PROVINCE WIDE SERVICES

Annual Report on Activities and Outcomes 2003

Alberta
HEALTH AND WELLNESS

REVISED JULY 2004
Province Wide Services Working Group

Preface

The Province Wide Services Annual Report is compiled by the Health Funding and Costing Branch of Alberta Health and Wellness. Special thanks to Backstreet Communications for the report design and layout for the fourth consecutive year.

The purpose of this report is to account for what is being achieved with the approximately $450 million in annual provincial government funding provided for Province Wide Services - what are the types and volumes of funded activities, and ultimately what are the health outcomes achieved and value for money.

Data is provided for Province Wide Services actual volumes and expenditures for the 2002/2003 fiscal year, and budget figures for 2003/2004 and 2004/2005. The primary data sources are: PWS annual reports from Capital Health and the Calgary Health Region; provincial hospital inpatient data; and information provided by the individual programs delivering Province Wide Services. The 2003 Annual Report also contains information on the activities and decisions of the Province Wide Services Working Group.

Each year the Annual Report provides an in-depth description of selected Province Wide Services. The Features section of the 2003 Annual Report highlights the trauma programs in both regions, and Capital Health's Pediatric Cardiac Program. We would like to express our thanks to the representatives of these programs for their time and commitment to producing these special reports.

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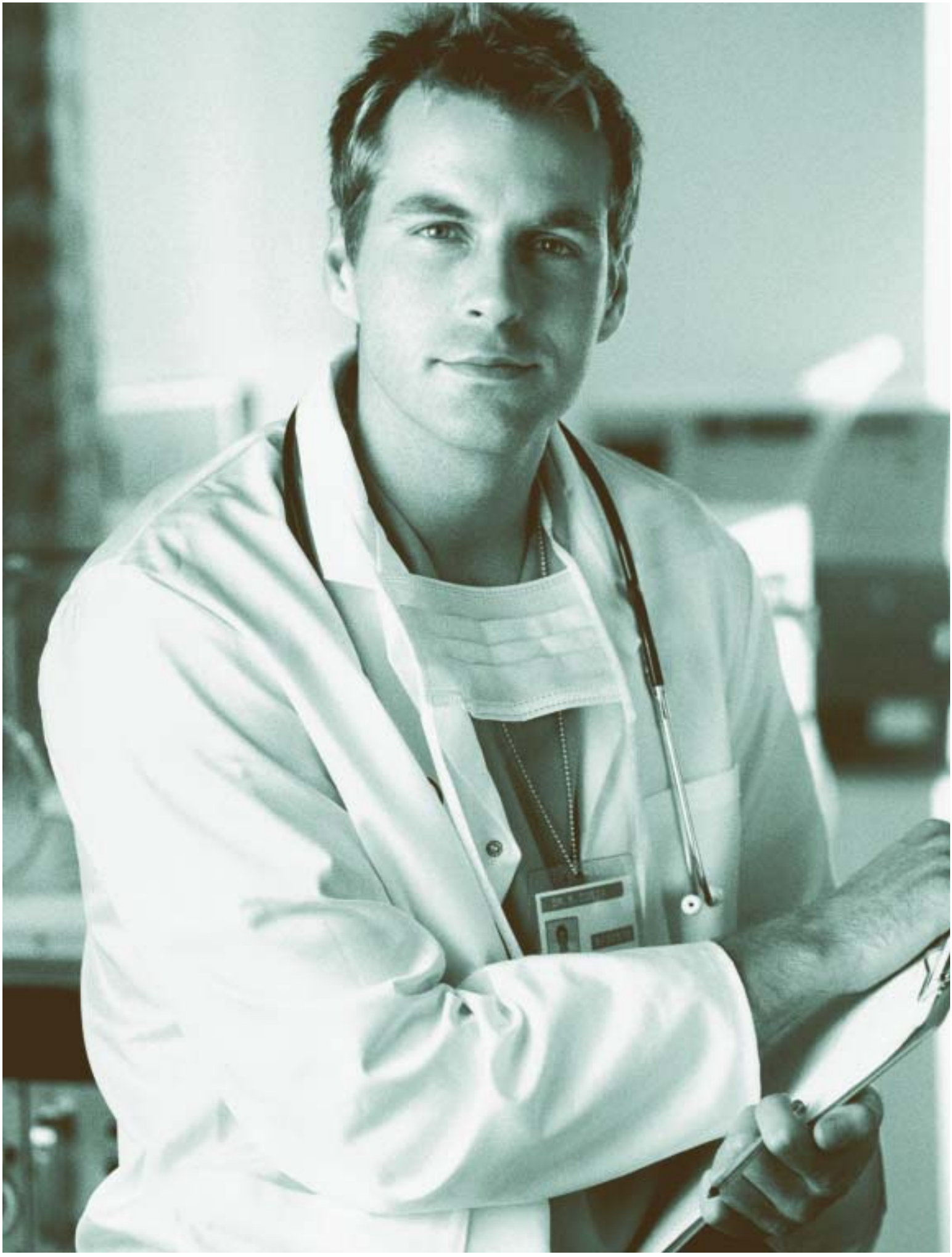


OVERVIEW OF
Province Wide Services

Province Wide Services are a set of highly specialized medical interventions. They include a number of hospital inpatient procedures - such as heart surgeries, organ and bone marrow transplants – as well as clinics and home services and high cost drugs and devices.

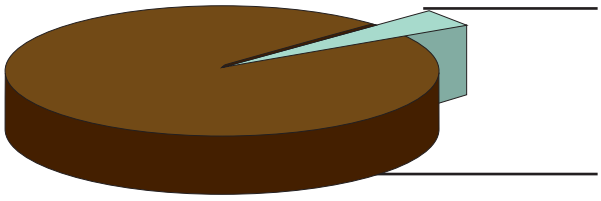
Figure 1 illustrates the high-cost nature of inpatient Province Wide Services compared to other hospital inpatient services. (Note: the costs shown are those incurred by the regional health authorities and exclude any physician fee-for-service claims).

Because of their complexity, Province Wide Services require specialized expertise and supporting infrastructure, as well as sufficient volumes to maintain provider proficiency. Thus, these services are specialized in only the Capital and Calgary health regions, but serve all Albertans.

Province Wide Services are separated from regional health authority global population funding and funded under their own regime. This ensures that special attention and support is provided to these key life-sustaining interventions, and also allows for a provincial approach to planning. By bringing all parties to the table - Capital Health, Calgary Health Region, a rural region representative, and Alberta Health and Wellness - Province Wide Services aims to improve collaboration in the provision of these key life-saving interventions.

Given the central mandate of Province Wide Services to deliver services to all Albertans, this report will present extensive information on patient region of residence.

Figure 1: Hospital Discharges - PWS cases vs. All Other Cases, 2002/2003



Province Wide Services
10,243 Total Inpatient Cases
3.1% of Total Inpatient Cases
$15,714 Average Cost/Case

All Other Cases
315,078 Total Inpatient Cases
96.9% of Total Inpatient Cases
$5,291 Average Cost/Case

Source: 2002/2003 Morbidity Data (Resource Intensity Weighting methodology used to estimate costs)

Province Wide Services Mission Statement

Province Wide Services is intended to fund a narrow band of high cost services that, because of their nature, can only be effectively provided at one or two sites in the province. Province Wide Services are planned collaboratively between Alberta Health and Wellness, the Calgary and Capital health authorities, and all health regions to ensure these highly specialized services are provided in the best interests of the province as a whole, with proper medical and financial accountability. Province Wide Services are patient-focussed, equitably accessed by all Albertans, cost effective, cost efficient and with a process to enhance quality.

INVENTORY OF CURRENT
Province Wide Services

Inpatient Services
(Detailed Case Mix Groups (CMGs) for 2003 are listed in Appendix "A")

- Organ and Bone Marrow Transplants
- Selected Tertiary Services for:
  - Trauma and Burns
  - Neurosurgery
  - Cardiovascular Procedures
  - Neonatology (Low Birthweight Procedures)
  - Oncology

Clinics and Home Services

- Dialysis and Renal Program
- Dialysis Prevention
- Pre-and-Post Transplant Activities
- Medical Genetics
- Islet Cell Transplantation
- HIV Clinics
- STD/TB Clinics
- 1-800 AIDS Hotline
- Poison and Drug Information Services (PADIS)
- Home Enteral Nutritional Therapy
- Craniofacial Osseointegraton (COMPRU)
- Children with Complex Health Care Needs
- Education Resource Centre
- Paediatric Transport

High-Cost Drugs

- Immunosuppressants (Cyclosporine, Tacrolimus, Sirolimus, Mycophenolate, Basiliximab, Daclizumab, OKT-3, ATGAM, Ondansetron and Filgrastim)
- HIV Antiretrovirals
- Human Growth Hormone for Chronic Renal Failure and Growth Hormone Deficiency
- Pulmozyme for Cystic Fibrosis
- Flolan and Tracleer for Primary Pulmonary Hypertension

High-Cost Devices

- Implanted Cardiac Defibrillators
- Cranioplasty
- Cochlear Implants

APPROACH

- Funding to support the **A**lberta **P**rovincial **P**roject for **O**utcomes **A**ssessment in **C**oronary **H**eart **D**isease

Rosehaven Provincial Program

- The Rosehaven Program (centered in Camrose) supplies special behavioural care within the continuing care system throughout Alberta

Ocular Photodynamic (Visudyne) Therapy

- Laser-activated drug (Visudyne) treatment of classic wet age-related macular degeneration

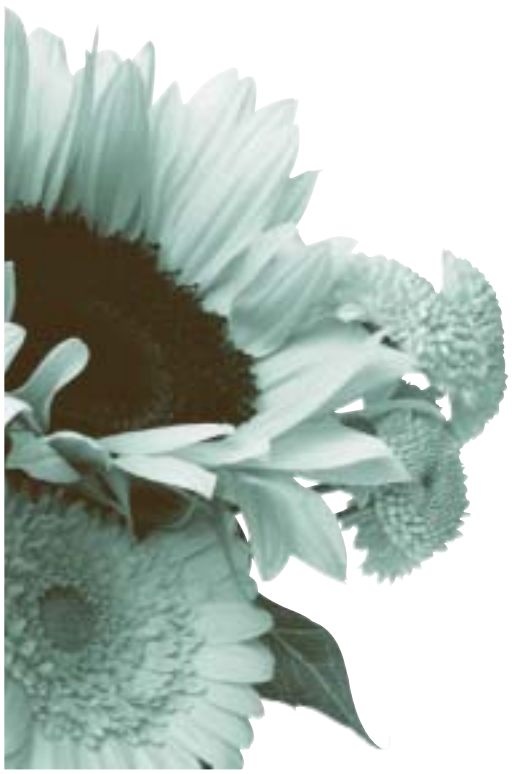
PROVINCE WIDE SERVICES
Working Group

The Province Wide Services Advisory Committee, reporting to the Minister of Health, was established in 1997 with a mandate to develop Province Wide Services (PWS) budget recommendations, review proposals for new services, ensure the development of action plans for the provision of services, and promote accountability and monitor performance outcomes for these activities.

In March 2002, the Advisory Committee was replaced with a smaller Province Wide Services Working Group reporting to the Deputy Minister of Health and Wellness. Membership consists of:

- Chair appointed by the Minister of Health and Wellness
- Chief Financial Officer and Chief Medical Officer of Capital Health
- Chief Financial Officer and Chief Medical Officer of the Calgary Health Region
- One representative from a non-urban health region
- Assistant Deputy Minister of Finance and Corporate Services for Alberta Health and Wellness
- Secretariat and staff support by Alberta Health and Wellness

(see Appendix B for current membership of the PWS Working Group)



PROVINCE WIDE SERVICES

Highlights

1 2002/2003 Results

Inpatient Services:

CAPITAL HEALTH - results for the 2002/2003 fiscal year showed Capital discharging 5,511 Province Wide Services hospital patients (excluding neuromodulation). Although comparisons to the previous year are complicated by service coding and grouping changes in 2002/2003, this appears to represent about a 3.0 per cent increase for this set of services. The increase resulted primarily from a 14.0 per cent increase in cardiac angioplasties. The actual inpatient results were 97 cases above the funded level. Again, this was attributable to cardiac angioplasties (1,927 actual cases versus 1,805 funded cases).

CALGARY HEALTH REGION - Calgary discharged 4,969 Province Wide Services inpatients in 2002/2003, representing a 5.2 per cent increase from the previous year. However, total Province Wide Services volumes were well below the funded level, by 349 cases. Most of the under achievement from funded volumes was attributable to cardiovascular procedures - 287 fewer cases than funded for. Although total PWS cardiac services provided by Calgary increased by 5.5 per cent, this was less than the generous increase in funded cardiac levels.

Dialysis:

Capital reported 722 patient years of dialysis service in 2002/2003, compared to 673 funded years. The annual growth rate was 11.8 per cent. Calgary reported 667 patient years of service, compared to 668 funded years.

2 2004/2005 PWS Budget

A Province Wide Services Budget totalling $454.3 million for 2004/2005 was announced on March 24, 2004, representing a 9.0 per cent increase from the previous year comparable budget.

3 Auditor General Review

In the Fall of 2002, Alberta Health and Wellness requested the Office of the Auditor General to verify whether the Province Wide Services process was resulting in a fair and equitable allocation of funding between the Calgary and Capital regional health authorities. The Auditor General completed its audit in September 2003, making the following recommendations:

That the Department of Health and Wellness and the Province Wide Services Working Group clarify the mandate of the Working Group and improve processes to achieve that mandate.

In response to this recommendation, Alberta Health and Wellness and the PWS Working Group developed a more detailed terms of reference (charter) describing responsibilities and processes of the Working Group in very specific terms. This charter was signed by the Calgary Health Region, Capital Health and Alberta Health and Wellness in February 2004. A copy of the charter is in Appendix C.

That the Province Wide Services Working Group review the changes to the qualifying list of PWS services arising from service grouping methodology changes.

In response to this recommendation, the PWS Working Group initiated a process to determine a new and better defined basket of PWS inpatient services. A technical sub-committee will make recommendations in 2004.

That the Department of Health and Wellness and the Province Wide Services Working Group decide what pre and post transplant services qualify as PWS services and determine their costs.

The PWS Working Group has set up a sub-committee to review funding of these services.

4 PWS Outcomes Symposium

The fourth annual Province Wide Services Outcomes Symposium was held May 26, 2003 at the Calgary Delta Airport Hotel. Chief organizer was Hyun Ji Kurek of the Calgary Health Region. Over 100 people attended the symposium. Keynote speaker was Dr. Greg Marchildon, whose résumé includes Executive Director of the Romanow Commission. Highlights of the keynote address were:

- Canada is in the top six countries in terms of health spending as a percentage of GDP.
- Phase 1 of health care reform in Canada (early to mid 1990s) was generally characterized by resource cutbacks and regionalization (Ontario the exception).
- There is little room or public appetite for tax increases in Canada and, considering the impact of public spending in other areas, it is anticipated that health care will need to learn to survive with modest annual increases despite an aging population.
- Phase 2 of reform is therefore emphasizing clinical effectiveness, re-examining patient responsibilities and incentives, addressing home care/ ambulatory care/diagnostic services, and emphasizing the continuum of care especially primary health care.
- The key to resource allocation is to understand what are the needs and potential health outcomes, not just what are the demands for health care.

PROVINCE WIDE SERVICES

Activities and Outcomes

PROVINCE WIDE SERVICES

Inpatient Services

Province Wide Services hospital inpatient services include organ and bone marrow transplants, most heart surgeries and cardiac angioplasties, complex trauma and burn cases, selected neurosurgical procedures, neonatology (low birthweight) and selected oncology services.

Total PWS inpatient services have grown at an average annual rate of 6.9 per cent over the period 1999/2000 to 2004/2005, well above the average annual population growth for the province of 1.6 per cent.

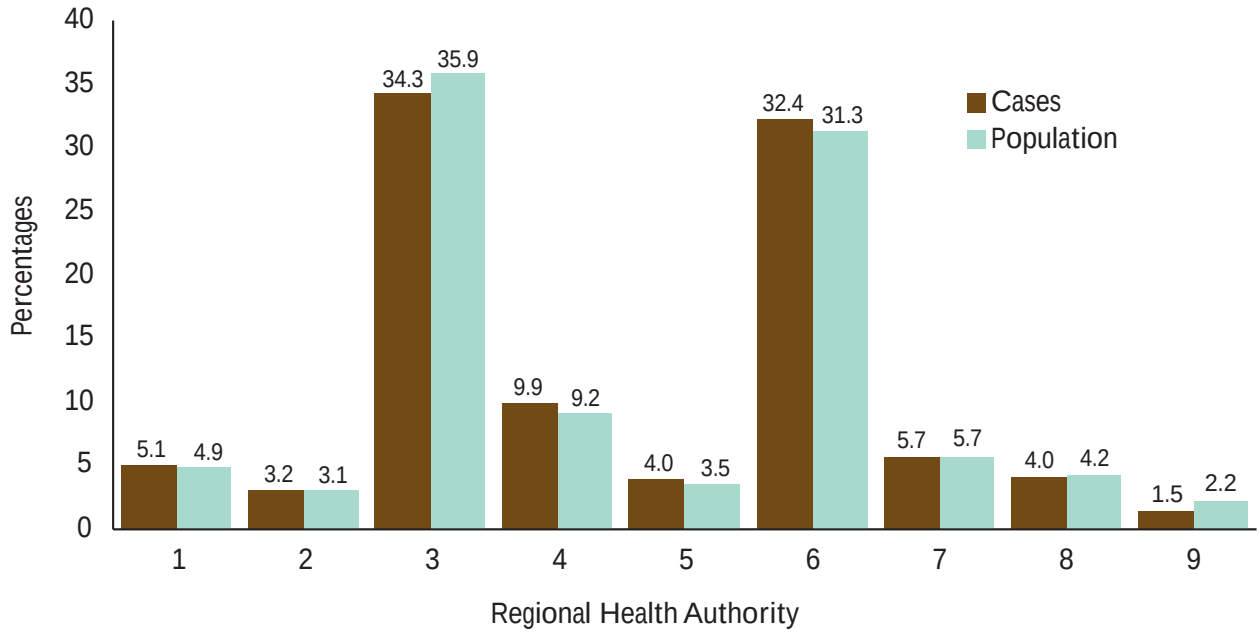
The very name 'Province Wide Services' is meant to designate that these services are available to all residents of Alberta, which is an important criteria for acceptance as a Province Wide Service. Figure 2 shows the percentage of PWS inpatient services delivered to Albertans from each of the nine current Regional Health Authorities. The service delivery volumes are shown alongside the respective RHAs' percentage of the provincial population to illustrate how closely the service delivery percentage mirrors the services received by its residents. It is notable that three out of the nine regions (Calgary, Peace Country and Northern Lights) received a smaller percentage of inpatient services than their population proportion, while the remaining six received slightly more.

Table 1: PWS Inpatient Services (current PWS list) Activity Trends

	ACTUALS				FUNDED		AVERAGE ANNUAL GROWTH
Inpatient Service	**99/00**	**00/01**	**01/02**	**02/03**	**03/04**	**04/05**	**99/00-04/05**
Organ & Bone Marrow Transplants	351	356	384	385	431	433	**4.3%**
Trauma and Burns	403	417	474	518	500	618	**8.9%**
Neurosurgery	1,716	1,793	1,773	1,769	1,883	1,897	**2.0%**
Cardiovascular	5,264	5,392	5,418	6,457	7,132	7,378	**7.0%**
Neonatology	477	605	585	611	608	649	**6.4%**
Oncology	197	207	658	704	668	775	**31.5%**
Total Inpatient Separations	**8,408**	**8,770**	**9,292**	**10,444**	**11,222**	**11,750**	**6.9%**

Source: CIHI Morbidity Data and PWS Budgets
Note: Caution should be used in interpreting the trends because of changes to both the ICD coding system and the corresponding CMG groups over this time period. Cardiovascular numbers ahve been supplemented with ambulatory care activity for those cases where the inpatient visit occurred at another site.

Figure 2: PWS Inpatient Services by Patient Region of Residence, 2002/2003



Source: 2002/2003 CIHI Morbidity Data

Table 2: PWS Organ and Bone Marrow Transplants

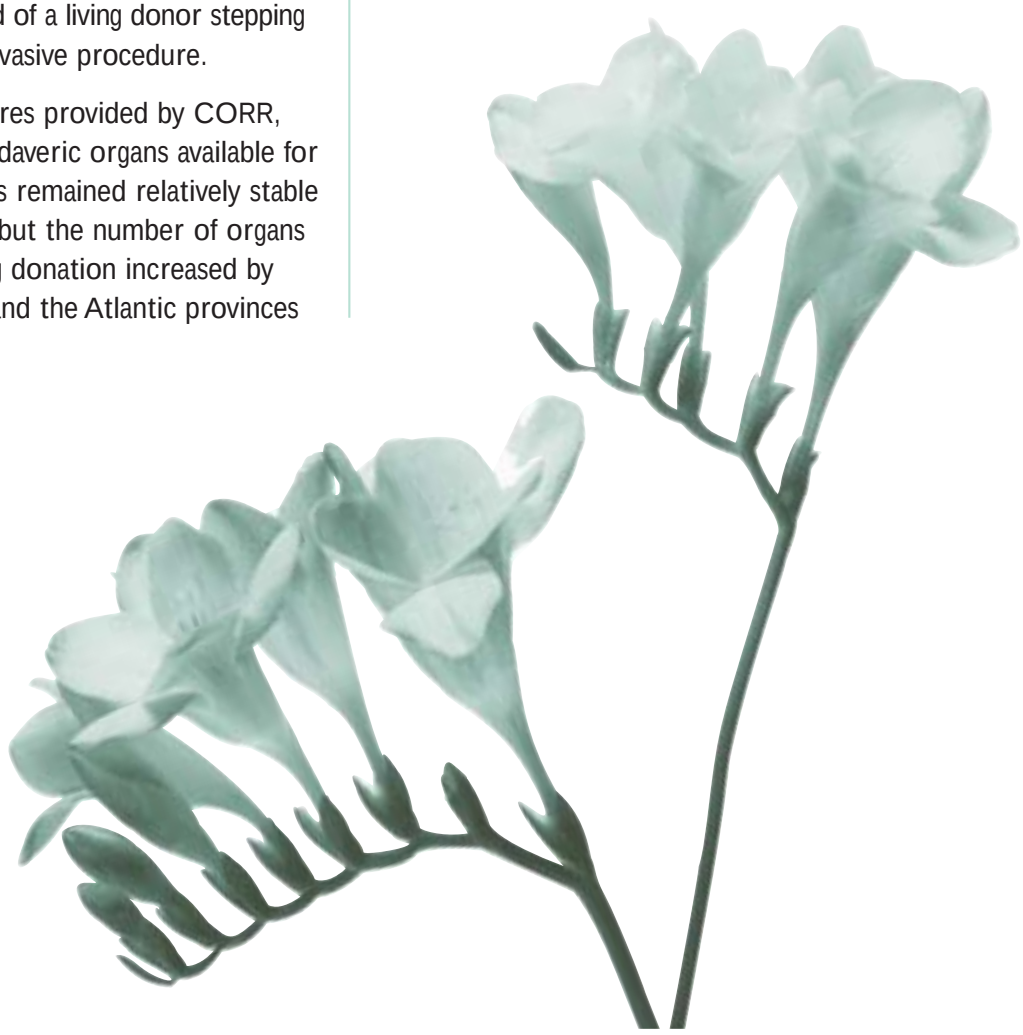
	96/97	97/98	98/99	99/00	00/01	01/02	02/03	04/05 Predicted
Heart/Lung (Capital)	35	36	33	35	50	58	55	50
Kidney (CH, CHR)	117	128	143	134	117	143	127	152
Liver (Capital)	34	33	47	55	40	45	50	54
Bone Marrow (CHR)	104	125	130	127	149	138	153	177
Total Transplants	**290**	**322**	**353**	**351**	**356**	**384**	**385**	**433**

Source: 2002/2003 CIHI Morbidity Data

Organ and Bone Marrow Transplants

The key factor impacting the number of transplants performed is availability of donors. As wait lists for all transplant types increase, there are movements underway across the country to increase donation rates. The Canadian Organ Replacement Registry (CORR) reports an increasing trend in Living Unrelated Donors who have stepped forward to donate organs to those waiting for lung, liver, and kidneys. The recent successes demonstrated by the Calgary Health Region in the use of laparoscopic surgery for living donor kidneys also holds a great deal of promise in improving the likelihood of a living donor stepping forward for this less invasive procedure.

According to draft figures provided by CORR, the total number of cadaveric organs available for donation in Canada has remained relatively stable for the past ten years, but the number of organs made available by living donation increased by 144 per cent. Alberta and the Atlantic provinces have outpaced the rest of the country with living organ donation rates of 19.3 per million population, compared to 13.8 for the country as a whole. However, cadaveric organ donations in Alberta are only 11.8 per million population, compared to the national average of 13.5. The sobering statistic behind these numbers is that there was a total of 243 people (including 80 kidney and 99 liver patients) across the country who died during 2003 while waiting for a transplant. As of December 31, 2003, there were a total of 3,916 Canadians on waiting lists for an organ transplant, with 73 per cent of those being kidney patients.



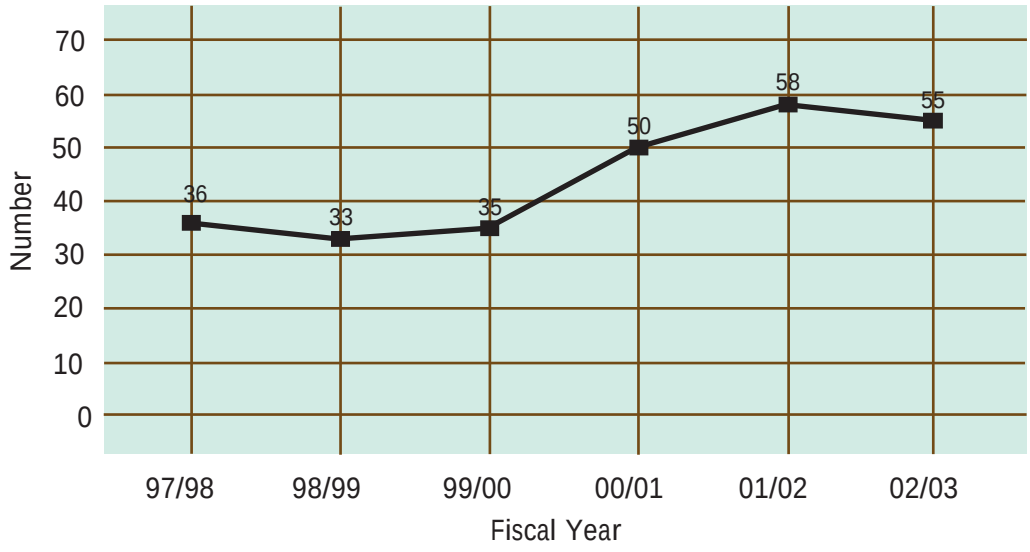
Heart and Lung Transplants

As shown in Figure 3, heart/lung transplant volumes have increased significantly since 1999/2000. This is a result of expanded efforts to obtain organs from outside Canada, and increasing success with living donor lung transplants. Recruitment of donors for both heart and lung are extremely reliant on public education stressing the importance of these life-saving gifts.

During 2002/2003, the University of Alberta Hospital performed 55 PWS heart and/or lung transplants. The two different procedures are reported together due to an oddity in coding. In fact, there were 19 heart transplants and 37 lung transplants during the 2002/2003 fiscal year, with one of those lung transplants being provided by a living donor.

The first Alberta case of lung transplantation from a living donor was performed in 2001/2002. The use of living donors for lung transplant is still a very new procedure in Alberta, but it is hoped that this new technology will allow for increased volumes in the coming years.

Figure 3: Historical Alberta Heart/Lung Transplant Volumes



Source: CORR/CIHI 2002 Report

Kidney Transplant

Kidney transplantation has proven to be an extremely successful and cost-effective way to increase the lifespan and quality of life of renal patients who would otherwise require ongoing dialysis treatment. Although transplantation and long-term provision of immunosuppression medication is costly, it pales in comparison to the ongoing cost of dialysis for patients waiting for a kidney.

There were a total of 127 kidney transplants performed in Alberta during the 2002/2003 fiscal year, down from 143 transplants in the previous year, with 54 per cent of the transplants done in Edmonton and 46 per cent in Calgary.

Availability of kidneys through either cadaveric or living donors is the greatest limiting factor on the number of transplants that can be performed. The number of family members and close friends who have stepped forward to donate a kidney for their loved ones has continued to grow. In 2002/2003, living donors accounted for 37 per cent of all kidneys made available for transplant in the Province. The advent of the less invasive laparoscopic kidney procurement in Calgary continues to hold great promise for increasing the numbers of living donors. During 2002/2003, the Calgary Health Region performed 18 laparoscopic kidney procurement procedures on living donors, up from the 6 they performed in their first year (2001/2002) of using this technique.

Table 3 shows the health region where the kidney transplant recipients resided.

Table 3: 2002/2003 Kidney Transplant Recipients - Region of Residence

Health Region			
Region 1	6	Region 6	45
Region 2	4	Region 7	5
Region 3	46	Region 8	3
Region 4	15	Region 9	3
Region 5	1	Total	128

Source: CIHI 2002/2003 Morbidity File

Liver Transplant

All liver transplants in the Province are performed at the University of Alberta Hospital site. Figure 4 illustrates liver transplant volumes since 1994/1995.

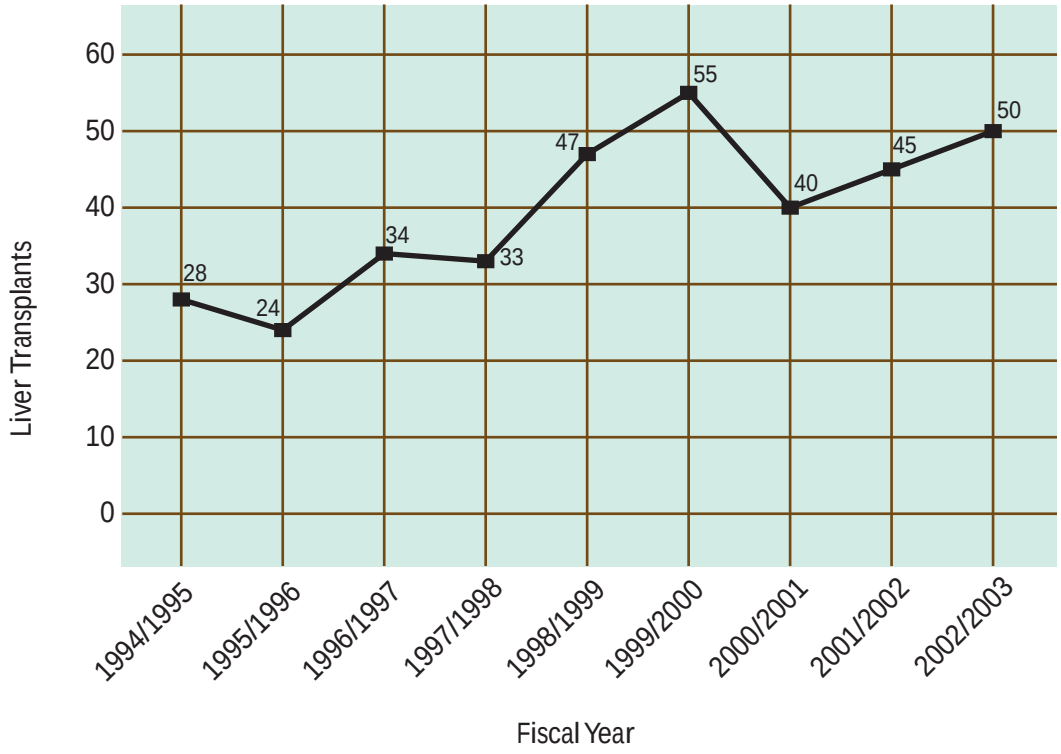
Although the human body only contains a single liver, living donation of a split liver is possible. In 2002/2003, Capital Health procured 8 partial livers from family members or friends of the transplant recipient.

As of March 31, 2002, there were a total of 43 Albertans waiting for liver transplants.

Additionally, as the University Hospital serves several other adjacent provinces and territories, they also manage a wait-list of people from outside the province. The wait-lists have experienced a substantial increase over the years.

Table 4 show the distribution of liver transplant recipients across Alberta. Relative to their population, Capital, David Thompson and Aspen regions had a high number of liver transplants for 2002/2003.

Figure 4: Liver Transplant Historical Activity



Source: CIHI Morbidity Data

Table 4: Liver Transplants Recipient Region

Health Region			
Region 1	1	Region 6	24
Region 2	0	Region 7	3
Region 3	12	Region 8	2
Region 4	7	Region 9	0
Region 5	1	Total	50

Source: CIHI 2002/2003 Morbidity File

Bone Marrow Transplants

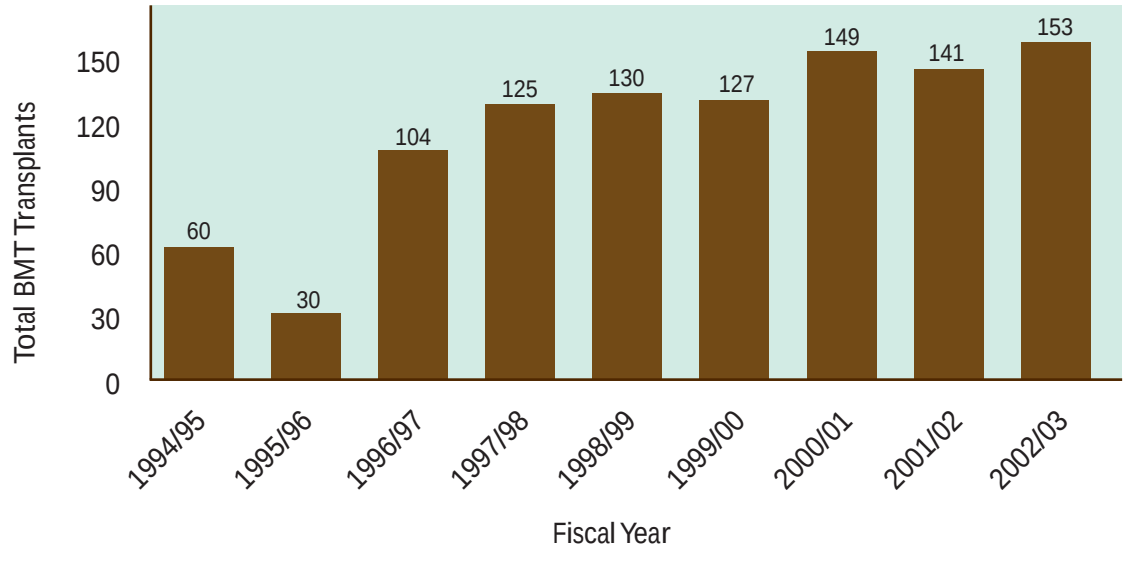
The Calgary Health Region performs all PWS-funded bone marrow transplantation (BMT) in Alberta. The adult inpatient procedures occur at the Foothills Hospital, with most of the outpatient pre and post transplant services provided through the Tom Baker Cancer Centre. Approximately 12 per cent of patients are pediatric cases, with both the inpatient and outpatient activity performed through the Alberta Children's Hospital.

In 2002/2003 there was a 7.8 per cent increase in total bone marrow transplants. The transplant increases are attributable to increased allogenic transplants using marrow provided by the registry donor systems in the United States and Germany.

Bone marrow transplantation can be conducted using marrow from either an autologous or allogenic source. An autologous transplant is when the person who donates is the same as the person who receives the tissue. In this case, the marrow is removed from the cancer patient prior to radiation and/or chemotherapy, and then returned once those therapies are completed. All autologous bone marrow transplants in Alberta are only performed by the Calgary Health Region with funding from Province Wide Services.

In an allogenic transplant, the marrow is retrieved from another donor who has been deemed to be a good match on a variety of genetic and laboratory tests. Allogenic transplants for residents

Figure 5: PWS Bone Marrow Transplants, 1994/1995 to 2002/2003



Source: CIHI Morbidity Data

of Northern Alberta are performed by the Cross Cancer Institute in Edmonton and funded through the Alberta Cancer Board. Allogenic transplants for residents of Southern Alberta are performed by the Calgary Health Region and funded through Province Wide Services. Regardless of where the transplants occurred, and whether they were autologous or allogenic, the follow-up for these patients is primarily performed and funded by the Alberta Cancer Board.

Trauma and Burns

The trauma programs of both Capital Health and the Calgary Health Region have undergone significant changes to their service delivery in the past 2 years. These programs are highlighted in the Special Features section of this Annual Report.

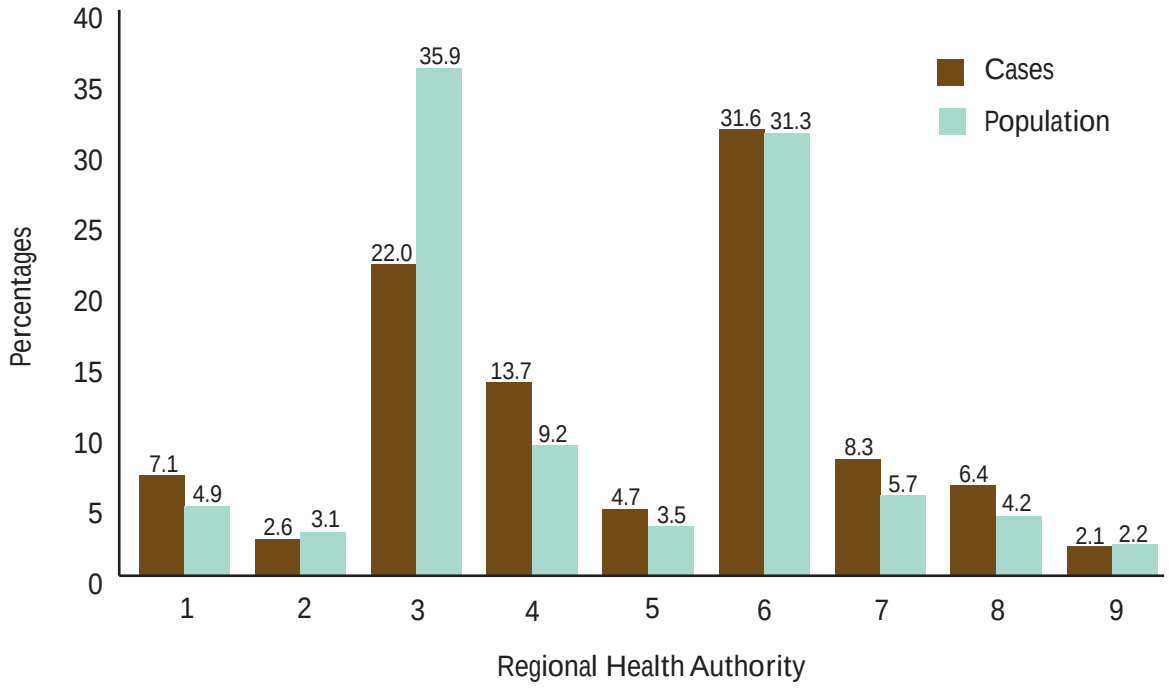
Province Wide Services funding is directed towards the most severe burn and trauma cases. In many cases, caring for these patients is a long-term and costly activity for the 2 urban health regions, involving hospitalization in intensive care, expensive treatments and lengthy rehabilitation before the patient can be discharged. In the case of burns, it is not uncommon for a patient's hospital care to exceed $100,000 and involve dozens of different clinical professionals over the course of the hospital stay. Trauma services may include procedures on the spine, intracranial surgery, tracheostomies and gastrostomies for patients who have sustained a traumatic injury.

Table 5: PWS Trauma and Burns Services By Recipient Health Region, 2002/2003

Health Region			
Region 1	33	Region 6	148
Region 2	12	Region 7	39
Region 3	103	Region 8	30
Region 4	64	Region 9	10
Region 5	22	Total	468*

Source: CIHI 2002/2003 Morbidity File
*includes 7 cases which did not have a home RHA identified

Figure 6: Trauma and Burn Procedures by Patient Region of Residence



Source: CIHI 2002/2003 Morbidity Data

Budgeting for this area is challenging because of the unpredictability of volumes and types of cases. In 2002/2003, Calgary and Capital were funded for 243 and 262 trauma and burn cases, respectively. By the end of the fiscal year, Calgary had seen 185 cases, while Capital served 283 patients. This was a decline for both regions from the previous year. The wide fluctuations can very quickly impact regional budgets and expenditures in the order of millions of dollars.

The trauma and burn cases highlight the need for prevention. Many of these injuries occur in workplaces, in motor vehicle collisions and during recreation activities. All activities aimed at reducing preventable injury should be encouraged because the long-term impact on society extends far beyond the initial hospitalization. For many of these patients, recovery can take years of rehabilitation and directly impact their quality of life forever.

Table 5 and Figure 6 illustrate the home region where PWS trauma and burn patients originated during 2002/2003. For this year, the largest number of trauma and burn patients, on a per capita basis, were from Region 8 (Peace Country), Region 4 (David Thompson) and Region 7 (Aspen).

Neurosurgery

Neurosurgery Province Wide Services include craniotomies, intracranial vascular procedures, ventricular shunt revisions, adrenal and pituitary procedures and spinal procedures. As for other Province Wide Services, these tertiary neurosurgery cases require highly specialized facilities, surgeons and other health professionals to be safely and effectively carried out.

During 2002/2003, a total of 1,769 Province Wide Services neurosurgeries were performed, about the same number as in the previous year. The volumes performed by Capital Health and Calgary Health Region were quite similar for ventricular shunt revisions, adrenal and pituitary procedures and craniotomies. However, Capital Health performed 75 per cent more spinal procedures (CMG 003) than Calgary Health Region, and 15.5 per cent more extracranial vascular procedures.

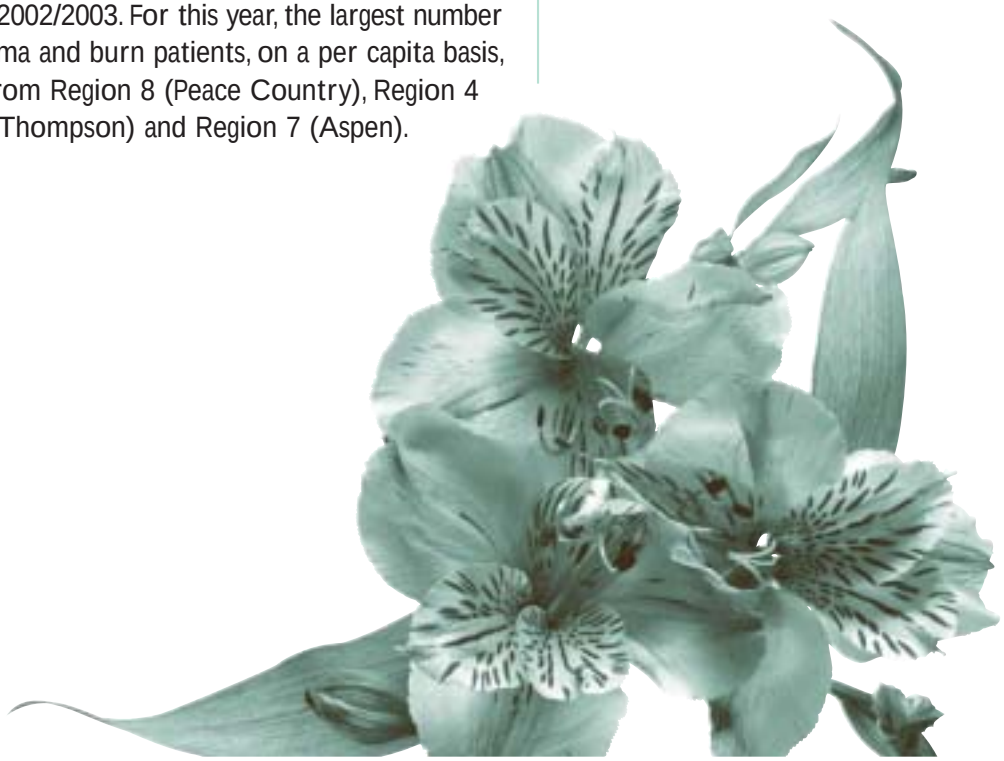


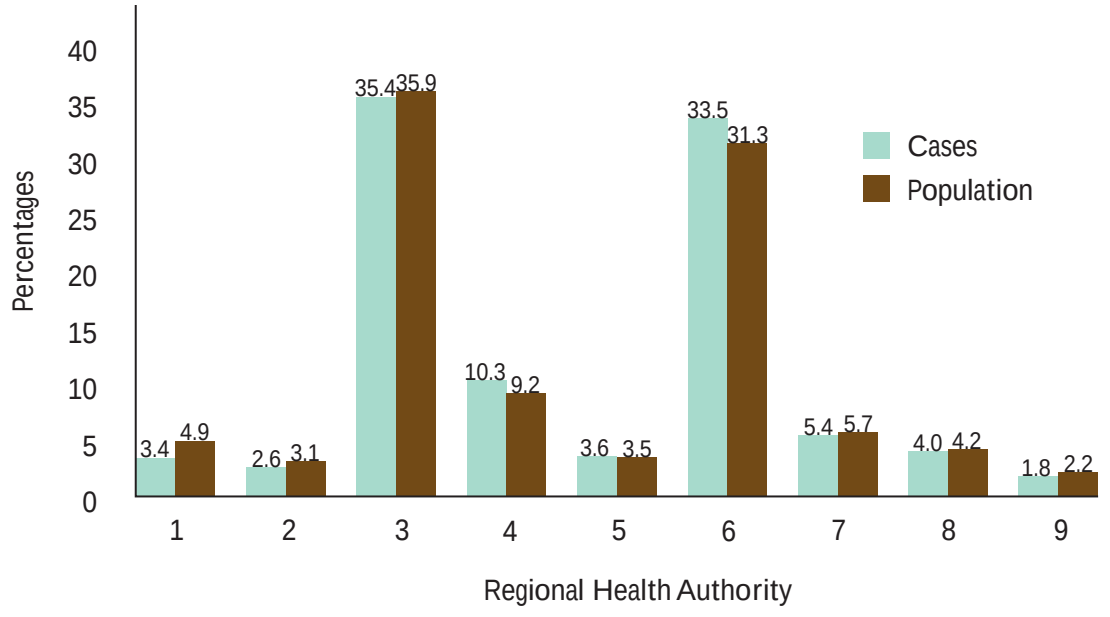
Table 6 and Figure 7 show the 2002/2003 distribution of Province Wide neurosurgery services by recipient health region. The three regions whose neurosurgery services exceeded their population share were Capital, David Thompson and East Central.

Table 6: PWS Neurosurgery Services by Recipient Region, 2002/2003

Health Region			
Region 1	60	Region 6	586
Region 2	45	Region 7	95
Region 3	620	Region 8	70
Region 4	181	Region 9	31
Region 5	63	Total	1,769*

Source: CIHI 2002/2003 Morbidity File
*includes 18 cases which did not have a home region identified

Figure 7: PWS Neurosurgery Services by Patient Region of Residence



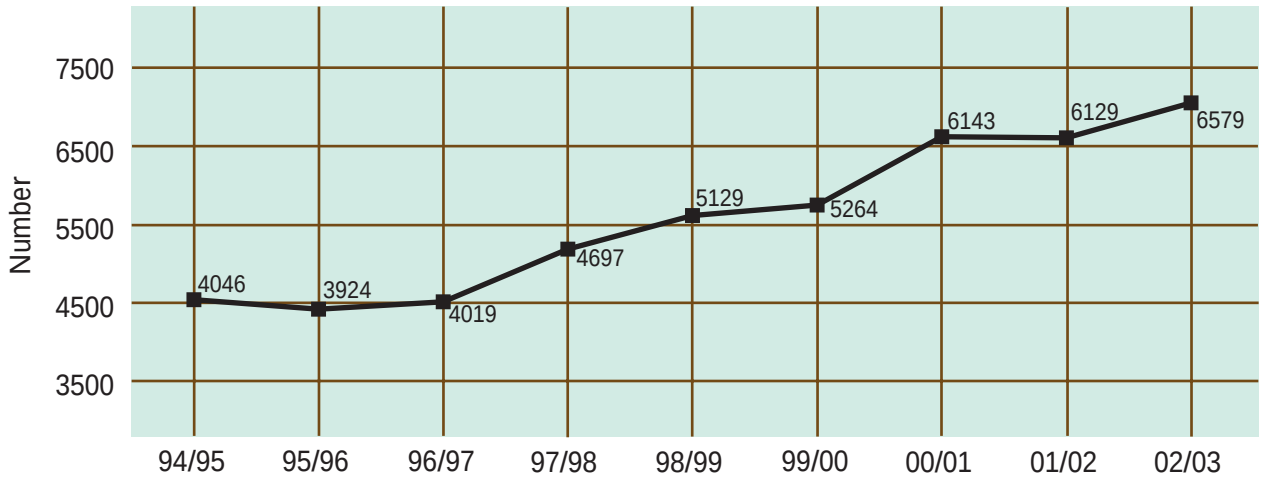
Source: CIHI 2002/2003 Morbidity Data

Cardiovascular Services

Cardiovascular disease is a leading cause of death in Canada. Disease prevention strategies have targetted obesity, smoking, diabetes, high cholesterol, high blood pressure and physical inactivity as major risk factors that must be addressed before we will see decreases in disease prevalence. As long as the core risk factors and disease prevalence continue to grow, it is anticipated that the need for the costly, life-saving cardiovascular services will continue to grow at a rate exceeding general population growth.

Coronary bypass grafts, angioplasties and open heart surgical procedures constitute most of the Province Wide Services cardiac treatments. Figure 8 demonstrates the growth in all PWS cardiovascular services. The growth trend over time is quite pronounced - an annual average growth of around 6.3 per cent over the 8 year period shown. Possible explanations for this trend also include an aging population, and increased availability of specialized staffing and ICU and surgical beds.

Figure 8: PWS Cardiovascular Procedures, 1994/1995 to 2002/2003

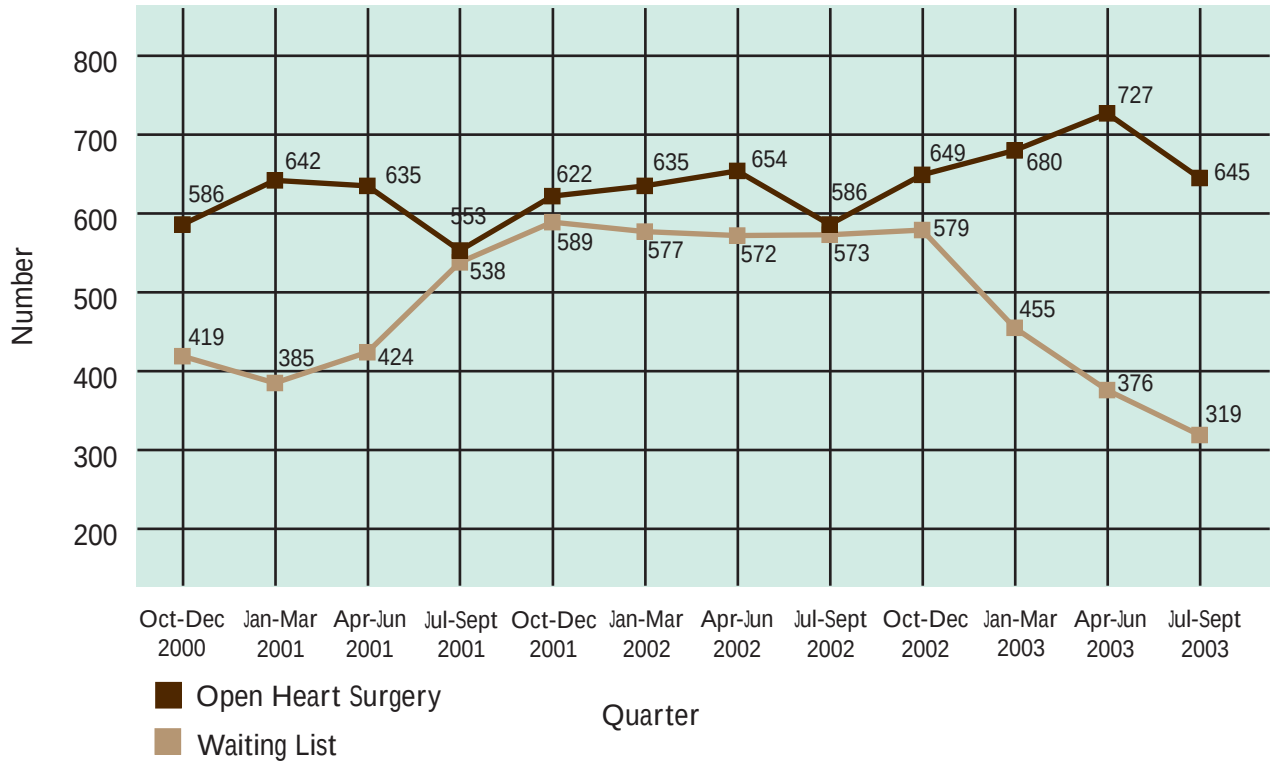


Source: CIHI 2002/2003 Morbidity Data

Cardiac Waitlists

Waitlists are commonly used as a proxy for the ability of people to access specific health services. A great deal of media attention is given to such measures because they are commonly believed to indicate the responsiveness of the health system to meeting the needs of the population. What is often misunderstood is the need for waitlists to be responsive to patients who are seen as high medical priority. A waitlist that merely reports a single number of people waiting for a specific surgery at a single point in time overshadows the responsiveness of the system to high priority cases. In the case of open-heart cardiac surgeries, it is not uncommon for extremely urgent cases to appear in a hospital who, for reasons of life and death, must be seen within minutes or hours. Such urgent cases are not even put onto the

Figure 9: Adult Open-Heart Surgery Volume and Number of Persons Waiting October/December 2000 to July/September 2003



Source: CIHI 2002/2003 Morbidity Data

waiting list because of the short period between diagnosis and surgical intervention. Those people put onto the waiting list are divided into three priority categories, but may be re-assessed at any time if their condition changes.

The most critical patients on the waitlist are those who are not stable enough to be discharged from hospital. The provincial target for these "urgent inpatients" to receive their surgeries is within one week. More stable patients may be able to return to their homes, and return for scheduled surgery at a later date. Such patients are assessed and prioritized by their physician as either "urgent outpatients" or "planned outpatients". Target wait times for these two groups are a maximum of 2 weeks to a maximum of 6 weeks, respectively.

Historically, increases in both provincial funding and surgical volumes for cardiac surgeries have not had great success in decreasing the waiting list. Nonetheless, both health regions providing these services are continuing to address issues with bed capacity and staffing in order to meet the provincial targets.

Figure 9 outlines the three-year trend in the number of cardiac surgeries performed in each quarter versus the number of people waiting for surgery on the last day of that quarter. It is remarkable to note that after many consecutive quarters of waiting list growth outpacing growth in service delivery, that there finally appears to be a downward trend in the number of people waiting for open-heart surgery. This trend appears to be consistent across three consecutive quarters, so it is hoped to be an indication that planning and budgeting at both the provincial and regional level have finally paid off. It is hoped that this downward trend might continue so that the lengthy waiting times on even the lowest priority (Priority 4 "Planned Outpatients") patients can be seen within the provincial target of six weeks.

Alberta Health and Wellness, the Province Wide Services Working Group, Capital Health and the Calgary Health Region will continue to monitor waiting times and waitlists and recommend appropriate action plans so Albertans receive the services they need in a timely manner.

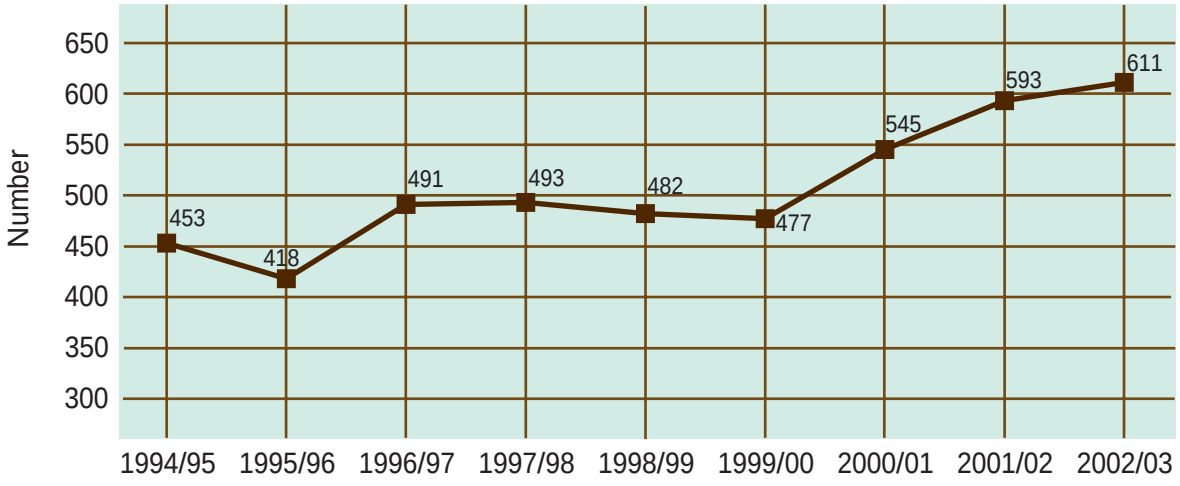
Neonatology

While medical centres across the province maintain special care nurseries that can address the vast majority of infants with extraordinary needs, very low birthweight babies, and babies with one or more catastrophic diagnoses, require specialized facilities, services and professionals that are only feasible to be provided at one or two locations within the Province. Both the Capital and Calgary health regions maintain neonatal intensive care facilities which are among the most advanced in North America.

Patient Population - risk factors contributing to low birthweight include: smoking or substance abuse during pregnancy, high or low maternal age, low socioeconomic status, low level of maternal education, poor prenatal care, pre-term birth, assisted reproductive techniques and multiple pregnancy. Technological advancements in the area of fertility treatments have been viewed as a probable leading cause for the increased number of multiple births worldwide. Such multiple births (i.e. twins, triplets, etc.) almost always result in lower birthweights, and need at least some degree of additional care before the child can be discharged from hospital.

Alberta's low birthweight (less than 2,500 grams) rate in 2000 was 6.1 per 100 live births. Although this rate has stabilized since the mid 1990s, it remains higher than it was in the mid 1980s (5.5). The increase is due to the rising incidence of

Figure 10: PWS Neonatology Trends in Alberta, 1994/1995 to 2002/2003



Source: CIHI Morbidity Data

Table 7: PWS Neonatology Services by Recipient Region 2002/2003

Health Region			
Region 1	19	Region 6	166
Region 2	20	Region 7	33
Region 3	275	Region 8	9
Region 4	52	Region 9	15
Region 5	16	Total	611*

Source: CIHI 2002/2003 Morbidity File
*includes 6 cases where the recipient RHA was not known

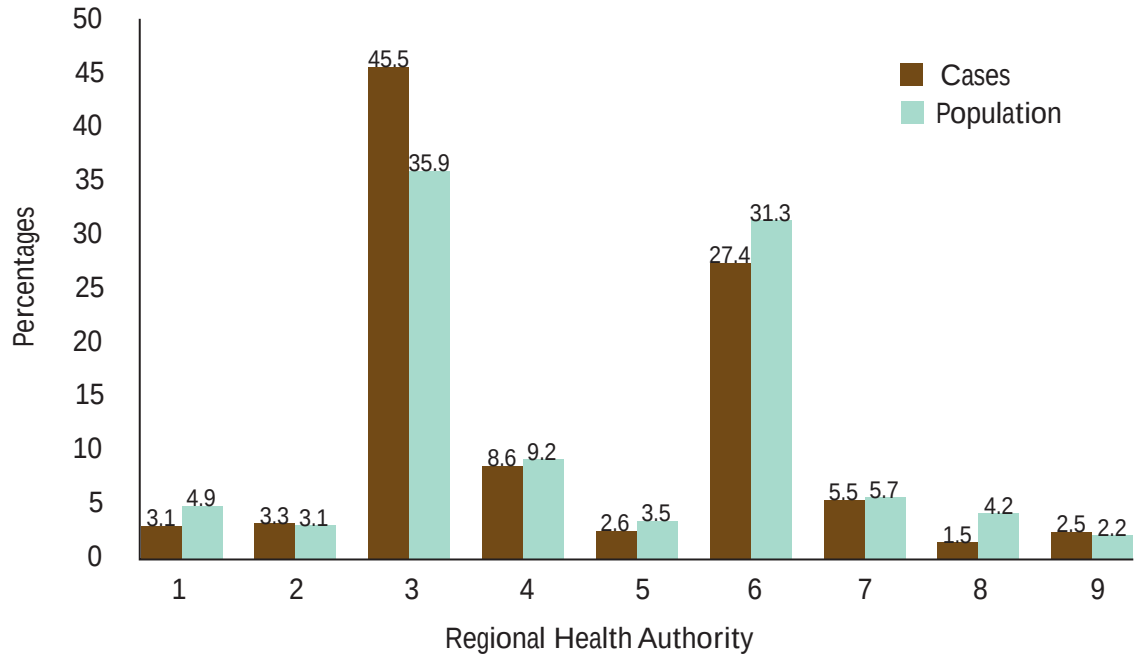
pre-term and multiple births. In 2000, 72 per cent of Alberta's low birthweight births were pre-term births, 25 per cent were multiple births, and fully one fifth were both pre-term and multiple births. According to the Canadian Perinatal Health Report 2003 (Health Canada), Alberta is slightly above the national average rate for pre-term births and for multiple births.

Services - the Alberta Children's Hospital in Calgary and the Stollery Children's Hospital in Edmonton are the primary sites for the highly specialized PWS neonatology services. This includes treatment for all newborns weighing less than 1,500 grams (3.3 pounds), and heavier neonates with catastrophic diagnosis resulting from cardiac conditions, birth trauma, metabolic disorders, organ failure or any number of genetic disorders.

Survival rates for sick and low birthweight babies have significantly improved over the past two decades due to medical advances in diagnostic and therapeutic technologies. This includes improved identification (such as by ultrasound or MRI) of problems in babies before they are born, and improved ventilation techniques.

The number of babies receiving Province Wide neonatology services has been growing at about an average rate of 3.6 per cent annually (see Figure 10).

Figure 11: PWS Neonatology Services by Patient Region of Residence



Source: CIHI 2002/2003 Morbidity Data

The 2002/2003 distribution of PWS neonatology services by recipient health region is shown in Table 7 and Figure 11. For this year, Calgary Health Region residents had much higher utilization of the neonatology services relative to their population, while the reverse was true for the Capital Health region.

Outcomes - survival rates have improved significantly over time due to medical advancements. The survival rate for premature babies weighing two to three pounds is about 95 per cent, compared to only 25 per cent survival thirty years ago when neonatal care was in its infancy. The smallest of viable premature babies, weighing less than two pounds, would have very likely died several years ago, but now have a survival rate of 75 per cent.

According to the *Canadian Perinatal Health Report* 2003, the neonatal (0-27 days) death rate in Alberta is 4.2 per 1,000 live births, versus 3.4 for Canada.

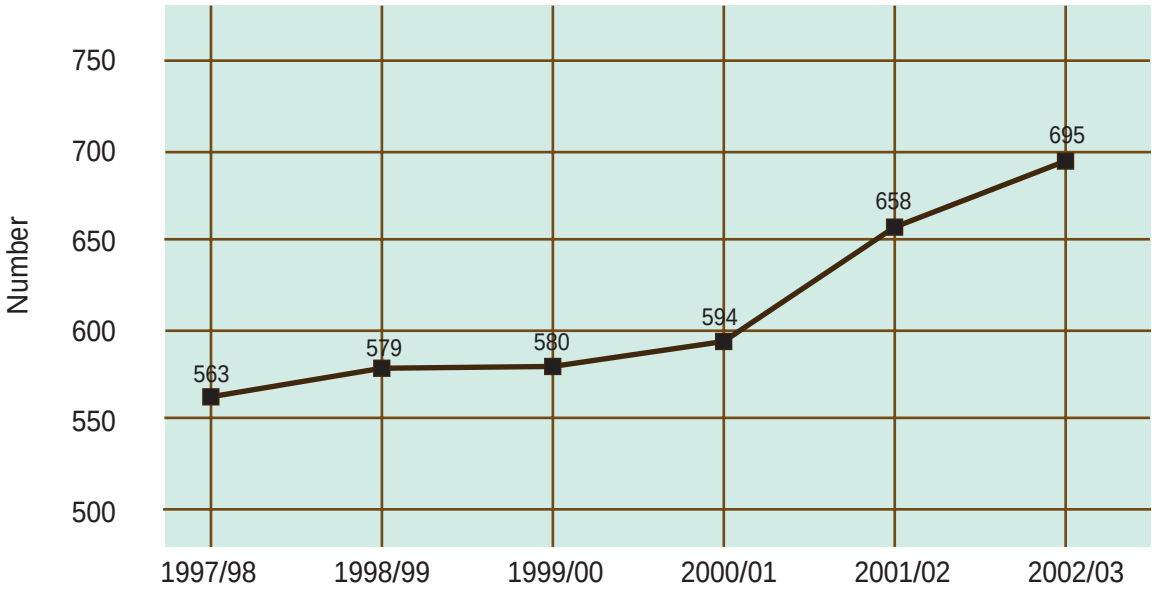
One concern is that the extremely low birthweight children who survive have high rates of disability in numerous areas, and eventually require a high level of educational support.

Oncology

Treatment of cancer patients in Alberta comes almost exclusively under the jurisdiction of the Alberta Cancer Board, which provides services through the Tom Baker Cancer Centre in Calgary, the Cross Cancer Centre in Edmonton, as well as four associate and ten community cancer centres across the Province. In some circumstances, however, cancer patients must undergo surgery that is only available through the tertiary care hospitals in Calgary and Edmonton. Province Wide Services funds these select inpatient procedures, which are restricted to a limited number of orthopaedic procedures for cancer as well as radical hysterectomies and vulvectomies, laryngectomies and glossectomies, major head and neck procedures, and lung resections.

There has been a steady increase in the oncology volumes funded through Province Wide Services, as illustrated by Figure 12.

Figure 12: PWS Oncology Inpatient Procedures, 1997/1998 to 2002/2003



Source: CIHI Morbidity Data

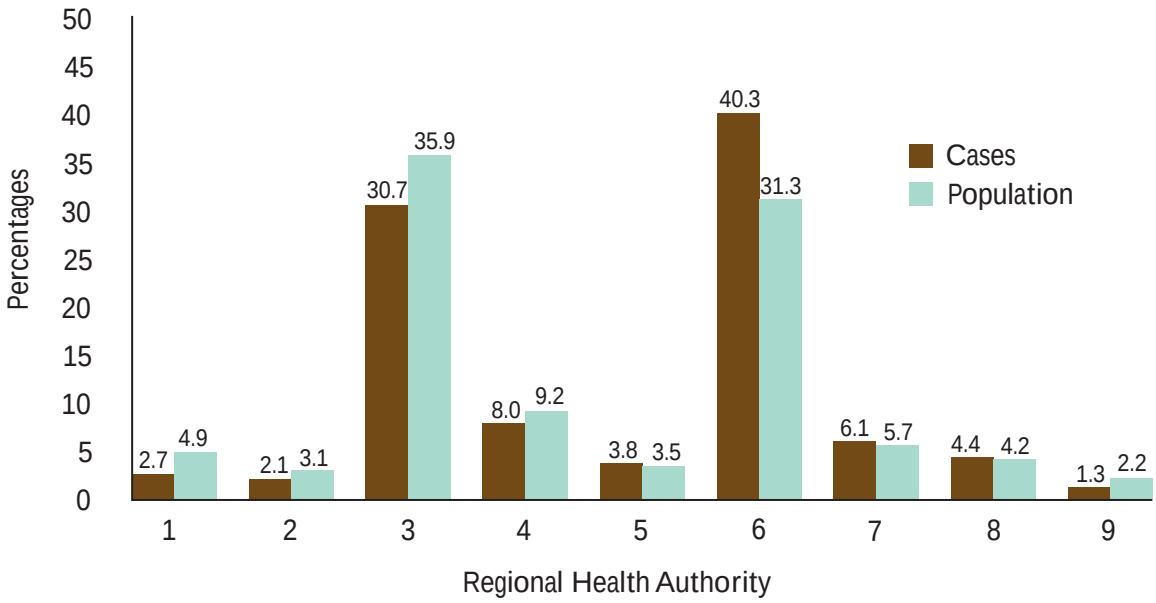
The breakdown of PWS oncology services by recipient health region in 2002/2003 is shown in Table 8 and Figure 13. The Calgary Health Region had utilization well below their population share, while services received by Capital Health residents significantly exceeded their population rate. It is important to note that these limited number of cancer surgeries are only a small component of the cancer services available to residents of Alberta and, as such, should not be interpreted as any kind of proxy for cancer prevalence in the province.

Table 8: PWS Oncology Services by Recipient Region 2002/2003

Health Region			
Region 1	19	Region 6	283
Region 2	15	Region 7	43
Region 3	216	Region 8	31
Region 4	56	Region 9	9
Region 5	27	Total	703*

Source: CIHI 2002/2003 Morbidity File
*total includes 4 cases where the recipient RHA was not known

Figure 13: PWS Oncology Services by Patient Region of Residence



Source: CIHI 2002/2003 Morbidity Data

Features

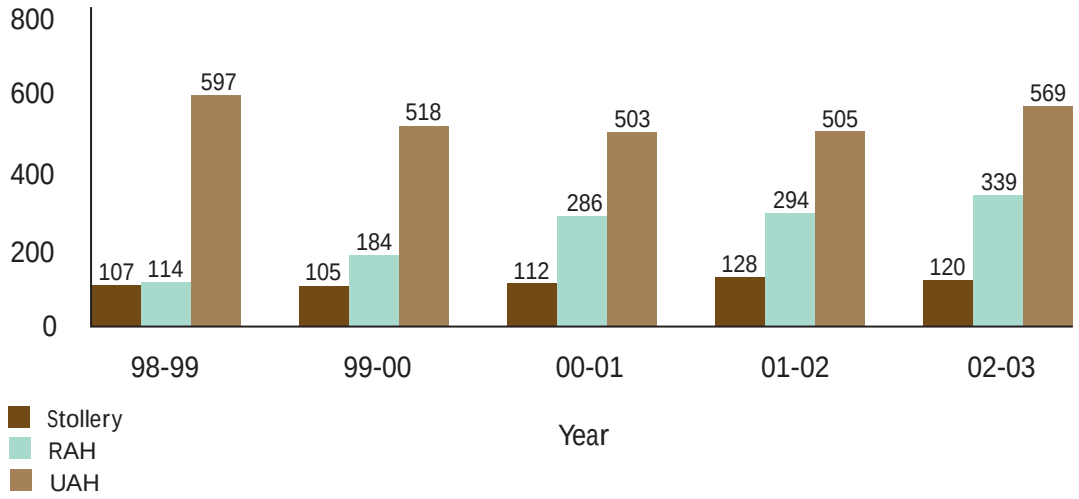
1. Alberta Trauma Program
Calgary Health Region / Capital Health Region

Injuries are the leading cause of death for people age 1 to 49 years. Studies show that injuries account for the largest number of years lost due to premature death when compared to all other diseases in the same age group (Injury Prevention and Control Services Report, Regional Trauma Services Annual Report, Calgary, Alberta 2003).

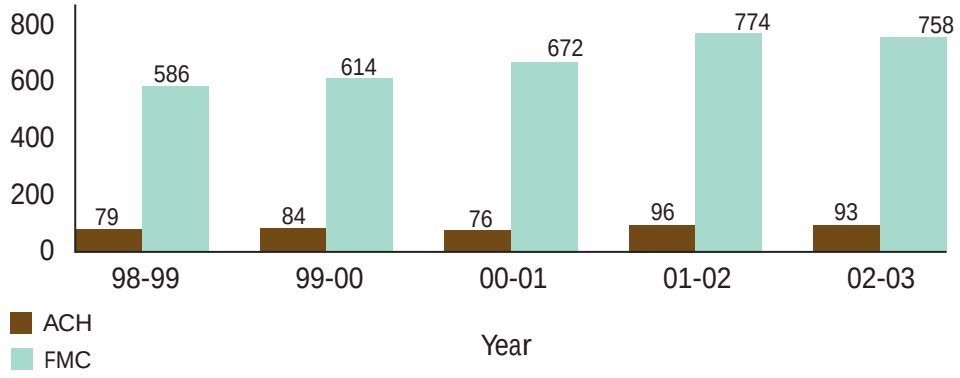
This report feature presents data and information on the adult and pediatric major trauma cases as identified by the Alberta Trauma Registry. Patients who qualify as major trauma, with burns as their primary injury, are excluded because burns are funded by Province Wide Services (PWS) separately from the trauma system.

The Trauma Registry is a computer data management and report writing package used by over 200 hospitals worldwide. As part of the Trauma Association of Canada guidelines, an accredited trauma centre must have a Trauma Registry in place. To qualify for inclusion in the Trauma Registry, a patient must have been admitted to the hospital or have died in the emergency department and have single or multiple system injuries that qualify for an Injury Severity Score (ISS) greater than or equal to 12. ISS is an anatomical scoring system that provides an overall score for injuries. The higher the ISS score, the more severe the patient's injuries. In Alberta, data is submitted to the Alberta Trauma Registry central site and compiled for submission to the National Trauma Registry. Data and reports are utilized to support local, provincial and federal quality improvement and injury prevention initiatives.

Major Trauma Admissions – Capital Health Region



Major Trauma Admissions – Calgary Health Region



Legend

RAH	Royal Alexandra Hospital
Stollery	Stollery Children's Hospital
UAH	University of Alberta Hospital
ACH	Alberta Children's Hospital
FMC	Foothills Medical Centre

These graphs include both adult and pediatric admissions. The Stollery Children's Hospital and the Alberta Children's Hospital are the pediatric trauma centres. There are two adult trauma centres in Edmonton and one in Calgary.

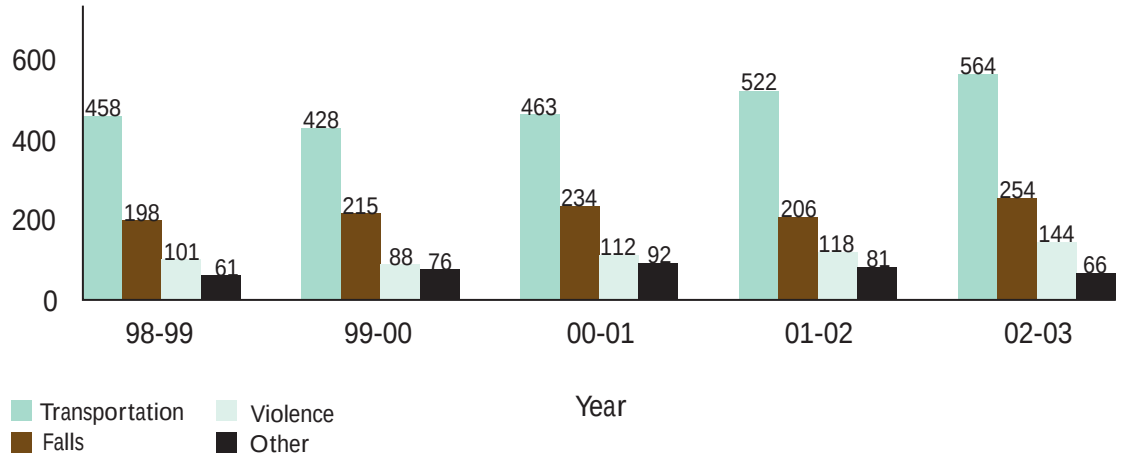
Number of Patients/ISS Scores: 5 years

Capital Health	98-99	99-00	00-01	01-02	02-03	5 Year Total
ISS 12 - 24	407	450	518	518	605	2498
ISS 25 - 40	345	301	324	330	353	1653
ISS 41 - 49	38	39	42	50	44	213
ISS 50 - 74	24	12	13	23	23	95
ISS 75	4	5	4	6	3	22
Annual Total	818	807	900	927	1028	
Calgary Health Region						
ISS 12 - 24	393	409	459	530	527	2318
ISS 25 - 40	238	262	242	272	262	1276
ISS 41 - 49	22	17	30	34	36	139
ISS 50 - 74	11	7	15	21	19	73
ISS 75	1	3	2	3	7	16
Annual Total	665	698	748	870	851	

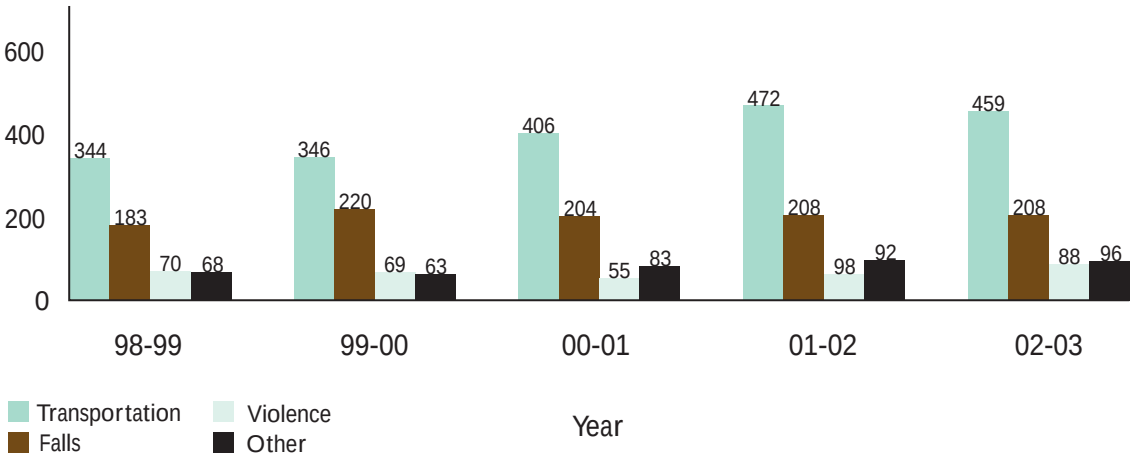
These tables provide a 5-year summary of the ISS scores and numbers of major trauma patients admitted to Calgary and Capital Health Regions. The majority of patients were in the range of ISS 12-40. The high severity of the injuries results in increased pressures on the acute care and community resources, with demands for improvements in performance, technology and efficiency.

Major trauma patients may arrive at urban or rural hospitals via emergency transport systems or private vehicle and require transfer to the appropriate trauma centres. However, a major trauma patient may also be admitted to a hospital that is not a designated trauma centre. These cases are reviewed whenever possible, and monitored for quality of care using various quality management strategies and data management systems. For example, in Calgary during 2002/2003, 44 patients with an ISS >/= to 12 were admitted and treated at the Rockyview Hospital and the Peter Lougheed Centres. Cases were reviewed at each site's Trauma Quality Improvement Committees. This data is based on identification using manual review of discharge data and does not include patients who die in an emergency ward.

Mechanism of Injury: Capital Health Region Adult and Pediatrics



Mechanism of Injury: Calgary Health Region Adult and Pediatrics



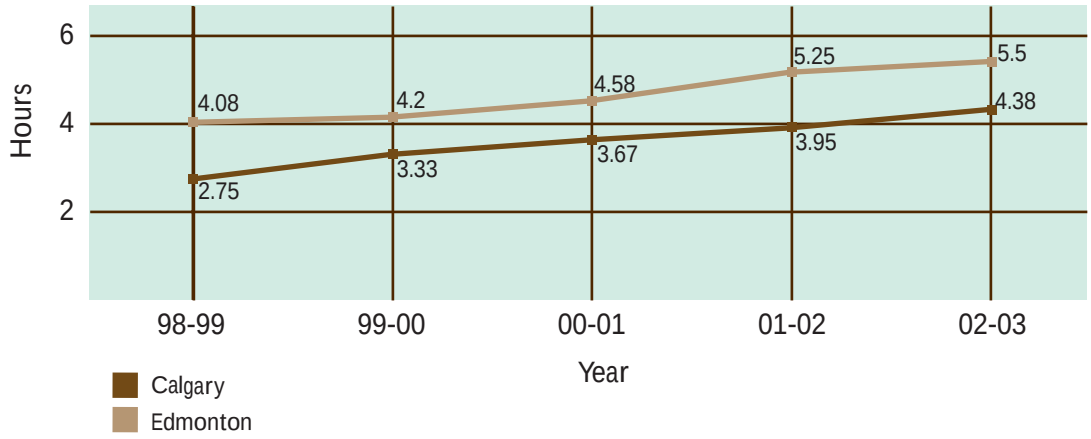
Legend

Transportation includes motor vehicle collisions, cycling incidents, vehicle/pedestrian incidents.
Falls include ground level and multi-level falls.
Violence includes assaults and self-inflicted injuries.
Other is defined as unspecified in documentation or not defined within the three catagories listed.

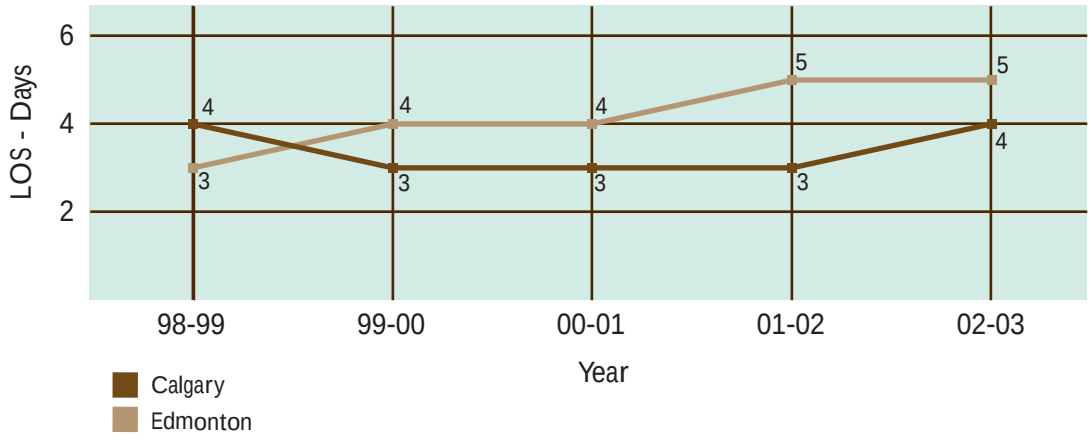
This graph shows the Mecahnism of Injury over a 5-year span with transportation as the primary cause of injury for 5 years.

Fall prevention programs in all regions may reduce the number of falls, and the new Alberta Graduated Licensing Program (start date May 2003) may reduce the injury risk for teens and new drivers resulting in major traumatic injury and hospitalizations.

ED Median LOS: Calgary Health and Capital Health Region – Trauma Centres

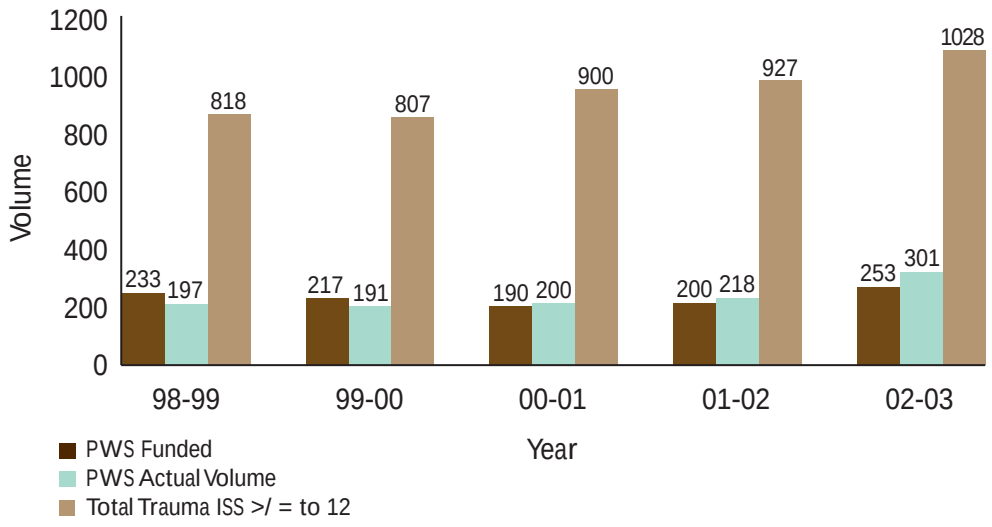


ICU Median LOS: Calgary Health and Capital Health Region – Trauma Centres

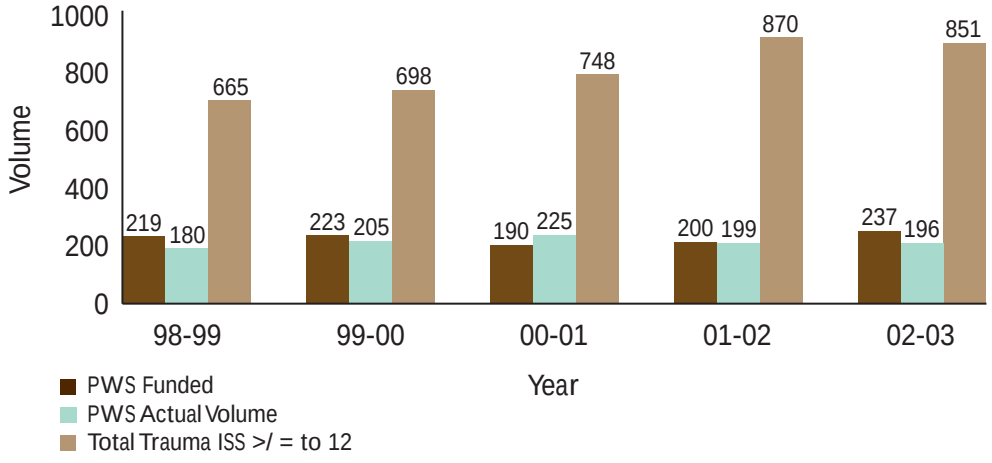


These graphs display the median Emergency Department (ED) and Intensive Care Unit (ICU) Length of Stay (LOS) for major trauma patients. Data includes both adult and pediatric patients. Both regions are working to address LOS issues and access to inpatient beds, which may impact LOS in Emergency Departments and the Intesive Care Units.

Capital Health Region Trauma



Calgary Health Region Trauma



These graphs compare PWS funding; the PWS identified actual volumes based on RGNs and CMGs (2002/2003), and the actual major trauma volumes identified through the Alberta Trauma Registry.

Future Directions

The Integrated Provincial Trauma Proposal

The Calgary Health Region, Capital Health and the Alberta Centre for Injury Control and Research (ACICR), have worked in partnership for several years to promote the implementation of the integrated Provincial Trauma Proposal (December 2001). The goal of the proposal is to develop and maintain an organized, integrated provincial trauma system that is cost effective while reducing mortality and morbidity due to injury.

This model aims to get the "injured person to the right treatment at the right facility in the shortest time". Five locations have been identified as proposed District Trauma Centres: Lethbridge Regional Hospital, Medicine Hat Regional Hospital, Red Deer Regional Hospital, Queen Elizabeth II Hospital in Grande Prairie, and Northern Lights Regional Hospital in Fort McMurray. Each identified centre strives to become a Trauma Association of Canada accredited District Trauma Centre, which includes the establishment of a trauma team, trauma registry and adequate educational and clinical resources.

Trauma Association of Canada Linkages

The Trauma Association of Canada (TAC) is a multi-disciplinary Society of the Royal College of Physicians and Surgeons of Canada. Their accreditation process is offered to institutions and systems providing care for trauma patients across Canada. The process is designed to ensure that standards for trauma care are maintained and that systems are in place to measure, evaluate and support the co-ordination and provision of expert care for trauma patients. Accreditation should occur every five years.

This designation is the recognized standard across North America and demonstrates commitment to quality care and services. Currently, there are 16 accredited Tertiary Trauma Centres in Canada with the majority in Ontario. In Alberta, the Foothills Medical Centre and the Alberta Children's Hospital achieved successful accreditation in 1998, while the University of Alberta Hospital achieved accreditation in 2002. A trauma system accreditation will occur again in Calgary in October 2004.

Report prepared by:

Capital Health and Calgary Health Region Trauma Programs

2. Pediatric Cardiac Surgery – Capital Health

Recognized as one of Canada's top pediatric cardiac surgery programs, Capital Health's Stollery Children's Hospital is Alberta's referral centre for complex pediatric cardiac surgeries including open-heart and transplant surgeries as well as very complex procedures done in very few centres.

The Stollery Children's Hospital performs the second highest number of pediatric surgical cardiac cases in Canada. In 2002/2003, the Stollery's program performed 299 pediatric cardiac surgeries, up from 266 in 2001/2002. The following table provides an overview of regional and out-of-province activity levels.

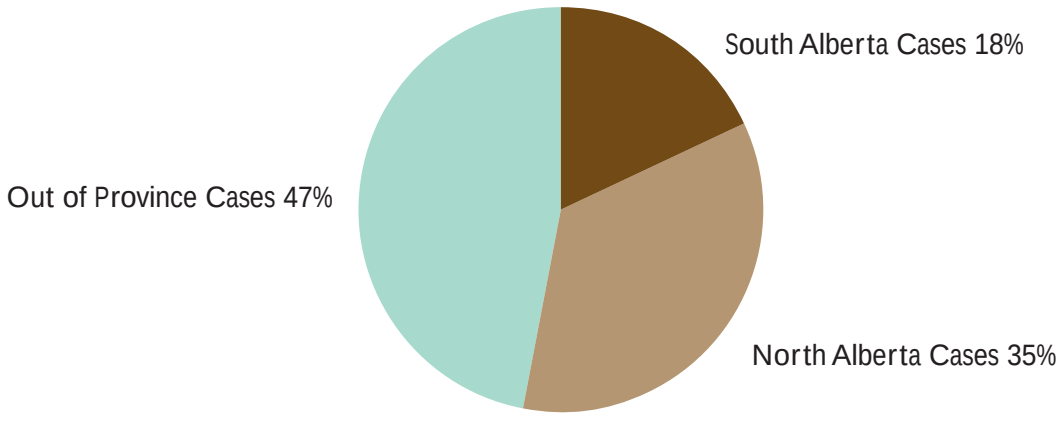
According to the annual survey of the US-based Pediatric Cardiac Care Consortium, children undergoing heart surgery at Capital Health's Stollery Children's Hospital in Edmonton have among the best outcomes in North America.

Figures for 2001 show the Stollery's surgical mortality rates are a fraction of the averages among the Consortium, which includes 47 children's heart surgery centres across North America:

- All pediatric cardiac surgery:
  1%, compared to the average of 4%
- Arterial switch:
  0%, compared to the average of 9%
- Norwood procedure:
  18%, compared to the average of 33%
- Overall newborn/baby mortality:
  4%, compared to an average of 8%

Stollery Children's Hospital Director of Cardiology, Dr. John Dyck, says the results of the US survey confirm that a consolidated centre of excellence in children's heart surgery is the right

Pediatric Cardiac Surgeries: Alberta/Out-of-Province Cases in 2002/2003



Note: Northern Alberta in this case is defined as including all of David Thompson Health Region (RHA#4)

approach for children and families from across Western Canada. "We know that outcomes generally tend to be better in centres that do larger volumes, and that's especially true for highly specialized care like heart surgery," says Dr. Dyck. "We serve a population of about five million; that's a population base big enough to support a total pediatric heart surgery caseload of about 500 to 600 a year. Its a volume large enough to include the very most complex cases in the field, supporting leading-edge care in other areas like interventional cardiology, as well as research and training. Our success is a credit to the commitment of governments and health care providers in all three Prairie provinces, and of course to the skill of Dr. Ivan Rebeyka and Dr. David Ross, and our whole team of specialists and staff."

Currently, two pediatric cardiac surgeons practice out of the Stollery Children's Hospital. Dr. Ivan Rebeyka and Dr. David Ross work in close collaboration with pediatric cardiologists, intensivists, nurse practitioners, nurses, perfusionists, respiratory therapists, and a host of others to improve the prognosis and quality of life for children born with congenital heart defects or other cardiac conditions.

To support its cardiac surgery program, members of the Stollery Children's Hospital cardiac sciences team regularly travel around Alberta to follow-up with patients. Outreach clinics are regularly scheduled in Red Deer, Grande Prairie and Fort McMurray.

In 2003, the Stollery Children's Hospital was officially made the home base for the Western Children's Heart Network (WCCHN). The WCCHN will co-ordinate the delivery of pediatric cardiac services to residents of British Columbia, Alberta, Saskatchewan and Manitoba. Albertan's will benefit from the increased inter-site collaboration in research, education and training.

Report prepared by:
Capital Health

PROVINCE WIDE SERVICES

Clinics and Home Services

PROVINCE WIDE SERVICES

Clnics and Home Services

PWS Clinics and Home Services include: renal dialysis treatment and prevention, pre- and post-transplant services, islet cell transplantation, medical genetics, HIV clinics, poison and drug information services, home enteral nutrition, children with complex health care needs, craniofacial osseointegration (COMPRU) and pediatric transport.

Renal (Kidney) Dialysis

Before the 1960s, kidney failure almost always resulted in premature death. Even though renal failure remains irreversible, significant advances have been made enabling patients to survive much longer. In particular, there has been rapid growth and improvement in dialysis treatment for those who cannot get a kidney transplant (the preferred treatment).

Dialysis Patients - Alberta Health and Wellness estimates 1,665 patient years of dialysis service for Albertans in 2004 (the total number of discrete patients is greater given that some patients will be on dialysis for less than a year). Nearly all dialysis patients are adults. A little over half of dialysis is provided to people age 60 to 79.

Patient numbers are increasing at an alarming rate. From 1999 to 2002, the number of Albertans dialyzed grew at an average annual rate of 9.1 per cent - at that pace, the number of patients requiring dialysis doubles every eight years! The rapid escalation in the number of patients with end-stage renal disease is the result of the improved survival rates combined with an aging population and an apparent rise in the incidence of renal failure.

Individuals with renal failure sometimes suddenly present as emergencies, but preferably their condition is recognized in advance by nephrology assessment following a referral by a family doctor or specialist. It is generally felt that it is best to begin dialysis before renal failure symptoms become apparent and before the patient becomes quite sick.

Services - Alberta has two renal programs: the Northern Alberta Renal Program (operated by Capital Health); and the Southern Alberta Renal Program (operated by the Calgary Health Region).

The two renal programs provide hemodialysis (circulation of the patient's blood through a machine to filter out waste products and excess

Table 9: Historical Hemodialysis Runs by Region

	97/98	98/99	99/00	00/01	01/02	02/03
Capital	50,028	56,942	63,709	69,360	79,715	91,715
Calgary	50,017	59,243	69,775	74,234	82,165	89,768

Source: CH and CHR PWS Annual Reports

water) and daily peritoneal dialysis (dialysis fluid is introduced into the abdomen where it draws waste products and excess water out of the blood using the body's peritoneal membrane as a filter). About 82 per cent of Alberta's dialysis patients are on hemodialysis, while the remaining 18 per cent receive peritoneal dialysis. Access surgery is required before the dialysis can be initiated.

Because an individual typically requires hemodialysis four hours a day, three days a week, patient service access is very important. Therefore, in addition to in-centre sites, hemodialysis is also provided through satellite sites located throughout the province. Some home hemodialysis is also provided where feasible. The renal programs also face significant planning challenges resulting from the rapid growth in renal patients, and the shift which has occurred over time to more hemodialysis and less peritoneal dialysis. Table 9 shows historical hemodialysis volumes.

The Northern Alberta Renal Program (NARP) has experienced average annual growth of 12.9 per cent in hemodialysis runs since 1997/1998. To cope with the increasing demands, NARP added a new satellite location at the Royal Alexandra Hospital in 2002, and increased the number of stations at its various sites. NARP has also pursued a nocturnal home hemodialysis service (while the patient sleeps), which should be of particular benefit to rural Albertans who travel long distances for kidney dialysis.

The Southern Alberta Renal Program (SARP) has experienced average hemodialysis growth of 12.4 per cent per year since 1997/1998. In 2002/2003, SARP opened a new satellite dialysis unit (five stations) in Crowsnest Pass, established a pilot Home Hemodialysis / Self-Care Training program in Lethbridge, and relocated a significant amount of services from the Foothills Medical Centre to the newly renovated Colonel Belcher community site.

Budget - the budget for treating renal failure is large and growing very rapidly. Province Wide Services funding for the two renal programs has increased at a remarkable average annual rate of 19.3 per cent over the last six years. Renal program funding of $38.8 million in 1999/2000 has grown to funding of $93.9 million in 2004/2005. The 2004/2005 budget was based on a program cost of approximately $58,900 per hemodialysis patient year, and $35,600 per peritoneal dialysis patient year.

Survival Rates - dialysis patients are surviving longer now than they did fifteen years ago. Hemodialysis patients aged 65+ are expected to live four years on average, while those age 45-64 can be expected to live seven years. For 2002, NARP reported that 22.0 per cent of its hemodialysis patients died. The reported mortality rate for SARP was a little lower. Patient survival statistics for Alberta's two renal programs are expected to be reported in next year's Province Wide Services Annual Report.

Quality of Life - obviously quality of life is not great for dialysis patients. There is a significant travel and time commitment, and it can be difficult to maintain employment. A 2002 study by the Institute of Health Economics found that health-related quality of life is not related to dialysis modality (hemodialysis versus peritoneal dialysis) after controlling for the effect of other factors.

Dialysis Delay/Prevention

There is good evidence that if impaired renal function is detected early, appropriate intervention can delay or even prevent the progression to end-stage renal disease.

Most end-stage renal disease is caused by diabetes, and increasingly by vascular disease which causes narrowing of the kidney's blood vessels, especially among older people. Many of the diseases leading to kidney failure can be treated successfully - for example, control of blood glucose levels for diabetics, blood pressure control for patients with hypertension, and use of ACE inhibitors. Even when kidneys begin to fail, careful control of diet and blood pressure, and timely intervention to prevent complications, can enable a person to survive in good health for many years.

Recognizing that prevention strategies should play a key role in addressing the expected continued growth in renal disease, in April 2001 Province Wide Services committed $3.2 million in new ongoing funding for dialysis prevention or delay initiatives. Further, a Renal Task Force was charged with identifying future prevention options and strategies.

Both the Calgary Health Region and Capital Health have since initiated specific prevention activities focussed on primary care. The Southern Alberta Renal Program has assembled multidisciplinary teams to work with recruited family physicians. The Northern Alberta Renal Program is engaged in a variety of activities including diabetes education, hypertension clinics, renal outreach and public campaigns.

Pre and Post Transplant

Due to the nature of organ and bone marrow transplants, the care and responsibility for these patients does not begin or end with the actual transplant event. A great deal of time and resources are required in the initial assessment for transplant eligibility. Pre-transplant activities might include organ procurement, patient assessment, work-up, lab tests, diagnostic costs, education, and counseling of patients and their families. The transplant programs are also committed to following each and every transplant patient for life after the surgery has been completed. Regular laboratory and clinical visits are required to monitor the success of the surgery over time, check for signs of rejection, and regulate medication dosages in order to prolong the life of the graft. Post-transplant activity therefore includes such things as follow-up clinic visits, lab testing and medication monitoring.

All transplant programs see sustained growth in their pre/post transplant areas as the pool of successfully transplanted individual grows and graft survival rates continue to improve with new immunosuppression therapies.

For 2004/2005, total Province Wide Services funding for pre- and post-transplant services was set at $13.66 million. Overall funding for pre- and post- transplant programs is currently under review, and consensus on a new funding scheme for this program will likely be achieved for the 2005/2006 budget.

Islet Cell Transplant

The Islet Cell Transplant Program has only been receiving Province Wide Services since April 1, 2001, and represents a cutting edge therapy that holds tremendous promise for a select group of patients with unstable forms of Type I Diabetes. Also called the 'Edmonton Protocol' (because of its' research and patient services originating at the University of Alberta Hospital in Edmonton), islet cell transplantation requires the harvesting of islet cells from a human cadaveric pancreas to be purified and then injected into the patient's liver. Unlike solid organ transplants, current technology and methods typically require more than one pancreas to be harvested in order to obtain sufficient quantities of islet cells to be implanted into a single recipient. Most patients require two transplant procedures to receive full benefit of the treatment.

In 2002/2003, 23 procedures were performed for Albertans, up from 22 in the previous year. There was a total of 17 Albertans who actually received transplants (i.e. several required 2 procedures), which is up 30 per cent from the 13 patients in 2001/2002. Although not funded through Province Wide Services, the Islet Cell Program also delivered 16 transplant procedures to 5 patients from outside Alberta. As the uptake of this new technology increases, it is fully anticipated that other centres in Canada and worldwide will begin to develop islet cell transplant programs based on the Edmonton Protocol. Since introduction of the Edmonton Protocol in 1998, the one-year success rate - excellent control of blood glucose and complete independence from insulin - is around 85 per cent.

Like other solid organ transplant programs, including whole pancreas transplants, islet cell transplant patients must commit themselves to a drug regimen of immunosuppressive therapy. Fortunately, the newest generation of immunosuppressants is proving to be more easily tolerated by patients and appears to improve the long-term prognosis of transplanted patients.

Although there is an inpatient component (1-2 days) to the transplant, most of the cost is associated with harvesting and preparing the islet cells, as well as the lifelong requirement of anti-rejection drugs, and is therefore funded outside of PWS Inpatient funding. Province Wide Services has allocated $2.947 million for 30 islet cell transplant procedures in 2004/2005. This covers all of Capital Health's operating costs, including donor acquisition, isolation lab, pre-transplant assessment clinic and drugs.

Medical Genetics

Medical Genetics is an expanding and an exciting field that involves the use of diagnostic genetic information to combat disease.

Each human cell knows what it is supposed to do by getting directions from the cell DNA. Two coiled DNA strands - one from the father, and one from the mother - make up one chromosome, and there are twenty three pairs of chromosomes in each cell nucleus. DNA is comprised of four chemical subunits which are arranged in different orders (genes) along the very long spiral DNA molecule. A gene therefore is not a single entity; it is one region of the DNA molecule in which the specific sequence (i.e. code) of DNA bases direct the cell to make particular substances necessary for human body function.

It is estimated that there are about 30,000 genes necessary for life. The Human Genome Project is a worldwide effort to record the entire human three billion DNA base sequence. This has lead to a vast increase in the amount of clinically relevant genetic information available. Genetic services are therefore playing an increasingly important role in the diagnosis, monitoring, and treatment of diseases.

Medical genetic diagnostic and counselling services are provided to Albertans through the Departments of Medical Genetics at the University of Calgary and the University of Alberta, supported by $13.5 million in Province Wide Services funding for 2004/2005. Genetic testing falls into three streams:

Cytogenetics involves examining the number, shape and staining pattern of chromosomes under a microscope to detect extra, missing or rearranged chromosomes. For example, a cytogenetics test is used to diagnose Down's syndrome, caused by the presence of an additional chromosome.

Table 10: PWS Medical Genetics – 2002/2003 Expenditure and Activity

	Calgary	Capital	Total Increase from Previous Year
Expenditure	$7.9 million	$6.4 million	16.8%
Genetic Tests			
– Cytogenetics	2,655	2,485	8.8%
– Molecular	2,367	2,542	6.9%
– Bio-Chemical	6,828	-	2.9%
– Newborn Screening	-	120,620	1.4%
Clinical Genetics Consulting			
– Patients	2,027	2,043	7.0%

Molecular genetic testing involves some of the most sophisticated techniques for testing of genetic disorders. It involves the direct detection on actual DNA molecules of inherited gene mutations that are known to be responsible for genetic diseases or increased susceptibility to a disease. Examples are the analysis of the BRCA 1 and 2 genes to identify women at risk of developing breast cancer, and gene mutations responsible for congenital heart defects, muscular dystrophies, Huntington's disease, malignant melanoma or deafness. Medical genetics staff in Alberta have developed many tests on site using in-house expertise. In so doing, they have managed to exceed the pace of development of most other laboratories in Canada.

Bio-chemical genetic testing involves studying the products of genes, not the genetic information itself. More specifically, it involves testing the enzymes in the body which may be abnormal in some way as a result of genetic differences. Phenylketonuria is an inborn error of metabolism that every province screens for, because the severe complications can be avoided through a special diet. Capital Health is responsible for the newborn screening tests for all of Alberta.

For 2002/2003, 72 per cent of Calgary's reported genetics tests were for Albertans from Calgary Health Region, while 58 per cent of Capital's cytogenetics and molecular genetics tests were for Albertans from the Capital region.

The challenge for genetics clinical service is the increased demand driven by the rapid expansion of genetic knowledge. The transfer of this knowledge to the practice of medicine will provide unique opportunities for the diagnosis and treatment of families with genetic disorders.

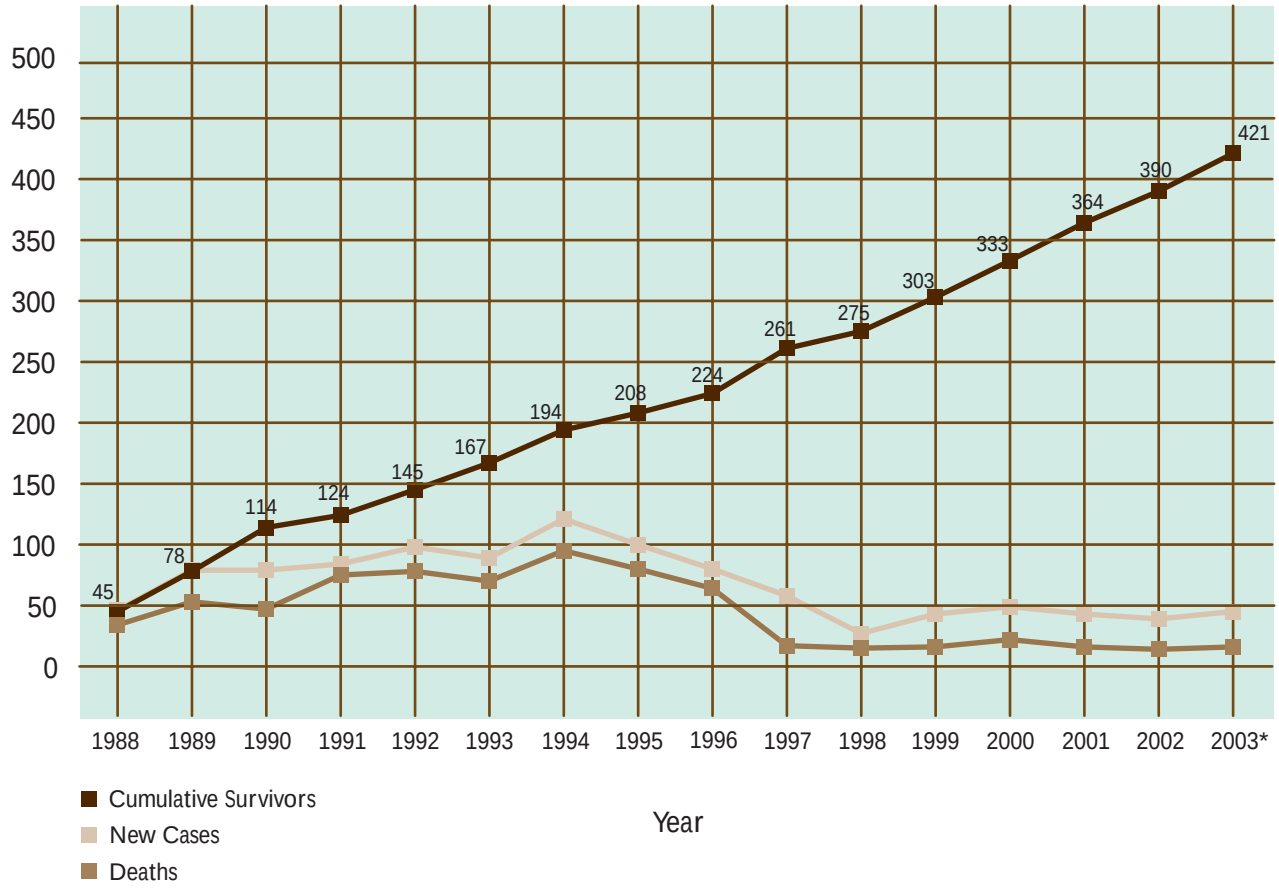
HIV Clinics

Province Wide Services provides funding ($2.74 million 2004/2005) for the Northern and Southern Alberta Outpatient HIV Clinics in Edmonton and Calgary. The goal of these clinics is to improve the quality and length of life for people living with HIV infection, and facilitate easy access to the antiretroviral agents used for staging HIV infection. These clinics also provide outpatient care and serve as centres of knowledge, research and education related to HIV.

Since the mid 1990s, the use of triple agent drug therapy with protease inhibitors has resulted in increased length and quality of life for HIV patients and a dramatic reduction in the number of newly diagnosed AIDS cases and AIDS related deaths (see Figure 14). However, this has also had a substantial cumulative impact on the total number of AIDS patients and the HIV drug budget (see PWS high cost drugs), as surviving clients remain on drug therapy for the rest of their lives.

The HIV programs report that the complexity of the issues they are dealing with has continued to be a challenge as they spend more time dealing with agency referrals for those with substance abuse issues, pregnancy, housing concerns, clients in remote areas and mental health issues. In their 2002/20003 report, Capital Health noted continued increases in patients from First Nations communities, and in the number of HIV+ pregnant women. They also noted a shift from clients moving to Edmonton to receive care to remaining in their own region. The Southern Alberta HIV Clinic reported more effective monitoring of drug expenditures resulting in increased patient adherence to their drug therapy, an optimized dispensary practice and a more accessible service for patients.

Figure 14: AIDS New Cases, Deaths and Cumulative in Alberta, 1998 to 2003



Source: Alberta Health and Wellness, Health Surveillance Branch
* figures for 2003 are still preliminary

Poison and Drug Information Service (PADIS)

Studies indicate seventy per cent of poison exposures can be safely and cost-effectively managed at home. The Poison and Drug Information Service, operating out of the Foothills Medical Centre, provides the following services through its three main units:

- the *Alberta Poison Centre* offers information, direction and advice on poisonings to the general public and to health professionals (the two most common poisonings are from over the counter pain medicine/fever treatment, and household cleaning products);
- the *Drug Information Service* offers information on drug therapy to health professionals; and
- the *Toxline* provides advice and information on toxins in the workplace to employees and workers in Alberta hospitals.

PADIS also identifies and tracks trends, groups at highest risk, and high risk toxins, for use in education and prevention initiatives.

PADIS has witnessed a downward trend in call volumes (see Table 11). The decline in poison calls is the result of lower numbers in the at-risk preschool population, and perhaps less awareness in the general public. A lack of awareness is believed to be the cause of a similar drop in calls from health professionals. The downward drift in drug information service calls is attributed to the canceling of the PADIS newsletter due to staffing difficulties. To address the apparent awareness issues, a public awareness campaign was targeted at Northern Alberta in the fall of 2002, and at Southern Alberta in the spring of 2003.

Table 11: PADIS Incoming Calls

	Number of Incoming Calls				
	1997/98	1998/99	1999/00	2000/01	2001/02
Poison Information	31,142	29,305	28,813	27,762	26,988
Drug Information	7,148	6,823	6,144	5,359	4,810
Occupational Toxicology	1,422	1,333	1,217	922	803

Source: CHR PWS Annual Reports

Home Enteral Nutrition

Enteral nutrition therapy is a means of providing food to adults or children who, for any number of medical reasons, are unable to eat, swallow properly, or suffer from another disorder preventing them from ingesting food by normal means. In this therapy, the nutritional replacement (approximately the consistency of a milkshake) is injected into the stomach through a tube that is either temporary (nasogastric tube inserted through the nose) or more permanent (gastrostomy tube through the abdominal wall into the stomach). The benefit of this home-based care program is that it reduces the need for hospitalization, thereby enhancing the quality of life for clients and reducing the overall costs of the health care system.

PWS funding for this program has been increased from $3.0 million in 2002/2003 to $3.38 million in 2004/2005, and to $4.05 million for the upcoming 2004/2005 budget year. Table 12 shows the growth in patient volumes over the past six years. Changing technologies and increased use of disposable supplies has added to the budget requirements.

Over the six-year period, Capital Health has seen a 133 per cent increase in total patients receiving enteral therapy, while Calgary has had a 45 per cent increase.

Table 12: Home Enteral Nutrition Patients, 1997/98 to 2002/2003

	Capital		Calgary	
	Paediatric	Adult	Paediatric	Adult
1997/98	206	206	304	155
1998/99	282	227	313	221
1999/00	356	327	360	265
2000/01	424	375	385	273
2001/02	455	423	420	274
2002/03	511	450	381	288

Source: CH and CHR PWS Annual Reports

COMPRU

The Craniofacial Osseointegration and Maxillofacial Prosthetic Rehabilitation Unit (COMPRU) of Capital Health performs highly specialized reconstructions of the head and neck. The program has been a leader in this area, as well as a leader in utilizing a comprehensive quality management system. In 2002, the world-leading manufacturer of craniofacial implants designated COMPRU as the first Centre of Excellence.

Province Wide Services only funds COMPRU for the high-end osseointegration procedures - the use of osseo (bone) integrated implant biotechnologies for prosthetic noses, eyes and ears. Funding was increased from $1.2 million in 2003/2004 (mostly bone anchored hearing aids) to $1.9 million in 2004/2005. The large increase is intended to help cover COMPRU's intraoral osseointegrated implant care (mostly jaws) for head and neck cancer and complex trauma patients. These services help facially disfigured patients lead a normal life.

For 2002/2003, the number of reported new osseointegration Alberta patients remained at 38, with 29 of these being recipients of bone-anchored hearing aids. COMPRU's costs, however, are escalating from the cumulative effect of maintaining previous patients. Once an implant is surgically placed, both the implant and facial prosthesis attached to it must be maintained on a lifetime basis. COMPRU reported 449 osseointegration visits (about 9 per week) in 2002/2003, along with 928 continuing care (osseo and non-osseo integration) visits (about 18 per week).

COMPRU wait times continue to be long. COMPRU reported 64 patients waiting for initial assessment at year end (April 1, 2003), with a wait time of up to five years depending on the case type. For patients who have had a full work-up and are just waiting for an operating room to become available, the wait time for a bone anchored hearing aid was six months, while extra and intraoral patients were waiting six to twelve months. There were also 40 extraoral patients requiring a prosthesis retreatment, with a wait time of up to three years.

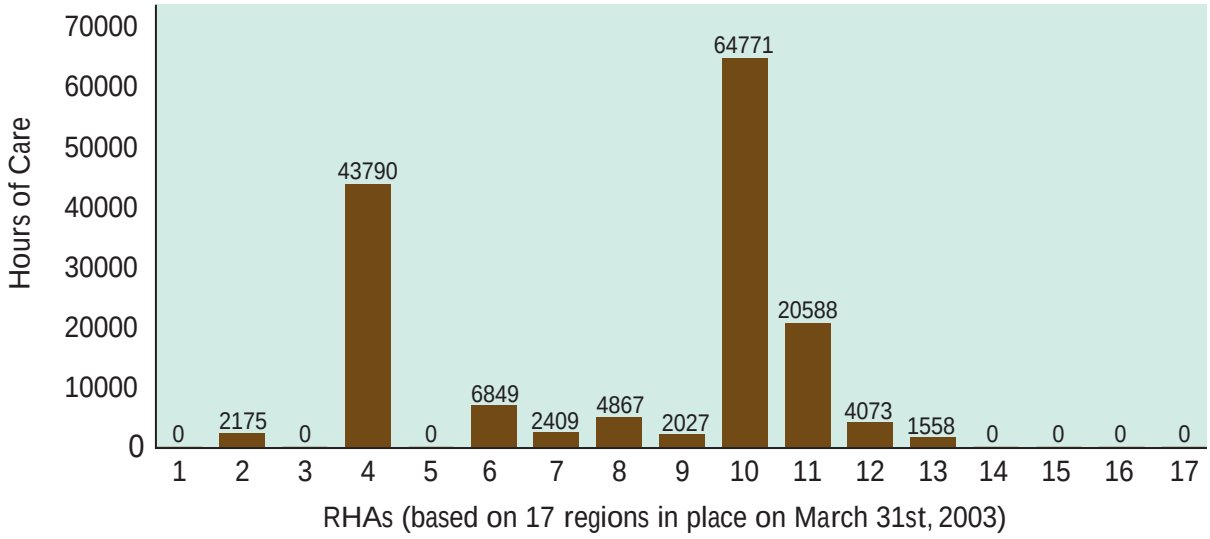
Children with Complex Healthcare Needs (CCHN)

Calgary Health Region is responsible for administering the CCHN budget, but much of the decision making around service delivery is carried out by a provincial Pediatric Advisory Team (PAT). PAT is a professional committee made up of clinical staff and administrators who have an intimate knowledge of working with special needs children across the province. The Province Wide Services funding is channeled to all health regions for home-care assistance required by children with life-threatening, complex health needs. Most of these children need ventilator support for breathing and constant monitoring of their airway through the night.

The number of children assisted by CCHN has increased from an average of just eleven children per month in 1997/1998, to an average of 49 children per month projected for 2004/2005. The number of funded cases continues to grow at a high rate, limited primarily by a shortage of trained care providers. The average cost per funded child month has grown at an average annual rate of about 5.5 per cent, rising from $5,413 per child month in 1997/1998, to $7,805 per child month projected for 2004/2005.

The assistance allows these children to be supported in their own homes with specialized care that would not otherwise be available through the standard Homecare programs. This is much more cost-effective than having these children in a hospital all the time, and, more

Figure 15: CCHN Hours of Care by Patient Region of Residence, 2002/2003



Source: CIHI 2002/2003 PWS Annual Report

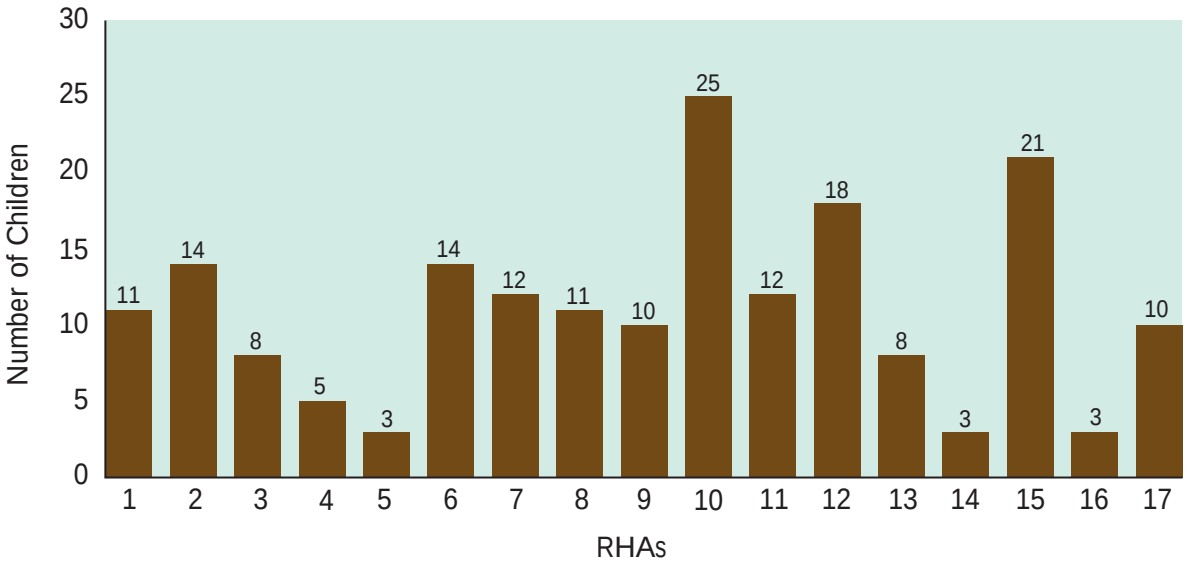
importantly, recognizes that the best environment for any child is home with their family. However, the special needs of some of these children can be overwhelming for families, so the PAT committee must find the right balance of in-home support that allows the parents to be maintained as the primary caregivers to their child, but supported enough that they can continue to manage other aspects of their lives. The distribution of CCHN hours of patient care by patient region is shown in Figure 15. Because of very low patient volumes in some rural regions, it is important not to assume that 'zero' hours of care means that region is being underserviced.

Pediatric Transport

The Pediatric Transport Teams in Capital Health and the Calgary Health Region provide assessment, intervention, stabilization and transport for critically ill or injured children. The teams are typically called when a level of care beyond a paramedic level is required to safely move a child.

The Pediatric Transport Teams are comprised of a pediatric emergency physician, a nurse specialist and a respiratory therapist. The team is utilized for patient retrieval from the initial injury location and, more commonly, for transferring critical pediatric patients from an outlying hospital to one of the tertiary care hospitals in Edmonton or Calgary.

Figure 16: Pediatric Transport Patients by Patient Region, 2001/2002



Source: CH and CHR 2002/2003 PWS Annual Reports

Province Wide Services funding provided to both Capital and Calgary is intended to cover both the cost of transport as well as the costs for providing year-round, 24-hour availability. In 2002/2003, 116 patients were transported by Capital Health, compared to 72 patients by the Calgary Health Region. The teams also carried out many patient transfers from within their own RHA, or for patients from outside the Province, that are not funded through Province Wide Services.

The distribution of PWS-funded pediatric patients by resident health region is shown in Figure 16. Note that figures shown for Calgary (Region 4) and Capital (Region 10) were only those instances where a child from one region was transported by the team from the other region (e.g. an Edmonton child transported to Calgary by the Calgary Pediatric Transport Team).

PROVINCE WIDE SERVICES

High Cost Drugs

PROVINCE WIDE SERVICES

High Cost Drugs

The Province Wide Services high cost drug budget funds selected medications dispensed by the Capital and Calgary health regions on an outpatient basis. Most of the funding ($39 million 2004/2005) is provided for immunosuppressive therapy for transplant patients and antiretroviral therapies for people living with HIV disease. Additionally, specific medications are funded for cystic fibrosis patients (Pulmozyme), primary pulmonary hypertension (Flolan and Tracleer), and for children with specific hormone deficiencies or chronic renal failure (Human Growth Hormone). Funding for the PWS high-cost drugs (Table 13) has grown at an average rate of about 10 per cent annually.

Transplant Drugs

Immunosuppressants, or 'transplant drugs', suppress a patient's immune system to prevent the body from recognizing the transplanted organ or tissue as a foreign object and rejecting it. These medications are costly, averaging as high as $8,000 per patient per year. Once transplanted, patients are generally required to take these medications for the rest of their lives. New medications continue to be developed which, although more expensive than their predecessors, show tremendous promise in improving patient outcomes and the long-term life of the transplanted organ or tissue.

Transplant drug expenditures are the fastest growing component of the PWS high cost drug budget, growing at an average annual rate in excess of 14 per cent.

HIV Drugs

HIV Clinics funded by Province Wide Services in both Edmonton and Calgary distribute antiretroviral agents, on an outpatient basis, to patients from across the Province. Despite the successful reduction in the number of new HIV cases seen each year, the improved outcomes of HIV patients from new drug therapies means there is an ever-growing pool of people requiring the costly drug therapies (see Figure 14 previously).

Table 13: PWS High Cost Drugs Expenditure

	Capital				Calgary			
	2000/01 ACTUAL	2001/02 ACTUAL	2002/03 ACTUAL	2004/05 FUNDED	2000/01 ACTUAL	2001/02 ACTUAL	2002/03 ACTUAL	2004/05 FUNDED
Immunosuppressives	7,822,336	8,870,996	9,622,700	12,753,000	4,894,348	5,212,582	6,567,286	8,649,150
HIV Antiretrovirals	4,355,673	4,938,938	5,027,673	6,181,436	4,925,644	5,320,529	5,583,256	6,482,646
Pulmozyme	700,665	714,910	790,405	856,252	455,116	551,905	512,577	547,046
Flolan/Tracleer/HGH	916,209	878,432	1,063,998	1,583,777	733,063	812,855	939,441	1,307,816
Distribution Costs	228,709	307,695	335,191	335,000	340,000	365,088	370,000	335,000
Total Drugs	14,023,592	15,710,971	16,840,037	21,709,465	11,348,171	12,262,959	13,972,540	17,321,658

Source: CHR and CH annual PWS reports, 2004/2005 PWS Budget

PROVINCE WIDE SERVICES

High Cost Devices

PROVINCE WIDE SERVICES

High Cost Devices

Province Wide Services funds Calgary and Capital for the capital cost of three expensive devices: implantable cardiac defibrillators (ICDs), cranioplasts, and cochlear implants. This is another high growth area for the PWS budget (see Table 14). Funding for these devices has more than doubled in the past 4 years, increasing from $3.3 million in 2000/2001, up to $7.8 million in 2004/2005.

Implantable Cardioverter Defibrillators (ICDs)

The ICD is effective in correcting life-threatening heartbeat abnormalities, thereby helping to prevent sudden cardiac death. ICDs provide high risk patients with a higher quality of life and superior outcomes to antiarrhythmic drug therapy. Clinical trials have demonstrated approximately a 50 per cent reduction in 3-year mortality for ICD therapy, versus a 27 per cent mortality reduction from pharmacologic therapy. Device lifespan is typically 5 to 7 years.

Advances in this technology-intensive branch of medicine are occurring rapidly, leading to device improvements and expanding indications based on the results of recently completed clinical trials. This has resulted in escalating growth rates for this device. The first ICD was implanted in Alberta in 1985. During 2002/2003, 202 ICDs were provided to Albertans (slightly above Canadian rate). For 2004/2005, 258 devices have been funded at an average cost of $22,500.

Table 14: PWS High Cost Devices – Volumes

	Calgary Health Region					Capital Health				
	2000/01 ACTUAL	2001/02 ACTUAL	2002/03 ACTUAL	2003/04 FUNDED	2004/05 FUNDED	2000/01 ACTUAL	2001/02 ACTUAL	2002/03 ACTUAL	2003/04 FUNDED	2004/05 FUNDED
ICDs	76	93	119	110	129	57	82	101	89	129
Cranioplasts	148	154	134	157	160	54	41	22	67	45
Cochlear Implants	10	15	15	21	18	26	17	23	20	25

Source: CHR and CH PWS Annual Reports, plus PWS Budgets for 2002/2003 and 2003/2004

Cranioplasts

Cranioplasty involves correction of skull defects through specialized headbands. It can only be done as a paediatric procedure, when the skull is malleable. The program in Calgary has been a Canadian leader.

During 2002/2003, 156 infants received cranioplasts funded by Province Wide Services. For 2004/2005, funding for 205 cranioplasts has been approved, at an average device cost of $2,100.

Cochlear Implants

The most common type of deafness is caused by damaged hair cells in the ear's cochlea. Cochlear implants are electronic devices that receive sound and transmit the resulting signal directly to electrodes implanted in the cochlea. The procedure requires highly specialized expertise. During 2002/2003, cochlear implants were provided to 38 Albertans.

Funding is approved for 43 devices in 2004/2005, at an average cost of $36,500. This device will allow individuals with profound hearing loss to perceive sound. For the young, this has an important impact on their educational and social development.

Other Province Wide Services

Other Province Wide Services

Equipment

Some funding is provided to Calgary and Capital for Province Wide Services equipment above and beyond other sources of funding and the equipment amortization already included in the cost weights used for funding purposes. For 2004/2005 fiscal year, $2.0 million has been allocated to both Capital Health and the Calgary Health Region.

APPROACH

The **A**lberta **P**rovincial **P**roject for **O**utcomes **A**ssessment in **C**oronary **H**eart Disease (APPROACH) involves maintenance of a large computerized cardiac database. This database is used for research on outcomes, and provides a source of data that allows Capital and Calgary to deliver the best possible care for patients with coronary artery disease. Regular PWS funding of $150,000 per annum is intended to provide APPROACH with a stable and sustainable source of funding.

Rosehaven

The Rosehaven Care Centre in Camrose provides beds and a specialized geriatric service for people with psychiatric or behavior management needs. Rosehaven was moved to the Province Wide Services funding umbrella starting in 2003/2004. Funding of $8.3 million has been provided to East Central Health for 2004/2005, an increase of 5 per cent from the previous year.

Visudyne Therapy

Age-related macular degeneration (AMD) is the leading cause of blindness in Canadians over the age of fifty. Ocular photodynamic therapy uses the laser-activated drug Visudyne to treat the classical form of wet AMD, when prescribed by a Retina Specialist. Multiple treatments are usually required on each affected eye. For the 2004/2005 budget year, funding for Visudyne therapy was increased by 4.7 per cent, to $3.4 million.

PROVINCE WIDE SERVICES

Apendices

APPENDIX A:

Hospital InPatient CASE MIX GROUPS

Currently Funded By Province Wide Services

CMG	DESCRIPTION
	Organ & Bone Marrow Transplants
175	Heart and Lung Transplant
310	Liver Transplant
500	Kidney Transplant
700	Bone Marrow Transplant
	Trauma and Burns
650	Tracheostomy and Gastrostomy Procedures for Trauma
	only separations with one or more of the following procedures coded in any position:
	1GJ77LA - other permanent tracheostomy using open approach
	1GJ77LALG - temporary tracheostomy using open approach
	1GJ77QB - other permanent tracheostomy using mediastinal approach
651	Intracranial Procedures with Spinal Procedures for Trauma
652	Intracranial Procedures with Femur Procedures for Trauma
653	Intracranial or Femur PROCs with Thoraco-Abdominal PROCs for Trauma
654	Intracranial PROCs w wound Debridement or Lower Extremity PROC for Trauma
655	Spinal Procedures with Femur Procedures for Trauma
656	Spinal Procedures with Thoraco-Abdominal Procedures for Trauma
657	Spinal PROCs with Wound Debridement or Lower Extremity PROC for Trauma
660	Intracranial Procedures for Trauma
661	Spinal Procedures for Trauma
665	Elevated Skull Fractures
674	Intracranial Injuries with Spinal Injuries
675	Intracranial Injuries with Fractures of Femur or Pelvis
676	Intracranial Injuries with Thoraco-Abdominal Injuries
830	Extensive Burns with Skin Graft Wound Debridement or Other Burn Procedures
	Neurosurgery
001	Craniotomy Procedures
003	Spinal Procedures
004	Extracranial Vascular Procedures
005	Ventricular Shunt Revision
476	Adrenal and Pituitary Procedures

Cardiovascular

176	Cardiac Valve Replacement with Heart Pump with Cardiac Cath
177	Cardiac Valve Replacement with Heart Pump without Cardiac Cath
178	Coronary Bypass with Heart Pump with Cardiac Cath
179	Coronary Bypass with Heart Pump without Cardiac Cath
181	Other Cardio-Thoracic Procedures with Heart Pump with Cardiac Cath
182	Other Cardio-Thoracic Procedures with Heart Pump without Cardiac Cath
183	Major Cardio-Thoracic Procedures without Heart Pump with Cardiac Cath
184	Major Cardio-Thoracic Procedures without Heart Pump without Cardiac Cath
188	Percutaneous Transluminal Coronary Angioplasty W Complicating Cardiac Conditions
189	Percutaneous Transluminal Coronary Angioplasty W/O Complicating Cardiac Conditions
194	Minor Cardio-Thoracic Procedures without Heart Pump
885*	Aortic Replacement
887*	Vascular Bypass Surgery
891*	Vascular repair

Neonatology

625	Neonates Weight < 750 Grams
626	Neonates Weight 750-999 Grams
627	Neonates Weight 1000-1499 GM with Catastrophic Diagnosis
628	Neonates Weight 1000-1499 GM without Catastrophic Diagnosis
630	Neonates Weight 1500-1999 GM with Catastrophic Diagnosis
643	Neonates Weight > 2500 GM with Catastrophic Diagnosis

Oncology

383	Joint Replacement for Malignancy
384	Back and Neck Procedures for Malignancy
385	Major Orthopaedic Oncology Procedures
576	Radical Hysterectomy and Vulvectomy

Other

075	Radical Laryngectomy and Glossectomy
076	Major Head and Neck Procedures
126	Resection of Lung

*CMGs 885, 887, and 891 were reviewed in January 2003 and specific procedures were added/removed from the PWS list. Procedures selected for inclusion involved procedures on blood vessels of the head and upper arch of aorta, other major vessels of the heart, or which invloved use of a balloon pump

APPENDIX B

Province Wide Services
Working Group (2002/2003)

Dr. Paul Greenwood, Chair

Dr. Ken Gardener,
VP Medical Affairs ..... **Region 6**

Mr. Allaudin Merali,
VP Finance ..... **Region 6**

Dr. Robert Johnston,
VP and Chief Medical Officer..... **Region 3**

Ms. Kay Best,
VP Corporate Services and CFO..... **Region 3**

Mr. Bryan Judd,
VP Corporate Support Services ..... **Region 4**

Mr. Bruce M. Perry,
ADM – Finance & Corporate Services..... **Alberta Health and Wellness**

Mr. Tapan Chowdhury,
Director – Health Funding and Costing..... **Alberta Health and Wellness**

Mr. Dennis Stang,
Senior Manager – Health Funding..... **Alberta Health and Wellness**

Mr. Sean Delaney,
Province Wide Services ..... **Alberta Health and Wellness**

APPENDIX C

Province Wide Services
Working Group Terms of Reference (Charter)

A. Overview and Purpose

The Province Wide Services Working Group (PWSWG) advises/reports to the Deputy Minister of Alberta Health and Wellness (AHW). More specifically, the PWSWG monitors, evaluates, advises, recommends and advocates, in accordance with these terms of reference, on matters affecting the scope, priorities, budget, delivery and reporting for Province Wide Services.

B. Duties and Responsibilities

a) Charter/Workplan

1. Review PWSWG charter every August/September and make changes if necessary.
2. Set workplan every August/September for determining PWS budget recommendations for the upcoming fiscal year, including ongoing identification and addressing of significant issues and risks for the delivery of Province Wide Services.
3. Set workplan every March/April for post-budget issues.
4. Review annually PWSWG sub-committees and their progress.
5. Review annually effectiveness of the PWSWG against the terms of reference.

b) Principles

1. Review funding principles on an annual basis, and as need arises, including eligibility criteria for new PWS.
2. Update PWS Funding Procedures and Definitions Manual containing operational rules for determining the PWS budget every two years.
3. Review inpatient cost methodology.

c) Basket of Funded Services

1. Proposals for new PWS are submitted jointly by Capital Health (CH)/Calgary Health Region (CHR) (who are to collaborate in the optimal delivery of new PWS), or by AHW, to PWSWG for recommendation/consideration. Submissions for new proposals should be based on established templates.
2. PWSWG may request health technology assessments or Expert Committee on Drug Evaluation and Therapeutics review.
3. Consider potential deletions of PWS on an annual basis.
4. Review annually impact of inpatient grouper changes, and assess the need for changes to the basket of funded services.

d) PWS Budget

1. Alberta Health and Wellness develops, in early Fall, a three year forecast of PWS funding requirements based on growth rates of macro budget drivers.
2. AHW, with input from CH/CHR, develops initial PWS budget projections for upcoming fiscal year, on a line item basis, in accordance with established principles, by November, for review by PWSWG.
3. The PWSWG may appoint specialty task groups to address specific issues of a technical nature.
4. Where differences of opinion exist between PWSWG members on budget allocations, PWSWG chair makes final recommendation.
5. Budget recommendations of PWSWG are forwarded by chair to Deputy Minister in a letter reviewed by PWSWG. PWSWG chair will distinguish between recommendations of the Working Group and the Chair's own comments.
6. PWSWG sets final service priorities when informed by Alberta Health and Wellness of budget target. Final funding determination rests with government and Ministry.
7. On a post-budget basis, PWSWG shall advise of any additional mid-year funding pressures for PWS, as well as the allocation of any unallocated PWS funding or other matters of financial content.

e) Reporting (Financial Accountability)

1. CH/CHR reports to PWSWG annually, by mid-August, on PWS activities for the preceding fiscal year, according to established reporting templates and standardized definitions. Reporting templates for newly funded services are developed collaboratively between AHW, CH and CHR.
2. PWSWG reviews the financial and activity results of operations, analyzes information on significant variances, and provides appropriate reports.
3. Annual activities of the PWSWG are reflected in the PWS Annual Report developed by AHW and released after Budget Day. Annual Report distribution list includes all regional health authorities.

f) Outcomes (Medical Accountability)

1. Continue to develop and implement annual reporting of key indicators of PWS health outcomes.
2. PWS outcomes are reflected in the PWS Annual Report.
3. PWS symposium on activities and outcomes held during May-June time period.
4. Annual review of preventative strategies.

g) Communications

1. Develop communication strategies.

C. Membership

Membership of the Working Group shall consist of:

- a chair (appointed by Alberta Health and Wellness)
- the Chief Financial Officer and Chief Medical Officer of Capital Health and the Calgary Health Region
- a non-Capital/Calgary RHA representative (appointed by Council of CEOs)
- the Assistant Deputy Minister of Finance and Corporate Services
- support staff from Alberta Health and Wellness

D. Meetings

1. PWSWG meets on a regular basis, with a minimum of four (4) meetings a year. Meeting dates determined by PWSWG Chair in consultation with AHW, CH and CHR.
2. A provisional meeting agenda is determined by PWSWG Chair in consultation with AHW, and distributed prior to meetings. AHW support is responsible for delivery of notices, agendas and available related materials to the PWSWG prior to meetings. Any PWSWG member may add additional agenda items or suggest changes.
3. Alternates are allowed for PWSWG members at meetings.
4. Meeting minutes are developed by AHW and circulated to all PWSWG members, who can suggest revisions. At the next meeting the minutes are submitted for approval. Final minutes are provided to the Deputy Minister.

January 2004

APPENDIX D

PWS 2004/2005 Budget

	CAPITAL	CALGARY	Total
INPATIENT SERVICES	**$131,147,356**	**$113,582,542**	**$244,729,898**
Transplants - Bone Marrow	0	10,366,525	10,366,525
Transplants - Organ	12,107,450	1,351,455	13,458,905
Trauma and Burns	14,073,347	10,531,805	24,605,152
Neurosurgery	15,530,815	14,208,710	29,739,525
Cardiovascular - CABGs	23,994,769	20,382,396	44,377,165
Cardiovascular - PTCAs	22,064,525	21,434,700	43,499,225
Cardiovascular - Other	17,187,824	14,471,277	31,659,101
Neonatology	17,683,564	15,383,454	33,067,018
Oncology	8,505,062	5,452,220	13,957,282
CLINICS and HOME SERVICES	**74,812,029**	**75,486,942**	**150,298,971**
Dialysis and Renal Program	47,472,246	46,394,504	93,866,750
Dialysis Prevention	1,500,000	1,500,000	3,000,000
Pre- and Post- Transplant	6,830,000	6,830,000	13,660,000
Islet Cell Transplantation	2,947,000	0	2,947,000
Medical Genetics	6,692,600	6,791,000	13,484,390
HIV Clinics	1,368,876	1,368,876	2,737,752
PADIS	0	2,616,672	2,616,672
COMPRU (osseointegration)	1,902,807	0	1,902,807
Home Enteral Nutritional Therapy	2,156,400	1,893,900	4,050,300
Paediatric Transport	775,000	700,000	1,475,000
1-800 AIDS Hotline	120,000	0	120,000
Education Centre	0	624,000	624,000
STD/TB Clinics	1,200,000	1,150,000	2,350,000
Visudyne Therapy	1,847,100	1,579,200	3,426,300
Children w/Complex Healthcare Needs	0	4,038,000	4,038,000
HIGH COST DRUGS	**21,709,465**	**17,321,658**	**39,031,123**
Transplant Drugs	12,753,000	8,649,150	21,402,150
HIV Drugs	6,181,436	6,482,646	12,664,082
Human Growth Hormone	487,845	616,616	1,104,461
Pulmozyme	856,252	547,046	1,403,298
Flolan/Tracleer	1,095,932	691,200	1,787,132
Distribution costs	335,000	335,000	670,000
HIGH COST DEVICES	**3,909,500**	**3,895,500**	**7,805,000**
Implantable Defibrillators	2,902,500	2,902,500	5,805,000
Cranioplasties	94,500	336,000	430,500
Cochlear Implants	912,500	657,000	1,569,500
EQUIPMENT	**2,000,000**	**2,000,000**	**4,000,000**
APPROACH	**0**	**150,000**	**150,000**
ROSEHAVEN (East Central)			**8,295,000**
TOTAL PWS	**233,578,350**	**212,436,642**	**454,309,992**


Alberta
HEALTH AND WELLNESS