

**Change in the Characteristics of Rhode Island Medicaid
Population in Nursing Homes
2008 - 2010**

DRAFT

**Prepared for the Evaluation of the RI Medicaid Program's
Real Choice System Transformation Project**

by

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Summary of Findings

- **The results of our analyses to determine change in the Medicaid population in nursing homes attributable to rebalancing efforts are encouraging: we observed a 10% decrease between 2008 and 2010 in the proportion of new admissions who remain in the nursing home longer than 90 days (long stay), from 63% to 53%.**
- **This decrease in “conversion” to long stay status is more pronounced in persons who enter the nursing home for post-acute care (12% decrease) than among persons who entered from the community (8% decrease).**
- **There is a modest decrease (5%) in the proportion of persons discharged to home who were readmitted to the nursing home from 2008 to 2010.**
- **There is very little change in the cognitive status of people who entered the nursing home in 2008 and 2010.**
- **In contrast, there is an increase in the percentage of persons entering the nursing home who require extensive help with ADLs in 2010, and this increase is observed for all ADLs except bathing.**
- **Additionally, the increase in ADL impairment severity is more pronounced for persons admitted from the community than for persons who entered the nursing home for post acute care.**
- **Nursing home residents who remained in the nursing home longer than 90 days (long stay residents) were also more ADL impaired in 2010 than in 2008, and this increase in severity is greatest for residents admitted from the community. The least amount of change was among residents who were admitted prior to the year of interest (i.e., prior to 2008 and 2010).**

- **The proportion of persons admitted from home who meet the broad criteria for “Low Care” (i.e., no late loss ADLs) was halved between 2008 and 2010, from 5.1 % in 2008 to 2.5% in 2010 for persons who stayed < 90 days (short stay) and from 10.9% to 6.1% for persons who stayed > 90 days (long stay).**
- **The percentage of persons who meet the broad criteria for “Low Care” was considerably higher three months following admissions than at admission for persons admitted from home in both years, but it was lower in 2010 (26.5%) than in 2008 (34.6%).**

Implications for the Medicaid Program

- **These results suggest a modest but clear impact of activities associated with efforts to rebalance long term care in Rhode Island on the acuity level of the nursing home population.**
- **Use of the universal screening tool is likely responsible for the increase in ADL impairment and decrease in the proportion of persons who enter the nursing home with low care needs, and efforts to triage persons who enter the nursing home back to the community with services or to less restrictive settings are likely to be responsible for the decrease in the percentage of persons who remain in the nursing home longer than 90 days.**
- **Despite these promising results, data from the first quarterly assessments, conducted approximately 90 days following nursing home admission, suggest that nearly one quarter of residents recover sufficiently to fall into the broad “low care” classification. More monitoring is required to successfully triage these residents to a less restrictive setting.**
- **It is also likely that there is insufficient capacity for care arrangements in the community that meet the needs of persons who may not require substantial ADL assistance but who may require around the clock supervision due to cognitive impairment. Solutions to this problem of access to community based options may be difficult to come by in the current economic environment.**
- **All in all, the Medicaid program has been successful in its initial efforts to change the landscape of long term care in Rhode Island. As the many people state-wide who are involved in these processes become accustomed to change, the progress documented in this report is likely to continue toward Medicaid’s goal of delivering the right services to the right people at the right time.**

Introduction

The purpose of this report is to provide information to the Medicaid program about change in the acuity level of people in nursing homes covered by Medicaid between 2008-2010. Our goal is to provide an indication of the impact of efforts funded by the Real Choice System Transformation project to reduce reliance on nursing homes through the deinstitutionalization and diversion of people who could be well served by less restrictive living environments, including in the community with long term care services.

Data Sources

Data for this report were derived from a merge of two data files at two points in time. 2008 data was used to establish a baseline picture of the RI nursing home population covered by Medicaid, and 2010 data were used to determine change in the nursing home attributable to rebalancing efforts, which were initiated in 2009. The first is the Data use agreements (DUA) were granted from the U.S. Center for Medicare and Medicaid Services (CMS) to use Rhode Island Minimum Data Set Nursing Home Assessment (2008 & 2010) specifically for this project. The second data file was a Medicaid claims file of all persons covered by Medicaid for whom at least one nursing home claim was submitted in 2008 (again in 2010). All nursing home claims for the period 7/01/07 through 6/30/09 (7/01/09 through 4/30/11) were contained in this file. Data use agreements from the R.I. Department of Human Services was granted to Brown University's Center for Gerontology and Health Care Research to use this data to conduct this research. This project was approved by Brown University's Institutional Review Board.

To merge these files, the last four digits of the SSN, date of birth and gender of Medicaid recipients with a nursing home claim were used to match to Brown's person identification data in the national MDS repository database spanning the calendar years 1999-2008. A total of 93% persons (N=10,088) in the RI Medicaid NH claims were identified, with most of the unmatched 7% likely being persons that only had NH claims in 2009, out of Brown's data range. Of those successfully matched, N=1,175 had all their NH Medicaid claims and MDS records in 2007 or in 2009, none in 2008, and were not used in our analysis. The final cohort of persons with an MDS record in 2008 was N=8,913.

Sub-Populations Defined for this Report

New Admits are defined as persons with an admission in 2010 which was their first NH admission (based on a three year lookback), OR who had been discharged prior to 1/1/10, and had a new admission in 2010.

The remaining residents were admitted to a nursing home **Prior to 1/1/10**, and continued their stay into the 2008 calendar year.

Admitted with SNF is defined as those residents newly admitted to a nursing home in 2010 with Medicare SNF benefit following a hospitalization, and were determined by whether they had any MDS required by Medicare for SNF payment (Medicare 5 day assessment, Medicare 14 day assessment, Medicare 30 day assessment, Medicare 60 day assessment, Medicare 90 day assessment, Medicare readmission assessment). No Medicare SNF claims were available under our DUA.

Admitted from Community is defined as the remaining New Admits in 2010, and is those residents without an MDS required by Medicare for SNF payment.

Long Stay Residents are defined to be residents remaining in the nursing home long enough after admission to have a quarterly MDS assessment (90 days post admission or later).

Short Stay Residents are defined to have stays less than 90 days, and thus have no quarterly MDS assessment.

Low Care was defined for NH residents using their first quarterly MDS assessment in 2010 for long stay residents, and the admission MDS assessment for short stay new admits (short stay residents admitted prior to 1/1/10 are not included in this analysis because our analyses are confined to 2010 data). The narrow and broad definitions of low care follows those used in Mor, Zinn, Gozalo et al. (2007, Health Affairs) based on the RUG v5.12 casemix classification index comprising 44 resource utilization categories, and is as follows:

Low Care Broad Definition: Resident does not require assistance in any of the four “late-loss” ADLs—bed mobility, transferring, using the toilet, and

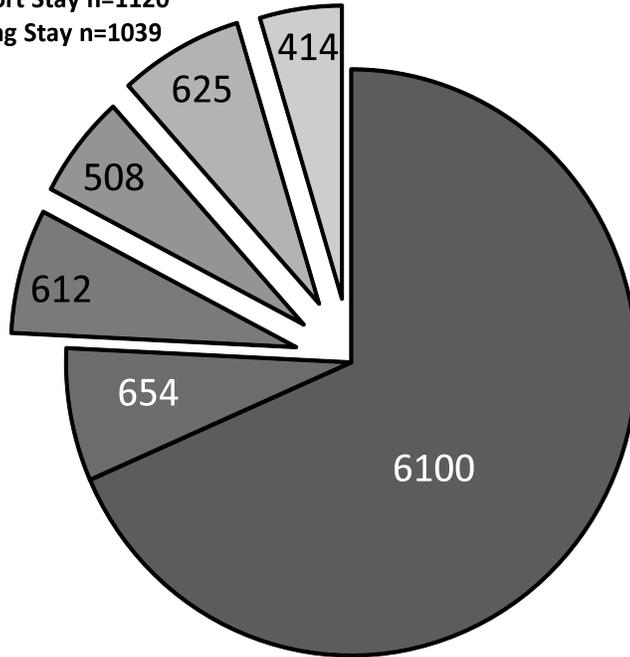
eating—and is not classified in either the “Special Rehab” or “Clinically Complex” Resource Utilization Groups (RUG III).

Low Care Narrow Definition: Resident meets above criteria AND is classified in either of the lowest two of the 44 RUGs groups, i.e., requires the lowest possible amount of care.

SECTION I
Population Parameters
2008 - 2010

Figure 1.1: Distribution of RI Nursing Home Residents with a Medicaid Nursing Home Claim in 2008 (N=8913)

Total New Admits 2008 n=2159
 Total Short Stay n=1120
 Total Long Stay n=1039

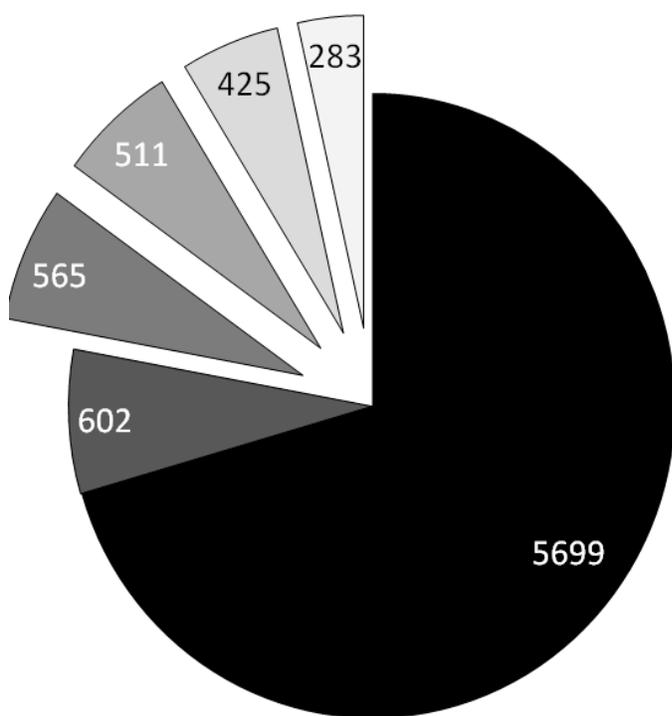


- Admitted Prior to 1/1/08 Long Stay n=6100 (68%)
- Admitted Prior to 1/1/08 Short Stay n=654 (7%)
- New Admits 2008 Short Stay From Home n=612 (7%)
- New Admits 2008 Short Stay SNF n=508 (6%)
- New Admits 2008 Long Stay From Home n=625 (7%)
- New Admits 2008 Long Stay SNF n=414 (5%)

Total Admitted Prior to 1/1/08 n=6754
 Total Short Stay n=654
 Total Long Stay n=6100

Figure 1.2: The Distribution of RI Nursing Home Residents with a Medicaid Nursing Home Claim in 2010 is Very Similar to 2008 (N=8085)

Total New Admits 2008 n=1808
 Total Short Stay n=827
 Total Long Stay n=957



- Admitted Prior to 1/1/10 Long Stay n=5699 (70%)
- Admitted Prior to 1/1/10 Short Stay n=602 (7%)
- New Admits 2010 Short Stay From Home n=565 (7%)
- New Admits 2010 Short Stay SNF n=511 (6%)
- New Admits 2010 Long Stay From Home n=425 (5%)
- New Admits 2010 Long Stay SNF n=283 (4%)

Total Admitted Prior to 1/1/10 n=6301
 Total Short Stay n=602
 Total Long Stay n=5699

Figure 1.3: The Average Percent of New Admissions with Stays > 90 Days Decreased between 2008 and 2010

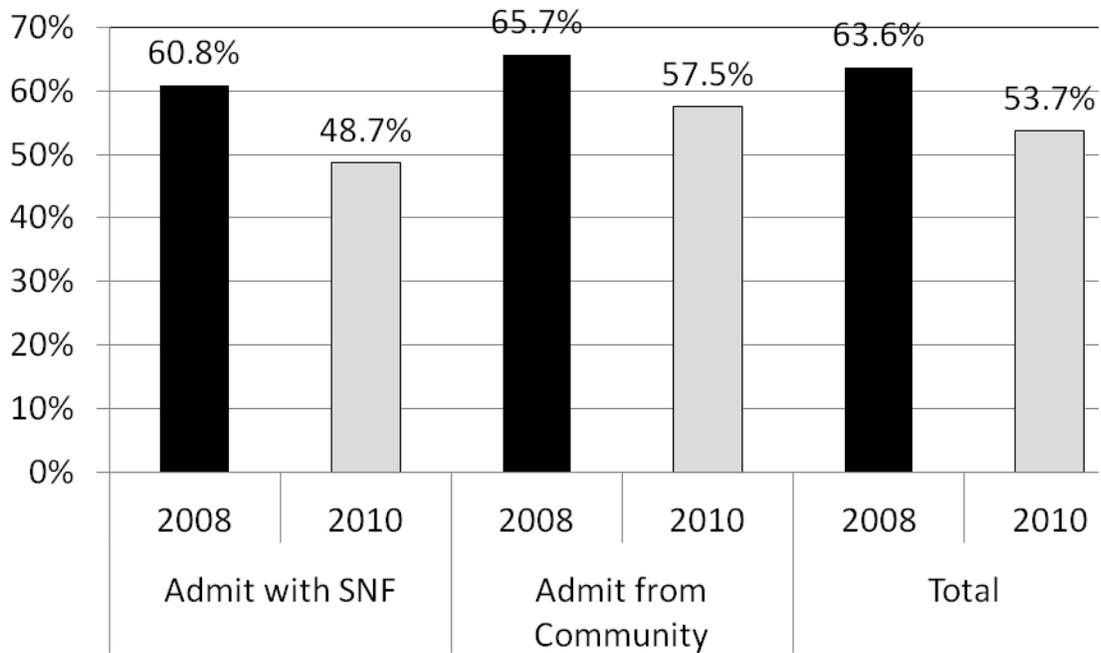


Table 1.1: Disposition of NH Residents Discharged to the Community 2008 and 2010

	New Admits 2008	Admitted Prior to 2008	New Admits 2010	Admitted Prior to 2010
<u>Total</u>	1825	6754	1784	6301
Any Discharge in 2008	856 (46.9%)	1726 (25.5%)	918 (51.4%)	1504 (23.9%)
Discharge to home	513	226	521	248
Discharge to AL	53	32	66	34
Total Discharged to Community	566 (66.1% of any discharge)	258 (14.9% of any discharge)	587 (63.9% of any discharge)	282 (18.8% of an discharge)
<u>Disposition of Persons Discharged to the Community By 9/30</u>				
Readmitted	220 (38.9%)	100 (38.8%)	198 (33.7%)	105 (37.2%)
Died	8 (1.4%)	5 (1.9%)	11 (1.8%)	11 (3.9%)
Neither (likely to be “successful” discharge)	338 (59.7%)	153 (59.3%)	378 (64.3%)	166 (58.9%)

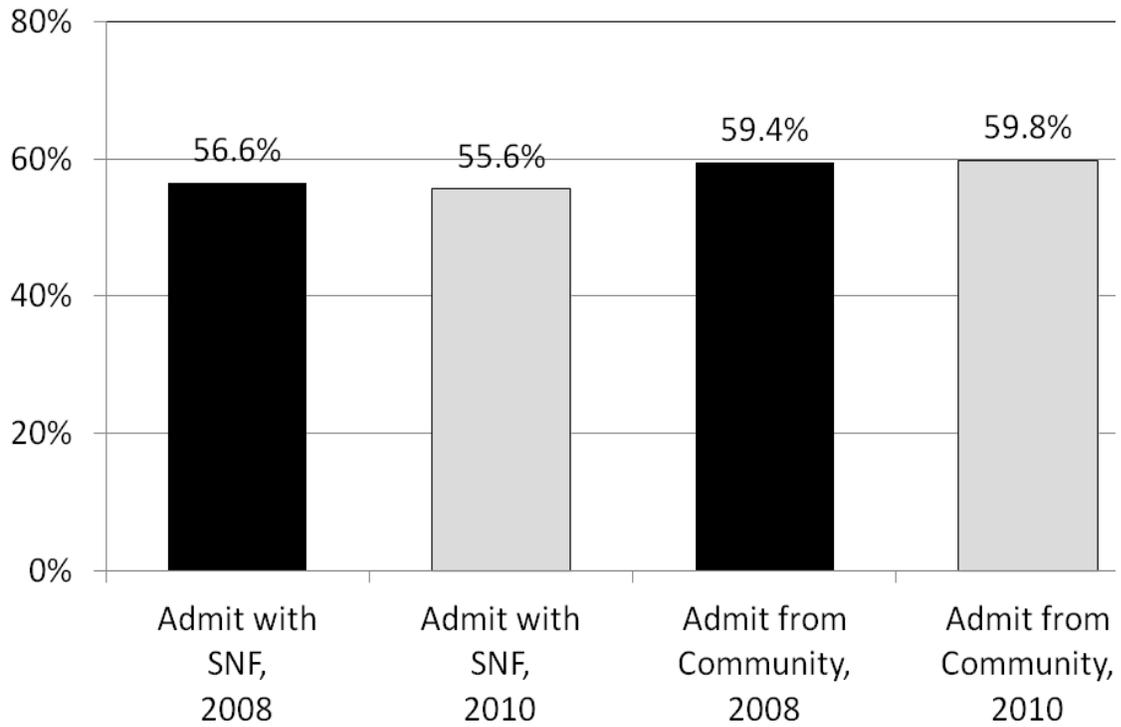
SECTION II

Change in Cognitive Status and Level of ADL Impairment of New Nursing Home Admissions by Admission Cohorts (admitted with SNF vs. from the Community)

2008 - 2010

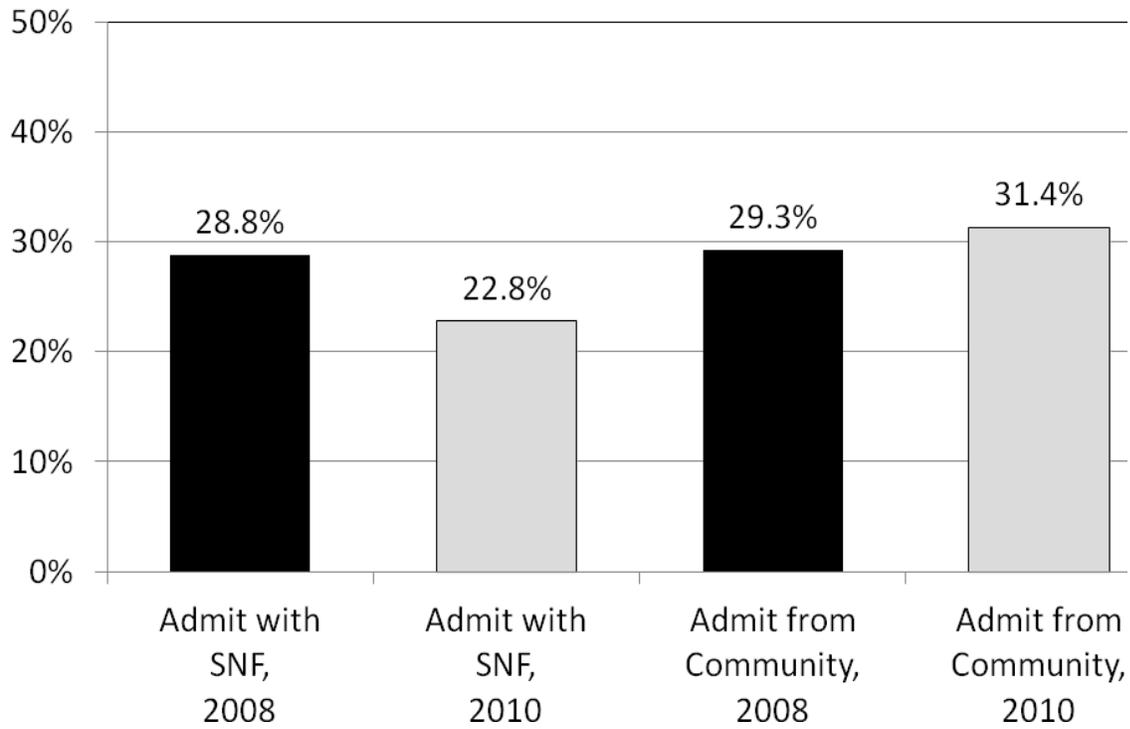
All data from Residents' MDS Admission Assessment in 2008 & 2010

Figure 2.1: Short-Term Memory Problem by New Admission Cohorts



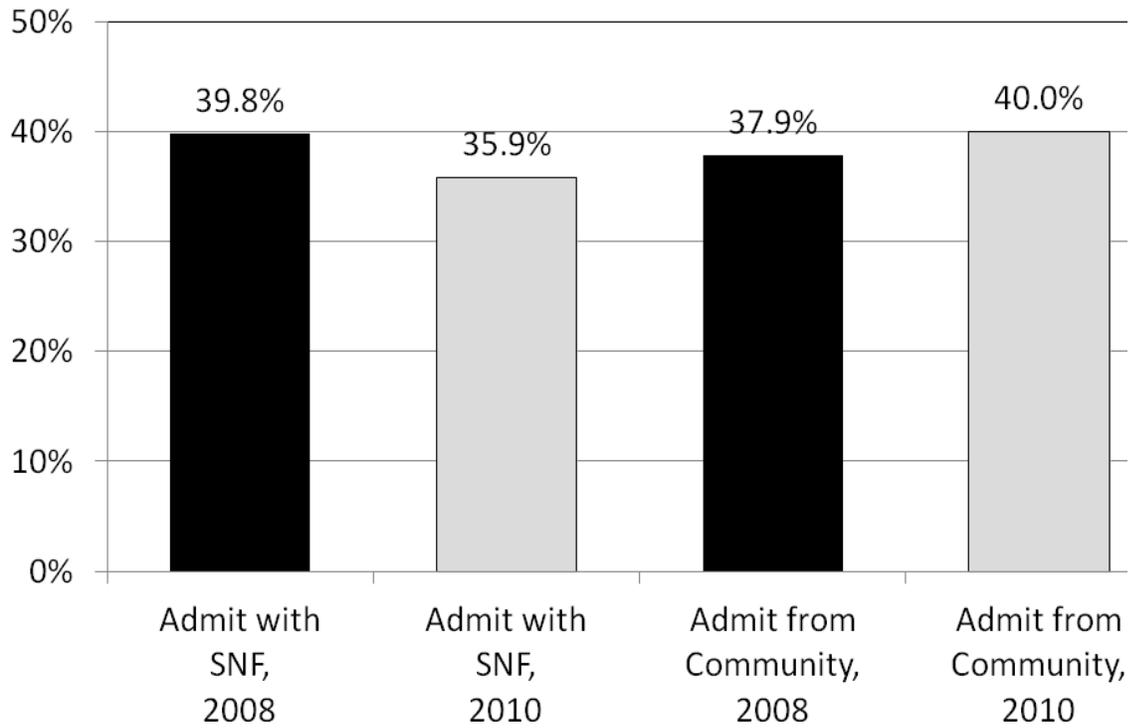
Source: MDS Admission Assessment, 2008 & 2010

Figure 2.2: Long-Term Memory Problem by New Admission Cohorts



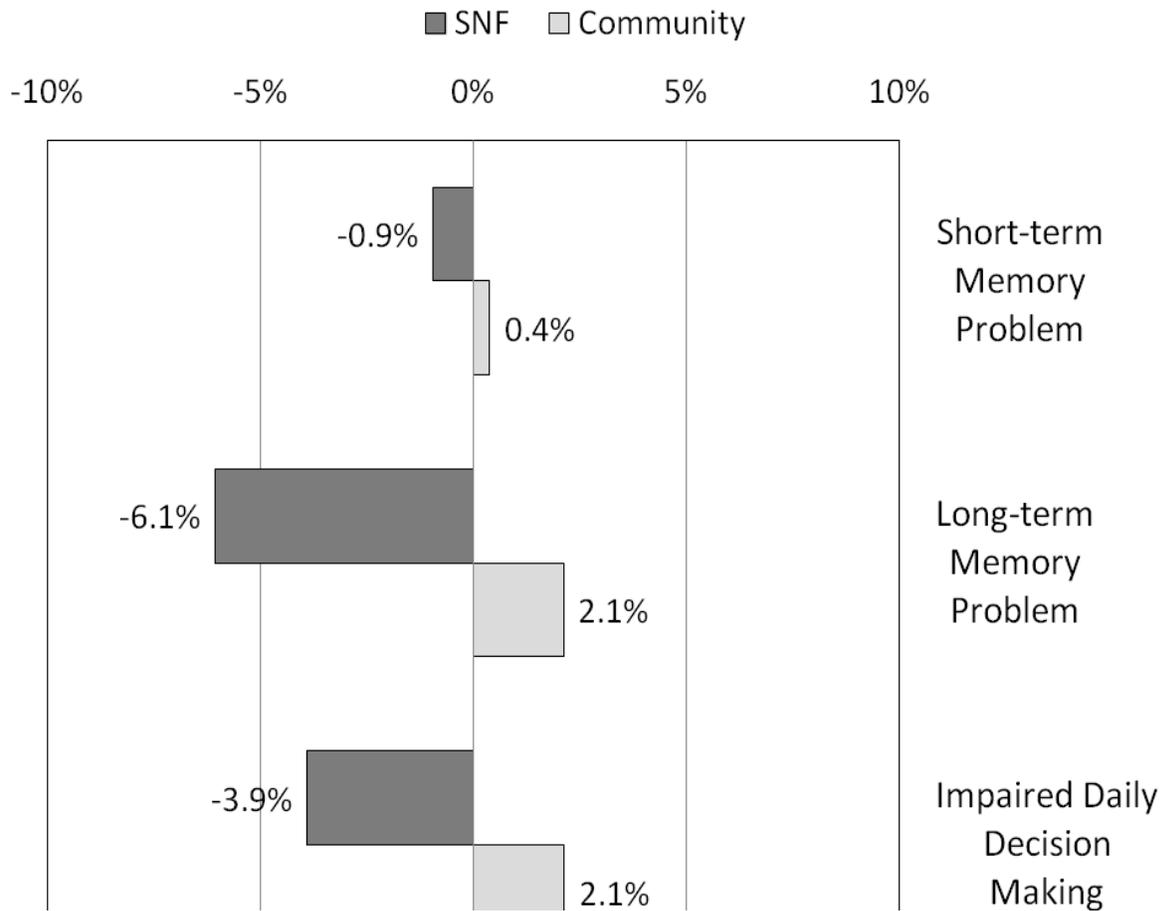
Source: MDS Admission Assessment, 2008 & 2010

**Figure 2.3: Impaired Daily Decision Making by
New Admission Cohorts**



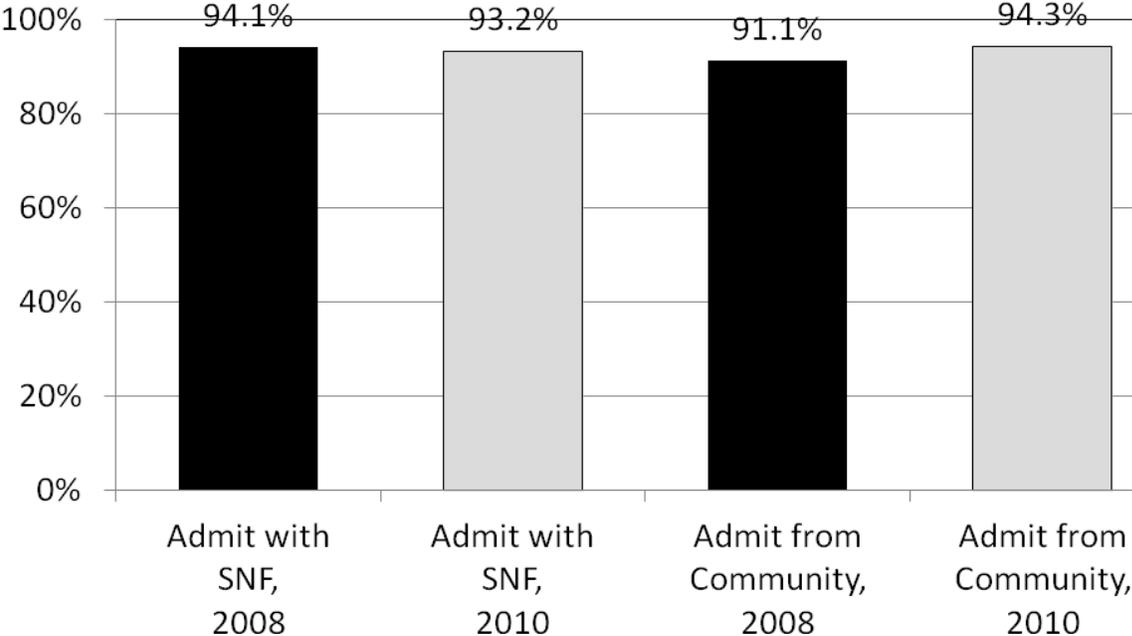
Source: MDS Admission Assessment, 2008 & 2010

Figure 2.4: Summary: Change (2008 to 2010) in Cognitive Measures by New Admission Cohorts



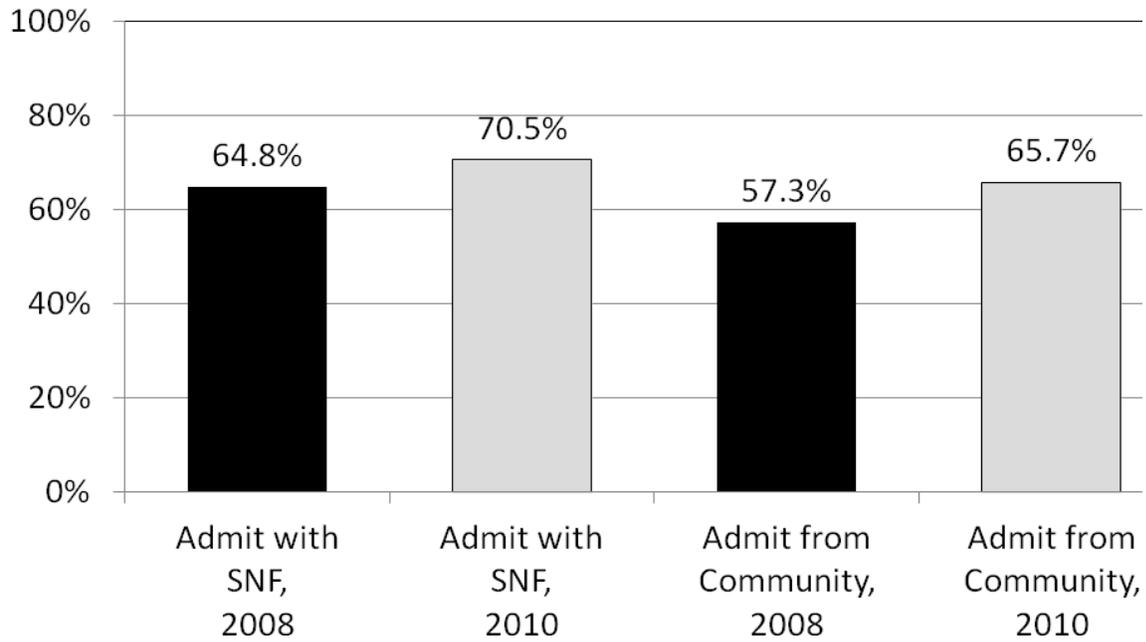
Source: MDS Admission Assessment, 2008 & 2010

Figure 2.5: Bathing-- Needs Extensive/Total Assistance in Past 7 Days by New Admission Cohorts



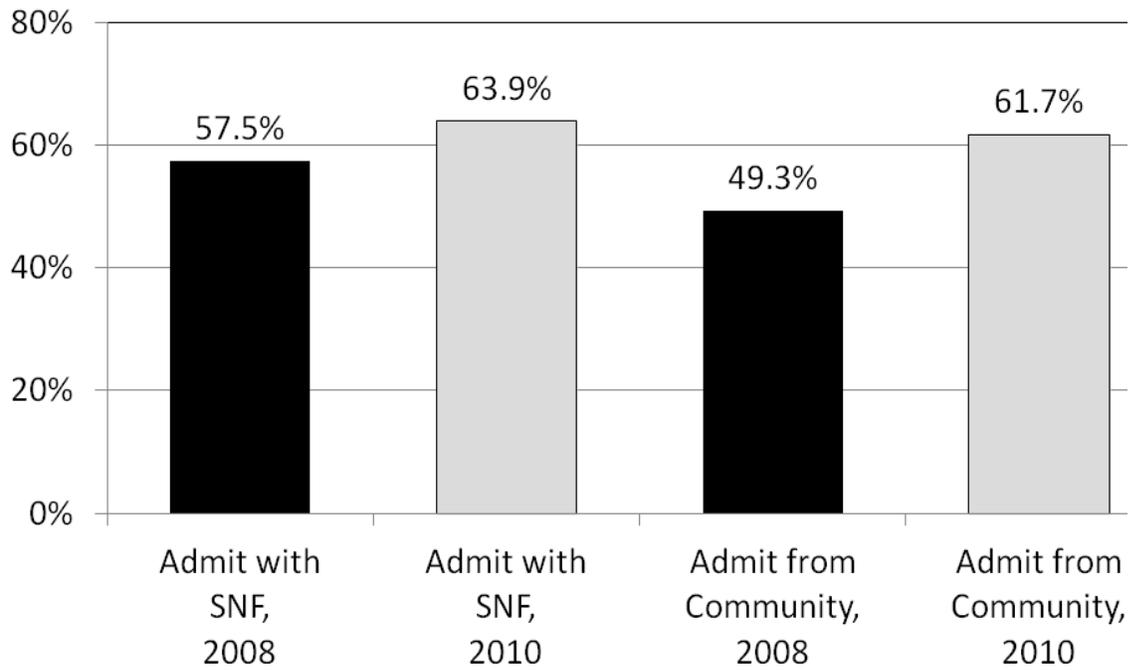
Source: MDS Admission Assessment, 2008 & 2010

Figure 2.6: Dressing-- Need Extensive/Total Assistance in Past 7 Days by New Admission Cohorts



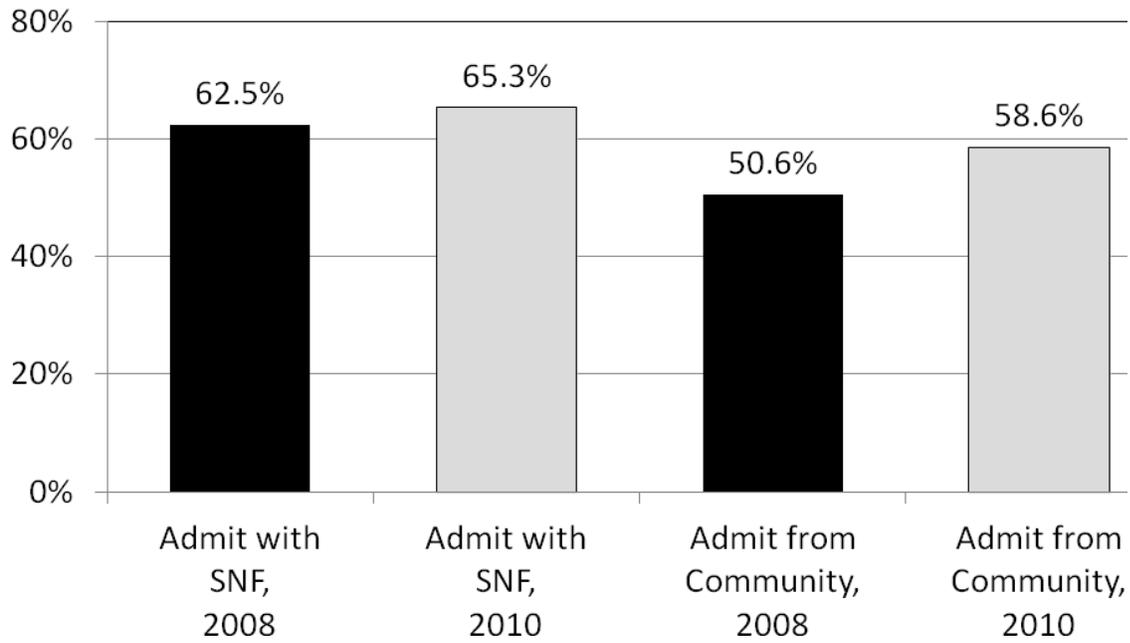
Source: MDS Admission Assessment, 2008 & 2010

Figure 2.7: Personal Hygiene-- Need Extensive/Total Assistance in Past 7 Days by New Admission Cohorts



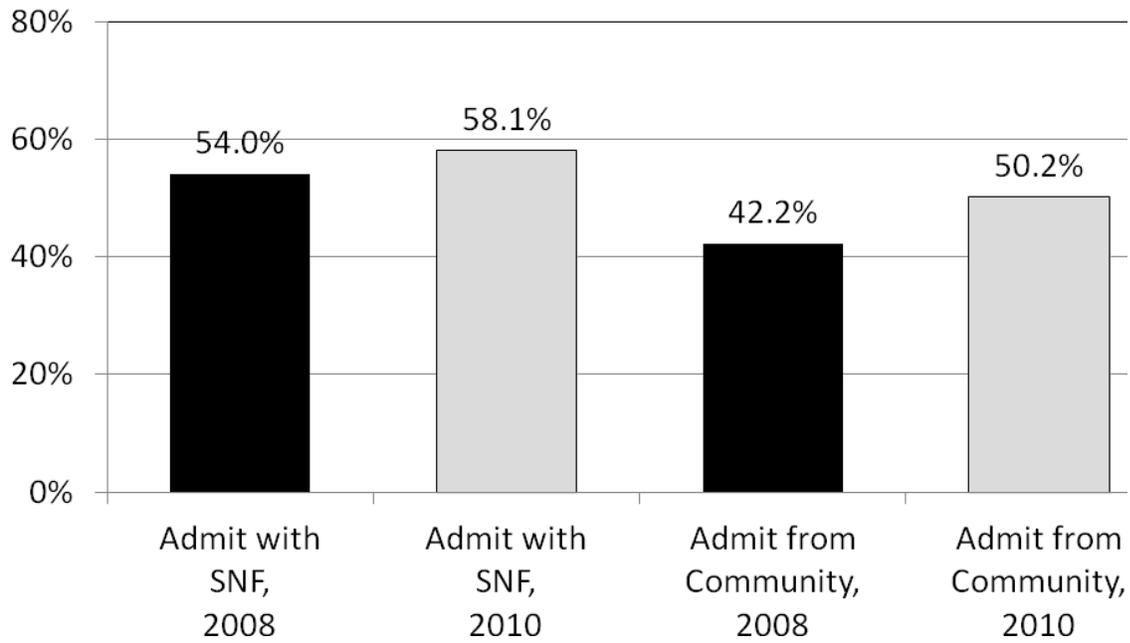
Source: MDS Admission Assessment, 2008 & 2010

Figure 2.8: Toileting-- Need Extensive/Total Assistance in Past 7 Days by New Admission Cohorts



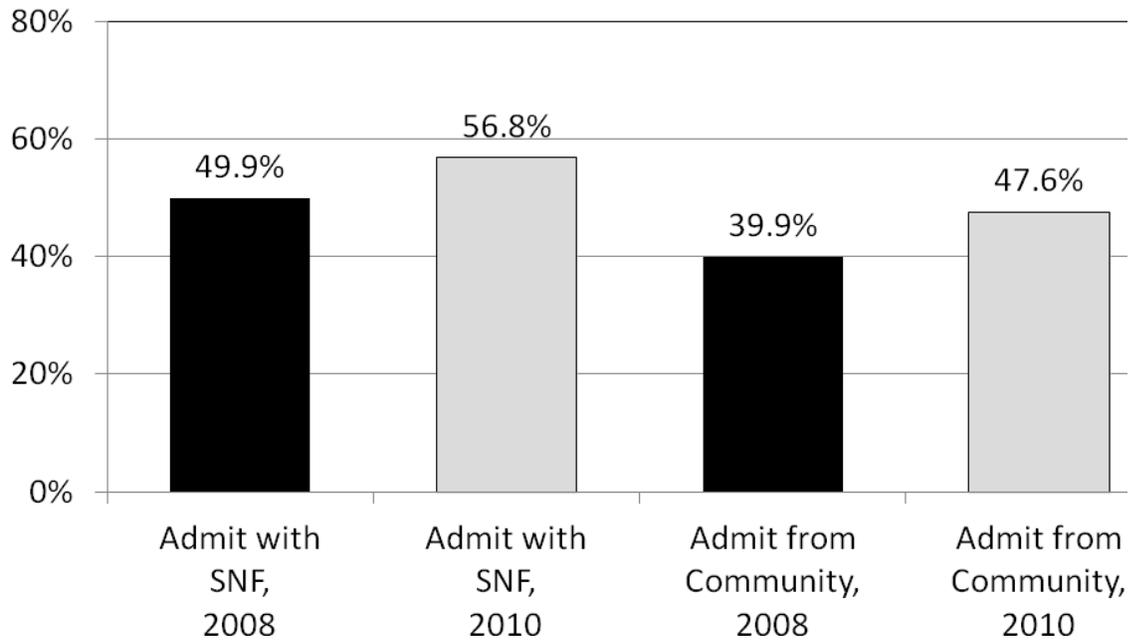
Source: MDS Admission Assessment, 2008 & 2010

Figure 2.9: Transfer-- Need Extensive/Total Assistance in Past 7 Days by New Admission Cohorts



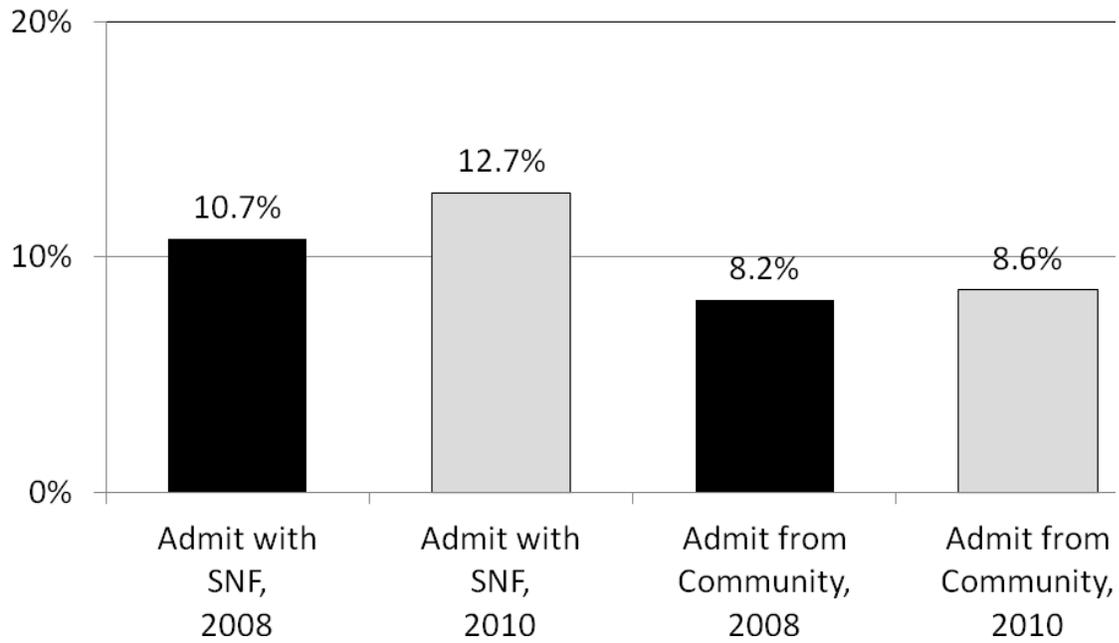
Source: MDS Admission Assessment, 2008 & 2010

Figure 2.10: Bed Mobility-- Need Extensive/Total Assistance in Past 7 Days by New Admission Cohorts



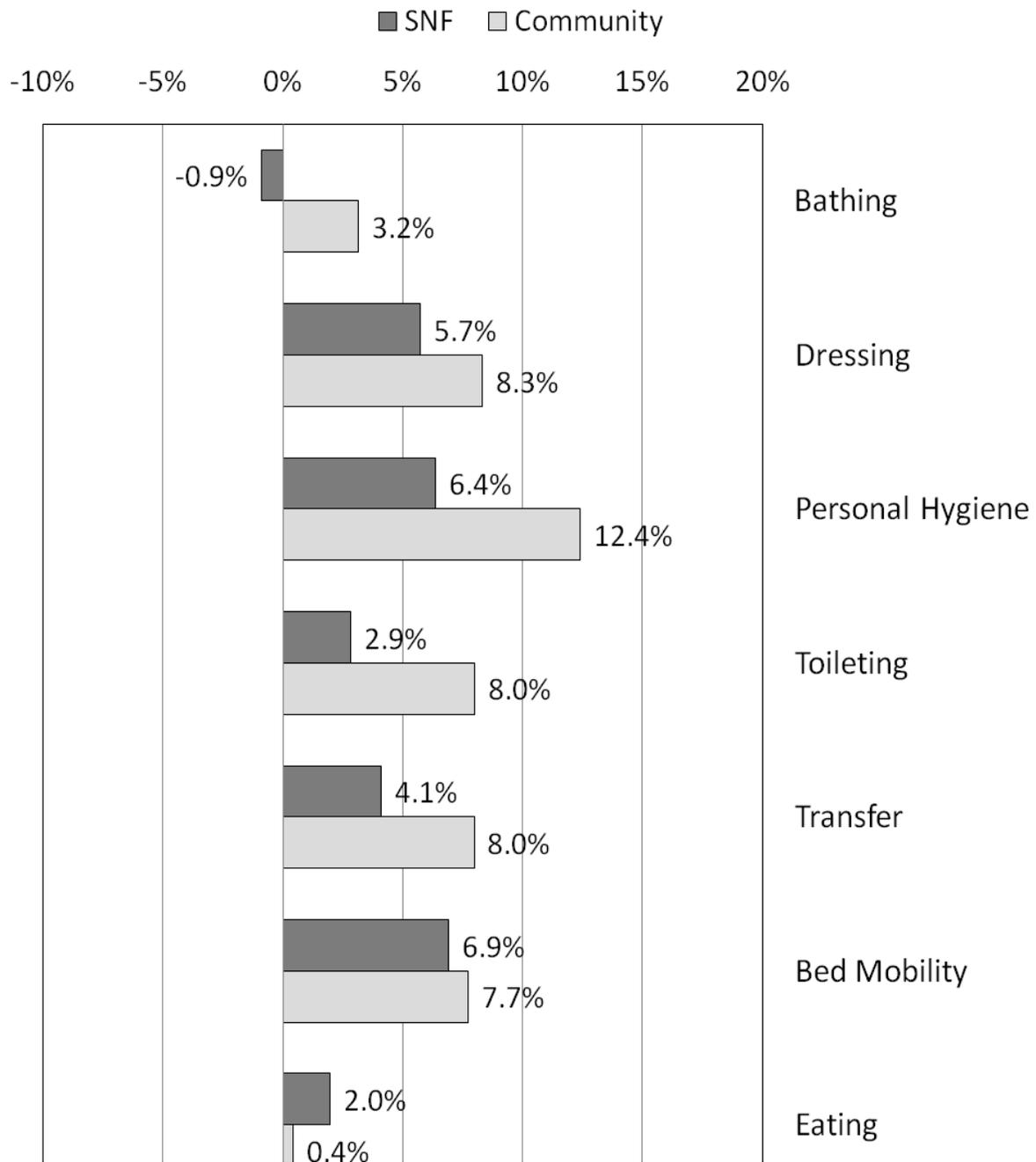
Source: MDS Admission Assessment, 2008 & 2010

Figure 2.11: Eating-- Need Extensive/Total Assistance in Past 7 Days by New Admission Cohorts



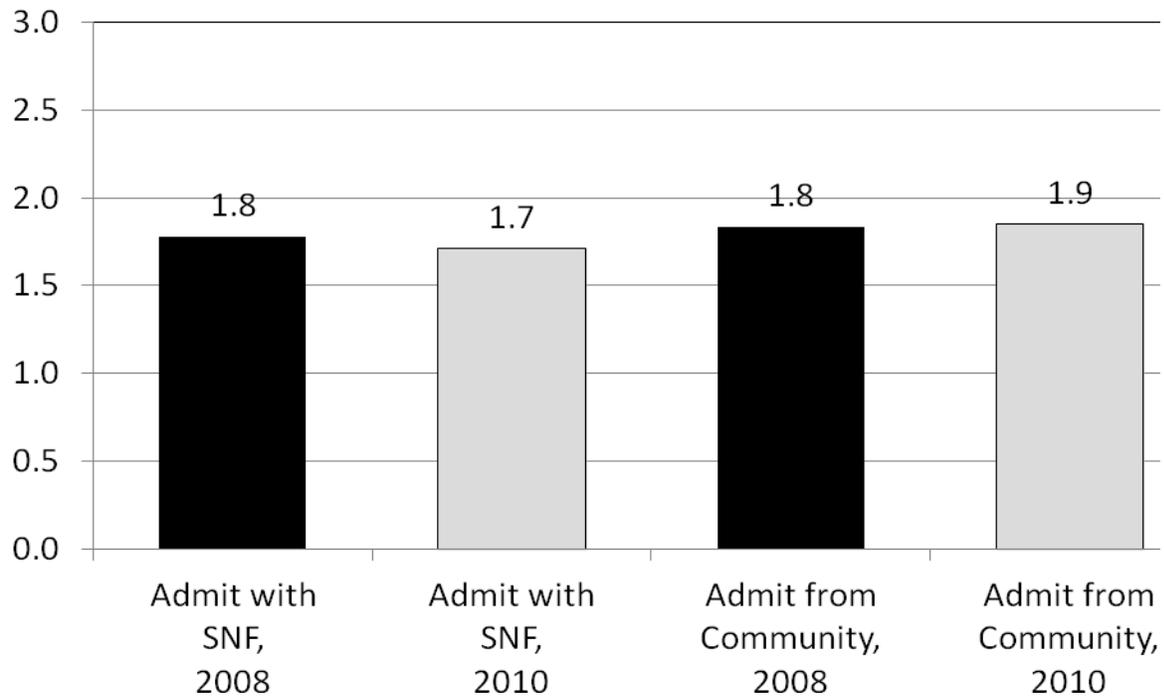
Source: MDS Admission Assessment, 2008 & 2010

Figure 2.12: Summary: Change (2008 to 2010) in ADLs by New Admission Cohorts



Source: MDS Admission Assessment, 2008 & 2010

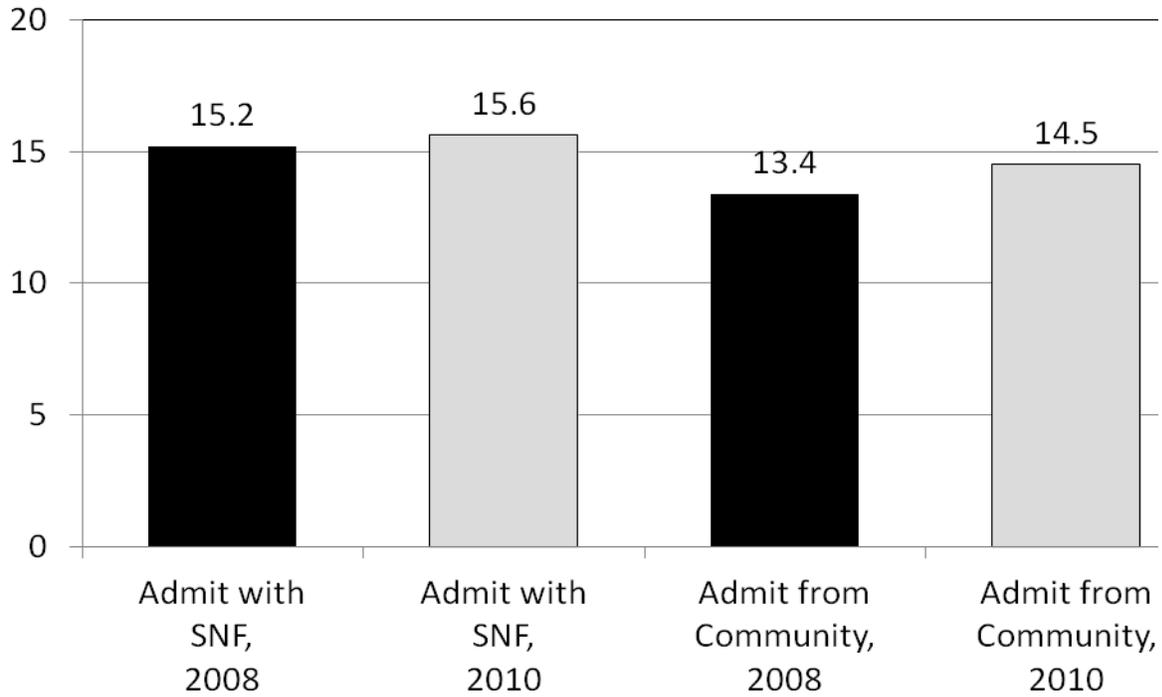
**Figure 2.13 Cognitive Performance Scale (0 to 6)*
by New Admission Cohorts**



Source: MDS Admission Assessment, 2008 & 2010

* Higher score indicates greater cognitive impairment.

**Figure 2.14: Morris ADL Scale (0 to 28)*
by New Admission Cohorts**



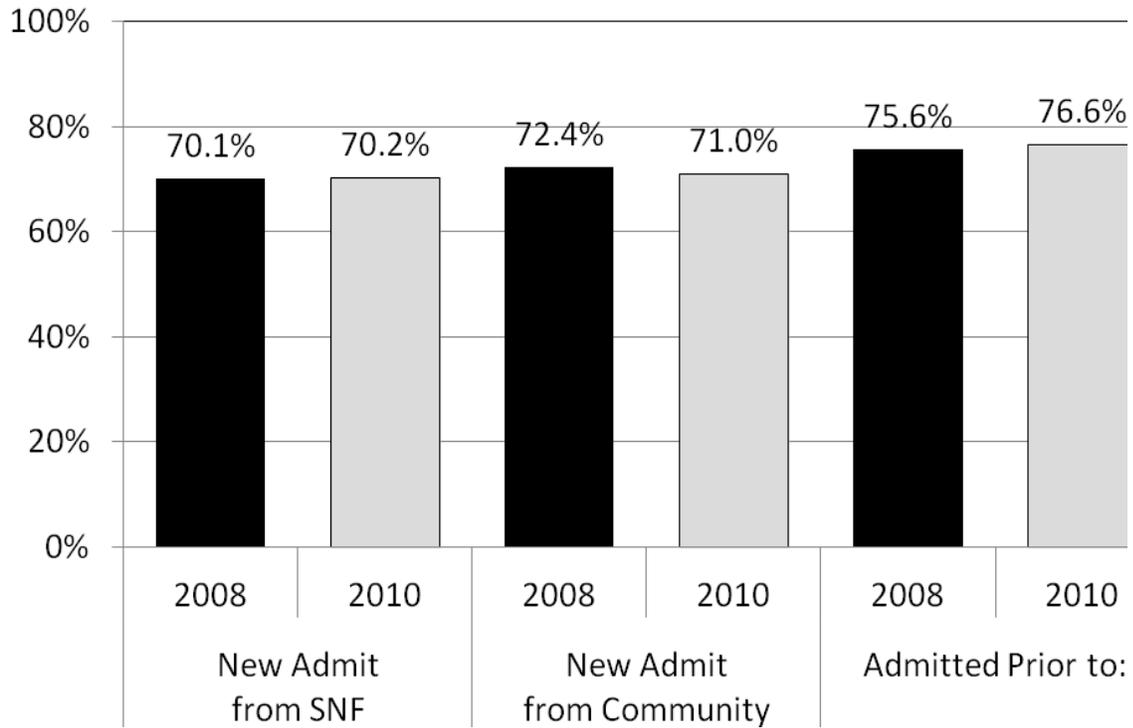
Source: MDS Admission Assessment, 2008 & 2010

* Higher score indicates greater ADL impairment.

SECTION III

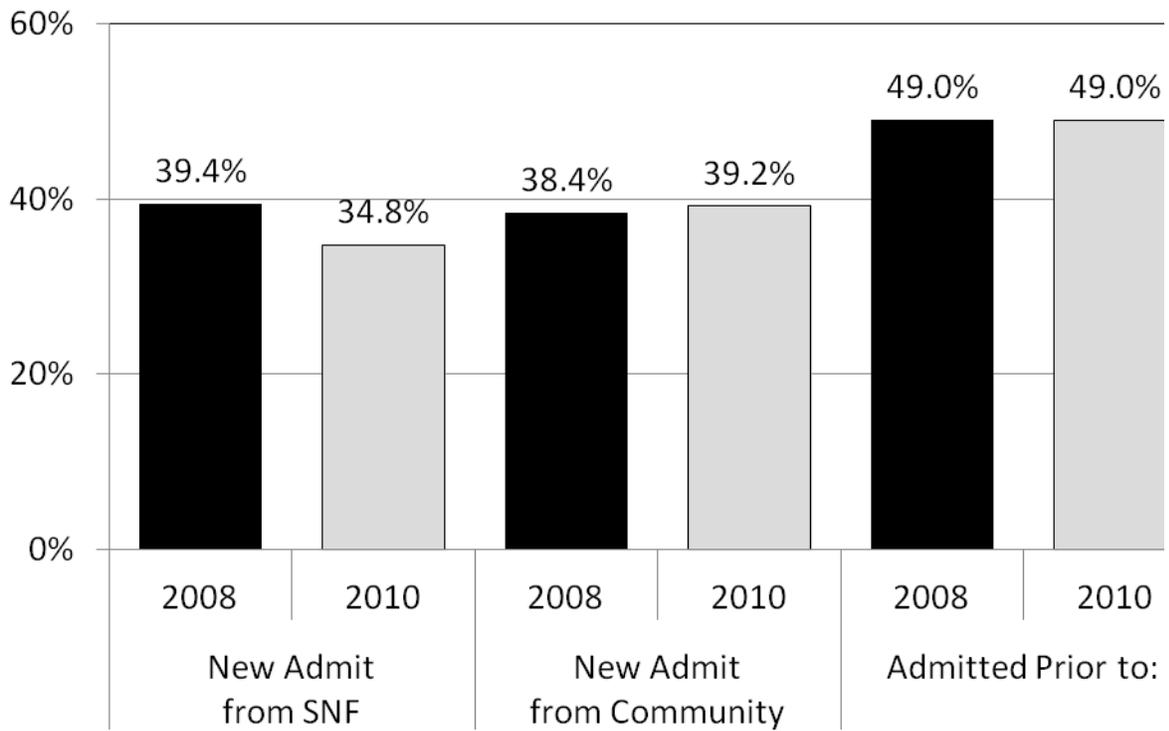
**Change in Cognitive Status and Level of ADL Impairment
of Rhode Island Nursing Home Population
By 3 Long Stay (>90 days) Cohorts
2008 - 2010**

**Figure 3.1: Short-Term Memory Problem
by Long Stay Cohorts**



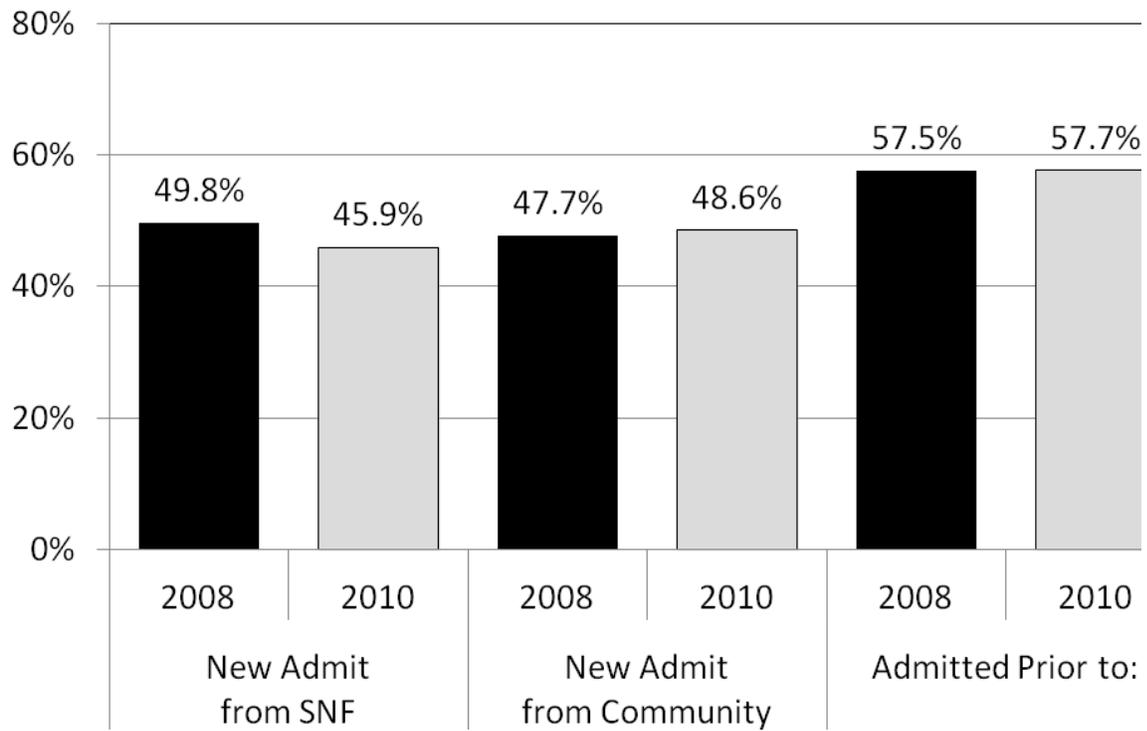
Source: 1st Quarterly MDS Assessment, 2008 & 2010

**Figure 3.2: Long-Term Memory Problem
by Long Stay Cohorts**



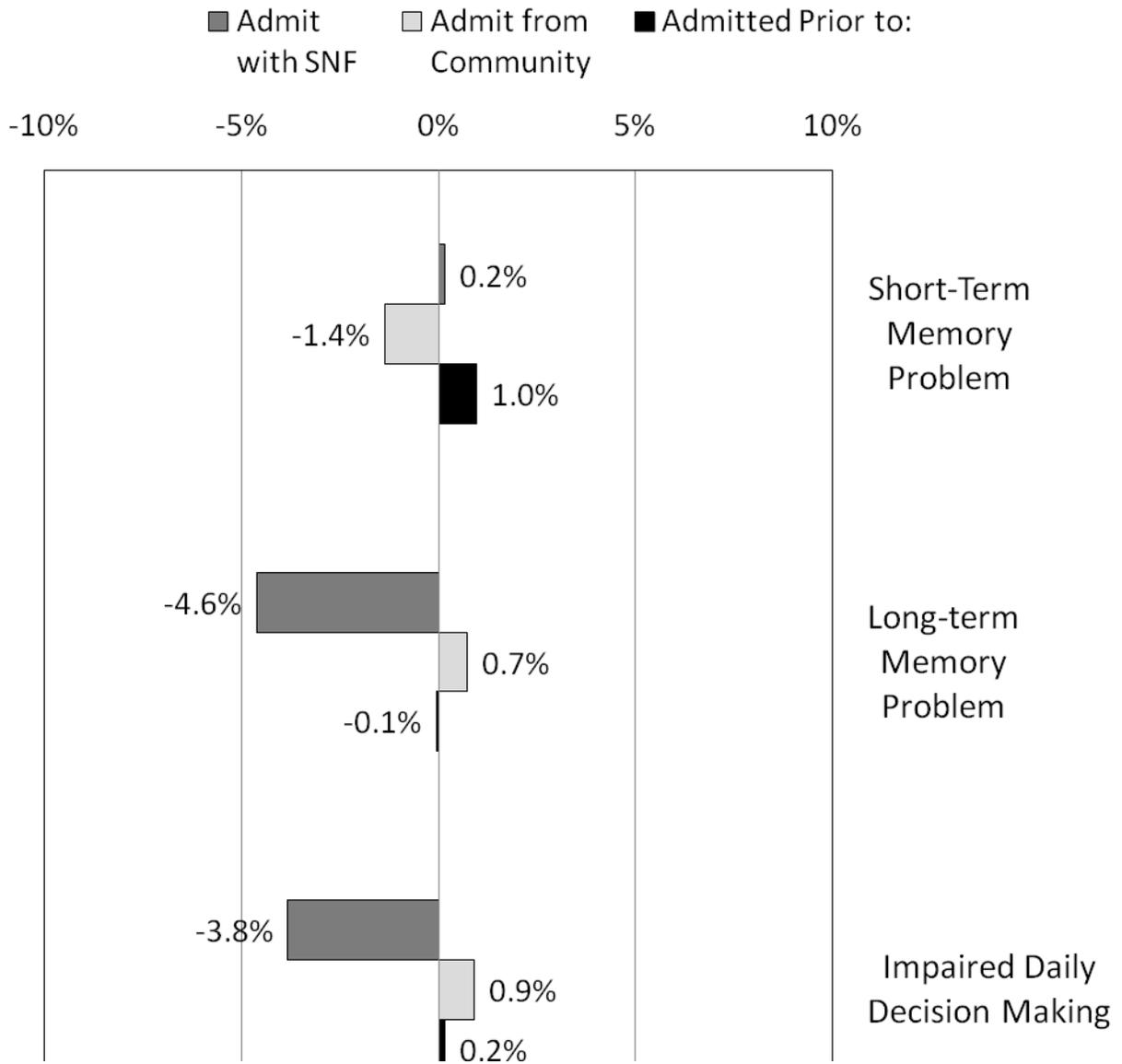
Source: 1st Quarterly MDS Assessment, 2008 & 2010

**Figure 3.3: Impaired Daily Decision Making by
Long Stay Cohorts**



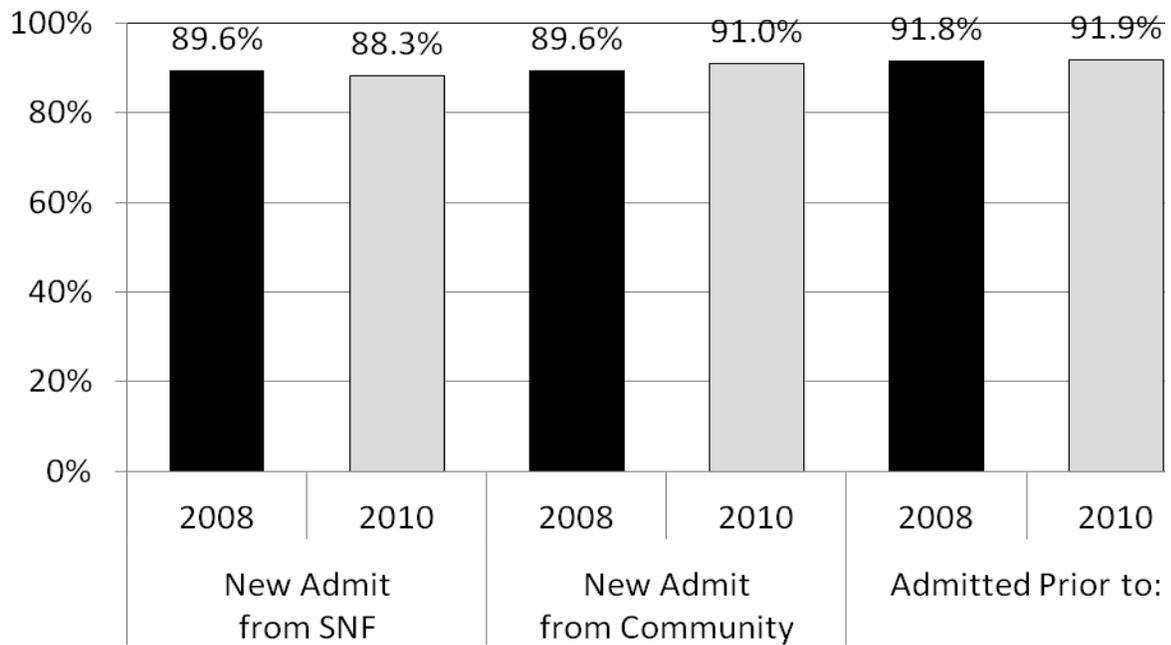
Source: 1st Quarterly MDS Assessment, 2008 & 2010

Figure 3.4: Summary: Change (2008 to 2010) in Cognitive Measures by Long Stay Cohort



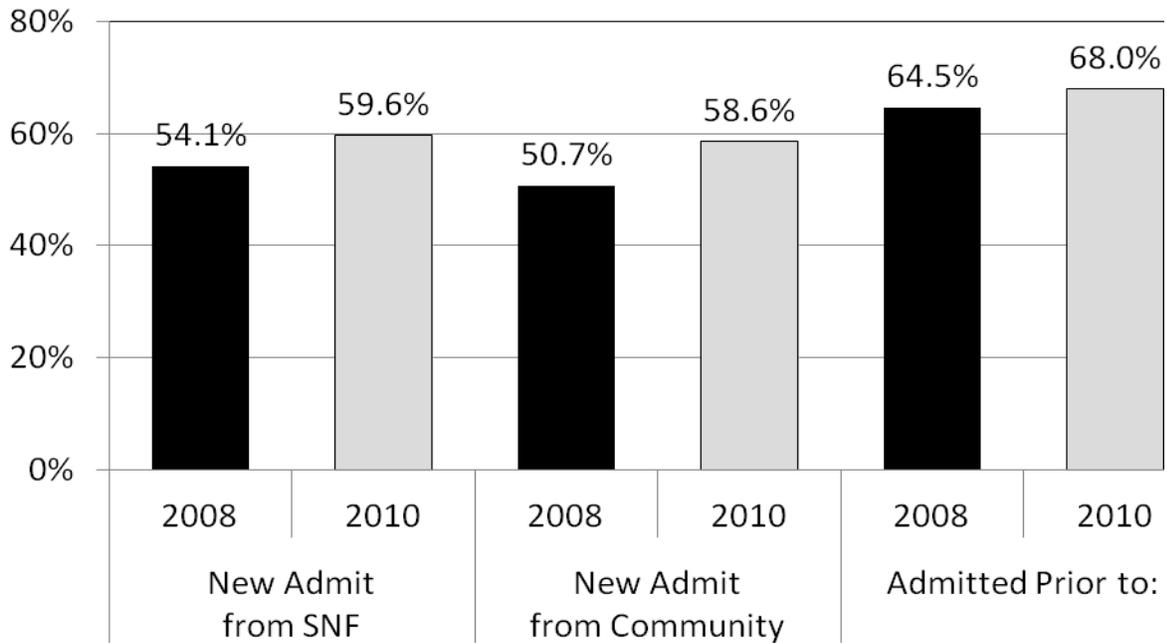
Source: 1st Quarterly MDS Assessment, 2008 & 2010

Figure 3.5: Bathing-- Need Extensive/Total Assistance in Past 7 Days by Long Stay Cohorts



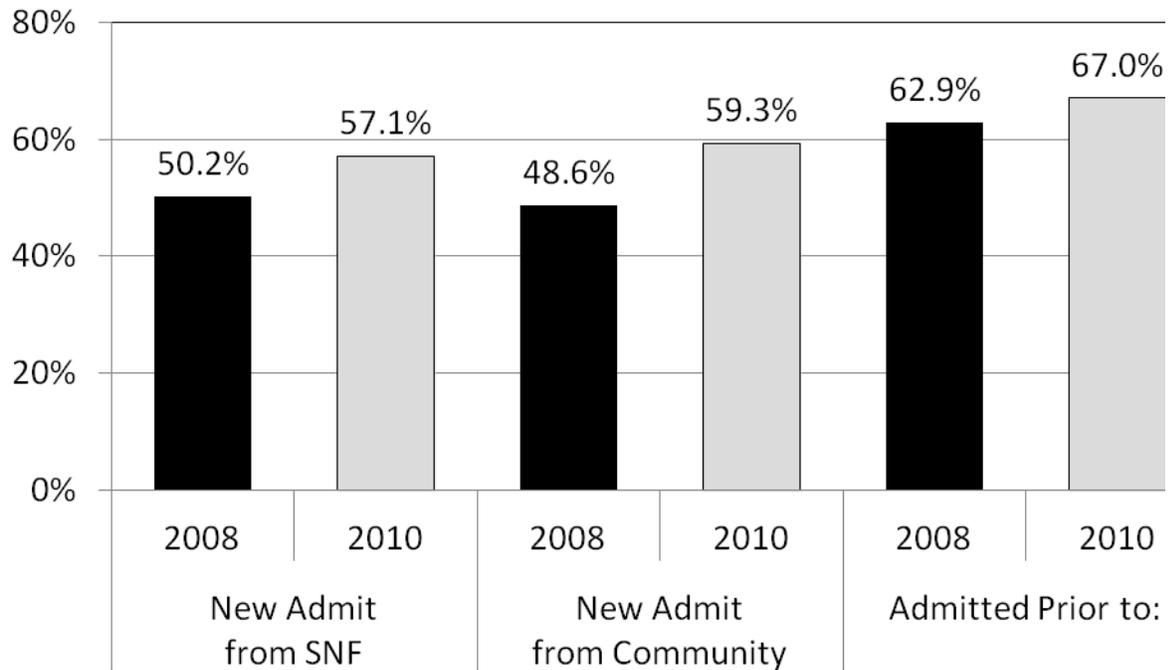
Source: 1st Quarterly MDS Assessment, 2008 & 2010

Figure 3.6: Dressing-- Need Extensive/Total Assistance in Past 7 Days by Long Stay Cohorts



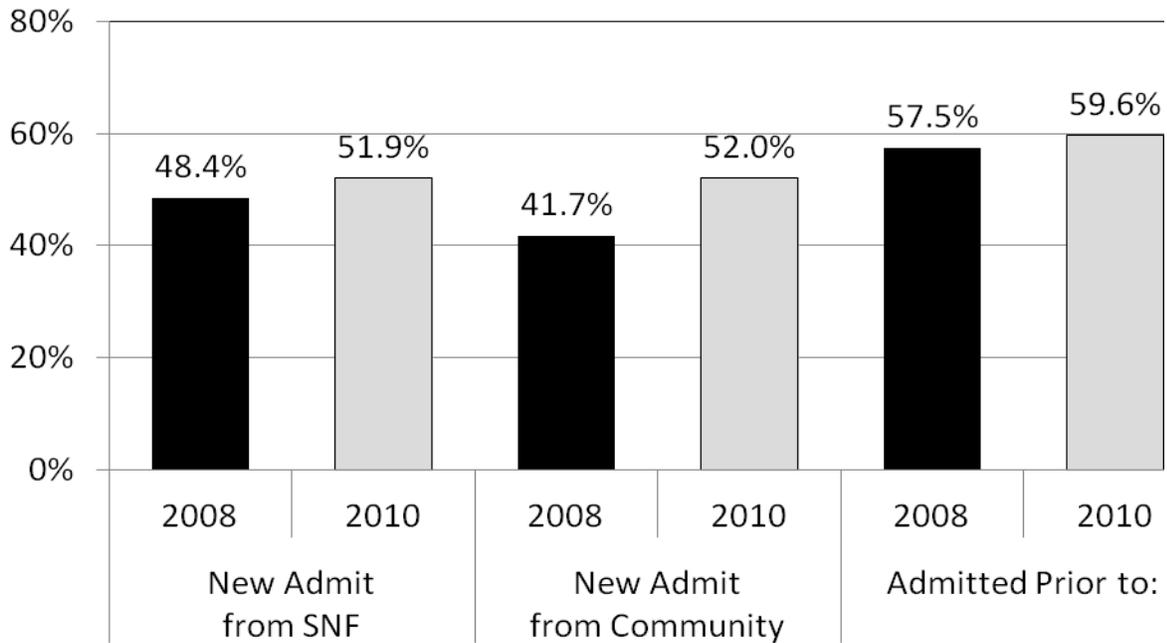
Source: 1st Quarterly MDS Assessment, 2008 & 2010

Figure 3.7: Personal Hygiene-- Need Extensive/Total Assistance in Past 7 Days by Long Stay Cohorts



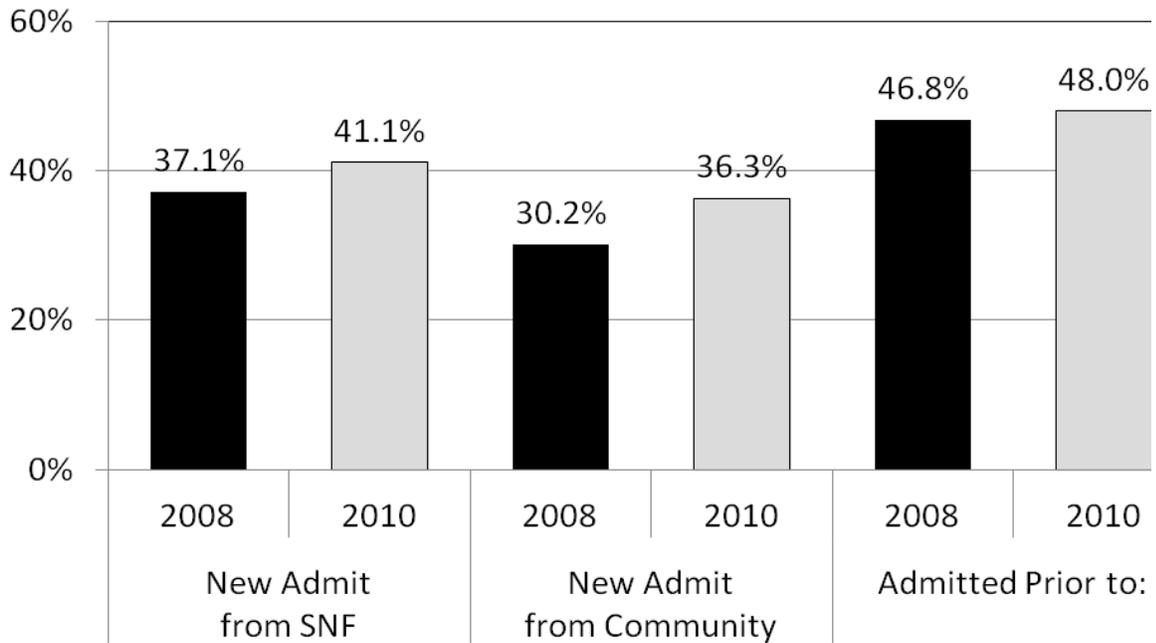
Source: 1st Quarterly MDS Assessment, 2008 & 2010

Figure 3.8: Toileting-- Need Extensive/Total Assistance in Past 7 Days by Long Stay Cohorts



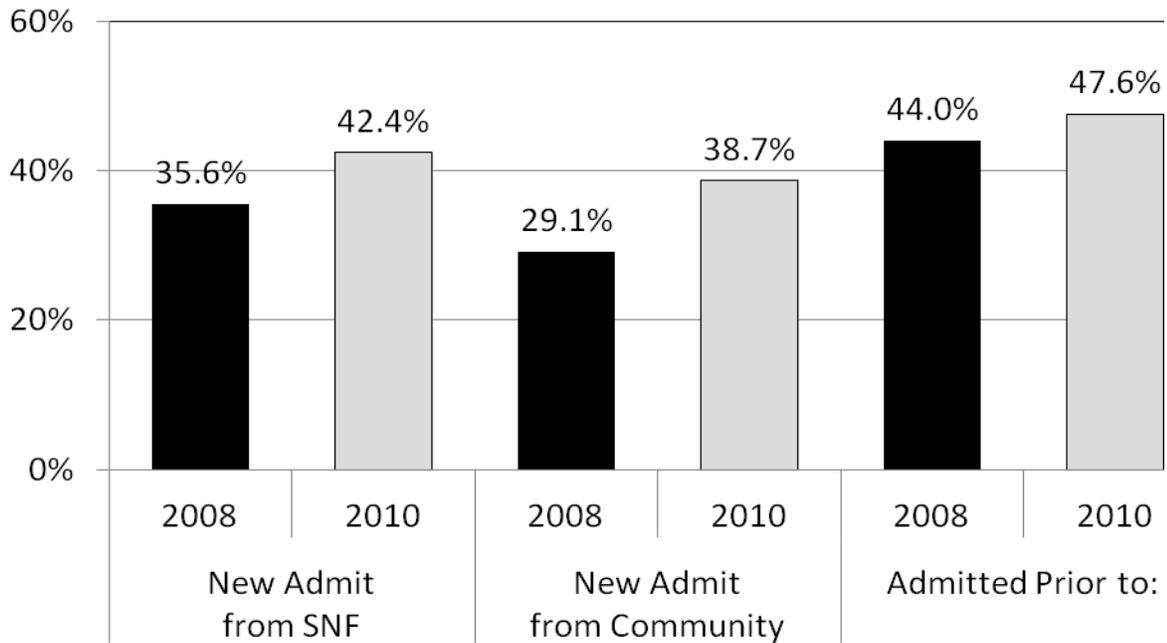
Source: 1st Quarterly MDS Assessment, 2008 & 2010

Figure 3.9: Transfer-- Need Extensive/Total Assistance in Past 7 Days by Long Stay Cohorts



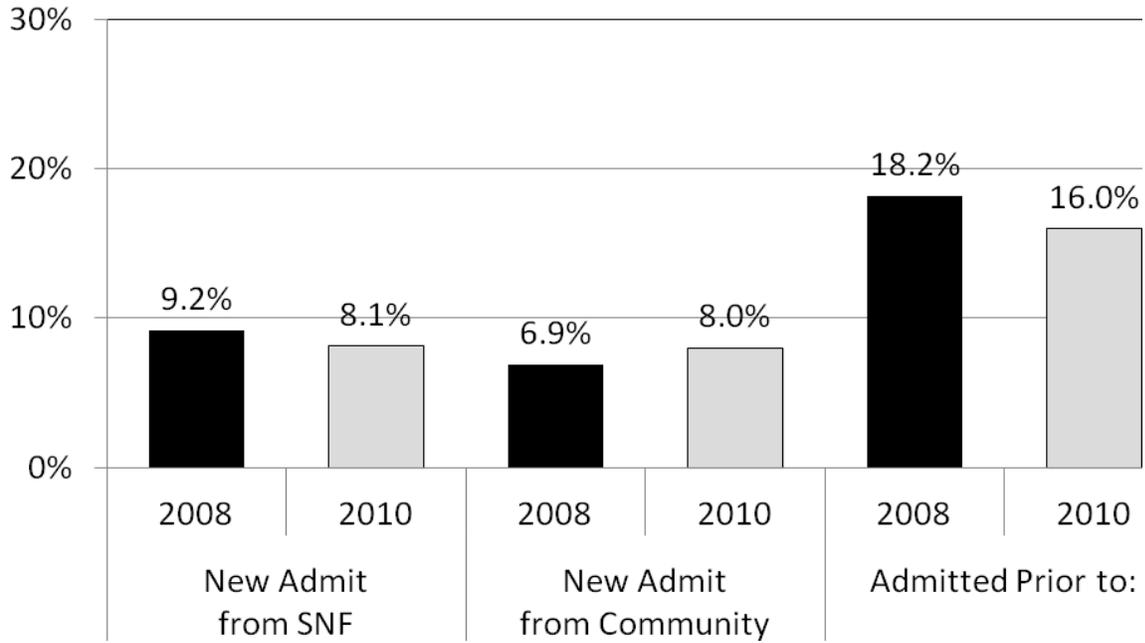
Source: 1st Quarterly MDS Assessment, 2008 & 2010

Figure 3.10: Bed Mobility-- Need Extensive/Total Assistance in Past 7 Days by Long Stay Cohorts



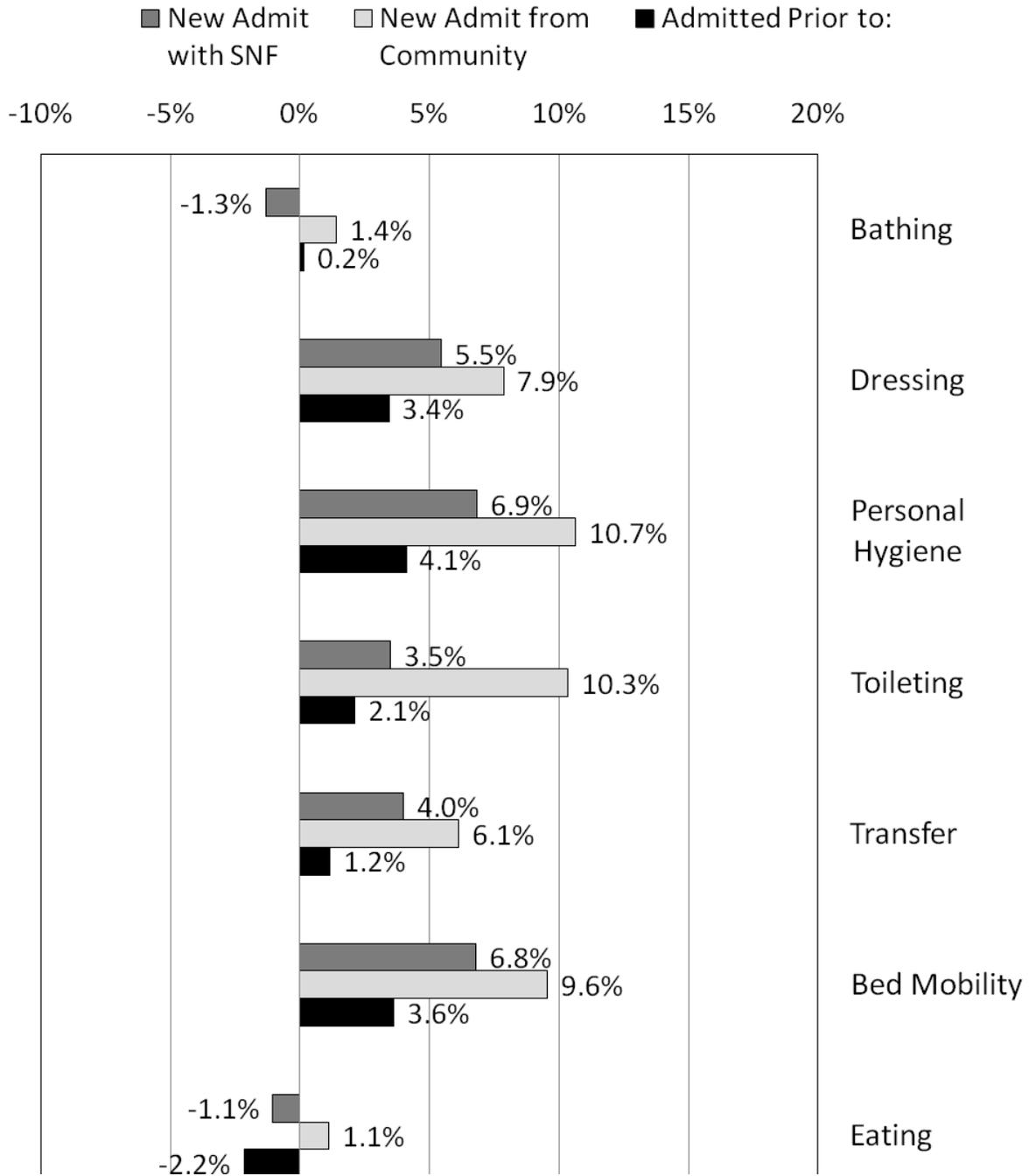
Source: 1st Quarterly MDS Assessment, 2008 & 2010

Figure 3.11: Eating-- Need Extensive/Total Assistance in Past 7 Days by Long Stay Cohorts



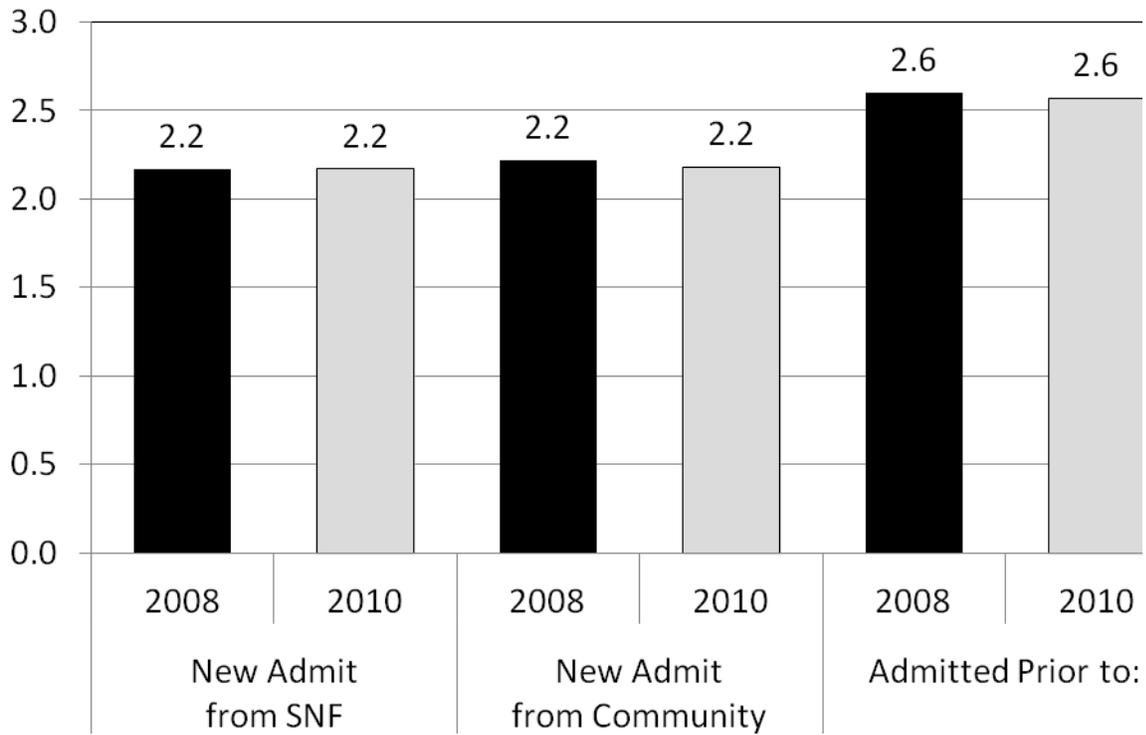
Source: 1st Quarterly MDS Assessment, 2008 & 2010

Figure 3.12: Summary: Change (2008 to 2010) in ADLs by Long Stay Cohorts



Source: 1st Quarterly MDS Assessment, 2008 & 2010

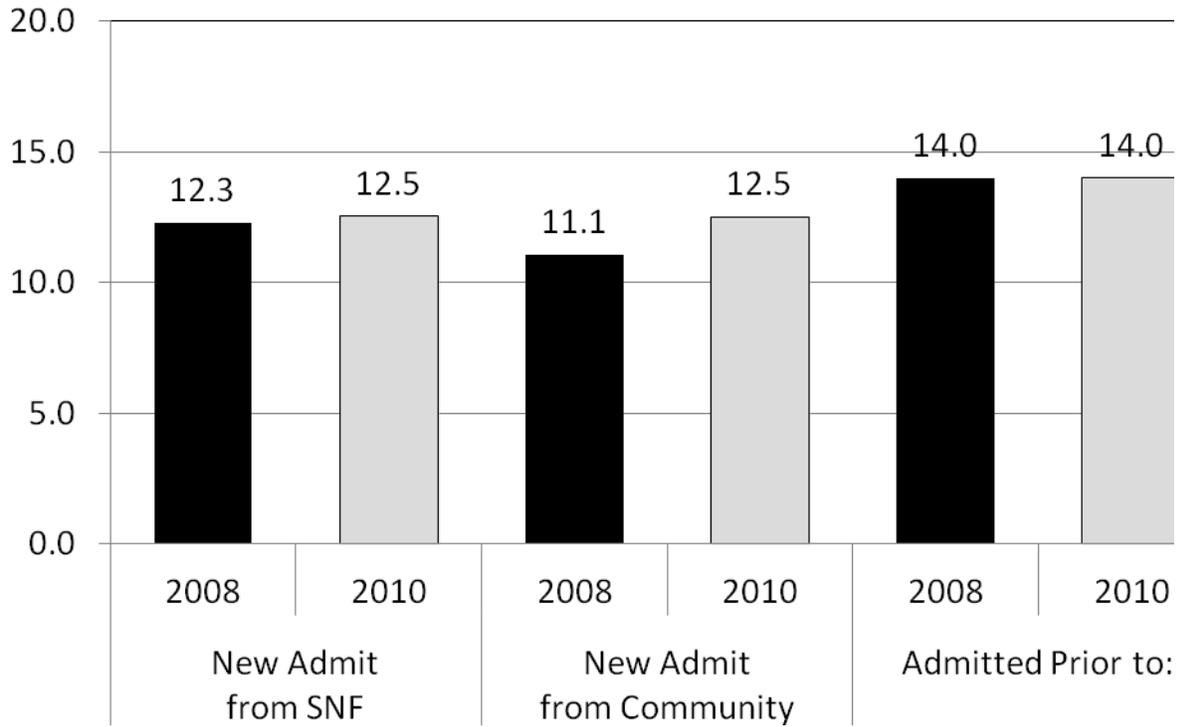
Figure 3.13: Cognitive Performance Scale (0 to 6)* by Long Stay Cohorts



Source: 1 Quarterly MDS Assessment, 2008 & 2010

* Higher score indicates greater cognitive impairment.

**Figure 3.14: Morris ADL Scale (0 to 28)*
by Long Stay Cohort**



Source: 1st Quarterly MDS Assessment, 2008 & 2010

* Higher score indicates greater ADL impairment.

SECTION IV

**Percent of Rhode Island Medicaid Nursing Home Residents Who
Meet Broad and Narrow Definitions of “Low Care”
2008 & 2010**

Table 4.1: Percent of Rhode Island Medicaid Nursing Home Residents Who Meet Broad and Narrow Definitions of “Low Care” in 2008 & 2010

Low Care Definition	Admission MDS		Quarterly MDS	
	2008	2010	2008	2010
New Admissions: Short Stay				
Admitted with SNF				
Broad	2.0	1.6	N/A	N/A
Narrow	0.2	0.2	N/A	N/A
Admitted from Home				
Broad	5.1	2.5	N/A	N/A
Narrow	1.1	1.1	N/A	N/A
New Admissions: Long Stay				
Admitted with SNF				
Broad	2.9	2.5	26.8	23.7
Narrow	1.0	0.7	0.2	0.0
Admitted from Home				
Broad	10.9	6.1	34.6	26.5
Narrow	4.5	2.6	0.3	0.2
Admitted Prior to: Long Stay				
Broad	N/A	N/A	25.3	24.9
Narrow	N/A	N/A	2.8	3.0