



**Maryland Department of Aging**  
**Community-Based Services Needs Assessment**  
**For Service Period 2005 - 2012**

**September 9, 2005**



CENTER FOR HEALTH PROGRAM  
DEVELOPMENT AND MANAGEMENT

## **Background**

The Maryland Department of Aging (Department) has requested an analysis of secondary data to estimate the number of Maryland residents 60 years of age and older living in the community who may be at risk of needing publicly funded services such as in-home services, assisted living, and nursing home care. The Department has also requested an estimate of the number of people who are 50 years of age or older who may also require these services. The service period for which the information was requested is 2005 through 2012.

The target population was defined based on income, age, and disability qualifications provided by the Department for the following programs: Congregate Housing, Home- and Community-Based Services Waiver for Older Adults, Senior Care, and Senior Assisted Living Group Home Subsidy. According to program guidelines, which became effective on July 1, 2005, the maximum annual household income for any of the Department's programs is \$35,578 for a couple, although different programs have discreet income criteria below \$35,578. Annual incomes may be subject to offsets for on-going medical expenses. Program age eligibility ranges from 50 years or older for the Waiver program, and 60 years and older for other programs. Program disability criteria range from nursing home level of care to moderate limitations in the completion of activities of daily living.

## **Data Sources**

Three primary data sources were used to construct the estimates: 2000 Census data, the Claritas 2005 Senior Life Report, and Maryland STEPS/PASRR data for fiscal years (FYs) 1997 through 1999 and FYs 2002 and 2003.

- The 2000 Census data were limited to actual numbers of non-institutionalized people who were 50 years of age and older.
- The 2005 Claritas Senior Life Reports is based on 2000 Census data and provides comprehensive information on persons 55 years of age and older for variables such as income by age group, household living arrangements, and self-reported physical or self-care limitations.
- Maryland's Statewide Evaluation and Planning Service/Preadmission Screening and Resident Review (STEPS/PASRR) Claims Report was used to provide information. STEPS is a component of the Adult Evaluation and Review Services (AERS) program, which assists elderly and functionally disabled adults who are at risk of institutionalization. The AERS staff, as mandated by State law, conducts a comprehensive STEPS preadmission evaluation of any adult at risk for nursing home placement. Additionally, they conduct the PASRR on anyone seeking nursing facility placement and who may have mental illness, a developmental disability, or both.

The STEPS/PASRR data used includes information on age, living arrangements, health status, and activities of daily living. It also provides information on the recommended plan of care for persons who were assessed.

## **Analysis Assumptions**

A number of assumptions were developed and applied to identify the target population, and to adjust Census and STEPS/PASRR data to estimate the actual number of people who may be at risk for needing publicly funded community services. While most programs offered by the Department of Aging have a lower age limit of 60 years, the Home- and Community-Based Waiver for Older Adults has a lower age limit of 50 years. As a result, two age groupings were used in this analysis: persons 50 years and older, and persons 60 years and older.

Data assumptions include:

- Population estimates were developed based on the 2000 Census population projections for Maryland.
- A household density factor was used to estimate the number of age- and income-qualified persons in Maryland. The density factor was established by dividing the total number of persons aged 50 and older by the total number of households with a member aged 50 and older. The household density factors, which vary slightly from those used in the 2001 report, are: ages 50-54 (1.7), ages 55-59 (1.7), ages 60-64 (1.6), ages 65-74 (1.6), ages 75-84 (1.5), and age 85 and older (1).
- The age categories used in the 2000 Census, in some cases, do not allow for a direct analysis of the population, age, and income. Therefore, the number of household members in the age category of 45-54 was divided in half to estimate the number of households with members between 50 and 54 years of age. Similarly, the number of households with members between 55 and 64 was divided in half to estimate the number of households with members between 60 and 64 years of age.
- The age breakdowns in the STEPS/PASRR data do not allow for a direct correlation of the age variable to the requested population. Therefore, the number of applicants in the 55 to 64 age category was divided in half to estimate the number of applicants who were between 60 and 64 years of age. Similarly, the number of applicants in the 45 to 54 age category were divided in half to estimate the number of applicants who were between 50 and 54 years of age.

## **Methodology**

This review is limited to persons 50 years or older and living in the community (i.e., not institutionalized). The review is also limited to persons living in households with annual incomes at or below \$34,999. While the upper eligibility program level is \$35,578, the closest Census data income level is \$34,999. Use of the next income category (\$35,000 - \$39,999) could result in an overestimation of need.

STEPS and Census data estimates were used in conjunction with household income data to estimate a range of Marylanders who may require services provided by the Maryland Department of Aging. According to STEPS/PASRR data for (FY's) 2000 to 2003, between 68 percent and 75 percent of STEPS applicants are found to be STEPS financially eligible, meaning they are either Medicaid certified or potentially Medicaid eligible within six months of nursing facility admission. For this reason, the majority of the STEPS applicants were assumed, for the

purposes of the analyses, to have household incomes \$10,000 or below, which is the lowest Census income bracket available for use in the analyses.

## Results

Population Totals and Future Projections: Table 1 provides information on the total eligible population of persons 50 years of age and older. As indicated in the chart, the 50-54 age group makes up the largest portion of the target population (355,643), followed by the 55-64 age group (268,647). As expected, the smallest is the 85 or older age group (66,902). The total population of persons 50 years or older is 1,425,325, while the total population of persons 60 years and older is 801,036. Columns three through ten provide Census population projections for each age group for the years 2005 through 2012. When comparing the 2005 projections to the 2012 projections, the greater population growth is predicted to occur in the 65-69 age group (35 percent increase), followed by the 85+ population (32 percent increase), and the 60-64 age group (29 percent increase).

**Table 1: Estimated Population in the Community for Persons 50 Years of Age and Older**

Age	Census 2000	2005	2006	2007	2008	2009	2010	2011	2012
50 - 54	355,642	386,359	395,025	404,723	414,724	423,989	432,457	439,564	443,532
55 - 59	268,647	336,936	347,474	347,474	349,590	354,726	362,624	370,716	379,796
60 - 64	201,729	248,149	256,709	273,392	285,753	297,306	309,594	319,366	318,930
65 - 69	168,242	182,639	188,171	197,214	207,904	216,467	223,492	230,970	246,230
70 - 74	153,043	148,757	149,536	150,997	154,197	158,599	162,490	167,495	175,652
75 - 79	128,491	128,499	128,303	127,618	126,969	126,150	126,623	127,514	128,977
80 - 84	82,629	98,274	99,004	99,536	100,194	100,235	100,285	100,353	100,043
85+	66,902	84,220	88,777	93,210	97,229	101,199	105,097	108,313	111,382
Total 50+	1,425,325	1,613,833	1,653,183	1,694,164	1,736,560	1,778,671	1,822,662	1,864,291	1,904,542
Total 60+	801,036	890,538	910,500	941,967	972,246	999,956	1,027,581	1,054,011	1,081,214

Age- and Income-Qualified Population: Tables 2a and 2b are subsets of the population described in Table 1. These tables provide data on the number of persons in each age group who fall into discrete income categories between \$10,000 and \$34,999. The number of people in each category was calculated by multiplying the number of household members in each age group by the household density factor for that age group. The resulting numbers for each age group within each income category were then totaled to provide the total number of persons in the income level. The data in the first column were obtained from the 2000 Census, while the numbers for years 2005 through 2012 were obtained by applying a 1.8 percent annual population increase factor. The 1.8 percent population increase factor is the average annual increase for years 2005 through 2012 based on Maryland's population projections for persons 50 years or older.

The 2000 baseline number of people who meet the age (50 and older) and income parameters (less than \$35,000) for the analysis is 461,513 for persons aged 50 and older, and 322,339 for

those aged 60 and older. For both the 50 and older and 60 and older cohorts, the largest number falls into the \$15,000 to \$24,999 income category, while the smallest number falls into the \$10,000 - \$14,999 income category.

**Table 2a: Age- and Income-Qualified Population 50+ by Income Levels**

Income	2000	2005	2006	2007	2008	2009	2010	2011	2012
Less than \$10,000	108,229	118,327	120,457	122,625	124,832	127,079	129,367	131,695	134,066
\$10,000- \$14,999	72,760	79,549	80,981	82,438	83,922	85,433	86,971	88,536	90,130
\$15,000- \$24,999	143,087	156,437	159,253	162,120	165,038	168,008	171,033	174,111	177,245
\$25,000- \$34,999	137,437	150,259	152,964	155,717	158,520	161,373	164,278	167,235	170,245
Total	461,513	504,572	513,654	522,900	532,312	541,894	551,648	561,578	571,686

**Table 2b: Age- and Income-Qualified Population 60+ by Income Levels**

Income	2000	2005	2006	2007	2008	2009	2010	2011	2012
Less than \$10,000	76,995	84,179	85,694	87,236	88,807	90,405	92,032	93,689	95,375
\$10,000- \$14,999	56,214	61,459	62,565	63,691	64,838	66,005	67,193	68,402	69,634
\$15,000- \$24,999	103,054	112,669	114,697	116,761	118,863	121,003	123,181	125,398	127,655
\$25,000- \$34,999	86,076	94,107	95,801	97,525	99,281	101,068	102,887	104,739	106,624
Total	322,339	352,413	358,757	365,214	371,788	378,480	385,293	392,228	399,288

Self-Reported Disabilities/Limitations: Tables 3a and 3b provide information on the number of persons reporting physical, self-care, or “go outside” limitations, mental, or combinations thereof. The information is based on 2000 Census data and is provided below for each income level. When completing the Census, respondents are asked to select only one category that best describes their limitation. The limitations are described as follows: physical (conditions that limit one or more basic physical activities such as walking, climbing stairs, or carrying); self-care (problems with dressing, bathing, or getting around the house); go outside (problems going outside of the home alone to shop or visit a doctor’s office); or mental (learning, remembering, or concentrating). Some selections allowed respondents to report multiple limitations, e.g. limitations in self-care and a physical disability, or limitations in both self-care and going-outside. The following table shows different categories as reported in the 2000 Census. Other categories were reported, but those listed were determined as most relevant to this report.

**Table 3a: Estimate of Persons 50+ Self-Reporting Disabilities in the 2000 Census by Income**

Income	Physical Only	Self-Care Only	Both Physical and Self-Care	Physical, or self-care, or both physical and self-care	Physical, or Self-Care, or Go Outside
Less than \$10,000	16,420	9,766	8,607	34,793	47,972
\$10,000-\$14,999	11,060	6,578	5,798	23,436	32,313
\$15,000 - \$24,999	21,712	12,914	11,381	46,008	63,434
\$25,000 - \$34,999	21,396	12,726	11,215	45,337	62,510

**Table 3b: Estimate of Persons 60+ Self-Reporting Disabilities in the 2000 Census by Income**

Income	Physical Only	Self-Care Only	Both Physical and Self-Care	Physical, or self-care, or both physical and self-care	Physical, or Self-Care, or Go Outside
Less than \$10,000	11,780	7,007	6,175	24,962	34,417
\$10,000-\$14,999	8,601	5,115	4,508	18,225	25,128
\$15,000 - \$24,999	15,767	9,378	8,265	33,410	46,065
\$25,000 - \$34,999	13,170	7,833	6,903	27,906	38,476

STEPS/PASRR Population: Tables 4a and 4b are estimates of the number of people who required (for 2004) or may require assessments under the STEPS/PASRR program from 2005 - 2012. The estimates for 2004 – 2012 are based on the actual number of persons from 2000 through 2003 who were identified in the STEPS/PASRR data as having no prior STEPS or PASRR assessment. We assume that if an individual is seeking a STEPS or PASRR assessment and has had no prior assessment, then that individual can be considered to be a new, unduplicated individual who is approaching the long term care service delivery system for the first time. To limit the analysis to the targeted age group, the number of persons having no prior assessment was multiplied by the percentage of the STEPS/PASRR population who were either 50 years of age or older or 60 years of age or older. The resulting number of applicants was then adjusted to exclude those persons who were identified as being in a nursing home at the time of the assessment.

To obtain a baseline of the number of assessments which may be required at each of the income levels, the number of assessments completed in FY2000 was divided by the total number of age- and income qualified persons in each income level. The resulting percentage was then used to determine the baseline number of assessments for each income level. The average rate of increase in the number of assessments completed from FY2000 through FY2003 was used to estimate the expected increase in the number of annual assessments. It is estimated that in 2012, 11,209 applicants age 50 and over will require a first-time STEPS or PASRR assessment, while 9,200 applicants age 60 and over will require a first-time assessment. .

**Table 4a: Estimates of New STEPS/PASRR Evaluations of Individuals age 50+ by Income**

Income	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Less than \$10,000	5,095	5,497	5,096	5,965	6,304	6,662	7,040	7,440	7,863	8,310	8,782	9,281	9,809
\$10,000 -\$14,999	357	385	357	418	441	466	493	521	551	582	615	650	687
\$15,000-\$24,999	181	196	181	212	224	237	251	265	280	296	313	330	349
\$25,000-\$34,999	189	204	189	221	234	247	261	276	292	308	326	344	364
Total	5,822	6,281	5,823	6,816	7,203	7,613	8,045	8,502	8,985	9,496	10,036	10,606	11,209

**Table 4b: Estimates of New STEPS/PASRR Evaluations of Individuals age 60+ by Income**

Income	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Less than \$10,000	4,707	5,037	4,613	5,372	5,625	5,890	6,167	6,458	6,762	7,080	7,414	7,763	8,129
\$10,000 -\$14,999	304	326	298	348	364	381	399	418	437	458	480	502	526
\$15,000-\$24,999	155	166	152	177	185	194	202	212	222	233	244	255	267
\$25,000-\$34,999	161	172	158	184	193	202	211	221	232	242	254	266	278
Total	5,327	5,701	5,221	6,080	6,366	6,666	6,979	7,309	7,653	8,014	8,391	8,786	9,200

Estimation of Need – Community-Based Services and Supports: Tables 5a, 5b, 5c, and 5d provide estimates of the number of persons who may, because of self-reported limitations, require community-based long-term services and supports. The information is provided for each of the four income categories and age, which may be useful in determining need based upon existing program eligibility criteria. Based upon past service provision trend data, the STEPS/PASRR estimates provide a snapshot of the projected need for STEPS and PASRR assessments and for comparison with Census reports. Columns four through six provide estimates of the number of people who may need service based upon the type of limitation. Table 5e is a summary of the four tables with information summarized by disability type for each year and age group.

For all age groups, persons who have reported having a combination of sensory, and physical, and self-care limitations represent only a small number of the age- and income eligible Marylander’s, however, the nature of the limitations may be indicative of the need for a higher level of support services or being at high risk of needing support services. Persons who reported having either physical, or self-care, or both a physical and self-care limitations provide the upper

limits of the projected need for service. The following tables provide the Department of Aging with options for determining what range or ranges are most appropriate for estimating needs.



**Table 5a: Total Estimates of Persons Who May Require Community-Based Services in 2005-2012 for Incomes Less Than \$10,000.**

Year	Age	First Time STEPS/PASRR Assessment	Persons with sensory, and physical, and self-care disabilities	Persons with self-care and physical disabilities	Persons with self-care disability only	Persons with a physical disability	Persons with physical, or self-care, or both physical and self-care disabilities
2000	50+	5,095	3,327	8,607	9,766	16,420	34,793
	60+	4,707	2,387	7,299	7,007	11,780	24,962
2005	50+	6,662	3,637	9,410	10,677	17,952	38,040
	60+	5,890	2,740	8,380	8,044	13,006	28,658
2006	50+	7,040	3,703	9,580	10,870	18,275	38,724
	60+	6,167	2,817	8,614	8,269	13,240	29,460
2007	50+	7,440	3,769	9,752	11,065	18,604	39,421
	60+	6,458	2,896	8,856	8,501	13,478	30,285
2008	50+	7,863	3,837	9,928	11,264	18,939	40,131
	60+	6,762	2,977	9,104	8,739	13,721	31,133
2009	50+	8,310	3,906	10,106	11,467	19,280	40,853
	60+	7,080	3,060	9,358	8,983	13,968	32,005
2010	50+	8,782	3,977	10,288	11,674	19,627	41,589
	60+	7,414	3,146	9,620	9,235	14,219	32,901
2011	50+	9,281	4,048	10,473	11,884	19,980	42,337
	60+	7,763	3,234	9,890	9,494	14,475	33,822
2012	50+	9,809	4,121	10,662	12,098	20,340	43,099
	60+	8,129	3,325	10,167	9,759	14,735	34,769

**Table 5b: Total Estimates of Persons Who May Require Community-Based Services in 2005-2012 for Incomes From \$10,000 - \$14,999.**

Year	Age	First Time STEPS/PASRR Assessment	Persons with sensory, and physical, and self-care disabilities	Persons with self-care and physical disabilities	Persons with self-care only	Persons with a physical disability	Persons with physical, or self-care, or both physical and self-care disabilities
2000	50+	357	2,241	5,798	6,578	11,060	23,436
	60+	304	1,743	5,370	5,115	8,601	18,225
2005	50+	466	2,450	6,339	7,192	12,092	25,623

	60+	381	2,001	6,166	5,873	9,403	20,923
2006	50+	493	2,494	6,453	7,322	12,310	26,084
	60+	399	2,057	6,338	6,037	9,573	21,509
2007	50+	521	2,539	6,569	7,453	12,531	26,553
	60+	418	2,114	6,516	6,206	9,745	22,111
2008	50+	551	2,585	6,687	7,587	12,757	27,031
	60+	437	2,173	6,698	6,380	9,920	22,730
2009	50+	582	2,631	6,807	7,724	12,986	27,518
	60+	458	2,234	6,886	6,559	10,099	23,367
2010	50+	615	2,679	6,930	7,863	13,220	28,013
	60+	480	2,279	7,079	6,742	10,281	24,021
2011	50+	650	2,727	7,055	8,005	13,458	28,518
	60+	502	2,361	7,277	6,931	10,466	24,694
2012	50+	687	2,776	7,182	8,149	13,700	29,031
	60+	526	2,427	7,480	7,125	10,654	25,385

**Table 5c: Total Estimates of Persons Who May Require Community-Based Services in 2005-2012 for Incomes From \$15,000 - \$24,999.**

Year	Age	First Time STEPS/PASRR Assessment	Persons with sensory, and physical, and self-care disabilities	Persons with self-care and physical disabilities	Persons with self-care only	Persons with a physical disability	Persons with physical, or self-care, or both physical and self-care disabilities
2000	50+	181	4,399	11,381	12,914	21,712	46,008
	60+	155	3,195	9,925	9,378	15,676	33,410
2005	50+	237	4,810	12,443	14,119	23,738	50,300
	60+	194	3,668	11,395	10,766	17,238	38,357
2006	50+	251	4,896	12,667	14,373	24,165	51,205
	60+	202	3,770	11,714	11,068	17,548	39,431
2007	50+	265	4,984	12,895	14,432	24,600	52,127
	60+	212	3,876	12,042	11,378	17,864	40,535
2008	50+	280	5,074	13,127	14,895	25,043	53,065
	60+	222	3,984	12,379	11,696	18,186	41,670
2009	50+	296	5,165	13,364	15,163	25,494	54,021
	60+	233	4,096	12,726	12,024	18,513	42,837

2010	50+	313	5,258	13,604	15,436	25,952	54,993
	60+	244	4,211	13,082	12,361	18,846	44,036
2011	50+	330	5,353	13,849	15,714	26,420	55,983
	60+	255	4,329	13,448	12,707	19,186	45,269
2012	50+	349	5,449	14,098	15,997	26,895	56,991
	60+	267	4,450	13,825	13,062	19,531	46,537

**Table 5d: Total Estimates of Persons Who May Require Community-Based Services in 2005-2012 for Incomes From \$25,000 - \$34,999.**

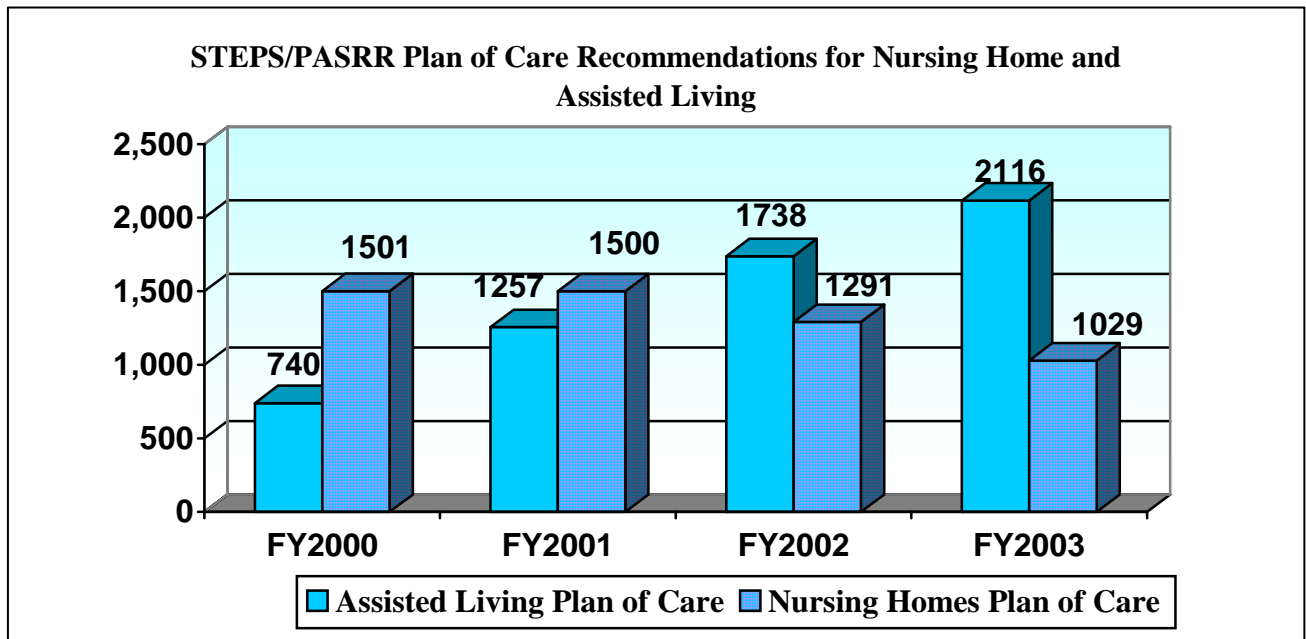
	Age	First Time STEPS/PASRR Assessment	Persons with sensory, and physical, and self-care disabilities	Persons with self-care and physical disabilities	Persons with self-care only	Persons with a physical disability	Persons with physical, or self-care, or both physical and self-care disabilities
2000	50+	189	4,335	11,215	12,726	21,396	45,337
	60+	161	2,668	8,445	7,833	13,710	27,906
2005	50+	247	4,740	12,262	13,913	23,392	49,567
	60+	202	3,063	9,696	8,993	14,399	32,038
2006	50+	261	4,825	12,483	14,163	23,818	50,459
	60+	211	3,149	9,967	9,244	14,658	32,935
2007	50+	276	4,912	12,707	14,418	24,242	51,367
	60+	221	3,237	10,246	9,503	14,922	33,857
2008	50+	292	5,000	12,936	14,678	24,678	52,292
	60+	232	3,328	10,533	9,769	15,190	34,805
2009	50+	308	5,090	13,169	14,942	25,122	53,233
	60+	242	3,421	10,828	10,043	15,464	35,779
2010	50+	326	5,182	13,406	15,211	25,575	54,192
	60+	254	3,517	11,131	10,324	15,742	36,781
2011	50+	344	5,275	13,647	15,485	26,035	55,167
	60+	266	3,616	11,443	10,613	16,025	37,811
2012	50+	364	5,370	13,893	15,764	26,504	56,160
	60+	278	3,717	11,763	10,910	16,314	38,870

**Table 5e: Summary of Estimates of Persons Who May Require Community-Based Services in 2005-2012 with Incomes Less than \$34,999.**

Year/Age Group	Persons with sensory, and physical, and self-care disabilities	Persons with self-care and physical disabilities	Persons with self-care disability only	Persons with a physical disability only	Persons with physical, or self-care, or both physical and self-care disabilities
2005					
50+	15,637	40,454	45,901	77,174	163,530
60+	11,472	35,637	33,676	54,046	119,976
2006					
50+	15,918	41,183	46,728	78,568	166,472
60+	11,793	36,633	34,618	55,019	123,335
2007					
50+	16,204	41,923	47,368	79,977	169,468
60+	12,123	37,660	35,588	56,009	126,788
2008					
50+	16,496	42,678	48,424	81,417	172,519
60+	12,462	38,714	36,584	57,017	130,338
2009					
50+	16,792	43,446	49,296	82,882	175,625
60+	12,811	39,798	37,609	58,044	133,988
2010					
50+	17,096	44,228	50,184	84,374	178,787
60+	13,153	40,912	38,662	59,088	137,739
2011					
50+	17,403	45,024	51,088	85,893	182,005
60+	13,540	42,058	39,745	60,152	141,596
2012					
50+	17,716	45,835	52,008	87,439	185,281
60+	13,919	43,235	40,856	61,234	145,561

Estimation of Need – Assisted Living and Nursing Facilities: The following chart shows the actual recommendations for assisted living group or facility services and long-term nursing home services for 2000 through 2003. The numbers are based on plan of care recommendations and include some people who were in assisted living or nursing homes at the time of the evaluation, or were repeat assessments, or under 50 years of age. As the referral numbers reflect recommendations for the overall STEPS/PASRR population represented in the reports, the presentation of actual program data is presented rather than extrapolations as used in other areas of the report. Trends have not been estimated for these numbers based on several factors:

- The Older Adult and Living at Home Waivers became operational in 2001 and the affect on redistributing assisted living and nursing home referrals can be seen in the STEPS/PASRR data. However, those waivers have now reached their enrollment maximums, so the trends are unlikely to continue at a similar rate.
- While the sharp downward trend of recommendations for nursing home placement is promising, more longitudinal data are necessary before a trend line could be estimated. Regardless, it is realistic to expect that, for a variety of reasons, there will continue to be a need for nursing home placements into the future.



## Summary

This document provides an estimate of several ranges of the number of persons who may require some form of long-term support services by the year 2012. According to 2000 Census data, by the year 2012, 1.9 million Marylanders will be 50 years of age or older, while 1.1 million will be 60 years of age or older. By the year 2012, it is estimated that over 500,000 Marylanders will be age- and income-qualified for programs offered by the Maryland Department of Aging. A review of the 1990 and 2000 Census data show that a greater number of Marylander’s are self-reporting limitations, which could result in an increased need for Maryland Department of Aging services.