
**OREGON HEALTH PLAN
MEDICAID DEMONSTRATION**

**Analysis of Federal Fiscal Years 2002 – 2003
Average Costs**

September 21, 2000



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Ms. Lynn Read, Manager
Oregon Health Plan Medicaid Demonstration
Office of Medical Assistance Programs
500 Summer Street N.E.
Salem, Oregon 97310-1014

Dear Lynn:

Re: Per Capita Costs for Federal Fiscal Years 2002 & 2003

At your request we have prepared this Analysis of Federal Fiscal Year 2002 & 2003 Average Costs for the Oregon Health Plan: Medicaid Demonstration.

This report describes our analysis and approach in detail. Please call Sandi Hunt at 415/498-5365 if you have any questions regarding the contents of this report.

Very Truly Yours,

PricewaterhouseCoopers L.L.P.

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Oregon Health Plan Medicaid Demonstration Analysis of Federal Fiscal Year 2002 & 2003 Average Costs

Executive Summary

The following report provides a calculation of the expected per capita costs for providing medical services under the Oregon Health Plan Medicaid Demonstration (OHP) for the period October 2001 through September 2003. These methods were designed to comply with the requirements of Oregon Senate Bill 27 (1989 legislature), which extended Medicaid coverage to nearly all Oregonians with incomes below the federal poverty level and stipulated guidelines for determining Medicaid provider reimbursement amounts.

The Oregon Health Services Commission has developed a “Prioritized List” of health care services, and that list is used in developing the per capita cost estimates reported here. Under the 1989 legislation the OHP did not apply to Mental Health and Chemical Dependency services and excluded individuals covered by the Aid to Blind, Aid to Disabled, Old Age Assistance, and Foster Care programs. Separate legislation added these “exempt” population groups to the OHP, effective January 1, 1995. Chemical dependency services were added to the Oregon Health Plan at the same time. In addition, a phase-in of mental health services was begun on a pilot basis for 25% of the OHP population in January 1995. Those services were expanded statewide in July 1997. Children covered by the Children’s Health Insurance Program (Title XXI) were added to the Oregon Health Plan in July 1998. Most recently, Citizen-Alien Waived Emergency Medical (CAWEM) eligibles have been explicitly identified and issued medical identification cards to use in accessing the emergency services for which they are eligible.

The services covered and the configuration of the Prioritized List have changed over time (see table below). The per capita costs shown here reflect costs through line 566 of the Prioritized List as configured for the 2001-2003 biennium. The claims data available for this analysis reflected claims through line 574 (equivalent to 566 of the 01-03 list). Should funding become available to expand coverage beyond line 566, additional data sources and analysis will be required to calculate the added coverage costs.

Effective Dates	Coverage Through Line	Reason for Change
2/1/94 – 12/31/94	565	
1/1/95 – 12/31/95	606	Mental Health lines added to list (no change in physical health benefits)
1/1/96 – 1/31/97	581	Benefits reduced
2/1/97 – 4/30/98	578	Benefits reduced
5/1/98 – present*	574	List reconfigured (no reduction in benefits)
Note: the 1999 legislature funded the health plan at line 564. This change has not been approved by HCFA, so coverage remains at line 574.		

In developing the per capita costs shown in this report, a variety of assumptions have been used, including assumptions relating to the following:

- the relationship between average charge amounts and the “cost” of providing services;
- the distribution of the population among the different groups of people who will be participating in the program;
- enrollment in capitated plans; and
- payment policy under the demonstration project.

Table 1 shows the average expected per capita cost by eligibility category for physical health services and chemical dependency services only and for all services. A per capita cost for the entire program is also shown.

Table 1
Per Capita Cost through line 566 of the Prioritized List

Eligibility Category	Physical Health Services^a	All Services^b
TANF	\$162.92	\$179.48
General Assistance	\$956.85	\$1153.76
PLM-Adults	\$637.43	\$642.57
CHIP-Children Age 0 < 1	\$302.45	\$302.48
PLM-Children Age 0 < 1	\$336.08	\$336.11
PLM/CHIP-Children Age 1 – 5	\$72.00	\$82.60
PLM/CHIP-Children Age 6 – 18	\$81.43	\$93.67
OHP Families	\$205.47	\$214.95
OHP Adults & Couples	\$366.14	\$392.57
AB/AD with Medicare	\$509.62	\$637.20
AB/AD without Medicare	\$684.64	\$804.38
OAA with Medicare Regular	\$350.60	\$359.47
OAA without Medicare	\$1203.79	\$1240.94
SCF Children	\$181.95	\$505.11
Citizen Alien Waived Emergency Medical	\$72.64	\$73.13
Average	\$268.46	\$309.72
^a	Includes Physical Medicine, Dental Services, Chemical Dependency and administrative costs.	
^b	Includes Physical Medicine, Dental Services, Chemical Dependency, Mental Health and administrative costs.	

We have also calculated the per capita cost associated with coverage at several different threshold levels on the Prioritized List of services. These estimates are calculated based on the assumption that all services up to and including the threshold ranking are covered by the demonstration project and that all services below the threshold are not covered. The per capita cost associated with ten different threshold levels are shown in Table 2 for physical

health, dental and chemical dependency services and for all services combined.

Table 2
Per Capita Cost at Various Thresholds

Threshold ^a	Physical Health Services ^b	All Services ^c
318	\$199.80	\$229.32
348	\$207.24	\$237.98
378	\$221.99	\$255.49
408	\$222.97	\$256.60
438	\$230.25	\$265.22
468	\$248.24	\$286.27
498	\$252.68	\$291.42
528	\$264.68	\$305.35
558	\$267.71	\$308.83
566	\$268.46	\$309.72

^a Threshold ranking on Prioritized List below which services would not be covered.

^b Includes Physical Medicine, Dental Services, Chemical Dependency and administrative costs.

^c Includes Physical Medicine, Dental Services, Chemical Dependency, Mental Health and administrative costs.

Following the Legislature’s review of this report and a determination of the funding level and the services to be covered by the OHP we will refine the calculation of the per capita cost. We will then calculate the capitation rates to be paid to health plans participating in the program.

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We appreciate the invaluable assistance provided by Oregon Department of Human Resources staff, including members of the Office of Medical Assistance Programs, the Office of Alcohol and Drug Abuse Programs, the Mental Health and Developmental Disability Services Division, the Senior and Disabled Services Division, and members of the Actuary's Advisory Committee in developing and reviewing the methods used in calculating the per capita costs for this program.

SECTION I

Program Overview

The Oregon Health Plan Medicaid Demonstration was devised as a means of expanding the Medicaid program to additional people while constraining total health care costs. The Medicaid Demonstration is one element in the Oregon Health Plan that is intended to provide health insurance coverage to all Oregonians. The 1989 Oregon legislature passed Senate Bill 27, which provided for a radical restructuring of the methods for determining provider reimbursement levels and for determining the level of services covered by Medicaid. Specifically, Senate Bill 27 made four significant changes in Medicaid rules:

1. Medicaid services are to be delivered largely through managed care entities;
2. Health plans are to be paid at “levels necessary to cover the costs of providing services”;
3. A Health Services Commission (HSC) is to develop a list of “Prioritized Health Services” that will serve as the decision making tool for determining the level of covered services;
4. Should budget shortfalls develop, adjustments to the Medicaid budget are to be made by means of changing the level of covered services rather than by changing provider reimbursement levels or by changing the eligibility rules.

Oregon Office of Medical Assistance Programs staff engaged PricewaterhouseCoopers to develop expected per capita costs under the Oregon Health Plan (OHP) to assist in the legislature’s decision making. This report describes the methods used in our analysis and our results.

Program Implementation

This analysis shows separate per capita costs for 15 different eligibility categories. The original legislation applied to the Temporary Assistance to Needy Families (TANF), Poverty Level Medical adults and children, General Assistance, and uninsured Oregonians under 100% of the federal poverty level. These groups are known collectively as the “Phase 1” population.

The “Phase 2” populations include Aid to the Blind and Aid to the Disabled (AB/AD), Old Age Assistance (OAA) and children served by the State Office for Services to Children and Families (primarily Foster Care). Because of differences in the mix of health services used and the cost to the state of providing services to individuals covered by Medicare, separate calculations are made for the AB/AD and OAA populations for those with and without Medicare coverage. These Phase 2 members became covered under the OHP in January, 1995.

Under the original legislation, the OHP did not apply to Mental Health and Chemical Dependency services. Effective January 1, 1995, Chemical Dependency services were added to the Oregon Health Plan, and a phase-in of mental health services was begun on a pilot basis for 25% of the OHP population. Mental Health services were expanded statewide in July, 1997.

More recent changes in eligibility and enrollment include:

1. Expansion of eligibility to all uninsured children in families with income up to 170% of poverty under Title XXI of the Social Security Act, referred to as SCHIP (State Children’s Health Insurance Program) eligibles, effective July, 1998;
2. Expansion of eligibility for pregnant women up to 170% of poverty, effective March, 1998;
3. More rapid enrollment of OHP eligibles into managed care plans through weekly enrollment for physical health services and auto-enrollment for mental health services, effective January, 1997.

4. Explicitly identifying the Citizen Alien Waived Emergency Medical population; these individuals are eligible only for emergency services and are not enrolled in managed care plans. Historically, CAWEM eligibles have been counted as part of the eligibility category for which they would be eligible except for alien status.
5. Changes in provider networks, particularly in rural areas, with decreased availability of managed care and greater reliance on fee-for-service delivery systems.

Description of Eligibility Categories

Common Medicaid eligibility rules limit enrollment in Medicaid based on income and asset restrictions and demographic characteristics. Income limits are set at varying levels depending on the category of eligibility and are often associated with eligibility to receive a cash grant.

Eligibility groups covered under the OHP are as follows:

- The **Temporary Assistance to Needy Families (TANF)** program covers single parent families with children and two-parent families when the primary wage-earner is unemployed. For the TANF program, income limits are set dollar levels that currently reflect approximately 35% of the Federal Poverty Level (FPL). Under current eligibility rules, this category includes some former recipients with extended Medicaid eligibility.
- The **General Assistance (GA)** program covers adults who do not qualify for any of the other cash assistance programs and who are unable to work due to a medical disability for at least 12 months. The income and resource limit for the GA program is set at \$50 per month.
- The **Poverty Level Medical Program (PLM) for adults** covers pregnant women up to 170% of FPL. Those with an income below 100% of poverty are covered by the OHP eligibility rules

providing reassessment of eligibility every six months, while those with an income between 100% and 170% of poverty are eligible through 60 days following the birth of their child.

- **Poverty Level Medical Children** have varying eligibility requirements depending on age:
 - Children age 0 < 1 are covered with family income up to 133% FPL, or if they were born to a mother who was eligible as PLM Adult at the time of the child's birth;
 - Children age 1 – 5 are covered up to 133% FPL; and
 - Children age 6 – 18 are covered up to 100% FPL.
- Title XXI eligibles, known as **SCHIP (State Children's Health Insurance Program)**, include uninsured children through age 18 with family incomes up to 170% FPL who are not covered by any other eligibility category.
- The Oregon Health Plan provides coverage for two eligibility groups that are not otherwise Medicaid eligible due to demographic characteristics such as single adults, childless couples and two-parent households with an employed parent. Eligibility requirements for both groups include: aged 19 and over, not eligible for Medicare, and family income under 100% FPL.
 - **Oregon Health Plan (OHP) Families** also have a child under age 19 in the household.
 - **Oregon Health Plan (OHP) Adults & Couples** do not have a child under age 19 in the household.
- The **Aid to Blind/Aid to Disabled (AB/AD)** and **Old Age Assistance (OAA)** programs apply to people who are blind, disabled, or over age 65 with an income generally below the Supplemental Security Income threshold. Many of these

individuals also have Medicare coverage, offsetting a large portion of their medical costs to the State.

- **Services for Children and Families (SCF) Children** covers children age 18 and younger (a few clients are served until age 21) who are in the legal custody of the State Office for Services to Children and Families and placed outside the parental home. Custody is obtained either by a voluntary agreement with the child's legal guardian or through a county juvenile court.
- **Citizen Alien Waived Emergency Medical (CAWEM)** provides emergency medical coverage to individuals who do not qualify for Medicaid coverage due to their alien status. These individuals receive a restricted set of services, limited to emergency situations, which include labor and delivery.

Under the Demonstration Project, the TANF, GA, AB/AD, OAA and SCF Children programs are covered by the traditional eligibility rules. The PLM program for individuals with an income between 100% and 170% of FPL is also governed by the traditional eligibility rules with certain exceptions.¹ Under traditional eligibility rules for those people who qualify for a cash grant, eligibility is generally reassessed monthly for those cases where the wage earner is or has been employed in the last 12 months.

Eligibility for the “demonstration only” eligibles (OHP Adults & Couples and OHP Families), as well as those who qualify for PLM with an income under 100% of the FPL, is redetermined once every six months. For “demonstration only” eligibles, income for the month of application plus the preceding two months is averaged to determine eligibility, and household liquid assets must be less than \$2,000. Children eligible for coverage through the Children's Health Insurance Program are covered by these same eligibility rules and, with some exceptions, must have been uninsured for the preceding six months. The CAWEM population receives eligibility for a six month period for the restricted range of services provided to that group.

¹ The eligibility rules for the PLM population with incomes from 100% to 170% of FPL are somewhat different than the rules for other categories of eligibility.

Exhibit 1 provides a matrix of the eligibility categories covered under the Oregon Health Plan Medicaid Demonstration.

Expected Distribution by Eligibility Category

The per capita cost of the demonstration program is based in part on assumptions regarding the distribution of eligibles by eligibility category. For this distribution we rely upon estimates made by OMAP budget staff in their analysis of expected enrollment in the demonstration project. Exhibit 2 shows the expected distribution of eligibles among the eligibility categories in 2002/03. These percentages, provided by OMAP staff, are used to calculate weighted average amounts across all eligibility categories in later portions of this report.

Delivery Systems

To accommodate the contracting arrangements used by the OHP, it is necessary to calculate the expected per capita cost for discrete services for several different population groups and for several different delivery systems.

During Federal Fiscal Years 2002 and 2003 the State expects to use three different delivery systems under the Oregon Health Plan. Some health plans contract with the State to provide nearly all physical health and chemical dependency services on a prepaid, capitated basis. These plans are referred to as Fully Capitated Health Plans or FCHPs. Chemical Dependency services are integrated with the physical health contracting with the exception of one stand-alone chemical dependency organization. Dental services are all contracted on a stand-alone basis through Dental Care Organizations (DCOs); Mental Health services are contracted on a stand-alone basis through Mental Health Organizations (MHOs).

A portion of OHP members receive all services on a fee-for-service basis, with the State contracting with a Primary Care Case Manager to direct all services for some of these members. In addition, some portion of services continue to be provided on a fee-for-service basis during the time before an OHP member is enrolled in a health plan. Other services are provided on a fee-for-service basis for all members, regardless of the delivery system in which they are

enrolled, such as non-ambulance transportation and mental health prescription drugs; maternity case management services are provided on a fee-for-service basis for all members except the limited number covered by plans which have opted to be capitated for these services. These services are referred to in this report as “FCHP/FFS” services, because they are provided on a fee-for-service basis to members enrolled in FCHP or other managed care plan.

Calculation of Cost by Delivery System

Under the Oregon Health Plan Medicaid Demonstration, payment rates vary based on whether the service is capitated or paid on a fee-for-service basis. Services that are provided through capitation contracts are priced based on “rates necessary to cover the costs of providing services,” while services that are provided on a fee-for-service basis are priced based on the Medicaid fee schedule with adjustments for expected legislative changes and payment levels.

In this analysis, we calculate per capita costs separately for capitated services, for non-capitated services for managed care enrollees, and for individuals covered by the fee-for-service and Primary Care Case Management systems. A weighted average value is then calculated based on the assumed distribution of enrollees among the delivery systems. Separate assumptions are made regarding the percentage of the population in managed care for physical health and chemical dependency, dental and mental health services.

The final per capita cost of the program will vary based on the contracting arrangements entered into between the State and prepaid plans, the demographic characteristics of the enrolled population, and the services that the Legislature determines it is able to fund.

In the following section we describe our data sources used in this analysis. In Section III we describe the methods and assumptions used in developing the per capita cost estimates and report on the estimated per capita costs for the program. Section IV describes the methods used to allocate costs to the diagnosis/treatment pairs on the Prioritized List and the resulting estimated per capita costs.

SECTION II

Data Sources

Primary Data Sources

Four primary claims data sources were used for the analysis: encounter data reported by participating health plans to the Office of Medical Assistance Programs (OMAP), encounter drug data reported directly by the health plans to PricewaterhouseCoopers, fee-for-service data from the Oregon Medicaid Management Information System, and data on special behavioral health services from the Oregon Mental Health and Developmental Disability Services Division. In addition, detailed eligibility data are used. Each of the data sources is described below.

- **Encounter** data reported to OMAP are used as the basis for the calculation of FCHP, DCO and MHO capitation rates. Claims incurred between July 1, 1997 and June 30, 1999 served as the primary data source for this portion of the analysis.

Separate data sets were provided with inpatient, outpatient, physician, and dental claims data. Each claim contained the health plan's reported billed charge amount; paid amounts were not reported in this data set. Each claim also included procedure codes, diagnosis codes, and patient demographic information such as date of birth, gender, and eligibility category.

Health plan data was summarized by plan, eligibility category and service category and provided to the respective plans for review and validation against their internal financial information. Through this process, 2 health plans and 3 dental plans declined to have their data used in this analysis because it was sufficiently

different from internal plan data sources. This analysis ultimately included data from 11 health plans and 6 dental plans, representing 79% of health plan members and 88% of dental plan members.

Encounter data were also reported by Mental Health Organizations (MHOs) and were subjected to the same review process. Because the data were reported during the phase-in process, the time period of the MHO data was restricted. Information on use of services (utilization rates) was restricted to the 18 month period of January 1998 through June 1999. Information on the amounts billed for each service was restricted to the six month period of January 1999 through June 1999. Data from 9 MHOs, representing 81.6% of members, were included in this analysis.

- **Encounter Prescription Drug** data were procured through a separate data request directly to health plans, as this information is not captured by OMAP in its encounter data reporting system. Health plan drug data covered varying time periods depending on what was available and most credible as determined by each health plan. (Appropriate member months of enrollment were matched against each plan's prescription drug reporting period.) The drug data used for these per capita cost calculations includes 8 health plans, representing 70% of OHP members.
- **Oregon Medicaid Management Information System (MMIS)** data are used to estimate fee-for-service system utilization rates by eligibility category and service type. Data for July 1, 1997 through June 30, 1999 were provided, including data for institutional, non-institutional, dental and prescription drug data. All of the data included actual billed and paid amounts for all services. Diagnosis and procedure codes were also provided, as well as patient information such as date of birth, sex, and category of eligibility.

- **Oregon Mental Health and Developmental Disability Services Division (MHDDSD)** data are used for measuring the cost of mental health services, in addition to MMIS data. Certain intensive treatment services are not paid through the MMIS system, and separate calculations are required to fully account for all Mental Health costs.
- **Eligibility information from the MMIS** is used to identify the specific eligibility and enrollment for each individual and to determine the correct number of eligibles associated with each service. Date sensitive matching is done between the state's master eligibility file and the enrollment database that describes the health plans in which each individual is enrolled at any point in time. These data provide information on each individual's eligibility classification, start and end date of the span of eligibility, and enrollment in plans.

As described above, different data sources are used for various components of the calculation. However, the data are used primarily in a mutually exclusive manner. For example, encounter data are used for calculating utilization rates for physical health capitated services, while fee-for-service data are used for calculating comparable rates for services paid on a fee-for-service basis. In no place in the analysis do we add data together from multiple sources for a particular portion of the calculation. Per capita costs are developed for each component of the calculation, and then the per capita costs are added. Throughout the process, care is taken to assure there is no double counting. This process is facilitated by using discrete service categories and population groups. We also grouped service categories wherever possible, for example, combining several outpatient hospital service types into a single category.

A small portion of services for managed care enrollees is paid on a fee-for-service basis. These services relate primarily to case management and special services, such as school-based health services. No comparable service categories exist in the encounter database.

Citizen-Alien Waived Emergency Medical

In this report a new eligibility category is identified: Citizen-Alien Waived Emergency Medical, or CAWEM. These individuals have been eligible for coverage under the Oregon Health Plan for some time, but were not issued identification cards due to their restricted scope of coverage. The group will now be issued cards showing their specific coverage, and there is an expectation that utilization of services will increase. To develop a cost estimate for this population we identified all of the claims associated with the group from the MMIS fee-for-service claims data base and estimates of average monthly eligibles from OMAP staff. These counts of eligibles include both those individuals who have used services and those who have not. We assumed that utilization rates would increase by approximately 10% as a result of members and providers having a clearer understanding of their eligibility to receive services and payments. Due to their limited scope of coverage, CAWEM members are not eligible to enroll in managed care plans.

Line 566 of the Prioritized List

Both the fee-for-service and encounter data described above provide information on the services provided under the OHP during 1997 – 1999. During the data reporting period, the OHP covered services only through line 574 of the prioritized list (equivalent to line 566 of the 2001-2003 prioritized list). Services matching condition/treatment pairs below line 574 were not covered by the program and are not represented in the data used here.

Given the lack of any recent claims information below line 566 of the 2001-2003 list, and the likelihood that the legislature will continue to fund services at this line or above, these calculations have not been expanded to cover services below this line. If additional services are funded, additional calculations will be performed at that time to determine the added cost.

Additional Data

In addition to the above primary data sources, data from several additional sources are used in the analysis.

“Budget Issues”

Certain adjustments are made for changes in covered services or other changes expected to occur during the contract period; these adjustments are referred to as “budget issues”. These data were provided by OMAP for both fee-for-service and managed care delivery systems issues, and reflect the following items:

Service Category	Budget Adjustment	Delivery Systems Affected
• Dental	Adult fluoride treatment, project prevention, new codes for on-site institutionalized dental	FFS and Managed Care
• DME/Supplies	Limits on Urological supplies	FFS and Managed Care
• DME/Supplies	OMAP ancillary cost savings measures	FFS
• Maternity Case Management	Increase in reimbursement per unit	FFS and Managed Care
• Prescription Drugs	Reinstatement of medical management	FFS
• Prescription Drugs	Removal of Neurontin and Depakote from managed care contracts (coverage will be provided under FFS)	FFS and Managed Care
• Vision	Limits on adult eyeglasses and minimum prescription strength	FFS and Managed Care

Other Data Sources

Data on cost-to-charge ratios for hospital services in Oregon were obtained from OMAP. Information on Medicare payment levels was used for calculating cost-to-charge ratios for professional services and other services that are covered by the Medicare program. In addition, we relied on data from the federal Health Care Financing Administration Office of the Actuary for estimating trend rates.

SECTION III

Methods and Assumptions

Generally Accepted Methods for Calculating Capitation Rates

Capitation rates are generally calculated by multiplying the rate of utilization of covered services by the average payment per unit of service. The utilization rate is typically expressed in terms of the number of services provided per 1,000 eligibles (or enrollees) in a program per year. The number of eligibles per year is typically expressed in terms of the number of member-months of eligibility. Thus, a person eligible for the entire year would have twelve member-months of eligibility, while a person eligible for only half of the year would be counted as having six member-months of eligibility.

For example, the amount to be paid for covered inpatient services would generally be expressed in terms of the number of inpatient days or the number of admissions per 1,000 members per year. This utilization rate is then converted into a measure per person per month by dividing by 12,000. The average payment (or reimbursement) per unit of service is then multiplied by this utilization rate to determine the per capita cost per month for that service. Similar calculations are made for the other categories of service, and appropriate adjustments are applied to reflect changes in covered services, eligibility, or the change in the cost per unit of service over time.

The sum of the required per capita costs for all contracted services is the total per capita cost for health care services. Plans are also paid an allowance for administrative expenses, since health plan encounter data is the primary source for developing per capita costs for managed care services.

Methodology Used in Calculating Per Capita Costs

The per capita cost amounts through line 566 of the Prioritized List are calculated through a multi-step process, which is briefly described below. Each of the steps is then described in greater detail.

1. Data from each of the data sources is summarized by eligibility category and service category. From this process we obtain information on total charges (encounter data), total paid amounts (fee-for-service data), and total units of service for the data period (encounter and fee-for-service data).
2. Adjustments are made for changes in covered services or other changes expected to occur during the contract period. These adjustments are referred to as “budget issues”.
3. Common measures of estimated cost or charges are calculated including the charges per person per month, the paid amount per person per month, and the number of units per 1,000 people per year. For the units per 1,000 people per year, a person is assumed to represent 12 member months. Thus, it is not possible to estimate the number of unique people accounted for in the calculation, and for eligibility categories with relatively short lengths of eligibility and episodic cases, such as maternities for the PLM adult population, it is possible to have more than one calculated average case per person per year.
4. Trend rates are calculated that apply to the appropriate payment method and population group.
5. For service categories with substantial variation in the average charges or paid amount per unit of service across eligibility categories, an “intensity” factor is calculated.
6. Cost-to-charge ratios by service category are calculated and applied to encounter data for services that are paid on a capitated basis. (For services provided on a fee-for-service

basis, the average Medicaid paid amount is used in the per capita cost calculation.)

7. Total expected costs per person per month are calculated for each eligibility category and service delivery arrangement.
8. The population distribution estimated for the contract period is arrayed by eligibility category and contract arrangement based on projections made by Oregon Office of Medical Assistance Programs staff.
9. The per capita cost for the Oregon Health Plan is calculated based on the expected population and contracting mix.
10. Costs are allocated to the various line items of the Prioritized List based on assignment criteria described in detail in Section IV. Separate allocations are made by eligibility category and broad service category (physical health, dental, chemical dependency, and mental health).

Measuring Utilization and Average Charges by Category of Service

The first step in this analysis is the categorization of claims into the approximately 90 detailed service categories shown in the attached exhibits. Claims are assigned to these categories based on the detailed criteria described in OMAP's "bucket books" for encounter and fee-for-service data.

The next step involves calculating utilization rates and the charge or payment amount per unit of service for each category of service, with the data subset for each eligibility category. The encounter data serves as the primary data source for the analysis of capitated services, with Medicaid MMIS data forming the basis of non-capitated services and periods of eligibility. Average charges are therefore calculated from the encounter data and average payment amounts are calculated from the fee-for-service data.

Utilization rates are measured by counting all claims for each of the categories of service. The sum of the number of claims is then divided by the number of member months of enrollment for the appropriate population group.

Hospital claims are recorded on a per admission basis, while all other claims are recorded for each separate service that is provided. For example, a series of office visits for a single condition are counted separately for each visit rather than as one episode of illness. Each separate prescription is also counted. Utilization rates for physician maternity, physician newborn, surgery and targeted case management are translated into rates per episode.

Exhibits 3-A (encounter) and 3-B (fee-for-service) show a comparison of the utilization rates by general category of service for each of the Medicaid eligibility categories after adjustments for changes such as the “budget issues” described in the preceding section.

Translating Average Charges to Measures of Cost

The Oregon Health Plan requires that the capitation rates for the program be based on “rates necessary to cover the costs of services.” In previous reports on per capita costs¹ we developed a method for defining costs based on a combination of cost-to-charge ratios for hospital services, the Resource Based Relative Value Scale for professional services, and managed care contracting rates. We have largely retained those same methods for this analysis, with some exceptions for specific services.

The charges per unit of service developed from the encounter data are adjusted to estimate a measure of “cost” for each general category of service based on a cost-to-charge ratio. Adjustments unique to each of the categories of service are made to translate the average charge amounts to values that would reflect “rates necessary to cover costs.”

¹ Coopers & Lybrand and PricewaterhouseCoopers reports dated May 1, 1991, April 19, 1993, February 10, 1995, December 16, 1996, and December 8, 1998.

Data on hospital costs and charges are reported to state agencies, from which an average cost-to-charge ratio is calculated to adjust the average charge amounts for inpatient and outpatient hospital services to costs.

For other categories of service, there are no generally accepted means of determining the “cost” of providing services. As a substitute, we examined published information on the percentage of total gross revenue (or charges) used to cover overhead expenses where that information is readily available as a first step in estimating the relationship between average charge amounts and the costs associated with providing services. We also obtained information on contracting arrangements and the amount of discounts required by managed care contracts in Oregon as a measure of reimbursement rates that are currently used by commercial managed care plans and reimbursement rates that can be presumed to cover the costs of providing services. We also examined payment rates made by Medicare and information on loss ratios reported by OHP health plans.

Because we are using encounter data for this analysis, it is also important to understand the information reported by health plans. In some cases, the information reported appears to be a reflection of the amount paid to providers rather than the billed amount. When payment amounts are reported by some health plans, the cost-to-charge ratio is higher (i.e., closer to 100%) than would be the case when full charges are reported. No direct information related to payment amounts is reported on the encounter database.

Based on discussions with a number of managed care organizations, we determined that those organizations are generally able to contract with primary medical care providers at discounts of at least 15% to 20% off of standard allowable charges.

Based on our understanding of the data, we use an 18% discount as a “benchmark” for determining costs for physicians. For convenience, this benchmark was compared to the Calendar Year 2000 Medicare fee schedule to derive imputed costs for other services. We used the relationship between payment rates for specific services in the Medicare fee schedule to develop cost to charge ratios for each of the professional service categories after establishing the expected cost for physician office visits.

For dental services, we do not apply a discount factor. Based on discussions with dental care organizations and our review of the data, we believe the encounter data reflect the amounts paid by DCOs for services rather than a charge amount.

For prescription drug data, we apply a discount factor only to reflect the average value of rebates collected by plans. As described in Section II, prescription drug data was provided by participating health plans directly for this analysis, as OMAP does not collect this data. This claims information included various payment fields, depending on the submitting health plan, including billed, paid, ingredient cost and/or dispensing fee. Since the charges from this data approximately reflect health plan payments, no additional cost-to-charge ratio is applied. However, the detailed claims data does not reflect the value of rebates received by managed care plans. We have applied an average 7% reduction to the billed amounts per unit of service to reflect the value of aggregate rebates.

For three service categories: Transportation – Ambulance, Durable Medical Equipment and Supplies, and Home Health, we conducted research on the methods used by Medicare to determine payment. For each of these services we developed a payment formula equal to the formula used by Medicare with limited exceptions where the data elements needed to calculate the implied Medicare payment amount were not available in the encounter data. These data elements would have allowed finer differentiation in the calculation, but were determined to have only a nominal impact on the resulting calculations.

Where Medicare data are used as a benchmark for comparison, the calendar year 2000 fee schedules are used.

For individuals who are dually eligible for Medicare and Medicaid, health plans are responsible only for that portion of costs that are not covered by Medicare.² The billed amounts included in the encounter data reflect 100% of charges for the encounter, and do not include an offset for Medicare payments. We calculated cost-to-charge ratios for individuals with Medicare coverage by examining differences in the OMAP fee-for-service payment amount for the

² OHP plans with Medicare Risk contracts are responsible for all costs, but the services that are covered under the Medicare scope of services are assigned to their Medicare line of business.

AB/AD population with and without Medicare coverage and the OAA population with and without Medicare coverage. The ratio of the payment amount, with a maximum value of 1.0, was applied to the standard cost to charge ratio to determine the cost to charge ratio for service provided to individuals who are dually eligible for Medicare and Medicaid.³

The cost-to-charge ratios used in the analysis are shown in Exhibit 4.

Adjustments for Changes in Scope of Benefits

During the data reporting period Mental Health Organizations were expected to provide specific types of ancillary services, including Prevention, Education, and Outreach, as well as other Ancillary Services. Specific reporting protocols had not yet been developed to allow the utilization of these services to be tracked through the encounter data reporting system. MHOs provided separate reports of these activities, which were subject to review by MHDDSD staff. Those services that were considered similar in nature to Exceptional Needs Care Coordination were included in the calculation. As detailed reporting by service is not available, we applied an overall adjustment factor to the Mental Health services per capita cost to recognize the cost to the plans of providing these services.

Adjustments for Case Mix Differences

There are substantial differences in the charge per unit of service by eligibility category for certain services including inpatient Med/Surg cases, prescription drugs, outpatient services, and durable medical equipment. Because the per capita cost for a service is calculated by multiplying the cost per unit of service by the utilization rate, it is important that the per capita cost calculation recognize these differences. For example, the charge per inpatient admission

³ Under both the FFS and FCHP delivery system, many providers choose not to submit claims for services when no payment is anticipated. For example, if Medicare payment is higher than the Medicaid allowed amount, providers often do not submit a separate bill to Medicaid, since the payment amount would be \$0. We confirmed with managed care plans that similar practices occur in that setting, and that the encounter data can be expected to show similar patterns in costs per unit of service. Where the cost to charge ratio for services provided to Medicare recipients is equal to the cost to charge ratio for non-Medicare recipients, this circumstance is prevalent.

for Med/Surg cases for TANF recipients is \$8,169 while the charge per Med/Surg admission for GA recipients is \$10,700 and the overall weighted average charge per Med/Surg admission for the encounter database is \$9,612. These differences are primarily a reflection of differences in the severity of illness of the different types of recipients. With no adjustment for these differences in severity, the per capita cost for TANF recipients would be overstated, while the per capita cost for GA recipients would be understated.

We have calculated and applied “severity” adjustments to account for these differences. The severity adjustments are calculated by comparing the adjusted charge per unit of service for each eligibility category to the overall average charge per unit and creating a relative charge factor. For those categories where there is a difference in the charge per unit of service among the eligibility categories of more than 10%, and there are at least 500 units of service, an adjustment factor is calculated.

These comparisons and intensity factors are calculated and applied separately for encounter data and MMIS data. The intensity factors are shown in Exhibits 5-A and 5-B.

Method for Trending Data Forward to FFY 2002/03

The cost per unit of service for all categories of service is trended forward to reflect the contract period of October 1, 2001 through September 30, 2003. Total trend rates are made up of two components:

- the increase in cost per unit of service (cost trend), and
- the increase in the number of units of service provided, in the relative intensity of services provided, and in the level of new technology used to provide medical services (utilization trend).

The trend rates in this analysis are calculated using two different approaches to reflect the differences in contracting arrangements and payment rates under the OHP. In addition, separate trend rates are developed for members with and without Medicare coverage. The trend rates used in this analysis can be found in Exhibits 6-A and 6-B for managed care and fee-for-service, respectively.

The trend rates for managed care calculations are based on information reported by the Health Care Financing Administration (HCFA), Office of the Actuary in their projections of national health expenditures,⁴ with the exception of prescription drug and mental health/chemical dependency services. The information from HCFA includes cost trends and total trends; utilization trend is calculated by subtracting cost from total trend. For most services the “commercial” portion of the HCFA data is used. For managed care dental services, the “total” (all payer) HCFA expenditure information is used, as dental services have a higher level of patient copay requirement in commercial plans than would be experienced in the OHP. The utilization trends are adjusted to reflect observed trends for inpatient, outpatient, and physician services.

Prescription drug trends are calculated based on industry information from pharmacy benefit managers and commercial health plans, as well as Medicaid programs in other states.

Separate trend rates are calculated for each year and then combined to develop annualized trend adjustments.

Trend rates for the fee-for-service delivery system are developed based on expected cost increases provided by OMAP and a calculation of total trend based on OHP experience during our data period, augmented by more recent data reported on a paid basis through April 2000. We obtained this additional data to conduct the trend analysis to allow us to incorporate the most recent available experience of the OHP. Utilization trend is derived by subtracting the cost trend value from the total trend.

Administrative Cost Allowance

The total program cost for the Fully Capitated Health Plan (FCHP) portion of the calculation includes an 8% allowance to cover administrative expenses. This amount is intended to cover the costs of administering a mature managed

⁴ Cost trends can be found in Tables 3a, 4a and 5a at www.hcfa.gov/stats/NHE-Proj/tables/default.htm. Total trends are reported in Tables 10 and 13 at www.hcfa.gov/stats/indicatr.htm.

care program that already has information systems in place. Additional costs associated with plan start-up or with marketing individual plans are not intended to be covered by the 8% administrative cost allowance. Administrative costs of 8% are also paid for Dental Care Organizations, Mental Health Organizations, and the Chemical Dependency Organization as well as for the chemical dependency services covered by Fully Capitated Health Plans. The administrative cost allowance is typically reported as a percentage of total premium and the amount allocated for administrative costs shown here for the FCHP portion of the program is expressed in those terms. For the fee-for-service portion of the program we have included a case management fee to be paid to the Primary Care Case Managers for the portion of the population enrolled with PCCMs.

Adjustment for Risk Mix - FCHPs

Data from a portion of all health plans was used for calculating per capita costs for the FCHP covered services. Because less than 100% of the plans contributed data, we must adjust the per capita cost calculation to reflect any measured differences in risk mix between those plans for which data are included and the full OHP population. This is done by dividing the per capita cost for the data base used in these calculations by the relevant risk assessment score for the group of plans that contributed data.

Differences in risk mix are measured using various approaches for specific population groups. In paying capitation rates to health plans, various forms of risk adjustment are used:

- For the AB/AD without Medicare, General Assistance, and OHP Adults/Couples populations a broad-based risk assessment value is calculated using the Chronic Illness and Disability Payment System (CDPS).
- For the TANF population a maternity/newborn prevalence adjustment is made.
- For most population groups, an adjustment is made to reflect differences in prevalence of members using Methadone services.

We calculated the weighted average risk assessment score for each of these factors, based on the most recent risk assessment and risk adjustment calculations, dated August 2000. The examination of Methadone risk adjustment scores showed no significant difference in risk from average, and were not applied in these calculations. We then divided the per capita cost by the value of these factors for the relevant eligibility categories. The adjustment factors used are shown in the table below:

Eligibility Category	Adjustment Factor	Services Adjusted
AB/AD without Medicare	1.021	All physical health services
General Assistance	1.028	All physical health services
OHP Adults & Couples	1.045	All physical health services
TANF	1.044	IP and Physician Newborn
TANF	1.050	IP, OP and Physician Maternity

Adjustment for Risk Mix – FFS

The Oregon Health Plan has undergone significant change in its delivery system in the past year, and further changes are anticipated in the future. Most significant, the mix of enrollees receiving services on a fee-for-service basis is changing. During the data period, a small percentage of OHP members received all of their services on a fee-for-service basis. Other OHP members received services on a fee-for-service basis prior to the time they enrolled in health plans. These individuals typically became enrolled in the OHP during the course of receiving health care services, and consequently show high per capita costs. Those individuals who receive all of their services on a fee-for-service basis have a more average risk profile. When the proportion of individuals with average risk increases, the per capita cost of the entire fee-for-

service population can be expected to decrease. These changes are reflected in the trend rates applied to the FFS portion of the calculation.

Adjustments for Non-Covered Services

Under the OHP, only those diagnoses and treatments on the Prioritized List through the approved funding line are considered to be covered by the program. Our examination of the data showed some services in both the FFS and encounter data that presumably were not eligible for coverage. Under the FFS system, services that are considered to be associated with a higher funding line and that represent comorbidities are allowed. Based on these decision rules, we assumed a comparable level of services in the encounter data system would also be allowed despite their having been identified as being below the funding line. Utilization from a total of 3.9% of encounter claims was included to reflect this aspect of the benefit package.

Final Per Capita Costs through Line 566 of the Prioritized List

Exhibits 7-A (managed care) and 7-B (fee-for-service) show the detailed calculation of per capita costs through line 566 of the Prioritized List for each of the population groups with the expenditures trended to FFY2002/03. These per capita costs reflect the expected claims costs per person per month under each delivery system. Fee-for-service costs for managed care enrollees are shown in Exhibit 8. Administrative costs for managed care plans or for Primary Care Case Managers are reflected in the appropriate section of Exhibit 8 and in Exhibits 10-A through 10-F.

The per capita cost for the demonstration period is based on the distribution of enrollees by eligibility category and health service delivery system. Exhibits 9-A through 9-C show the expected population distribution during FFY2002/03; these estimates were provided by OMAP staff.

Exhibits 10-A through 10-F show the expected per capita cost for the Oregon Health Plan through line 566 of the Prioritized List, based on the per capita costs developed in Exhibits 7-A and 7-B and the expected population distribution from Exhibits 9-A through 9-C.

SECTION IV

Pricing the Prioritized List of Services

Introduction

The final per capita cost for the program will be based on the specific services that the Legislature determines will be covered and the population distribution by eligibility category and delivery system. The rate calculated thus far shows costs through line 566 of the prioritized list. However, the Legislature may decide that funds are not available to fully cover all health care services through that level. Alternatively, the legislature may fund services beyond line 566. The data available for this analysis did not permit an accurate calculation of costs beyond line 566. Should additional funding become available to expand services, additional data and analysis will be required to calculate the added costs and new funding threshold.

Process for Identifying Expenditures by Condition/Treatment Pair

To determine the per capita costs associated with covering a portion of health care services, we used the condition/treatment pairs developed by the HSC. All of the expenditures in our databases were allocated to the line items in the Prioritized List of services, with minor exceptions.¹ The specific process used for allocating expenditures to line items is described below.² Separate analyses were performed for the encounter and MMIS databases.

¹ A small percentage of the expenditures in the MMIS and encounter data bases (between 5% and 6% of the total) did not match any of the criteria for assigning expenditures to one of the line items. These expenditures were effectively allocated to each of the line items based on the percentage of total expenditures represented by each line item.

² The term “line item” is used to describe the condition/treatment pairs developed by the HSC for the Prioritized List.

Types of Condition/Treatment Pairs

The HSC developed condition/treatment pairs based on combinations of ICD9 diagnosis codes and CPT-4 procedure codes. For mental health services, DSM-4 diagnosis codes and OMAP-specific “BA” procedure codes are used. In the Prioritized List, the same diagnosis code is often associated with different types of treatments. In other cases, disease staging is used to further differentiate between condition/treatment pairs that are otherwise identical. The primary distinction is among treatments that include a surgery and treatments that are primarily medical in nature. Surgery claims are generally defined by CPT-4 codes in the range of 10000-69999. Medical Therapies are generally defined by CPT-4 codes in the range of 90000-99999. The remaining CPT-4 codes describe Dental (ADA codes 00100-09999), Anesthesia (codes 00100-01999), Radiology (codes 70000-79999) and Pathology and Laboratory (codes 80000-89399) services.

In addition to the services that can be identified based on specific combinations of condition/treatment pairs, there are a large proportion of services that are coded based on something other than CPT-4 code. These include ancillary services as well as hospital inpatient and outpatient services and prescription drugs. In addition, the HSC did not specifically identify the laboratory tests, x-rays, anesthesia, or other ancillary services that are associated with each of the condition/treatment pairs because of the large amount of overlap that occurs (i.e., the same codes would be used for nearly all of the line items).

Initial Diagnosis

Expenditures associated with initial diagnosis are always covered and thus included at the beginning of the list. These expenditures are identified as those with ICD9 codes in the range of 780 through 799 plus several other ICD9 codes that are primarily diagnostic in nature or with CPT-4 codes identified by the HSC as being associated with initial diagnosis. These treatments include biopsies and other diagnostic procedures as well as most lab and x-ray services. A few services, such as Targeted Case Management, Exceptional Needs Care Coordination, and Transportation – Other are allocated to the

beginning of the list because diagnostic information is not available and they are assumed to be always covered.

Medical and Surgical Therapies

Medical Therapies are those services that do not include a surgery. These services are coded with CPT-4 codes in the range 90000-99999 (excluding those ranges uniquely associated with a Prioritized List line item). An issue in developing the condition/treatment pairs is that many of the diagnoses have a primary treatment that is medical only and a companion treatment that is primarily surgical. For example, for most cancer diagnoses, patients can receive either medical therapy or surgical therapy. In addition, in some cases the range of diagnoses on the Prioritized List provided for a given condition/treatment pair includes some diagnoses that occur for another line item with the same treatment. In other cases, the patient's age or stage of disease is used to differentiate between condition/treatment pairs. In either of these cases the same services could theoretically be allocated to more than one condition/treatment pair, so we developed decision rules for allocating the expenditures to each pair.

The classification imposed by the current coding system is such that some claims have the potential of falling into more than one of the line items on the Prioritized List. For example, individuals who receive a surgical therapy also generally have some expenditures that may be associated with medical therapy. This issue is most clearly defined for those conditions that have one line item for medical therapy and one line for surgical therapy. For example, individuals with heart failure can be treated with a heart transplant (surgical treatment) or can be treated by non-invasive medical therapy. Similarly, patients with stomach ulcers may receive either surgical or non-invasive treatment. An analysis of members with ulcers and heart failure indicates that approximately 25% of the expenditures associated with medical therapy (services with CPT-4 codes in the range of 90000-99999) are for members who received surgical treatment. The remaining 75% of medical therapy CPT codes are associated with members who did not receive a surgical treatment.

To allocate the physical health expenditures to each of the line items we used the following logic:

1. Using the MMIS and encounter data, we first applied factors to the data to convert the claim charge amounts to costs by service type based on the factors shown in Exhibit 4, as well as trend to translate the data into future estimates of cost. This step was necessary to assure that the relative cost for each line item was consistent with the methods used to calculate the overall per capita cost for the program.
2. We then identified all the claims as fitting into one of two general categories: claims with CPT-4 codes in a range that we expected to match exactly with at least one of the condition/treatment pairs, and claims that did not fit that criteria. Claims associated with services that were deemed by the HSC to be “never covered” were deleted from the database.
3. Claims with service codes that we expected to exactly match a line item on the Prioritized List were further divided into two groups: those that represented surgeries or mental health, dental, or diagnostic lab and x-ray services and those that represented medical therapy. Surgery claims were identified as those with CPT-4 codes in the range of 10000-69999. Mental Health therapies were identified by CPT-4 codes 90801-90899, 96100, 99052, 99201-99275, 99291. Medical Therapies were identified as the remaining claims with CPT-4 codes in the range of 90000-99999 (excluding non-covered CPT-4 codes) and ancillary services provided during physician visits.
4. Surgery, mental health and dental claims were matched against the Prioritized List and allocated to a specific line item. Diagnostic services were allocated to “Line 0” as these services are assumed to always be covered. In addition, some services such as Targeted Case Management, Transportation-Other and Exceptional Needs Care Coordination are allocated to this line,

as diagnostic information is not available, and the services are always covered.

5. Medical claims and those claims that could not be successfully matched in step 4 were processed through a complex logic test to determine the amount of the total expenditures for each ICD9 code that should be allocated to the matching condition/treatment pairs.
 - Claims for all medical therapies were summarized by ICD9 code. (All CPT-4 codes related to medical therapy are included in the same treatment definition on the Prioritized List. Therefore, the CPT-4 code was discarded once the expenditure was identified as a medical therapy expenditure and it was treated as any other claim lacking a CPT-4 code.)
 - Each claim was then matched by ICD9 Code against the Prioritized List to identify all of the possible line items with which the expenditure might be associated.
 - We then determined whether any of the line items represented only “Medical Therapy”. (Those lines that have CPT-4 codes only in the 90000-99999 range were considered “Medical Therapy”.)
 - In cases where the claim’s ICD9 code matched exactly two line items, one of which represented “Medical Therapy” and the other of which represented a form of surgery, 75% of the medical therapy expenditures were allocated to the “Medical Therapy” line item and 25% of the medical therapy expenditures were allocated to the surgical therapy line item based on our analysis of the “Medical Therapy” expenditures for individuals with Heart Failure and Ulcers.
 - In cases where the ICD9 code matched several line items, all of which represented “Medical Therapy”, the expenditures were distributed equally based on the number of line items except in cases where condition/treatment pairs

were differentiated by stage of disease. In these cases, more specific criteria developed by the HSC were used.

- In cases where the ICD9 code matched several line items, all of which represented various surgical therapies, the expenditures were distributed equally based on the number of line items.
 - In cases with multiple medical therapies and one or more surgical therapies, 75% of the medical expenditures were allocated to the medical therapy line items, with the expenditures allocated to each line based on the number of medical therapy lines. The remaining 25% of the medical therapy expenditures were allocated to the surgical therapies, with the expenditures allocated equally to each line based on the number of surgical therapy lines.
6. The medical and surgical expenditures were then combined and a total amount allocated to each line item was then calculated.
7. The remaining services not yet allocated, including the remaining lab and x-ray services as well as inpatient and outpatient hospital services were next allocated to the condition/treatment pairs based on the number of different line items that the expenditures might fall into and the amount of dollars for medical and surgical therapy assigned to the line item.
- All expenditures for ancillary services were summarized by ICD9 code.
 - Each ICD9 code was then matched against the Prioritized List to identify all of the possible line items with which the expenditure might be associated.
 - The total dollars associated with each of the line items that an ICD9 code matched with were identified from the analysis of claims by ICD9 diagnosis code and CPT-4 procedure code (the result of step 6 above). Ancillary

claims were then allocated based on the proportion of dollars matching each treatment/condition pair.

- The expenditures were then summarized by line item.
8. The medical, surgical, and ancillary services were then summed to obtain one total amount for each line item. Totals were also calculated for each of 19 types of service including inpatient hospital, outpatient hospital, physician, lab and x-ray, and so on. These totals by service type are needed later as an initial step in the calculation of the capitation rates to be paid to the contracting plans.
 9. The Health Services Commission provided us with information on certain services that have a “substitute” among the line items at higher levels. Based on the information provided by the HSC, we reallocated the substitute services to the appropriate line items. These reallocations applied to all service categories and eligibility categories for a given line. Many of these allocations are based on stage of disease.
 10. The total dollars for prescription drug expenditures by line item were calculated separately based on the results of the global per capita cost calculation. From that analysis we identified the percentage of physical health costs associated with prescription drugs for each eligibility category. The prescription drug dollar amount on each line was calculated by multiplying this percentage by the physical health costs that were allocated to the line through the process described above. (Prescription drug claims do not include diagnosis codes so it is not possible to directly match the expenditures to specific condition/treatment pairs.) A separate calculation is made for mental health and chemical dependency drugs and the costs are assigned to the appropriate mental health and chemical dependency lines on the prioritized list.

11. Costs for mental health intensive services were added to the appropriate lines. Expected costs by condition/treatment pair were developed based on the distribution of diagnostic information provided by MHDDSD for the children receiving these services.
12. The expenditures were then summed across all line items to obtain a total dollar amount.
13. The percentage of total dollars represented by each line item was calculated by dividing the dollars for the line item by the total dollars for the entire data base.³
14. We then calculated the cost per person per month, by delivery system, by multiplying the percentage of the total represented by each line item by the total cost per person per month shown in Exhibits 7-A and 7-B.

The above methodology was used separately for costs under managed care plans (FCHPs, DCOs and MHOs), under the fee-for-service/Primary Care Case Manager system, and also for services provided to managed care enrollees on a fee-for-service basis. Within each delivery system, separate percentages were calculated for each eligibility category for each line of the Prioritized List. Weighted average percentages were then calculated by delivery system across all eligibility categories for physical medicine, Chemical Dependency, Dental and Mental Health services.

Exhibit 11 provides a summary of the criteria used for assigning claim dollars to each of the condition/treatment pairs. Exhibit 12 provides a diagram of the processing logic used for the expenditures assignment.⁴

³ Separate percentages were also calculated for each service type to allow for future calculation of the capitation rates to be paid to contracting plans.

⁴ The symbols used in the diagram are provided as an aid in identifying the portions of the process that are related. They are not intended to reflect standard flow chart symbols.

Calculating the Cost Per Person Per Month Based on Covered Services

The cost per person per month for several “threshold” levels of services was calculated by determining the services that would be above and below the line at each threshold. These thresholds were identified by their rank on the Prioritized List.

The cost per person per month at each threshold was calculated by summing the cost per person per month for each line item through the threshold. In other words, for the threshold at line 355, all lines from 1 through 355 were summed. Exhibits 13-A through 13-C show the per capita cost at each of the ten threshold levels based on the expected eligibility distribution for the OHP under each delivery system. Per capita cost estimates are shown separately for broad service categories. Exhibit 13-D shows total program costs at these threshold levels across all eligibility categories and delivery systems.