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# Vermont Choices for Care 2008 Outcomes "At-A-Glance"

## FINAL

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## Executive Summary

In October 2005, Vermont launched its Choices for Care (CFC) Medicaid waiver program for elders and adults with disabilities who have functional impairments. This 1115 waiver is an extension of previous initiatives in Vermont to further shift the state's long-term care system towards community-based, rather than institutional, care. To achieve this overarching goal, CFC's design features bring under its oversight the entire continuum of long-term care (home and community-based services (HCBS), enhanced residential care (ERCs), and nursing homes) as well as various service types (self-directed care, Flexible Choices, surrogate-directed care, and traditional agency services).

The waiver also created three levels of need (moderate, high, and highest) to allocate services to the neediest individuals (highest level of need). While the criteria for the two higher levels of need groups differ, participants in either group have access to long-term care in all three settings (HCBS, ERCs, and nursing facilities) and are eligible for up to the same maximum level of HCBS. Funding constraints can result in the necessity of a wait-list for applicants applying for the high need level of service. The clinical criteria for the moderate level of need are the lowest of the three levels of need, and moderate needs participants have access to only case management, homemaker, and adult day services (HCBS).

## Indicators of Desired Outcomes

To capture CFC's status at the mid-point of the waiver, UMMS examined CFC participants' 2008 responses to the annual consumer survey conducted by DAIL's contractor, MACRO International. More specifically, UMMS conducted bivariate analyses to examine the variation of survey responses across selected client characteristics (e.g., age, gender, level of need). UMMS focused on responses to specific survey items selected as indicators of CFC meeting its desired outcomes. These indicators are organized by each desired outcome as part of the CFC evaluation plan developed between June 2007 and June 2008 (see DAIL website for a copy of the evaluation plan). The outcomes are organized based on whether they could be reasonably expected to be achieved within the five demonstration years.

The seven identified short-term (i.e., 1 – 5 year) desired outcomes were: *Information Dissemination*, *Access*, *Effectiveness*, *Experiences of Care*, *Quality of Life*, *Waiting List Impact*, and *Budget Neutrality*. In addition, the waiver established two long-term outcomes that may be reasonably expected to take longer than five years to achieve: *Public Awareness* and *Health Outcomes*.

The present report is limited to analyses of the selected 2008 MACRO survey responses (of CFC clients) related to the first five short-term outcomes and the two long-term outcomes. A companion report, [CFC Evaluation for Years 1-3 \(2009\)](#), provides a more comprehensive summary of evaluation data of CFC between 2005 and 2008. All reports are available on the DAIL website (<http://dail.vermont.gov/>).

## Methodology

We conducted an exploratory data analysis to describe and examine associations between selected satisfaction/quality of life responses and client characteristics using merged data from three primary sources provided by VT DAIL: 1) 2008 MACRO survey data of CFC clients; 2) Independent Living Assessment (ILA) data for CFC clients assessed in FY 2008; and 3) SAMS service authorization data for FY 2008. For data analytic purposes, we used a point-in-time approach to the analysis comparing clients' MACRO responses across sample characteristics at or within three months of the November 2008 survey administration.

MACRO used statistical sampling techniques to identify a representative sample of the populations being surveyed and accounting for non-response at the regional/county level by weighting cases of responding clients. Of the 936 DAIL clients interviewed, 766 clients were CFC clients at the time of the survey. From the merged data file, 714 clients (93.2%) had MACRO survey, ILA, and service authorization data from the SAMS database.

## Selected Results

A total of 714 CFC clients surveyed by MACRO were included in the analysis. The characteristics of clients in the final sample that we analyzed were very similar to the sample surveyed by MACRO and we would expect that the results found in this analysis to be generalizable to the larger VT CFC population.

- Most clients (72%) were female.
- About 75% of clients were over 65 years of age.
- About half were authorized for area agencies on aging (AAA) case management and about half were authorized for home health agency (HHA) case management.
- 35% of the sample were highest needs participants; 15% were high needs participants; and about 50% of the sample were moderate needs clients.
- Of the 350 moderate needs clients, 48 (14%) appeared to have met clinical criteria for high need while 9 (3%) appeared to have met highest needs clinical criteria.
- About 36% of the sample were authorized to receive at least one self-directed service (e.g., consumer-direction, surrogate direction, or Flexible Choices) during the 3-month period preceding the MACRO survey, while 64% were authorized to receive agency-directed services.

Participant satisfaction across most MACRO survey items was *generally very high* (i.e., >90%). In addition, we identified differences in degrees of high satisfaction with respect to some subgroups of participants:

- A smaller proportion of younger clients (18-64) reported high satisfaction (i.e., "excellent" or "good") with CFC services compared to older (65-84) and oldest (85+) clients on items such as "choice and control", "services timely", and "service fit schedule". Similarly, younger participants were less likely to report high satisfaction with their quality of life than older participants ("quality of life", "free time").
- Moderate needs participants reported high satisfaction with CFC services at a lower rate than highest and high participants ("services fit schedule", "quality of services"). (We found no significant differences in how the two moderate needs subgroups (moderate needs

- participants appearing to meet high or highest needs criteria and those appearing not to meet high or highest needs criteria) responded to MACRO indicators.)
- In general, participants authorized for either AAA case management or home health agency case management rated satisfaction high. On two items ("choice and control" in planning for services; help received has made life much/somewhat better), participants authorized for AAA case management reported higher satisfaction than those authorized for case management with home health agencies.
  - Participants authorized to self-direct services reported high satisfaction with CFC services at a higher rate than participants authorized for agency services (e.g., "service timely", "service meet needs"), although as stated above, overall satisfaction with CFC services was high.

## Conclusions and Recommendations

This exploratory analysis of CFC participants' satisfaction and quality of life indicators in 2008 provided initial evidence for statistically significant relationships between a number of participant characteristics and individual indicators. As we describe in this report, we observed a number of reliable differences in responses to individual MACRO items within six of seven indicators of Satisfaction/Quality of Life (*Information Dissemination, Access, Effectiveness, Experiences with Care, Quality of Life, and Health Outcomes*) across multiple participant characteristics. We did not observe differences with respect to the *Public Awareness* indicator. These results provide a baseline against which we might measure future progress by assessing change over time. Future comparative studies of these relationships will be valuable in understanding CFC progress. To facilitate such comparative analyses, UMMS access to equivalent electronic data sources will be necessary, including: 1) CFC participant survey data as collected in the 2008 MACRO International survey; 2) SAMS service authorization data for services in the three-month period prior to the comparison-year Macro survey, and 3) (if analysis of ADL needs is desired) Independent Living Assessment (ILA) data for CFC clients (moderate, high and highest) assessed close in time to the comparison-year MACRO survey.

## Introduction

In October 2005, the Vermont state agency launched its Choices for Care (CFC) Medicaid waiver program for elders and adults with disabilities who have functional impairments. This 1115 waiver is an extension of previous initiatives in Vermont to further shift the state's long-term care system towards community-based, rather than institutional, care. To achieve this overarching goal, CFC has several key design features. First, the waiver brought under its oversight the entire continuum of long-term care services (home and community-based services (HCBS), enhanced residential care, nursing homes) as well as various service delivery settings (self-directed care, Cash and Counseling-based Flexible Choices, surrogate-directed care, and traditional agency-directed care). In addition to giving participants choices in service setting type, every participant also had a choice between a case manager from a home health agency or from an area agency on aging.

While CFC sought to provide participants with choices, the waiver also created three levels of need (moderate, high, and highest) to allocate services to the neediest individuals (highest level of need). While the high level of need criteria differed from those of the highest level, participants in either group are eligible up to the same maximum level of services, even though individuals applying for high level of need services could be wait-listed if a waiting list were active due to funding. On the other hand, the clinical criteria for the moderate level of need are lower in impairment than the other two levels of need and moderate needs participants have access to only case management, homemaker, and adult day services (HCBS). While the three CFC levels of need are differentiated in the CFC guidelines, some overlap may occur. Specifically, some high needs applicants may be served under the moderate needs category due to a high needs applicant list. In addition, some individuals meet clinical criteria for high or even highest needs but do not meet the latter groups' *financial* criteria and thus are served under the moderate needs category. In some cases, applicants may choose to receive services under a lower level of need category.

To capture CFC's status at the mid-point of the waiver (and shed light on some of key programmatic characteristics), UMMS, at the request of the Vermont Department of Disabilities, Aging, and Independent Living, examined CFC participants' 2008 responses to the annual consumer survey conducted by DAIL's contractor, Macro International. More specifically, UMMS conducted bivariate analyses to determine the degree to which the 2008 Macro results varied based on selected client characteristics (e.g., age, gender, level of need). UMMS focused on participant responses to specific questions from the Macro survey that had been selected as indicators of CFC's progress. These indicators are organized by each desired outcome as part of the CFC evaluation plan developed between June 2007 and June 2008 (see DAIL website for a copy of the evaluation plan). The outcomes are organized based on whether they could be reasonably expected to be achieved within the five demonstration years. They are as follows:

### Short-term Desired Outcomes (1-5 years):

1. **Information Dissemination:** Participants (and their authorized representatives) receive necessary information and support to choose the long-term care setting consistent with the participant's expressed preference and need.
2. **Access:** Participants have timely access to long-term supports in the setting of their choice.

3. **Effectiveness:** Participants receive effective HCBS to enable them to live longer in the community.
4. **Experience of Care:** Participants have positive experiences with the types, scope, and amount of CFC services.
5. **Quality of Life:** Participants report that their quality of life improves.
6. **Waiting List Impact:** CFC applicants who meet the high needs criteria will have equal access to services regardless of the setting of their choice (e.g., nursing home, enhanced residential care, HCBS)
7. **Budget Neutrality:** Medicaid's cost of serving CFC participants is equal to or less than under the previous Medicaid and HCBS waiver funding.

In addition, the waiver established two long-term outcomes that may be reasonably expected to take longer than five years to achieve. These are:

Long-Term Desired Outcomes (over 5 years):

1. **Public Awareness:** Vermont general public is aware of the full range of long-term care settings for persons in need of long-term care and have enough information to make decisions regarding long term care.
2. **Health Outcomes:** CFC participants' medical needs are addressed to reduce preventable hospitalizations and their long-term care needs are effectively addressed.

The present report is limited to the bivariate analysis of the 2008 MACRO survey responses related to the first five short-term outcome indicators and the two long-term outcome indicators (i.e., CFC in its third year). The CFC Evaluation Report for Years 2005-2008 (2009) provides a more comprehensive review of CFC during the 2005-2008 period. Both reports are available on the DAIL website (<http://dail.vermont.gov/>).

In this document, we first describe our study methodology. Our methodology section describes the data sources used to create the study sample and the study variables used for differentiate the study sample into relevant subgroups (e.g., CFC levels of need, case management setting) for analysis. In the methodology section, we also describe our study sample in two parts. The first part describes our final sample in terms of level of need and geographic region to assess the degree to which the results in our analyses can be generalized to the larger CFC population. The second part describes the extent to which the CFC participants in our study population who were in the moderate needs group (the primary group of interest) also may have met CFC high level of need and highest level of need criteria using selected criteria (e.g., activities of daily living, medical conditions). Subsequent to the methodology section, we display results for each outcome variable by specific subgroups. Then, we discuss our results and identify potential future studies.

## Methodology

### *Data Sources*

We analyzed merged data from three primary sources: 1) CFC data in the 2008 MACRO survey; 2) Independent Living Assessment (ILA) data for CFC clients assessed in FY 2008; and 3) SAMS service authorization data for FY 2008. For data analytic purposes, we used a point-in-time approach to the analysis. We used an approximate date of 11/15/08 to represent the point at which

the MACRO data were collected. From the ILA data provided by DAIL, we selected clients' most recent ILA (full if available, or short-form)<sup>1</sup> and merged the assessment data with the MACRO data file. Finally, we identified each client's SAMS authorized service data for the three-month period ending on 11/15/2008 and merged this data with the MACRO and ILA data to obtain data on authorized services.

### *Study Population*

Our analysis was restricted to the CFC clients surveyed by MACRO in 2008. MACRO used statistical sampling techniques to identify a representative sample of the populations being surveyed (i.e., disproportionate sampling stratified by program type), and accounting for non-response at the regional/county level by weighting cases of responding clients. Of the 936 DAIL clients interviewed, data provided by DAIL indicated that 766 clients were classified as CFC clients at the time of the survey. The merged data file included matched MACRO survey, ILA data, and authorized service setting data for a total of 714 (93.2%) clients—our final sample for analysis, as detailed in Table 1. The final sample, with respect to the distribution of clients in terms of level of need and geographic region was very similar to the sample surveyed by MACRO. Therefore, we would expect that the results found in this analysis would be generalizable to the larger CFC population.

Table 1. Levels of Need and Geographic Regions of CFC Clients Surveyed by MACRO and Included in Final Sample for Analysis.

Characteristic	Surveyed by MACRO		Final Sample	
	# Clients	%	# Clients	%
<i>Level of Need:</i>				
Moderate	367	47.9	350	49.0
High	117	15.3	108	15.1
Highest	282	36.8	256	35.9
<i>Geographic Region</i>				
Addison	60	7.8	54	7.6
Bennington	47	6.1	44	6.2
Caledonia	57	7.5	55	7.7
Chittenden/Grand Isle	102	13.3	98	13.7
Essex/Orleans	74	9.7	70	9.8
Franklin	64	8.4	57	8.0
Lamoille	49	6.4	45	6.3
Orange/Windsor	106	13.9	97	13.6
Rutland	85	11.1	82	11.5
Washington	54	7.0	49	6.9
Windham	67	8.7	62	8.7
ALL	766	100.0	714	100.0

<sup>1</sup> In a small number of cases, the client's most recent assessment occurred after 11/15/2008. In such cases we used the most recent assessment collected on or before 12/31/08.

## Study Variables

In addition to the MACRO survey variables identified for further analysis in the Analytic Plan and client characteristic variables (e.g., gender, geographic region, level of need) available from the original data, we additionally derived a number of new variables from the ILA data and service authorization data for purposes of the analysis. These variables are described briefly below:

1. *Age at MACRO Survey.* Using date of birth (DOB) data from the ILA, we derived clients' ages at the time of the MACRO survey. Ages ranged from 18 to over 100 years of age, with a mean of 73.6 yrs ( $SD=14.7$ ), indicating that most clients were nearer the high end of the range. In creating age categories, we combined clients into three age groups: 18 – 64 yrs, 65 – 84 yrs, and 85+ yrs so as to both differentiate the youngest clients and to center the age groups with respect to the data.
2. *ILA Recency.* We calculated the number of months between the client's most recent ILA and the date of the MACRO survey to examine the recency of assessments. These data were further categorized into "more recent" and "less recent" using a median split of the data to examine whether any differences in MACRO responses were observed as a function of recency.
3. *Authorized Case Management Setting.* From the most recent three months of service authorization data, we were able to categorize clients into two broad categories of case management setting - either AAA case management or HHA case management.<sup>2</sup>
4. *Authorized Service Type.* Also from the service authorization data, we created two broad categories of service type: self-directed or agency-directed. We defined self-directed as authorization/approval to receive either consumer-directed, surrogate-directed, or Flexible Choices services<sup>3</sup>. Clients not captured under this definition were coded as authorized and approved to receive agency-directed services for purposes of the analysis.
5. *ADL Needs.* We applied an ADLs scoring system developed by Morris et al. (1999)<sup>4</sup>. For each of the seven ADLs (dressing, personal hygiene, toilet use, mobility out of bed, transfer, bed mobility and eating), the client's self-performance scores (1=supervision, 2=limited assistance, 3=extensive assistance, 4=total dependence or activity did not occur) were summed to create an overall score ranging from 0 to 28 (with higher scores indicating higher ADL need). To parallel VT DAIL's 3-category level of need structure and to facilitate analysis

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<sup>2</sup> A small number of clients (n=4) received BOTH AAA and HHA case management services in the three-month period preceding the MACRO survey. These clients' data were not used in cross-tabulation of MACRO responses and the AAA CM/HHH CM analysis. A small number of clients (n=16) used neither AAA nor HHA case management services during the three-month period, and were also excluded from this analysis. Most of these (n=11) were clients receiving Flexible Choices services.

<sup>3</sup> We chose to combine the three types of self-directed care into a single category primarily on conceptual grounds. Although distinctive, each involves some degree of choice and control distinctive from traditional agency-directed care. In addition, we observed similar patterns of responding by consumer-directed and surrogate-directed clients compared to clients authorized for agency-directed services. There were too few cases of Flexible Choices participants to analyze separately, and several clients were authorized for both consumer and surrogate direction in the period prior to the survey.

<sup>4</sup> Morris, J. N., Fries, B. E. and Morris, S. A. (1999). Scaling ADLs within the MDS. *Journal of Gerontology*, 54A, M546-M555.

by limiting the number of ADL need categories, we classified clients into one of three ADL need levels (low=0-9, medium=10-18, intensive=19-28) for further analysis<sup>5</sup>.

6. *Moderate needs Clients Meeting the High or Highest Level of Needs Criteria.* For moderate needs CFC clients, we examined ILA data variables that could be used to classify moderate needs clients as those who *may* meet clinical eligibility criteria for a higher level of need (high or highest). Of the seven clinical criteria for the high needs group, only the first criterion (eligibility based on ADLs) could be derived from the ILA data. With respect to the highest level of need clinical criteria, we were able to estimate the number of moderate needs clients who appeared to have met highest level of need based on four of the five criteria. The detailed methodology used to capture whether clients may have met the high or highest level of need based on applying DAIL clinical criteria to the ILA data is described in Appendix A<sup>6</sup>. As summarized in Table 2 below, we were able to identify 48 moderate needs clients as appearing to meet clinically eligible for the high needs group and 9 moderate needs clients as appearing to meet clinically eligible for the highest needs group. The unduplicated count of moderate needs clients possibly meeting *either* the high or highest needs criteria was 49<sup>7</sup>.

Table 2. Profile of Moderate needs Clients

	Meet HIGH (B.1.) On ADL Criteria Alone		Meet Highest On ANY of Criteria (A.1 through A.4)		Meet High OR Highest On ANY Criteria	
	Count	%	Count	%	Count	%
Present Level of Need Group:						
<i>Moderate</i>	48	13.7	9	2.6	49	14.0

### Data Analysis

All selected MACRO survey response variables were dichotomized for cross-tabulation with individual client characteristics, including assessment data and service authorization data. Client characteristics data were categorized into two (and in some cases three) groups to describe and/or test for differences in responding to MACRO items across levels (e.g., male and female) of each client characteristic group (e.g., gender). With analyses of differences involving 3-group variables (e.g., age), where overall differences were significant, we then identified and reported which subgroups differed from one another. Geographic region data represent clients residing in each of 11 regional areas, as reported in the MACRO survey.

Chi-square Goodness-of Fit tests for statistical significance were used for the analysis of frequencies observed in the categorical variables. Given that the analysis was exploratory in nature

<sup>5</sup> The 0 to 28 point scale was not divisible into three equal parts; therefore other break-points than those we selected could have been used.

<sup>6</sup> We also provide a profile of current high and highest needs clients with respect to these criteria for descriptive purposes in Appendix B.

<sup>7</sup> One client appeared to meet the highest needs level based on the "unstable conditions" criteria, rather than based on ADLs, explaining why not all 49 moderate needs clients appearing to meet the highest level also appeared to meet the high level of needs.

and not guided by a priori hypotheses with respect to where differences might be expected, or the direction of any observed differences, we used 2-tailed tests, with an alpha level of .05 in identifying statistical differences. In the case of the regional variable (region), the number of categories (14) resulted in cell frequencies that were too small to test for statistical differences in this sample. We applied the MACRO sample weighting variable for all tests that included MACRO items, and we list the weighted number of clients (e.g., "n<sub>wght</sub>") in the results summaries.

Section I describes the Profile of our study sample by gender, age group, region, Medicare Parts A and B eligibility status, ILA recency, authorized case management setting (AAA or HHA), and authorized service type (self-directed vs. agency-directed). For the service type variable, consumer-directed and surrogate-directed services are included in the "self-directed" group. The n's reported in Section I.A. are unweighted counts.

Section II summarizes our analyses of the MACRO Satisfaction and Quality of Life Indicators with respect to the various client characteristics developed in the data analysis plan. The first two tables summarize the results detailed in the 18 individual charts of client ratings of each of the individual MACRO items included in the analysis. All n's reported in this section are the weighted n's after applying the final MACRO weighting variable to adjust sample sizes for regional differences. Client characteristic variables where statistically significant differences in MACRO responses were found are denoted with an asterisk (\*). Subgroups within client characteristic variables differing significantly from one another are denoted by differing subscripts (e.g., "a", "b", and "c").

## Results

It is important to note that overall satisfaction and quality of life responses across most items were high. That is, most participants, and in some cases nearly all participants, responded favorably to the MACRO items. Significant differences reported herein should not be interpreted generally in terms of satisfaction vs. dissatisfaction, but rather (in most cases) in terms of differences in levels of satisfaction associated with certain client characteristics.

### *Gender*

We had complete gender data for 682 CFC participants in our sample (96%). Overall, females made up 72.1% of the sample. We found gender differences in MACRO item responding within *Information Dissemination* and *Quality of Life* (two of the six categories).

- *Information Dissemination*: A larger proportion of females (93.7%) than males (89.3%) responded affirmatively to question "People listen".
- *Quality of Life*: There were two items endorsed more by females than males. On the "Quality of Life" item, 73.7% of females (vs. 64.3% of males) responded affirmatively. Similarly, a larger proportion of females (69.1%) than males (61.1%) indicated that they were "satisfied with how they spend their free time" (item 7e).

## Age Group

There were age differences in responses to MACRO items across five of six Satisfaction/Quality of Life indicator categories (*Information Dissemination, Access, Quality of Life, Experiences with Care, and Health Outcomes*), and on 10 of 18 individual items.

Within four of six categories (and 7 of 10 items that differed by age group), we found lower rates of satisfaction (rating "excellent" or "good") among younger participants than either older and/or oldest participants.

- *Information Dissemination*: We found differences on both MACRO items ("Choice and Control", and "People Listen"). Only 84.0% of younger participants endorsed the "Choice and Control" item compared to 91.2% and 91.5% of older and oldest participants respectively. Likewise only 83.6% endorsed the item "People Listen" compared to 95.6% of older participants and 96.5% of the oldest participants.
- *Access*: A smaller percentage of younger participants endorsed the "Services Timely" item (83.1% compared to 90.2% of older participants and 90.8% of oldest participants) and the "Services Fit Schedule" item (86.2% compared to 90.5% of oldest participants and 95.3% of oldest participants).
- *Quality of Life*: Only 56.5% of younger participants endorsed the "Quality of Life" item compared to 73.7% of older participants and 79.2% of oldest participants. Similarly, only 59.5% endorsed the item that indicated satisfaction with "Free Time" compared to 70.0% of older and 68.2% of oldest participants. On the third *Quality of Life* measure ("Family/Friend Contact"), a smaller percentage of older participants (64.1%) endorsed the item compared to oldest participants (75.7%).
- *Experiences with Care*: A smaller percentage of younger participants (96.6%) rated the courtesy of those who help them as either "good" or "excellent", compared to 100% of oldest participants<sup>8</sup>. However, the courtesy ratings for all three age groups were high.
- *Health Outcomes*: In their ratings of "Current Health", 64.8% of oldest participants rated their health as either "excellent", "very good", or "good", compared to 50.9% of older participants and 38.2% of younger participants. Statistical differences between each group were significant.<sup>9</sup> On the health rating item ("Health change from 1 year ago"), a larger percentage of younger participants (34.7%) indicated their current health being "much better" or "somewhat better" than one year ago, compared to 25.8% of older participants and 22.5% of oldest participants.

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<sup>8</sup> On this item and 6 additional Macro items where statistically significant differences were found, the chi-square test result should be interpreted with caution due to at least one cell having fewer than the expected n of at least 5. These six items are denoted with a footnote in the matrix table of results in section: II. Satisfaction and Quality of Life Indicators.

<sup>9</sup> Participants were asked to rate their health "compared to other people your age". Because age and health are correlated, it is possible that this framing of the question may have contributed to the observed group differences. That is, younger participants would have been evaluating their health relative to other (generally healthier) younger persons, while oldest participants would have been evaluating their health relative to other (generally less healthy) older persons.

### *Geographic Region*

Given the sample size in relation to the number of geographic regions (11), we could not apply statistical tests to determine if there were differences in responding to Macro items by region. Because we could not statistically analyze these data, we cannot determine whether there were or were not any differences in responses by region. We present the endorsement percentages for descriptive purposes only, and caution should be used in interpreting these data given the small cell sizes.

### *Level of Need*

Across Level of Need groups (moderate, high and highest), we found differences in responses to MACRO items across six of seven Satisfaction/QOL indicator categories (*Information Dissemination, Access, Effectiveness, Experiences with Care, Quality of Life, and Health Outcomes*) and on 7 of 18 individual items. We found a general pattern of moderate level of need participants reporting their satisfaction at a lower rate than high and/or highest level of need participants.

- *Information Dissemination*: On the "People Listen" item, a smaller percentage of moderate needs participants (89.9%) rated "excellent" or "good" compared to highs (97.2%).
- *Access*: On "Services Fit Schedule", only 87.2% of moderate needs participants rated this item "excellent" or good" compared to 95.4% of highs and 92.3% of highest.
- *Effectiveness*: On both Effectiveness items, moderate needs participants gave these items high marks at lower rates than high and highest needs participants. On the "Services Meet Needs" item, 86.1% of moderate needs participants (compared to 97.1% of highs and 95.5% of highest) gave high marks to this item. This was also the case for the "Help has made your life... (much/somewhat better)" item, where 88.6% of moderate needs participants endorsed the item compared to 96.4% of highs and 94.6% of highest.
- *Experiences with Care*: A smaller percentage of moderate needs participants indicated that the "Quality of Services" received were "good" or "excellent" (88.0%) compared to 100% of highs and 96.7% of highest needs participants.
- *Quality of Life*: We found level of need differences on one quality of life item "Get Around Inside"; with a larger percentage of moderate needs participants (82.0%) endorsing the item compared to 73.8% of highest needs participants.
- *Health Outcomes*: A higher percentage of high needs participants (36.9%) endorsed the "Health Change" item compared to moderate needs participants (24.8%).

### *ADL Needs<sup>10</sup>*

In comparing responses of participants having *either low, medium, or intensive ADL needs*, we found differences on three Macro items, within the three indicator categories *Effectiveness, Experiences with Care, and Quality of Life*. On the *Effectiveness* item "Services

<sup>10</sup> ADL needs (low, medium and intensive) and clients' Level of Need classification (moderate, high and highest) were highly correlated, which was not unexpected given that ADLs are one of the criteria for determining level of need group. Applying the Morris et al. (1999) ADL measure, each Level of Need Group differed significantly from the other on the 0 to 28 point ADL scale, where higher score indicates higher ADL needs: moderate (Mean=1.26, SD=2.80), high (M=8.64, SD=4.35), highest (M=16.09, SD=6.51).

Meet Needs", a smaller percentage of low ADL needs participants endorsed this item (89.2%) compared to participants in the intensive ADL needs group (97.0%). On the *Experiences with Care* item "Quality of Services", a smaller percentage of low ADL needs participants endorsed the item (90.6%) compared to medium (97.1%) and intensive (97.1%) ADL needs participants. Finally, on the *Quality of Life* item "Get Around Inside", a higher percentage of low ADL needs participants endorsed the item (82.5%) compared to both medium (76.2%) and intensive (63.1%) ADL needs participants.

### *Case Management Setting*

Differences in MACRO item responding by case management setting were only found on two items, representing the *Information Dissemination* and *Effectiveness* indicators. In each case, a higher percentage of clients receiving area agency on aging (AAA) case management services endorsed the item compared with clients receiving home health case management services. On the "Choice and Control" item, 92.9% of AAA case management clients endorsed the item compared to 86.8% of home health case management clients. On the "Help has made my life...(much/somewhat better)" item, 94.7% of AAA case management clients and 89.4% of home health case management clients endorsed the item.

### *Authorized Service Type*

The service type analysis compared responses of: 1) clients who were authorized to receive any self-directed services (Consumer-Directed, Surrogate-Directed, or Flexible Choices) at any time during the three months preceding the survey; and 2) clients authorized to receive agency-directed services only. We found significant differences on 7 of 18 items from five of the six indicator categories: *Information Dissemination*, *Access*, *Effectiveness*, *Experiences with Care*, and *Quality of Life*. In each case, a higher percentage of clients authorized to receive self-directed services rated high Satisfaction/Quality of Life compared to clients who were authorized to receive agency-directed services only.

- *Information Dissemination*: A larger percentage of self-directed clients indicated that "People Listen" (96.2%) compared with agency-directed clients (90.3%).
- *Access*: Service type differences emerged for both of the *Access* items. A higher percentage of self-directed clients indicated that "Services (were) Timely" (91.9%) compared to 87.1% of agency-directed clients. Similarly, a higher percentage of self-directed clients indicated that "Services Fit Schedule" (95.4%) compared to 87.5% of agency-directed clients.
- *Effectiveness*: Among self-directing clients, 96.0% indicated that "Services Meet (their) Needs" compared to 88.5% of agency-directed clients. A larger percentage of self-directed clients (95.4%) indicated that the help they have received has made their life "much better" or "somewhat better", compared to 89.7% of agency-directed clients. Differences were found for one of two *Experiences with Care* indicators. More self-directed clients (97.3%) rated the "Quality of Services" they received as "good" or "excellent" compared to agency-directed clients (89.7%). Finally, we found differences on one of six *Quality of Life* indicators. In terms of their satisfaction with "Family/Friend Contact", 75.8% of self-directed clients and 63.0% of agency-directed clients indicated being satisfied.

### *Moderate Needs Participants*

In our sample, 14% were moderate needs participants who appeared to have met either high or highest level of need criteria while the other 86% were moderate needs participants who appeared not to meet a higher level of need. This allowed us to test for differences in the two groups' responses to Macro survey questions. In this sample, we found *no significant differences* in Macro survey responses to items related to service satisfaction and quality of life when comparing these two groups. The moderate needs category represents both a level of need component and a level of *service access* component. The presence of statistical difference by level of need for several individual Macro responses combined with the absence of statistical difference between the subgroups of moderate needs participants suggests that service access may be more closely related to service satisfaction than the clinical characteristics that differentiate level of need.

### *Other Data Observations*

There were four indicators for which we did not observe any differences in responding based on the client characteristics we analyzed. Specifically, no differences were found for the items "Social Life Connection" (q7h), "Can Get Where Need to Go" (q7c) or on either of the two *Public Awareness* indicators ("Informed of Ways to Get Help with ADLs When Left Hospital" and "Involved With Decision-Making on Getting Help with ADLs When Left Hospital"). We also only found one variable that was related to differences in responding to the "Current Health" indicator (e.g., age group), and we suspect that the differences were likely due in part to the phrasing of the question.

## **Discussion**

As described in this report and summarized in Table II, we observed a number of reliable differences in responses to individual MACRO items within each indicator of Satisfaction/Quality of Life (*Information Dissemination, Access, Effectiveness, Experiences With Care, Quality of Life, and Health Outcomes*) across multiple client characteristics. We did not observe differences with respect to the *Public Awareness* indicator.

Age differences in responding were most frequently observed in the data. In general where age differences were observed, older (age 65-84) and oldest clients (age 85+) were more satisfied than younger clients (age 18-64). In most cases, the two older groups of clients did not differ significantly in their satisfaction ratings.

A second prevalent effect in these data was observed differences in responding based on one's level of need (moderate, high, or highest). The general effect across multiple MACRO items and indicators was for moderate needs participants to differ in their responses (and with lower endorsement levels) from high and highest needs participants. These latter two groups differ from moderate needs participants in terms of their needs, the amount, array, and type of services and supports targeted to them under the CFC waiver.

Authorized service type (e.g., self-directed vs. agency-directed) was a third client characteristic associated with the satisfaction/quality of care measures. In each instance where differences were observed, self-directing clients were more satisfied with their services than clients

authorized for agency-directed services. Self-directing clients reported feeling better informed, that services were more accessible and effective, and rated the quality of their services higher (as well as one measure of their quality of life). That self-directing clients indicate increased satisfaction is certainly a positive result, given the goal of increasing autonomy and choice among consumers of long-term services both in Vermont and nationally. Differences at the person level or in the nature of the received services themselves could contribute to this effect. In the first case, self-direction is a choice, and therefore there may be inherent differences between persons who select this service-deliver model and persons who do not.

A smaller number of differences in participant responses to the MACRO items were found for gender, level of ADL need, and case management setting, suggesting that these variables were also associated with differences in responding to at least some MACRO items.

### Conclusions and Recommendations for Future Studies

UMMS conducted an exploratory analysis of the relationships between CFC client characteristics (e.g., age, gender, level of need) and responses to a selected number of 2008 Macro International satisfaction/quality of life survey items identified as indicators of CFC's progress at the mid-point of the waiver. The bivariate analyses represented a snapshot of these relationships as close in time as possible to the date selected as the approximate timeframe of the survey administration (11/15/2008). The analysis did provide initial evidence for statistically significant relationships between a number of client characteristics and individual indicators, as noted above. Because this study captured a single point in time, rather than change across time, the relationships between variables, while descriptive and hopefully informative, do not provide direct evidence for assessing *improvement* with respect to the CFC indicators of progress. Rather, they provide a baseline against which we might measure future progress. While some findings were encouraging (for example the high satisfaction reports by CFC clients who had been authorized to self-direct their care), it will be necessary to continue to examine these relationships in future studies in order to observe any changes across time.

The present study provides a baseline against which future annual CFC satisfaction and quality of life survey responses for various client characteristic subgroups could be compared to identify changes in indicators of progress. For example, it could be informative to measure change in satisfaction with respect to age group (among younger clients and older/oldest clients), or with respect to service type (among self-directed and agency-directed clients). To facilitate such comparative analyses, UMMS access to equivalent electronic data sources will be necessary: 1) CFC client survey data as collected in the 2008 MACRO International survey; 2) Independent Living Assessment (ILA) data for CFC clients (moderate, high, and highest) assessed close in time to the comparison-year MACRO survey; and 3) SAMS service authorization data for services received in the three-month period prior to the comparison-year Macro survey.

## I. Profile of CFC Sample

	Moderate needs (n = 350)		High needs (n = 108)		Highest needs (n = 256)		All CFC Enrollees (n = 714)	
	Count	%	Count	%	Count	%	Count	%
<b>GENDER:</b>								
Female	254	75.6	70	69.3	168	68.6	492	72.1
Male	82	24.4	31	30.7	77	31.4	190	27.9
<b>AGE GROUP:</b>								
18 – 64	80	22.9	24	22.2	77	30.1	181	25.4
65 – 84	181	51.7	55	50.9	122	47.7	358	50.2
85+	88	25.2	29	26.9	57	22.3	174	24.4
<b>GEOGRAPHIC REGION:</b>								
Addison	37	10.6	0	0.0	17	6.6	54	7.6
Bennington	28	8.0	4	3.7	12	4.7	44	6.2
Caledonia	25	7.2	9	8.3	21	8.2	55	7.7
Chittenden/Grand Isle	34	9.7	23	21.3	41	16.0	98	13.7
Essex/Orleans	32	9.2	12	11.1	26	10.2	70	9.8
Franklin	11	3.2	14	13.0	32	12.5	57	8.0
Lamoille	22	6.3	5	4.6	18	7.0	45	6.3
Orange/Windsor	59	16.9	14	13.0	24	9.4	97	13.6
Rutland	45	12.9	7	6.5	30	11.7	82	11.5
Washington	25	7.2	10	9.3	14	5.5	49	6.9
Windham	31	8.9	10	9.3	21	8.2	62	8.7
<b>MEDICARE:</b>								
Medicare A Yes	18	90.0	83	84.7	202	85.6	303	85.6
Medicare B Yes	15	88.2	82	83.7	192	82.4	289	83.0
<b>ILA RECENCY: (M = 7.72 mo., SD = 4.57 mo.)</b>								
More Recent	248	70.9	33	30.6	78	30.5	359	50.3
Less Recent	102	29.1	75	69.4	178	69.5	355	49.7
<b>ATHORIZED CASE MGMT. SETTING:</b>								
AAA CM	136	41.7	56	56.0	133	56.4	325	49.1
HHA CM	190	58.3	44	44.0	103	43.6	337	50.9
<b>AUTHORIZED SERVICE TYPE:</b>								
Self-Directed	4 <sup>1</sup>	1.2	60	60.0	173	73.3	237	35.6
Agency-Directed	325	98.8	40	40.0	63	26.7	428	64.4

Note: n's for individual variables may sum to less than the total n due to sporadic missing data.

<sup>1</sup>One previously Moderate needs client (from list provided to MACRO) became eligible for Highest needs group on 10/22/08, another on 10/30/08, a third on 11/13/08, and a fourth on 11/15/08. These four clients were coded as moderate needs participants for level of need and as self-directing for service type.

## II. CFC Subgroup Analysis: Satisfaction and Quality of Life Indicators

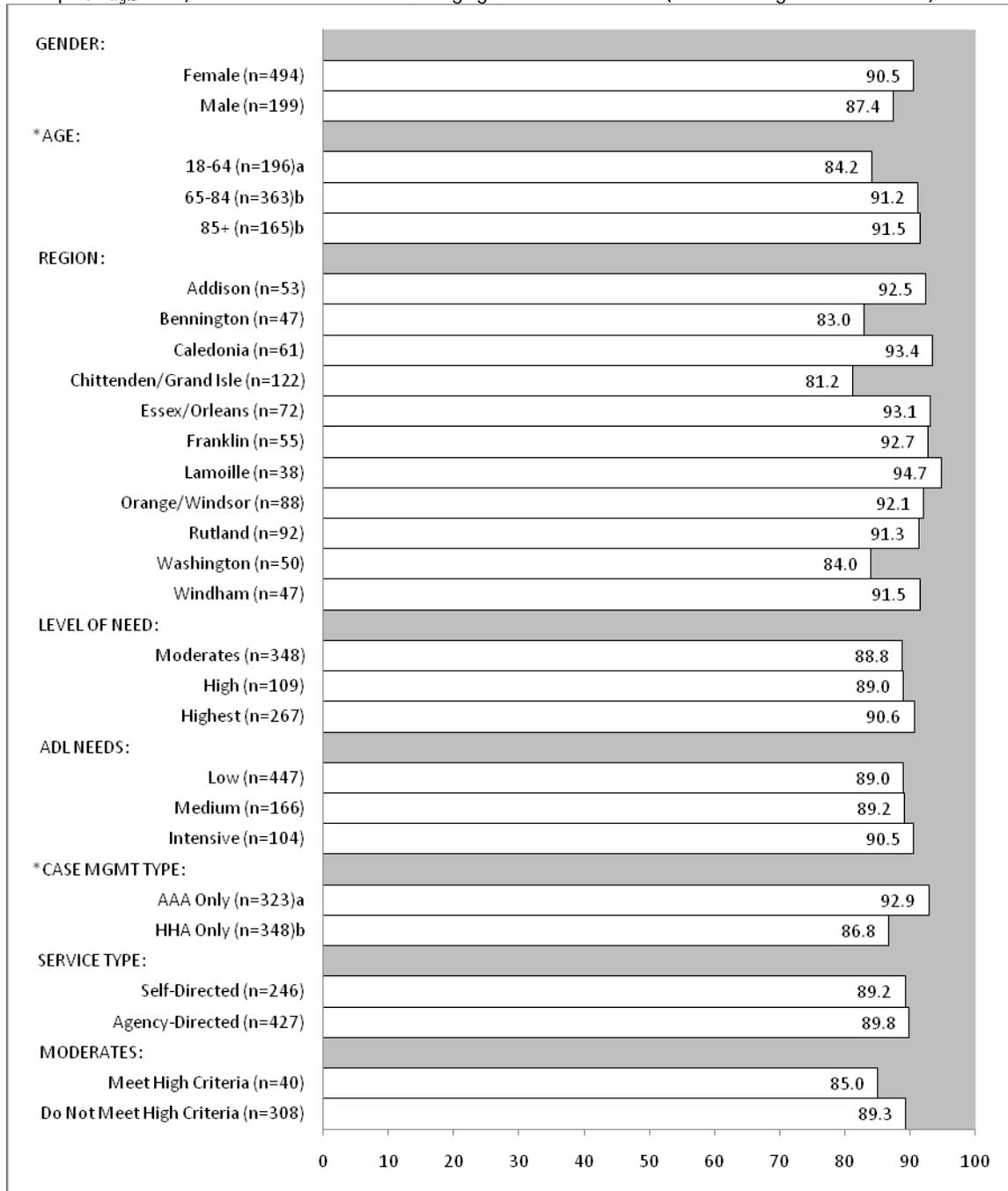
	Information Dissemination		Access		Effectiveness		Experiences with Care	
<b>Macro Item (Columns):</b>	<b>Choice and Control (q3a)</b> n <sub>wgtd</sub> =725; %=89.4	<b>People Listen (q3j)</b> n <sub>wgtd</sub> =738; %=92.6	<b>Services Timely (q3c)</b> n <sub>wgtd</sub> =742; %=88.5	<b>Services Fit Schedule (q3d)</b> n <sub>wgtd</sub> =742; %=90.3	<b>Services Meet Needs (q3g)</b> n <sub>wgtd</sub> =711; %=91.4	<b>Help has made life... (q5)</b> n <sub>wgtd</sub> =752; %=92.0	<b>Courtesy of others (q3i)</b> n <sub>wgtd</sub> =751; %=98.1	<b>Quality of Services (q3b)</b> n <sub>wgtd</sub> =749; %=92.9
<b>Client Characteristics:</b>								
<b>Gender</b>	n/d	Larger % females endorse	n/d	n/d	n/d	n/d	n/d	n/d
<b>Age Group</b>	Smaller % younger endorse compared to older and oldest	Smaller % younger endorse compared to older and oldest	Smaller % younger endorse compared to older and oldest	Smaller % younger endorse compared to oldest	n/d	n/d	Smaller % younger endorse compared to oldest <sup>1</sup>	n/d
<b>Geographic Region</b>	***	***	***	***	***	***	***	***
<b>Level of Need</b>	n/d	Smaller % the moderate needs group endorse compared to high <sup>1</sup>	n/d	Smaller % moderate needs participants endorse compared to high and highest	Smaller % moderate needs participants endorse compared to high and highest <sup>1</sup>	Smaller % the moderate needs group endorse compared to high <sup>1</sup>	n/d	Smaller % the moderate needs group endorse compared to high and highest <sup>1</sup>
<b>ADL Needs (Low, Medium, Intensive)</b>	n/d	n/d	n/d	n/d	Smaller % lows endorse compared to intensive <sup>1</sup>	Higher % medium endorsed compared to low	n/d	Smaller % lows endorse compared to medium and intensive needs <sup>1</sup>
<b>Case Mgmt. Setting (AAA vs. HHA)</b>	Larger % AAA endorse	n/d	n/d	n/d	n/d	Larger % AAA endorse	n/d	n/d
<b>Service Types (Self-Directed vs. Agency-Directed)</b>	n/d	Larger % of self-directed endorse	Larger % of self-directed endorse	Larger % of self-directed endorse	Larger % of self-directed endorse	Larger % of self-directed endorse	n/d	Larger % of self-directed endorse
<b>Moderate needs Participants: Meet/Do not meet High or Highest Criteria</b>	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
***Did not test for significant differences due to small cell n's								
Note: n/d = no significant differences in % endorsing item.								
<sup>1</sup> Small cell n's; interpret with caution.								

**CFC Subgroup Analysis: Satisfaction and Quality of Life Indicators, continued**

Macro Item (Columns):	Quality of Life						Public Awareness		Health Outcomes	
	Quality of Life (q8a) n <sub>wgtd</sub> =748; %=70.5	Free Time (q7e) n <sub>wgtd</sub> =742; %=66.8	Get around Inside (q7d) n <sub>wgtd</sub> =751; %=78.2	Social life Connection (q7h) n <sub>wgtd</sub> =736; %=55.2	Can get where need to go (q7c) n <sub>wgtd</sub> =742; %=60.8	Family/Friend Contact (q7f) n <sub>wgtd</sub> =743; %=67.9	Informed of ways to get help with ADLs when left hosp. (q8d recoded) n <sub>wgtd</sub> =185. %=82.7	Involved dec.-making re: ADLs when left hosp. (q8e) n <sub>wgtd</sub> =143 %=98.6	(Current) Health is... (excellent/very good/good) (q8b) n <sub>wgtd</sub> =747; %=50.7	Health change (1 yr ago) (q8c) n=741, %=27.6
Client Characteristics:										
Gender	Larger % females endorse	Larger % females endorse	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Age Group	Smaller % younger endorse compared to older and oldest	Smaller % younger endorse compared to older	n/d	n/d	n/d	Smaller % older endorse compared to oldest	n/d	n/d	Larger % endorse at each higher age group	Larger % younger endorse compared to older and oldest endorsement
Geographic Region	***	***	***	***	***	***	***	***	***	***
Level of Need	n/d	n/d	Larger % the moderate needs group endorse compared to highest	n/d	n/d	n/d	n/d	n/d	n/d	Smaller % moderate needs endorse compared to high
ADL Needs (Low, Medium, Intensive)	n/d	n/d	Smaller % endorse at each higher needs level	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Case Mgmt. Setting (AAA vs. HHA)	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Service Types (Self-Directed vs. Agency-Directed)	n/d	n/d	n/d	n/d	n/d	Larger % of self-directed endorse	n/d	n/d	n/d	n/d
Moderate needs Participants: Meet/Do not meet High or Highest Criteria	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
***Did not test for significant differences due to small cell n's										
Note: n/d = no significant differences in % endorsing item.										
<sup>1</sup> Small cell n's; interpret with caution.										

## Information Dissemination: Choice and Control

*The amount of choice and control you had when planned the services or care you would receive (MACRO item q3a, n<sub>wgtd</sub>=725). Percent of clients endorsing "good" or "excellent" (overall % agreement = 89.4)<sup>11</sup>*

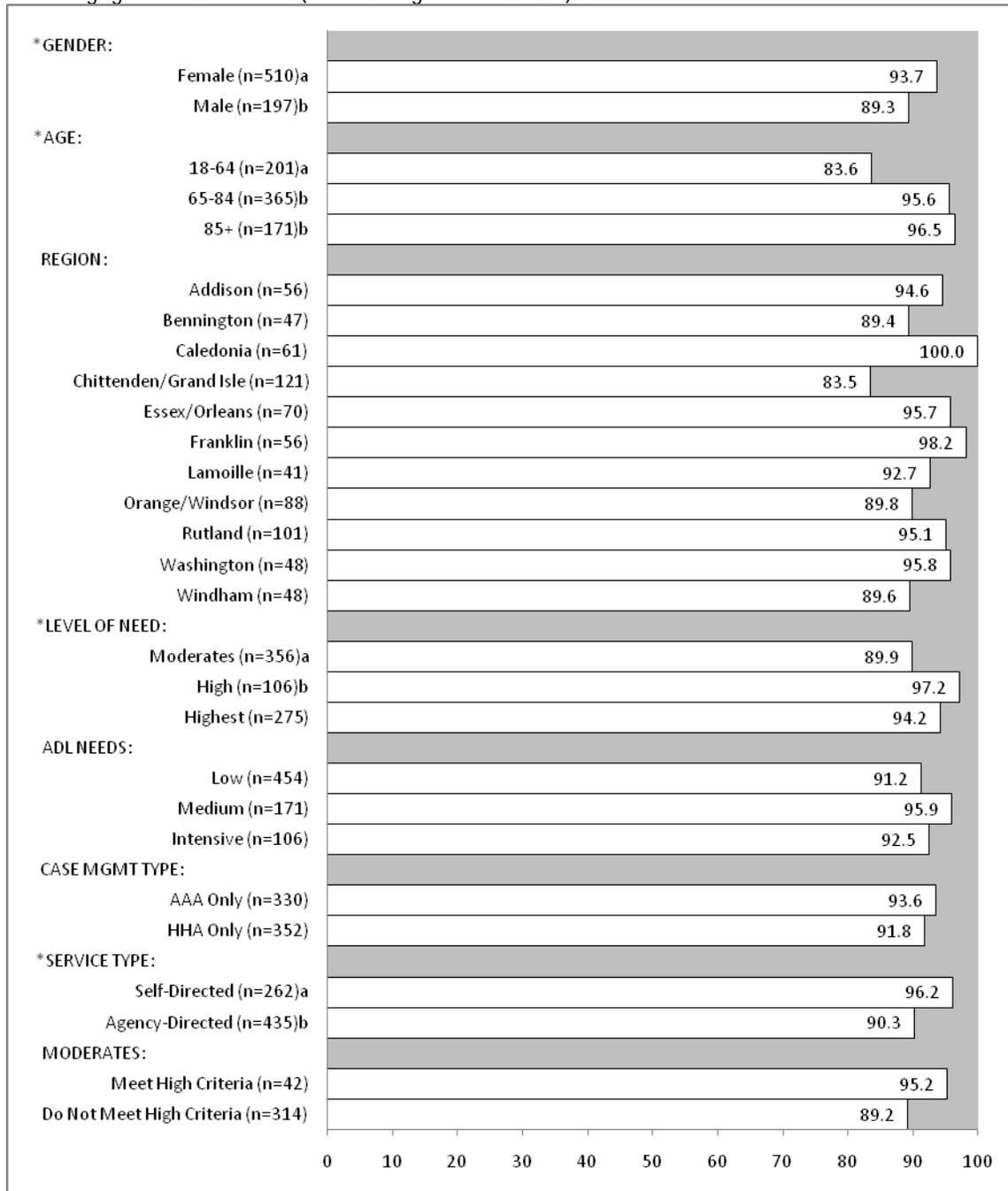


<sup>11</sup> For the full sample of clients in CFC (moderate, high, and highest needs), including those without an ILA assessment (n<sub>wgtd</sub>=776), % agreement was 88.8. For the full sample of all clients surveyed by MACRO (n<sub>wgtd</sub>=887) % agreement was 89.0.

Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly ( $p < .05$ ).

### Information Dissemination: People Listen

How well people listen to your needs and preferences (MACRO item q3j,  $n_{wgt}=738$ ). Percent of clients endorsing "good" or "excellent" (overall % agreement = 92.6)<sup>12</sup>.

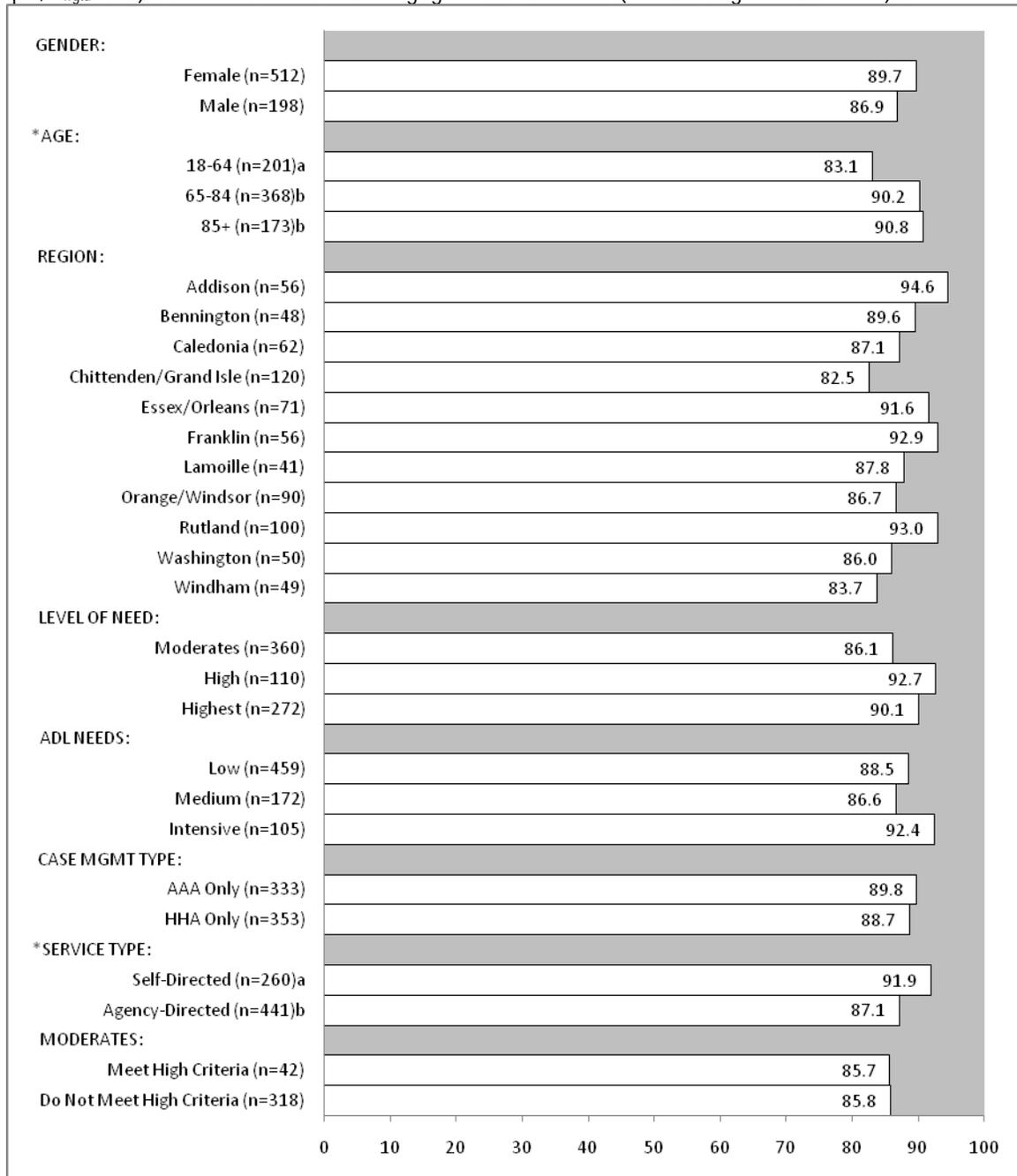


<sup>12</sup> For the full sample of clients in CFC (moderate, high, and highest needs), including those without an ILA assessment ( $n_{wgt}=790$ ), % agreement was 92.5. For the full sample of all clients surveyed by MACRO ( $n_{wgt}=902$ ), % agreement was 92.5.

Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly ( $p < .05$ ).

### Access: Services Timely

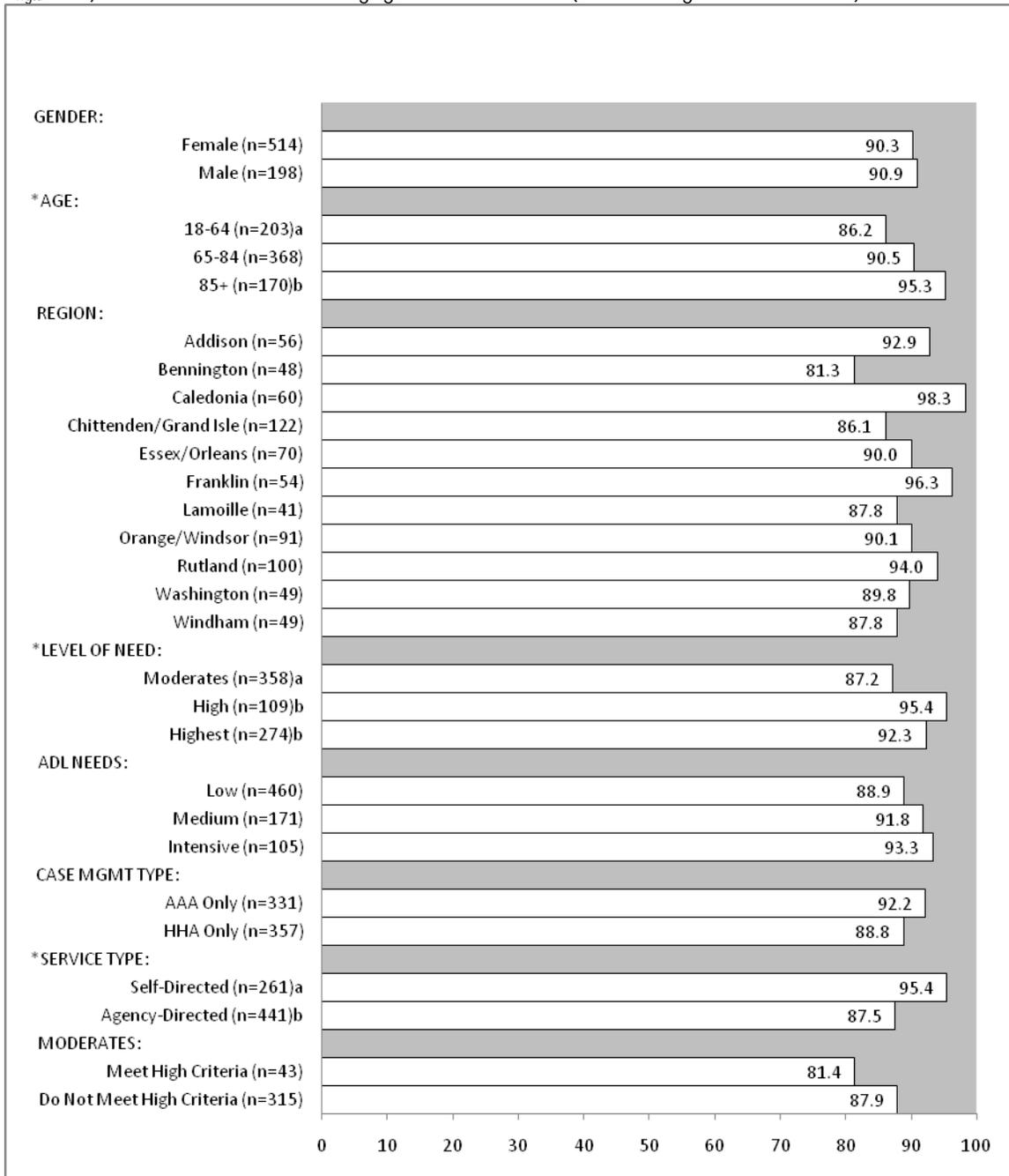
The timeliness of your services. For example, did your services start when you need them? (MACRO item q3c, n<sub>wgtd</sub>=742). Percent of clients endorsing "good" or "excellent" (overall % agreement = 88.5)<sup>13</sup>.



<sup>13</sup> For the full sample of clients in CFC (moderate, high, and s), including those without an ILA assessment (n<sub>wgtd</sub>=792), % agreement was 87.9. For the full sample of all clients surveyed by MACRO (n<sub>wgtd</sub>=903), % agreement was 87.0. Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly ( $p < .05$ ).

### Access: Services Fit Schedule

When you receive your services or care. For example, do they fit with your schedule? (MACRO item q3d, n<sub>wgtd</sub>=742). Percent of clients endorsing "good" or "excellent" (overall % agreement = 90.3%)<sup>14</sup>.

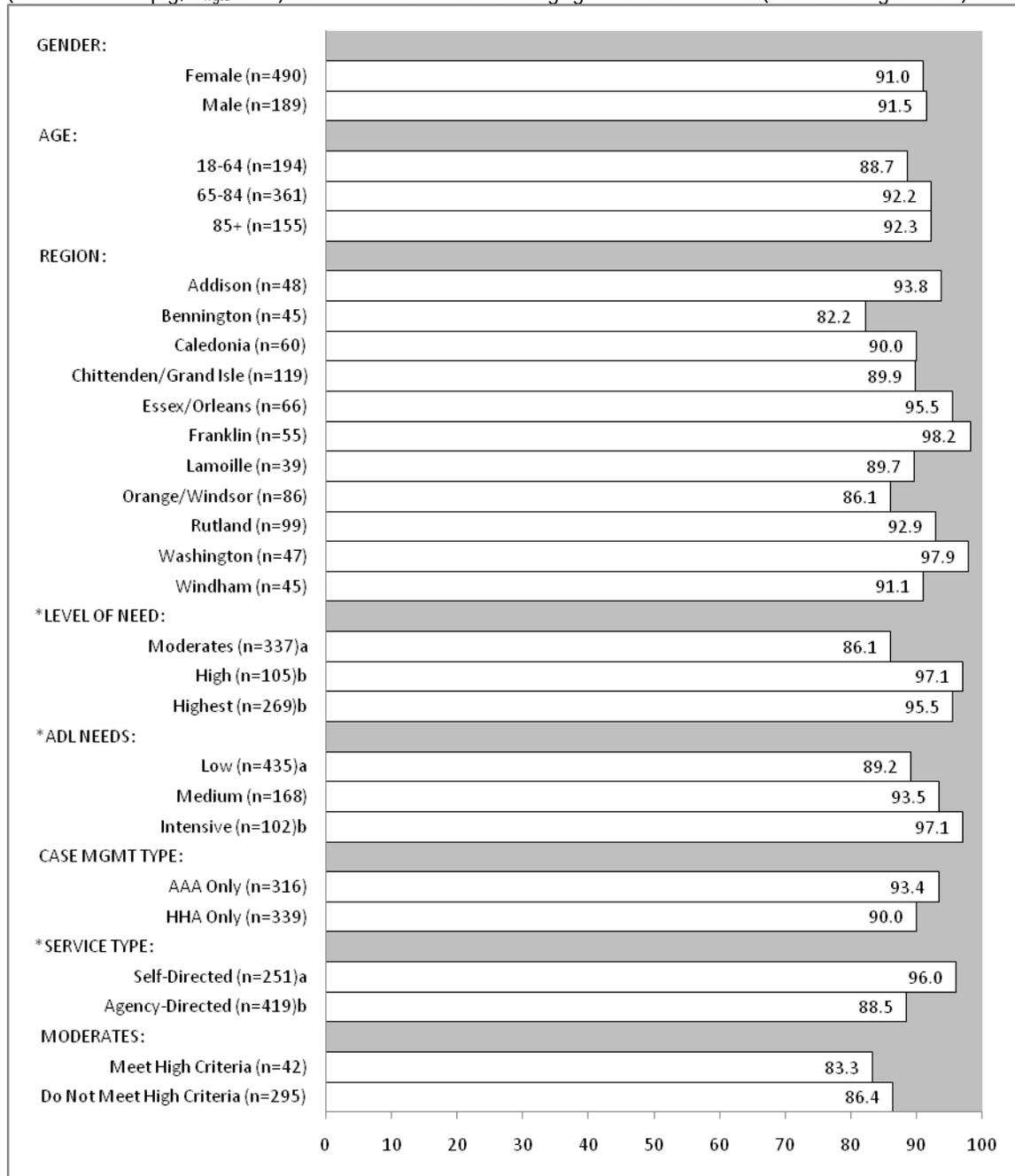


<sup>14</sup> For the full sample of clients in CFC (moderate, high, and highest needs), including those without an ILA assessment (n<sub>wgtd</sub>=793), % agreement was 90.3. For the full sample of all clients surveyed by MACRO (n<sub>wgtd</sub>=905), % agreement was 90.8.

Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly ( $p < .05$ ).

### Effectiveness: Services Meet Needs

The degree to which services meet your daily needs such as bathing, dressing, meals, and housekeeping (MACRO item q3g,  $n_{wgt} = 711$ ). Percent of clients endorsing "good" or "excellent" (overall rating=91.4%)<sup>15</sup>.

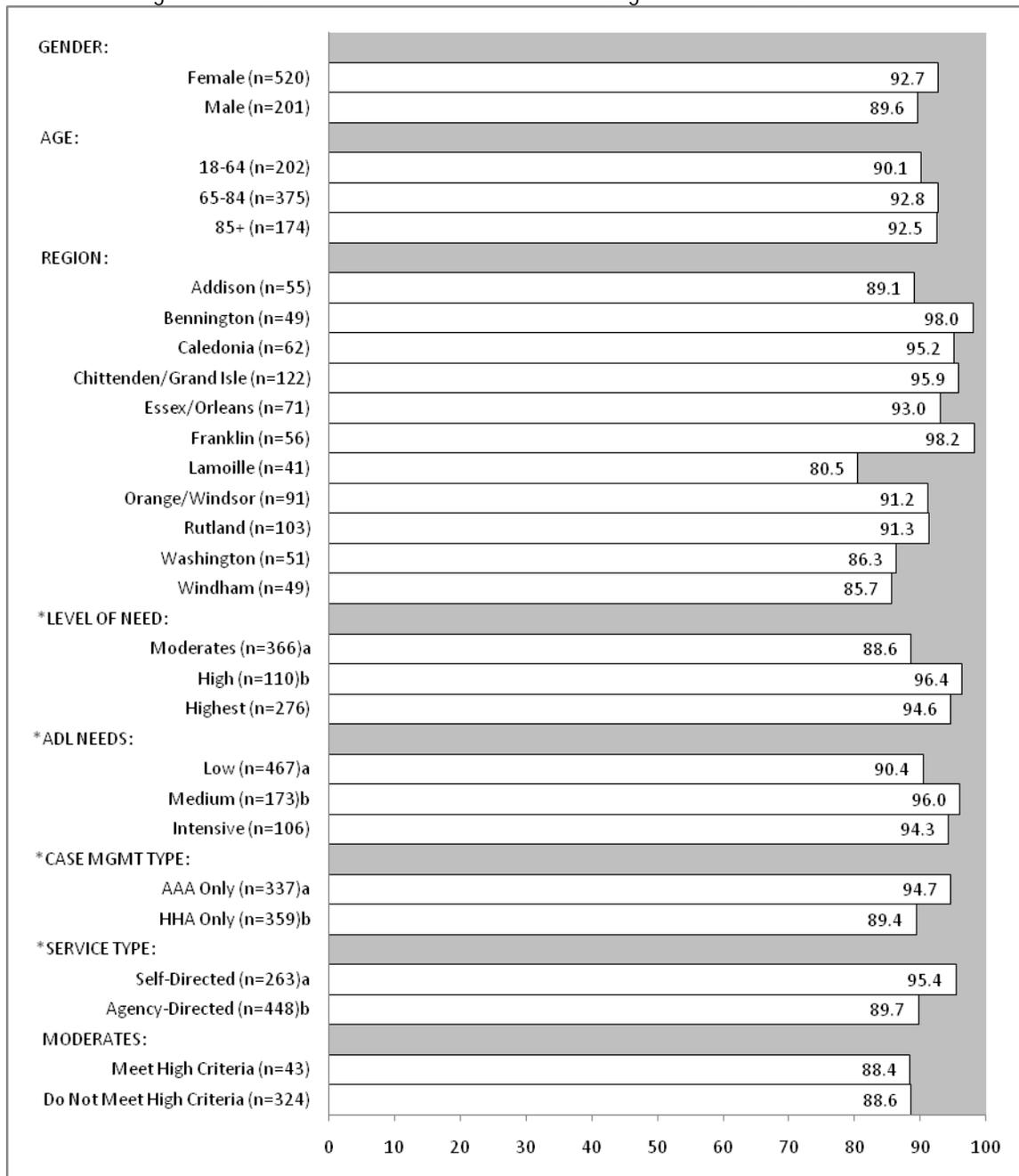


<sup>15</sup> For the full sample of clients in CFC (moderate, high, and highest needs), including those without an ILA assessment ( $n_{wgt} = 760$ ) % agreement was 91.3. For the full sample of all clients surveyed by MACRO ( $n_{wgt} = 871$ ) was 91.7.

Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly ( $p < .05$ ).

### Effectiveness: Help has made life ...

*Would you say the help you have received has made your life...* (MACRO item q5, n<sub>wgtd</sub>=752). Percent of clients endorsing "much better" or "somewhat better". Overall % agreement = 92.0%<sup>16</sup>.

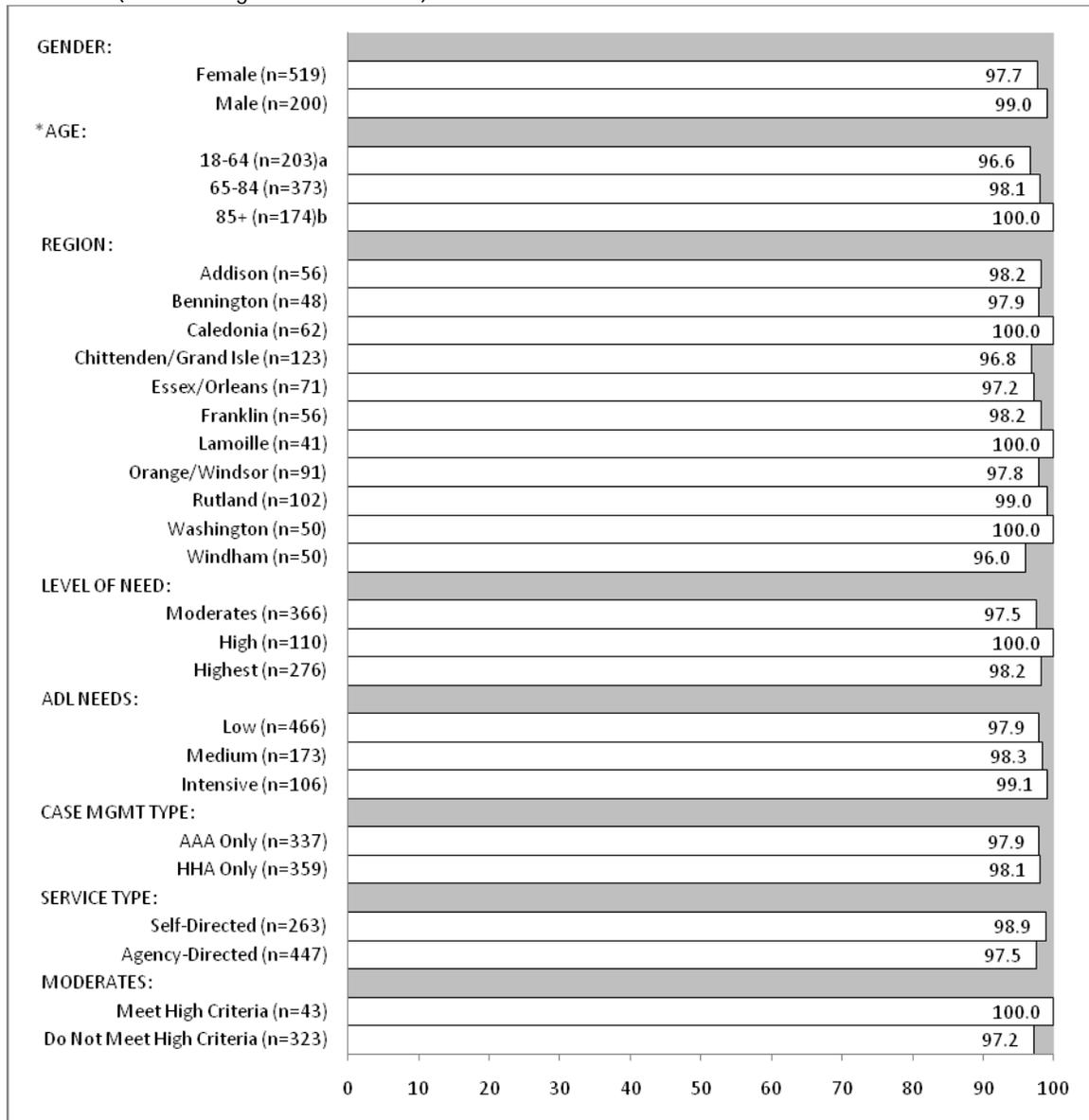


<sup>16</sup> For the full sample of clients in CFC (moderate, high, and highest needs), including those without an ILA assessment (n<sub>wgtd</sub>=804), % agreement was 91.9. For the full sample of all clients surveyed by MACRO (n<sub>wgtd</sub>=917), % agreement was 92.3.

Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly ( $p < .05$ ).

### Experiences with Care: Courtesy of Others

*The courtesy of those who help you* (MACRO item q3i,  $n_{\text{wgtid}}=751$ ). Percent of clients endorsing "good" or "excellent" (overall % agreement = 98.1%)<sup>17</sup>.

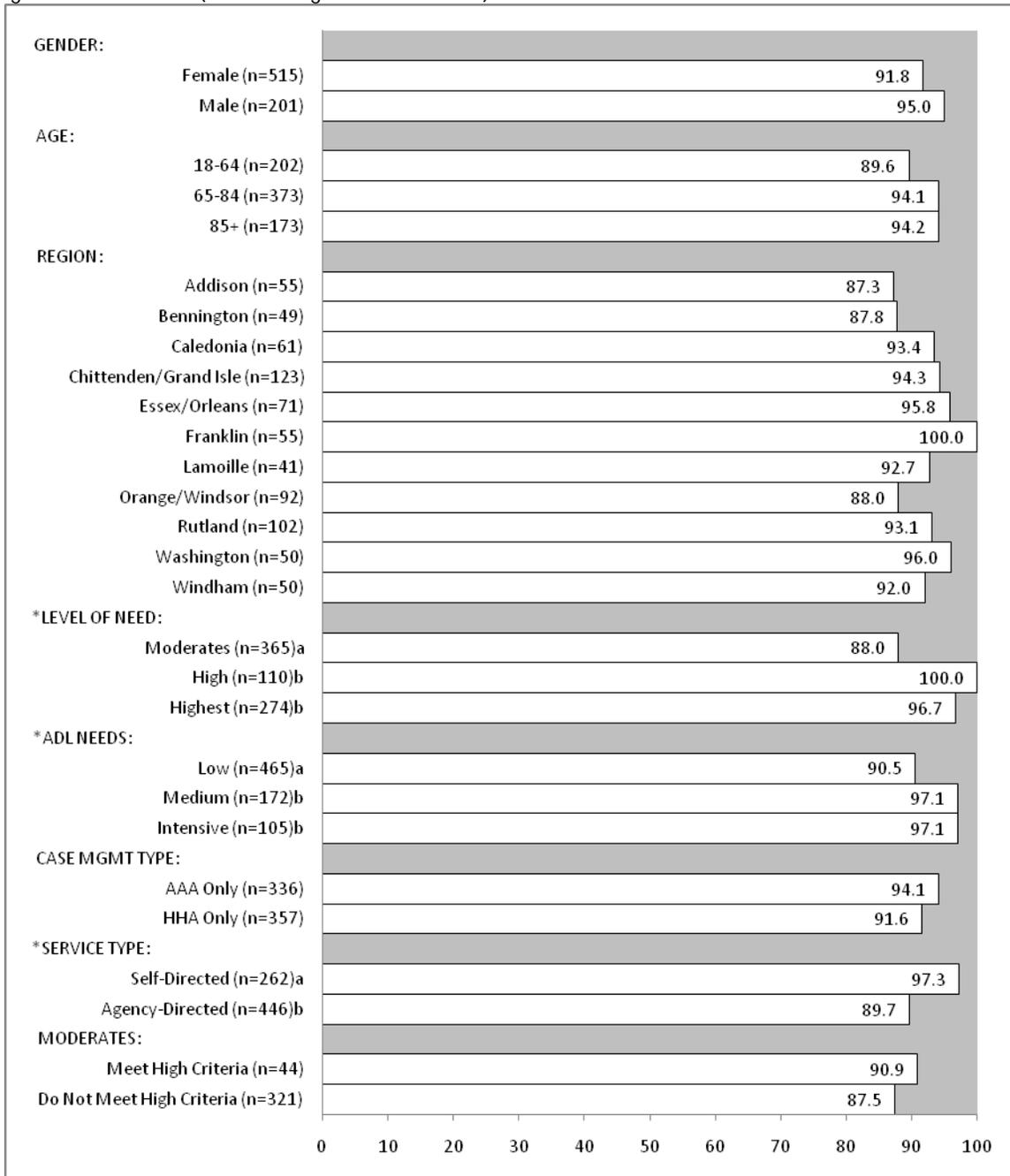


<sup>17</sup> For the full sample of clients in CFC (moderate, high, and highest needs), including those without an ILA assessment ( $n_{\text{wgtid}}=804$ ), % agreement was 98.1. For the full sample of all clients surveyed by MACRO ( $n_{\text{wgtid}}=916$ ), % agreement was 98.1.

Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly ( $p < .05$ ).

### Experiences with Care: Quality of Services

The overall quality of the help you receive (MACRO item q3b,  $n_{wgted}=749$ ). Percent of clients endorsing "good" or "excellent" (overall % agreement = 92.9%)<sup>18</sup>.

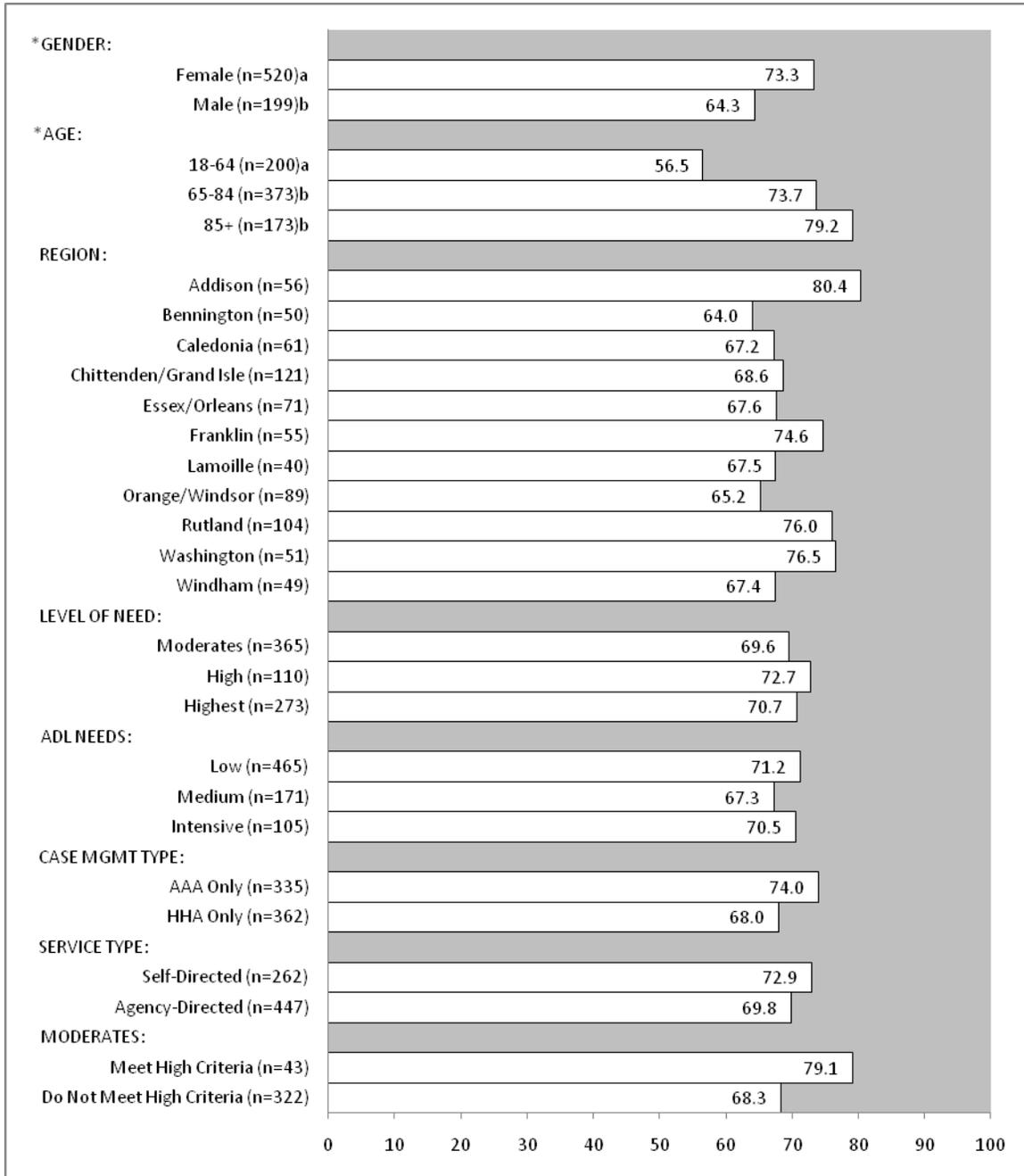


<sup>18</sup> For the full sample of clients in CFC (moderate, high, and highest needs), including those without an ILA assessment ( $n_{wgted}=801$ ), % agreement was 93.1. For the full sample of all clients surveyed by MACRO ( $n_{wgted}=912$ ), % agreement was 93.1.

Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly ( $p < .05$ ).

### Quality of Life: Quality of Life

Overall, how would you rate your quality of life? (MACRO item q8a,  $n_{wgt}=748$ ). Percent of clients endorsing "yes". Overall % agreement = 70.5%<sup>19</sup>.

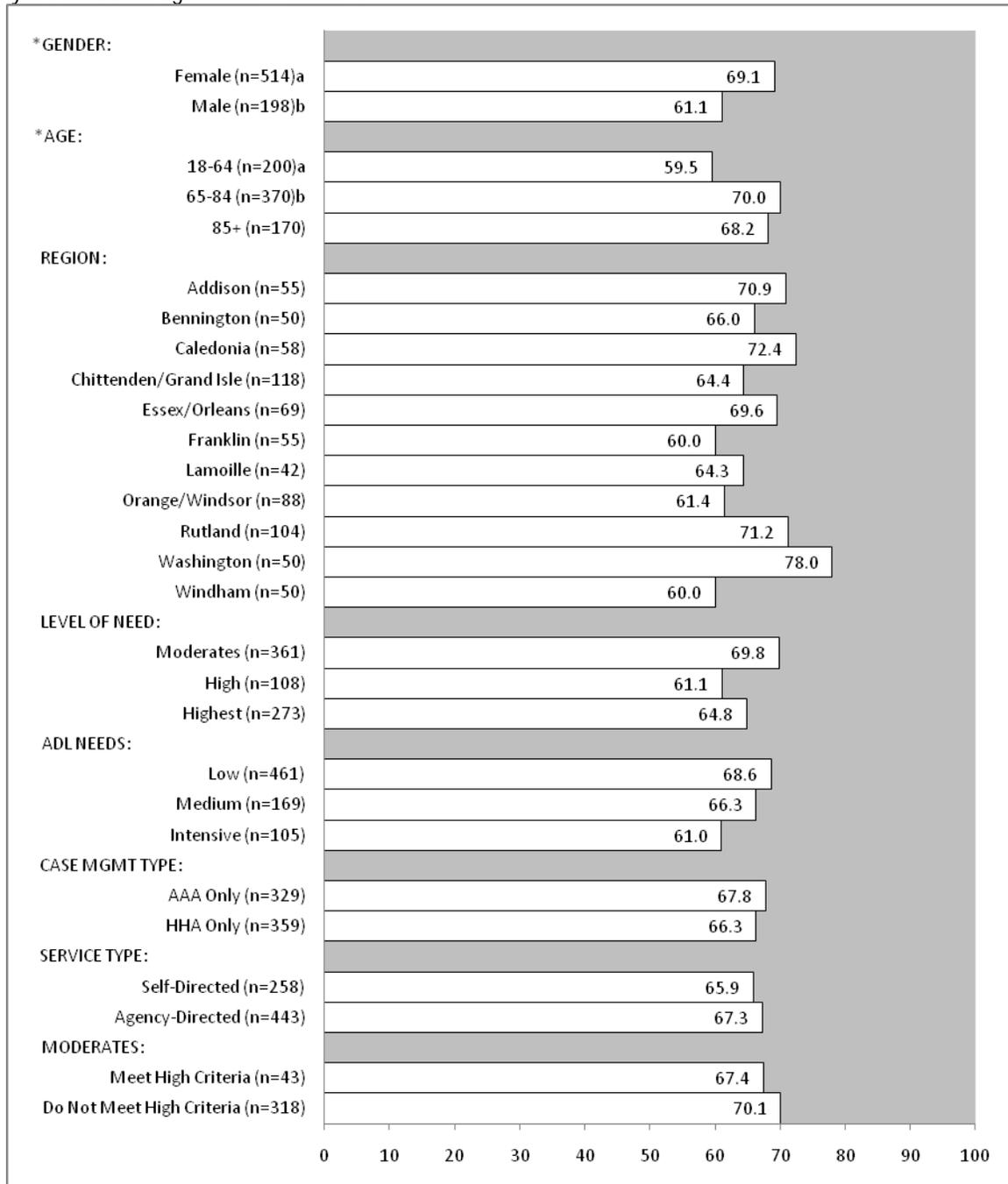


<sup>19</sup> For the full sample of clients in CFC (moderate, high, and highest needs), including those without an ILA assessment ( $n_{wgt}=800$ ), % agreement was 70.3. For the full sample of all clients surveyed by MACRO ( $n_{wgt}=912$ ), % agreement was 69.5.

Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly ( $p < .05$ ).

## Quality of Life: Free Time

*I am satisfied with how I spend my free time.* (MACRO item q7e,  $n_{\text{wgtld}}=742$ ). Percent of clients endorsing "yes". Overall % agreement = 66.8%<sup>20</sup>.

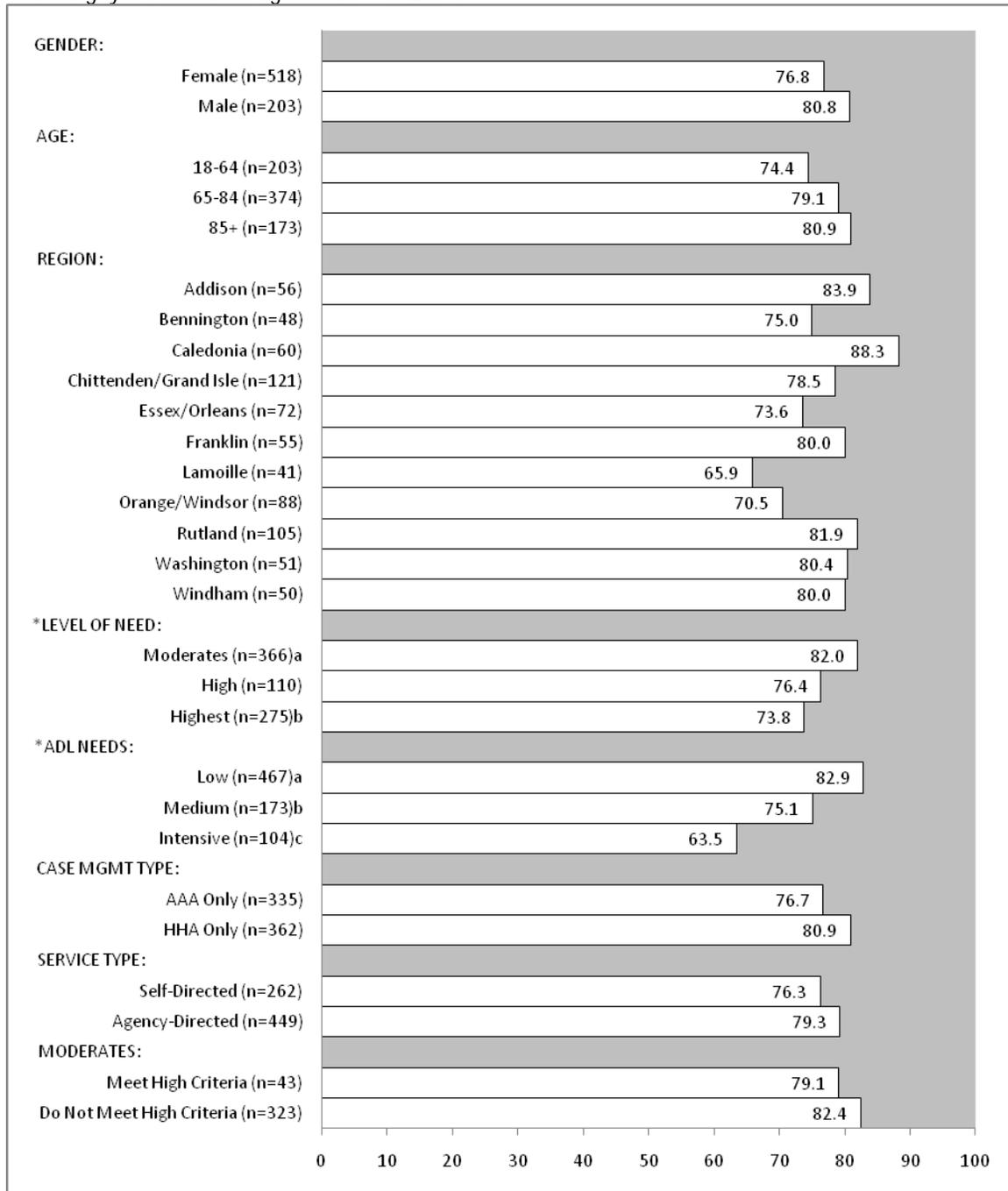


<sup>20</sup> For the full sample of clients in CFC (moderate, high, and highest needs), including those without an ILA assessment ( $n_{\text{wgtld}}=793$ ), % agreement was 67.1. For the full sample of all clients surveyed by MACRO ( $n_{\text{wgtld}}=903$ ), % agreement was 66.1.

Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly ( $p < .05$ ).

### Quality of Life: Get Around Inside

*I can get around inside my home as much as I need to.* (MACRO item q7d,  $n_{\text{wgt}}=751$ ). Percent of clients endorsing "yes". Overall % agreement = 78.2%<sup>21</sup>.

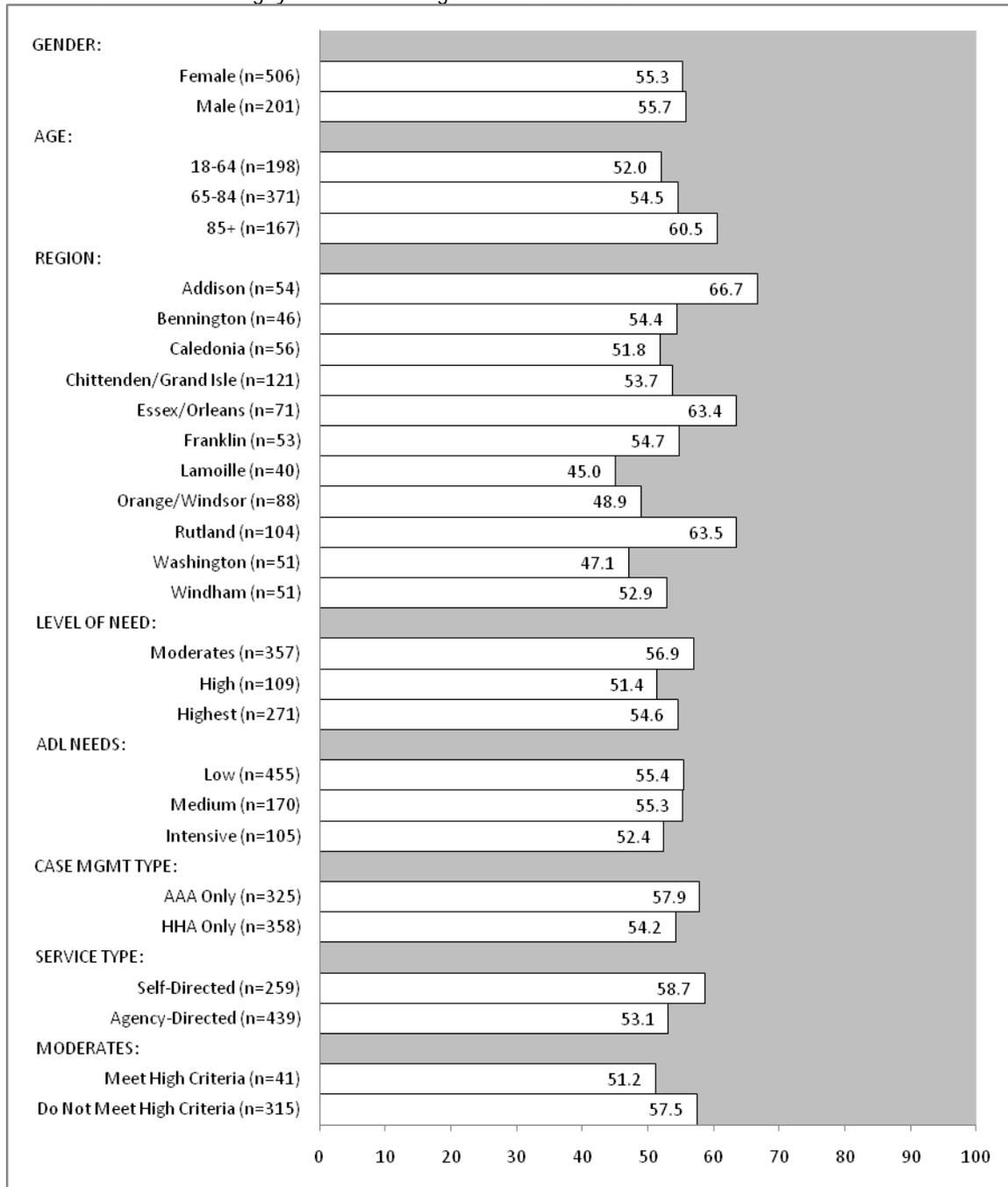


<sup>21</sup> For the full sample of clients in CFC (moderate, high, and highest needs), including those without an ILA assessment ( $n_{\text{wgt}}=802$ ), % agreement was 78.6. For the full sample of all clients surveyed by MACRO ( $n_{\text{wgt}}=914$ ), % agreement was 77.7.

Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly ( $p < .05$ ).

### Quality of Life: Social Life Connection

*I feel satisfied with my social life and with my connection to my community.* (MACRO item q7h,  $n_{\text{wgtid}}=736$ ).  
 Percent of clients endorsing "yes". Overall % agreement = 55.2%<sup>22</sup>.

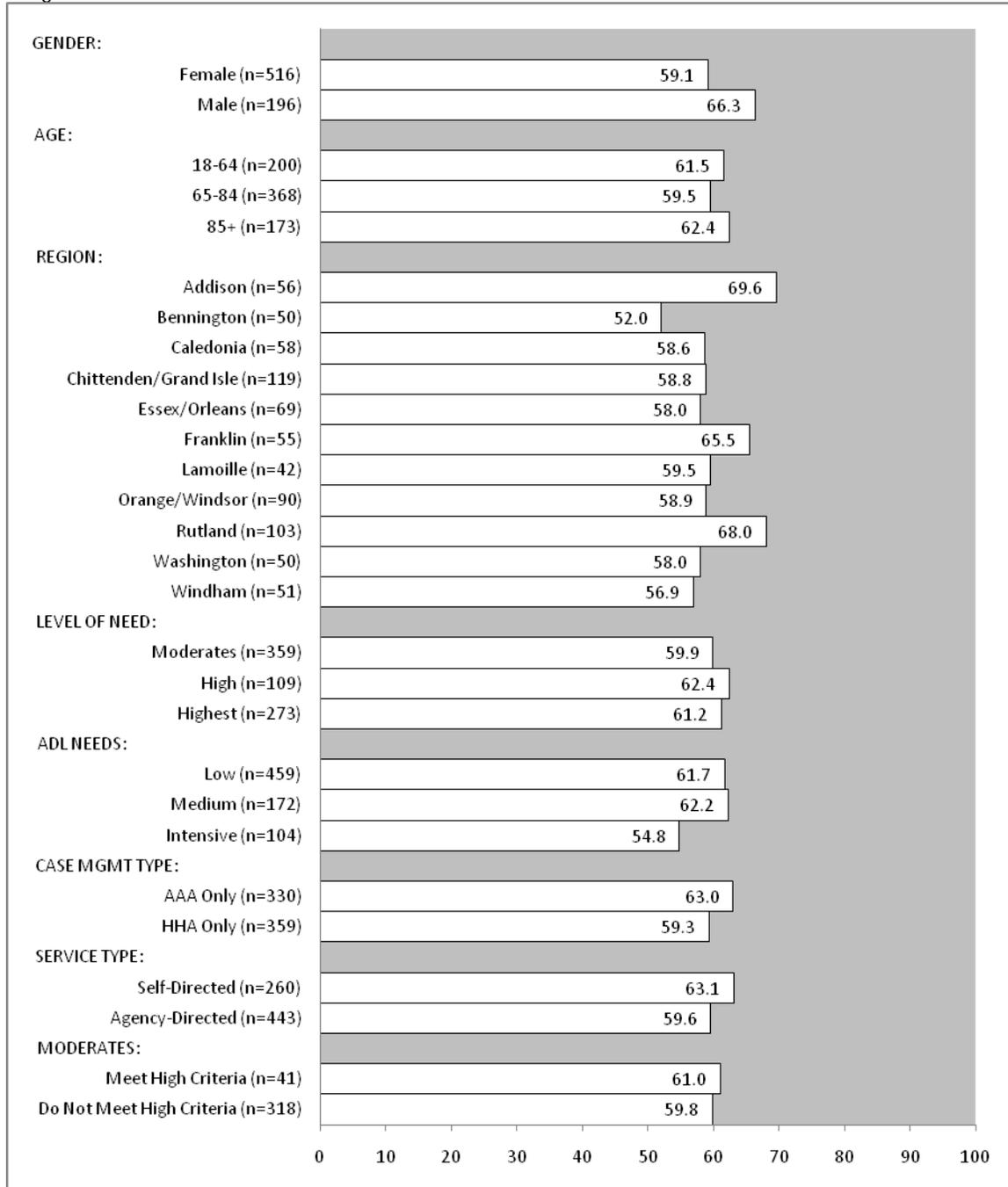


<sup>22</sup> For the full sample of clients in CFC (moderate, high, and highest needs), including those without an ILA assessment ( $n_{\text{wgtid}}=788$ ), % agreement was 56.3. For the full sample of all clients surveyed by MACRO ( $n_{\text{wgtid}}=898$ ), % agreement was 55.1.

Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly ( $p < .05$ ).

### Quality of Life: Can Get Where Need To Go

*I can get where I need or want to go.* (Macro item q7c, n<sub>wgtd</sub>=742). Percent of clients endorsing "yes". Overall % agreement = 60.8%<sup>23</sup>.

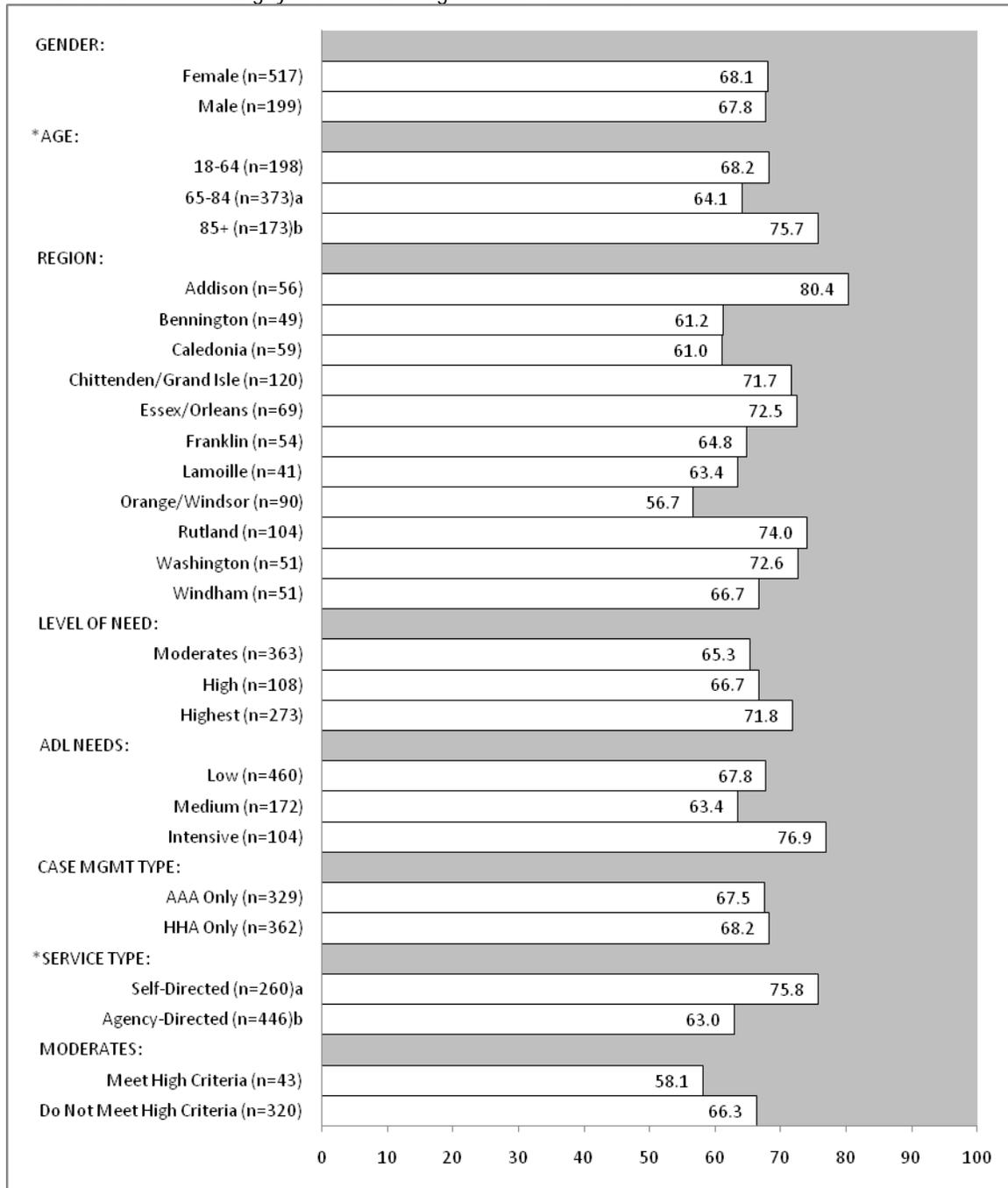


<sup>23</sup> For the full sample of clients in CFC (moderate, high, and highest needs), including those without an ILA assessment (n<sub>wgtd</sub>=794), % agreement was 60.9. For the full sample of all clients surveyed by MACRO (n<sub>wgtd</sub>=905), % agreement was 60.3.

Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly ( $p < .05$ ).

### Quality of Life: Family/Friends Contact

*I am satisfied with the amount of contact I have with my family and friends.* (MACRO item q7f, n<sub>wgtd</sub>=743). Percent of clients endorsing "yes". Overall % agreement = 67.9%<sup>24</sup>.

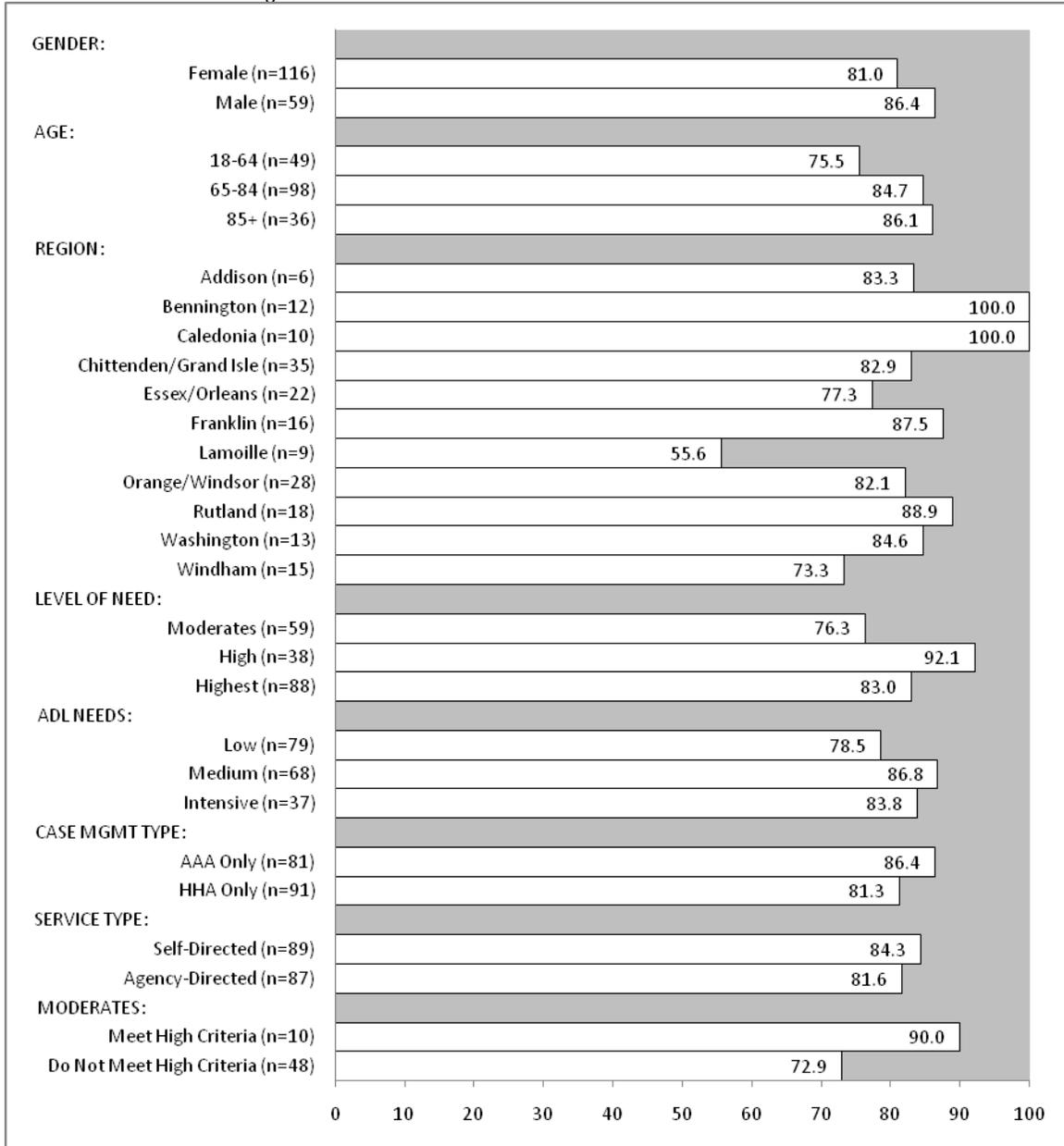


<sup>24</sup> For the full sample of clients in CFC (moderate, high, and highest needs), including those without an ILA assessment (n<sub>wgtd</sub>=795), % agreement was 68.4. For the full sample of all clients surveyed by MACRO (n<sub>wgtd</sub>=907), % agreement was 67.8.

Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly ( $p < .05$ ).

**Public Awareness: Informed About Getting ADLs Help (when left hospital)**

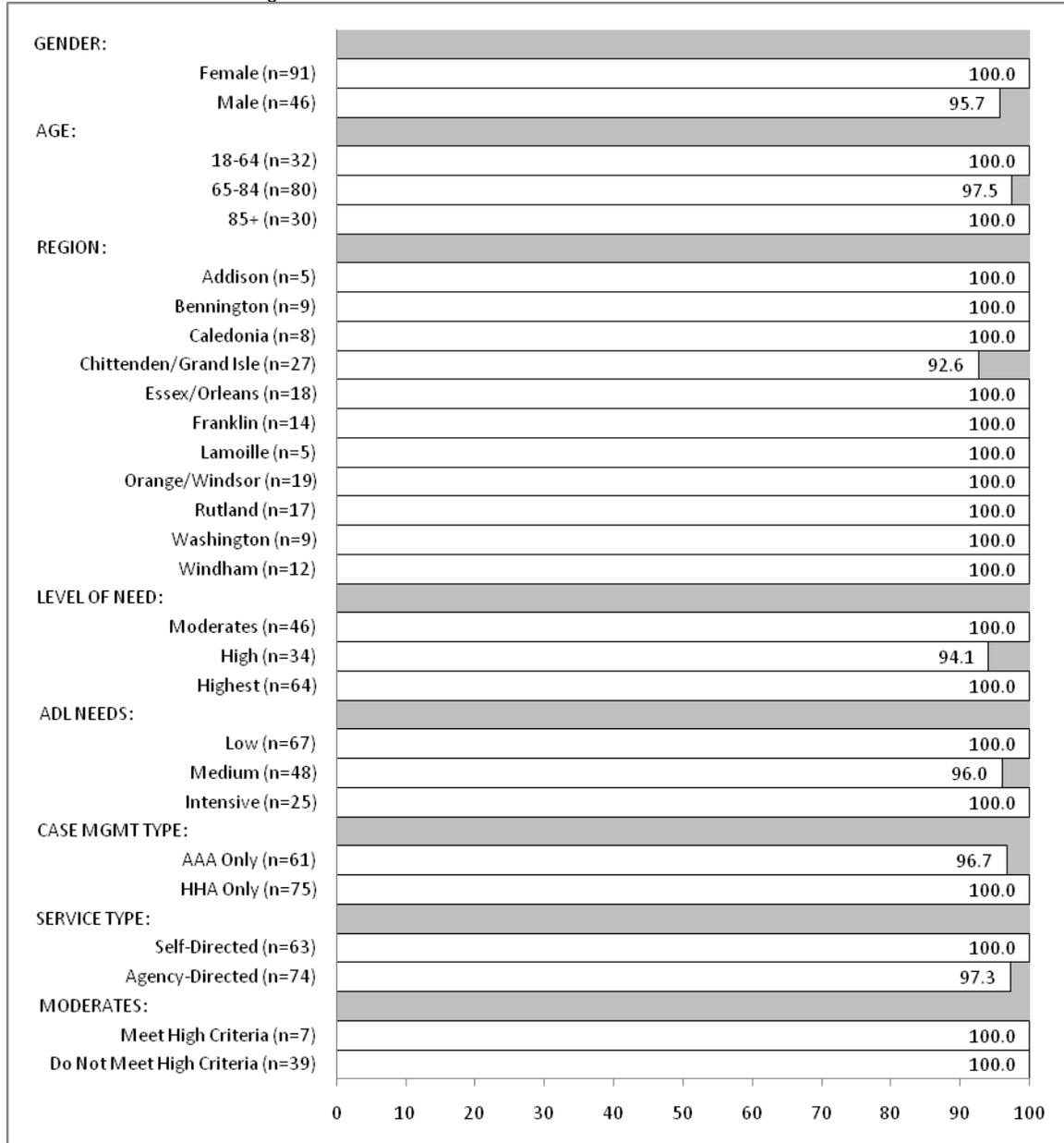
Those responding affirmatively to: 1) were you hospitalized in the last year (n<sub>wgtd</sub>=280, 36.3%), and 2) If you have been hospitalized more than once, when you left the hospital (at your most recent hospitalization) did you need help with daily activities (MACRO item 8d (recoded), n<sub>wgtd</sub>=185), and 3) did either a hospital or CFC staff member inform either you or a family member about getting help with your daily activity needs. Percent of clients endorsing this item = 82.6%<sup>25</sup>.



<sup>25</sup> For the full sample of clients in CFC (moderate, high, and highest needs), including those without an ILA assessment (n<sub>wgtd</sub>=206), % agreement was 82.7. For the full sample of all clients surveyed by MACRO (n<sub>wgtd</sub>=235), % agreement was 82.9. Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly (p < .05).

### Public Awareness: Involved In Decision-Making (when left hospital)

Those responding affirmatively to: 1) were you hospitalized in the last year ( $n_{\text{wgt}}=280$ , 36.3%), and 2) If you have been hospitalized more than once, when you left the hospital (at your most recent hospitalization) did you need help with daily activities (MACRO item 8e (recoded),  $n_{\text{wgt}}=143$ ), and 3) did either a hospital or CFC staff member inform either you or a family member about getting help with your daily activity needs. Percent of clients endorsing this item = 98.9%<sup>26</sup>.

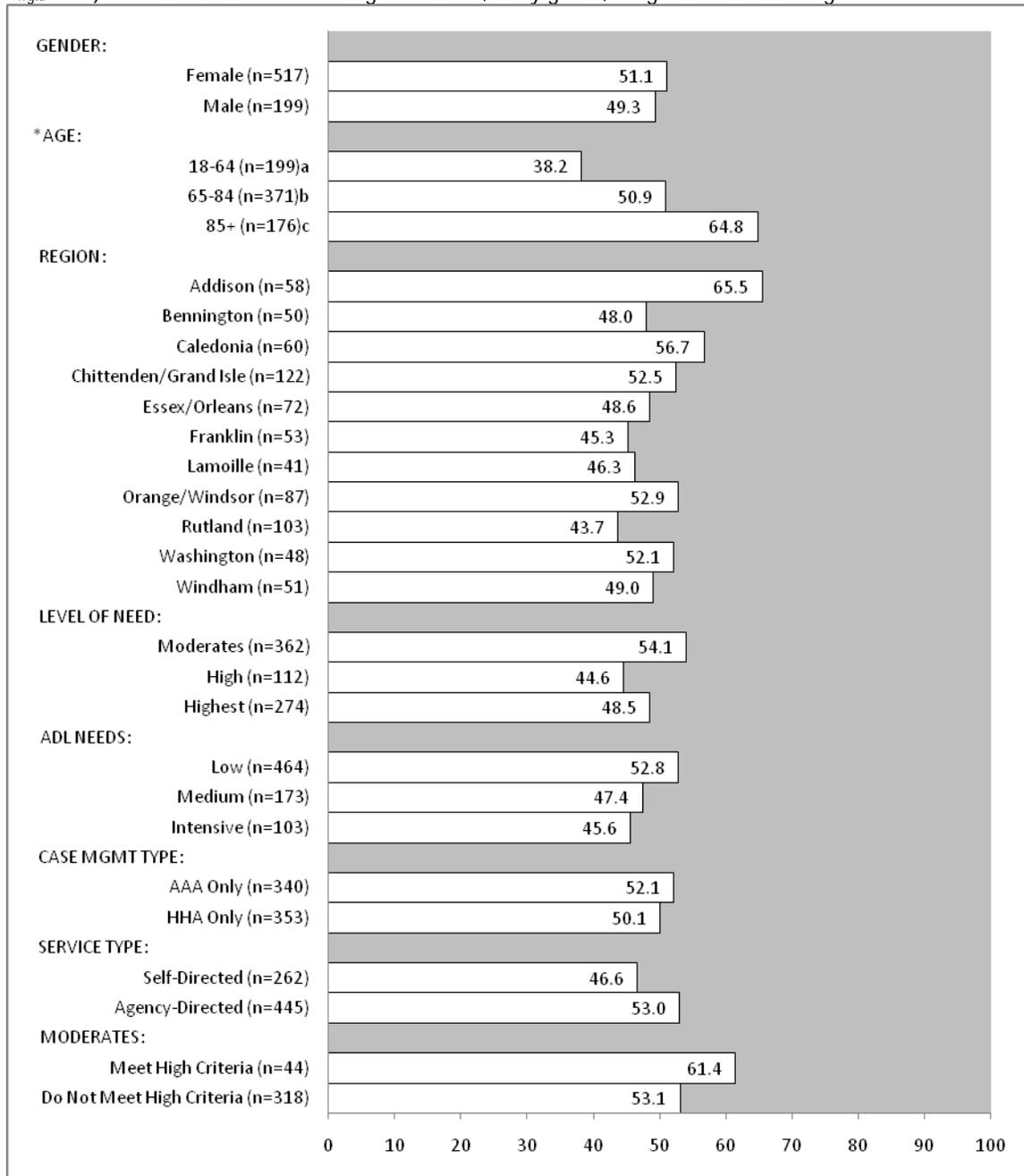


<sup>26</sup> For the full sample of clients in CFC (moderate, high, and highest needs), including those without an ILA assessment ( $n_{\text{wgt}}=160$ ), % agreement was 99.0. For the full sample of all clients surveyed by MACRO ( $n_{\text{wgt}}=181$ ), % agreement was 99.2.

Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly ( $p < .05$ ).

### Health Outcomes: Current health is ...

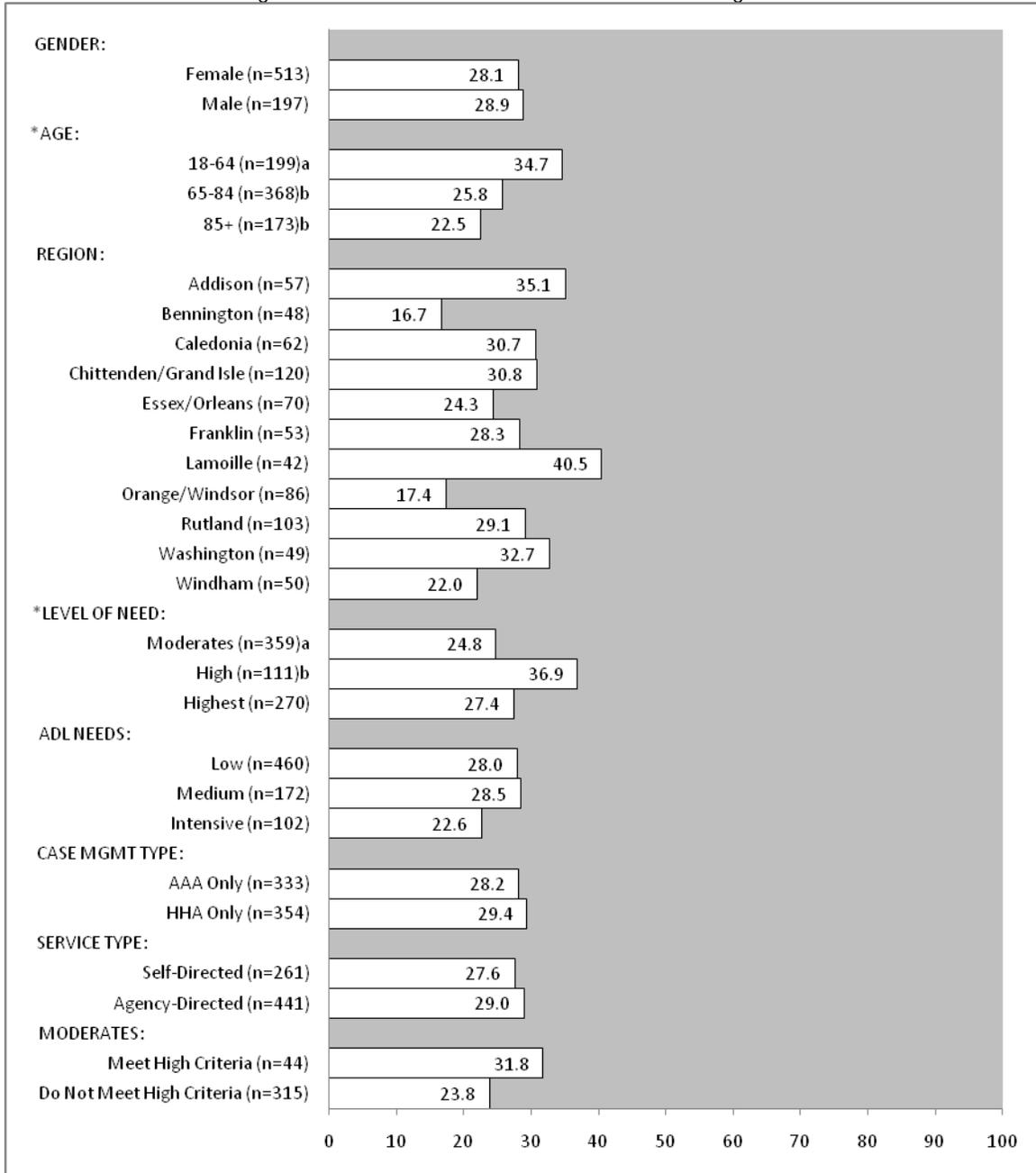
In general, compared to other people your age, would you say your health is... (MACRO item q8b, n<sub>wgtd</sub>=747). Percent of clients endorsing "excellent", "very good", or "good". Overall % agreement = 50.7%<sup>27</sup>.



<sup>27</sup> For the full sample of clients in CFC (moderate, high, and highest needs), including those without an ILA assessment (n<sub>wgtd</sub>=799), % agreement was 50.2. For the full sample of all clients surveyed by MACRO (n<sub>wgtd</sub>=912), % agreement was 49.1. Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly ( $p < .05$ ).

### Health Outcomes: Health Change

Compared to one year ago, how would you rate your health in general now? (MACRO item q8c,  $n_{\text{wgtid}}=741$ ). Percent of clients endorsing "much better" or "somewhat better". Overall % agreement = 27.6%<sup>28</sup>.



<sup>28</sup> For the full sample of clients in CFC (moderate, high, and highest needs), including those without an ILA assessment ( $n_{\text{wgtid}}=793$ ), % agreement was 26.8. For the full sample of all clients surveyed by MACRO ( $n_{\text{wgtid}}=906$ ), % agreement was 25.3.

Note: Client variables with significant effects noted with asterisk. Within client characteristic variables, subgroups with different subscripts (e.g., "a", "b") differed significantly ( $p < .05$ ).

## Appendix A. Mapping of DAIL Clinical Level of Need Criteria to ILA Variables<sup>29</sup>

### II. Clinical Eligibility

#### A. Highest needs Group

1. (ADLs): Individuals who require EXTENSIVE or TOTAL assistance with AT LEAST ONE of the following ADLs: toilet use (var 1079), eating (1078), bed mobility/transfer (1073/1074), AND require AT LEAST LIMITED assistance with any other ADL [mobility (1076), dressing (1077), personal hygiene (1080), or adaptive devices (1900)].

2. Individuals who have (1) a severe impairment with decision-making skills, OR a moderate impairment with decision-making skills<sup>30</sup> and [any] one of the following behavior symptoms/conditions, WHICH OCCURS FREQUENTLY and IS NOT EASILY ALTERED: wandering (1929/3613), resists care (3620/3621), behavioral symptoms [e.g., "socially inappropriate/disruptive behavior"] (1933/3619), verbally aggressive behavior (1932/3615), physically aggressive behavior (1931/3617).<sup>31</sup>

3. Individuals who have AT LEAST ONE of the following conditions or treatments that require skilled nursing assessment, monitoring, and care on a daily basis:

- Stage 3 or 4 skin ulcers [Pressure ulcers (var 1253) = 3 or 4; Stasis ulcers (var 1254) = 3 or 4].
- IV medications (var 3684 = 3)
- End stage disease (var 1233 = 19)
- 2<sup>nd</sup> or 3<sup>rd</sup> degree BURNS (var 1255 = 1)
- Ventilator/respirator (var 3684=12)
- Naso-gastric tube feeding (var 3665=2) ["feeding tube"]
- Parenteral feedings (var 3665=1)
- Suctioning (var 3684=9)

4. Individuals who have an UNSTABLE medical condition that requires skilled nursing assessment, monitoring, and care on a daily basis related to, but not limited to, AT LEAST ONE of the following:

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<sup>29</sup> Clinical eligibility criteria for the moderate, high, and highest needs programs can be found in the respective VT Department of Disabilities, Aging, and Independent Living Program Manuals, available at the following links: <http://www.ddas.vermont.gov/ddas-policies/policies-cfc/policies-cfc-moderate/policies-cfc-moderate-documents/sec-ii-eligibility> (for moderate needs), and <http://www.ddas.vermont.gov/ddas-policies/policies-cfc/policies-cfc-highest/policies-cfc-highest-manual> (high and highest needs).

<sup>30</sup> "Decision-making skills" appears to be captured by item 3589: "What is the client's ability to make decisions regarding tasks of daily life? (1=Independent - decisions consistent/reasonable; 2=Modified Independence – some difficulty in new situations only; 3=Moderately impaired – decisions poor; cues/supervision; 0=Severely impaired – never/rarely makes decisions). We used "0" coding as the measure of "a severe impairment" and "3" as "a moderate impairment."

<sup>31</sup> For each behavioral status assessment there are two variables. Example wandering: (1929)=How often does the client get lost or wander? [4=never, 1=less than daily, 2=daily]; and (3613)=In the last 7 days was the client's wandering behavior alterable? [1=behavior not present or behavior easily alterable, 2=behavior was not easily altered. We used "2=daily" as the operational definition of "which occurs frequently", and "behavior was not easily altered" as operational definition of "is not easily altered".

- Dehydration (var 123311=11)
- Aphasia (112452=52)
- Vomitting (123317=17)
- Quadriplegia (112457=57)
- Chemotherapy (36841=1)
- Septicemia (36597=7)
- Cerebral palsy (112453=53)
- Respiratory therapy (41764=4)
- Open lesions (12552=2)
- Radiation therapy (36848=8)
- Internal bleeding (123313=13)
- Transfusions (368411=11)
- Wound care ("Wound infection", 365912=12); Surgical wound site (125550=50)
- Aspirations (123314=14)
- Oxygen (36847=7)
- Pneumonia (36595=5)
- Dialysis (36842=2)
- Multiple sclerosis (11248=8)
- Tracheotomy ("Trachostomy care"?, 368410=10)
- Gastric feeding tube ("feeding tube", 36652=2).

#### B. High needs Group

1. Individuals who require EXTENSIVE to TOTAL assistance on a daily basis with at least one of the following ADLs: bathing (1081), dressing (1077), eating (1078), toilet use (1079) or "physical assistance to walk" [mobility (1076)]

## Appendix B. Clinical Profile of High and Highest needss Clients

Using the same methodology for estimating moderate needss participants who may have met high or highest needs criteria (see the Methodology section's Study Variables in the body of the report), we estimated the following in Table 3:

- the number of high needss clients who met ADL criteria for high needs and who met selected criteria for highest needs
- the number of highest needss clients who met ADL criteria for high needs and who met selected criteria for highest needs

As with our estimation of moderate needs participants who may have met high or highest needs criteria, we were subject to the same limitations in our estimates of the high and highest needss participants in Table 3. Specifically, we were not able to apply *all* clinical criteria, but only those criteria that could be directly matched to specific variables and data points available from the ILA. Therefore, Table 3 should not be used to estimate the number of participants who may not meet one of the three levels of need (moderate, high or highest) since, for instance, a high needss participant may not have met ADL criteria for high needs but may have met another high needs criterion not fully captured by the ILA (e.g., having an unstable medical condition that requires daily skilled nursing assessment, monitoring, and care). Therefore, Table 3 only reveals the number and percentage of clients whose level of need qualification (either highest or high) could be ascertained directly from their ILA data.

Briefly, in our sample of 108 clients in the high needss enrollment group, 96 clients (89%) were estimated as meeting high needs based on ADL criteria alone. At least half of these clients also met at least one of the four criteria indicative of highest needss. (Again, the remainder of this high needss group may have met other high needs (or highest needs) criteria that were unspecified in the ILA). Looking at the sample of 243 highest needss clients, a full 95% or 243 clients met the high needs ADL criteria, while 91% meet one of the four criteria for highest needss (e.g., decision-making). For the highest needss clients, ADL was the single criterion that captured the largest proportion of clients.

Table 3: Profile of High and Highest needss Clients

	Meet HIGH		Meet Highest	
	(B.1.) On ADL Criteria Alone		On ANY of Criteria (A.1. through A.4.) <sup>32</sup>	
Current Level of Need Group:	Count	%	Count	%
<i>High</i> (n = 108)	96	88.9	54	50.0
<i>Highest</i> (n = 256)	243	94.9	232	90.6

<sup>32</sup> A.1. = ADL needs criteria; A.2. = decision-making/physical symptoms criteria; A.3. = conditions criteria; A.4. = unstable conditions criteria.

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