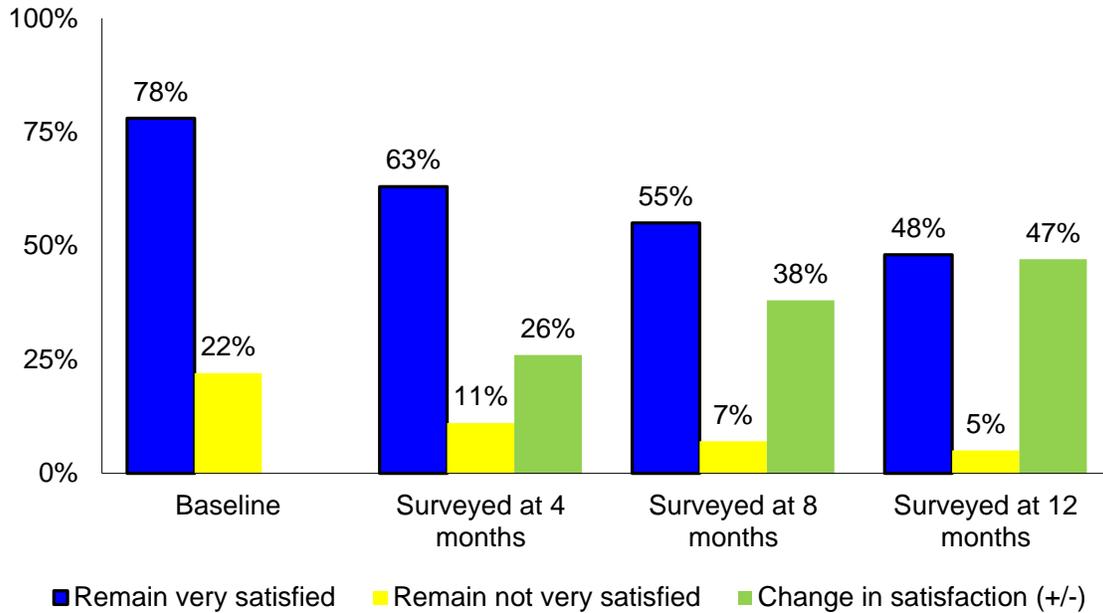
These individuals were queried very soon after they began using services. Typically, this is a time when the need for services is most acute and individuals are likely to be particularly grateful for receiving assistance. It is therefore not surprising that most individuals indicated that they were very satisfied with their service. For many, this was the first time that they were receiving paid services, and many had been receiving family care for an extended period before accessing the formal service system. By the time they did so, their level of need had likely increased, and therefore receipt of formal care complemented, rather than replaced, their family care.<sup>9</sup> Most of these individuals required ongoing LTSS for many months or years.

A key question is whether the high level of satisfaction exhibited at baseline persists over time. We asked respondents at four-month intervals the same satisfaction question that was asked at baseline. We show trends over a one year period and focus on the chance that an individual remains satisfied throughout the year. Figure 2 shows that satisfaction levels with service providers trend downward over time. This reflects a longitudinal view of experience for the same individuals, regardless of service setting.

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<sup>9</sup> Miller, J. and Shi, X., Cohen, M. (2008) “Following an Admissions Cohort: Care Management, Claim Experience and Transitions among an Admissions Cohort of Privately Insured Disabled Elders over a Twenty-Eight Month Period. Final Report.” Department of Health and Human Services, Office of Disability, Aging and Long-Term Care Policy. April.

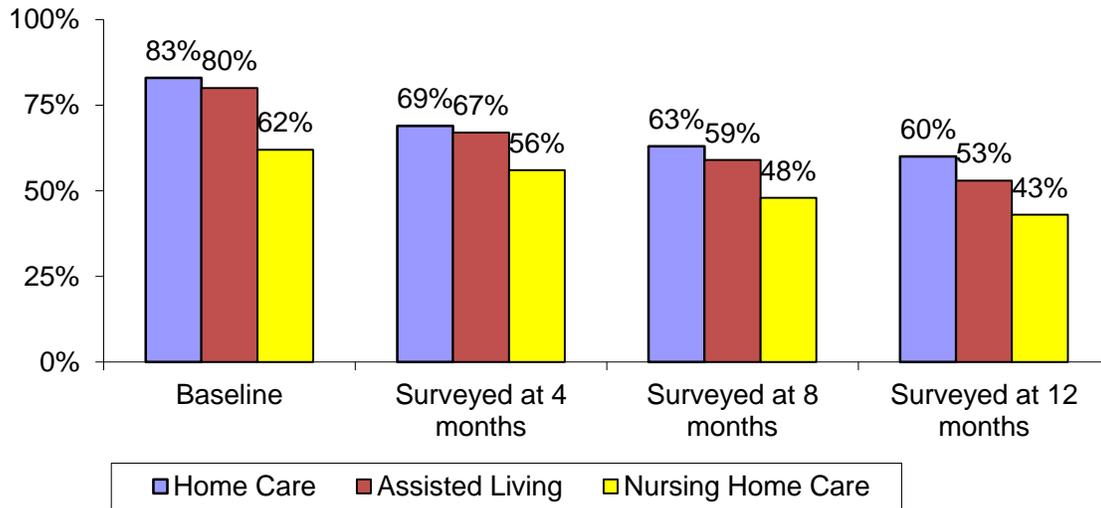
Figure 2: Satisfaction with Service Provider over Time



There are a number of important points to note. First, only about half of the sample remained very satisfied with their current provider one year after services commenced. Second, the proportion of individuals who were dissatisfied at baseline significantly declines over time. This suggests that people may have changed providers, their providers improved their level of service, or expectations were adjusted downward. Finally, satisfaction is not a static concept; that is, it fluctuates a great deal over time. This is evidenced by the fact that nearly half the sample had experienced some change in their level of satisfaction – either positive or negative - over the course of the year. An analysis focused exclusively on only those individuals who have survived throughout the course of the year yields similar results.

Given the differences in the nature and level of services that are provided in alternative service settings, one might have expected satisfaction trends to vary by such settings. However, as shown in Figure 3, across all three service settings, there are declines in the proportion of individuals remaining very satisfied over time.

Figure 3: Satisfaction Levels by Setting over Time

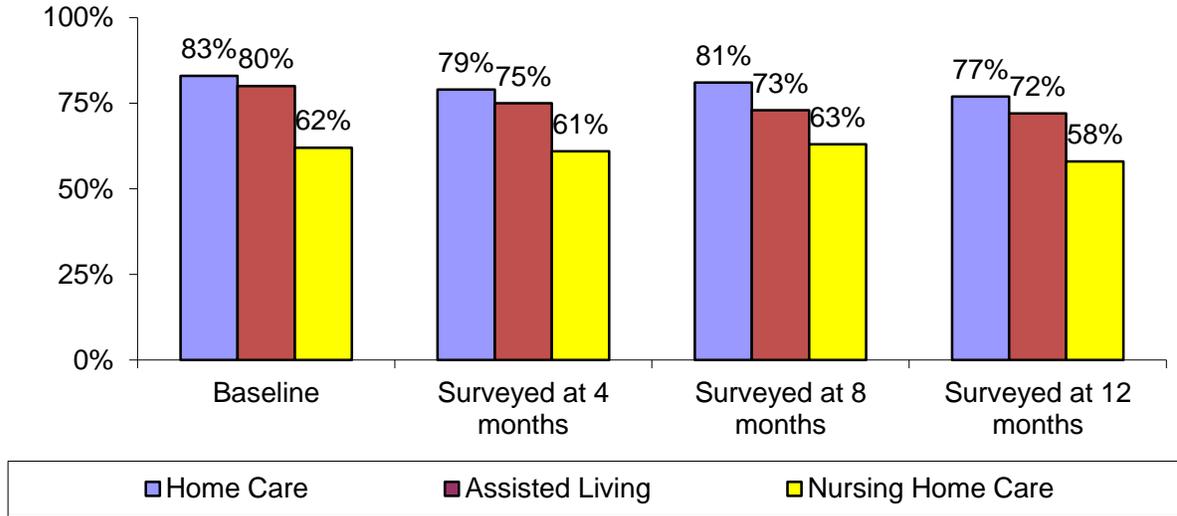


Not surprisingly, the highest proportion of individuals reporting that they are very satisfied with their services is residing at home. Moreover, higher proportions of this group maintain this level of satisfaction over time. In contrast, nursing home residents are the least satisfied at baseline and across all observation periods. The analysis also suggests that satisfaction levels may be at their highest when people first begin using care in a new service setting.

Our analysis has focused on the experience of individuals as they use services over time. One could instead view the experience of a cross-section of individuals at varying points of time in different service settings. The cross-section would be comprised of both new service users and those who continue to use services from previous periods. Viewing the data in this manner would allow us to test the hypothesis that satisfaction with services is highest when one first begins using a new service, even if one has previous experience using LTSS.

Figure 4 confirms that people have higher levels of satisfaction when they first begin services in a care setting, even though they may have been receiving care in a different setting for a period of many months. One possible reason for this may be that providers work hardest and put in their most effort at the outset of relationship-building with a new client, and then over time, there is regression to the mean. Another possible explanation is that over time, consumers expect that they will receive better care, while providers may become more relaxed or tend to take short cuts based upon their experience with the care recipient. Also the care recipient may feel a greater need for more care or different care and the provider continues to provide the same level of care with no re-evaluation or change to the baseline care plan. Finally, a higher proportion of home care and assisted living residents reported being very satisfied with their current provider than nursing home residents at baseline and at all waves.

Figure 4: Satisfaction Levels at Points in Time

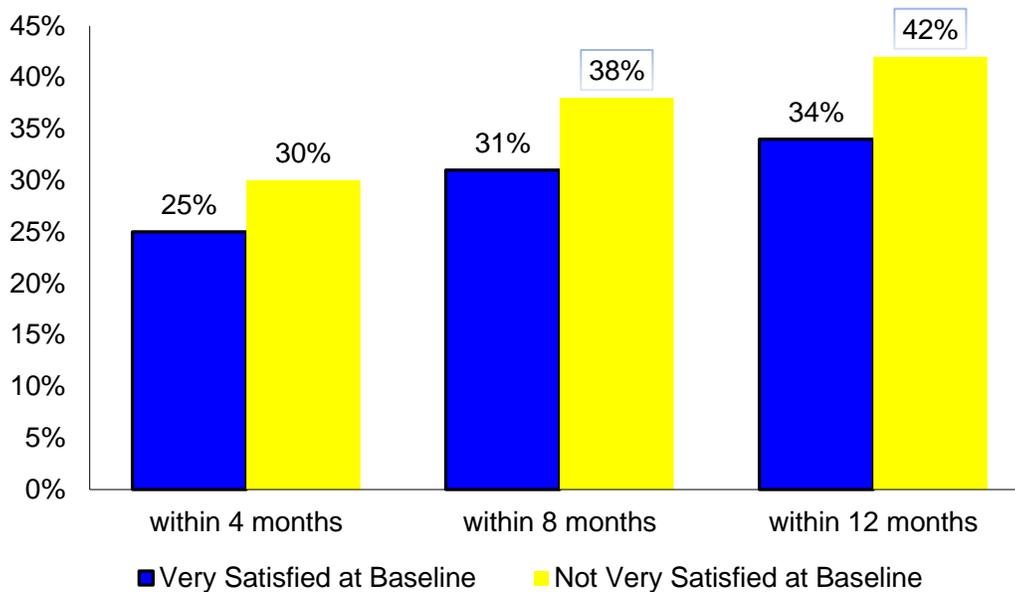


*Satisfaction with Quality of Care and Transitions between Care Settings*

Tracking the service use and attitudinal profile of respondents over time also allowed for the identification of transitions from one care setting to another. There are many reasons why a person might transition from one type of care to another. The most obvious is that a change in health or disability status necessitates such a move. However, people also may shift between care settings because they are not satisfied with their service. We were interested to determine whether or not one's baseline level of satisfaction was related to the probability of transitioning to a different care setting.

Figure 5 shows the relationship between baseline level of satisfaction and the subsequent probability of transferring to a different service setting.

Figure 5: Baseline Satisfaction Levels and Probability of Transferring Care Setting



Note: Boxes around percentages indicate significance at the  $p=.05$  level.

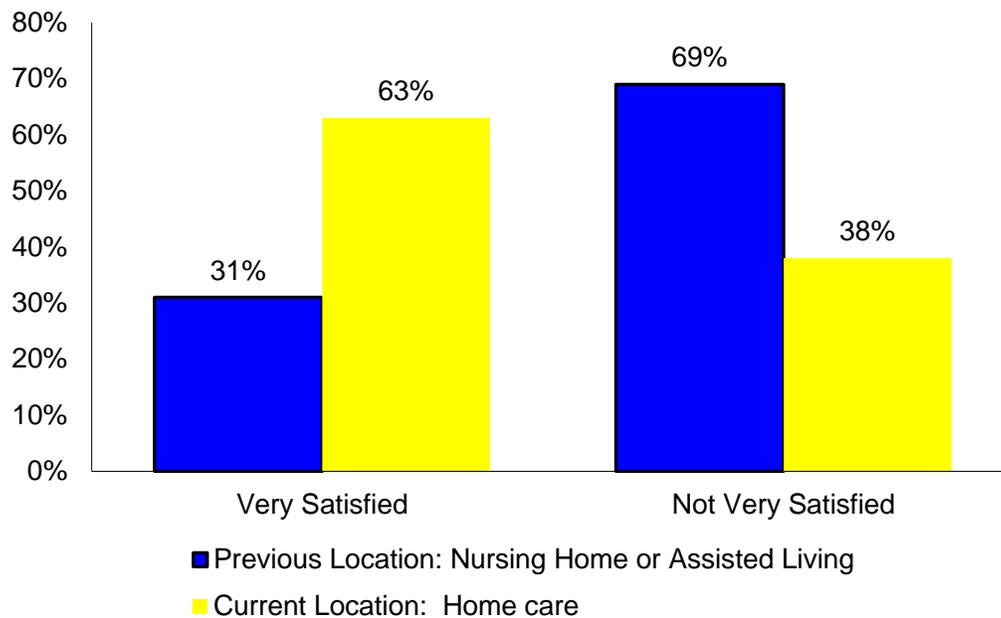
It is clear that those who are not very satisfied at baseline are significantly more likely to be observed at a different care setting within eight to twelve months. For example, 38% of those who said they were not very satisfied at baseline were likely to have transferred to a different service setting by eight months. This is significantly higher than the same proportion that transferred at four months. This may reflect the fact that respondents were willing to give their providers more time to meet their needs, but if they did not see improvement, they transferred to a different care setting.

It is a commonly held belief that when given a choice, those who require LTSS would prefer to receive it at home rather than in an institutional setting such as a nursing home. It also stands to reason that those receiving care at home would be more likely to report that they are very satisfied, in part because they can more easily terminate poorly performing caregivers than can individuals in institutional settings. We were able to observe those who transitioned to home care services after having been in a nursing home or assisted living facility, in order to see whether they were more or less likely to report being very satisfied with services after the transition.

Figure 6 shows that the proportion of care recipients who reported that they were very satisfied with their current provider increased from 31% to 63% after a transition to home care from a facility. This observation occurs over a one year period. Said another way, 31% of people said they were very satisfied when they were receiving care in a nursing home or assisted living facility and then when they transitioned to a home care setting, 63% said they were very satisfied.

Although not shown in this figure, we also looked at those who were receiving LTSS at home or in an ALF (a more home-like setting than nursing home) and then transitioned to a nursing home and found that satisfaction levels decreased. We also found that satisfaction at baseline was unrelated to whether or not a person ceased receiving care during the year. This is not unexpected given that we would anticipate disability status, the availability of complementary care, and even financial factors to have a greater influence over this decision to transfer between care settings than satisfaction levels.

Figure 6: Satisfaction Levels of those who Transitioned to Home Care from a Facility Setting



*Satisfaction with Provider by Intrinsic and Extrinsic Characteristics*

Understanding the relationship between decision making and satisfaction level is complex because perceived satisfaction can be influenced by so many factors. These factors can be related to the characteristics of an individual (intrinsic), such as gender, age, disability level, marital status, and more. They can also be shaped by attitudes associated with external characteristics (extrinsic) of the provider, such as skill level, perceived trustworthiness, communication skills and the like. We tested whether there was an association between a number of intrinsic and extrinsic characteristics and baseline satisfaction.

No single intrinsic characteristic was associated with satisfaction. That is, age, gender, marital status, disability status, and cognitive status, were not associated with whether or not someone was satisfied with their caregiver/provider, although as will be shown later, in the multivariate analysis, certain intrinsic variables are significant. Even in cases where family care was supplementing formal (paid) care, there was no discernible

difference in the probability of being satisfied. On the other hand, provider characteristics are clearly related to the perceived overall level of satisfaction (See Table 1 below).

Table 1: The Relationship between Specific Provider Characteristics and Satisfaction

Variable	Percent Very Satisfied
Individual has trouble understanding the caregiver	
Never	81% ***
Sometimes	63%
Always	64%
Caregiver/staff provides high quality care	
Always	87% ***
Sometimes	19%
Never	17%
Caregivers/staff are good at what they do	
Always	87% ***
Sometimes	20%
Never	----
Caregivers/staff are trustworthy	
Always	83% ***
Sometimes	25%
Never	----
Caregivers/staff are reliable	
Always	85% ***
Sometimes	26%
Never	17%
Individual gets along with the caregiver/staff	
Always	82% ***
Sometimes	31%
Never	-----
The caregiver/staff spends enough time with individual	
Always	86% ***
Sometimes	42%
Never	38%

Table 1: --- continued

Variable	Percent Very Satisfied
Individual feels safe	
Always	81% ***
Sometimes	21%
Never	0%
Individual has enough privacy	
Always	83% ***
Sometimes	44%
Never	46%

Not surprisingly, all of these provider-specific care-related attributes are associated with levels of satisfaction. For example, for those individuals who never have trouble communicating with their caregiver, 81% are very satisfied with their care. In contrast, only 64% of individuals who always find it difficult to communicate with their caregiver are very satisfied. If a caregiver is perceived to be unreliable, untrustworthy, or not very good at what they do few care recipients will be very satisfied with the service.

A key question is whether or not these variables can be grouped together in some way to capture the key conceptual categories that comprise the notion of satisfaction. In order to determine this, we conducted a Factor Analysis, which is a statistical technique used to find patterns and connections between multiple variables, that describe an underlying concept – in this case, what it means to be satisfied with a care provider. Factor Analysis is a data reduction technique where variables that measure the same underlying dimension cluster together to form a Factor. These Factors allow us to quantify the effects of individual variables on the underlying dimensions of satisfaction as well as determine how many dimensions there are.

Table 2 shows that there are two Factors extracted from the nine variables that were tested. These two Factors together explain 51% of the variance between the variables. The variables that comprise the first Factor to a large degree capture the quality of the caregiver’s technical skill – in other words, how good they are at their job. In contrast, the variables comprising the second Factor are more related to the nature of the relationship between the care receiver and the caregiver. This factor seems to capture more of the qualities that would set the care recipient (and their family) at ease with having a non-family member performing such personal and important tasks. While both are important, the first – technical skill – seems to capture more of what comprises satisfaction.

Not shown in the table is that fact that these factors do remain relatively stable over time, although there are changes in the importance of the individual variables. The analysis was conducted at each of the waves and the same factors representing technical skill and relationship characteristics were revealed. However, whereas at baseline the

“trustworthiness” of the caregiver was the 7<sup>th</sup> variable in order of importance, by Wave 4 it had become the 4<sup>th</sup> most important variable.

Table 2: Principal Component Factor Analysis Results on Satisfaction level (All Care Settings)

Underlying Variables Tested	Components	
	Factor 1	Factor 2
Caregivers/staff provide high quality care	.844	.136
Caregivers/staff good at what they do	.823	.206
Satisfied with current staff/caregivers	.756	
Reliable caregivers/staff	.738	.273
Spend enough time with individual	.579	.283
Individual feels safe	.503	.478
Trustworthy caregivers/staff	.491	.457
Does the individual have trouble understanding the caregiver/staff		.695
Individual gets along with caregiver/staff	.306	.642
Has enough privacy	.192	.616

Factor 1: Eigenvalue is 4.36 and % of variance explained is 43.5%

Factor 2: Eigenvalue is 1.042 and % of variance explained is 10.4%

Total cumulative variance explained is 54%

We also tested whether or not the same Factors are derived for each of the three care settings. We found that for the institutionally-based services – nursing home care and assisted living – the factors are essentially the same. However, for the home care setting an additional Factor emerges (See Table 3).

The first factor remains the same for the home care setting in that the quality of the technical skills of the caregiver remain important. However, something interesting happens to that second factor that captured the qualities related to the relationship between the caregiver and care receiver – it splits into two different and distinct facets of the relationship for those receiving care at home. The first facet (shown as the second factor in table 3 and comprised of getting along with each other, feeling safe and having enough privacy) relates more to a sense of physical security within the relationship between the caregiver and receiver. The second facet (shown as the third factor in table 3 and comprised of perceived trustworthiness and being able to communicate with the caregiver) has more to do with a sense of emotional security. It is not surprising that this last factor emerges in the home care setting. These variables that constitute the third factor capture a qualitatively different dimension of satisfaction, one related more to the emotional connection with the caregiver. In the home care setting, the individual is opening up their home and private space to the caregiver. To do so comfortably would

require that a level of trust be built with the caregiver and this is also a function of the ability to communicate clearly with the individual. This had much less to do with physical security, or even the precise types of assistance provided, but rather, the sense of emotional well-being felt in the presence of the caregiver. This third Factor likely captures elements of this additional dimension of satisfaction.

Table 3: Principal Component Factor Analysis Results on Satisfaction Level in Home Care Service Setting

Underlying Variables Tested	Component		
	Factor 1	Factor 2	Factor 3
Reliable caregivers/staff	.807	.068	.181
Caregivers/staff good at what they do	.800	.231	.154
Caregivers/staff provide high quality care	.791	.204	.223
Spend enough time with individual	.547	.198	-.116
Individual gets along with caregiver/staff	.165	.759	-.145
Has enough privacy	.195	.602	.096
Individual feels safe	.292	.524	.272
Trustworthy caregivers/staff	.275	-.080	.835
Does the individual have trouble understanding the caregiver/staff	-.079	.548	.654

Factor 1: Eigenvalue is 3.29 and % of variance explained is 36.6%  
 Factor 2: Eigenvalue is 1.14 and % of variance explained is 12.7%  
 Factor 3: Eigenvalue is 1.02 and % of variance explained is 11.4%  
 Total cumulative variance explained is 61%

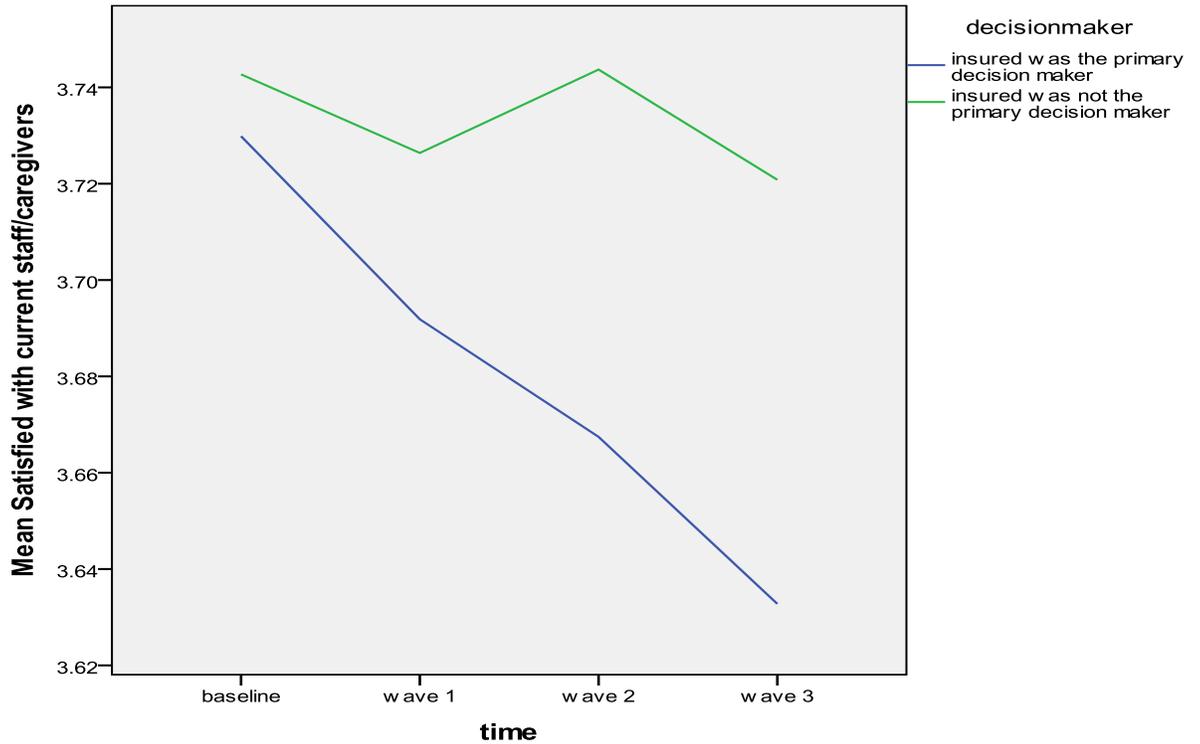
### *Decision-Making and Satisfaction*

We also sought to understand whether or not baseline satisfaction was related to the level of involvement or due diligence exhibited in the care selection process. Respondents were asked whether (a) the care setting represented their first choice; (b) they were the primary decision-maker; (c) they had interviewed the caregiver before hiring them; (d) they collected information about the care setting, and; (d) they compared costs before making a decision. Somewhat surprisingly, none of these variables were associated with satisfaction at baseline. This suggests that how you arrive at a decision regarding care selection is of much less importance to your initial satisfaction level than the actual results of the decision. Ultimately what matters most when commencing use of services is the way the care is actually delivered.

When we tracked satisfaction over time, and correlated it with decision-making variables we did find a greater decrease in satisfaction over time in cases where the individual was not the primary decision-maker. Figure 7 below summarizes results. Note that for the

purposes of this analysis the satisfaction variable was coded as follows: 1=very unsatisfied, 2=unsatisfied, 3=somewhat satisfied and 4=very satisfied.

Figure 7: Satisfaction Score by Decision-Making Status



A similar result was observed for individuals for whom the baseline service setting did not represent their first choice. While there may not have been significant differences at baseline, after four months of care, such individuals experienced sharp declines in satisfaction. No other variables displayed this pattern over time. Taken together, these findings suggest the impacts of these variables on satisfaction levels only manifest over time.

### *Multivariate Modeling*

As mentioned, in order to capture the independent impact of variables on satisfaction, we use Generalized Estimating Equations (GEE). These models are particularly applicable to this dataset. First, there will be respondents for whom we do not have complete data across all time periods; for example, some people dropped out of the study or died during the measurement period. GEE models can use what is called “unbalanced data” (i.e. two observations for some people and up to four for others), which maximizes the number of data point available for the analysis. Second, time is treated as a continuous variable so that respondents do not have to be measured at exactly the same time which is particularly useful when follow-up times are not uniform across respondents (due to scheduling of calls). Third, both time-invariant variables like gender as well as time-varying covariates are included in the model to assure maximum explanatory power. Finally, the equation that is ultimately developed can be used to estimate change in satisfaction over time.

Given that our dependent variable captures whether a respondent is very satisfied with their service provider, cognitive status can surely introduce a level of variability into the model that could mask the importance of other variables. For the cognitively impaired, proxies such as a spouse or adult child tended to complete the interview protocol. For that reason, we present three models including one based on the total sample, a second based on the sub-sample of individuals who are cognitively intact, and a third based upon the sub-sample of individuals who are cognitively impaired. The number of respondents and observation points in each of the samples is:

- (1) Full sample: 988 individuals and 2,409 observation points;
- (2) Sub-Sample of cognitively intact: 635 individuals and 1,461 observations points;
- (3) Sub-Sample of cognitively impaired: 353 individuals and 948 observations points.

Table 4 on the following page summarizes results. Where appropriate we point out key differences in findings between the sub-samples. Statistically significant variables are bolded. For this model, we used a cut off of  $p=.10$  for the significance test because we believe that understanding what at least 90% of the older adults in this sample associate with high satisfaction is sufficiently significant to warrant attention.

Figure 4: General Estimating Equations for Satisfaction with Long-Term Services and Supports

Factors	All		Cognitively Intact Individuals		Cognitive Impaired Individuals	
	B	Sig.	B	Sig.	B	Sig.
(Intercept)	0.072	0.844	0.020	0.964	0.796	0.178
Individual is age 85 or above	0.080	0.539	0.212	0.216	-0.258	0.215
Individual is female	-0.223	0.122	-0.023	0.889	<b>-0.573</b>	<b>0.024</b>
Individual is married	-0.057	0.691	0.058	0.735	-0.388	0.111
Individual was cognitive impaired	0.022	0.880				
Individual had 3 or more ADL limitations	0.015	0.903	0.063	0.671	0.062	0.763
Key value: Feeling safe where I am	0.248	0.199	0.157	0.508	0.435	0.177
Key value: Having someone available to assist me when I need them	0.199	0.260	0.002	0.992	<b>0.618</b>	<b>0.044</b>
Current care setting was first choice of individual	-0.133	0.411	-0.119	0.604	-0.164	0.464
Individual was involved in the decision making	0.079	0.577	0.061	0.709	0.130	0.644
Different paid caregivers/facilities were interviewed before the decision about care was made	0.018	0.903	0.074	0.702	-0.148	0.516
Cost was an important consideration in decision to use paid care	<b>-0.239</b>	<b>0.071</b>	-0.166	0.328	<b>-0.514</b>	<b>0.020</b>
Costs were compared among different paid caregivers/facilities	-0.153	0.335	-0.244	0.215	0.185	0.471
An effort was made to obtain information on care providers	0.165	0.238	0.049	0.790	0.202	0.326
Individual currently receives unpaid care	<b>-0.270</b>	<b>0.013</b>	-0.170	0.235	<b>-0.388</b>	<b>0.016</b>
Individual currently uses care manager	<b>-0.492</b>	<b>0.009</b>	<b>-0.495</b>	<b>0.031</b>	-0.458	0.152
Interaction term between having a care manager and time	<b>0.208</b>	<b>0.090</b>	0.139	0.365	0.288	0.136
The individual reports no unmet need	<b>1.423</b>	<b>0.000</b>	<b>1.430</b>	<b>0.000</b>	<b>1.228</b>	<b>0.000</b>
The individual's health is expected to deteriorate	<b>0.323</b>	<b>0.013</b>	<b>0.420</b>	<b>0.011</b>	-0.113	0.627
Home Care Residents	<b>0.670</b>	<b>0.000</b>	<b>0.491</b>	<b>0.024</b>	<b>1.052</b>	<b>0.003</b>
Nursing Home Residents	<b>-0.763</b>	<b>0.000</b>	<b>-0.957</b>	<b>0.000</b>	<b>-0.576</b>	<b>0.012</b>
Assisted Living Residents	0.000	.	0.000	.	0.000	.
Time (number of times we interviewed an individual)	<b>-0.136</b>	<b>0.003</b>	<b>-0.133</b>	<b>0.024</b>	<b>-0.134</b>	<b>0.068</b>

The descriptive analysis presented previously showed an association between satisfaction and time; more specifically, the longer an individual used services, the less likely he/she was to be satisfied. We posited, however, that this could be due to the fact that the individual's situation may have been worsening, and that their increased need was not being addressed adequately by the caregiver. The GEE analysis allows us to untangle these effects and capture the independent impact of each of the variables on the probability of being satisfied. It shows, for example, that holding all other variables constant, there is a negative relationship between satisfaction and the amount of time one uses a service. This is true for the entire sample as well as the sub-groups defined by cognitive status.

Somewhat surprisingly, when controlling for other variables, disability and cognitive status do not influence the probability of being satisfied with the service. Nor do any other socio-demographic variables. When focusing exclusively on female individuals who are cognitively impaired, their proxies were less likely to report being satisfied with services.

When people begin using services, they are trying to fill a need, and also to maximize certain values related to their service choices. In this study, respondents were asked to rank among a list of five value statements, which were most important to them. Along with the percentage of respondents that ranked a particular value as most important, the five items included<sup>10</sup>:

- (1) Having someone available to assist me when I need them (53%);
- (2) Feeling safe where I am (28%);
- (3) Having control over my own schedule/daily routines (8%);
- (4) Maintaining personal privacy (7%), and;
- (5) Being around peers and acquaintances (4%).

We tested these variables and with the exception of one – having someone nearby to help when I need them – none were significant. Moreover, this variable was significant only for the sub-sample of individuals with cognitive impairment. When this is the most important value for these people, there is an increased chance that they will be satisfied with their service. Given that cognitively impaired individuals are more likely to require stand-by and queuing assistance -- rather than actual physical assistance for ADL loss – this is expected. For the cognitively intact, the mere presence of a caregiver is not as important as having someone actually providing the care and this is reflected in the insignificant coefficient on this variable.

The extent to which the individual was involved in the actual decision-making about the specific provider had no subsequent effect on whether or not they were satisfied with the provision of care; this is true even in cases where the care setting was not the first choice

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<sup>10</sup> Cohen, M., Miller, J. and Shi, X. (2006). "Service Use and Transitions: Decisions, Choices and Care Management among an Admissions Cohort of Privately Insured Disabled Elders." Department of Health and Human Services, Office of Disability, Aging and Long-Term Care Policy. December.

of the individual. As well, whether or not the individual went to the effort of obtaining information on the caregiver, compared costs among different providers, or even interviewed caregivers did not affect their ultimate evaluation of the care provider.

However, when cost was an important consideration in the decision to use paid care this did have a negative impact on the probability of being satisfied. At the time of these interviews, the average monthly costs of care nationally were \$5,561 for nursing home care, \$2,653 for assisted living and \$3,601 for home care.<sup>11,12,13</sup> When cost is an important consideration in the choice of care, individuals are less likely to be satisfied, which suggests that they are evaluating satisfaction in a *relative* not *absolute* sense. That is, they are not asking the question “...am I satisfied or not” but rather, “...am I satisfied relative to what I am paying?” This is a qualitatively different evaluation and the findings presented here suggest that the cost-conscious are less satisfied, even in the presence of significant private insurance coverage for care in these alternative settings. The fact that these individuals may be more conscious about cost may have led them to choose lower cost providers. To the extent that lower cost is associated with lower quality, this may have resulted in lower levels of satisfaction.

We also focused on whether or not the presence of unpaid and paid caregivers working in concert would have an effect on satisfaction with the latter. The negative coefficient on this variable indicates that when there are unpaid caregivers, there is a lower likelihood of satisfaction with the paid caregiver. For the most part unpaid caregivers are spouses, children or other relatives. Given the highly personal nature of the services that are provided – assistance with personal care activities – perhaps it is expected that care receivers would be less satisfied with paid caregivers, in a *relative sense*. That is, the comparison being made is with family caregivers. On the other hand, paid caregivers are usually better trained in this type of caregiving, have varied experience, and additional resources that may not be available to the family. Thus, one might have expected a different result.

Fewer than one-in-five individuals used a care manager to assist in organizing services. However, for those who did, there are two surprising results. First, when a care manager is used, there appears to be a lower likelihood of being satisfied with services. The coefficient on this variable is negative. On the other hand, when this variable is interacted with time, there is a positive and significant coefficient. This suggests that when people use a care manager, they may start out being less satisfied with services, but over time, and compared to those without a care manager, the chance of being satisfied increases. A likely explanation is that at the time of service initiation, there is often a general reluctance to have to rely on formal (paid) caregivers to assist with daily

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<sup>11</sup> MetLife Mature Market Institute (2007). The MetLife Market Survey of Nursing Home & Assisted Living Costs. September.

<sup>12</sup> MetLife Mature Market Institute (2007). The MetLife Market Survey of Adult Day Services and Home Care Costs. October.

<sup>13</sup> Miller, J. and Shi, X., Cohen, M. (2008) “Following an Admissions Cohort: Care Management, Claim Experience and Transitions among an Admissions Cohort of Privately Insured Disabled Elders over a Twenty-Eight Month Period. Final Report.” Department of Health and Human Services, Office of Disability, Aging and Long-Term Care Policy. April.

activities. The job of a care manager is to actually get services in place as quickly as possible to assure that the needs of the individual are met. Thus, there may be an associated negative sense about both the care manager and the initiation of services that dissipates over time, especially as the care manager takes on a continued advocacy role for the individual. Clearly, as the functional or cognitive status of the individual changes, having a care manager available to assure that changes in care plans match changes in need, should – and likely does – increase the chance of being satisfied with service. Data presented here bears this out. Note also that this finding is significant only for those who are cognitively intact.

Clearly, the decision to use paid services is related to filling a need that cannot be met with unpaid caregivers alone, if at all. The primary and most important role of a paid caregiver is to meet the needs of the individual. The single most important explanatory variable related to the probability of being satisfied with a caregiver is whether there is unmet need. In cases where there is no unmet need, individuals tend to be very satisfied with their caregiver. This finding is consistent across each of the sub-groups.

The nurses conducting the interviews were asked in the interview protocol to give their assessment as to whether the individual was expected to improve, stay the same or deteriorate. These clinical predictions were shown to be significant predictors of mortality.<sup>14</sup> We hypothesized that here too there would be an impact on whether people are ultimately satisfied with their service providers. In fact, the variable is significantly related to the probability of being very satisfied, but not in the way one would have expected. Individuals whose health is predicted to worsen are more likely to be satisfied with their service providers than are those who are predicted to improve or stay the same. A possible explanation for this is that during a period of general decline, for which there is a diminishing chance of recovery, people are less likely to hold their caregivers to the same standard as might be the case when there is a chance of real improvement. That is, there may be a different standard in place when care is more palliative or maintenance rather than curative. Again this variable is significant for the cognitively intact.

Finally, compared to assisted living residents, holding all other variables constant, home care residents are more likely to be satisfied with their caregivers and nursing home residents less so. Again, this is true for both sub-samples studied.

## 5. Conclusions and Implications

Understanding the concept of satisfaction with LTSS is a complicated undertaking. Not only are there many different ways to measure satisfaction, but there are many diverse dimensions to understanding what makes the care that someone receives satisfactory. Through the use of this unique longitudinal dataset we have shown that while people tend to be very satisfied with their caregivers when they commence their care, this satisfaction decreases over time. Moreover, this pattern occurs regardless of where one receives care and whether one transfers to a different type of care setting. While the concept of

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<sup>14</sup> Ibid, 2006.

satisfaction is multi-faceted, in broad terms what people are focused on in the evaluation of caregiver quality are the technical skills of the caregiver as well as the nature of the relationship formed with the provider. In home care settings, the emotional bond and sense of personal security engendered by a high degree of trust and communication are also important. While one might assume that health status, age, marital status and other socio-demographic factors would be important to understanding whether one is satisfied with paid caregivers, such is not the case. In fact, the presence of unmet need, receiving care in a particular setting (i.e., institutional versus home), cost consciousness, use of a care manager, and the expected trajectory of decline or recovery are most important to understanding why some people are satisfied with their caregivers and others are not.

While the financing of LTSS usually takes center stage and is an important component of the discussion about long-term care, the issue of quality and satisfaction are also of paramount importance to service users and their family members. We have shown here that while satisfaction with a care provider is in fact high at the beginning of service use, it decreases over time. Knowing this, what are the actions that could be taken to counteract the decline in satisfaction? One possibility is more frequent reassessment of the care receiver's needs to ensure the appropriate level of care is being provided. This would guard against unmet need by helping the provider and care receiver understand changes in disability status or medical condition, changes in cognitive status and changes in the amount of unpaid care (which could compensate for an unmet need in paid care).

Another important finding here is the importance of the quality of the caregiver's technical skills in the level of satisfaction. Knowing that these dimensions are associated with higher levels of satisfaction has implications for additional or on-going training for paid care providers. Such training could help to identify the source of unmet needs, emphasize the importance of the personal dimension of care giving not just the technical, and assure that paid caregivers have a thorough understanding of the criticality of building trust and communication with the care recipient.

One thing is clear: being able to identify the factors, issues and conditions that influence satisfaction with care should be as important as understanding how to finance that care. Evidence put forth here suggests that even when consumers conduct due diligences on providers, are relatively unconstrained in terms of finances, and obtain assistance from a care manager to access care there is no guarantee of satisfaction with service. Setting expectations immediately when care commences, monitoring those expectations, reassessing a care recipient's condition, as well as the care provider's technical and personal relationship skills would all contribute to supporting consistently higher levels of satisfaction over the course of LTSS use.