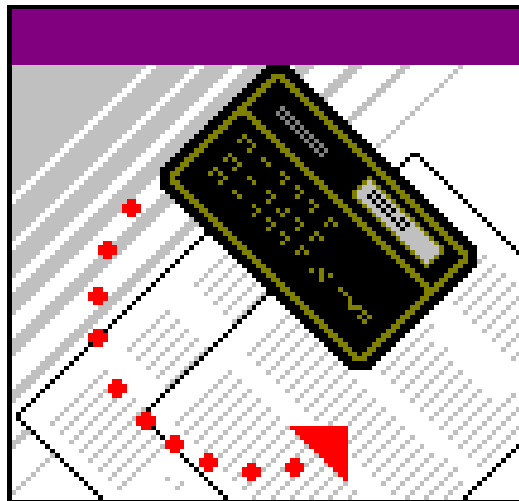


REGIONAL HEALTH AUTHORITY GLOBAL FUNDING MANUAL

2000-01 Funding



**Health Resourcing Branch
Alberta Health & Wellness
March 2000**

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REGIONAL HEALTH GLOBAL FUNDING

Overview

Regional Health Authority global funding, excluding Province Wide Services, is \$2.68 billion for 2000-01 (February 24, 2000 announcement). This represents new funding of \$141.5 million from the previous year comparable base budget. This manual documents the calculations behind the allocation to regions of this global funding amount.

Funding for 2000-01 consists of three general components: First, each region was guaranteed, as a minimum, their combined funding (Population Based and Non-Population Based) of the previous year plus 3.53%. This required \$89.9 million in new funding. The remainder of new funding went for population growth compensation (\$39.8 million), and a “no loss subsidy” incremental payment (\$11.8 million) for six regions.

Regional Health Authorities: Global Funding Targets

(Excluding Province Wide Services)

24-Feb-00

RHA	1999/00 Comparable Base Budget	2000/01 Target				Change From 1999/00	
		3.53% Minimum Guarantee	Population Growth	No Loss Incremental Payment	2000/01 Total	\$	%
1. Chinook	144,147,832	5,090,570	1,971,732	3,811,625	155,021,758	10,873,926	7.5
2. Palliser	79,250,939	2,798,741	1,738,326	1,031,924	84,819,930	5,568,991	7.0
3. Headwaters	46,015,540	1,625,035	1,075,095	0	48,715,671	2,700,131	5.9
4. Calgary	780,904,079	27,577,567	14,589,665	0	823,071,311	42,167,232	5.4
5. Region 5	38,573,259	1,362,212	1,281,670	0	41,217,140	2,643,881	6.9
6. David Thompson	147,830,915	5,220,637	4,432,308	6,345,462	163,829,323	15,998,408	10.8
7. East Central	104,338,856	3,684,719	1,107,546	0	109,131,120	4,792,264	4.6
8. WestView	38,946,181	1,375,381	1,887,107	12,966	42,221,636	3,275,455	8.4
9. Crossroads	35,124,186	1,240,408	939,483	0	37,304,077	2,179,891	6.2
10. Capital	842,670,006	29,758,826	5,869,781	0	878,298,613	35,628,607	4.2
11. Aspen	48,871,407	1,725,890	808,021	39,671	51,444,989	2,573,582	5.3
12. Lakeland	88,897,729	3,139,416	384,641	0	92,421,786	3,524,057	4.0
13. Mistahia	72,762,431	2,569,600	2,039,258	516,241	77,887,530	5,125,099	7.0
14. Peace	20,665,109	729,787	316,001	0	21,710,897	1,045,788	5.1
15. Keeweenok Lakes	17,356,119	612,930	395,232	0	18,364,281	1,008,162	5.8
16. Northern Lights	25,638,463	905,420	449,774	0	26,993,658	1,355,195	5.3
17. Northwestern	13,283,728	469,114	544,437	0	14,297,279	1,013,551	7.6
TOTAL	2,545,276,779	89,886,253	39,830,078	11,757,890	2,686,751,000	141,474,221	5.6

MINIMUM GUARANTEE

In order to provide greater stability in funding for the regions, all regional health authorities receive a minimum guarantee over their previous year's funding. For 2000/01, the minimum guarantee is 3.53% percent over the comparable base budget for 1999/2000. This provision requires \$89.9 million in additional funding for 2000/01.

FUNDING FOR POPULATION GROWTH

Regional funding for 2000/01 included provision for population growth to September 30, 2000 (mid-point of fiscal year). Additional 2000-01 funding for projected annual population growth (to September 30, 2000) totaled \$ 34.9 million and was calculated as follows:

Projected annual growth rates for the population (registered persons by age, gender and socio-economic group) in each RHA were based on the historical growth rates from March 31, 1998 to March 31, 1999, scaled by the same factor to produce an overall population increase equal to the expected population growth of 1.9% for 2000/01.

The scaled rates produce an estimated annual population growth for 2000/01 (to September 30, 2000) of 55,397 persons for the province.

The annual population growth for each RHA was valued using the per capita rates developed for population based funding, which were based on a total pool size equal to the comparable previous year funding of \$2.286 billion. Additional funding allocations for population growth for the *protection, promotion, prevention* activity pool (\$1.9 m.) and non-population based funding (\$3.0) were calculated as 1.9% of the corresponding 1999/2000 regional amounts for each RHA.

2000-2001 FUNDING for Population Growth

RHA	<i>Projected Annual Population Growth</i>	Funding Value For Growth	PPP 1.9%	Non Pop. 1.9%	Total Funding For Population Growth
	<i>(persons)</i>	(\$)	(\$)	(\$)	(\$)
1. Chinook	<i>1,271</i>	1,717,850	111,073	142,809	1,971,732
2. Palliser	<i>1,497</i>	1,569,955	56,870	111,501	1,738,326
3. Headwaters	<i>2,230</i>	965,382	48,475	61,238	1,075,095
4. Calgary	<i>25,634</i>	13,298,469	541,266	749,930	14,589,665
5. Region 5	<i>1,420</i>	1,181,017	38,905	61,747	1,281,670
6. David Thompson	<i>5,220</i>	4,142,306	137,837	152,165	4,432,308
7. East Central	<i>(398)</i>	790,390	66,940	250,216	1,107,546
8. WestView	<i>1,714</i>	1,741,943	57,742	87,422	1,887,107
9. Crossroads	<i>436</i>	875,926	28,135	35,422	939,483
10. Capital	<i>11,514</i>	4,659,034	528,323	682,423	5,869,781
11. Aspen	<i>787</i>	673,434	56,859	77,728	808,021
12. Lakeland	<i>80</i>	231,251	83,837	69,553	384,641
13. Mistahia	<i>2,066</i>	1,757,568	59,262	222,428	2,039,258
14. Peace	<i>189</i>	234,314	14,795	66,893	316,001
15. Keeweenok Lakes	<i>325</i>	293,581	29,843	71,808	395,232
16. Northern Lights	<i>772</i>	337,044	26,865	85,865	449,774
17. Northwestern	<i>640</i>	435,277	23,491	85,669	544,437
Total	<i>55,397</i>	34,904,741	1,910,519	3,014,818	39,830,078

CAPITAL EQUIPMENT

2000/01 Population Based Funding now includes the \$15.0 million in funds for capital equipment requirements that was allocated last year. Regions are expected to meet their ongoing equipment requirements from their Population Based Funding allocation.

NO LOSS SUBSIDY INCREMENTAL PAYMENT

For the 1999/2000 funding year all eligible regions - Chinook, Calgary, David Thompson, Crossroads, Capital and Northwestern received 100% of their No Loss Subsidy amount. While regions who could have had funding reduced remained “protected” it was decided that for the 2000/01 and subsequent years the No Loss Subsidy payments would only be made if the funding formula calculation show an amount of subsidy in excess of the funding provided in 1999/2000.

To determine the No Loss Subsidy Incremental Payments, the following steps are taken:

1. The full formula calculations are completed using updated information (both activity and dollars).
2. Results of No Loss Subsidy or Protection are computed.
3. Where a subsidy result is calculated, this amount is then compared to the subsidy amount paid in 1999/2000.
4. Where the subsidy amount from the current year calculation exceeds the prior year subsidy payment made an incremental amount is determined.
5. The incremental amount is carried forward for payment in 2000/01.

The decision to move to an allocation based on an incremental payment rather than the full No Loss Subsidy was taken for the following reason:

1999/2000 saw, for the first time, a 100% payment of the No Loss Subsidy amount. This provided funding equity to the regions who received the monies. The payment, however, was made from government funds rather than from a reallocation. Because of this, subsequent calculations would repeat the “inequity” already addressed. It was therefore decided that No Loss funding would only be provided if the calculations showed an increase in the inequity already funded.

2000-01 FUNDING for No Loss Subsidy Incremental Payment			
RHA	Prior Year No Loss Payment	Current Year No Loss Calculation	No Loss Incremental Funding
1. Chinook	616,152	4,427,777	3,811,625
2. Palliser	0	1,031,924	1,031,924
3. Headwaters	0	(419,157)	0
4. Calgary	15,868,714	4,143,232	0
5. Region 5	0	(542,751)	0
6. David Thompson	1,019,521	7,364,983	6,345,462
7. East Central	0	(5,208,349)	0
8. WestView	0	12,966	12,966
9. Crossroads	692,095	(706,385)	0
10. Capital	18,018,190	6,706,522	0
11. Aspen	0	39,671	39,671
12. Lakeland	0	(8,819,195)	0
13. Mistahia	0	516,241	516,241
14. Peace	0	(3,408,045)	0
15. Keeweenok Lakes	0	(497,980)	0
16. Northern Lights	0	(4,623,568)	0
17. Northwestern	297,873	(17,887)	0
TOTAL	36,512,545	0	11,757,890

no loss +/-

24,243,317

The calculations of the “full formula” components - Population Based and Non-Population Based Funding - are described in the following sections.

Population Based Funding

Overview

In the past, health care funding in Alberta was directed to specific facilities, agencies or programs, and was essentially determined by previous funding levels. Beginning with the 1997-98 fiscal year, Alberta adopted a new method of funding regional health authorities to ensure that each region receives its fair share of available health dollars.

Under Population Based Funding, funds are allocated to each regional health authority according to the population in the region and their estimated relative health care funding requirements. The population's health care funding requirements are measured by taking into account:

- total population base of each region
- age and gender of the population base
- socio-economic composition of the population base
- services provided by regions to residents of other regions

Because funds are allocated according to relative health care needs in the population, all regions are able to operate on a more level playing field than in the past.

The size of the Population Based Funding component (\$2.387 billion) was determined by subtracting the Non-Population Based Funding component (\$0.158 billion) from total comparable 1999-2000 funding (\$2.545 billion).

The Population Based Funding amount is allocated according to the Population Based Funding methodology. The first step is to distribute the Population Based Funding amount into funding pools which represent the regional services that the funding is intended to cover: Hospital Inpatient Care/Ambulatory Care/Continuing Care/Home Care/Protection, Prevention, Promotion and Private Clinics. The pool size distribution is based on the latest (1998-99) reported spending pattern of all regions combined.

The population-based methodology allocates funds to regions on the basis of the average health expenditure consumption rate incurred for the various demographic groups in each of the funding areas. Health care requirements vary necessarily by region because each region has a different mix and number of people. For example: East Central has over 14% of its population over 65 while Northern Lights has less than 2% over 65. Basing regional funding allocations on the average health expenditure consumption rate in the province ensures an equitable funding allocation across regions.

Since funding is allocated according to the population which is resident in the region, an import/export adjustment is also made to the allocations to compensate for the inter-regional servicing that occurs.

RHA	31-Mar-99 Registry Population	Net* Per Capita Rate	Population Based Allocation	Net Import/Export Adjustments	Population Based Funding
	1	2	3**	4	5
			(= 1 x 2)		(3+4)
1. Chinook	148,388	994.1	147,517,165	(6,457,845)	141,059,320
2. Palliser	90,469	917.4	82,993,239	(8,578,837)	74,414,402
3. Headwaters	73,391	809.5	59,409,344	(17,036,011)	42,373,334
4. Calgary	916,481	745.3	683,067,183	62,510,143	745,577,326
5. Region 5	53,959	937.9	50,605,970	(15,825,322)	34,780,648
6. David Thompson	190,173	872.8	165,977,491	(18,790,255)	147,187,236
7. East Central	103,982	1,017.2	105,770,752	(19,809,498)	85,961,254
8. WestView	91,098	681.5	62,082,121	(27,724,156)	34,357,964
9. Crossroads	39,793	887.5	35,315,913	(2,762,442)	32,553,471
10. Capital	816,334	845.0	689,773,724	123,685,779	813,459,503
11. Aspen	82,579	829.1	68,466,656	(23,646,506)	44,820,150
12. Lakeland	108,165	924.8	100,034,884	(23,617,034)	76,417,851
13. Mistahia	90,743	713.5	64,744,189	(3,172,270)	61,571,919
14. Peace	20,030	827.8	16,580,335	(2,843,936)	13,736,400
15. Keeweenok Lakes	26,057	768.5	20,025,893	(6,947,145)	13,078,747
16. Northern Lights	40,550	506.7	20,547,847	(4,052,182)	16,495,664
17. Northwestern	19,864	689.2	13,689,454	(4,932,483)	8,756,971
Total	2,912,056	819.6	2,386,602,160	0	2,386,602,160

*Net per capita rate reflects the difference in mix of each region's population.

** See Appendix D for a detailed breakdown of these totals.

The starting point for Population Based allocation is to allocate the total funding amount (\$2.386.6 billion) into activity pools:

Activity	1999-00 Funding Pool Size	%	2000-01 Funding Pool Size	%
Acute Inpatient	\$1,013.9 M	45.9	\$1,099.4 M	46.1
Ambulatory Care	\$512.4 M	23.2	\$526.0 M	22.0
Continuing Care	\$402.0 M	18.2	\$455.9 M	19.1
Home Care	\$177.6 M	8.0	\$194.8 M	8.2
PPP	\$93.0 M	4.2	\$100.6 M	4.2
Private Clinics	\$10.1 M	0.5	\$9.9 M	0.4
TOTAL	\$2,208.9 Million	100.0	\$2,386.6 Million	100.0

The pool sizes should not necessarily be interpreted as targeted funding. Delineation of total funding into activity pools is done for funding calculation purposes only. The regional funding allocation is based on the estimated expenditure requirements of the population as demonstrated by the average past consumption pattern of various regional health services (see next sections). In calculating the capitation rates for the various regional service categories, different costing weight sources are used which are not directly comparable, or the activity coverage sets are not the same. For example, a full 100% annual activity set may exist for one category of regional service, but less than a full activity set for another category of regional service. Consequently, the estimated expenditures are not comparable between regional activities. A weighting of the estimated expenditures is achieved by setting a total expenditure pool size for each regional activity, which is then distributed according to the estimated expenditure distribution for that activity determined from the available activity and cost data.

It is essential that the relative pool sizes reflect as closely as possible actual spending distributions if the relative expenditure needs of regions are to be measured accurately. In addition, the import/export adjustment is sensitive to pool size. Given that nearly three-quarters of total import/export services are inpatient services, the overall size of the import/export adjustment is very much affected by the relative size of the inpatient pool. Pool size distribution can therefore have a significant impact on the final distribution of funding across regions. However the pool size amount has been relatively stable over time.

The allocation of the Population Based Funding into service pool categories for 2000-01 funding was based on the most recent historical (1998-99) regional expenditure distribution, as determined from Management Information System (MIS) data. The National MIS Guidelines developed and maintained by CIHI provides the basis for this reporting, the intent of which is to promote consistent financial and non-financial reporting by hospitals across the country. It has been modified for use by the RHAs in reporting their expenditure information. Commencing with the 1995-96 fiscal year, all RHAs are required to submit to Alberta Health and Wellness financial and statistical MIS data, by facility, which reconcile to the RHA's audited financial statements.

In determining accurate relative pool size, it is important to obtain the most recent expenditure data from the regions. Timeliness is important because the continuing reform of the health sector means the distribution of activity can change from year to year.

For the 2000-01 funding calculations, 1998-99 MIS data was available for 14 of the 17 RHAs - Chinook, Palliser, Calgary, Region 5, David Thompson, East Central, WestView, Capital, Aspen, Lakeland, Mistahia, Peace, Keeweenok Lakes and Northern Lights. The fourteen reporting regions account for the vast majority of total spending, and therefore provide a reasonable estimate of the total provincial distribution.

For Population Based Funding purposes, Health Resourcing (Alberta Health & Wellness) first reconciles the MIS financial data obtained from the regions with the audited financial statements.

Major discrepancies between the submitted MIS/EDT data and the audited financial statements, are reported back to the regions for correction.

The next step for Health Resourcing is to use a program developed in the MIS-EDT system to assign the RHA financial data (operating expenditures) to the various funding pools/activities. Excluded are such items as building amortization, unfunded pension accrual adjustment and ancillary operations. All cost allocations are done on a facility-specific basis and then added up to the RHA level. The Expenditure Allocation Analysis Methodology is contained in Appendix A of this manual. For the 2000-01 funding calculations, Alberta Health and Wellness with help from several regions, improved the methodology and reporting components to deliver a more robust product.

Improved MIS reporting made the assignment of MIS data into the appropriate pools more straightforward than in the past, however, refinements and improvements are ongoing.

After the allocations of RHA expenditures have been made into the various activity pools, Province-Wide Services, Non-population Based funded expenditures and any offset revenue is removed (i.e. the Government only funds regional **net** expenditures). The resulting sub-total proportions, for those activity pools distributed by Population Based Funding (acute inpatient, ambulatory care, continuing care, home care, PPP, private clinics), are applied to the 1999-00 funding pool (\$2,386.6 million). In other words, the MIS data is only used to determine a *distribution* of the funding pools.

Finally, the Ambulatory Care pool (\$526.0 million) required further breakdown because a combined activity file (ACCS + Fee-for-Service) was used for population based allocation (see Estimated Health Expenditures section). Because of some gaps in reported Ambulatory Care Classification System (ACCS represents approximately 80% of the expenditure) data, for 2000-01 funding it is necessary to supplement ACCS data with fee-for-service claim file records for calculating ambulatory care expenditures (an interim measure until comprehensive ACCS data is available). This involved adding to the ACCS data file all fee-for-service ambulatory care related claims that could not be matched with an existing ACCS record. To value these two different activity sets, separate pool sizes were required – one for ACCS and one for the added fee-for-service claims.

The ACCS pool (\$422.3 million) was determined by valuing the ACCS activities with the provincial average ACCS costs. The pool size for the activity represented by the fee-for-service claims (\$103.7) was calculated as a residual – by subtracting the determined ACCS pool from the total Ambulatory Care pool (\$526.0 million).

The pool for Ambulatory Care FFS (\$103.7 million) was then further broken down into three sub-components: Emergency/Clinic and Day Procedures (Day/Night Care) (\$14.4 million / \$67.0 million and \$22.6 million respectively) for proper weighting of the fee-for-service activity proxies. The three sub-component proportions (.1358/.6461/.2181) were based on the distribution of the actual FFS claim amounts (unmatched records) in these three categories after they had been adjusted by historical multipliers (3.42/8.57/5.256) for inflating fee-for-service amounts to regional expenditures. Because of varying degrees of physician involvement generally associated with Emergency versus Clinic versus Day Procedures, different multipliers are used to capture the relationship between the fee-for-service amounts and regional expenditures.

1998-1999 MIS Data Expenditure Allocation

RHA	Total Cost	Acute In-Patient	Ambulatory Care	Continuing Care	Home Care	Protection Prevention Promotion	Private Clinics	Other*
1. Chinook	158,838,705	62,074,762	25,280,803	42,756,823	10,011,396	6,117,178		12,597,743
2. Palliser	91,046,748	36,984,454	11,918,542	26,652,674	6,191,539	3,618,465		5,681,074
3. Headwaters								
4. Calgary	1,027,780,936	445,025,920	236,716,091	170,313,115	61,051,195	28,198,637	6,026,536	80,449,442
5. Region 5	39,081,767	8,541,306	3,804,981	10,334,924	1,890,075	1,604,437		12,906,044
6. David Thompson	161,835,315	65,697,982	31,275,159	34,225,256	9,402,824	5,280,805		15,953,289
7. East Central	120,405,209	38,499,792	13,534,134	46,629,012	12,356,119	3,158,850		6,227,302
8. WestView	43,275,715	15,375,665	8,067,081	6,038,894	6,013,460	4,661,279		3,119,336
9. Crossroads								
10. Capital	1,118,770,114	518,980,833	212,488,045	173,322,444	57,624,477	32,502,032	3,464,192	120,388,091
11. Aspen	56,314,808	16,232,349	8,071,755	17,746,471	6,451,057	3,205,473		4,607,703
12. Lakeland	97,712,587	26,977,545	21,784,342	32,857,406	8,442,571	3,614,426		4,036,297
13. Mistahia	83,635,968	41,376,118	14,535,515	12,430,924	7,272,391	1,857,424		6,163,596
14. Peace	22,951,450	7,336,110	4,209,499	7,242,172	1,604,239	1,858,654		700,776
15. Keeweenok Lakes	19,169,255	6,149,794	5,107,558	2,300,618	1,955,626	2,457,934		1,197,725
16. Northern Lights	28,691,906	12,268,923	6,573,411	2,799,335	1,468,253	2,367,935		3,214,049
17. Northwestern								
Sub-Total	3,069,510,483	1,301,521,553	603,366,916	585,650,068	191,735,222	100,503,529	9,490,728	277,242,467
Less:								
Prov-Wide Services	231,475,468	138,141,777	63,742,730		2,939,352			26,651,609
Offset Revenue	246,453,796	91,614,616	25,251,057	129,046,845				541,278
Non-Pop Funding	142,747,850	11,032,040	6,893,748	15,372,799	555,455	3,144,465	740	105,748,603
Assured Access	15,229,332	5,527,092	2,601,121	3,623,069	1,312,963	849,442		1,315,645
Sub-Total	635,906,446	246,315,525	98,488,656	148,042,713	4,807,770	3,993,907	740	134,257,135
TOTAL	2,433,604,037	1,055,206,028	504,878,260	437,607,355	186,927,452	96,509,622	9,489,988	142,985,332

*Other includes: Community Laboratory, Community Rehabilitation, Ancillary Operations, Research, Education, Other and Error no statistics.

**2000/01 Funding
DETERMINATION OF POOL SIZES**

	1998-99 MIS Dist. (Jan 17/00)	%	2000-01 POOL ALLOCATION	%
Acute Inpatient	1,055,206,028	46.1	1,099,422,169	46.1
Ambulatory Care*	504,878,260	22.0	526,034,099	22.0
Continuing Care	437,607,355	19.1	455,944,351	19.1
Home Care	186,927,452	8.2	194,760,245	8.2
Protection-Prevention-Promotion	96,509,622	4.2	100,553,650	4.2
Private Clinics	9,489,988	0.4	9,887,646	0.4
Total	2,290,618,705	100.0	2,386,602,160	100.0

***Ambulatory Care pool breakdown:**

Total	526,034,099		
... ACCS		422,306,083	
... FFS		103,728,016	
> Emergency			14,086,265
> Clinic			67,018,671
> Day/Night Care			22,623,080

ALLOCATION OF POOLS

The principle behind population-based regional funding is to distribute the health service activity pools (budget funds) across regions according to the relative health expenditure needs of the regional populations. If all types of individuals had the same level of health care need, equal per capita funding for regions would suffice. However, it is well established that significant variation in health needs results from variations in the population in regards to age, gender and socio-economic status.

Thus, the approach taken by the funding model is to first divide the total population of the province into various population groups with different age, gender and socio-economic characteristics (identifiable from the Population Registry). Then, relative funding rates per capita for each of these groups are calculated based on historical health service utilization data - activity with cost weights attached. This allocation approach assumes that historical health care utilization is a measure of relative health care need, and that age, gender and socio-economic characteristics will be accurate predictors of variations in health expenditure needs (or, more precisely, health expenditure risks).

Because of data constraints, the allocation of the Protection, Prevention and Promotion pool requires a separate approach, although the principle of a population-based allocation underlies the methodology.

i. Population

a. population data source

The official population data source for the funding model - as chosen by the Ministerial Committee on Funding - is the AHCIP *Population Registry* file. Data for the Population Registry is obtained from two systems within Alberta Health and Wellness - the Stakeholder Registry and the Eligibility and Premium System. The Registry file includes all known residents of Alberta that have been determined to be eligible for Health Care Insurance coverage. This excludes some residents, such as the RCMP and military service personnel (whose health care usage is paid for by the Federal Government).

Included on the Registry file are the resident's:

- »»» address
- »»» gender
- »»» date of birth
- »»» some socio-economic elements (e.g. eligibility for premium assistance, coverage as a member of Health Canada's Treaty Indian group)

Individuals receiving social service benefits - one of the four socio-economic groups used for Population Based Funding - are identified from a data file received from Alberta Family and Social Services for March 31 (only those individuals listed in specific support categories).

Various sources are used to maintain the registrations data, and information is updated daily. Alberta Health and Wellness currently processes retroactive changes to the file as far back as 24 months when notified "after the fact". The population data used for regional funding allocation in 2000/01 is active Registry population as of March 31 (as seen four months later at July 31), one year prior to commencement of the funding year. The four month lag for adjustments is necessary to allow for the retroactive adjustments. All registrations with the necessary data elements are included in the calculation of the expenditure and funding capitation rates, but only active registrations with identified age, gender, socio-economic status and RHA residence are used for funding allocation. Thus, a registration record without an RHA or age identifier would be excluded.

There is general satisfaction with using health care registration population, compared to the alternative of incorporating Statistics Canada population data. However, with the registrations data there is an issue of correct residency.

b. population residency

When Alberta's RHAs were originally formed, there was a requirement to be able to assign each Alberta health care registrant to an RHA based on the residency of the registrant. After reviewing various options to achieve this requirement, it was determined that using the postal codes from registrant mailing addresses provided the most viable, although not totally foolproof, option. A mailing address is required to register for basic health services. A physical address field is available in the population registry, but it is not a mandatory field and not fully utilized. Consequently, registrant postal codes (as at March 31) are used to determine region of residence for purposes of regional funding allocation.

For residents of continuing care facilities, the postal code is set to the postal code of the facility. For health care registrants out of province (sabbatical leave, temporary employment, etc.) who only have their out-of-province address recorded in the Registry file, the last known Alberta postal code obtained from the Statistical Registration History Master is used to determine residency for Population Based Funding purposes. For registrations with Bad Address Flags, the flag is ignored and the region of residence becomes the location of the bad address postal code.

Assignment of postal codes to an RHA is not a simple or straightforward task.. There are approximately 70,000 active postal codes in use in Alberta. However, all of Alberta is not neatly divided up into postal code areas - postal codes only specify to Canada Post where mail is to be delivered, which includes rural post office boxes which are accessed by individuals over an undefined geographic area.

Assignment of each postal code to a region by Alberta Health and Wellness is based on the "representative points" which Statistics Canada assigns to each postal code to refer to a specific geographic location (a coordinate proxy for the postal code location).

For rural areas, one representative point is normally associated with each census enumeration area (in the absence of any cluster, the point is placed at the visual centre of the enumeration area), and thus it can simply be a matter of determining which census enumeration areas fall into which RHA. Where one postal code covers a large geographical area (i.e. multiple representative points) located within two or more RHAs, all registrants are assigned to a single RHA on a “best assumption” basis. In general, assignment of postal codes to a region is less reliable for rural areas where postal codes, in many cases, cover mail delivery points over a large geographical area. It is also recognized that postal code may not be the most appropriate residency indicator for Population Based Funding in cases where addresses are maintained by family, but the dependant’s address is different.

While improvements have been explored in determining residency for the health care registrants, it should be remembered that the financial impact from misassigned residents is minimal, on average, for any region as a result of the import/export mechanism of regional funding. For example, even if a region does not receive Population Based Funding for one of its actual residents, it would receive an import funding adjustment for all health services which it provides to that individual. The import/export mechanism, described later in the manual, compensates regions for residents serviced from outside of their identified region.

c. population groups

Altogether, there are 124 population groups identified for Population Based Funding. These are the result of:

- *twenty* age groups: (<1,1-4,5-9,10-14,15-19,20-24,25-29,30-34,35-39,40-44,45-49,50-54,55-59,60-64,65-69,70-74,75-79,80-84,85-89,90+)
- *two* gender groups: (male, female)
- *four* socio-economic groups:
 - aboriginal (those with Treaty Status) under age 65
 - welfare (those who received social assistance during the year) under age 65
 - subsidy (those with subsidized health care premiums) under age 65
 - other (non-premium subsidy under age 65 – this group represents the majority of Albertans and all persons aged 65 and older)

Composition by socio-economic group:

28	aboriginal (under age 65) groups	[14 age groups x 2 gender groups]
+ 28	welfare (under age 65) groups	[14 age groups x 2 gender groups]
+ 28	subsidy (under age 65) groups	[14 age groups x 2 gender groups]
+ 40	other groups	[20 age groups x 2 gender groups]
= 124	population groups	

Each of these groups must be mutually exclusive for the funding model. The Registry file can only include one age or gender per individual, but it is possible that an individual could belong to more than one socio-economic group. For such cases, a decision hierarchy has been imposed with the following order: aboriginal, welfare, subsidy, other.

Per capita rates (estimated annual health expenditures per person) are most sensitive to the *age* factor. Age groups between one and sixty-five years have an average per capita health expenditure rate of \$444 whereas the average rate for the over sixty-five age group is \$3,863 or nearly nine times greater (1998/1999 activity/1999/2000 funding). Various age group rates are shown below:

<u>age</u>	<u>average per capita rate (\$)</u>
< 1	1,751
1-19	245
20-44	423
45-64	668
65-69	1,519
70-74	2,295
75-79	3,641
80-84	6,166
85-89	10,175
90+	18,101

The four regions with the youngest population (Northwestern, Keeweenok Lakes, Northern Lights, Mistahia) are all located in Northern Alberta. The region with the oldest population (average age) is East Central, followed by Palliser, Capital and then Chinook. East Central, with its older population, receives the highest overall population-based per capita funding rate among regions.

Gender is a less important determinant of health expenditure, but it accounts for significant differences in the child-bearing years. On average, females in the child-bearing years incur more than twice as much health care expenditure as males in the same age group.

In addition to age and gender, health expenditure needs have also been determined to be dependent on *socio-economic status* (note: the Population Based Funding model is structured on the premise that socio-economic status is only a good predictor of health needs for the population under 65 years of age). Per capita rates vary significantly by socio-economic status.

The rates are generally highest for those in the *welfare* group (about 5.3 times higher, on average, than the *regular non premium subsidy group* for persons in the same age-gender group), followed by *aboriginal* (about 2.2 times higher than the regular group) and then *subsidy* (about 1.4 times higher than the regular group). The table below shows the Regional Health Authorities with the lowest and highest proportions in the various socio-economic groups:

	<i>Proportion of Population Lowest</i>		<i>Proportion of Population Highest</i>	
Welfare < 65	Headwaters	1.5%	Capital	4.2%
Aboriginal < 65	Palliser	0.6%	Keeweenok Lakes	34.0%
Subsidy < 65	Northern Lights	6.5%	Northwestern	14.9%
Non Premium Support and over 65				
< 65	Northwestern	49.3%	Northern Lights	80.8%
> 65	Northern Lights	1.9%	East Central	14.4%

POPULATION COMPOSITION (by broad age group)

As of March 31, 1999

	Registration Population age group – percentages				
	0 – 19	20 – 44	45-64	65+	Total
RHA	%	%	%	%	%
1. Chinook	31.5	35.2	20.2	13.1	100.0
2. Palliser	29.5	37.9	19.7	12.9	100.0
3. Headwaters	28.8	40.2	21.0	10.0	100.0
4. Calgary	27.4	43.0	20.8	8.8	100.0
5. Region 5	31.5	35.4	20.6	12.4	100.0
6. David Thompson	31.5	38.0	19.9	10.7	100.0
7. East Central	30.2	34.8	20.6	14.4	100.0
8. WestView	32.2	38.7	21.5	7.5	100.0
9. Crossroads	31.5	36.4	21.0	11.2	100.0
10. Capital	27.6	40.4	21.5	10.5	100.0
11. Aspen	32.9	36.2	20.7	10.3	100.0
12. Lakeland	33.5	35.1	19.9	11.5	100.0
13. Mistahia	32.8	40.8	18.7	7.8	100.0
14. Peace	33.8	37.4	19.2	9.7	100.0
15. Keewetinok Lakes	39.2	39.7	15.8	5.3	100.0
16. Northern Lights	33.8	45.5	18.9	1.9	100.0
17. Northwestern	46.4	38.0	12.0	3.6	100.0
Province	29.3	40.0	20.7	10.0	100.0

POPULATION COMPOSITION
(by socio-economic status)

As of March 31, 1999

	Registration Population – percentages					
		Under 65				
	Age 65+	Aboriginal	Welfare	Premium Support	Non Premium Support	Total
RHA	%	%	%	%	%	%
1. Chinook	13.1	7.3	3.0	13.3	63.4	100.0
2. Palliser	12.9	0.6	2.4	11.7	72.4	100.0
3. Headwaters	10.0	5.1	1.5	9.8	73.6	100.0
4. Calgary	8.8	1.1	2.5	10.1	77.6	100.0
5. Region 5	12.4	5.8	2.6	12.5	66.6	100.0
6. David Thompson	10.7	5.4	3.8	11.5	68.6	100.0
7. East Central	14.4	0.7	2.1	13.5	69.3	100.0
8. WestView	7.5	3.4	2.0	9.2	77.8	100.0
9. Crossroads	11.2	5.2	3.0	12.4	68.2	100.0
10. Capital	10.5	2.3	4.2	11.9	71.2	100.0
11. Aspen	10.3	4.4	2.5	13.0	69.8	100.0
12. Lakeland	11.5	9.1	2.7	11.7	65.1	100.0
13. Mistahia	7.8	3.9	2.0	12.0	74.4	100.0
14. Peace	9.7	7.2	2.6	11.8	68.8	100.0
15. Keewetinok Lakes	5.3	34.0	2.1	8.5	50.1	100.0
16. Northern Lights	1.9	8.8	1.9	6.5	80.8	100.0
17. Northwestern	3.6	30.5	1.7	14.9	49.3	100.0
Province	10.0	3.4	3.0	11.2	72.4	100.0

ii. Estimated Health Expenditures

To derive provincial health care expenditures (proxy for need) for each of the 124 demographic groups, cost weights are attached to activity data for each of the service pools (except Protection, Prevention and Promotion). The cost weights are scaled to produce a total expenditure for each funding pool equal to the total pool size amount. Linkage between the activity files and the registry file then allows the calculated expenditures to be distributed across the 124 identified population groups. The resulting estimated expenditures, by population group, when divided by the provincial population for those groups, determine the provincial per capita rates that are applied to each region's specific population to determine the regional funding allocations.

The Population Based Funding model therefore requires good utilization and cost (relative resource consumption) data for the health services provided by regional health authorities.

For utilization/activity data, 1998-99 is the most recent year for which there is provincial data. Coverage of regional health service activities is relatively comprehensive, although a few gaps currently exist (e.g. Adult Day Programs; C.H.O.I.C.E. program; Community Rehab. (five disciplines) and stand alone diagnostic imaging procedures performed in a hospital).

For Population Based Funding, records on the activity files must be linkable to the Registry file in order to estimate health expenditures by population group. This linkage is accomplished via Personal Health Numbers attached to all clients or recipients of health services. Alberta Health and Wellness systems personnel ensures that valid identifiers exist for each record on the utilization files. Activity records for individuals receiving services who cannot be matched up to or found on the March 31 Population Registry must be excluded from the funding rate calculations (but are used for the import/export adjustments wherever possible).

In terms of costing weights (or relative values within a service category), the key is to have accurate *relative*, costs within a pool. Since the expected health costs are only used to *distribute* a set funding pool size across regions, and not to determine funding levels, it is only necessary that relative costs of services are assigned. Costing is one area of the funding formula where improvements have been actively sought by Alberta Health and Wellness. In particular, a costing initiative is in place to collect made-in-Alberta patient-specific cost data for regional health services, and convert them into costs weights required for population-based regional funding.

a. acute hospital care (inpatient)

Acute hospital care activity data were extracted from the 1998-99 CIHI Inpatient file (or *hospital morbidity* file). All acute care facilities in Alberta report monthly inpatient separations (about 345,000 records annually) through a standard set of data elements.

After the department receives the annual file from CIHI (Canadian Institute for Health Information), it first subjects the file to several edits and converts the patient Personal Health Numbers (PHNs) to an anonymous scrambled number to protect patient identity. Province Wide Services inpatient activity is identified separately and excluded for purposes of Population Based Funding. Data record adjustments implemented by Health Resourcing for 2000-01 funding involved the inclusion of subacute care from both Calgary and Capital Health Authorities, and the inclusion of Lloydminster hospital data (Alberta residents) from East Central.

To calculate expenditures, the activity records are first grouped into RGNs (Refinement Group Numbers) using the RDRG (Refined Diagnosis Related Grouping) methodology. The RGN inpatient grouper version used on the 1998-99 morbidity file was the *DRG Refinement Grouper Version 11.0/15.0*. This resulted in each inpatient separation being classified, based on the RDRG system, into one of over eleven hundred and seventy patient types (RGNs).

Cost weights for the inpatient RGNs were derived from approximately 136,000 Alberta costing records for 1998-99 combined with approximately 121,000 records from 1997/98. More precisely, the RGN cost weights were relative values derived from the Alberta costing data (see Appendix B - Acute Inpatient RVI Methodology), weighted by the inpatient pool size. As before, for identified outliers, days beyond the trim point were only valued at a proportion of the average cost per day - 30% for acuity 0 or 1 (RDRG classification), and 70% for the more severe acuity 2 or 3. As in previous years no adjustment is made for transfer cases, although these will be studied for probable adjustment for 2001/02.

b. hospital based ambulatory care

For the first two years of Population Based Funding (1997-98 and 1998-99), estimated expenditures for hospital-based ambulatory care, in the absence of activity and cost data, were based on fee-for-service claims paid to physicians delivering day/night procedures, clinic and emergency services in hospitals. Although this was only a proxy of RHA expenditure for ambulatory care, it was the best interim information available. To address the ambulatory data gap, Alberta Health and Wellness has actively pursued comprehensive ambulatory care activity and costing data collection.

With the implementation of the Ambulatory Care Classification System (ACCS), almost all acute care facilities in the province are now reporting ambulatory care visits (about 3.7 million records for 1998-99), with six regions providing cost information. Northwestern is the only health region not submitting any activity data (Calgary RHA is also lagging in comprehensive reporting). The activity is classified by ACCS into 434 groups. All Province Wide Services activities in the ACCS file are excluded from the Population Based Funding calculations.

One data adjustment required for the ACCS data related to angioplasty procedure transfers being recorded in Capital Health Authority as an outpatient procedure. Since these are Province Wide Services they should not be included in the Population Based Funding calculations. For 2000-01 funding, all outpatient records where a PTCA was performed were identified and flagged as a Province Wide Service.

To March 31, 1999 there has been a continual increase in reporting of ACCS data. However, as at 1998/99 the activity records account for approximately 80% of the total expenditure reported. Consequently, for 2000-01 funding, and until comprehensive ACCS data is available, it is necessary to supplement the ACCS data stream with fee-for-service claim file records for the ambulatory care component. This involved adding to the ACCS data file all fee-for-service ambulatory care related claims that could not be matched with an existing ACCS record. The added fee-for-service records are used to account for 20 percent of the total ambulatory care expenditure used for 2000-01 funding.

Cost weights for the ACCS activities were the average costs derived from the costing regions. After these costs were applied to the activity file it was discovered that several regions had, on paper, performed a much greater value of activity than their total expenditure indicated. This phenomenon had the opposite effect on Calgary RHA whose ACCS reporting is lacking, rather than “overvaluing” their activity in fact, their activity valuation was decreasing. To address this issue a separate calculation was done to value each regions ambulatory activity at the expenditure level incurred. This valuation was then averaged with the previous calculation to soften both effects. The total value in both scenarios was the total ambulatory pool size available.

c. continuing care

As in past years of Population Based Funding, activity data for long term care was derived mostly from Resident Classification System (RCS) data: all residents of provincial continuing care facilities (nursing homes and auxiliary hospitals) are classified once a year (“snapshot”) using a standard format. The Case Mix Index (CMI)-based RCS data reported to Alberta Health and Wellness is client specific and includes demographic information and eight indicators/three domains which place a client into one of seven classification categories (A to G scale) representing increasing acuity levels or resources needed for care. The system holds providers responsible for hours of service by occupational class. RCS data used for 2000-01 funding were collected from a December 1998 - January 1999 classification period involving approximately 13,000 residents. Additional activity for this year included several alternative care settings including: assisted living; residential care; alzheimer centres etc. All such activity was converted to an A-G classification, however, separate rates were calculated for each setting.

The provincial cost weights for each classification (A to G), used previously for the funding calculations for traditional long term care spaces, were derived by Alberta Health and Wellness several years ago. For the 2000-01 funding calculations, these weights were adjusted by a 3.0 percent inflation factor:

- A. \$10,679.76
- B. \$13,916.99
- C. \$18,079.70
- D. \$21,285.95
- E. \$28,922.10
- F. \$35,005.46
- G. \$58,556.69

Note: *a new resident classification system and new weights are being developed as part of the Continuing Care Information and Accountability Initiative - an integrated, automated data collection and client classification system for continuing care*

d. home care

Home care expenditures are based on data from the Home Care Information System (HCIS): all RHAs report monthly home care data through a standard set of data elements. The data are client specific (with PHNs) and include demographic, client classification and service information. Because of some concerns in the past with incorrect reporting of self-managed care hours, this particular service component is reviewed for reasonableness.

The activity data used for 2000-01 funding is the HCIS 1998-99 hours paid, excluding services provided under the Children With Complex Health Needs program, which are funded through Province Wide Services (for 2000-01 all such costs were excluded as now the first \$3,000 per month is eligible for PWS funding).

Self-managed care was valued at actual costs. Costs for each of the six general service types (assessment, case co-ordination, direct professional, personal care, home support, indirect services) were 1998-99 provincial average cost rates calculated by adding up all provider costs (per hour) for all regions and dividing by the total number of providers:

»»» Assessment	- \$31.47
»»» Case Coordination	- \$29.69
»»» Direct Professional	- \$28.24
»»» Personal Care	- \$13.91
»»» Home Support	- \$13.22
»»» Indirect Services	- \$20.68

Only the direct provider costs are included in the calculations. One of the problems with including indirect costs (such as administration, travel costs, management and building depreciation), is that these costs are reported in varying degrees across regions and are not client specific.

e. private clinics

On July 1, 1996, the Alberta Government, in compliance with the Canada Health Act, prohibited the charging of facility fees by private clinics to patients for medically necessary services. For three months (July – September, 1996) facility fees were paid directly by Alberta Health and Wellness to private clinics. Effective October 1, 1996, however, responsibility was delegated to the RHAs to fund and manage the facility fees associated with insured physician and oral surgeon surgical services. A sum of \$4.5 million for facility fee funding was allocated between Capital, Calgary, Headwaters, Chinook and David Thompson RHAs for the remaining sixth months of fiscal year 1996-97 (October - March), to cover the necessary operating costs of providing approved surgical procedures outside the public hospital setting. With this funding, these regions began contracting with private clinics to cover facility fees.

For 1997-98, Private Clinics annual funding was set at \$8.0 million, and included in the non-population based component of regional funding. The same regional distribution as for 1996-97 funding was used. The funding amount and allocation for 1998-99 was exactly the same as in 1997-98.

The largest categories of service offered by the private clinics to date have been cataract surgery, abortions and dental surgery.

For 1999-00, the decision was made to move Private Clinics into Population Based Funding this has continued for 2000-01, utilizing data on private clinics (activity with attached PHNs, fees) for 1998-99 provided by four regions (Capital, Calgary, Headwaters and David Thompson).

iii. Capitation Rates

After the estimated expenditures for each service category have been calculated, capitation funding rates are derived for each of the 124 demographic groups by summing the expenditures by demographic group and dividing by the total provincial population in that group.

The following table shows the total capitation rate for each of the 124 demographic groups, along with the estimated expenditures by service category and population which are used to calculate the rates. The 1999-00 funding capitation rates, summed across all service pools (except Protection, Prevention and Promotion), vary from a low of \$139 per person (*age 10-14 female regular non-premium support*) to \$19,045 per person (*age 90+ female*) an amount 137 times greater.

2000-01 CAPITATION RATES (Based on 1998-99 activity and 1999-00 funded costs)

***** Regular (Non Premium Support plus all over 65)**

			Estimated Expenditures						
Age	Sex	Population 31-Mar-99	Inpatient	Ambulatory Care	Long Term Care	Home Care	Private Clinic	TOTAL	Capita Rate
<1	F	14,059	20,132,223	1,871,667	0	164,518	1,158	22,169,566	1,577
1 - 4	F	58,076	6,747,351	8,379,758	0	262,219	90,704	15,480,032	267
5 - 9	F	81,749	4,749,318	7,220,590	0	578,917	134,803	12,683,627	155
10 - 14	F	86,436	4,941,592	6,571,561	96,063	288,875	116,903	12,014,993	139
15 - 19	F	83,660	12,587,201	10,983,127	0	224,770	358,934	24,154,032	289
20 - 24	F	69,655	16,681,614	10,500,348	0	126,495	426,612	27,735,069	398
25 - 29	F	77,684	29,430,045	13,788,099	35,941	305,638	299,362	43,859,086	565
30 - 34	F	91,148	34,566,183	16,355,080	156,184	737,030	315,011	52,129,488	572
35 - 39	F	111,216	27,177,273	18,200,301	107,823	1,236,603	268,304	46,990,305	423
40 - 44	F	107,515	20,906,749	16,819,681	348,309	2,075,704	174,512	40,324,955	375
45 - 49	F	87,852	18,423,346	14,640,492	932,310	2,176,712	207,373	36,380,233	414
50 - 54	F	69,541	18,397,285	13,322,880	1,137,828	3,161,472	142,568	36,162,033	520
55 - 59	F	47,310	14,971,898	9,545,965	887,731	2,303,134	144,364	27,853,092	589
60 - 64	F	32,931	13,492,123	7,421,514	1,626,727	2,063,578	145,508	24,749,449	752
65 - 69	F	46,070	35,066,267	13,489,104	9,824,252	6,442,443	399,143	65,221,209	1,416
70 - 74	F	40,132	42,723,223	13,547,593	19,220,693	10,315,981	587,051	86,394,540	2,153
75 - 79	F	33,685	52,341,147	13,443,762	37,555,033	16,726,226	659,993	120,726,161	3,584
80 - 84	F	22,393	48,166,175	9,635,379	60,009,257	20,396,590	501,122	138,708,523	6,194
85 - 89	F	13,064	37,445,886	6,237,526	75,014,438	19,322,307	276,056	138,296,213	10,586
90+	F	6,973	24,766,678	3,218,878	89,273,882	15,450,144	90,535	132,800,117	19,045
<1	M	14,961	23,327,453	2,391,248	0	119,820	721	25,839,242	1,727
1 - 4	M	61,373	9,725,482	11,446,526	0	664,787	121,650	21,958,445	358
5 - 9	M	86,202	5,210,957	10,532,839	0	832,135	148,581	16,724,511	194
10 -14	M	90,746	6,896,648	8,877,643	0	482,015	48,567	16,304,874	180
15 - 19	M	88,818	9,203,130	9,372,076	0	261,066	70,838	18,907,110	213
20 - 24	M	79,953	7,793,410	7,696,654	41,834	430,542	60,546	16,022,986	200
25 - 29	M	84,549	7,351,374	8,083,292	60,122	519,692	73,524	16,088,004	190
30 - 34	M	93,859	8,781,539	9,340,756	35,941	564,483	88,439	18,811,159	200
35 - 39	M	114,092	12,611,381	12,327,303	201,282	1,047,621	137,791	26,325,379	231
40 - 44	M	114,108	14,674,755	13,299,679	215,923	1,507,167	146,635	29,844,159	262
45 - 49	M	93,417	15,611,022	12,310,575	859,010	1,416,516	128,727	30,325,850	325
50 - 54	M	73,975	17,407,586	12,405,961	1,434,415	1,661,751	135,297	33,045,010	447
55 - 59	M	52,620	17,725,083	10,976,663	1,316,135	1,681,863	164,073	31,863,817	606
60 - 64	M	39,444	20,374,198	10,261,821	2,240,524	1,622,233	145,182	34,643,958	878
65 - 69	M	45,263	44,036,035	15,621,093	8,988,772	4,541,608	330,868	73,518,375	1,624
70 - 74	M	35,280	50,252,431	14,860,241	14,526,822	6,653,638	406,265	86,699,398	2,457
75 - 79	M	24,751	49,102,334	12,189,696	23,011,361	7,280,961	446,198	92,030,551	3,718
80 - 84	M	13,994	38,900,755	8,156,349	29,833,234	8,459,711	303,993	85,654,043	6,121
85 - 89	M	6,460	23,165,527	3,980,670	25,661,225	7,411,138	134,666	60,353,227	9,343
90+	M	2,737	11,943,168	1,722,505	23,911,306	5,358,902	25,997	42,961,878	15,697

2000-01 CAPITATION RATES (continued)

*** Premium Subsidy

			Estimated Expenditures						
Age	Sex	Population 31-Mar-99	Inpatient	Ambulatory Care	Long Term Care	Home Care	Private Clinic	TOTAL	Capita Rate
<1	F	2,673	4,158,336	391,341	0	46,343	0	4,596,020	1,719
1 - 4	F	11,254	1,715,767	1,659,564	0	39,815	27,032	3,442,179	306
5 - 9	F	14,170	1,088,999	1,461,180	0	172,884	19,308	2,742,370	194
10 - 14	F	12,606	966,291	1,121,982	0	30,915	2,118	2,121,307	168
15 - 19	F	12,624	3,069,809	1,910,043	0	33,322	65,464	5,078,638	402
20 - 24	F	24,577	7,245,830	4,345,371	0	32,471	158,814	11,782,485	479
25 - 29	F	20,116	6,539,616	3,730,886	35,941	86,290	119,068	10,511,800	523
30 - 34	F	14,126	4,942,923	2,859,150	75,344	107,989	54,291	8,039,697	569
35 - 39	F	14,263	4,256,298	2,658,553	35,941	328,821	35,230	7,314,842	513
40 - 44	F	12,195	3,202,109	2,379,312	125,758	456,259	20,535	6,183,973	507
45 - 49	F	9,416	2,753,433	1,758,355	257,490	480,310	13,744	5,263,333	559
50 - 54	F	8,621	3,152,692	1,972,468	359,032	565,629	10,233	6,060,053	703
55 - 59	F	9,784	4,343,199	2,334,543	219,494	527,439	35,330	7,460,005	762
60 - 64	F	14,442	8,553,904	3,779,323	994,010	1,693,341	138,831	15,159,409	1,050
<1	M	2,827	4,892,024	514,950	0	43,882	0	5,450,855	1,928
1 - 4	M	11,865	2,323,818	2,461,821	0	117,371	22,785	4,925,795	415
5 - 9	M	14,696	1,160,360	2,239,539	0	104,495	24,698	3,529,092	240
10 - 14	M	13,294	1,210,891	1,454,504	0	68,219	5,609	2,739,223	206
15 - 19	M	12,727	1,671,058	1,493,006	0	65,964	4,995	3,235,024	254
20 - 24	M	16,921	1,878,952	1,859,940	68,104	49,088	8,390	3,864,474	228
24 - 29	M	15,242	1,896,702	1,563,030	0	213,736	9,136	3,682,603	242
30 - 34	M	10,658	1,358,473	1,284,772	96,063	156,690	9,045	2,905,042	273
35 - 39	M	10,585	2,578,338	1,562,934	0	174,946	8,713	4,324,931	409
40 - 44	M	9,613	2,250,398	1,484,874	163,668	299,183	9,198	4,207,321	438
45 - 49	M	7,953	2,278,544	1,464,834	136,323	547,987	13,898	4,441,587	558
50 - 54	M	6,531	2,448,878	1,459,435	109,105	346,542	16,575	4,380,535	671
55 - 59	M	6,075	3,548,356	1,596,016	364,723	597,248	10,877	6,117,220	1,007
60 - 64	M	7,347	6,133,113	2,274,802	803,381	802,447	39,291	10,053,034	1,368

2000-01 CAPITATION RATES (continued)

*** Aboriginal

			Estimated Expenditures						
Age	Sex	Population 31-Mar-99	Inpatient	Ambulatory Care	Long Term Care	Home Care	Private Clinic	TOTAL	Capita Rate
<1	F	1,212	2,470,595	271,734	0	3,899	0	2,746,228	2,266
1 - 4	F	5,094	2,885,504	1,184,157	0	14,179	16,263	4,100,103	805
5 - 9	F	6,527	888,599	802,688	0	32,967	12,648	1,736,902	266
10 - 14	F	5,689	676,489	547,075	0	2,649	2,620	1,228,832	216
15 - 19	F	5,029	2,223,882	974,192	0	46,601	17,324	3,261,999	649
20 - 24	F	4,259	3,182,860	1,325,108	20,917	8,207	44,976	4,582,068	1,076
25 - 29	F	4,627	3,327,028	1,523,371	159,892	19,473	35,633	5,065,396	1,095
30 - 34	F	4,577	2,992,888	1,379,942	20,917	59,773	18,182	4,471,701	977
35 - 39	F	4,098	2,304,561	1,352,084	87,295	66,930	11,936	3,822,807	933
40 - 44	F	3,078	1,984,092	1,048,684	48,090	135,484	3,946	3,220,296	1,046
45 - 49	F	2,226	1,744,481	789,526	63,114	105,209	2,620	2,704,950	1,215
50 - 54	F	1,720	1,506,897	750,296	211,751	86,764	4,270	2,559,978	1,488
55 - 59	F	1,115	1,250,353	465,175	96,063	42,320	4,178	1,858,088	1,666
60 - 64	F	853	1,352,475	436,276	117,917	146,238	4,772	2,057,678	2,412
<1	M	1,246	2,894,047	372,533	0	841	202	3,267,623	2,622
1 - 4	M	5,474	3,356,328	1,457,175	0	29,313	17,395	4,860,212	888
5 - 9	M	6,828	782,605	1,063,920	0	9,201	11,151	1,866,877	273
10 - 14	M	5,994	788,951	639,580	0	50,414	1,573	1,480,519	247
15 - 19	M	4,902	1,003,278	629,903	0	6,906	2,943	1,643,030	335
20 - 24	M	4,002	1,181,547	651,559	101,134	127,475	773	2,062,488	515
25 - 29	M	4,378	1,588,614	898,995	102,736	9,931	2,170	2,602,445	594
30 - 34	M	4,460	1,614,110	922,655	81,039	456,141	2,204	3,076,148	690
35 - 39	M	3,916	1,786,642	977,791	120,243	362,049	1,916	3,248,641	830
40 - 44	M	2,935	1,617,970	775,994	245,972	85,559	2,181	2,727,676	929
45 - 49	M	2,088	1,985,569	737,536	132,004	137,714	4,449	2,997,272	1,435
50 - 54	M	1,537	971,679	463,984	21,855	24,249	4,212	1,485,979	967
55 - 59	M	1,132	1,056,108	394,809	0	32,545	2,354	1,485,817	1,313
60 - 64	M	877	1,308,002	421,531	35,941	53,650	894	1,820,019	2,075

2000-01 CAPITATION RATES (continued)

*** *Welfare*

			Estimated Expenditures						
Age	Sex	Population 31-Mar-99	Inpatient	Ambulatory Care	Long Term Care	Home Care	Private Clinic	TOTAL	Capital Rate
<1	F	891	1,707,032	148,526	0	8,516	0	1,864,074	2,092
1 - 4	F	3,045	661,511	644,571	0	71,007	9,228	1,386,316	455
5 - 9	F	4,025	466,653	530,905	0	21,406	9,503	1,028,467	256
10 - 14	F	3,664	392,661	406,256	0	28,135	1,901	828,953	226
15 - 19	F	3,765	2,217,901	987,556	0	136,316	21,478	3,363,251	893
20 - 24	F	3,281	3,769,853	1,783,221	159,177	788,930	35,683	6,536,865	1,992
25 - 29	F	3,257	3,746,213	1,757,761	128,740	1,022,452	31,073	6,686,239	2,053
30 - 34	F	3,670	4,076,009	2,092,344	661,988	1,035,020	21,714	7,887,075	2,149
35 - 39	F	4,434	4,314,322	2,382,459	1,004,294	1,933,627	13,130	9,647,832	2,176
40 - 44	F	4,137	4,722,834	2,419,555	1,302,944	1,823,354	12,544	10,281,231	2,485
45 - 49	F	3,440	4,236,421	2,115,934	1,627,605	1,936,599	11,410	9,927,970	2,886
50 - 54	F	3,192	4,239,034	1,819,230	2,003,467	1,675,011	7,449	9,744,191	3,053
55 - 59	F	2,880	3,607,027	1,467,726	2,119,568	1,564,735	16,220	8,775,277	3,047
60 - 64	F	2,227	3,747,632	1,061,575	2,195,147	1,475,242	14,477	8,494,073	3,814
<1	M	875	1,732,328	183,330	0	4,935	0	1,920,594	2,195
1 - 4	M	3,044	986,490	782,165	0	109,970	9,504	1,888,129	620
5 - 9	M	4,152	582,278	905,897	0	33,640	13,709	1,535,523	370
10 - 14	M	3,832	649,254	516,633	0	99,576	3,555	1,269,018	331
15 - 19	M	3,686	1,229,189	691,612	0	81,866	14,468	2,017,135	547
20 - 24	M	2,143	2,599,450	980,076	472,479	1,229,185	3,356	5,284,547	2,466
25 - 29	M	2,216	2,467,789	1,333,266	241,474	1,481,535	3,654	5,527,717	2,494
30 - 34	M	2,775	3,160,653	1,515,590	448,660	2,335,504	3,029	7,463,436	2,690
35 - 39	M	3,658	4,344,769	2,156,726	970,013	1,938,928	3,093	9,413,529	2,573
40 - 44	M	3,660	4,036,782	1,980,433	1,312,110	1,491,054	5,940	8,826,319	2,412
45 - 49	M	3,279	4,337,190	1,836,923	1,728,198	1,685,889	9,530	9,597,730	2,927
50 - 54	M	2,934	3,790,786	1,605,953	1,216,033	1,152,549	8,234	7,773,554	2,649
55 - 59	M	2,561	3,310,231	1,271,962	1,553,016	1,282,849	13,351	7,431,410	2,902
60 - 64	M	2,508	4,136,768	1,274,211	2,723,803	1,089,104	14,852	9,238,739	3,684
Grand Total		2,912,056	1,099,422,169	526,034,099	455,944,351	194,760,245	9,887,646	2,286,048,510	785

iv. Regional Allocation

Funding for each region is determined by multiplying the number of individuals in the region in each of the 124 demographic groups by the corresponding capitation rate (estimated provincial average health expenditures per person). Because the capitation rates vary by demographic group, and because the population composition is different in each region, a different *overall* per capita funding level occurs for each Regional Health Authority.

v. Protection, Prevention and Promotion Allocation

The Protection, Prevention and Promotion funding pool covers:

- Health Protection - immunizations, communicable disease control, chronic disease programs, environmental health, dental health, community relations, sexual and reproductive care.
- Community Health Services - community health nursing, family planning, health promotion/education, breast screening, drug awareness, mental health promotion, pre-natal teaching, public health, nutrition, school health, etc.

In previous years, because of inadequate activity and cost data for these public health services, allocation of this funding pool was simply based on each region's share of Population Based Funding for the other regional health service pools. However, in 1999-2000 an alternative allocation was implemented because it was felt that significantly different demographic factors drive this activity as compared to the other regional health care activities. In particular, while utilization per person for the other regional pool activities is many times greater for the senior population, for Protection, Prevention and Promotion many of the activities are targeted primarily to non-senior age groups, including vaccinations, anti-smoking, drug awareness, pre-natal, school health, sexually transmitted disease and accident prevention programs. This allocation methodology has continued for 2000-01.

The first step in the funding methodology is to split the PPP pool (\$100.6 million) into four broad age group categories. The proportions were based on the judgement of those involved with these programs:

	% - Split	Sub-pools (\$)
Age 0-14	40%	40,221,460
Age 15-64	17%	17,094,121
Age 65+	13%	13,071,974
All ages	30%	30,166,095
Total	100%	100,553,650

Next, for each RHA, the population in each of the four broad age groups was broken down into the four socio-economic groups, and then each of these four populations were weighted according to the scheme below. Again, this weighting scheme (relative utilization by socio-economic group) was estimated based on the judgement of those involved with this health service area:

	Weighting
Non Subsidy	1
Subsidy	2
Aboriginal	5
Welfare	5

Finally, the share of each of the four funding sub-pools for each region was determined by its share of the estimated provincial weighted population. This led to the following allocations of the Protection, Promotion and Prevention pool:

2000-01 Funding

Protection, Promotion, Prevention - Pool Allocation

RHA	PPP Allocation	PPP % Share
1. Chinook	5,845,934	5.8
2. Palliser	2,993,183	3.0
3. Headwaters	2,551,337	2.5
4. Calgary	28,487,694	28.3
5. Region 5	2,047,645	2.0
6. David Thompson	7,254,603	7.2
7. East Central	3,523,151	3.5
8. WestView	3,039,052	3.0
9. Crossroads	1,480,786	1.5
10. Capital	27,806,487	27.7
11. Aspen	2,992,580	3.0
12. Lakeland	4,412,476	4.4
13. Mistahia	3,119,035	3.1
14. Peace	778,662	0.8
15. Keeweenok Lakes	1,570,685	1.6
16. Northern Lights	1,413,953	1.4
17. Northwestern	1,236,388	1.2
Total	100,553,650	100.0

IMPORT/EXPORT ADJUSTMENT

Because the population-based regional funding allocations described previously are based solely on each region's resident population, adjustments must be made to the funding allocations to account for the health care services provided to individuals who cross regional boundaries to receive services. An amount of \$336.1 million is the total valuation of import/export activity identified in the 1998-99 activity files. Such activity accounts for over ten percent of all regional health care activity in the province.

i. Identification of Import/Export Activity

The first step in calculating import/export adjustments is to identify import/export (inter-regional) services from the available activity data sets. As previously mentioned, current data coverage of regional health service activities is relatively comprehensive, with only a few gaps currently existing. Import/exports are identified for each of the following service categories:

- ▶ hospital inpatient (including subacute)
- ▶ hospital ambulatory care
- ▶ continuing care (including non traditional spaces)
- ▶ home care
- ▶ private clinics

The import/export adjustments to 2000-01 funding were based on 1998-99 activity data, which were the most recent annual activity data at the time of the funding calculations.

An import/export is identified for any activity where the region of service (as determined by the facility number or service location on the file) is different from the region of patient residence. For services where the region of patient residence is not determinable, it is assumed that they are local cases and not subject to import/export adjustment.

For hospital inpatient services, given that Calgary's forensic psychiatry program has received a funding adjustment outside of Population Based Funding, excluded from import/export were all forensic psychiatry cases from the Peter Lougheed hospital.

For continuing care, identification of import/export is somewhat more complicated than for other regional services. For residents who are classified twice by the Resident Classification System in different facilities, only the second classification is considered. Also, the region of residence for import/export (but not for general funding allocation) is defined as the region in which the person lived (mailing address) one year prior to their admission to the continuing care facility system. For funding purposes, it was possible to check prior residency for registrations going back to April 1, 1984, which covers the large majority of continuing care residents. For those records that had a provider RHA identifier differing from the RHA patient identifier one year prior to admission, an import/export service was identified. For resident records that did not have an Alberta Health

Care Insurance Plan registration number one year prior to admission, it is assumed that the patient moved to Alberta and thus no import/export identification is made. The ability of Alberta Health and Wellness to go back further in checking prior residency was the major factor behind the 31 percent increase in the valued continuing care import/export activity for 1999-00 funding compared to the previous year.

ii. Valuation of Import/Export Activity

Once the import/export services have been identified, the next step is to value them. For hospital inpatient activity the same methodology used in determining the regional funding capitation rates is used to value identified import/export services. The rates used for valuing are based on the total pool size equal to the previous year (1999-00) comparable funding. However, as the activity only needs to be a provincial responsibility (responsibility = 0) the total volume is slightly different than that of the capitation funding (i.e. does not require age gender and socio-economic identification). The dollar multiplier for 1998-99 activity (1999-00 funding) was \$4,437.67. These rates are not estimates of actual cost (average or marginal), but they do relate to the estimated provincial expenditures used in the Population Based Funding allocations.

For ambulatory care activity, Ambulatory Care Classification System (ACCS) data, supplemented by physician fee-for-service data (interim measure as explained in the *Estimated Health Expenditures* section), were used for the second time. The combined file meant that similar services could be valued differently depending on the degree to which a region had complied with ACCS reporting.

For continuing care, the values attached to identified import/exports are the Resident Classification System A to G cost weights (see page 22), less the long term care per capita funding rate (see below) already received by the service region because that person is included in that region's population. As mentioned previously, for general Population Based Funding allocation, patients in continuing care facilities on March 31 are considered as residents of the region in which the continuing care facility is situated. That region is therefore already the recipient of the general Population Based Funding (total per capita rate) for that person. The long term care component is adjusted out of the import compensation it also receives.

Below are the 1999-00 population funding rates - total (excluding Protection, Promotion, Prevention) and continuing care components - for the senior population:

99/00 Per Capita Funding Rates

		Total	Continuing Care
Female	65-69	\$1,416	\$213
	70-74	\$2,153	\$479
	75-79	\$3,584	\$1,115
	80-84	\$6,194	\$2,680
	85-89	\$10,586	\$5,742
	90+	\$19,045	\$12,803
Male	65-69	\$1,624	\$199
	70-74	\$2,457	\$412
	75-79	\$3,718	\$930
	80-84	\$6,121	\$2,132
	85-89	\$9,343	\$3,972
	90+	\$15,697	\$8,736

Thus, the import value for a 92 year old female with a “G” classification, is \$58,557 less the continuing care capitation amount of \$12,803, which gives a net import/export value of \$45,754.

For home care, the values attached to identified import/exports are the 1999-00 provincial average cost rates (see page 23) for each of the six general service activity types, adjusted by a 3.0 percent inflation factor. Costs do not include administration, meeting or travel costs.

For private clinics, the values attached to identified import/exports are the actual fees identified in the data sets received from the regions.

iii. Application of Import/Export to Regional Funding Allocations

The calculated compensation for a region where the service is provided (import), is deducted from the funding of the region where the patient comes from (export). Thus, summed import/export adjustments over all seventeen regions is zero - total imports (positive) equal total exports (negative). However, individual RHAs receive a net gain or loss depending on whether they are a net-exporter or net-importer of regional health services. Both Capital and Calgary RHAs service a significant proportion of activity from the other regions, and are therefore recipients of a large *positive* net import/export adjustment (\$123.7 million and \$62.5 million, respectively). Net-exporting regions, on the other hand, receive a *negative* net import/export adjustment.

2000-01 Regional Funding

Import/Export (based on 1998-99 activity, 1999-00 dollars)

RHA	Inpatient			Ambulatory Care		
	Import	Export	Net	Import	Export	Net
1. Chinook	5,790,359	9,305,639	(3,515,280)	2,257,758	3,937,139	(1,679,381)
2. Palliser	2,619,469	8,766,263	(6,146,794)	1,015,873	3,338,071	(2,322,198)
3. Headwaters	2,596,259	13,424,896	(10,828,637)	1,840,800	6,477,888	(4,637,089)
4. Calgary	49,416,307	10,217,992	39,198,315	21,533,075	5,150,612	16,382,463
5. Region 5	2,666,108	13,276,865	(10,610,757)	1,346,175	5,589,541	(4,243,366)
6. David Thompson	9,794,663	21,933,044	(12,138,381)	3,845,164	9,059,672	(5,214,508)
7. East Central	4,274,415	18,302,086	(14,027,671)	1,517,982	7,090,504	(5,572,521)
8. WestView	2,070,574	19,907,389	(17,836,815)	1,625,973	8,952,304	(7,326,332)
9. Crossroads	7,398,757	9,680,651	(2,281,895)	3,070,960	3,572,131	(501,171)
10. Capital	100,281,093	13,198,589	87,082,504	42,044,870	6,920,780	35,124,090
11. Aspen	3,170,816	18,650,034	(15,479,218)	1,225,715	8,787,482	(7,561,767)
12. Lakeland	4,527,733	22,151,616	(17,623,883)	2,655,785	9,513,013	(6,857,228)
13. Mistahia	6,065,922	7,815,357	(1,749,435)	2,194,672	3,352,842	(1,158,170)
14. Peace	1,811,246	4,377,656	(2,566,411)	833,657	1,531,210	(697,553)
15. Keeweenok Lakes	1,096,528	6,145,655	(5,049,128)	598,640	2,008,608	(1,409,967)
16. Northern Lights	694,617	3,420,356	(2,725,740)	496,075	1,712,729	(1,216,654)
17. Northwestern	237,751	3,938,527	(3,700,775)	154,019	1,262,669	(1,108,650)
	204,512,616	204,512,616	0	88,257,193	88,257,193	0

continued next page

Import / Export (continued)

RHA	Continuing Care			Home Care		
	Import	Export	Net	Import	Export	Net
1. Chinook	965,639	2,132,835	(1,167,196)	224,905	186,673	38,232
2. Palliser	941,660	960,172	(18,512)	165,733	127,301	38,433
3. Headwaters	1,062,034	2,284,350	(1,222,316)	223,035	343,138	(120,103)
4. Calgary	9,347,977	3,723,417	5,624,560	1,023,080	723,434	299,646
5. Region 5	1,470,435	2,007,713	(537,278)	70,000	276,259	(206,259)
6. David Thompson	2,768,628	3,937,861	(1,169,234)	427,859	306,471	121,388
7. East Central	2,713,113	2,703,106	10,007	325,474	365,136	(39,662)
8. WestView	471,569	2,672,161	(2,200,591)	108,104	295,416	(187,311)
9. Crossroads	1,383,867	1,216,131	167,736	43,768	112,312	(68,544)
10. Capital	8,632,604	8,151,961	480,643	1,056,681	1,126,911	(70,229)
11. Aspen	1,753,125	2,236,460	(483,335)	295,960	272,544	23,416
12. Lakeland	3,073,819	2,216,797	857,022	415,224	228,555	186,670
13. Mistahia	677,062	935,357	(258,295)	190,729	114,770	75,959
14. Peace	763,791	295,207	468,584	31,688	66,377	(34,689)
15. Keeweenok Lakes	216,218	639,684	(423,466)	32,761	41,656	(8,895)
16. Northern Lights	58,117	103,818	(45,701)	8,663	23,884	(15,221)
17. Northwestern	72,023	154,651	(82,628)	6,540	39,368	(32,828)
	36,371,680	36,371,680	0	4,650,204	4,650,204	0

	Private Clinics			TOTAL		
RHA	Import	Export	Net	Import	Export	Net
1. Chinook	0	134,220	(134,220)	9,238,661	15,696,506	(6,457,845)
2. Palliser	0	129,766	(129,766)	4,742,735	13,321,572	(8,578,837)
3. Headwaters	50,200	278,066	(227,866)	5,772,328	22,808,339	(17,036,011)
4. Calgary	1,110,400	105,241	1,005,158	82,430,839	19,920,696	62,510,143
5. Region 5	0	227,662	(227,662)	5,552,718	21,378,040	(15,825,322)
6. David Thompson	2,883	392,404	(389,521)	16,839,197	35,629,453	(18,790,255)
7. East Central	0	179,651	(179,651)	8,830,984	28,640,482	(19,809,498)
8. WestView	0	173,107	(173,107)	4,276,220	32,000,376	(27,724,156)
9. Crossroads	0	78,568	(78,568)	11,897,352	14,659,794	(2,762,442)
10. Capital	1,118,140	49,369	1,068,771	153,133,389	29,447,610	123,685,779
11. Aspen	0	145,601	(145,601)	6,445,615	30,092,122	(23,646,506)
12. Lakeland	0	179,615	(179,615)	10,672,561	34,289,595	(23,617,034)
13. Mistahia	0	82,328	(82,328)	9,128,386	12,300,655	(3,172,270)
14. Peace	0	13,867	(13,867)	3,440,382	6,284,317	(2,843,936)
15. Keeweenok Lakes	0	55,690	(55,690)	1,944,147	8,891,292	(6,947,145)
16. Northern Lights	0	48,867	(48,867)	1,257,472	5,309,654	(4,052,182)
17. Northwestern	0	7,601	(7,601)	470,333	5,402,816	(4,932,483)
	2,281,623	2,281,623	0	336,073,316	336,073,316	0

Non-Population Based Funding

Overview

Some components of general regional funding are not subject to the population based allocation methodology. These components are:

1999 - 2000 Non-Population Based Funding

RHA	<i>Community Laboratory Services</i>	<i>Community Rehab</i>	<i>Assured Access</i>	<i>Other Services</i>	<i>Cost of Doing Business</i>
1. Chinook	2,697,272	2,277,617	687,160	531,599	0
2. Palliser	1,869,736	1,363,513	1,661,525	29,026	0
3. Headwaters	1,012,248	949,164	459,405	0	0
4. Calgary	24,454,949	11,903,864	0	60,253,310	0
5. Region 5	614,865	748,151	1,268,540	0	0
6. David Thompson	3,043,124	2,608,316	360,390	131,466	0
7. East Central	1,617,395	1,664,821	1,970,255	0	0
8. WestView	1,659,277	1,275,252	1,079,325	0	176,513
9. Crossroads	674,599	605,521	20,090	76,650	0
10. Capital	24,906,550	12,512,397	0	4,892,808	0
11. Aspen	869,258	1,337,701	1,488,710	0	0
12. Lakeland	900,479	1,078,404	778,795	0	0
13. Mistahia	945,868	1,221,006	3,206,815	587,650	3,638,122
14. Peace	207,884	358,789	1,473,745	0	1,033,255
15. Keeweenok Lakes	212,049	337,260	1,990,755	0	867,806
16. Northern Lights	836,195	567,266	734,105	527,377	1,281,923
17. Northwestern	103,030	337,260	3,113,745	0	664,186
TOTAL	66,624,777	41,146,300	20,293,360	12,801,886	7,661,806

continued...

19990 - 2000 Non-Population Based Funding (continued)

RHA	Rosehaven	Public Health Services
1. Chinook		52,141
2. Palliser		30,852
3. Headwaters		24,063
4. Calgary		1,318,609
5. Region 5		18,482
6. David Thompson		63,958
7. East Central	6,752,773	36,861
8. WestView		30,841
9. Crossroads		13,709
10. Capital		1,626,598
11. Aspen		29,205
12. Lakeland		38,049
13. Mistahia		93,718
14. Peace		3,374
15. Keeweenok Lakes		4,187
16. Northern Lights		6,119
17. Northwestern		2,952
TOTAL	6,752,773	3,393,718

RHA	Diagnostic Imaging Adjustment	Sub Total	Growth 1.9%	Maximum Guarantee 3.53%	TOTAL
1. Chinook	1,270,500	7,516,289	142,809	5,090,570	12,749,668
2. Palliser	913,810	5,868,461	111,501	2,798,741	8,778,702
3. Headwaters	778,169	3,223,050	61,238	1,625,035	4,909,323
4. Calgary	(4,232,748)	39,469,984	749,930	27,577,567	67,797,481
5. Region 5	599,822	3,249,859	61,747	1,362,212	4,673,818
6. David Thompson	1,801,410	8,008,663	152,165	5,220,637	13,381,465
7. East Central	1,127,148	13,169,253	250,216	3,684,719	17,104,187
8. WestView	379,975	4,601,183	87,422	1,375,381	6,063,987
9. Crossroads	473,761	1,864,329	35,422	1,240,408	3,140,159
10. Capital	(8,021,327)	35,917,026	682,423	29,758,826	66,358,275
11. Aspen	366,055	4,090,928	77,728	1,725,890	5,894,546
12. Lakeland	864,956	3,660,684	69,553	3,139,416	6,869,653
13. Mistahia	2,013,574	11,706,753	222,428	2,569,600	14,498,781
14. Peace	443,617	3,520,664	66,893	729,787	4,317,344
15. Keewetinok Lakes	367,335	3,779,392	71,808	612,930	4,464,130
16. Northern Lights	566,246	4,519,231	85,865	905,420	5,510,516
17. Northwestern	287,697	4,508,870	85,669	469,114	5,063,653
TOTAL	0	158,674,619	3,014,817	89,886,253	251,575,688

Non-Population Based Funding Items

Community Laboratory Services (\$66,624,777)

Alberta's laboratory service system was restructured in July 1995 to consolidate lab testing services (excluding services provided by the Provincial Laboratories of Public Health) under RHA authority. It became the responsibility of regions to provide lab testing services either through direct service delivery, or contractual arrangements with private providers or other RHAs. Lab tests for non-hospital patients (physician referrals), until then reimbursed through the AHCIP fee-for-service E-code, were de-listed, and \$65.2 million from the AHCIP E-schedule transferred to RHA funding. Regional allocations of this amount were based on the distribution of physician requests for lab services by resident region (where the test originated) prior to restructuring.

This Community Lab (non-hospital physician-contracted services) allocation was increased by 2.2% growth for 1999 - 2000 funding. Funding has not been subject to population based allocation because of insufficient data. Some community lab activity/costing information has become available from Capital, Chinook, Crossroads and Mistahia. However, given its limitations, including the difficulties of regions in providing lab test data by region of patient residence and the lack of comprehensive activity data for import/export, the \$66.6 million allocation remains unchanged except for a 1.9% growth component to be added for 2000-01.

Community Rehabilitation (\$41,146,300)

The Community Rehabilitation Program was implemented in July 1995 to replace physical therapy services provided on a fee-for-service basis, and consolidate several rehabilitation services into the regional system. Physical therapy was de-listed from the AHCIP, and RHAs became responsible for the management and delivery of community-based rehabilitation services - physiotherapy, audiology, occupational therapy, respiratory services and speech-language pathology - in accordance with the provincially established CRP policy framework.

At that time, funding of \$40.3 million - from the physical therapy budget of the AHCIP, plus the existing speech-language pathology budget in health units, plus additional reallocated dollars - was reallocated to regions. The determined distribution of funding among RHAs was considered to be equitable, with a large portion of the dollars allocated on the basis of the provincial average utilization by age group. The relative age-specific weights, calculated from 1992-93 data (the last year before capping strategies affected utilization), were applied to the region specific population (1991 Census).

Community Rehabilitation funding is not currently subject to Population Based Funding because of inadequate data being collected for these activities. The original amount of \$40.3 million has been increased by 2.2% growth (1999-00) and will be increased by 1.9% for 2000-01. Community rehabilitation data will become a mandatory ACCS reporting requirement effective April 1, 2000.

Assured Access (\$20,293,360)

Assured Access special funding is provided to qualifying regions in recognition of the greater service delivery costs associated with sparsely populated areas. Regions receive an additional percentage of the per capita funding rate for each of their residents living outside of population circles (50-kilometer radius) in their region with a population concentration of at least 5,000.

Some changes were made to the way the Assured Access adjustment was calculated for 1999-00 funding. In the two previous funding years, population centre sizes of 5,000 or more were identified via postal code assignment of the registry population, and then 50 kilometer circles were drawn around these centres. However, this calculation method proved inequitable in situations where postal codes covered a large geographic area.

To improve equity, measurement of the 5,000 population threshold is now based on 1996 Census data. This includes drawing circles (50 km radius) around:

1. All municipalities (as defined by the Census Subdivisions types “City” and “Town”) with a population of over 5,000.
2. Sherwood Park and Fort McMurray (Census Subdivision type “Specialized Municipality”).
3. Population “hubs” (the largest municipality in an area with a population of 1,000 - 5,000) where a 50 kilometer radius catchment area captures a population of 5,000 or more, within the same region; the population count for the catchment area is the 1996 Census Enumeration Area population counts (Statistics Canada, *GeoRef, 1996 Census, 92F0085XCB*) as assigned to geographical points designated by Statistics Canada as the Enumeration Area Representative Point (centroid).

The drawing of the circles (50 km and 80 km radius) around the population centres remains essentially the same. Rather than a circle, Edmonton, Calgary and other major centres have their municipal boundaries extended outward by 50 and 80 kilometers.

The population outside of the 50 kilometer radius and 80 kilometer radius which qualify for an Assured Access adjustment is also now the census enumeration area count, instead of registry population assigned by postal code. Special consideration was given to the Crossroads region as no enumeration area representative points for that region fall within their identified 50+ kilometer buffer area. To accommodate this anomaly, the remote population count for Crossroads is the pro-rated portion of the remote township population, based on Statistics Canada TRM (Township/Range/Meridian) Counts, rather than the Enumeration Area count. This required a pro-ration of five different townships.

For 2000-01 funding population was estimated for non-enumerated areas in Peace, Keeweenok Lakes and Lakeland.

All regions contain some identified remote population except Calgary and Capital (see table below). The regions with the highest percentage of remote population are Northwestern (49%), Peace (30%) and Keeweenok Lakes (22%).

Remote Population

RHA	Population 50-80 km from designated centres	Population 80+km from designated centres	Total Remote Population
1. Chinook	2,580	386	2,966
2. Palliser	3,137	2,484	5,621
3. Headwaters	2,191	25	2,216
4. Calgary	0	0	0
5. Region 5	5,192	498	5,690
6. David Thompson	1,510	124	1,634
7. East Central	8,717	447	9,164
8. WestView	5,265	0	5,265
9. Crossroads	98	0	98
10. Capital	0	0	0
11. Aspen	5,369	0	5,369
12. Lakeland	5,692	0	5,692
13. Mistahia	4,111	5,766	9,877
14. Peace	4,837	1,176	6,013
15. Keeweenok Lakes	1,707	4,002	5,709
16. Northern Lights	571	1,505	2,076
17. Northwestern	4,135	5,527	9,662
Total	55,112	21,940	77,052

The funding adjustments for remote population remain the same as in prior years. For individuals residing beyond 50 but less than 80 kilometers from a designated population centre, the adjustment is equal to 25 percent of the average capitation funding rate. For individuals residing in locations more than 80 kilometers away, the adjustment is 50 percent of the per capita funding rate, as in previous years.

Other Services (12,801,886)

(Alternate Physician Payments, ICU, Emerging Drugs, Costing Project)

With regionalization, Alberta Health and Wellness contracts with individual physicians were divested to the appropriate regions, along with special funding to cover the contracts. These payments were increased by 2.2% growth for 1999-00 and go to Calgary (\$5.3 million), Capital (\$4.2 million), Chinook (\$0.5 million), David Thompson (\$54,816), Palliser (\$29,026) and Northern Lights (\$16,377).

Beginning 1998-99, ICU special funding is provided to Mistahia and Northern Lights who receive \$511,000 each. This funding is subject to a 1.9% increase for 2000/01.

Payments for emerging drugs (transferred from Blue Cross Non-Group) and HIV viral load testing are allocated to Calgary (\$664,300) and Capital (\$664,300). Funding will be increased by 1.9% for 2000-01.

Funding is provided to six regions in support of the Provincial Costing Initiative. Regions involved are: Chinook, Calgary, David Thompson, Crossroads, Capital and Mistahia.

Veterans (\$0)

Special funding to Calgary - Colonel Belcher (\$4.1 million), and Capital - Mewburn Veterans Centre (\$3.5 million), originally allocated as a non-Population Based Funding item has, for 2000-2001 funding been included in Population Based Funding.

Cost of Doing Business (\$7,661,806)

In recognition of the high cost of travel, supplies and utilities for RHAs located more than 300 kilometers from a major city (generally applies to the five Northern regions), a special funding adjustment is provided equal to 25 percent of the region's estimated supplies budget (estimated at 20 percent of their total budget). For 2000-01 the Jasper area of WestView has been included in this component.

Rosehaven Care Center (\$6,752,773)

The Rosehaven facility in East Central (Camrose) provides 100 beds and a specialized program service to people with geriatric psychiatry or behavior management needs. Rosehaven was operated directly by Alberta Health and Wellness until December 1992. About 70 percent of the people served by this program are from outside East Central region. Given this provincial focus, funding was initially placed outside of population-based allocation and funded as a provincial program. The intent is to roll this component into Population Based Funding in future years, with appropriate import/export to compensate East Central for out-of-region servicing. However, consideration also needs to be given to the care centres in Claresholm and Raymond as well as possibly the funding of Alberta Hospital Ponoka and Alberta Hospital Edmonton.

Public Health Services (3,393,718)
(STD/TB Services, 1-800 Information Line)

Payments for the combined TB and STD (Sexually Transmitted Diseases) clinical services go to Calgary (\$1.3 million) and Capital (\$1.5 million). These public health programs are provincial in scope. The STD clinic was operated directly by Alberta Health and Wellness until transferred to the Capital Health Authority in January 1997. Within region funding is also provided to each region for STD education and contact tracing.

Funding is provided to Capital for the operation of the 1-800 AIDS hotline.

Lloydminster Hospital Agreement (\$0)

Following the incorporation of Lloydminster Hospital (Saskatchewan) inpatient morbidity data into the provincial data set this element (for 2000/01) has been rolled into Population Based Funding.

Diagnostic Imaging Adjustment (\$0)

Diagnostic Imaging services are provided in both the RHA and private setting. RHA services are subject to population based funding adjustments whereas, until now, the private clinic activity has not been. To compensate for the differing levels of access to private DI (Diagnostic Imaging Clinics) funding, a Population Based Funding calculation was performed on Fee-For Service payments made by Alberta Health and Wellness. The resulting adjustment (+\$12 m./-\$12 m.) impacts primarily the no-loss position (a non cash item) however, actual funding adjustments can be traced in part to: Chinook, Palliser, David Thompson, WestView, Aspen and Mistahia.

Minimum Guarantee (\$89,886,253)

Each region was guaranteed, as a minimum, their combined funding (Population and Non Population Based) of the previous year (base budget) plus 3.53%.

Growth (\$3,014,817)

Each region was provided with an increase of 1.9% on their net sub-total non-population based budget.

Expenditure Allocation Analysis Methodology

(1998/99 Fiscal Reporting in MIS for 2000/01 Funding Calculations)

The Expenditure Allocation Analysis Methodology is used to drive RHA expenditures reported through MIS into several pools, of which the first six are used in population-based funding. For 1998/99 expenditures, the following envelopes were in place:

1998/99 MIS Expenditure Envelopes	
1	Acute Inpatient
2	Ambulatory Care
3	Continuing Care
4	Home Care
5	Private Clinics
6	Prevention/Promotion/Protection
7	Community Lab
8	Community Rehabilitation
9	Ancillary Operations
10	Research
11	Education
12	Other

The process of allocating expenditures to envelopes is done within a region on a facility-by-facility basis, using statistics relative to the various expenditure categories. The RHAs also have the option of reporting region-wide expenditures within a Corporate Facility. In this situation, the Corporate Facility expenditures will be allocated last, based on the combined statistics and totals of all facilities.

The following outlines the method/basis of allocation for each of the MIS primaries.

Administration & Support – 711		
Account	Account Name	Basis of Allocation
71105	Corporate Admin	Based on percentage of absorbing cost centre expenditures by expenditure envelope
71110	General Admin	Based on percentage of absorbing cost centre expenditures by expenditure envelope
71115	Finance	Based on percentage of absorbing cost centre expenditures by expenditure envelope - excluding Voluntary & Privates
71120	Personnel	Based on Salary Cost of Funding Pool absorbing cost centres by expenditure envelope - excluding Voluntary & Privates
71125	Systems Support	Based on Percentage of absorbing cost centre expenditures by expenditure envelope - excluding Voluntary & Privates
71130	Communications	Based on Percentage of absorbing cost centre expenditures by expenditure envelope - excluding Voluntary & Privates
71135	Material Management	Based on Percentage of non-salary costs of expenditure envelope absorbing cost centres excluding: Voluntary & Privates, drugs and referred out costs (contracted out)
71140	Volunteer Services	Based on Percentage of expenditure envelope absorbing cost centres excluding Voluntary & Privates and Community Lab
71145	Housekeeping	Based on weighted square meters of expenditure envelope absorbing cost centres excluding Voluntary & Privates, Community Lab, CRP and Private Clinics.
71150	Laundry & Linen	Based on kilograms of laundry for Inpatient, Ambulatory Care and Continuing Care except Voluntary & Privates
71153	Plant Admin Clearing Account	Allocated to 71155, 71160 and 71165 based on percentage of expenditures
71155	Plant Operation	Based on weighted square meters of expenditure envelope absorbing cost centres excluding Voluntary & Privates, Community Lab, CRP and Private Clinics.
71160	Plant Security	Based on weighted square meters of expenditure envelope absorbing cost centres excluding Voluntary & Privates, Community Lab, CRP and Private Clinics.
71165	Plant Maintenance	Based on weighted square meters of expenditure envelope absorbing cost centres excluding Voluntary & Privates, Community Lab, CRP and Private Clinics.
71175	Bio-Medical Engineering	Allocation based on expenditures for Inpatient, Ambulatory Care and regionally operated Continuing Care
71180	Registration	Based on weighted admissions and visits of Inpatients, Ambulatory Care patients and Continuing Care clients except Voluntary & Privates. Weighting factor of 10:1 will be used for Admissions : Visits
71182	Case Management Co-ord.	Based on percentage of expenditure envelope absorbing cost centres excluding Voluntary & Privates and Community Lab
71185	Patient Transportation	Based on Percentage of Inpatient, Ambulatory Care and Continuing Care expenditures
71190	Health Records	Based on Percentage of expenditure envelope absorbing cost centres of Inpatient, Ambulatory Care and Continuing Care, excluding Voluntary & Privates
71195	Patient Food Services	Based on Percentage of Inpatient, Ambulatory Care and Continuing Care meal days.

Inpatient Nursing – 712		
Account	Account Name	Basis of Allocation
71205	Nursing –Inpatient Admin	Allocated to Acute Inpatient expenditure envelope
71207	Medical Resources	Allocated to Acute Inpatient expenditure envelope
71210	Medical (Nursing Units)	Allocated to Acute Inpatient expenditure envelope
71220	Surgical (Nursing Units)	Allocated to Acute Inpatient expenditure envelope
71230	Combined Medical/Surgical	Allocated to Acute Inpatient expenditure envelope
71240	Intensive Care	Allocated to Acute Inpatient expenditure envelope
71250	Obstetrics	Allocated to Acute Inpatient expenditure envelope
71260	Operating Room	Pro-rated to expenditure envelopes based on: <ul style="list-style-type: none"> • Inpatient Surgical Cases • Outpatient Surgical Cases
71265	Post-Anesthetic Recovery Room	Pro-rated to expenditure envelopes based on: <ul style="list-style-type: none"> • Inpatient Surgical Cases • Outpatient Surgical Cases
71270	Pediatric	Allocated to Acute Inpatient expenditure envelopes
71275	Psychiatry	Allocated to Acute Inpatient expenditure envelopes
71280	Rehabilitation	Allocated to Acute Inpatient expenditure envelopes
71285	Geriatrics	Allocated to Acute Inpatient expenditure envelopes
71290	Palliative Care	Allocated to Acute Inpatient expenditure envelopes
71295	Long Term Care	Allocated to Continuing Care expenditure envelopes

Ambulatory Care – 713		
Account	Account Name	Basis of Allocation
71305	Ambulatory Care Admin	Pro-rated to expenditure envelopes based on: <ul style="list-style-type: none"> • Inpatient visits • Outpatient visits
71307	Medical Resources	Pro-rated to expenditure envelopes based on: <ul style="list-style-type: none"> • Inpatient visits • Outpatient visits
71310	Emergency	Pro-rated to expenditure envelopes based on: <ul style="list-style-type: none"> • Inpatient visits • Outpatient visits
71320	Poison Info Centre	Allocated to Ambulatory Care expenditure envelope
71340	Day/Night Care	Pro-rated to expenditure envelopes based on: <ul style="list-style-type: none"> • Inpatient visits • Outpatient visits
71350	Clinics	Pro-rated to expenditure envelopes based on: <ul style="list-style-type: none"> • Inpatient visits • Outpatient visits
71355	Private Clinics	Allocated to Ambulatory Care expenditure envelope
71395	Psychiatry Ambulatory Care	Pro-rated to expenditure envelopes based on: <ul style="list-style-type: none"> • Inpatient visits • Outpatient visits

Diagnostic & Therapeutic – 714

Account	Account Name	Basis of Allocation
71410	Clinical Laboratory	Allocated to expenditure envelopes based on: <ul style="list-style-type: none"> • Inpatient Procedures • Outpatient Procedures (excl. Ref. In) • Outpatient Procedures Referred In • Staff Health Procedures • Environmental Procedures • Community Lab Procedures
71415	Diagnostic Imaging	<ul style="list-style-type: none"> • Inpatient Procedures • Outpatient Procedures • Community Procedures
71420	Radiation Oncology	<ul style="list-style-type: none"> • Inpatient Procedures • Outpatient Procedures
71425	Electrodiagnosis	<ul style="list-style-type: none"> • Inpatient Visits • Outpatient Visits
71430	Other Diagnostic Lab	<ul style="list-style-type: none"> • Inpatient Visits • Outpatient Visits
71431	Orthotics	<ul style="list-style-type: none"> • Inpatient Visits • Outpatient Visits
71435	Respiratory Therapy	<ul style="list-style-type: none"> • Inpatient Visits • Outpatient Visits • Resident Visits • Community Client Visits • Home Care Visits
71440	Pharmacy	Allocated based on the percentage of drug costs in each expenditure envelope
71445	Clinical Nutrition	<ul style="list-style-type: none"> • Inpatient Visits • Outpatient Visits • Resident Visits • Community Client Visits • Home Care Visits
71449	Phys Med & Rehab Admin	Allocated to Inpatient expenditure envelope
71450	Physiotherapy	<ul style="list-style-type: none"> • Inpatient Visits • Outpatient Visits • Resident Visits • Community Client Visits • Home Care Visits
71455	Occupational Therapy	<ul style="list-style-type: none"> • Inpatient Visits • Outpatient Visits • Resident Visits • Community Client Visits • Home Care Visits
71460	Audiology & Speech Lang. Path.	<ul style="list-style-type: none"> • Inpatient Visits • Outpatient Visits • Resident Visits • Community Client Visits • Home Care Visits
71465	Rehab Engineering	<ul style="list-style-type: none"> • Inpatient Visits • Outpatient Visits • Resident Visits • Community Client Visits • Home Care Visits

Diagnostic & Therapeutic - 714		
Account	Account Name	Basis of Allocation
71470	Social Work	<ul style="list-style-type: none"> • Inpatient Visits • Outpatient Visits • Resident Visits • Community Client Visits • Home Care Visits
71475	Psychology	<ul style="list-style-type: none"> • Inpatient Visits • Outpatient Visits • Resident Visits • Community Client Visits • Home Care Visits
71480	Pastoral Care	<ul style="list-style-type: none"> • Inpatient Visits • Outpatient Visits • Resident Visits • Community Client Visits • Home Care Visits
71485	Recreation	<ul style="list-style-type: none"> • Inpatient Visits • Outpatient Visits • Resident Visits • Community Client Visits • Home Care Visits
71490	Child Life	<ul style="list-style-type: none"> • Inpatient Visits • Outpatient Visits • Community Client Visits • Home Care Visits
71495	Community Rehab Programs	Allocated to the Community Rehab expenditure envelope

Community & Social Services – 715		
Account	Account Name	Basis of Allocation
71505	Community & Soc. Admin	Allocated to Home Care expenditure envelope
71507	Community Medical Resources	Allocated to Home Care expenditure envelope
71510	Primary Care Clinics/Programs	Allocated to Home Care expenditure envelope
71515	Crisis Intervention	Allocated to Home Care expenditure envelope
71520	Primary Day/Night Care	Allocated to Home Care expenditure envelope
71530	Home Care	Allocated to Home Care expenditure envelope
71535	Home Support	Allocated to Home Care expenditure envelope
71538	Home Care/Support Combined	Allocated to Home Care expenditure envelope
71540	Residential Services	Allocated to Home Care expenditure envelope
71550	Health Promotion & Education	Allocated to Prevention, Protection & Promotion expenditure envelope
71555	Disease & Injury Prevention	Allocated to Prevention, Protection & Promotion expenditure envelope
71558	Health Promo/Disease & Injury Prevention Combined	Allocated to Prevention, Protection & Promotion expenditure envelope
71560	Environmental Health & Licensing	Allocated to Prevention, Protection & Promotion expenditure envelope

Research – 717

All expenditures within the 717 accounts are assigned to the **Research** expenditure envelope.

Education – 718

All Education accounts are assigned to the **Education** expenditure envelope.

Ancillary Operations – 718

All expenditures associated with Ancillary Operations are assigned to the **Ancillary Operations** expenditure envelope.

Undistributed– 8*9

Any expenditures with accounts within this range are allocated to the Other expenditure envelope.

Special Programs – 91

The program Action for Health – 91380 is allocated to the Prevention, Promotion & Protection expenditure envelope.

Non-Population Based Funding

Once all regional expenditures have been allocated to an expenditure envelope, a further step is required before funding pool totals can be calculated. Since the funding pools are used for population-based funding decisions, all non-population based funding, as well as offset revenues are to be removed from the expenditure envelope totals. This results in the following deductions:

Province-Wide Services amounts are removed from the appropriate expenditure envelopes based on input from the two RHAs.

Non-Population Based Funding for various items such as Laboratory Services, Community Rehab, Alternate Pay Programs, Emerging Drugs, ICU Funding, etc. are deducted from the respective expenditure envelopes. The Cost of Doing Business funding adjustment is deducted on a pro-rated across the expenditure envelopes.

Assured Access funding is deducted based on the expenditure patterns of the RHAs who are eligible for this funding.

Offset Revenue as reported in MIS is deducted based on RHA input with respect to their specific region.

Further Adjustments

A number of additional adjustments were made to arrive at the final funding pools in order to reflect changes in funding patterns which have occurred subsequent to the 1998/99 fiscal year. The adjustments include:

- ▶▶ Reflection of the transfer of funding for Veteran's hospital into the population-based side (Funding for Mewburn & Colonel Belcher - \$7.6 million)
- ▶▶ Recognition of the discontinuation of the Lloydminster separate funding allocation – moved into population-based side (\$1 million)
- ▶▶ Consideration of the increased funding provided to Province-Wide Services for Pre & Post Transplant costs (\$4 million)
- ▶▶ Adjustment to recognize sub-acute beds (\$19.5 million)

Acute Inpatient Relative Value Index (RVI) Methodology

One of the most important data goals of Alberta’s Population Based Funding has been to generate hospital service cost weights or relative values based on actual Alberta costs. Calculating relative values adjusts for differences in utilization patterns and costing between facilities. The process used by Alberta Health and Wellness to develop relative values for each of the inpatient service activity cells (RGNS: Refinement Group Numbers) is based on the Hospital Specific Relative Value methodology (HSRV).

The HSRV Methodology

1998-99 costed cases are first assigned to grouped activity cells, RGN’s. The 1998-99 costed cases are blended with last year’s (97-98) cost data. All low volume (less than 5 cases) RGN cells are topped up with either Ontario costs or Maryland costs (note: the top-up of low volume cells has a very small impact on the funding allocations because the low volume RGNs account for a very small percentage of the total inpatient cases). Alberta relative values are then derived by Alberta Health and Wellness using the HSRV methodology. This method first calculates the HSRV for each RGN for each hospital, then derives an initial System-Wide (including all hospitals) Relative Value (SWRV), and finally calculates a case mix index (CMI).

HSRV -Step 1: *Raw costing information is received from the costing regions and processed at Alberta Health and Wellness. An average cost per case is calculated for each RGN. These costs are then available as input into the relative value calculation process.*

		Hospital A		Hospital B		Province-Wide	
RGN*	Description	Cases	Average Cost \$	Cases	Average Cost \$	Cases	Average Cost \$ (wtd avg.)
780	Embolism	9	\$100.00	16	\$150.00	25	\$132.00
1800	GI Obstruction	5	\$200.00	10	\$300.00	15	\$266.67
3700	Cesarean	2	\$300.00	6	\$450.00	8	\$412.50
	Total Hospital	16	\$156.25	32	\$253.13	48	\$220.84

RGN * = Refinement Group Number

HSRV -Step 2: *The relative value calculation requires cost data by institution and by group. First, the average cost per case by RGN, by facility, is divided by the average cost for all cases in that facility (average institution case cost) to derive the Hospital Specific Relative Value (HSRV) for each RGN cell. This allows us to look at the cost of an RGN relative to other RGNs in that facility rather than at the average cost.*

		Hospital A		
RGN	Description	Cases	Average \$Cost	Hospital Specific Relative Value (HSRV)
780	Embolism	9	\$100.00	$\$100/\$156.25=0.64$
1800	GI Obstruction	5	\$200.00	$\$200/\$156.25=1.28$
3700	Cesarean	2	\$300.00	$\$300/\$156.25=1.92$
	Total Hospital	16	\$156.25	N/A

HSRV - Step 3: *The initial System Wide Relative Values (SWRV) are calculated for each RGN by taking a weighted average of the hospital specific relative values from each facility. For each facility, the number of cases in an RGN is multiplied by the HSRV for that RGN. This number is then divided by the total number of cases in the system (province) for that particular RGN. The sum of the results of this calculation for all facilities is the Initial SWRV.*

		Hospital A			Province-Wide
RGN	Description	Cases	Average Cost \$	Hospital Specific Relative Value (HSRV)	Initial System-Wide Relative Value (ISWRV) (wtd.avg. Of HSRVs)
780	Embolism	9	\$100.00	$\$100/\$156.25=0.64$	$(0.64*9/25)+(0.59*16/25)=0.6097$
1800	GI Obstruction	5	\$200.00	$\$200/\$156.25=1.28$	$(1.28*5/15)+(1.19*10/15)=1.2168$
3700	Cesarean	2	\$300.00	$\$300/\$156.25=1.92$	$(1.92*2/8)+(6/8*1.78)=1.8133$
	Total Hospital	16	\$156.25	N/A	N/A

Note: Calculates a system wide relative measure of the value of an RGN compared to other RGNs

This calculation filters out the differences in efficiencies between hospitals. This can occur if a hospital is a teaching hospital, and would typically incur higher costs per case, or if a hospital uses different technology in treating patients.

HSRV - Step 4 *The Case Mix Index adjusts for differences in the case mix of treatments in a hospital. For example, if a hospital typically treats much more severe patients, the CMI will adjust the relative values to take that into account.*

CMI is calculated for each facility by multiplying the SWRV for each RGN by the number of cases in each cell for that facility. The resulting values are then summed. This total is then divided by the number of cases treated in that hospital, which results in the facility's CMI.

		Hospital A			
RGN	Description	Cases	Average Cost \$	Initial System-Wide Relative Value units= SWRV x # of cases	Adjusted Hospital Specific Relative Value (AHSRV)
780	Embolism	9	\$100.00	0.6097*9= 5.4869	0.64*0.9498= 0.6079
1800	GI Obstruction	5	\$200.00	1.2168*5= 6.0840	1.28*.9498= 1.2158
3700	Cesarean	2	\$300.00	1.8133*2= 3.6267	1.8133*.9498= 1.8237
	Total Hospital	16	\$156.25	Total = 15.1976	

Notes: Cases in Hospital A adjusted using average system-wide relative values.

▶▶ Relative value of RGN adjusted by case mix index for Hospital A

Case Mix Index = sum of adjusted value of cases(SWRV units)/actual number of cases =15.1976/16=**0.9498**

The HSRVs for each RGN by facility are then multiplied by that facility's CMI to give a new set of Adjusted Hospital Specific Relative Values (AHSRVs). For each RGN, these AHSRVs are then summed from all of the hospitals and divided by the total number of cases in each case group to derive a new set of System Wide Relative Values.

HSRV - Step 5: *Steps 3 and 4 are repeated (weighting HSRVs, averaging HSRVs, and adjusting for Case Mix) until the difference between successive SWRVs is less than 1%.*

Application of HSRV derived weights

The above determined weights were attached to all applicable inpatient separation records available in the province for the most current fiscal year. For 2000/01 funding the latest available activity file was 1998/99.

The weights are used to determine both capitation funding and import/export valuations. The total budget applied to these weights exceeded \$1 billion.

Appendix C

1999/2000 Funding	2000/2001 Funding
Population Based Funding	Population Based Funding
<ol style="list-style-type: none"> 1. Minimum Guarantee of 3% =\$71,128,549 2. Population Growth of 2.2% =\$51,520,823 3. Capital Equipment = \$15,000,000 4. No Loss subsidy based on comparable 1998/99 full funding formula allocation = \$36,512,545 <p><u>Total New = \$174,161,917</u></p> <p>MIS: used for funding pool sizes based on 1997/98 MIS expenditure distribution (14 reporting regions)</p>	<ol style="list-style-type: none"> 1. Minimum guarantee of 3.53%=\$89.9 m. 2. Population growth of 1.9% 3. Capital Equipment = \$15 million moved to population based funding. 4. No Loss payment based on “incremental” dollars over prior year No Loss = \$11.8 m. <p><u>Total New = \$141.5 m.</u></p> <p>MIS: used for funding pool sizes based on 1998/99 MIS expenditure distribution (14 reporting regions)</p>
<u>Activity Data</u>	<u>Activity Data</u>
<ol style="list-style-type: none"> 1. <i>ambulatory care</i>: a combined ACCS (2.4 million records) and FFS (0.4 million records) 2. <i>private clinics</i>: activity data supplied by 4 of the 5 previously funded regions 	<ol style="list-style-type: none"> 1. <i>ambulatory care</i>: a combined ACCS (3.3 million records) and FFS (0.3 million records) 2. <i>private clinics</i>: activity data supplied by 4 of the 5 previously funded regions 3. <i>home care</i>: excludes all activity associated with Children with Complex Health Needs (now 100% funded through Province Wide Services) 4. <i>inpatient</i>: data includes sub acute beds in Capital and Calgary and data from Lloydminster Hospital (Alberta Residents) 5. <i>continuing care</i>: includes activity from non traditional continuing care spaces in Capital and WestView

1999/2000 Funding	2000/2001 Funding
Population Based Funding	Population Based Funding
<p><u>Cost Data</u></p> <ol style="list-style-type: none"> <i>hospital in-patient</i>: cost weights based on 1997-98 RGNs-Alberta data (121,000 cost records) <i>ambulatory care</i>: cost weights for ACCS activity are ACCS average costs; FFS records valued from special pool size calculated as the residual after ACCS costed activities (424,000) are subtracted from the ambulatory care total pool <i>continuing care</i>: A to G values increased by 3% <i>private clinics</i>: fee data supplied by 4 of the 5 previously funded regions 	<p><u>Cost Data</u></p> <ol style="list-style-type: none"> <i>hospital in-patient</i> cost weights based on 1998-99 RGNs-Alberta data (257,000 two year combined costed records) (note: lengthy debate/discussion over CMG/RIW99 vs RGNs due to transfer issue. Will likely move to CMGs for next year's funding) <i>ambulatory care</i>: cost weights for ACCS activity (1.5m two year combined costed records) are ACCS average costs; FFS derived same as previous year. Methodology to move to full ACCS not achieved due to insufficient reporting by Calgary and no data from Northwestern <i>continuing care</i>: A to G values increased by 3%, valued other non Resident Classification System Continuing care program records on scale provided by Capital and WestView RHAs <i>private clinics</i>: no change
<p><u>PPP Allocation</u></p> <p>Allocation based on age profile, and a socio-economic utilization weighting</p>	<p><u>PPP Allocation</u></p> <p>No change.</p>
<p><u>Import/Export</u></p> <ol style="list-style-type: none"> based on 1997-98 activity data <i>inpatient</i>: forensic psychiatry services excluded from activity; CHA angioplasty cases (PWS) excluded <i>ambulatory care</i>: replacement of FFS with combined ACCS/FFS file; PTCA transfers excluded from ACCS <i>continuing care</i>: able to go back further (1984) in determining residency (one year prior to admission) for import/export) <i>NARG/SARG</i>: combined with inpatient 	<p><u>Import/Export</u></p> <ol style="list-style-type: none"> based on 1998-99 activity data <i>inpatient</i>: data includes sub-acute beds in Capital and Calgary and data from Lloydminster Hospital (Alberta residents) <i>continuing care</i>: included activity for non-Resident Classification System Continuing Care Programs in Capital and WestView

Non-Population Based Funding	Non-Population Based Funding
<ol style="list-style-type: none"> 1. <i>assured access</i>: population catchment area of 5,000 or more based on census population (EA) count within a 50 km radius and also in same region; remote population also census EA count 2. <i>emerging drugs</i>: funding increased 3. <i>private clinics</i>: see above for population based funding 	<ol style="list-style-type: none"> 1. <i>assured access</i>: Added population in RHAs 12,14,15 for non enumerated areas 2. <i>emerging drugs</i>: Same 3. Funding for Colonel Belcher and Mewburn Veterans Centre transferred to population funding pool 4. Lloydminster Hospital Agreement funding transferred to general population based funding 5. Cost-of-Doing-Business adjustment provided for WestView (Jasper) 6. Adjustment for Diagnostic Imaging funding to compensate non Calgary/Capital regions for non availability and use of private DI Clinics

Appendix D

The following table details the component parts of the population based funding calculations. This is presented for information only, it is not intended to be a prescriptive statement of budget requirements. It precedes import/export and no loss adjustments. The equivalent funding amount is shown on page 7.

RHA	Population Based Funding										
	Inpatient	ACCS	Day/Night FFS	Emergency FFS	Clinics FFS	Continuing Care	Home Care	Private Clinics	Sub-Total	Allocation of P.P.P.	Total
1. Chinook	65,918,862	23,137,003	1,308,072	767,125	3,555,620	33,584,987	12,827,579	571,983	141,671,231	5,845,934	147,517,165
2. Palliser	37,223,679	13,398,610	716,137	433,546	2,136,495	18,534,889	7,213,165	343,535	80,000,055	2,993,183	82,993,239
3. Headwaters	27,320,224	10,524,556	561,752	353,404	1,627,291	11,558,463	4,664,399	247,919	56,858,008	2,551,337	59,409,344
4. Calgary	318,051,888	127,507,059	6,621,094	4,258,178	20,597,258	120,893,868	53,704,548	2,945,597	654,579,489	28,487,694	683,067,183
5. Region 5	22,778,726	8,218,043	453,089	268,899	1,272,734	11,061,870	4,305,601	199,364	48,558,325	2,047,645	50,605,970
6. David Thompson	75,921,544	28,386,743	1,554,936	954,216	4,445,879	32,869,202	13,923,174	667,193	158,722,888	7,254,603	165,977,491
7. East Central	46,096,920	15,856,970	862,586	500,982	2,524,896	26,397,133	9,589,614	418,499	102,247,601	3,523,151	105,770,752
8. WestView	29,735,275	12,482,613	635,417	421,550	1,946,167	9,100,569	4,447,704	273,774	59,043,068	3,039,052	62,082,120
9. Crossroads	16,114,727	5,960,965	324,902	196,702	931,887	7,206,025	2,958,463	141,456	33,835,127	1,480,786	35,315,913
10. Capital	316,749,694	120,672,057	6,507,877	3,958,585	19,667,684	132,869,447	58,696,172	2,845,723	661,967,237	27,806,487	689,773,724
11. Aspen	31,639,458	12,084,394	644,749	399,441	1,876,143	13,066,397	5,483,708	279,784	65,474,076	2,992,580	68,466,656
12. Lakeland	45,604,089	16,544,498	924,902	554,638	2,493,994	20,899,252	8,211,398	389,638	95,622,408	4,412,476	100,034,884
13. Mistahia	30,723,697	12,502,896	654,565	436,666	1,912,513	10,409,781	4,706,591	278,444	61,625,154	3,119,035	64,744,189
14. Peace	7,690,533	2,925,618	158,853	100,523	442,825	3,122,999	1,293,870	66,452	15,801,673	778,662	16,580,335
15. Keeweenok Lakes	10,229,771	4,049,912	252,358	162,919	494,767	2,102,320	1,090,070	73,090	18,455,208	1,570,685	20,025,893
16. Northern Lights	10,501,899	5,134,248	263,678	194,599	751,406	1,187,035	1,007,188	93,841	19,133,894	1,413,953	20,547,847
17. Northwestern	7,121,181	2,919,900	178,115	124,290	341,111	1,080,114	637,001	51,354	12,453,067	1,236,388	13,689,454
Total	1,099,422,169	422,306,083	22,623,080	14,086,265	67,018,671	455,944,351	194,760,245	9,887,646	2,286,048,510	100,553,650	2,386,602,160