DEPARTMENT OF HUMAN SERVICES
FINANCE & POLICY ANALYSIS
CLIENT CASELOAD FORECASTING TEAM

AGED & PHYSICALLY DISABLED

FALL 2005 FORECAST
(Revised November 30, 2005)

EXECUTIVE SUMMARY

SERVICES FOR AGED AND PHYSICALLY DISABLED

Program Description

The Seniors and People with Disabilities (SPD) Cluster administers programs that protect seniors and people with physical and developmental disabilities and increase their independence. This forecast applies only to long-term care programs for the aged and physically disabled. The developmentally disabled caseload will be forecasted separately in the future.

Currently, Oregon offers a range of long-term care services for people with chronic illnesses or physical disabilities. These services include Nursing Facilities, Licensed Community Care Facilities and In-Home Care programs.

The Total Long-Term Care caseload (measured by the average daily client population receiving a long-term care service) is estimated to be a biennial daily average of 27,492 in the 2005-07 biennium. The actual total Long-Term Care caseload in the 2003-05 biennium through the month of April 2005 is 28,040. The biennial average caseload forecast is about two percent less than the actual caseload for the 2003-05 biennium.

- The Total Nursing Facilities caseload is forecasted to decrease by 6.5 percent from the biennial daily average of 5,092 in 2003-05 to a biennial daily average of 4,761 in the 2005-07 biennium. The Nursing Facility Basic Care caseload, which accounts for 92 percent of the Total Nursing Facilities caseload, accounts for the major portion of the caseload decline.

- The total In-Home Care services caseload is forecasted to decline by about one percent from the biennial daily average of 11,817 in the 2003-05 biennium to an average of 11,648 in the 2005-07 biennium.

- The Total Licensed Community Facilities caseload is forecasted to decrease by about 1 percent from a 2003-05 biennial daily average of 11,132 to 11,083 in the 2005-07 biennium.

- The Relative Adult Foster Care caseload is forecasted to decrease by about 1 percent during the period 2005-07 compared to the 2003-05 biennium. Commercial Adult Foster Care caseload is forecasted to increase by about 4 percent in the same period.

- The Regular Residential Care caseload is forecasted to decrease by about 12 percent in the 2005-07 biennium compared to the 2003-05 biennium. Contract Residential Care is forecasted to decrease by 9 percent during the same period.

- The Assisted Living caseload is forecasted to stay about the same in the 2005-07 biennium relative to the 2003-05 biennium.

- The Providence ElderPlace caseload is forecasted to increase by 7 percent during the 2005-07 biennium compared to the 2003-05 biennium.

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INTRODUCTION

PROGRAM CLUSTER DESCRIPTION

The Oregon Department of Human Services (DHS) Seniors and People with Disabilities (SPD) Cluster administers programs that protect seniors and people with physical and developmental disabilities and increase their independence. This forecast applies only to long-term care programs for the aged and physically disabled. The developmentally disabled caseload will be forecasted separately in the future.

Currently, Oregon offers an array of long-term care services for people with chronic illnesses or physical disabilities. These services include nursing facilities, licensed community care facilities and in-home care programs. This long-term care client caseload forecast does not include all of the services. Some of those services not included in the caseload forecast are Enhanced Residential Care in Licensed Community Facilities, In-Home Agency Provider and Independent Choices, Personal Care, Adult Day Care Services under In-Home, and Extended Care under Nursing Home Services.

PEER REVIEW

A Client Caseload Peer Review Group, forecasting experts from other Oregon state agencies, Oregon University systems and private industry reviews and recommends changes and improvements to the base methodology. The Peer Review Group examines the issues relating forecast methodology, definitions of forecast groups and forecast measurement mechanisms. A list of the members of the Peer Review Group is included in Appendix I.

FORECAST PROCESS

The Department of Human Services Forecasting process begins with the development of a Forecast Agreement with the cluster administration. A Forecast Steering Committee, composed of representatives from DHS program and budget clusters, the Legislative Fiscal Office (LFO) and the Department of Administrative Services' (DAS) Budget and management (BAM) Office, creates the Agreement.

A list of members of the Aged and Physically Disabled Client caseload Forecast Steering Committee is included in Appendix II.

The Forecast Agreement outlines the groups that will be forecasted and the data sources that will be used to create the caseload records. The Forecast Steering Committee also provides policy and program guidance that may influence the caseload forecast as well as guidance to the production of adjusted and risk forecasts.

FORECAST METHODOLOGY

This is the second long-term care caseload forecast generated using the Department of Human Services' Forecasting System and methodology. The methodology diverges from previous forecasts in two significant ways:

1. The methodology uses the date of service rather than the date of payment to count clients. Under the old methodology, the total number of vouchers paid in the month was used as a proxy for the client caseload count. Since several vouchers may have been paid for the same client in the same month, this represents a "duplicated" count. Under the new methodology, the total unduplicated number of clients receiving service on the last day of the month is used as a proxy for the client caseload. This is the statistical equivalent of the average daily client population.

2. The methodology separates the use of long-term care services from the use of the Oregon Health Plan. Under the old methodology, the caseload was forecasted through its relationship to the Office of Medical Assistance Programs' Old Age Assistance and Aid to the Blind and Disabled caseloads. However, under the new methodology, the caseload is forecasted as a mathematical relationship between the past and the future utilization of long-term care services. Different counting methods can lead to different reported caseload counts. The caseload count in the following example varies from one to three clients depending on the methodology that is used to count the clients.

Methodology Used to Count Clients

Month
Begins

Month
Ends

Begin
service
episode
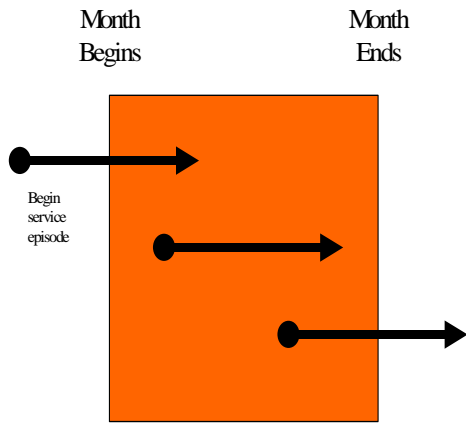
Average daily client population = (10 days + 20 days + 10 days)/30 = 1.33.

Number of clients served in the month = 3.

Number of clients admitted to service during the month = 2.

Number of clients in active service on the last day of the month = 1.

Because of the change in counting methods, the caseload counts reported in prior forecasts (under the Old Method) are not equal to the caseload counts reported in this document. The new method represents an unduplicated count of people served on the last day of the month whereas the old method represented a duplicated count of people who received service within the month. As the following graph illustrates, the new counting methodology does change the reported caseload by about two percent.

Historical Basic Nursing Facility Average Daily Population Using "Duplicated Bill Payment" and "Unduplicated End-of-Month" Counting Methodologies

Forecast under Old Method
Forecast under New Method
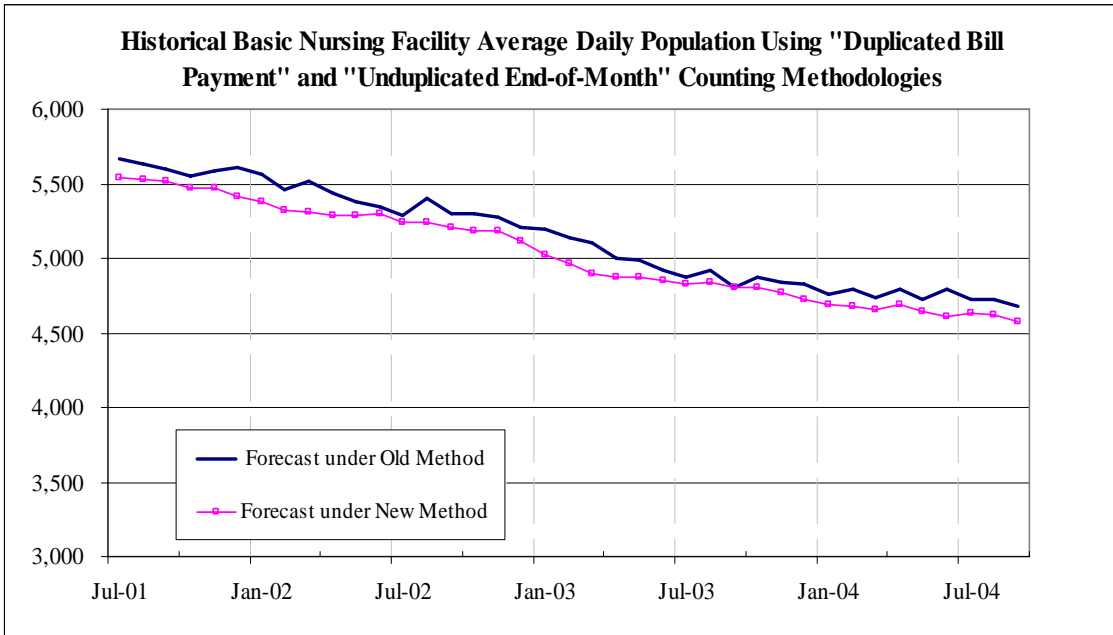
The new APD forecast is based on mutually exclusive service groups rather than the overlapping groups allowed under the old system. Because of this requirement, a hierarchical order of APD services was followed in case of overlapping of services.

1.   Nursing Facility—Complex Medical Add-On

2.   Nursing Facility—Basic

3.   Contract Residential Care

4.   Commercial Adult Foster Care

5.   Regular Residential Care

6.   Assisted Living

7.   Relative Adult Foster Care

8.   In-Home Total Forecast Process

The methodology used to create the Aged and Physically Disabled caseload forecast is described in detail in Appendix III.

The base forecast is calculated using the Department of Human Services' Forecasting System, as a mathematical relationship between history and the future. The forecasting tool, which was created by Looking Glass Analytics (Olympia, Washington), enhances a model developed by Willamette University's Public Policy Research Institute. This model was originally devised to forecast Oregon's Medical Assistance Program caseloads.

The model uses three variables to forecast caseloads:

1.   Current clients

The number of clients on the caseload on the last day of the month, for which reliable data were available at the time of the forecast, is used as the starting point for the forecast. "Survival" rates – the proportion of clients who are likely to remain on the caseload each month – determine the number of current clients included in each monthly forecast.

2.   New clients

The number of clients who are likely to enter the system after a service break of at least one month is forecast using the Statistical Analysis Software (SAS) Econometric and Time Series (ETS) forecasting module. The ETS tool selects the model that best fits the data from more than 20 standard time series programs. The ETS new client forecast is added to each month's current client forecast.

3.   Transfer clients

The number of clients who are likely to enter the caseload from other related caseloads is forecasted using an historical transfer matrix, which is adjusted for seasonality. The transfer caseload is added to each month's forecast.

The base methodology is "utilization-based" rather than "needs-based." It assumes that historic patterns of service will continue into the future. As a result, the base forecast is particularly sensitive to recent policy and budget actions.

The model is based on the following assumptions:

▪   **At least one full year of historical data**

   This system assumes that at least one continuous year of historical data is available in order to generate survival distributions. Forecasting works best when several years of history are present.

▪   **Mutually exclusive programs**

   Mutual exclusivity of program enrollment in a given month is a critical part of this forecasting model since it is based on entry-exit and transfer between programs. The model calculates the percent of clients leaving one program and transferring to another program, or leaving the system entirely. The transfer rate is assumed for the entire forecast period. In

order for this transitions-based model to function optimally, a client cannot be enrolled in more than one program simultaneously.

Uncapped program enrollment
The current entry-exit model is not designed to accommodate a program with a capped enrollment.

The Forecast Steering Committee gives final approval to the forecast.

Risks and Assumptions

➢ **Medicare Modernization Act (MMA).**
In the current APD forecast, only a base forecast is generated. However, the in-home hourly caseload is at risk to gain new clients as a result of the "woodwork" effect of the Medicare Modernization Act of 2003—that is, the expected number of persons who will learn about DHS services as a result of the information provided in MMA materials and subsequently apply for services "from out of the woodwork" so to speak. This client population is expected to be completely new to the DHS system.

The Medicare Modernization Act provides prescription drug coverage to elderly and disabled people who are enrolled in the Medicare programs. As a part of the Act, approximately 264,000 Oregonians have been informed they are potentially eligible for low-income subsidies to pay for this coverage. A subset of these individuals will be eligible for other State-funded benefits like the Oregon Health Plan; yet another subset will have the functional needs to qualify for long-term care services.

About one-third of the clients who are served by Medicaid funded long-term care will be required by the MMA to participate in premium payment and cost sharing. If these people live in nursing facilities, they will be exempted from the required cost sharing under current regulations. If they live in community-based care, however, they will be subject to cost sharing. This co-pay may provide an incentive to move out of community-based care and into a nursing facility.

➢ **Growing Elderly Population.**
Elderly Oregonians are among the fastest growing segment of the state population. While the total Oregon population is expected to increase 13 percent by 2010, the 65 and older age group will grow by 19.6 percent and the 85 and older age group is expected to increase 32.7 percent. Both of these groups are expected to grow substantially at least through the year 2040. The

average 75-year-old has three chronic conditions and uses five prescription drugs. As these populations live longer (and often with chronic conditions) through medical advances, they also run the risk of spending down available resources and falling within the poverty guidelines of DHS and thereby eventually into the Medicaid long-term care population, currently the second largest program within DHS.

> **Exo-Forecast.**

As reflected in the Forecast Methodology, the current forecasting model only projects the caseload based on historical client data. This current model does not however, adequately integrate external, or "exogenous", factors such as the changing Oregon demographic, economic situations, and health conditions, into the forecasting process. These factors play an ever changing, and significant, role in helping to determine the potential future "demand population" for DHS services.

In response to the reality that outside factors and future trends may influence the long-term care caseload demand and thus the forecast, an exo-forecast workgroup was created within the Department of Human Services. Consisting of members from both Seniors and People with Disabilities cluster and the Client Caseload Forecasting Team, the workgroup has been changed with identifying exogenous variables, quantifying them, and determining how they will impact the short and long-term forecasts. This process will improve client caseload forecast accuracy as well as facilitate policy analysis relating to the caseload forecast and DHS services.

The workgroup's progress report on the Long-Term Care client caseload using the exogenous variables is in Appendix VI.

LONG-TERM CARE

FORECAST ASSUMPTIONS

Total long-term Care caseload is the additive of three main long-term care services: In-Home, Licensed Community Care and Nursing Home client caseloads.

New Client Entry Pattern: New Eligibles' entry in the long-term care services are modeled based on history since July 2003. An appropriate new eligible client forecast model is chosen from an array of Econometric Time Series (ETS) models based on each model's statistical goodness of fit, that is the model with the least amount of error measured by mean average percentage error (MAPE).

Survival Pattern: An appropriate survival distribution is chosen from the forecast model list, which reflects a true length of stay by client population in a given program:

<u>Annual Cohort</u>: The cohort is everybody that entered the program in the given year (2002, 2003, and 2004)

<u>Exit Cohort:</u> The cohort is everybody that exited the program in the given year (2002, 2003, and 2004)

<u>Pooled Cohort:</u> The cohort is everybody that entered the program in the given year or after (2002, 2003, and 2004)

Transfer Pattern: Average transfer pattern of the clients movement from one program to another are models based on the 12 month time period.

Transfer seasonality pattern is modeled based on the last two-year historical data.

Program Description

This forecast includes the following APD long-term care (LTC) services under three broad program categories:[+]

- **Nursing Facilities:**
    Basic Care
    Complex Medical Add-On
    Pediatric Care[*]
- **In-Home Care**
    Hourly
    Live-In
    Spousal-Pay
- **Licensed Community Care Facilities:**
    Relative Adult Foster Care
    Commercial Adult Foster Care
    Regular Residential Care Facilities
    Contract Residential Care Facilities
    Assisted Living Facilities
    Specialized Living Facilities[*]
    Providence ElderPlace[*]

[+] APD long-term care also includes other services: Personal Care, In-Home Agency Care, Independent Choices, Enhanced Residential Care, Adult Day Care and Nursing Facilities - Extended Care Services which are not included in the current caseload forecast.

[*] The three long-term care services: Specialized Living Facilities, Pediatric Nursing Care and Providence ElderPlace client caseloads are forecasted outside of the Oregon DHS Forecast System. Specialized Living and Pediatric caseloads are both very small and capped caseloads, whereas Providence ElderPlace has an all-inclusive service caseload.

The following exhibit shows the distribution of these program groups in the total Long-Term Care caseload.

Historical Distribution of Total Long-Term Care Caseload
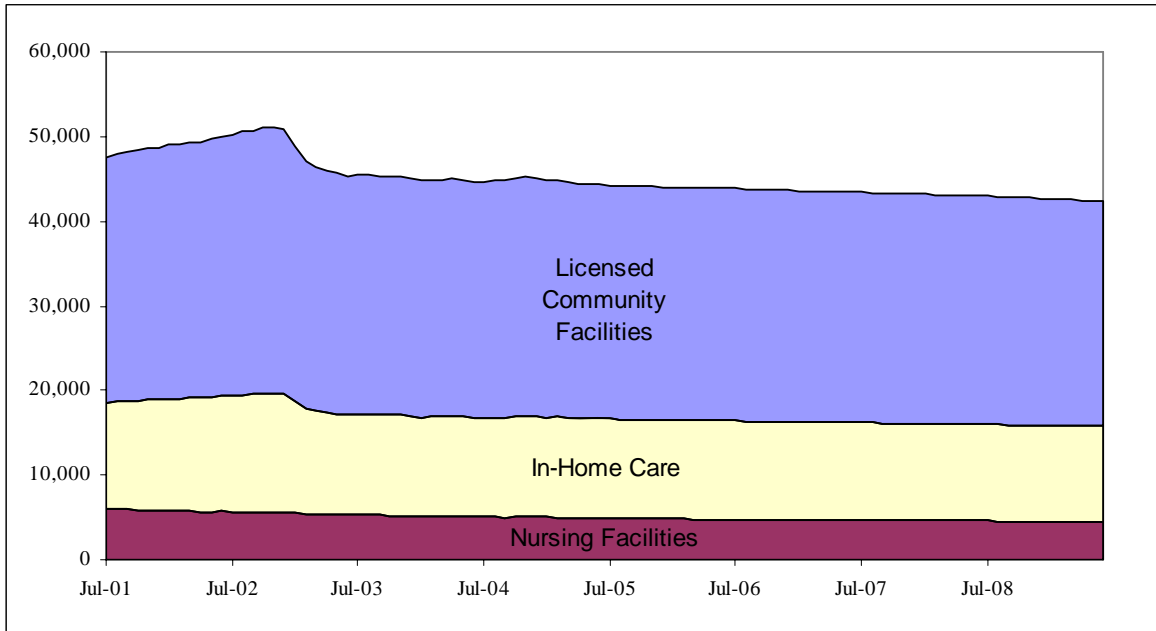
NOVEMBER 2005 CASELOAD FORECAST

The average daily Long-Term Care caseload population was 28,040 (actual through April 2005) in the 2003-05 biennium. The average daily Long-Term Care caseload is forecasted to decrease to 27,492 in the 2005-07 biennium and to 27,071 in the 2007-09 biennium. The decline in the caseload forecast represents a 1 percent drop in the 2005-07 biennium and a 2.46 percent drop in the 2005-07 biennium and a 1.65 percent drop in the 2007-09 biennium respectively. This is illustrated in the following exhibit:

Total Long Term Care Caseload
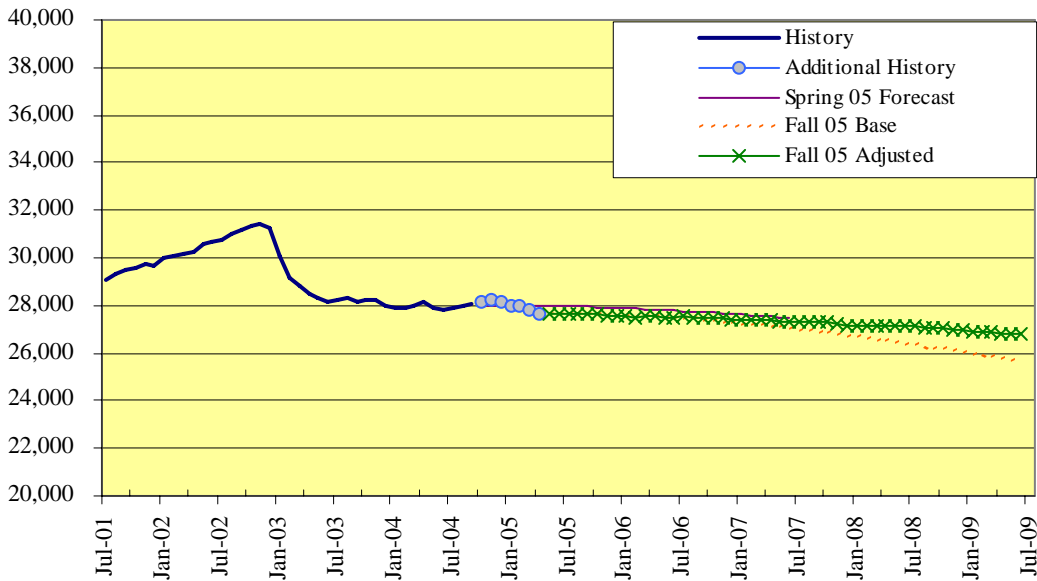
Overall, the distribution for the three Long-Term Care program groups changed slightly from historical caseload distribution from 2001-03 to 2005-07: The Nursing Facilities caseload is expected to account for about 17 percent of the total Long-Term Care caseloads, whereas the total In-Home Care and the Licensed Community Care Facilities caseloads are expected to account for 42 and 40 percent respectively.

Historical Distribution of Long Term Care Caseload by Program
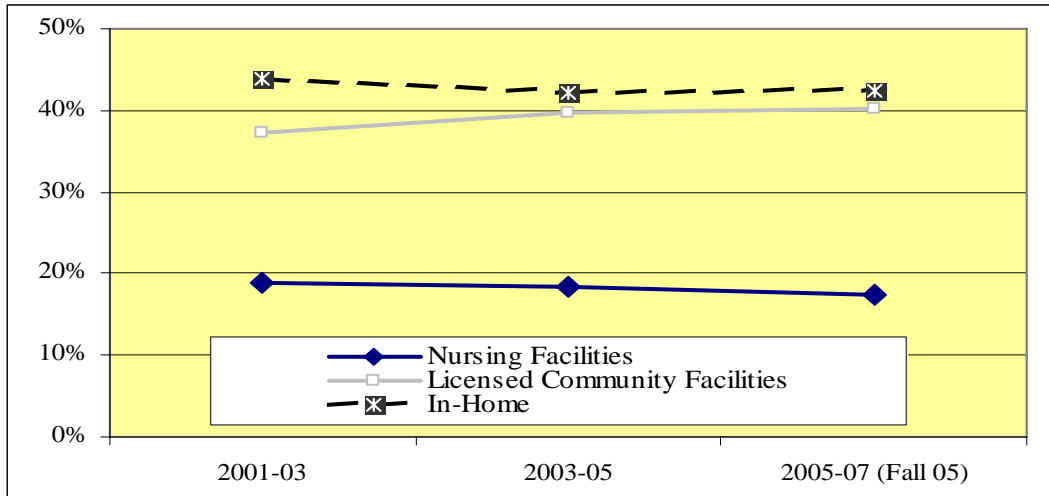
The Fall 2005 Long-Term Care caseload forecast shows a less than one percent decrease over the Spring 2005 caseload forecast for biennium 2005-07 and is a 2.46 percent decrease for the next biennium 2007-09:

1. The Nursing Facilities caseload decreased by a biennial average of less than a one-fifth of one percent in the 2005-07 biennium, and by about 4 percent in the 2007-2009 biennium;

2. The In-Home caseload decreased by one percent in the 2005-2007 biennium and by 3 percent in the 2007-09 biennium; and,

3. The Licensed Community Facilities caseload decreased by 1.2 percent in the 2005-07 biennium and about one percent in the 2007-09 biennium.

A Comparison of Average Caseload Forecast-2005-2007:
April 05 Forecast and November 05 Forecast
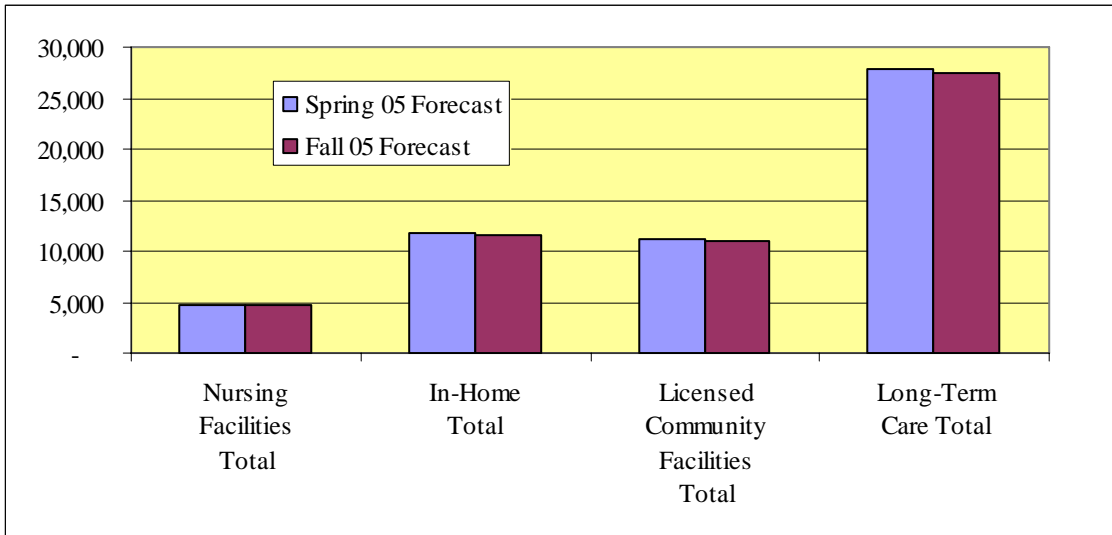
Data underlying the above exhibit:

Aged and People With Disabilities
Average Daily Client Caseload Forecast: 2005-2007 and 2007-2009

APD Services	History July 03-Apr 05	Spring 05 Forecast (July 05-Jun 07)	Fall 05 Adjusted Forecast (July 05-Jun 07)	Percent Change from Spring 05 Forecast (July 05-Jun 07)	Fall 05 Adjusted Forecast (July 07-Jun 09)	Percent Change from Spring 05 Forecast (July 07-Jun 09)
Long-Term Care Total	**28,040**	**27,754**	**27,492**	**-0.94%**	**27,071**	**-2.46%**
Nursing Facilities Total	**5,092**	**4,770**	**4,761**	**-0.18%**	**4,582**	**-3.94%**
Basic NFC	4,660	4,391	4,367	-0.55%	4,204	-4.25%
Complex NFC	365	309	324	5.04%	307	-0.44%
Pediatric NFC	67	70	70	0.00%	70	0.00%
In-Home Total	**11,817**	**11,765**	**11,648**	**-1.00%**	**11,394**	**-3.16%**
In-home Hourly		10,384	10,281	-1.00%	10,056	-3.16%
In-home Live-In		1,245	1,232	-1.00%	1,206	-3.15%
In-home Spousal pay		136	135	-1.01%	132	-3.12%
Licensed Community Facilities Total	**11,132**	**11,219**	**11,083**	**-1.21%**	**11,095**	**-1.11%**
Relative Adult Foster Care	1,945	1,631	1,616	-0.94%	1,389	-14.86%
Commercial Adult Foster Care	2,648	2,325	2,424	4.24%	2,306	-0.83%
Regular Residential Care	1,095	1,215	1,069	-12.03%	1,090	-10.33%
Contract Residential Care	962	1,293	1,177	-8.99%	1,328	2.67%
Assisted Living	3,791	3,973	3,976	0.09%	4,115	3.58%
Specialized Living	170	172	172	0.00%	172	0.00%
Providence ElderPlace	521	609	649	6.55%	696	14.20%

Notes:
* Spring 05 Forecast: Actual through September 2004.
* Fall 05 Forecast: Actual through April 2005.
*The numbers in the table above were rounded, however percentages were calculated from the source data, which was not rounded.
*APD long-term care also includes other services: Personal Care, In-Home Agency Care, Independent Choices, Enhanced Residential Care, Adult Day Care and Nursing Facilities - Extended Care Services which are not included in the current caseload forecast.

NURSING FACILITIES

The Total Nursing Facilities client population includes three major service categories[*]:

- Basic Care

- Complex Medical Add-On

- Pediatric Care

Historically, the average Nursing Facility caseload represented approximately 20 percent of the total Long-Term Care caseload. The Basic Nursing Care caseload comprised of 92 percent of the Total Nursing Facilities caseload. While the Complex Medical Add-On and Pediatric Care accounted for about 7 percent and 1 percent of the Total Nursing Facilities caseload respectively.

In the 2005-07 and 2007-09 biennia, the average caseload distribution among Nursing Facility services remains about the same; Basic Care is expected to account for 92 percent; Complex Medical Add-On is expected to account for 7 percent and 6.7 percent in 2005-07 and 2007-09 respectively; and Pediatric Care is expected to remain at the capped level of 70 (about one percent of the Total Nursing Facilities client population).

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[*] At present, clients receiving Extended Care Services are not included in the Fall forecast. They are accounted for in the budget process, however.

Total Nursing Facility Client Population
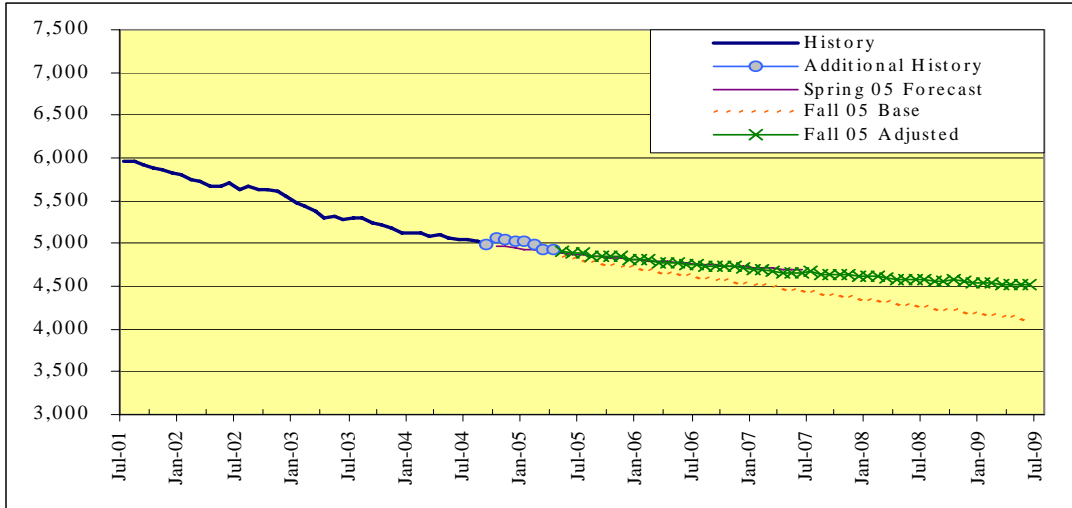
The total Nursing Facility caseload in the Fall 05 forecast remains about the same as in the Spring 05 forecast with a slight reduction of less than a one-fifth percent in the Fall forecast.

The nursing facility caseload is distributed among:

Basic Nursing Care

The nursing facility base care service is forecasted to decrease by 6.3 percent from the 2003-05 biennial daily average of 4,660 to a biennial average of 4,367 and 4,204 clients in the 2005-07 and 2007-09 biennia respectively.

Basic Nursing Care Caseload
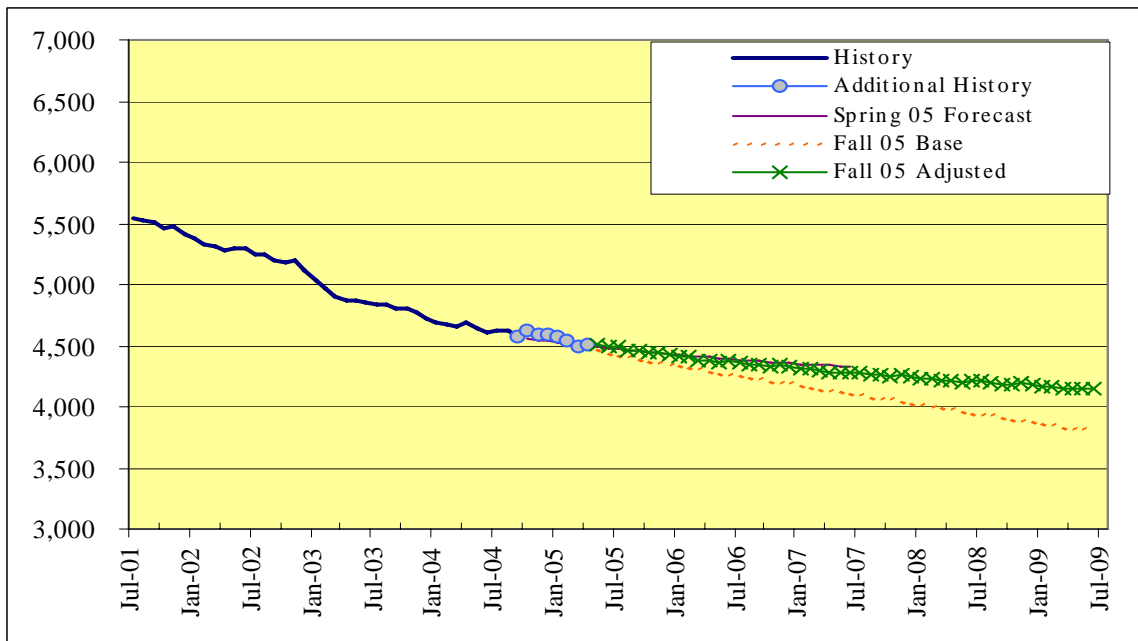
Complex Medical Add-On

The Complex Medical Add-On client caseload is forecasted to decrease from the 2003-05 biennial average of 365 to a 2005-07 biennial average of 324 clients by June of 2007, but will decrease to a biennial average of 307 in 2007-2009.

Complex Medical Add-On Caseload
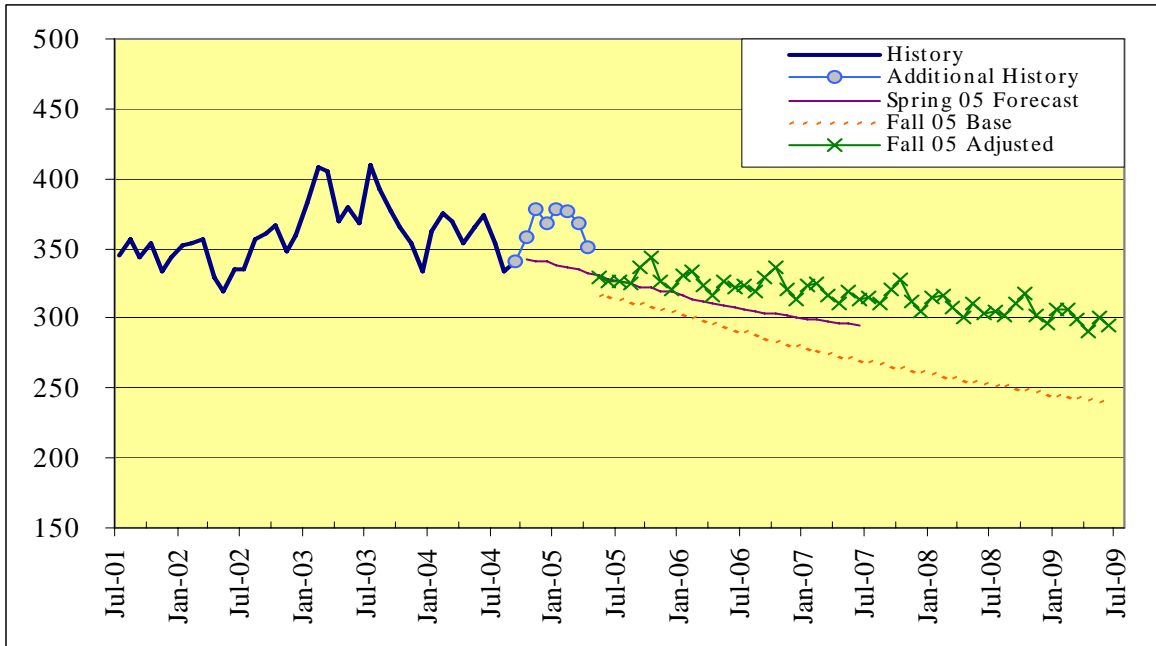
Pediatric Care

The Pediatric Nursing Client population is forecasted to remain at the capped level of 70 clients in the current and the next biennia, ending in June of 2009.

Pediatric Care Caseload
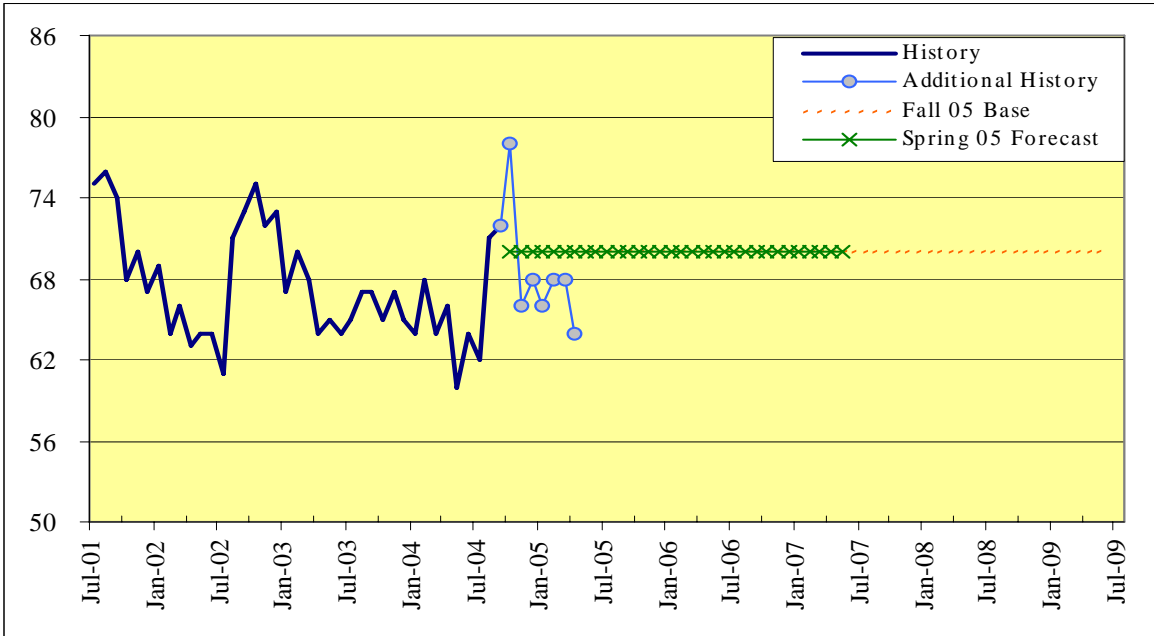
IN-HOME CARE

The total In-Home Care client population includes three major service categories:

- In-Home Hourly

- In-Home Live-In

- In-Home Spousal-Pay

The Oregon DHS Forecast System projects the In-Home Care caseload as a single program. The caseload for the three services under In-Home Care is then proportionately distributed based on their historical proportional relationship percentage.

Historically, the average In-Home Care caseload represented approximately 44 percent of the total Long-Term Care caseload. The In-Home Hourly caseload accounted for approximately 88 percent of the total In-Home Care caseload. In-Home Live-in comprised about 11 percent and In-Home Spousal-Pay accounted for one percent of the Total In-Home Care caseload. In the 2005-07 biennium, the average In-Home Care caseload is forecasted to maintain the same historical distributions across the three in-home services.

In-Home Care Service Distribution
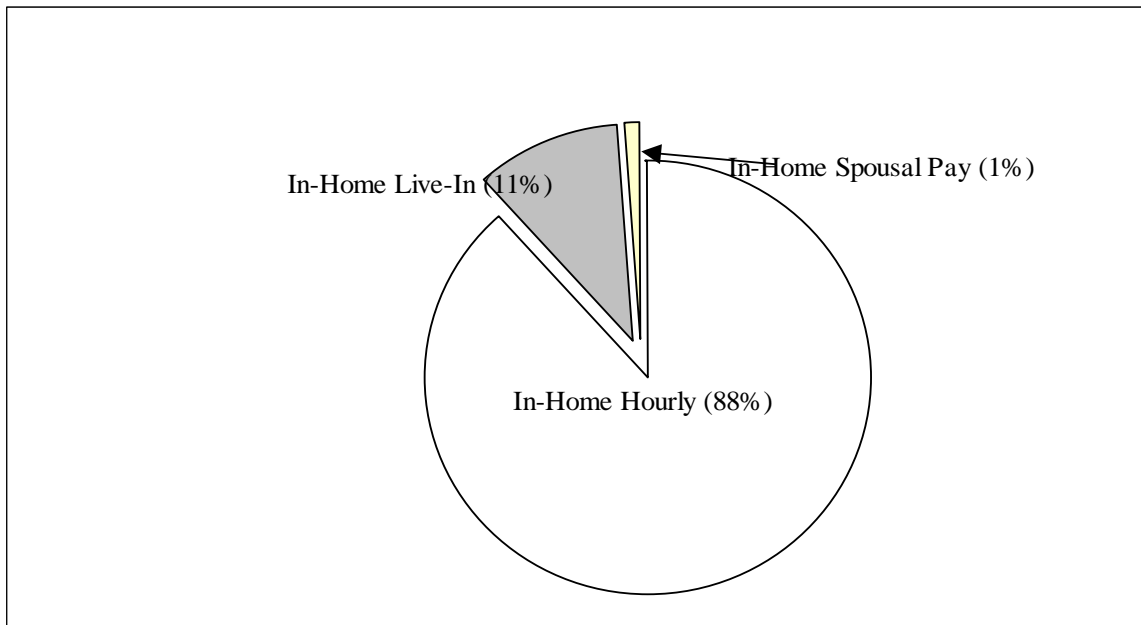
The total In-Home Care caseload is forecasted to decrease one percent to a biennial daily average of 11,648 clients in the 2005-07 biennium compared to the 2003-05 biennial daily average of 11,817. The In-Home Care caseload will decrease to a biennial average of 11,394 by the end of June 2009.

The total In-Home Care caseload in the Fall 05 forecast is lower by biennial average of 117 clients, which is a 1 percent lower in the Fall forecast compared to the Spring 05 forecast.

Total In-Home Care Caseload
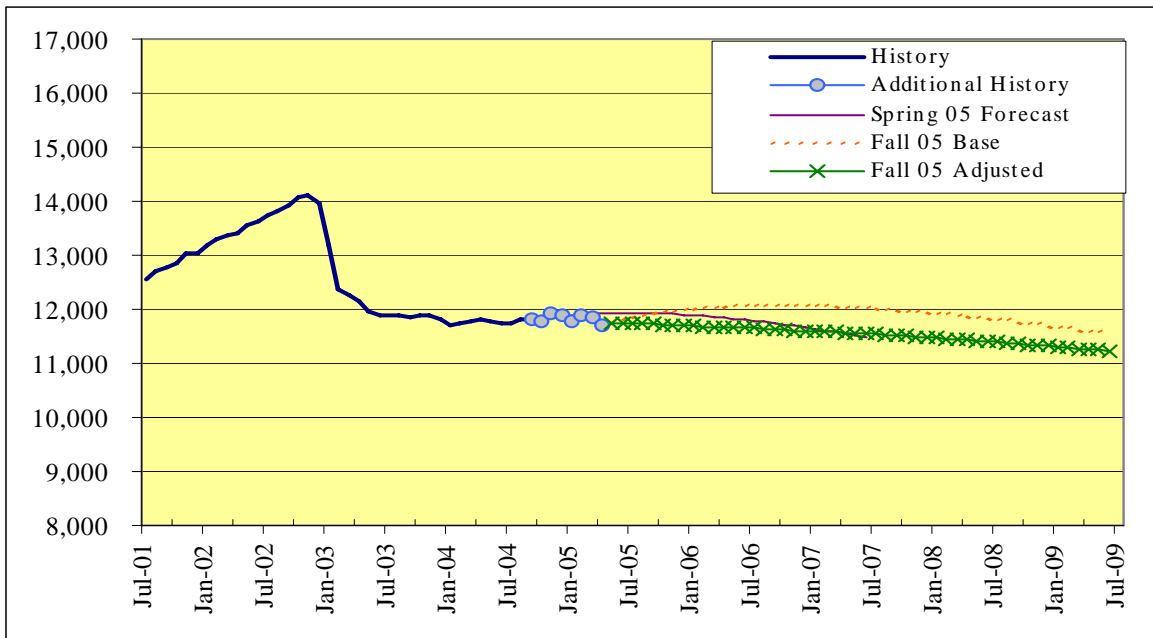
LICENSED COMMUNITY CARE FACILITIES

The total Licensed Community Care client population includes five major service categories:

- Relative Adult Foster Care

- Commercial Adult Foster Care

- Regular Residential Care Facilities

- Contract Residential Care Facilities

- Assisted Living Facilities

- Specialized Living Facilities

- Providence ElderPlace

Historically, the average Licensed Community Care caseload remained at about 40 percent of the Total Long-Term Care caseload. Among the Licensed Community Care services, the Adult Foster Care caseload remained about 44 percent of the total, followed by Assisted Living Facilities (33 percent) and Residential Care Facilities (17 percent). Similarly, Specialized Living Facilities and the Providence ElderPlace accounted for about 2 percent and 4 percent of the total Licensed Community Care caseload respectively.

The total Licensed Community Care caseload in the Fall 05 forecast is lower by biennial average of 136 clients, which is about 1 percent lower in the Fall forecast compared to the Spring 05 forecast.

Total Licensed Community Care Facilities Caseload
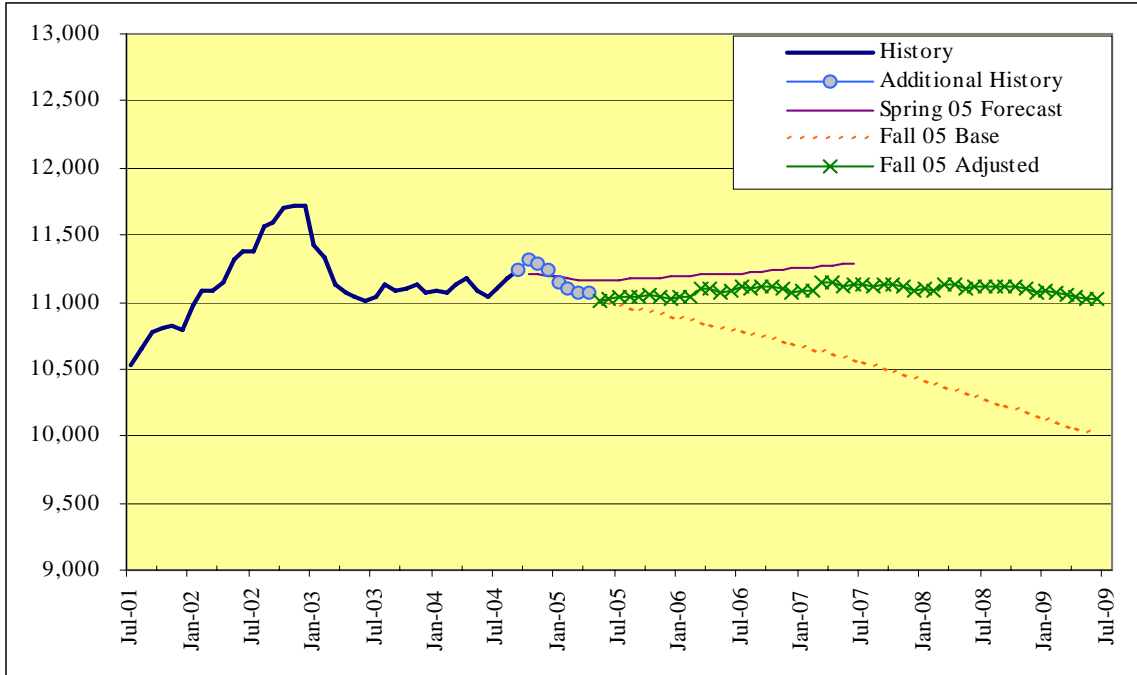
In the 2005-07 biennium, the average Licensed Community Care caseload is forecasted to decrease by slightly less than 1 percent to a biennial average of 11,083 clients by June of 2007 from the 2003-05 biennial average of 11,132.

ADULT FOSTER CARE

The total Adult Foster Care caseload is forecasted to decrease by 12 percent from the biennial daily average of 4,593 in 2003-05 biennium to a daily average of 4,040 clients in the 2005-07 biennium and to 3,695 in the next biennium.

Adult Foster Care Caseload
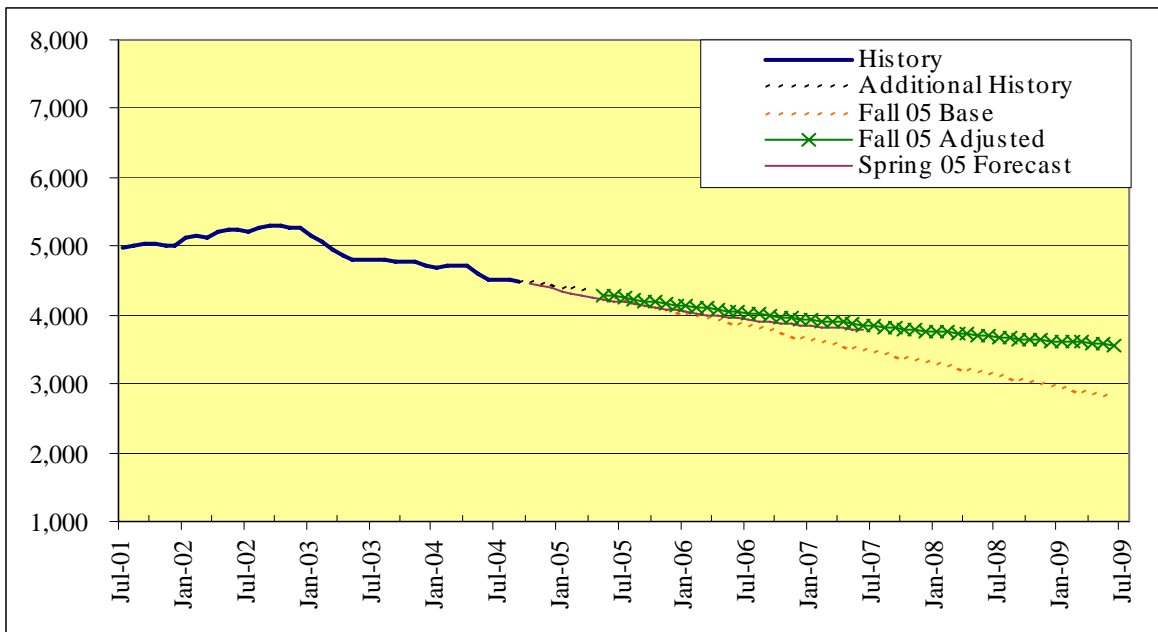
The Adult Foster Care program includes two services: Relative and Commercial Foster Care. Historically, Commercial Foster Care and Relative Foster Care accounted for 58 percent and 42 percent of the total Adult Foster Care program, respectively. However, the proportional distribution of Adult Foster Care has changed in 2004. While Commercial Adult Foster Care caseload is in a very slight decline over a long stretch of months, Relative Adult Foster Care is declining at a rapid rate in the most recent months.

Relative Adult Foster Care

The Relative Adult Foster Care caseload is forecasted to decrease by 17 percent from the biennial daily average of 1,945 in the 2003-05 biennium to a daily average of 1,616 clients in the 2005- 07 biennium and to 1,389 in the 2007-09 biennium respectively.

Relative Adult Foster Care Caseload
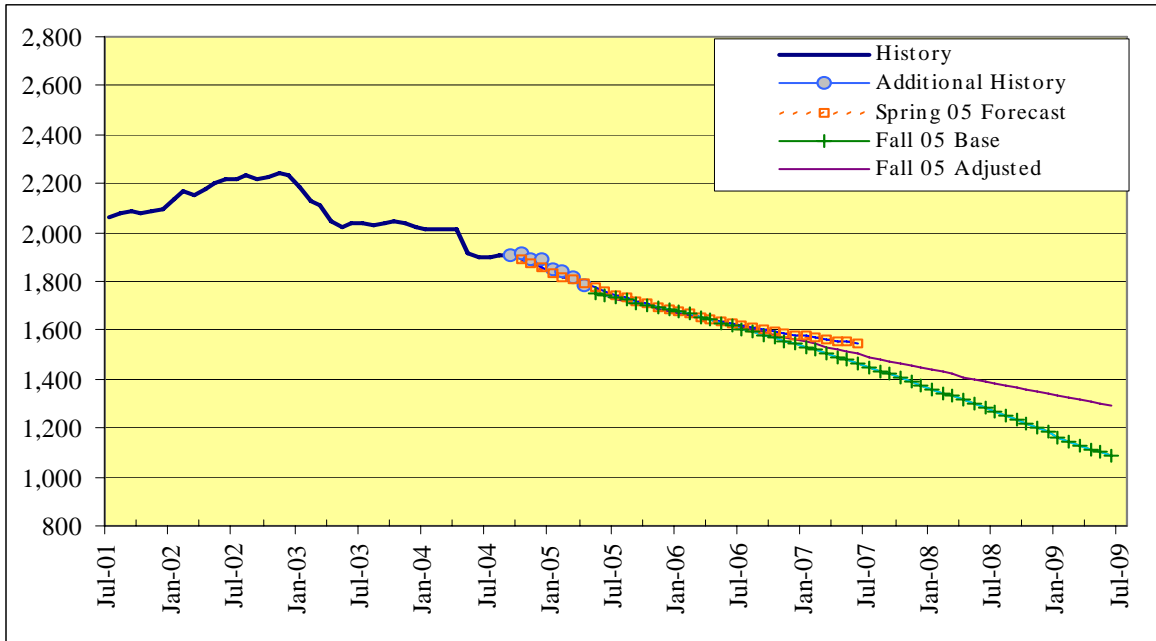
Commercial Adult Foster Care

The Commercial Adult Foster Care caseload is forecasted to decrease by 4.2 percent from the biennial daily average of 2,648 in the 2003-05 biennium to a daily average of 2,424 clients in the 2005-07 biennium and to 2,306 in the next biennium (2007-09).

Commercial Adult Foster Care Caseload
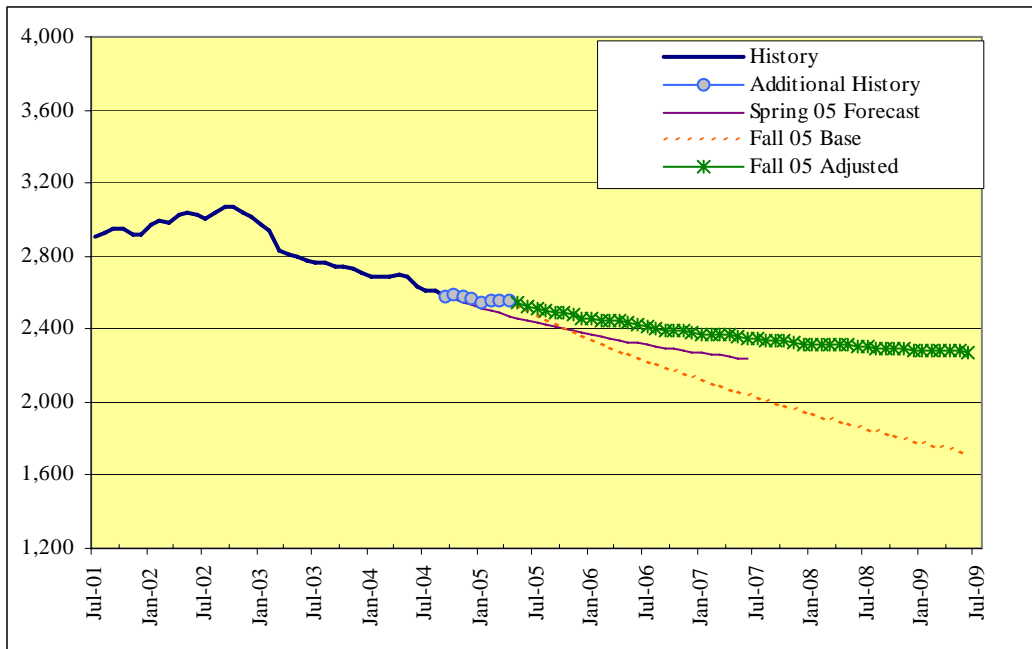
RESIDENTIAL CARE

The Total Residential Care caseload is forecasted to increase from the 2003-05 biennial average of 2,057 by 9 percent to a biennial daily average of 2,246 clients in the biennium 2005-07 and to 2,418 in the next biennium (2007-09).

Total Residential Care Caseload
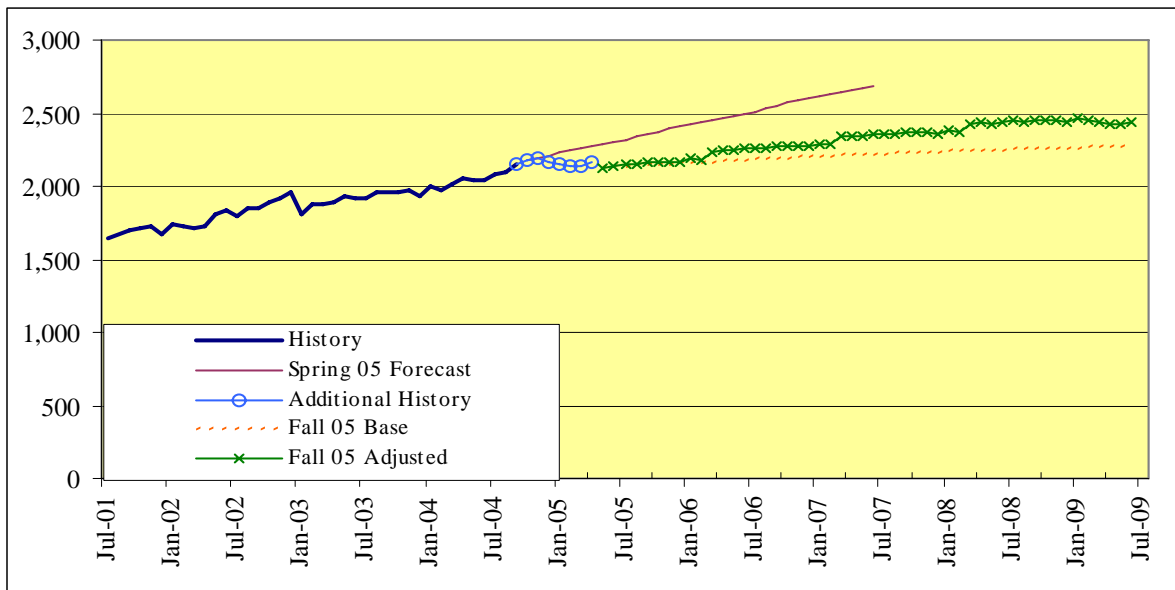
The Residential Care program includes two services: Regular and Contract Rate services. Historically, Regular and Contract Residential Care accounted for 60 percent and 40 percent respectively of the total Residential Care program. The Regular Residential Care service caseload is forecasted to gradually decrease to 47 percent of the total, whereas the Contract Rate Residential caseload is forecasted to increase to 53 percent in the forecast period (2005-07). Similarly, the Regular Residential Care caseload will decrease to 44 percent and Contract Residential Care will increase to 56 percent by the end of June 2009.

Regular Residential Care

The Regular Residential Care caseload was 1,095 in the last biennium (2003-05). It is forecasted to maintain about the current level of caseload (1,069) in the 2005-07 biennium and to 1,090 in the 2007-09 biennium.

Regular Residential Care Caseload
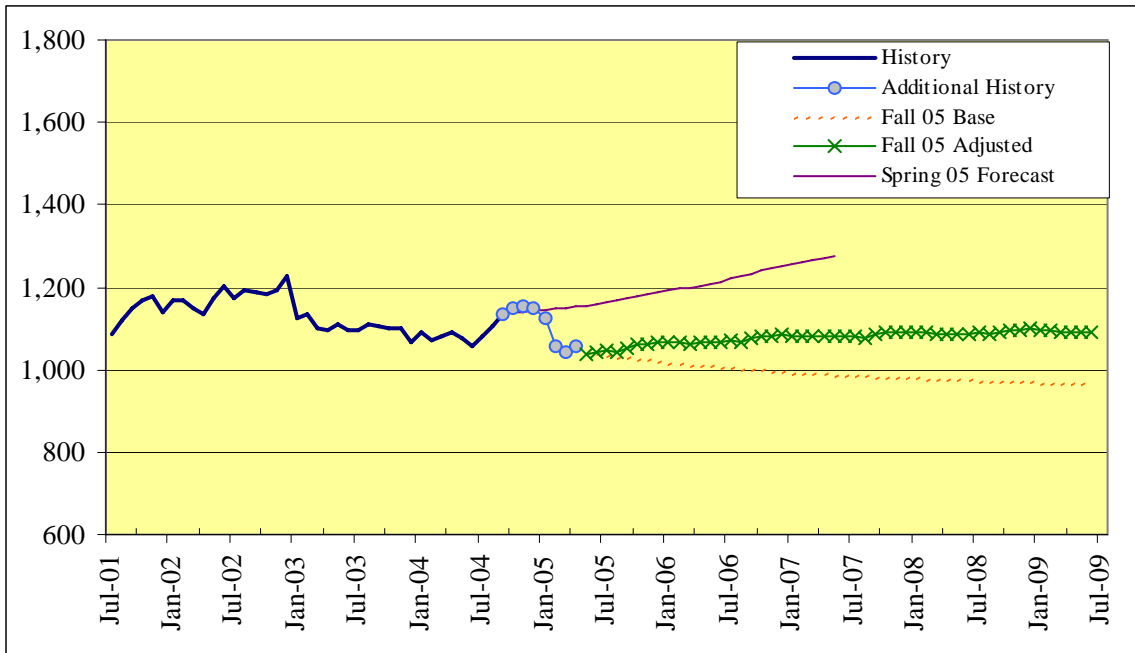
Contract Residential Care

The Contract Residential Care caseload will increase in both the 2005-07 and 2007-09 biennia. It was 962 in the last biennium (2003-05) and is forecasted to increase by about 23 percent to 1,177 in the current biennium and 1,328 in the next biennium (2007-09).

Contract Residential Care Caseload
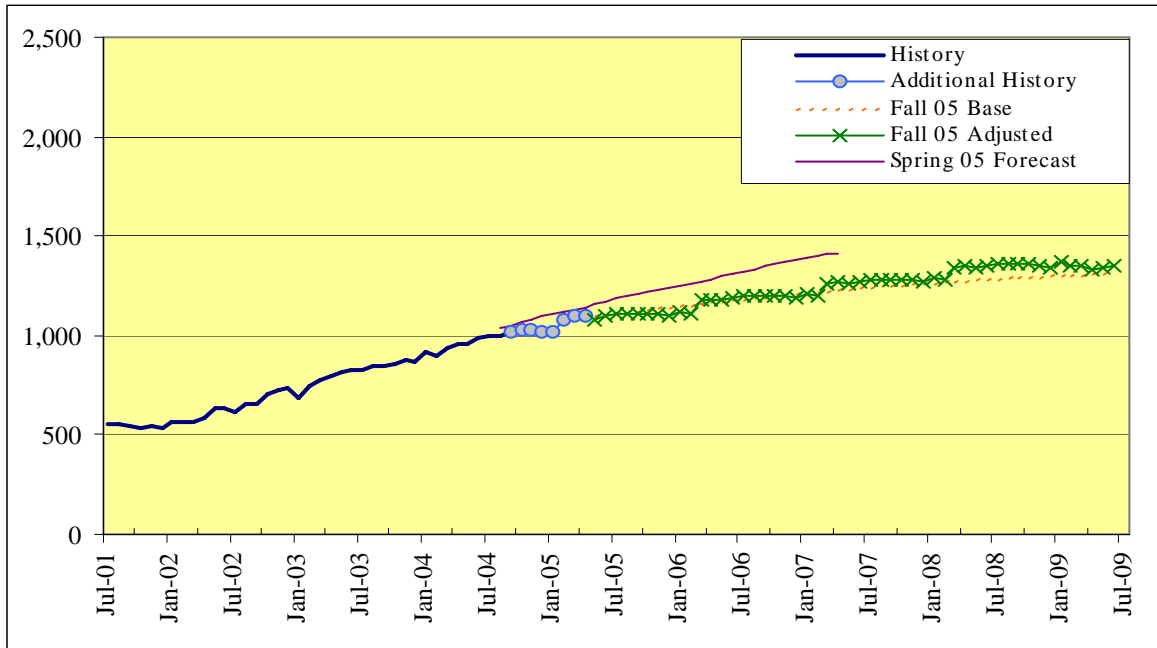
ASSISTED LIVING

The Assisted Living caseload is forecasted to increase, from the 2003-05 biennial daily average of 3,791, by 5 percent to a biennial daily average of 3,976 clients in the 2005-07 biennium and to 4,115 in the 2007-09 biennium.

Assisted Living Caseload
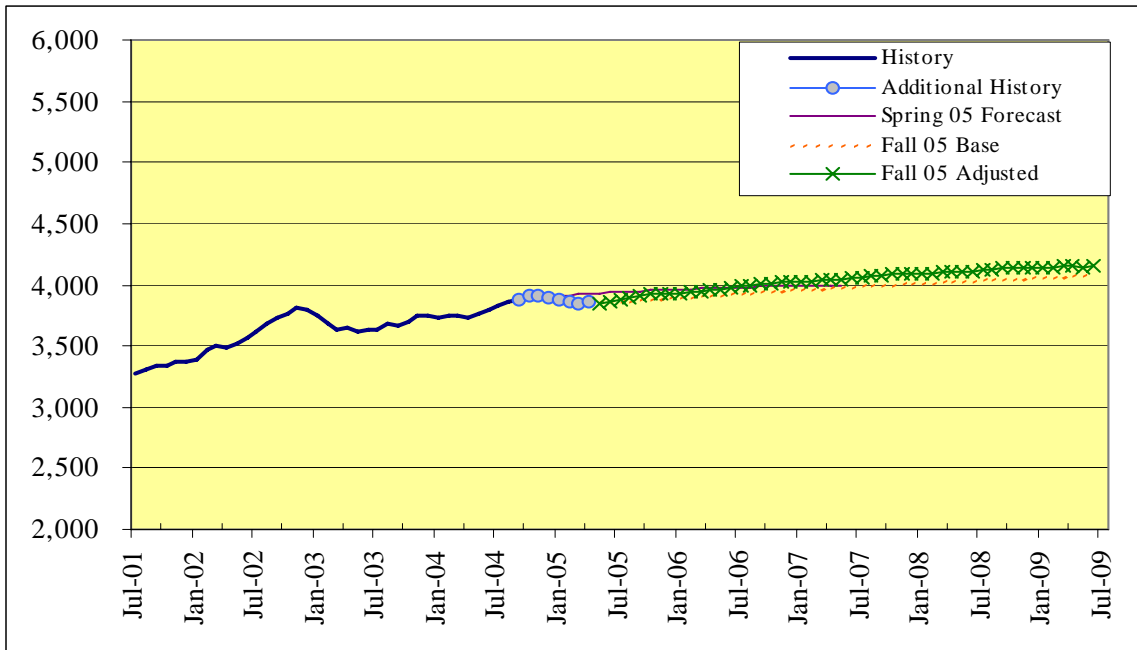
SPECIALIZED LIVING FACILITIES

The Specialized Living caseload is forecasted to remain at the capped level of 172 clients in the forecast periods (2005-07 and 2007-09).

Specialized Living Facilities Caseload
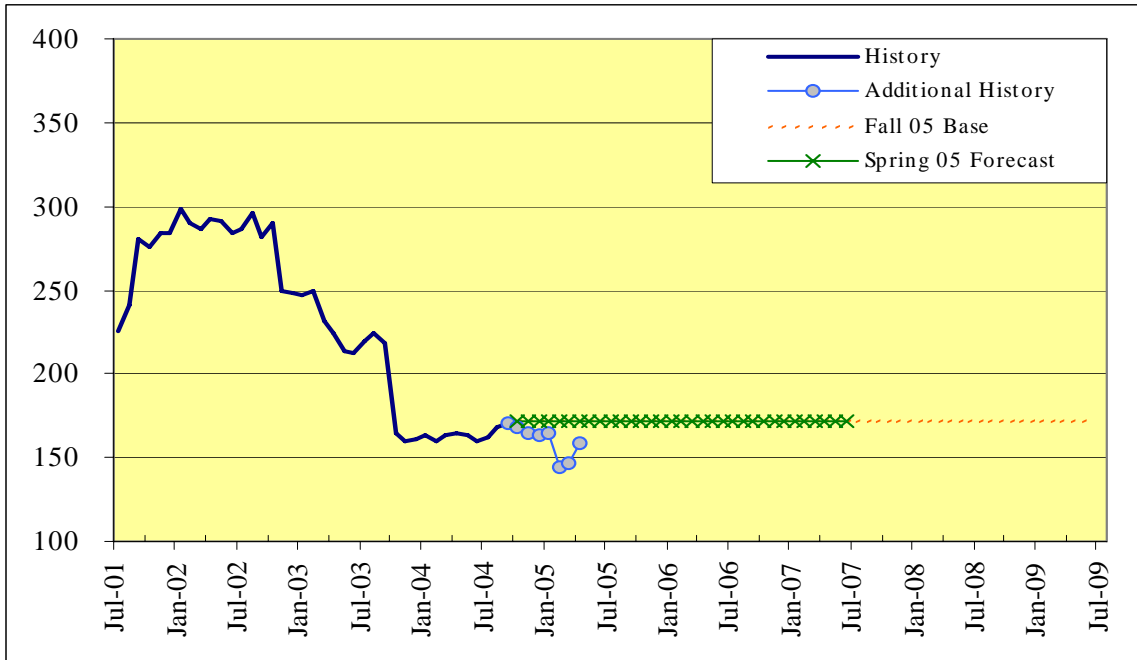
PROVIDENCE ELDERPLACE

The caseload at Providence ElderPlace is forecasted to remain at a daily average of 649 in 2005-07. The ElderPlace caseload will remain at 696 clients in the forecast period 2007-09.

Providence ElderPlace Caseload
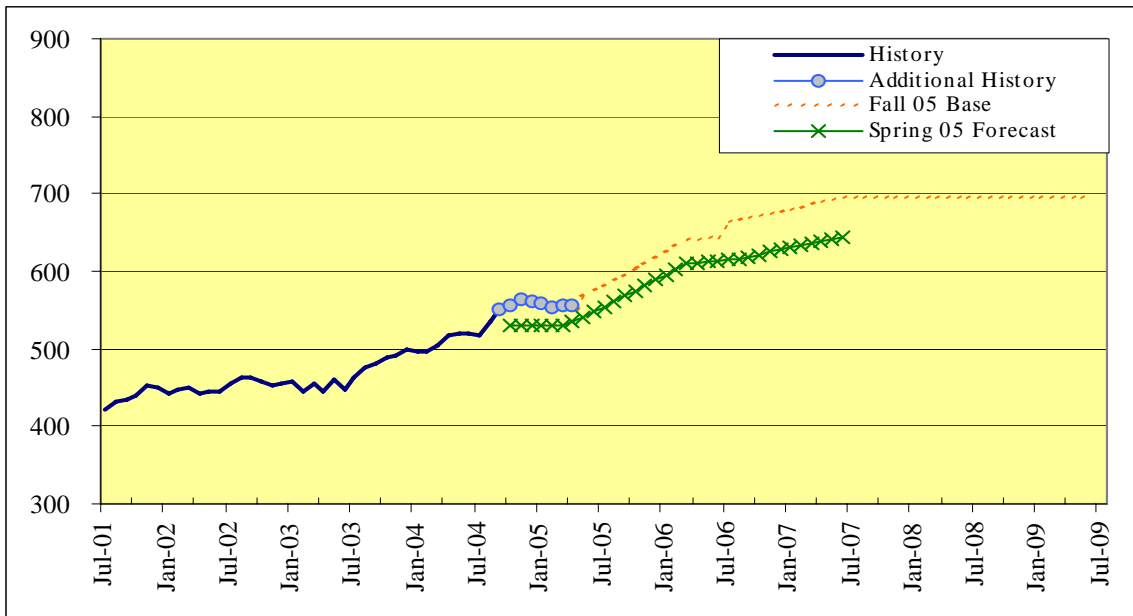
APPENDIX I

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APPENDIX III

FORECAST METHODOLOGY

The base APD caseload forecast is based on historical trends, and are assumed to be indicative of the future patterns of survival (the rate at which clients leave service groups), transfer (the movements of clients among different service groups), and inflow (the rate at which new eligible clients enter the service group). The forecast is based on 45 months of historical data for July 2001 through April 2005. The data elements used are the Prime ID of a long-term care client, the beginning date of service eligibility, the end-date of eligibility and a program eligibility (PERC) code.

All eligible clients are categorized into eight mutually exclusive groups as listed below (in a hierarchical order of acuity of care):

> Nursing Facility – Complex Medical Add-On
> Nursing Facility – Basic
> Contract Residential Care
> Commercial Adult Foster Care
> Regular Residential Care
> Assisted Living
> Relative Adult Foster Care
> In-Home Total

The hierarchical order of APD services followed is based on the acute level of care needed by the clients being served in each distinct care setting. For instance, a client receiving overlapping services of complex medical add-on and basic care in a month will be counted under the complex medical add-on caseload.

In the case of the in-home caseload, a Total In-Home caseload is forecasted and the subsets of in-home services (hourly, live-in and spousal-pay groups) are allotted proportionately based on the historical distribution of each type of service. This is done to account for the inherent overlapping nature of the hourly and live-in in-home services.

APPENDIX IV

DISTRIBUTION OF LONG-TERM CARE SERVICES

Month	Relative AFC	Commercial AFC	Regular RCF	Contract RCF	ALF	SLF	PEP	Basic	CMAO	Pediatrics
			Licensed Community Facilities					**Nursing Facilities**		
Jul-01	2,061	2,909	1,086	553	3,277	225	421	5,545	345	75
Aug-01	2,078	2,924	1,122	552	3,310	241	431	5,527	357	76
Sep-01	2,087	2,950	1,151	541	3,332	280	435	5,513	343	74
Oct-01	2,081	2,954	1,170	538	3,342	276	439	5,467	353	68
Nov-01	2,085	2,912	1,178	544	3,370	284	453	5,468	334	70
Dec-01	2,097	2,915	1,137	532	3,372	284	449	5,414	344	67
Jan-02	2,140	2,971	1,168	566	3,393	298	443	5,379	352	69
Feb-02	2,166	2,995	1,166	564	3,462	290	448	5,325	354	64
Mar-02	2,154	2,980	1,147	567	3,503	287	449	5,308	357	66
Apr-02	2,181	3,030	1,135	585	3,484	292	441	5,286	329	63
May-02	2,200	3,040	1,174	634	3,526	291	445	5,290	319	64
Jun-02	2,216	3,023	1,203	634	3,571	284	446	5,300	335	64
Jul-02	2,215	3,008	1,174	618	3,620	287	455	5,243	335	61
Aug-02	2,237	3,037	1,195	660	3,679	296	462	5,241	356	71
Sep-02	2,217	3,069	1,190	653	3,723	282	463	5,202	361	73
Oct-02	2,223	3,067	1,185	709	3,767	290	457	5,186	366	75
Nov-02	2,245	3,035	1,194	726	3,809	250	453	5,189	348	72
Dec-02	2,238	3,018	1,227	736	3,797	248	454	5,119	359	73
Jan-03	2,182	2,976	1,124	690	3,747	247	457	5,026	382	67
Feb-03	2,127	2,943	1,135	745	3,682	249	446	4,960	408	70
Mar-03	2,112	2,825	1,101	774	3,639	232	454	4,902	405	68
Apr-03	2,045	2,809	1,097	798	3,645	224	444	4,873	369	64
May-03	2,023	2,796	1,108	819	3,624	213	460	4,868	379	65
Jun-03	2,034	2,770	1,094	823	3,629	212	448	4,849	368	64
Jul-03	2,037	2,764	1,094	828	3,636	220	463	4,833	409	65
Aug-03	2,030	2,769	1,109	848	3,681	224	476	4,837	393	67
Sep-03	2,039	2,737	1,107	846	3,660	218	480	4,806	376	67
Oct-03	2,046	2,738	1,099	859	3,700	165	488	4,799	365	65
Nov-03	2,035	2,736	1,098	874	3,739	160	491	4,767	354	67
Dec-03	2,024	2,706	1,067	870	3,749	161	498	4,722	334	65
Jan-04	2,012	2,686	1,090	915	3,728	163	498	4,691	363	64
Feb-04	2,017	2,688	1,069	899	3,739	160	497	4,679	375	68
Mar-04	2,017	2,687	1,081	934	3,740	163	504	4,654	370	64
Apr-04	2,017	2,693	1,091	959	3,738	165	516	4,690	353	66
May-04	1,912	2,685	1,078	961	3,765	163	519	4,646	365	60
Jun-04	1,899	2,629	1,057	986	3,795	160	520	4,610	374	64
Jul-04	1,901	2,614	1,081	995	3,827	162	517	4,628	353	62
Aug-04	1,903	2,610	1,103	996	3,861	168	536	4,621	333	71
Sep-04	1,908	2,578	1,134	1,021	3,878	170	550	4,579	341	72
Oct-04	1,911	2,585	1,151	1,029	3,917	168	557	4,630	357	78
Nov-04	1,893	2,576	1,155	1,031	3,906	165	563	4,596	378	66
Dec-04	1,890	2,572	1,147	1,016	3,887	163	562	4,589	368	68
Jan-05	1,852	2,546	1,127	1,018	3,877	165	559	4,580	377	66
Feb-05	1,843	2,558	1,058	1,082	3,865	144	554	4,544	377	68
Mar-05	1,814	2,554	1,042	1,096	3,853	147	556	4,500	368	68
Apr-05	1,781	2,554	1,059	1,099	3,862	158	556	4,514	351	64

Month	Licensed Community Facilities							Nursing Facilities		
	Relative AFC	Commercial AFC	Regular RCF	Contract RCF	ALF	SLF	PEP	Basic	CMAO	Pediatrics
May-05	1,751	2,544	1,038	1,081	3,853	172	569	4,506	330	70
Jun-05	1,740	2,528	1,041	1,096	3,868	172	576	4,500	326	70
Jul-05	1,730	2,516	1,046	1,104	3,885	172	582	4,493	327	70
Aug-05	1,720	2,507	1,044	1,105	3,897	172	589	4,462	325	70
Sep-05	1,710	2,493	1,053	1,112	3,910	172	596	4,453	336	70
Oct-05	1,700	2,489	1,062	1,109	3,921	172	604	4,441	343	70
Nov-05	1,689	2,479	1,062	1,106	3,924	172	611	4,445	327	70
Dec-05	1,680	2,463	1,066	1,097	3,929	172	618	4,428	320	70
Jan-06	1,671	2,457	1,064	1,122	3,933	172	626	4,404	331	70
Feb-06	1,663	2,450	1,066	1,111	3,942	172	633	4,402	333	70
Mar-06	1,653	2,450	1,063	1,176	3,950	172	641	4,383	324	70
Apr-06	1,642	2,444	1,066	1,182	3,957	172	642	4,377	317	70
May-06	1,631	2,431	1,065	1,177	3,958	172	643	4,367	327	70
Jun-06	1,620	2,420	1,067	1,191	3,971	172	645	4,369	322	70
Jul-06	1,610	2,412	1,070	1,197	3,986	172	664	4,368	323	70
Aug-06	1,601	2,406	1,066	1,197	3,995	172	666	4,343	319	70
Sep-06	1,591	2,397	1,074	1,202	4,006	172	669	4,338	330	70
Oct-06	1,581	2,396	1,081	1,199	4,015	172	672	4,329	337	70
Nov-06	1,571	2,390	1,080	1,196	4,017	172	675	4,337	321	70
Dec-06	1,561	2,377	1,084	1,186	4,019	172	678	4,324	314	70
Jan-07	1,551	2,374	1,081	1,211	4,022	172	681	4,304	324	70
Feb-07	1,543	2,370	1,082	1,199	4,028	172	684	4,304	325	70
Mar-07	1,532	2,372	1,079	1,263	4,034	172	687	4,288	317	70
Apr-07	1,522	2,369	1,080	1,267	4,039	172	690	4,284	310	70
May-07	1,511	2,359	1,079	1,262	4,038	172	693	4,276	319	70
Jun-07	1,501	2,350	1,080	1,275	4,050	172	696	4,280	314	70
Jul-07	1,492	2,345	1,082	1,281	4,062	172	696	4,281	315	70
Aug-07	1,484	2,341	1,078	1,280	4,071	172	696	4,258	311	70
Sep-07	1,475	2,334	1,085	1,285	4,080	172	696	4,255	321	70
Oct-07	1,466	2,335	1,091	1,282	4,088	172	696	4,247	328	70
Nov-07	1,456	2,331	1,090	1,278	4,087	172	696	4,257	312	70
Dec-07	1,447	2,321	1,093	1,267	4,088	172	696	4,246	305	70
Jan-08	1,438	2,319	1,090	1,292	4,089	172	696	4,227	315	70
Feb-08	1,430	2,317	1,091	1,279	4,094	172	696	4,228	317	70
Mar-08	1,420	2,320	1,086	1,343	4,099	172	696	4,213	308	70
Apr-08	1,410	2,319	1,088	1,347	4,102	172	696	4,211	301	70
May-08	1,400	2,311	1,086	1,341	4,100	172	696	4,204	310	70
Jun-08	1,390	2,304	1,087	1,354	4,110	172	696	4,209	304	70
Jul-08	1,382	2,300	1,089	1,359	4,121	172	696	4,211	305	70
Aug-08	1,374	2,298	1,084	1,358	4,127	172	696	4,190	302	70
Sep-08	1,365	2,292	1,091	1,362	4,135	172	696	4,187	311	70
Oct-08	1,357	2,295	1,097	1,359	4,142	172	696	4,181	318	70
Nov-08	1,348	2,292	1,096	1,355	4,140	172	696	4,191	302	70
Dec-08	1,339	2,283	1,098	1,344	4,139	172	696	4,182	296	70
Jan-09	1,331	2,282	1,095	1,368	4,140	172	696	4,163	306	70
Feb-09	1,324	2,281	1,096	1,355	4,143	172	696	4,166	307	70
Mar-09	1,315	2,285	1,091	1,353	4,147	172	696	4,151	299	70
Apr-09	1,306	2,285	1,092	1,335	4,150	172	696	4,150	291	70
May-09	1,297	2,279	1,090	1,337	4,146	172	696	4,143	300	70
Jun-09	1,288	2,272	1,091	1,351	4,154	172	696	4,149	295	70

Month	In-Home			Total Long-Term Care			
	Hourly	Live-In	Spousal	Total LTC	Total NFC	Total LCF	Total In-Home
Jul-01	11,068	1,327	145	29,037	5,965	10,532	12,540
Aug-01	11,198	1,342	147	29,306	5,960	10,658	12,688
Sep-01	11,273	1,351	148	29,478	5,930	10,776	12,772
Oct-01	11,351	1,361	149	29,549	5,888	10,800	12,861
Nov-01	11,494	1,378	151	29,721	5,872	10,826	13,023
Dec-01	11,520	1,381	151	29,663	5,825	10,786	13,052
Jan-02	11,648	1,396	153	29,976	5,800	10,979	13,197
Feb-02	11,727	1,406	154	30,121	5,743	11,091	13,287
Mar-02	11,805	1,415	155	30,193	5,731	11,087	13,375
Apr-02	11,849	1,420	156	30,251	5,678	11,148	13,425
May-02	11,975	1,435	157	30,551	5,673	11,310	13,568
Jun-02	12,023	1,441	158	30,698	5,699	11,377	13,622
Jul-02	12,141	1,455	160	30,772	5,639	11,377	13,756
Aug-02	12,192	1,462	160	31,048	5,668	11,566	13,814
Sep-02	12,298	1,474	162	31,167	5,636	11,597	13,934
Oct-02	12,407	1,487	163	31,382	5,627	11,698	14,057
Nov-02	12,449	1,492	164	31,426	5,609	11,712	14,105
Dec-02	12,332	1,478	162	31,241	5,551	11,718	13,972
Jan-03	11,643	1,396	153	30,090	5,475	11,423	13,192
Feb-03	10,933	1,311	144	29,152	5,438	11,327	12,387
Mar-03	10,832	1,298	142	28,785	5,375	11,137	12,273
Apr-03	10,714	1,284	141	28,507	5,306	11,062	12,139
May-03	10,568	1,267	139	28,329	5,312	11,043	11,974
Jun-03	10,482	1,256	138	28,167	5,281	11,010	11,876
Jul-03	10,478	1,256	138	28,221	5,307	11,042	11,872
Aug-03	10,485	1,257	138	28,314	5,297	11,137	11,880
Sep-03	10,465	1,254	138	28,193	5,249	11,087	11,857
Oct-03	10,491	1,258	138	28,211	5,229	11,095	11,887
Nov-03	10,491	1,258	138	28,207	5,188	11,133	11,886
Dec-03	10,430	1,250	137	28,013	5,121	11,075	11,817
Jan-04	10,345	1,240	136	27,931	5,118	11,092	11,721
Feb-04	10,366	1,243	136	27,936	5,122	11,069	11,745
Mar-04	10,407	1,247	137	28,005	5,088	11,126	11,791
Apr-04	10,437	1,251	137	28,113	5,109	11,179	11,825
May-04	10,388	1,245	137	27,924	5,071	11,083	11,770
Jun-04	10,371	1,243	136	27,844	5,048	11,046	11,750
Jul-04	10,359	1,242	136	27,877	5,043	11,097	11,737
Aug-04	10,424	1,249	137	28,012	5,025	11,177	11,810
Sep-04	10,416	1,249	137	28,032	4,992	11,239	11,801
Oct-04	10,400	1,247	137	28,166	5,065	11,318	11,783
Nov-04	10,539	1,263	139	28,270	5,040	11,289	11,941
Dec-04	10,486	1,257	138	28,143	5,025	11,237	11,881
Jan-05	10,408	1,248	137	27,959	5,023	11,144	11,792
Feb-05	10,501	1,259	138	27,991	4,989	11,104	11,898
Mar-05	10,447	1,252	137	27,835	4,936	11,062	11,837
Apr-05	10,317	1,237	136	27,687	4,929	11,069	11,689

Month	In-Home			Total Long-Term Care			
	Hourly	Live-In	Spousal	Total LTC	Total NFC	Total LCF	Total In-Home
May-05	10,378	1,244	136	27,672	4,906	11,008	11,758
Jun-05	10,371	1,243	136	27,667	4,896	11,021	11,750
Jul-05	10,367	1,243	136	27,671	4,890	11,035	11,746
Aug-05	10,357	1,242	136	27,626	4,857	11,034	11,735
Sep-05	10,348	1,240	136	27,629	4,859	11,046	11,724
Oct-05	10,338	1,239	136	27,624	4,854	11,057	11,713
Nov-05	10,328	1,238	136	27,587	4,842	11,043	11,702
Dec-05	10,320	1,237	136	27,536	4,818	11,025	11,693
Jan-06	10,314	1,236	136	27,536	4,805	11,045	11,686
Feb-06	10,307	1,236	135	27,520	4,805	11,037	11,678
Mar-06	10,303	1,235	135	27,556	4,777	11,105	11,673
Apr-06	10,300	1,235	135	27,539	4,764	11,105	11,670
May-06	10,296	1,234	135	27,506	4,764	11,077	11,665
Jun-06	10,290	1,234	135	27,506	4,761	11,086	11,659
Jul-06	10,288	1,233	135	27,528	4,761	11,111	11,656
Aug-06	10,279	1,232	135	27,481	4,732	11,103	11,646
Sep-06	10,270	1,231	135	27,485	4,738	11,111	11,636
Oct-06	10,258	1,230	135	27,475	4,736	11,116	11,623
Nov-06	10,248	1,228	135	27,440	4,728	11,101	11,611
Dec-06	10,239	1,227	135	27,386	4,708	11,077	11,601
Jan-07	10,231	1,226	134	27,382	4,698	11,092	11,591
Feb-07	10,222	1,225	134	27,359	4,699	11,078	11,581
Mar-07	10,216	1,225	134	27,389	4,675	11,139	11,575
Apr-07	10,211	1,224	134	27,372	4,664	11,139	11,569
May-07	10,205	1,223	134	27,341	4,665	11,114	11,562
Jun-07	10,198	1,222	134	27,342	4,664	11,124	11,554
Jul-07	10,191	1,222	134	27,343	4,666	11,130	11,547
Aug-07	10,181	1,220	134	27,296	4,639	11,122	11,535
Sep-07	10,168	1,219	134	27,294	4,646	11,127	11,521
Oct-07	10,155	1,217	133	27,281	4,645	11,130	11,505
Nov-07	10,142	1,216	133	27,240	4,639	11,110	11,491
Dec-07	10,130	1,214	133	27,183	4,621	11,084	11,477
Jan-08	10,120	1,213	133	27,174	4,612	11,096	11,466
Feb-08	10,108	1,212	133	27,146	4,615	11,079	11,453
Mar-08	10,100	1,211	133	27,170	4,591	11,136	11,444
Apr-08	10,092	1,210	133	27,150	4,582	11,134	11,435
May-08	10,082	1,209	133	27,113	4,584	11,106	11,424
Jun-08	10,071	1,207	132	27,107	4,583	11,113	11,410
Jul-08	10,063	1,206	132	27,106	4,586	11,119	11,401
Aug-08	10,049	1,205	132	27,057	4,562	11,109	11,386
Sep-08	10,034	1,203	132	27,050	4,568	11,113	11,369
Oct-08	10,018	1,201	132	27,038	4,569	11,118	11,351
Nov-08	10,002	1,199	131	26,994	4,563	11,099	11,332
Dec-08	9,988	1,197	131	26,935	4,548	11,071	11,316
Jan-09	9,974	1,196	131	26,924	4,539	11,084	11,301
Feb-09	9,960	1,194	131	26,895	4,543	11,067	11,285
Mar-09	9,949	1,193	131	26,851	4,520	11,059	11,273
Apr-09	9,938	1,191	131	26,807	4,511	11,036	11,260
May-09	9,926	1,190	130	26,776	4,513	11,017	11,246
Jun-09	9,913	1,188	130	26,770	4,514	11,024	11,231

APPENDIX V

SERVICE CODE

Proc Code	Description	Model Code
AF001	Non-Relative AFC	AN
AF002	Relative AFC	AF
OC111	CEP Hourly	HR
OC112	CEP Live-In	LI
SP111	CEP Spousal Pay	SP
SL001	SLF	SL
LF001	ALF	LF
NFC	NFC-Basic	SS
NFC	NFC-CMAO	NH
NFC	NFC-Pediatric	HA
ONLK	PEP	ON
RF*	RCF	RF
RX*	RCF Contract Rate	RX

- Note: RCF Regular (RF) and Contract Rate (RX) caseloads are extracted from 512 Payment System

APPENDIX VI

LONG-TERM CARE EXOGENOUS FORECAST WORKGROUP PROGRESS REPORT

Background. In May 2005, the Client Caseload Forecasting Team (CCFT) implemented a formal project to integrate external, or exogenous, information into the forecasting process. The objective of the exogenous project is to improve accuracy as well as facilitate policy analyses and planning by incorporating the relationships among new clients and the environment into the DHS forecasting process. These new types of projections are called "exo-forecasts."

The development of exogenous input is scheduled for two caseloads per forecast cycle (every six months). Having discussed the project with all of the Forecast Steering Committees, forecasting and program staff will form workgroups to develop two products: (1) a timeline (month and year) of policy events and (2) a list of variables that affect caseload. DHS staff are currently working with the Mental Health Treatment Programs, and Aged and Physically Disabled - Long-term Care. This report details the progress of the Long-term Care workgroup to date.
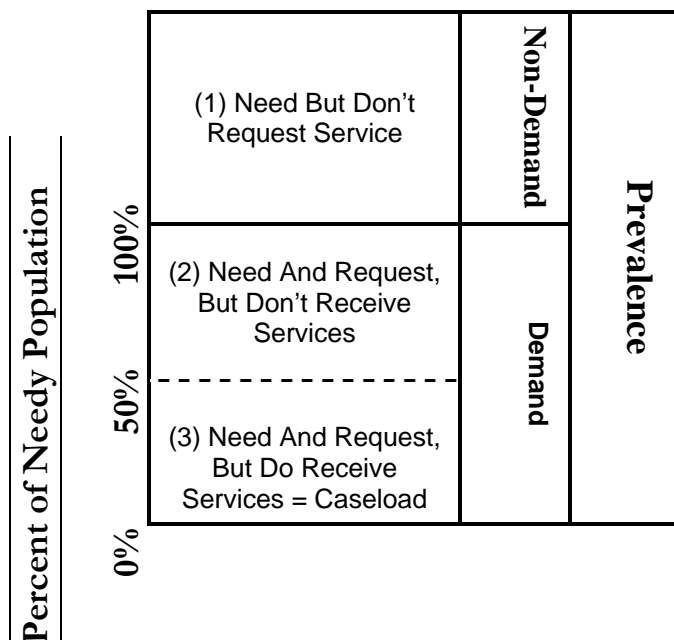
Long-term care services in Oregon are provided to all eligible individuals in three primary categories: In-Home Services, Non-Institutional Care (Community Based Care) and Institutional Care (Nursing Facilities). *In-home services* include personal care, chore services and other supports that help individuals stay in their own home. *Community Based Care* is 24-hour care and health oversight services provided in licensed facilities as an alternative to nursing facilities. All facility types (Adult Foster Homes, Assisted Living and Residential Care) serve both private pay and Medicaid clients. Specialty programs such as Alzheimer Endorsed Units, Enhanced Care Services and Contract Nursing are available in some settings. *Institutional Care* provides skilled nursing services and/or behavioral supports, housing and related services for seniors and people with physical and developmental disabilities.[1]

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[1] Based on Seniors and People with Disabilities 2005 Ways and Means Presentations.

Methods. CCFT, staff are exploring various methods for exo-forecasting including: (1) deterministic (needs-based) projections, (2) statistical modeling, and (3) various combinations of these two. Each has benefits and drawbacks. Specific methodological pathways depend upon the analytical requirements of the exercise at hand. For example, the first method might be preferred when program staff, engaged in long-range planning, want to understand the potential demand-for-service by the general population. However, analysts could calculate explicit numbers of future clients using statistical modeling, e.g., multiple regression, if they needed this level of specificity to complete more detailed planning. These two primary approaches are explained below.

Figure One. Population Segments Based On Demand-for-Service.

Percent of Needy Population			
100%	(1) Need But Don't Request Service	Non-Demand	Prevalence
50%	(2) Need And Request, But Don't Receive Services	Demand	
0%	(3) Need And Request, But Do Receive Services = Caseload		

Deterministic Projections. This concept is illustrated by the hypothetical construct in Figure One. There are three primary population groups that affect a program's caseload: (1) people that need services and/or benefits but do not request them; (2) people that need and apply for services and/or benefits but do not receive them; and (3) people that need, apply for, and then receive services and/or benefits. Group Three equals a program's client caseload. These three groups comprise the prevalence of the condition for which the Department of Human Services provides services and benefits.

The relative proportions of the three groups will vary by program. A primary determinant of these differences is whether a program's services and benefits are "mandated" by law.[2] For example, Food Stamps are available to all eligible applicants so that Group Two for Food Stamps should be very small. Likewise, Child Welfare Services, another mandated program, must be available as needed; however, many Child Welfare clients do not "demand" these services in the usual sense. In fact, their involvement is often involuntary. Conversely, Group Two for Non-Committed Mental Health Services, a non-mandated program, would be proportionately larger because the availability of services is a function of the legislatively approved biennial budget. If this budget is decreased, then the availability of services may decrease as well, and the number of potential clients in Group Two would increase.

Demand-for-services and program capacity are the two important factors when considering caseload size. When a portion of the Demand Group successfully applies for services and eventually is added to the program's caseload, two conditions must be met: (1) the applicant must be eligible for services, and (2) services must be available for the applicant. In other words, there must be a "slot" for an eligible applicant. The proportion of the Demand segment that eventually becomes part of the caseload is a function of program capacity. Capacity, in turn, is a function of policy and budget.

Statistical Modeling. These types of projections use the statistical relationship between a dependent variable and one or more independent variables (the "model") to calculate additional values of the dependent variable. Future values of the dependent variable can be estimated if appropriately-projected values of the independent variable(s) are available. In using these methods, however, the existence of a legitimate and realistic association among these variables and the real-life situations that they represent is assumed. These methods will be explored during the second phase of our work.

Oregon's Elderly Population: the Demand Group. Individuals who need long-term care have impairments that prevent them from meeting basic needs. For seniors and people with physical disabilities, this means limitations in activities of daily living (ADLs) such as bathing, mobility, dressing, eating, personal hygiene, or cognition. For people with developmental disabilities, this may mean limitations in ADLs but also may mean limitations in self-direction, self-sufficiency and learning. Although younger disabled clients do receive

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[2]Federal laws require states that participate in certain programs, to provide services and/or benefits to all eligible persons; these are mandated programs. Non-mandated programs provide services as resources allow.

services, approximately 70% of the Long-term Care caseload is composed of persons who are 65 years old and older. Because this segment of the population will grow significantly in the near future, the workgroup has focused its efforts on issues relating to this group.

Although not the largest of Oregon's population groups, state demographers expect the elderly to increase in number at the greatest rates over the next five years (Figure Two).[3] The increases hold for the longer-term as well (Figures Three and Four). The greatest difference in expected growth between 2005 and 2040 occurs in the 85+ subgroup, the most numerous group in the 2004 Long-term Care caseload as well as the most costly and needy of the elderly groups. The aging of Oregon's population implies that this caseload could significantly increase over the next few years if the capacity of the Long-Term Care system allows for this type of growth. Important but unknown future factors include varying disability rates among the elderly, improved health care and positive lifestyle choices may mitigate potential disability issues.

Figure Two. Percent Change By Age Group, 2005 - 2010
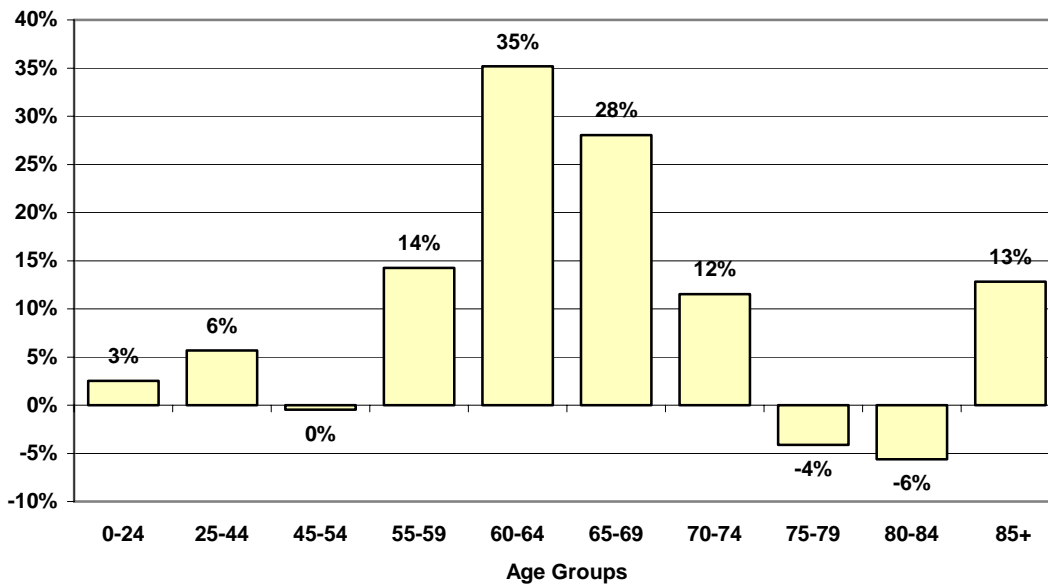
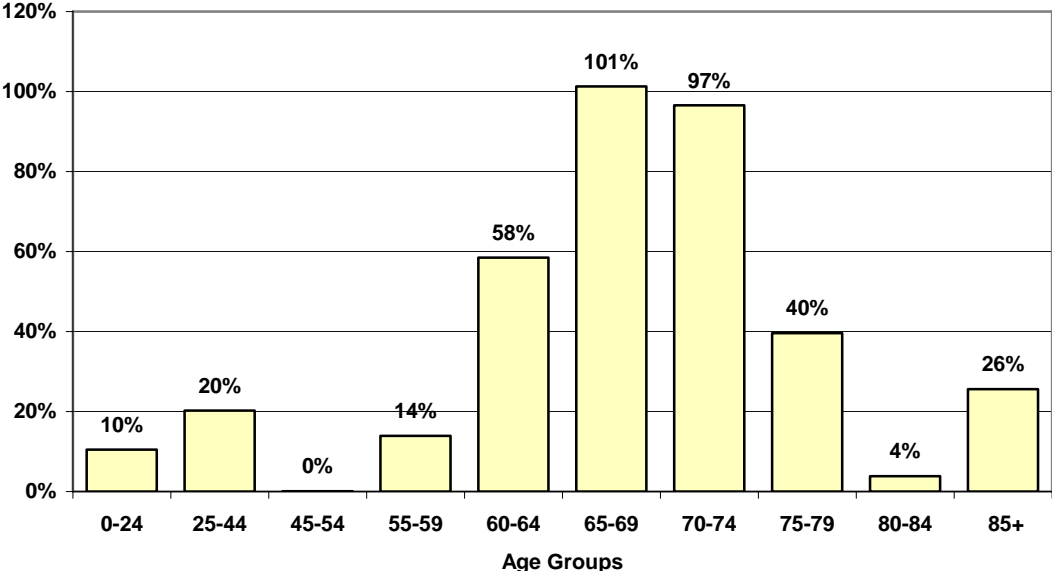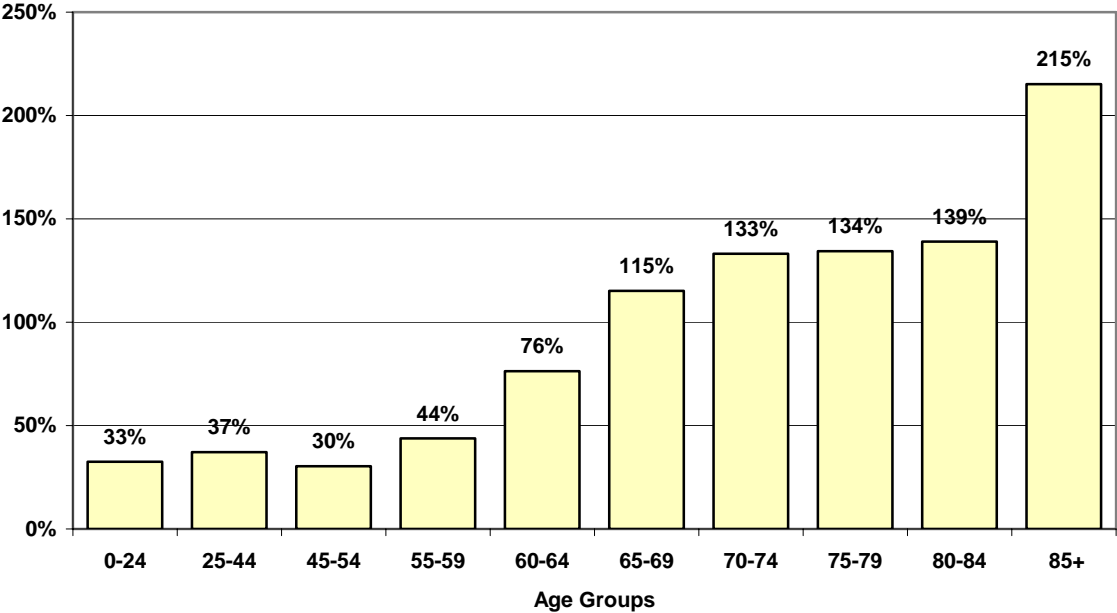**Figure Three. Percent Change By Age Group, 2005 - 2020**

Figure Four. Percent Change By Age Group, 2005 - 2040

Long-Term Care Caseload by Type of Care and Age. Figures Two through Four illustrate that Oregon's elderly population is increasing at a greater rate than other age groups, and that subgroups of the elderly population are increasing at different rates as well. Figure Five shows that the proportion of Long-Term Care clients per type of care setting changes with age. Younger clients rely on In-Home services, the most flexible type, but clients age, they tend to enter community-care settings. The use of Nursing Facilities and Community-Based Care steadily increases after age 70 and the use of In-Home services declines to 17.6 percent for the 85+ age group. Thus, different elderly age-groups will need access to services and facilities in differing proportions over the next 5 – 35 years. Adequately meeting these needs will require accurate planning and legislative foresight in the next 2 to 4 years.

Figure Five. Type of Care By Age Group (2004)
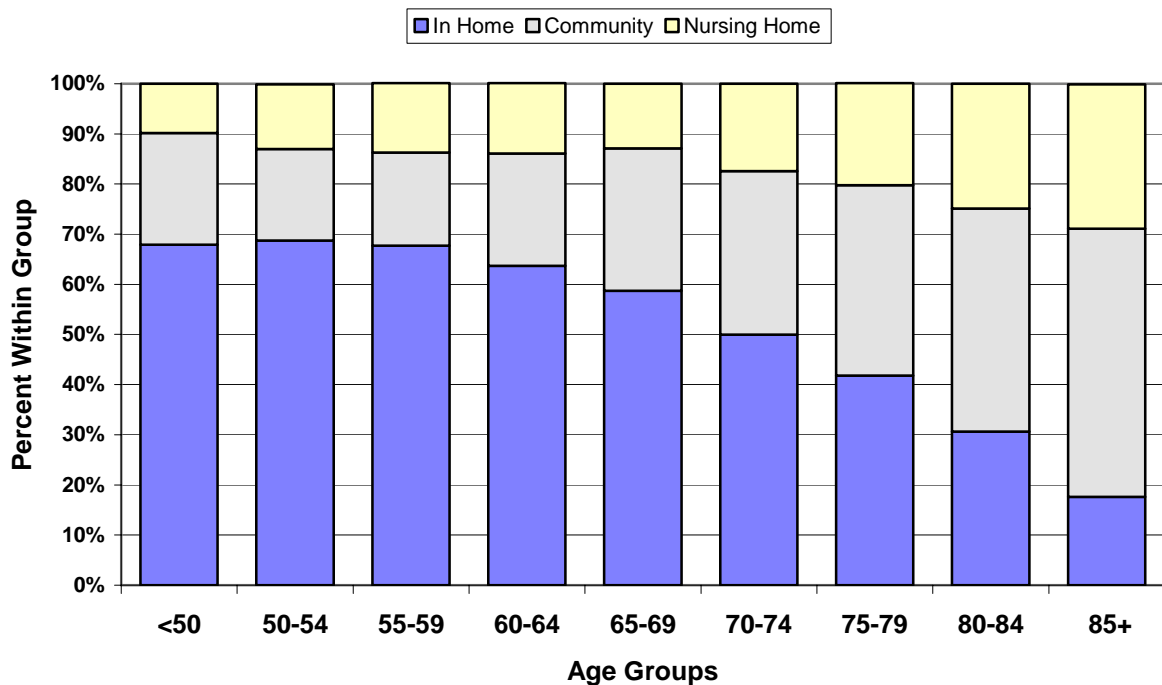
Long-term Care Caseload: An Example of a Deterministic Projection.
The workgroup used the following methodology to project the Long-Term Care caseload:

1. For Long-Term Care, the group assumed that the total Prevalence Group could be characterized as low-income, $\geq$ 65 years of age, with some degree of disability. The group assumed that the Demand portion of the Prevalence Group would be defined by Long-term Care eligibility criteria.[4] Because living alone is a known risk factor for Long-term Care services, the Demand number was further refined by using the proportion of single-person households, age 65+, with income <300% SSI. Currently, the Demand and Non-demand groups are indestinguishable from one another.

2. In 2003, the average disability rate for the 65+ population equaled 44.6%.[5] To quantify the change in disability over time, we calculated the average annual change in the un-weighted proportion of responses to a series of questions on the National Health Interview Surveys and American Community Surveys for 1999, 2000, 2001, 2002, and 2003. This resulted in an average, decreasing disability rate of –0.8% per year.

3. The Demand Group was calculated as follows:

    (Total 65+ population) x (% 65+ in single-person households with income <300% SSI)

4. The 2004 caseload was divided by the Demand Group (from #3) to calculate the Utilization Rate (UR), or that proportion of the Demand Group that eventually goes on the caseload.

5. Projections of the elderly population over the forecasting interval are available from the Oregon Office of Economic Analysis; these were used to quantify annual Demand Groups through 2011.

6. The 2004 Utilization Rate was applied to the projected Demand Groups to calculate future caseload. This requires that no significant policy changes would occur, and that the capacity of the system will allow for this growth.

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[4]Annual income <300% Supplemental Security Income (SSI), which equals 225% of the Federal Poverty Level, and a disability or medical issue that aligns with the program's Service Priority Levels.
[5]From the 2003 American Community Survey tabulated by the Center for Personal Assistance Services, University of California, San Francisco. People over 65 were classified as having a disability if they reported any one of the following: sensory, physical, mental, self-care, or go-outside-the-home disability.

Table One. Projected Long-Term Care caseload based on population-level need for service.

Year	OEA 65+ Projected Pop	% Alone < 300% SSI	Adjusted Disability Rate (-0.8% yr)	Estimated Population Need	65+ Caseload[1]	Utilization Rate	85+ Caseload[2]
2004	453,803	24.8%	44.6%	50,128	25,500	50.9%	29.7%
2005	460,391	24.8%	44.6%	50,856	25,870	50.9%	7,683
2006	468,175	24.8%	44.2%	51,302	26,097	50.9%	7,751
2007	479,000	24.8%	43.9%	52,068	26,487	50.9%	7,867
2008	491,582	24.8%	43.5%	53,008	26,965	50.9%	8,009
2009	505,159	24.8%	43.2%	54,037	27,488	50.9%	8,164
2010	518,373	24.8%	42.8%	55,007	27,982	50.9%	8,311
2011	535,428	24.8%	42.5%	56,362	28,671	50.9%	8,515

[1]For 2004, these are annual counts of 65+ individuals who occur at any time in the caseload data during the year. This is not the same counting methodology that we use for the official caseload forecast.
[2]Clients in the 85+ age group comprised 29.7% of the 65+ caseload in 2004.

In this example, we held constant the Utilization Rate and the rate for single-person households at < 300% SSI, and then varied the elderly disability rate. The relative capacity of the Long-term Care system must increase from year to year, or there would have to be excess capacity present over the projection time period, to accommodate the growing Demand population. If capacity cannot accommodate this growth, then the Utilization Rate will decrease as the caseload remains static. We also assumed that the Demand group would equal 100% of the prevalence (no Non-Demand group) due to lack of information concerning non-demand. Theoretically, however, the Non-Demand group could equal any value from 0 to 24,628 (Need minus Caseload) in 2004.

Figure Six shows the needs-based projection from Table One and the April 2005 forecast of the total Long-Term Care client caseload. Because the Table One values represent clients that are ≥ 65 years of age, and the April 2005 forecast contains all ages, the April 2005 forecast was adjusted to compare the two sets of projections. In the future, all age groups will be included in these types of projections.

As expected, the needs-based projection continues to increase through 2007, even with a decreasing disability rate, while the April 2005 forecast decreases over the same time. The needs-based projections, while not an official forecast, indicate an ongoing and increasing "pressure" on the Long-Term Care program. Policy makers would want to consider this information when planning future resources. However, the needs-based projection doesn't contain any of

Figure Six. Hypothetical Needs-based Projections vs. Forecast for 65+
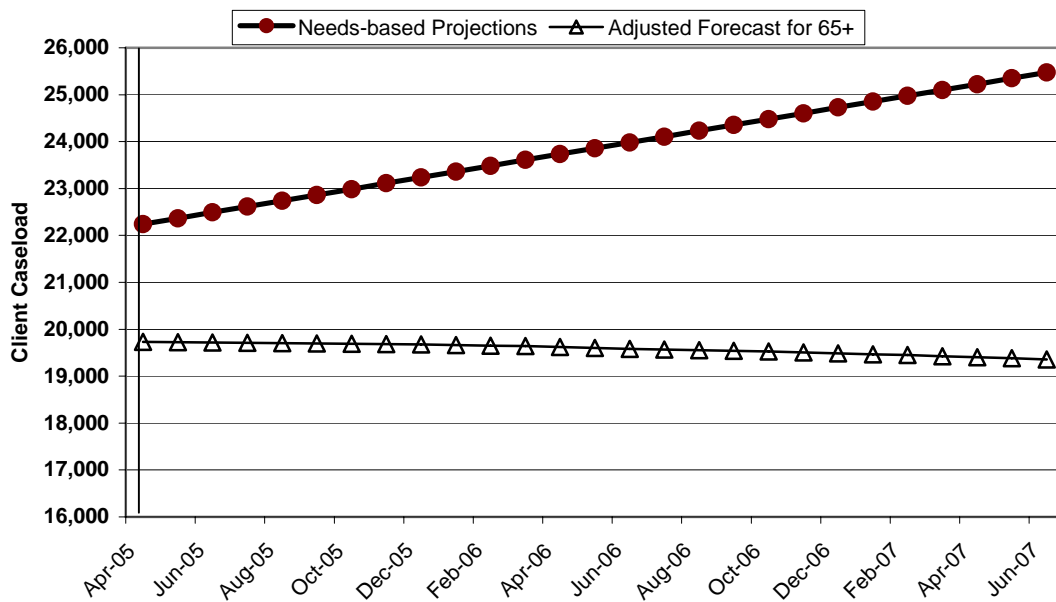
the important information used in the forecasting tool, e.g., durations on the caseload and the magnitude of client movement among various subprograms. Thus, some blending of these methodologies will be necessary to maximize the accuracy of the forecasting process.

Current Activities. Seniors and People with Disabilities and forecasting staff have formed a joint workgroup to review the above methodology and develop a systems model of Oregon's Long-Term Care services. This exercise should facilitate an understanding of the critical relationships among the components

that define this system and its capacity. In addition, forecasters will be able to analyze additional statistical relationships among these components and then incorporate these factors into the forecasting process where appropriate. The final systems model will not be used to calculate the caseload forecast.

For additional copies, information or to receive information in an alternate format call (503) 945-6167.

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Oregon Department of Human Services
Finance and Policy Analysis
Client Caseload Forecasting Team