The theme of this year’s annual report is Rising to the Challenge which reflects the ongoing perseverance and determination of the thousands of Canadians who have a connection to the blood system; Canadians like two-year old Sarah Edge of Peterborough, Ontario who underwent a heart transplant in November 2003.

Sarah is a prime example of someone who had to “rise to the challenge” at an extremely young age. After experiencing severe heart failure twice in her short life – the first time at just seven weeks of age and the second time shortly after her first birthday – Sarah waged a courageous battle to regain her health. Following the heart transplant which required more than 60 units of blood, Sarah has made an amazing recovery and is an inspiration to everyone she meets. Today her parents are proud to report she is a happy, healthy little girl. Sarah is just one of thousands of Canadians who receive blood and blood products each year.

Canadian Blood Services thanks all Canadians who Rise to the Challenge to help build a better blood system.
Dear Minister,

On behalf of the Canadian Blood Services Board of Directors, I have the privilege of submitting this Report to Canadians, together with its audited financial statements, for the period of April 1, 2003, to March 31, 2004.

Respectfully submitted,

Verna M. Skanes PhD
Chair, Board of Directors
**Facts at a Glance**

### 2003/2004

<table>
<thead>
<tr>
<th><strong>NUMBER OF PERMANENT SITES</strong></th>
<th><strong>NUMBER OF BLOOD DONOR CLINICS HELD</strong></th>
<th><strong>NUMBER OF WHOLE BLOOD DONATIONS RECEIVED</strong></th>
<th><strong>NUMBER OF APERESIS PLATELET DONATIONS RECEIVED</strong></th>
<th><strong>NUMBER OF APERESIS PLASMA</strong> DONATIONS RECEIVED</th>
<th><em><em>TOTAL NUMBER OF ACTIVE</em> DONORS</em>*</th>
</tr>
</thead>
<tbody>
<tr>
<td>42</td>
<td>15,626</td>
<td>842,366</td>
<td>21,662</td>
<td>44,776</td>
<td>447,146</td>
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<th><em><em>PERCENTAGE OF ACTIVE</em> DONORS WHO ARE MALE</em>*</th>
<th><em><em>PERCENTAGE OF ACTIVE</em> DONORS WHO ARE FEMALE</em>*</th>
<th><strong>AVERAGE FREQUENCY OF WHOLE BLOOD DONATIONS PER DONOR DURING 2003/2004</strong></th>
<th><strong>AVERAGE FREQUENCY OF PLATELET DONATIONS PER DONOR</strong></th>
<th><strong>AVERAGE FREQUENCY OF PLASMA</strong> DONATIONS PER DONOR</th>
<th><strong>NUMBER OF HEALTH FACILITIES SERVED BY CANADIAN BLOOD SERVICES</strong></th>
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</thead>
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<tr>
<td>51%</td>
<td>49%</td>
<td>2.1</td>
<td>4.5</td>
<td>9.3</td>
<td>732</td>
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<table>
<thead>
<tr>
<th><strong>NUMBER OF EMPLOYEES</strong></th>
<th><strong>NUMBER OF VOLUNTEERS</strong></th>
<th><strong>NUMBER OF HOURS WORKED BY VOLUNTEERS</strong></th>
<th><strong>NUMBER OF CANADIAN PATIENTS WHO UNDERWENT UNRELATED BONE MARROW TRANSPLANTS</strong></th>
<th><strong>POTENTIAL BONE MARROW DONORS ON THE UNRELATED BONE MARROW DONOR REGISTRY</strong></th>
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<td>~4,440</td>
<td>~17,000</td>
<td>265,000</td>
<td>195</td>
<td>~219,000</td>
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</tbody>
</table>

### Blood Facts

- **Most common type** ................................................................. O Rh-Pos (31%)
- **Rarest type** ................................................................. AB Rh-Neg (0.7%)
- **Highest groups in demand** .................................................. O and A

### Shelf Life of Different Products

- **Red blood cells** ................................................................. 42 days
- **Platelets** ................................................................. 5 days
- **Fresh frozen plasma (for transfusion)** .................................. 1 year
- **Source plasma (for fractionation)** ...................................... 10 years

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* Active donors refer to those donors who have donated blood in the past 18 months
** Plasma can be “fractionated” or manufactured into many different blood products, including intravenous immunoglobulin (IVIG) and Factor VIII
Governance

For Canadian Blood Services, good governance is an essential aspect of our commitment to Canadians. This has been demonstrated through the application of the mission, vision and values of the organization and through the ethical standards and practices pursued at all levels across the organization.

With respect to the Board of Directors, governance strength is reflected through the independence of the Board, with all voting members of the Board and of committees of the Board being independent of the management of the organization. Through the active efforts of the independent Chair, the Board, working with management, ensures that policies and standards are developed, implemented and monitored.

The Board has reviewed its governance practices and standards in order to reinforce a culture of responsibility and accountability. The Board has also made efforts to demonstrate continuous improvement to its governance responsibilities through focused discussions on governance and the pursuit of improved processes for disclosure and decision making. These efforts include a review of the skill sets on the Board, the continuous development of Board committees and an ongoing plan of review of Board practices.

Canadian Blood Services has continued to pursue open and transparent practices by both the Board and management. This governance disclosure practice is demonstrated through regular Board meetings that are open to the public and the public accessibility of information, including materials available on our Web site, which include the following:

- the charter documents of the organization;
- the mission, vision and value statements applicable to the organization;
- the ethical code of conduct applicable to the organization;
- descriptions of the various governance structures of the organization;
- the full disclosure of regulatory audits; and
- public posting of the minutes of directors’ meetings.

Canadian Blood Services has also continued to review the emerging governance guidelines produced throughout North America. Many of these guidelines apply specifically to public companies and are focused on the protection of investors – a situation not relevant to Canadian Blood Services. Nevertheless, they focus on fundamental principles of accountability and good governance and it is these principles that Canadian Blood Services, a not-for-profit organization, embraces and will continue to further develop.
Our Vision

Canadians have confidence in us.

Canadian Blood Services provides a safe, secure, cost-effective, affordable and accessible supply of quality blood, blood products and their alternatives. Canada is self-sufficient in blood and we are working to be self-reliant in plasma. Emerging risks and best practices are monitored continuously. Our blood and blood products are safe and of quality.

Canadian Blood Services has established and works to maintain effective relationships with all of our stakeholders.

Our arm’s-length relationship with Provincial/Territorial and Federal governments enables us to operate within our business plan and with reliable funding. We are known for our financial stewardship of public funds.

We work with consumer groups to address strategic issues and meet their needs. We monitor our environment and other key indicators that enable us to anticipate changes and prepare for them.

Canadian Blood Services continues to help hospitals improve blood utilization and surveillance. We have found that educating consumers, donors, physicians and other health professionals is key to managing utilization of blood and blood products.

Donors actively support us and our donor base is strong. Our volunteers continue to play a critical and meaningful role.

Through our work and support, the science of transfusion medicine is advanced. Our research program is leading to the development of alternative products in transfusion practices.

We are internationally recognized for our excellence and innovative programs and services.

Our employees view Canadian Blood Services as a great place to work. We have an environment that rewards creativity, teamwork and vision, and provides opportunities for personal and professional advancement.

We are proud of the contribution we make.

Our Mission

Canadian Blood Services operates Canada’s blood supply system in a manner that gains the trust, commitment and confidence of all Canadians by providing a safe, secure, cost-effective, affordable and accessible supply of quality blood, blood products and their alternatives.
A Message to Canadians

842,366 is the number of whole blood units collected by Canadian Blood Services in the past year — the highest number of collections in our five-year history. It is the number that allowed us to successfully meet hospital demand and ensure blood and blood products were available for the patients who needed them — a remarkable achievement considering that it was also the year in which we faced the greatest number of challenges. At the end of the year, it was with an enormous sense of accomplishment that we realized that, had it not been for the changes we made to transform the blood system since 1998, we would not have been able to rise to the challenge.

With this in mind, we chose the theme, Rising to the Challenge, for our fifth anniversary celebration in September 2003. When we looked back and realized how much had been done in just five short years, these words most closely reflected our journey. We restored confidence, improved safety and quality, and implemented more efficient processes. It is only fitting that this Report to Canadians also reflects the same theme, since “rise to the challenge” is exactly what we did.

The seeds were planted to transform the blood system years ago. And in this year of unexpected challenges that impacted our ability to collect blood — the emergence of SARS, forest fires in British Columbia, a hurricane and a massive snow storm in Nova Scotia, a power failure in Ontario and an influx of human West Nile Virus (WNV) cases in the Prairies — these seeds gave rise to the framework that ensured the security of the blood supply.

From challenge comes growth. The challenges to the blood system in the past provided us with valuable lessons that set the stage for preparedness today. The system has grown to be a flexible and nimble structure capable of responding effectively to new challenges that come our way. This year provided us with many opportunities to demonstrate this responsiveness.

Significant improvements to the blood system are now in place, taking Canadian Blood Services to the next level. We now have a new information system, MAK Progesa, that combines 14 separate databases into one national system capable of tracking a unit of blood, from donation to the hospital, in real-time. We have also consolidated our 11 testing laboratories into three donor-testing laboratories, equipped with state-of-the-art Nucleic Acid Amplification and PRISM testing technology, capable of testing large quantities of blood samples faster and more accurately. And we have improved our customer service to donors through the implementation of a National Contact Centre, which allows for targeted telerecruiting to support collections when and where they are needed.
The improvements we had made to the blood system, including a broader focus on research and development, made it possible to implement the WNV test with unprecedented speed. The consolidation of our testing laboratories allowed us to implement testing in two sites to respond rapidly to the threat.

If we had maintained 11 testing laboratories, the cost and logistical implications would have greatly affected our ability to address the WNV threat. The foresight of our Corporate Members (the Provincial and Territorial Ministers of Health), when they created the mechanism of a contingency fund for rapid use to protect the safety of the blood supply, ensured that we had the resources available to respond quickly to protect Canadians.

Credit for the success of this year does not belong to us alone. The realization of many projects that were years in the making is a credit to many – the support and investment in transformation by our Corporate Members, the leadership of our Board of Directors and Executive Management Team, the guidance of our advisory committees, the involvement of the Canadian public in our decision making, the hard work of our dedicated employees and volunteers, and of course, the commitment of our donors – all of whom rose to their own challenges to take this transformation journey with us.

But the journey is far from over. In a year of many changes, we never lost sight of the fact that the blood system is all about people – from donors to recipients to employees to volunteers.

In many ways, the improvements we have made to the blood system so far are the easy ones. Now we must call for cultural change within Canadian Blood Services and also in the way Canadians think about the need for donating blood. We must change the way we approach our work – from designing donor recruitment, collections and production plans to meet the specific needs of hospitals as the practice of medicine changes, to focusing our attention more directly on our customers and communities as we strive to facilitate social change so that Canadians take responsibility for their blood system.

Changing the way we think and act is much more difficult than consolidating laboratories and introducing new technologies, but it is something we must do if we are to continue to meet the growing demand for blood and blood products.
We will focus on improving the customer service we offer our blood donors and Canadian hospitals. We are doing a good job – more than nine out of 10 donors agree that Canadian Blood Services appreciates their donations – but there is always room for improvement.* Throughout the year, donors have told us about their donation experiences and suggested ways to improve. We listened and the coming years will see us working to introduce changes to our recruitment practices and blood donor clinics in order to involve more Canadians in blood donation.

We will also turn our attention to the plasma products portion of our business. In October 2003 we sought the input of our stakeholders to begin planning the components of this initiative, and over the ensuing years we will enhance and improve this major part of our business. Likewise, we have begun to transform the Unrelated Bone Marrow Donor Registry, and in the next few years we will see changes to the products and services offered to those in need of blood stem cell transplantation.

Canadians have high expectations of their blood system – and so they should. They require blood products that are as safe as they can possibly be, better services for donors and proper management of resources. They deserve openness, transparency and a voice in the decision making. During the upcoming year, we will continue to rise to the challenge by setting our goals higher, striving for excellence in customer service, and building an even better blood system for Canadians.

*Results of Ipsos-Reid poll conducted August 2003

Dr. Graham Sher
Chief Executive Officer

Verna M. Skanes PhD
Chair, Board of Directors

A REPORT TO CANADIANS
For the past six years, Mark has worked closely with community partners and volunteers in the Edmonton area to increase awareness of the need for blood in the community. As the Community Relations Coordinator he is responsible for arranging locations for mobile clinics, booking volunteers, working with the media and developing promotional materials to ensure a full clinic. For Mark, one of the highlights of working for the blood system is the constant contact he maintains with the public, donors and volunteers.

“I enjoy working with people who are spending their spare time, out of the goodness of their hearts, helping us collect blood. They go out after work promoting our clinics because they know it will benefit their community — I think they realize that it comes full circle.”
Wedad made her first blood donation last year after participating in a donor clinic held at her high school when she was 18. She was pleasantly surprised that it took less than an hour to donate and more importantly, that it didn’t hurt. Since her introduction to donating she has become a regular donor and does her part to encourage others to donate as well, including convincing her brother whom she brought with her to another high school clinic.

“I think it’s very important for people to donate blood. I love the idea of helping people without any cost to you and you never know when you or someone in your family may need blood.”
Ca is one of the first faces a donor sees when he or she enters a clinic. As a Donor Services Representative, she greets donors, ensures that they get checked in at their appointed time and works with volunteers like Irene (see opposite page), training them so they too will know the best way to make donors feel welcome. Ca says her greatest reward comes from her interactions with donors and volunteers. She knows the importance of good customer service and she rises to the challenge every day to ensure donors have the best experience possible.
For many donors in Winnipeg, one of the best parts of the donation process is seeing familiar and friendly faces at the clinic. Irene Bisson has been a volunteer for more than six years and is one of those friendly faces that donors love to see. Helping out in the refreshment area, Irene, like so many of Canadian Blood Services’ volunteers, offers a warm smile and friendly conversation. She also knows first-hand how important donors are as she required two units of blood when she underwent cancer treatment last year. Now in remission, she wasted no time returning to the clinic — much to the happiness of the many donors who missed her.
Masoud’s relationship with the blood system began in 1998 when he began working in the testing laboratory. He is responsible for supervising testing, reviewing test results and communicating those test results to the relevant departments within Canadian Blood Services. Approximately four years ago he also made the decision to become a regular plateletpheresis donor (donating platelets only). This decision has provided him with a unique perspective since he sees first-hand the journey of a unit of blood product from collection to testing. The importance of his job remains front and centre to him as he knows that Canadian patients rely on the blood system to provide the safest blood products possible.
Jenn made her first donation in June of this year, taking part in Canadian Blood Services’ CTV Blood Donor Day. She made her donation as a tribute to her eight-year old friend Marcus, who passed away in February, 2004 after losing his battle with leukemia.

When Marcus was asked what he wanted for his birthday he simply said he wanted people to donate blood to help other kids like him. His strength had an enormous impact on Jenn who joined the Unrelated Bone Marrow Donor Registry and has organized several donor clinics in his honour. For Jenn, donating blood has taken on a special meaning for her. “If I couldn’t save his life, I want to try to save someone else’s.”
Steve works in a division of Canadian Blood Services called Quality Systems which ensures that every aspect of blood management — from collections to component production to the distribution of blood products — operates under the highest quality standards. As a 14-year veteran of the blood system, Steve’s primary goal is overseeing and coordinating quality efforts to ensure the security of blood products. This runs the gamut from ensuring local blood products meet the highest regulatory standards to working with the Collections and Donor Services divisions in planning donor clinics which provide a safe and secure environment for donors.

For Steve, the best part of working for Canadian Blood Services is knowing everyone is working together for the same goal: to ensure the best products are available to the patients that need them.
“Sometimes you have to know someone who has needed blood before you realize how important it is to give.” — Jared

Jared’s battle with leukemia began in May 2001 when he was 13 years old. Since then he has undergone chemotherapy as well as nine blood transfusions and eight platelet transfusions — he is scheduled to complete his treatment in September. It is important to Jared that blood donors know the difference they have made in his life and how critically important the transfusions are in helping him win his battle with leukemia. It’s also important to his mother Kim who is a regular blood donor.

(turn to page 37 for Kim’s story)
Canadian Blood Services’ Milestones
Rising to the challenge throughout the years

1998–2004

SEPTEMBER 1998
Canadian Blood Services assumes full responsibility for blood system

SEPTEMBER 1999
Deferral policy for variant Creutzfeldt-Jakob Disease (vCJD) introduced (those who spent six months or more in the U.K.)

JUNE 1999
Universal pre-storage leukoreduction for all blood components begins

JANUARY 2000
Consensus conference on Prevention of Post-transfusion CMV (Cytomegalovirus) in the Era of Universal Leukoreduction hosted by Canadian Blood Services

OCTOBER 1999
Nucleic Acid Amplification Testing (NAT) for Hepatitis C virus (HCV) implemented

MARCH 2000
Public Participation Task Force commissioned by Board of Directors
In 1998, Canadian Blood Services made a promise to transform the blood system into one that is safe, secure and cost-effective. To *build a better blood system* for Canadians and to regain their trust and confidence, we operate in a manner that is open and transparent, ensuring that proactive measures are taken to protect the blood supply. In just five years of operation, we have kept our promise and as a result, it is recognized as one of the safest blood systems in the world.

- **MAY 2001**
  - Launch of Nucleic Acid Amplification Testing (NAT) for HIV/AIDS

- **OCTOBER 2000**
  - vCJD policy expanded (to include people who had spent six months or more in France)
  - Consensus Conference on Prescribing Intravenous Immune Globulin: Prioritizing Use and Optimizing Practice

- **NOVEMBER 2000**
  - National Forum on Hematopoietic Stem Cell Transplantation from Unrelated Donors

- **NOVEMBER 2001**
  - Consensus conference on Blood Borne HIV and Hepatitis: Optimizing the Donor Selection Process hosted by Canadian Blood Services

- **OCTOBER 2001**
  - vCJD policy further revised (time period for U.K. and France changed to three months; addition of western Europe for five years)
JULY 2003
NAT testing for West Nile Virus implemented (commercial assay)

FEBRUARY 2004
MAK Progesa fully implemented

APRIL 2003
SARS screening implemented

MARCH 2003
Consensus Conference on vCJD Screening of Blood Donors

MARCH 2003
Consensus Conference on vCJD Screening of Blood Donors

OCTOBER 2003
PRISM implemented as transmissible disease test of record

OCTOBER 2002
Canadian Blood Services’ Performance Review undertaken by the Provinces and Territories

AUGUST 2003
Sample diversion pouch implemented to reduce risk of bacterial contamination
Corporate Profile

Canadian Blood Services is a national, not-for-profit charitable organization that manages the blood supply in all provinces and territories with the exception of Quebec and operates the country’s Unrelated Bone Marrow Donor Registry. Canadian Blood Services operates 42 permanent collection sites, 11 bone marrow donor centres and more than 15,000 donor clinics annually. Created in 1998, it is the successor to the Canadian Red Cross Blood Program and the Canadian Blood Agency (the former funding arm of Canada’s blood supply system).

Who We Are

Canadian Blood Services owns and operates all aspects of the blood supply system. We recruit blood donors, collect blood, and process it into the components and products that are administered to hundreds of thousands of patients every year. We oversee scientific investigations to make sure Canada is at the international forefront of blood safety research. Canadian Blood Services also helps educate health professionals and the public, to make sure we all use our precious blood supply wisely.

Canadian Blood Services tests each unit of blood collected for a variety of transmissible disease markers, manufactures it into its components and derivative products, and distributes it to hospitals. Because of the rapid pace of change in transfusion science, Canadian Blood Services is also charged with ensuring that Canadian transfusion medicine research and development remains at the cutting edge, and establishing public and professional education programs.

Canadian Blood Services also manages the Unrelated Bone Marrow Donor Registry (UBMDR), whose mission is to secure donors for Canadian bone marrow transplant patients and for patients abroad. The donors are Human Leukocyte Antigen (HLA) compatible, healthy and unrelated to the recipients. The registry processes search requests from Canadian Transplant Centres and facilitates searches of other international registries on behalf of Canadian patients.

Safety is the paramount concern of Canadian Blood Services. Because blood is a biopharmaceutical product, it must be manufactured with the same strict regulatory standards as any drug, using Good Manufacturing Practices (GMP). The pursuit of safety, therefore, is properly reflected in every branch of the organizational structure, and drives every management and operational decision. Canadian Blood Services is committed to meeting national and international safety standards.

The federal government, through the Biologics and Genetic Therapies Directorate located within Health Canada’s Health Products and Food Branch, is responsible for regulating the blood system. Health Canada, through its Centre for Infectious Disease Prevention and Control (CIDPC), tracks reports of disease or threats to the blood system and monitors international pathogenic organism trends in blood safety and management. Health Canada’s Bureau of Medical Devices regulates and approves diagnostic products and medical devices used by Canadian Blood Services and also regulates medical devices manufactured by Canadian Blood Services’ serology laboratories.

Canadian Blood Services established CBS Insurance Company Limited (CBSI), a captive insurance company wholly owned by Canadian Blood Services. One of the purposes of this company is to provide insurance support in the event of a serious event. The capital funding for this company is provided by the provinces and territories and it has proven to be, and will be in the future, a very useful tool in the risk management strategies for Canadian Blood Services.
Safety of Products

A poll conducted in August 2003 revealed that 85 per cent of Canadians surveyed believe that, when it comes to operating Canada’s blood system, safety should always come first.* To Canadian Blood Services, safety of the blood supply is its primary responsibility and the driving force behind many of the initiatives undertaken throughout the year to modernize and transform the blood system. The implementation of a new computer system (MAK Progesa), the consolidation of donor testing laboratories, the installation of PRISM as the transmissible disease test of record, and the introduction of the first West Nile Virus (WNV) screening test — all of these initiatives enhanced the safety of the blood supply and allowed Canadian Blood Services to rise to the challenge posed by threats to that safety.

Emerging Pathogens

Through surveillance, risk analysis, expert opinion and international collaboration, Canadian Blood Services continuously monitors the health, scientific and medical environments to keep abreast of emerging pathogens like WNV. With the inevitable emergence of new threats to the security of the blood system, Canadian Blood Services is prepared to meet these challenges with the technological capabilities in place to support any necessary precautionary action.

WEST NILE VIRUS

With the emergence of WNV as transfusion-transmissible in August 2002, the blood system was facing one of the most significant threats since the 1980s.

Canadian Blood Services took unprecedented steps to protect the safety of the blood supply from WNV, including the precautionary withdrawal in December 2002 of plasma products collected in Ontario during the summer of 2002 and “Operation Stockpile,” the stockpiling of frozen blood products during the winter months of 2003. By the end of the 2002/2003 fiscal year, Canadian Blood Services had announced its intention to introduce a screening test for WNV on or about July 1, 2003.

While working towards the implementation of a commercial test, the Research and Development team at Canadian Blood Services developed an “in-house” test in the event that the commercial test would not be ready. On June 19, 2003, testing began with the “in-house” test on blood collected in Ontario, where the vast majority of human cases had occurred in 2002.

On July 2, 2003, Canadian Blood Services began testing the entire blood supply using a commercial WNV test, developed and manufactured by Roche Diagnostics. Testing for WNV is performed at Canadian Blood Services laboratories in Toronto and Calgary.

“I would like to thank the many people whose extraordinary efforts helped us overcome the threat of West Nile Virus: Health Canada and Roche Diagnostics who worked closely with us, our donors who responded to our call to action, our staff who worked at an unprecedented pace, and our stakeholders and advisors who provided excellent advice.”

Dr. Graham Sher, Chief Executive Officer

* Results from Ipsos-Reid poll conducted August 2003
One of the most remarkable aspects of this initiative was the speed with which the test was implemented (approximately nine months, compared to the usual two to three years to introduce a new test). The major transformation projects of 2003/2004, such as the new computer system (MAK Progesa) and the consolidation of the donor-testing laboratories (from 11 laboratories to three), prepared the organization to rise to the challenge of this emerging pathogen and allowed for the rapid implementation of the WNV test.

During the 2003 season, the WNV test resulted in the identification and withdrawal of 14 blood donations that tested positive for the virus. Each unit of blood can be divided into several components; therefore, the test may have helped protect as many as 42 patients from potential infection.

While the test is critical to Canadian Blood Services’ ability to protect the blood system from WNV, it does not reduce the risk to zero. In the United States, the Centers for Disease Control and Prevention attributed six cases of WNV infection to infected blood donations that were not detected through testing using a similar test. These donations contained very low levels of virus from people at the very beginning of their infection period – levels that were too low for the test to detect. In order to add further safety, Canadian Blood Services introduced a number of other measures such as individual unit testing, rather than testing in pools of six, and stopping collections in areas that were hit hard by the virus (see box to the right).

**WEST NILE VIRUS COMMUNICATIONS**

The importance of communicating timely information was essential to maintaining the public’s trust during the first half of 2003/2004 as Canadian Blood Services ramped up efforts to protect the blood system from WNV. Through the posting of information on its Web site, active media relations and constant communication with the provincial and territorial governments, physicians, hospitals and blood banks, and other stakeholders, Canadian Blood Services kept its audiences apprised of each change that affected patients, blood donors, blood products and testing.

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**The following is a list of measures implemented by Canadian Blood Services during 2003/2004 to protect the blood supply from West Nile Virus:**

**MAY 20, 2003**
Urgent national appeal to ask Canadians to help build a stockpile of red blood cells in an unprecedented four-week donation “blitz”

**MAY 26, 2003**
Deferral of potential donors who had experienced headache and fever in the previous seven days

**JUNE 17, 2003**
Early testing with an “in-house” test to screen a limited quantity of blood products from Ontario – primarily platelets (later replaced by the commercial test)

**JUNE 23, 2003**
Commercial test on blood collected in Ontario

**JULY 2, 2003**
Commercial test on blood collected across Canada

**JULY 22, 2003**
Identification of the country’s first blood donation containing WNV in Saskatchewan

**SEPTEMBER 2, 2003**
Voluntary withdrawal of units prepared from donations collected in Saskatchewan between August 4 and August 31, 2003 (due to a large increase in the number of people in Saskatchewan believed to have contracted WNV)

**SEPTEMBER 2 TO 23, 2003**
Move from testing all blood samples (collected in Saskatchewan) in pools of six, to testing each individual blood sample

**SEPTEMBER 9 TO 10, 2003**
Cancellation of clinics in the Medicine Hat area of Alberta (due to a large increase in human cases identified by public health authorities)
Research indicates that Canadian Blood Services maintained trust and confidence throughout the period. Between March 2003 and August 2003, the number of Canadians who felt confident that Canadian Blood Services was prepared to handle the impact of WNV increased from 66 per cent to 76 per cent.

SEVERE ACUTE RESPIRATORY SYNDROME

In the spring of 2003, information emerged about a new virus making its way to North America from regions of Asia. At that time there was no scientific evidence that Severe Acute Respiratory Syndrome (SARS) can be transmitted by blood. Canadian Blood Services proceeded with a deferral policy as a precautionary measure in April 2003. Along with this additional deferral criteria, Canadian Blood Services already had a number of built-in safety measures that protect the blood supply against viruses such as SARS. Prospective donors attending clinics are asked if they are feeling well at the time of donation; those who are not well are deferred. Canadian Blood Services also checks the temperature of each would-be donor before a donation; any individual with a fever is deferred. In addition, donors are asked to contact Canadian Blood Services if they develop signs or symptoms of any illness within seven days of their donation; if they do, their blood donation is withdrawn.

Canadian Blood Services also took preventative measures to protect its staff from the virus. Each clinic posted a notice requesting that people who may have been exposed to SARS not enter. Antibacterial hand-washing stations were set up throughout the clinics and drivers who delivered blood to quarantined hospitals were met by hospital staff outside of the building. Canadian Blood Services maintained constant communication with public health officers to ensure they had the most up-to-date information on the virus. As a result, no Canadian Blood Services staff member developed SARS from working in the blood donor clinics.

SARS deferrals included the following:

- Donors who had travelled to Singapore, Taiwan, Vietnam, and China, including Hong Kong Special Administrative Region, were deferred for 14 days following the date of departure from the affected areas (this deferral was gradually removed in the months following the epidemic as specific sites were no longer considered a risk zone by the World Health Organization and the United States Centers for Disease Control)
- Donors recently quarantined or who had been advised to place themselves under quarantine were deferred for 14 days
- Donors who had recently cared for or lived with persons with SARS or suspected SARS were deferred for 14 days
- Prospective donors who had SARS or suspected SARS were also deferred for 28 days after recovery
VARIANT CREUTZFELDT-JAKOB DISEASE
In May 2003, tests confirmed that a cow from a farm in Alberta had bovine spongiform encephalopathy (BSE) or mad cow disease. In December 2003, a cow from the United States tested positive for BSE and it was later determined that the cow also originated from a farm in Alberta. The discovery of these two cases from Canada caused renewed concern about variant Creutzfeldt-Jakob Disease (vCJD) (the human form of mad cow disease) entering the Canadian population. There is, however, little reason to believe that vCJD would arise especially from such isolated incidents.

In December 2003, the first possible case of transfusion-transmitted vCJD was reported in the United Kingdom, leading blood operators around the world to conclude that the risk of vCJD being transfusion-transmitted should be considered “probable,” and no longer merely “theoretical” as in the past. With no blood screening test on the horizon, Canadian Blood Services reviewed its donor deferral policy and determined that it is sufficiently stringent to remove most of the potential risk to the system without endangering the supply of blood.

Throughout the year, Canadian Blood Services continued to consult with its Scientific and Research Advisory Committee, which includes scientists from the United Kingdom and other European countries, the United States and Canada, ensuring that it maintained access to international expertise and up-to-date information on vCJD.

Reducing Bacteria
In April 2003, Canadian Blood Services announced its plan to further enhance the safety of blood products with the introduction of a newly designed blood bag that includes a sample diversion pouch. The use of the new bags substantially reduces the risk of bacterial contamination. Bacterial contamination of blood products is the second most common cause of death from blood transfusions. All Canadian Blood Services sites had switched to the new bags by the end of the fiscal year.

Best practices in phlebotomy (puncturing the vein to take blood) and skin disinfection are well established at Canadian Blood Services; however, it is almost impossible to completely disinfect the skin. When the needle is inserted into the arm, a small plug of skin is torn from the site where the needle enters and is washed into the blood collection container. Diverting the first few millilitres of blood into a sample diversion pouch encourages the skin plug to move into the pouch, thereby decreasing the risk of bacteria introduced into the collected product.

This new process is expected to further reduce incidents of bacterial growth. The blood samples used to test the donor’s blood for blood group and infectious disease markers are taken from this diverted pouch, so no additional blood is lost in the process.

Blood Product Deviations
Canadian Blood Services reports deviations in its manufacturing activities to Health Canada on a monthly basis. These deviations are grouped under two categories: errors and accidents (E/As), and post-donation information (PDI).

When Canadian Blood Services discovers that an E/A has occurred or when a PDI is received about a donor, the donation is recalled if the safety, quality, purity or potency of the donation is brought into question. If affected components are still in inventory, they are quarantined immediately.
Errors and accidents may be detected at any point during the manufacturing process and are tracked, trended and analyzed to determine the root causes of any increases. During 2003/2004, Canadian Blood Services implemented multiple, major changes throughout the organization, including MAK Progresa, SARS screening, WNV testing and the consolidation of its donor-testing laboratories. The increase in the number of E/As during the summer, late fall and early winter is likely the result of the implementation of these many new processes and systems, and the associated learning curve. Given the automation of many of the new processes, compared to the previous processes, it is anticipated that E/As will decrease over time. Canadian Blood Services will continue to closely monitor the number of reportable errors and accidents to ensure that the changes are not creating new problems in the system.
POST-DONATION INFORMATION

A post-donation information (PDI) report is an incident in which a donation was accepted from a donor who subsequently reported a health risk factor that would have prevented him or her from donating blood. The reasons for these PDIs vary widely, from a donor developing the flu after having donated blood, to having risk factors for hepatitis or HIV. In 30 to 40 per cent of cases, donors had no way of knowing they were at risk at the time they donated. In other instances, however, they did know and the health assessment process did not obtain the relevant information. Continued efforts to improve Canadian Blood Services’ health assessment resulted in a reduction of nearly 25 per cent in the rate of PDIs in 2003/2004 compared to the previous fiscal year.

Health Canada Audits

The blood system is subject to routine audits by Health Canada, through its Health Products and Food Branch Inspectorate (formerly the Blood Establishment Regulation Division). In this fiscal year, Health Canada conducted 24 inspections at 16 Canadian Blood Services sites plus Head Office; this included a focused audit of the MAK Progesa system. Health Canada audit observations (deviations from standard operating procedures) for 2003/2004 totalled 122, showing a continued decline year over year since 1998/1999. This is evidence of the improving regulatory compliance and enhanced quality systems environment at Canadian Blood Services, reflecting the many changes that have been brought to the system over the past number of years.

On March 9, 2004, the Biologics and Genetic Therapies Directorate (BGTD) notified Canadian Blood Services that it had placed conditions on its licence requiring that a Contingency Plan and a Contingency Simulation Plan (including the date by which the simulation would be held) relating to the implementation of MAK Progesa be provided to BGTD no later than April 30, 2004. The Contingency Plan was intended to outline the manual steps Canadian Blood Services would take in the event of a prolonged breakdown of the Progesa system. The Contingency Simulation Plan was required to physically test the Contingency Plan. By the end of the fiscal year, plans were under way for the delivery of the two plans, which were delivered to BGTD before the April 30 deadline, as well as the scheduling of a disaster simulation which was actually conducted on June 6, 2004.

Lookbacks/Tracebacks

By the end of fiscal year 2003/2004, 74 per cent of lookbacks (tracing a unit of blood to the recipient) were completed, a significant improvement from the previous year in which 62 per cent were closed. In addition, 73 per cent of lookbacks for hepatitis C virus (HCV) were closed by the end of the year.

For tracebacks (tracing a unit of blood back to the donor), 77 per cent of cases were closed by the end of the fiscal year, compared with 56 per cent of traceback cases at the same time last year. By the end of the year, 76 per cent of HCV tracebacks were complete.
Risk Management

The assessment of and response to risk is a daily matter at Canadian Blood Services. It is the foundation upon which the organization provides a safe and secure blood supply to Canadians.

Canadian Blood Services has established an overall risk management framework for the organization that provides for the policies and processes to assess and respond to risk.

The primary risk is, of course, the risk associated with the availability and safety of the blood supply. This risk requires ongoing efforts to recruit donors, and to maintain and implement stringent testing and safety regimes.

Canadian Blood Services must, like many other organizations, be aware of and deal with other areas of risk, each with its own specifics applicable to the blood system, including:

- Operational Risk – the effects of human performance, technology risk and external events
- Reputational Risk – the impact of organizational behaviour on the trust that is an essential pillar of the blood system
- Compliance Risk – the ability to keep pace with varied and emerging standards of care in the medical, regulatory and legal areas
- Governance Risk – ensuring the existence and demonstration of good decision making and relationships at all levels, including with varied stakeholders

Attending to these risks, and ensuring that they are dealt with openly and thoroughly, is of prime importance to Canadian Blood Services.

A good example of how the structure of Canadian Blood Services permits timely response to risk is the matter of West Nile Virus. When Canadian Blood Services was created the Ministers of Health also created a contingency fund to be available to the CEO of Canadian Blood Services so that if there was an urgent safety need the organization would have quick access to funds without having to seek further appropriations from government. Having determined that the rapid emergence of WNV constituted a material risk issue for the blood supply, Canadian Blood Services was able to access funds rapidly in order to implement measures to reduce the risks that would have been faced through the blood supply.

This, along with a variety of other initiatives which measure and assess risk, is an essential and ongoing part of the management of the blood system.

YOLANDA RUSSO
VOLUNTEER
TORONTO, ONTARIO

In the six years that Yolanda has volunteered for Canadian Blood Services, she has made a significant contribution to donor clinics in her area. She submits clinic information for her church bulletin and community newspapers, encourages the priests at her church to personally endorse upcoming clinics and she coordinates approximately 12 volunteers from the Catholic Women’s League who help in the clinics. She has built strong relationships with local businesses and her local high school, each of whom wholeheartedly support the clinics by displaying the Canadian Blood Services posters that she provides. She is a prime example of someone who rises to the challenge every day to contribute to the blood system.
Security of Supply

Security of supply means that an adequate supply of blood and blood products is available for the patients who need them, when they need them. Faced with an ever-increasing demand, ensuring a secure supply is a constant challenge for Canadian Blood Services. It necessitates a blood system that is poised to respond with flexibility and speed to any challenge, and requires increasingly sophisticated programs to recruit and continually attract committed blood donors.

This past year, blood donors played a leading role in rising to the challenges that emerged – unexpected challenges such as the emergence of SARS, the spread of West Nile Virus (WNV) in the west, a major power outage in Ontario, wild fires in British Columbia, a hurricane as well as a severe snowstorm in Nova Scotia, and labour disruptions in Calgary and Nova Scotia – to help the blood system collect a record 842,366 units of whole blood.

Canadian Blood Services’ success in collecting its highest number of whole blood units to date is a compliment to the dedication of its staff members. Not only did they adapt to major changes throughout the organization, work tirelessly to implement new programs and processes and react quickly to emerging threats to the blood system, but they persevered in the face of many challenges of nature. On the west coast, forest fires in Kelowna forced many, including a number of Canadian Blood Services staff members, to evacuate their homes. On the east coast, Hurricane Juan struck the city of Halifax, causing major damage to the city and forcing the cancellation of several clinics in Nova Scotia and Prince Edward Island. In February, a severe snowstorm hit much of the east coast, resulting in a state of emergency and causing the cancellation of clinics in New Brunswick, Nova Scotia and Prince Edward Island. Despite these difficulties, staff continued to work through these emergency situations to ensure that hospitals and patients continued to receive the blood and blood products they needed.

Donor Recruitment

Despite the record number of whole blood collections during the year, Canadian Blood Services recognized it must continue finding ways to recruit and retain donors if it is to meet the growing needs of hospitals. With the percentage of Canadians who donate blood falling below that of many other industrialized countries, Canadian Blood Services launched a number of marketing campaigns throughout the year to remind people that the need for blood never stops.

WEST NILE VIRUS CAMPAIGN

In May 2003, Canadian Blood Services launched an urgent national appeal asking Canadians to help build a stockpile of red blood cells in a four-week donation “blitz.” The stockpile was intended to serve as a safety net to be used if WNV appeared in humans before Canadian Blood Services started screening all blood on or about July 1.
CTV DONOR DAY
In a national effort to promote the need for blood donors over the summer months, Canadian Blood Services continued its five-year partnership with CTV on June 19 for CTV Blood Donor Day. Thanks to the active involvement of CTV stations and affiliates across the country, more than 3,400 units of blood were collected.

INTERFAITH PILOT PROJECT
On September 22, 2003, Canadian Blood Services in Ottawa launched the Interfaith Pilot Project. This pilot marked the beginning of a promising new partnership between Canadian Blood Services and the National Capital Interfaith Committee.

The goal of this partnership is to attract new blood donors by making blood donation an integral part of Ottawa’s spiritual life. With the support of religious leaders, more than 250 congregations across Ottawa were asked to make a pledge to support the blood system. The first six months of the partnership showed promising results, with 25 congregations responding to the invitation to participate, 25 speaking engagements secured, three new clinics held at churches (two mobiles, one Bloodmobile), 19 congregations promoting existing clinics and eight congregations supporting the 2003 Holiday Promotion.

CANADIAN FORCES
In October 2003, Canadian Blood Services teamed with the Canadian Forces for the second year in a row to ask people to donate blood between November 5 and 11 (Remembrance Day) to honour the contribution of Canadian Forces personnel in Canada and around the world. The second part of the campaign, dubbed “Operation Roll up your Sleeves, Canada!” ran from November 11, 2003 to January 12, 2004 and involved visiting Canadian Forces Bases across the country so that members of the Canadian Forces, their families and friends could also donate blood.

THE MORE THE MERRIER
To encourage blood donations during the holiday season, Canadian Blood Services launched the “More the Merrier” campaign, which ran from November 17, 2003 to January 12, 2004 and asked donors to bring a family, friend or co-worker with them to donate.

WHAT’S YOUR TYPE?
The “What’s Your Type?” program, originally launched in 1998, allows Canadian Blood Services to reach into the communities where it collects blood and introduce potential new donors to the blood system. Individuals receive a finger prick and on-the-spot identification of their blood type, as well as unique information about their blood type.

The program is a proven means of attracting new donors, building partnerships and creating visibility within communities. Eight per cent of program participants subsequently donate blood. On average, donor clinics that leverage the program collect nine per cent of their monthly whole blood collections from new donors.

In 2003/2004, new display booths, registration forms, wallet cards, interactive pamphlets and a special section on the Internet were designed and launched for the program.

NEW DONORS
Despite unexpected challenges throughout the year, the number of new donors recruited by the blood system increased from 71,700 in 2002/2003 to 79,180 in 2003/2004.
**Donor Retention**

As important as it is to attract new donors, the most efficient way to secure the supply of blood is to retain donors already in the system. Through efforts like the Customer Care program, launched during the fourth quarter of 2003/2004, Canadian Blood Services is working to enhance customer service to blood donors by ensuring that their efforts are recognized from the very first donation.

With the Customer Care program, a nurse from the National Contact Centre calls new donors shortly after their donation to ensure they had a positive donation experience. Early results have shown a seven per cent increase in follow-up appointments by new donors who have been contacted.

In addition, employees continued to participate in the Customer Service Training program, originally launched in January 2003. A total of 322 staff from seven locations completed the training during 2003/2004.

**Donor Reinstatement**

For any number of reasons, donors may cease donating for a period of time, whether due to travel, illness or busy schedules. Canadian Blood Services continuously works to bring lapsed donors back into the system by contacting them periodically with a phone call or letter. Recruitment programs throughout the year primarily focused on bringing back lapsed type O-negative donors through the use of direct mail campaigns. Lapsed donors were also included in direct mail campaigns over the holidays. With the launch of the National Contact Centre, Canadian Blood Services has also been able to increase recruitment of lapsed donors by calling donors who have not been contacted before. In 2003/2004, there were a total of 76,026 reinstated donors, representing an increase of 2.6 per cent over the number reported in 2002/2003.

**Donor Recognition**

While the majority of donors surveyed say they don’t expect to be rewarded for their donations, Canadian Blood Services publicly recognizes the contribution of these valuable ambassadors of the blood system who set an example of generosity and dedication. Donor recognition events are held annually across the country to recognize the efforts of whole blood, plasma, platelet and bone marrow donors.

**HONOURING OUR LIFEBLOOD**

The fourth Honouring Our Lifeblood event was held in Ottawa in October 2003 at the National Gallery of Canada. The event honoured blood, plasma and bone marrow donors, as well as volunteers, partners and sponsors. All honorees were representative of Canadians who contribute to the blood system. One of the highlights of the event was keynote speaker Stephen Lewis, Special United Nations Envoy for HIV/AIDS in Africa, who spoke about the key role that donors, volunteers, partners and sponsors play in Canada’s blood system.

The event also recognized two Canadian Blood Services employees: Mr. Harvey Heather (pg 28), who was presented with the first annual CEO Award of Excellence for excellence in customer service, and Dr. Morris A. Blajchman, who received the Canadian Blood Services Lifetime Achievement Award for his contribution to the field of transfusion medicine.
Whole Blood Collections

For the fiscal year 2003/2004, Canadian Blood Services collected 842,366 whole blood units. Although this is approximately 7,634 units short of the target amount of 850,000 units, it represents a four per cent increase from the amount collected in 2002/2003.

Blood collections throughout the year were strong; however, several events – including an influx of WNV, the emergence of SARS, the Ontario power outage, Hurricane Juan, the severe winter storm in Halifax, forest fires in Western Canada, two labour interruptions (Calgary and Halifax) and severe weather across the country during February – resulted in under-performance of the goal set for 2003/2004. The combined effects of these events resulted in an inability to collect approximately 15,800 whole blood units and 2,400 plasma units. To combat this loss, Canadian Blood Services ramped up collections by setting up additional clinics where possible and moving clinics to different locations. Hospital demand was met by moving blood inventory around the country. These efforts resulted in making up about 8,000 whole blood units and reaching 99 per cent of the annual target by the end of the fiscal year.

In addition to these challenges, the implementation of several initiatives to transform the blood system affected collections and clinic operations, resulting in decreased efficiency as staff adjusted to new processes and systems. The implementation of MAK Progesa, the national computer system, required the cancellation of clinics to permit the necessary downtime for the switch-over; the introduction of a new blood bag with a sample diversion pouch slowed the collection process while staff adapted; and the transition from local telerecruitment to the National Contact Centre challenged Canadian Blood Services staff to adapt to new processes. With the addition of new questions to the donor screening questionnaire to reduce the risk of SARS and WNV, health interviews took longer to complete, extending the overall donation process. The majority of donors were understanding and positive about Canadian Blood Services’ efforts to maintain blood safety.

Plateletpheresis Collections

The plateletpheresis program collects only platelets from donors using a cell separator. For the fiscal year 2003/2004, Canadian Blood Services collected 21,662 units, which represents an 11.4 per cent increase from 2002/2003 and approximately 5.7 per cent above the targeted amount for the year.

Plasmapheresis Collections

The plasmapheresis program collects only plasma from donors instead of a whole blood unit. For the fiscal year 2003/2004, Canadian Blood Services collected 44,776 units of plasma. Collections were slightly less than the previous year due to a number of challenges to the plasma program. Some of these challenges included such things as the closure of a plasma clinic in Alberta due to WNV concerns; the two-week closure of the plasmapheresis program in Calgary due to a labour disruption in July; and weather and labour disruptions in Halifax. Although the plasmapheresis program was reinstated in Newfoundland and Labrador in early 2003 as part of Operation Stockpile, staff are still working to increase donations and make donors aware of the program.
**Hospital Customer Service Strategy**

Canadian Blood Services strives to strengthen its relationship with hospitals by continuously looking for ways to improve communications, balance the availability of blood with demand and assist hospitals in improving blood utilization and surveillance.

A significant milestone was reached during the fiscal year with the launch of the Hospital Customer Service strategy and the introduction of Hospital Customer Service Representatives (HCS Reps) in five areas: British Columbia and Yukon, Alberta, Toronto, Southern Ontario and Nova Scotia/Prince Edward Island. The HCS Reps provide a link for information exchange between Canadian Blood Services and hospitals. While the strategy is to improve service to hospital customers, the initiative will help Canadian Blood Services to better understand product demand and to meet hospital needs.

Following the launch of the Hospital Customer Service program, a benchmark survey of hospital customers was conducted by Ipsos-Reid on behalf of Canadian Blood Services. The objectives of the survey were to: measure hospital satisfaction levels with Canadian Blood Services products and services; determine areas for service improvement; identify tools, skills and resource support required to achieve and maintain customer service excellence; and provide a benchmark for performance on an ongoing basis. The 10-minute telephone survey was conducted from a sample of 200 hospitals serviced by Canadian Blood Services.

Data from the survey indicates that 91 per cent of hospital customers are satisfied with the services received from Canadian Blood Services. It also revealed that satisfaction is primarily driven by timeliness and accuracy of deliveries. The majority of respondents (84 per cent) said their satisfaction with Canadian Blood Services had not changed in recent years and any dissatisfaction they have experienced relates primarily to product availability. This data will be used to further build Hospital Customer Service programs.

**Hospital Issues and Orders**

One of the measures Canadian Blood Services uses to track its ability to meet demand is comparing the number of units issued to the number of units ordered by hospitals. The resulting measure, the Issue/Order (I/O) ratio is presented as a percentage. Due to a strong donor response across the country, red blood cell (RBC) units issued to hospitals were above the set target of 95 per cent despite the challenges of the year and the implementation of Transformation initiatives such as MAK Progesa, consolidated testing and the National Contact Centre.

**O-NEGATIVE RED BLOOD CELL INVENTORY**

O-negative red blood cells are the products for which shortages happen more often than other groups, since this blood group is universally compatible for all blood group recipients and is widely used in trauma. Demand for O-negative red blood cell units can be higher than the amount collected from the donor population. As a result, O-negative red blood cells are normally the blood group with the lowest inventory in relation to the target level. Canadian Blood Services has rarely sustained an inventory of O-negative red blood cells above the target inventory level. The target inventory level is based on four days of average historical demand and is recalculated each year.

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**Hospitals’ Satisfaction with Canadian Blood Services**

Overall, how satisfied would you say you are with the services that Canadian Blood Services provides to you? You can do this by using a 7-point scale in which ‘7’ means you are very satisfied and ‘1’ means you are not satisfied at all.

- **7** Very Satisfied
- **6** Somewhat Satisfied
- **5** Neutral
- **4** Somewhat Dissatisfied
- **3** Very Dissatisfied
- **2** Not At All Satisfied
- **1**

Base: All respondents N=200

Satisfaction with Canadian Blood Services among hospital customers is very high. Asked to rate their satisfaction on a scale of 1 to 7, 91 per cent of hospital customers offer a score of 5 or higher, with 37 per cent rating Canadian Blood Services a perfect score of 7 out of 7 (very satisfied). Negative views of Canadian Blood Services are extremely rare, as only two per cent offer a rating of three or lower on the 7-point scale.
Throughout fiscal year (FY) 2003/2004, Canadian Blood Services exceeded its target of meeting 95 per cent of hospital orders. Service level to hospitals was maintained on or above target, despite the power outage in August in Ontario, the fires in British Columbia during the summer of 2003, Hurricane Juan (in September 2003) in Nova Scotia and a severe snowstorm (in February 2004) in Nova Scotia, and labour disruptions in Calgary (July 17 to 30, 2003) and Nova Scotia (November 10, 2003 to February 9, 2004).

Shipments for this fiscal year totalled 751,470, which represents a 1.3 per cent increase from the previous year (741,401). Canadian Blood Services continues to experience an increase in shipments year over year, but the growth rates are diminishing.

O-negative inventory was below target for the first half of the year but did increase in response to the West Nile Virus appeal in May and extra collection efforts in August, following the Ontario power blackout. Inventory levels were sustained during the second half of the year.

One way that Canadian Blood Services can ensure a strong supply of blood for Canadian patients is by enhancing customer service to donors. This is one of the primary reasons behind the launch of the National Contact Centre (NCC) in April 2003 and it is one of the most important aspects of Jenn’s job. She works at the NCC as a Customer Service Representative where she responds to calls from donors as well as the general public. Jenn is also responsible for recruiting new donors, booking appointments and calling donors to remind them about upcoming appointments. Although she joined the blood system less than a year ago, she quickly realized the impact her job can have on a donor’s experience which in turn can make a difference in the life of someone who needs blood.
Platelet Shipments

In 2003/2004 Canadian Blood Services noted an increase in demand for platelets of approximately five per cent. Over the year, a survey of hospital customers was undertaken to determine whether the growth in demand would be sustained. Hospitals were asked to reflect on ordering practice, platelets transfused, patients transfused, units pooled, transfusion triggers and new programs. The results of the survey indicated changes in ordering practices were due to shorter dating of platelets received and more frequent deliveries. In addition, 54 per cent of hospitals that participated in the survey reported transfusing more platelets in 2003/2004 than over the same period the previous year, with an average yearly increase of nearly seven per cent. Hospitals also indicated that more patients are being transfused platelets, mostly due to more aggressive cancer therapies. From the survey, Canadian Blood Services has concluded it can expect to see the increase in demand for platelets continue in the range of four to six per cent for the upcoming fiscal year.

Plasmapheresis Shipments

Apheresis plasma issues are traditionally very stable, as are apheresis plasma collections. However, in the summer of 2003, apheresis plasma collections were reduced as a result of actions taken in response to the approach of the WNV season. The apheresis collections in June 2003 that would have been used for transfusion were instead collected as source plasma (plasma derived from apheresis), which is collected specifically for fractionation – the fractionation process inactivates the virus. Apheresis plasma collections were diverted to source plasma for the entire month of June 2003 across the country. Once the WNV testing program was in place (July 2, 2003), apheresis plasma collections for transfusion resumed. This interruption in supply resulted in less apheresis plasma available to meet hospital orders; some of the demand was met with additional fresh-frozen plasma manufactured from whole blood donations.

In a year that challenged both donors’ ability to attend clinics and staff’s ability to adapt to new systems, the security of the blood supply was always at the forefront of each and every decision made by Canadian Blood Services. Despite an unprecedented number of challenges to the blood system, collections of whole blood were at their highest and shipments to hospitals exceeded the target. It was truly a year that demonstrated how both the blood system and the people that support it rose to the challenge.
Operational Effectiveness

The blood system, like any other business, must operate to optimize the use of resources available to it. With safety as the overriding principle, Canadian Blood Services undertook a number of initiatives to improve process efficiencies in the system. These initiatives focused on minimizing waste, increasing productivity and improving capacity to respond to challenges. In a year of change, Canadian Blood Services made it its business to *rise to the challenge* by ensuring that all projects were collectively coordinated and focused on these objectives.

Product Yield
For the fiscal year 2003/2004, Canadian Blood Services saw a slight decline in the proportion of red blood cell (RBC) components produced from whole blood compared with the previous year. This coincided with the implementation of the WNV test. Beginning in mid-May 2003, Canadian Blood Services began building a “safety net” of stockpiled RBCs collected before the occurrence of human cases, when the risk to the blood system was considered low. This was done as a safety measure in case the implementation of the commercial WNV test was delayed beyond the occurrence of human cases. As it turned out, the WNV test was implemented at the earliest possible date, on July 2, 2003, thereby allowing Canadian Blood Services to replace the stockpiled RBCs with WNV-tested RBCs. Some of the RBCs collected as part of this “safety net” were not used because they were replaced with WNV-tested RBCs; however, the plasma previously extracted from these units was sent to fractionation (which inactivates the virus) and used.

Labour Hours Per Unit of Whole Blood Collected
One way to measure productivity in the blood system is through the tracking of labour hours per unit (LHU) collected. In 2003/2004, Canadian Blood Services saw an improvement in total LHUs of whole blood collected compared with 2002/2003 results, reflecting the continuous improvements brought to Canadian Blood Services’ environments, both as a result of new initiatives and efforts to improve the process in a number of Canadian Blood Services locations. LHUs can vary from region to region due to such factors as collection volume, distance required to travel to clinics and labour agreements.
Ottawa Manufacturing and Collections Facility

In April 2002, Canadian Blood Services announced that current manufacturing operations in Ottawa would be moving to a new facility that would meet Good Manufacturing Practices (GMP), Health & Safety and operational requirements. The new site is a state-of-the-art, GMP-compliant facility with the capacity to manufacture more than 90,000 whole blood units.

By September 2003, all divisions, with the exception of Collections, had successfully completed their move to the new site. Relocation to the new Collections facility will take place in 2004/2005.

HR/Payroll

In May 2001 Canadian Blood Services launched a project to redesign its Human Resources (HR) and Payroll processes. The objective of the HR/Payroll project was to ensure that employees are paid appropriately, that collective agreements are implemented in a timely manner, and that changes in terms and conditions are applied consistently. Since the system was implemented in June 2002, it has encountered ongoing difficulties. In the fall of 2003, a new project was launched to address the issues that remained outstanding.

In addition to other activities, the following key milestones were achieved, aimed at improving and enhancing HR/Payroll services and restoring employee confidence:

• A feasibility study was undertaken to review the corrective action required to improve the HR/Payroll Program.

Although the development of the HR/Payroll system faced a number of challenges which negatively impacted staff morale, Canadian Blood Services is committed to learning from the issues that followed this implementation.
Continuous Improvements

DISCONTINUATION OF HIV-1 P24 ANTIGEN TESTING
In April 2003, Health Canada granted Canadian Blood Services approval to discontinue HIV-1 p24 antigen testing, which was originally implemented in 1996. Nucleic Acid Amplification Testing (NAT) for HIV is now an approved test that is more sensitive and reduces the window period for HIV by a few days. The elimination of this test has several measurable benefits for the blood system, including:

- expensive test kits and large staff requirements made the cost of the test high;
- the test had relatively low specificity which resulted in the deferral of many donors (between 500 and 700 donors per year) due to false reactive test results.

Cost savings for 2003/2004 were $1.4 million in test kits alone.

OPERATIONS DIVISION REORGANIZATION PROJECT
To meet Canada’s requirements for safe, high-quality blood, Canadian Blood Services announced a change to its operations structure in June 2003. This restructuring will reposition the blood system to better supply hospitals by eliminating limitations inherent in operating a system from multiple geographic centres.

The strategy is designed to provide a focal point for leadership in customer service by realigning operations into regions.

The new concept will operate with seven regions, each with its own Regional Director, who will focus on improving customer relations within his or her area. Each region will also have managers responsible for recruitment, collections and manufacturing, supported by the fully automated, on-line, real-time inventory capabilities of MAK Progesa.

In addition, 2003/2004 also saw the responsibility for the daily operations of donor testing transferred from Canadian Blood Services’ Operations division to the Medical, Scientific and Research Affairs (MS&RA) division to better reflect the medical and scientific expertise required to assure optimal performance of the sophisticated tests now being used. Although not compulsory, Canadian Blood Services modelled its approach on the American Association of Blood Banks (AABB), which requires that medical directors have responsibility and authority for all medical and technical policies, processes and procedures, including those that pertain to laboratory personnel and test performance.

PATIENT SERVICES LABORATORIES
Currently, many of Canadian Blood Services’ locations offer a variety of specialized laboratory functions that support hospitals and patients. Some of these services include transmissible disease testing for pregnant women and diagnostic testing for autoimmune diseases. Although these services are not directly related to Canadian Blood Services’ mandate of operating the blood system, they are still important services that have been performed for a number of years.

Some of the patient services laboratory activities occurred in laboratories with joint manufacturing/donor services and patient services activities while others occurred in laboratories dedicated to offering patient services. In 2003/2004, Canadian Blood Services began the process of consolidating patient services laboratory activities into laboratories that perform only patient services activities, with the single exception of the Canadian Blood Services lab in Regina, which will continue to operate its patient services laboratory. The responsibility for all patient service labs was transferred from Canadian Blood Services’ Operations division to the MS&RA division.
In addition, donor typings for the Unrelated Bone Marrow Donor Registry (UBMDR) are now performed at the HLA Laboratory at Canadian Blood Services’ Head Office in Ottawa or the Winnipeg Immunogenetics Laboratory.

Performance Improvement Projects
Canadian Blood Services undertook a performance improvement project in British Columbia and Yukon aimed at achieving both operational enhancement and simultaneous savings. Specifically, the task was to increase donations while properly aligning collection, production and distribution costs, and improving quality and customer service to donors and hospitals.

Canadian Blood Services in British Columbia and Yukon saw an increase of 5.3 per cent in collections, which translated to an additional 5,415 units. This represented the highest annual collection level in British Columbia and Yukon since the 1994/1995 fiscal year.

Several other improvements were achieved during the year, including:
• implementation of an organizational redesign of the manufacturing lab, which resulted in cost savings, more effective use of staff and increased employee satisfaction through the creation of a number of more meaningful positions;
• introduction and development of a continuous improvement culture through eight Performance Improvement Teams that provide recommendations for improvement;
• increased hospital customer satisfaction and decreased costs when improvements are made to modes and times of transportation of product to hospitals;
• improved monitoring and planning with the introduction of daily production planning meetings for all clinics; and
• improved management and supervisory skills through leadership training.

Improvements in labour hours per unit (LHU) collected, achieved through the operational improvement initiative introduced in Toronto in 2002/2003, were maintained in 2003/2004 with a year-end rate of 1.75 LHU, compared with the previous year’s rate of 1.94. Toronto also sustained learned monitoring processes, introduced in 2002/2003, through daily meetings, metrics/tools and increased staff involvement in process improvements and cost efficiencies.

Analysis of Manufacturing Processes
During the fiscal year, the manufacturing division trained its staff in the Six Sigma methodology, an industry-recognized, standardized approach that uses statistical tools to help in the analysis of problems.

Six Sigma working groups were established during the year to assess the following challenges:
• Unit breakage of Fresh Frozen Plasma
• Outdating of platelet units
• Inappropriate hemoglobin deferrals during screening
• Donor questionnaire errors

Transfusion Medicine Division
Canadian Blood Services’ transfusion medicine division has assumed a leadership role in transfusion medicine education in Canada. Initiatives target both physicians and the public and include the following examples.
TRANSFUSION MEDICINE FELLOWSHIP TRAINING

In the summer of 2003, the Royal College of Physicians and Surgeons of Canada officially recognized the subspecialty of Transfusion Medicine (TM) in the category of certification without examination.

A TM training program at the University of Toronto was accredited by the Royal College and its first fellow (funded by Canadian Blood Services) will enter the program in July 2004.

ISO CERTIFICATION

On June 3, 2003, Canadian Blood Services’ two device manufacturing facilities – the Immunohematology and Human Leukocyte Antigen (HLA) laboratories in Ottawa – received ISO 9001 and 13485 certification. ISO is a universal quality system designed to protect both customer and supplier by emphasizing prevention, as opposed to detection, in production and processing. This certification is an important milestone for Canadian Blood Services. In addition to giving the blood system international recognition, it demonstrates Canadian Blood Services’ commitment to quality and excellence.

Public Involvement

As part of its ongoing commitment to operate openly and effectively, Canadian Blood Services continues to involve stakeholders and the public in decisions that may affect them. This involvement happens in many ways, such as through consensus conferences, liaison committees and open Board meetings.

Over the fiscal year, the National Liaison Committee (NLC), made up of national stakeholders in the blood system, provided input on issues such as WNV communications, the Canadian Blood Services Foundation and the UBMDR.

The six Community Liaison Committees representing British Columbia/Yukon, Calgary, Winnipeg, London, Nova Scotia/Prince Edward Island and Newfoundland and Labrador, provided input on the Canadian Blood Services Foundation, the volunteer strategy, donor recruitment and the “Donors for Life” program.

Canadian Blood Services also held an open meeting of its Board of Directors in Regina in April 2003.

Volunteer Strategy

Volunteers are the heart of the blood system and their work is critical to community awareness. Throughout the year, Canadian Blood Services’ volunteers contributed 265,000 hours to enhancing the blood system.

In response to findings that the percentage of Canadians who volunteer is decreasing but the number of short-term volunteers is increasing, Canadian Blood Services launched a three-year Volunteer Program Strategy aimed at improving the volunteer program. The 2003/2004 fiscal year saw the successful completion of such things as the standardization of volunteer service assignments to define the roles of volunteers.

Ongoing support for the volunteer program included the launch of the national Speakers Bureau program in three new locations: Winnipeg, Sudbury and Ottawa. Seven locations are currently running the program. Through the Speakers Bureau, Canadian Blood Services recruited an average of 4.6 new donors per month at each participating location.
Transforming the System

This has been a landmark year for the blood system in Canada. After years of planning, Canadian Blood Services has transformed into a system that is positioned to respond efficiently and effectively to unforeseen challenges. The investments made in such areas as technology, research and development, and testing have allowed Canadian Blood Services to rise to the challenge, in a year when the blood system was truly put to the test. The strategic activities outlined in the following pages have collectively ensured Canadian Blood Services’ place as one of the safest blood systems in the world.

MAK Progesa

One of the most significant events for the blood system in 2003/2004 was the much-anticipated launch of a new software program, called Progesa by MAK-System International Group. Progesa has helped to lay the foundation for other Canadian Blood Services initiatives and is testament to the commitment of this organization to build a better blood system for Canadians.

Following years of careful and detailed planning, Canadian Blood Services saw the successful implementation of this national system, beginning with a pilot in Halifax in March 2003 and finishing in Edmonton and Winnipeg in February 2004. Though some problems were noted during implementation, as is to be expected when a new system of this magnitude is brought in, Canadian Blood Services continues to improve and refine the system.

Overall, the project met with great success and Canadian Blood Services received international recognition for its implementation. Canadian Blood Services was recently invited by the American Red Cross to share its approach to implementing Progesa, recently referred to Canadian Blood Services’ experience as the “gold standard” in the industry.

The Progesa software has resulted in standardized processes that allow Canadian Blood Services to follow a unit of blood from the donor, through production and testing, to the hospital. This new environment means that, instead of operating with 14 separate databases and a variety of paper-based processes, Canadian Blood Services now has one consolidated database with a real-time view of the products in stock. Storing the history of every blood donation and making the information available at blood donor clinics results in improved management and safety of the national inventory.

This new environment means that, instead of operating with 14 separate databases and a variety of paper-based processes, Canadian Blood Services now has one consolidated database with a real-time view of the products in stock.
MAK Progesa Benefits

THE DONATION
- Automates many manual operations for faster processing of donors
- Eliminates manual transcription errors by automatically recording, storing and printing a donor’s demographic information
- Ensures every blood clinic has the same information on each donor

POST DONATION
- Electronically informs production staff of the number of units to expect and when they will be received
- Scans units and generates packing slip

PRODUCTION/MANUFACTURING
- Ensures real-time inventory information on blood component data (plasma, platelets, red blood cells)
- Provides interface with scales for weighing components to ensure consistency of data
- Ensures discard of components (due to information on health problems received in the days following donation, or positive test results, etc.)
- Captures statistics (e.g., number of components produced, reasons for product discards)

TESTING
- Interfaces directly with laboratory software (Lab Data Management System), providing faster access to information and reducing potential for human error
- Allows laboratory staff to view status of components

TRACEABILITY
- Provides for immediate recall of products that have been released to hospital
- Prevents release of specific donations by electronic quarantine

LABELLING
- Replaces highly paper-based system and eliminates human error
- Requires fewer resources
- All rules now applied by database

INVENTORY
- Allows for real-time national inventory levels
- Improves accuracy in meeting hospital demand
- Replaces manual counting and balancing of inventory

HOSPITAL
- Improves safety of blood products through new, consolidated bar-code labelling, which reduces chance of error in product distribution

Consolidation and Automation of Donor Testing Laboratories

Since taking over management of the blood system in 1998, Canadian Blood Services has upheld its mission to provide a safe and reliable supply of blood for Canadians. The most important means of ensuring safety is through testing for diseases that are known to be transmissible by blood. Canadian Blood Services tests every unit of blood for a number of transmissible diseases such as HIV, hepatitis and West Nile Virus (WNV).

The first step in refining its testing procedure was made by Canadian Blood Services on October 25, 1999, with the implementation of Nucleic Acid Amplification Testing (NAT) for hepatitis C virus (HCV). On May 28, 2001, NAT was broadened to include screening for HIV-1, the virus that causes AIDS. This test significantly reduces the window period (the period between infection and the ability of the test to detect infection) by testing for the presence of the actual virus in the blood instead of the antibodies.

In 2001, Canadian Blood Services had announced that PRISM would be the testing platform of record for four transmissible disease antibody tests: syphilis, hepatitis B and C, HIV 1 and 2, and Human T-Cell lymphotropic virus.

The PRISM technology, manufactured by Abbott Diagnostics, provides high throughput and process-controlled testing, significantly improving both safety and quality. This allowed Canadian Blood Services to consolidate its 11 testing laboratories into three laboratories located in Toronto, Calgary and Halifax, where both NAT and PRISM technologies are used.
In March 2003, Canadian Blood Services implemented PRISM in its Toronto location, followed by implementation in Calgary and Halifax in April and October, respectively.

The consolidation of laboratories made it possible for Canadian Blood Services to implement the NAT test for WNV in a very short time period by freeing up resources that were redirected towards the development of the test. All WNV testing is conducted in Calgary and Toronto.

The consolidated laboratories and implementation of PRISM completely revolutionized the testing environment. Now Canadian Blood Services can easily meet the testing requirements for increased collection targets and adapt quickly should a sudden spike in blood donations be needed to respond to a disaster, without compromising the safety of the blood system.

**National Contact Centre**

As part of a significant initiative aimed at enhancing customer service to donors and increasing collections, the National Contact Centre (NCC), a state-of-the-art telerecruitment facility, became operational on April 13, 2003, with the successful transfer of inbound and outbound calls from the Sudbury site to the NCC. Throughout the remainder of the year, all inbound and outbound calling from Canadian Blood Services sites across the country was transferred to the NCC, with the exception of Toronto.

The NCC, located in Sudbury, operates 24 hours a day, seven days a week to answer calls from the toll-free telephone line and perform outbound recruitment calls. It also supports national donor recruitment campaigns, appointment reminders, changes in clinics, as well as the “What’s Your Type?” telerecruitment initiative.

**MAJOR SUCCESSES**

The NCC rose to the challenge on a number of occasions throughout the year. When Hurricane Juan hit Halifax in September 2003, coordination between the NCC and the Canadian Blood Services location in Halifax was critical in ensuring that donors were kept apprised of any clinic schedule changes. When labour disruptions affected Halifax and Calgary, the NCC was able to successfully ramp up collections in other areas, ensuring that the blood supply was not affected.

When a power outage hit much of Ontario on August 16, 2003, the NCC remained 100 per cent operational due to a natural-gas-powered generator. Staff at the centre worked long hours during the days following the blackout, to ensure blood was collected in locations that were still operational.

**RESULTS**

The NCC has experienced a 56 per cent increase in total calls to the toll-free line (1 888 2 DONATE), absorbing 148,680 more calls in 2003/2004 than in the previous year, and demonstrating that the NCC can truly respond to an ever-changing environment.
Quality Management System Transformation Program

Because Canadian Blood Services operates in a strictly regulated environment, it has made it a priority to document, monitor, report and evaluate its processes, products and services at all times and ensure that risk is minimized should changes be made.

In addition, the regulatory environment in which Canadian Blood Services operates is subject to change. During the fiscal year, Health Canada transferred responsibility for the inspection of the national blood program from the former Blood Establishment Regulation Division (BERD) to the Health Products and Food Branch Inspectorate (HPFBI), while management of submissions and reportable errors remain within the mandate of the Biologics and Genetic Therapies Directorate (BGTD). Changes such as these require adjustments within Canadian Blood Services’ operations to ensure it has the capacity to manage change safely and effectively.

The attainment of this quality objective requires the participation and commitment of personnel in many different departments and levels, as well as of suppliers to the blood system. To achieve the objective in a reliable manner, management uses several types of organized arrangements that are collectively called Quality Systems.

In 2002, Health Canada approved 16 Quality Systems standard operating procedures (SOPs) for Change Control, Document Management, Deviation Management, Training Management, Validation, and Complaint Management. The implementation of these quality SOPs ensures the Canadian Blood Services’ Quality Systems are compliant with mandated Good Manufacturing Practices (GMP) guidelines. These standardized processes will support Canadian Blood Services’ efforts in managing risk to the blood system, by providing accurate, timely and complete quality performance metrics, and by supporting information necessary for risk-based decision making.

One of the first projects in the program is the Document Management quality system. This system will control the authoring, review and approval, distribution and implementation of SOPs and related controlled documents. Recent major projects, such as the implementation of MAK Progesa and WNV testing, have highlighted the significant impact the document control function has on the timely and efficient implementation of key strategic projects.
Plasma Products

Plasma is the fluid in which blood cells are suspended. It consists mostly of water, but also contains a variety of proteins, salts, lipids, and other nutrients and products of metabolism. Plasma products or fractionated products usually refer to drugs derived from the fractionation, or processing and refining, of plasma. These “plasma protein products” refer to plasma-derived drugs, recombinant clotting factors and synthetic proteins that are not derived from fractionated plasma.

There are two methods for collecting plasma. In apheresis, whole blood is passed through a closed system that separates the plasma and returns red blood cells to the donor. With whole blood donations, plasma is separated from other components after the collection process is complete. Plasma derived from apheresis and intended for fractionation is called “source plasma,” while plasma taken from whole blood and intended for fractionation is called “recovered plasma.”

The plasma collected for fractionation by Canadian Blood Services and Héma-Québec is stored and shipped to Canadian Blood Services’ contracted fractionator in the United States to produce intravenous immune globulin (IVIG) and albumin.

Approximately half of Canadian Blood Services’ overall budget is invested in obtaining and distributing plasma protein products, such as intravenous immune globulin (IVIG), recombinant clotting factors VIII and IX, and albumin. As the sole distributor in Canada (outside Quebec), Canadian Blood Services is committed to ensuring a safe and adequate supply of these products for Canadian patients.

Demand for IVIG has continued to increase steadily over the past five years. IVIG manufactured from plasma shipped for fractionation is sufficient to meet only a portion of Canadian requirements for IVIG. The balance of the requirement is purchased from commercial fractionators in the United States.
Development of the Plasma Protein Products Strategy

Demand in Canada for plasma protein products is expected to remain strong for the foreseeable future. Recent developments on the international level, including mergers and acquisitions of key companies, and the pending sale of Bayer’s plasma fractionation business, have emphasized the importance that Canadian Blood Services develop a clear vision for the future to ensure continuous access to plasma protein products for Canadian hospitals.

In October 2003, Canadian Blood Services organized a broad-based consultation with a diverse cross-section of stakeholders to set the direction for the development of a strategic plan for plasma protein products and their alternatives. Attendees included representation from the health care field, patient groups, commercial manufacturers, regulators, Corporate Members, and international experts, as well as members of Canadian Blood Services’ Board of Directors, Executive Management Team and staff. The strategic directions that emerged from the broad-based consultation were:

- Product Selection Process
- Utilization Management
- Demand Forecasting
- Canadian Sufficiency for Plasma Products
- Collections
- Manufacturing
- Inventory Management and Distribution

From the consultation, Canadian Blood Services began developing a strategic plan to move forward on all aspects of the plasma protein products business.

Plasma Protein Products

**INTRAVENOUS IMMUNE GLOBULIN**

IVIG is used to treat immunodeficient patients, as well as some neurological diseases. While the growth in demand for IVIG in Canada decreased slightly to 6.8 per cent from 10 per cent growth in the previous year, comparative data available from other countries indicate that Canada continues to be one of the highest per capita users of IVIG in the world.

**ALBUMIN AND PENTASTARCH**

These products are used for plasma volume expansion in patients. Shipment of albumin (combined albumin in a five per cent solution and albumin in a 25 per cent solution) increased by 3.3 per cent over the previous year, while pentastarch shipments increased by 13.2 per cent over the same period.
RECOMBINANT FACTOR VIII

Recombinant Factor VIII is prescribed to prevent and control bleeding in patients with hemophilia A. In 2003/2004, recombinant Factor VIII accounted for more than 95 per cent of overall demand for Factor VIII. Shipments of recombinant Factor VIII increased by 9.8 per cent over the previous year.

FACTOR IX

Factor IX is prescribed to prevent and control bleeding in patients with hemophilia B. In 2003/2004, recombinant Factor IX accounted for more than 90 per cent of demand for Factor IX. Total shipments of recombinant and plasma-derived Factor IX decreased by 5.5 per cent from the previous year.

RECOMBINANT FACTOR VIIa

Factor VIIa is used in the treatment of bleeding in patients with hemophilia A or B with anti-Factor VIII or anti-Factor IX inhibitor antibodies. Demand for this product often varies widely from month to month, reflecting the large doses that may be required, and the relatively small number of patients treated with this product.

**Patient Notification System**

Canadian Blood Services and Héma-Québec jointly launched the Patient Notification System in March 2003, to provide a supplementary source of up-to-date information on the withdrawal and recall of plasma products to patients, families and health care professionals. Since its launch, the system has seen a steady increase in the number of registrants. Currently there are approximately 300 registrants, which represents an annualized growth rate of 30 per cent. Approximately 8,500 promotional pamphlets have been distributed to raise awareness of the system.
Unrelated Bone Marrow Donor Registry

The Unrelated Bone Marrow Donor Registry (UBMDR) is committed to matching healthy, unrelated donors to patients here in Canada and around the world. At any given time, the Registry has approximately 250 Canadian searches under way, as well as 350 searches for international patients. In 2003/2004, the UBMDR facilitated 195 unrelated bone marrow transplants for Canadian patients and 54 international patients. The Registry can also coordinate searches of umbilical cord blood-derived stem cells (cord blood) for the 18 Canadian Transplant Centres, and last year the UBMDR conducted 37 cord searches for Canadian patients.

The UBMDR is now the sixth largest registry in the world, with over 219,000 donors listed. Through its affiliation with 57 international registries around the world, Canadian patients have access to almost nine million donors worldwide. This link to international registries is a distinct advantage, because over 50 per cent of donors for Canadian bone marrow transplant patients come from other countries.

The UBMDR is committed to rising to the challenge of building the most effective registry possible – a registry that reflects the age and ethnic diversity of Canada. Since tissue types (called “HLA” types) differ among racial groups, just adding more donors to the Registry is not enough.

Over the 2003/2004 fiscal year, the UBMDR initiated research and made changes to eligibility to reflect patient needs. In light of medical research that shows younger donors offer patients the best transplant outcome, the decision was made to lower the upper age limit from 59 to 50 years of age. Canadians can now join the Registry until their 51st birthday and will remain on the Registry until age 60, which is in accordance with recommendations set by the World Marrow Donor Association.

An epidemiologist was dedicated to better identify gaps between the current donor pool and the needs of bone marrow transplant patients. The results of this analysis will offer a scientific basis for strategic recruitment of donors that will more effectively offer patients the best possible chance of finding a match now and in the future.
When matching donors to patients, there are six antigens, or genetic markers, that are thought to be critical. In 2003/2004, more sophisticated and comprehensive typing methods were introduced so that new donors could be fully typed when joining the Registry. With the introduction of more sophisticated DNA typing, new donors are now typed faster and for all six antigens (this includes two sets of HLA-A, -B and -DR antigens as inherited from each parent). Since it is most likely that a match for a patient will be found in the pool of donors who have been fully typed, retrospective DR-typing was begun on all donors under the age of 40. Currently, the Registry has 42 per cent of its donors completely typed. This initiative will increase the number of registered donors likely to be selected as a match and decrease the search times for patients waiting for a matched donor.

Changes have also been made to the UBMDR to further improve the donor search and work-up process. In 2003/2004, a file audit of all registered donors on the UBMDR was initiated to ensure that all donor information captured in the Registry database was accurate and up-to-date. At year’s end, over 50 per cent of the audit had been completed.
Research and Development

The majority of Canadians (85 per cent) believe that Canadian Blood Services should be a leader in research and development.* Public opinion polling has shown that, of this group, 94 per cent also feel that the blood system is safer today than it was five years ago.

In order to remain one of the safest and most advanced blood systems in the world, Canadian Blood Services is committed to the advancement of transfusion science. Nineteen staff scientists and nine adjunct scientists, as well as medical directors, medical consultants and other scientific employees, work to realize this goal in five research hubs across Canada.

The five hubs are:
- Blood-Borne Infectious Diseases
- Transfusion Immunology
- Transfusion Clinical Research and Epidemiology
- Nanotechnology and Cryopreservation for Blood and Stem Cells
- Blood Product Processing, Storage and Substitutes

In each of the five hubs, Canadian Blood Services’ dedicated scientists have proven to be national and international leaders in their areas of specialty.

Blood-Borne Infectious Diseases

In the past year, the work of the Infectious Diseases group has focused primarily on the development of the West Nile Virus (WNV) in-house test and the detection of bacterial contamination in blood.

IN-HOUSE WNV NAT TEST

An in-house WNV Nucleic Acid Amplification Testing (NAT) test was developed and used under an Investigational Testing Application (ITA) from Health Canada for early testing for WNV, which was performed from June 17 to 23, prior to the implementation of the commercial test by Roche Diagnostics. A total of 3,148 samples were tested and 2,813 samples were released as non-reactive for WNV. The samples were from London, Toronto, Ottawa and Hamilton and included all apheresis platelet donations, all donations for pediatric use and approximately 62 per cent of the samples from random donor platelets.

* Result of an opinion survey conducted by Ipsos-Reid in August 2003
BLOOD-BORNE BACTERIA TESTING
Bacterial contamination of blood products is currently the major microbiological cause of transfusion-associated morbidity and mortality. It is reported that 1/1000 to 1/3000 platelet units are contaminated with bacteria in the United States. Due to the five-day shelf life of platelets, there is an urgent need for the development of efficient methods for detection and identification of bacterial contaminants of platelets and other blood products. The Infectious Diseases group validated a method to be used in the detection of bacteria in whole-blood-derived platelets.

ANTIGEN SCREENING
While all blood donations are grouped for ABO blood type and RhD, sometimes a patient who has already received a blood transfusion requires blood matched to a more specific red cell or platelet antigen.

Requests for antigen-matched blood often require a quick turnaround time to meet the demand. Some phenotyping (blood group typing) is performed by Canadian Blood Services on a routine basis, but the cost and resources to do this quickly can be prohibitive.

A solution is to “screen” blood donations for important blood group genotypes using DNA and then to confirm the antigen phenotype on selected units. Canadian Blood Services' staff scientists developed a robotic DNA testing platform which can analyze thousands of samples within 36 hours or less. Thus, the unmet demand for antigen-matched blood can be addressed in a rapid and cost-effective manner.

In 1992 Silvia was diagnosed with aplastic anemia, a disease that caused her bone marrow to stop making enough blood cells to keep her alive. Over the next two years, she received drug therapy with transfusions of platelets several times per week and red blood cells every two weeks. She went into remission for a short time before developing a more chronic form of bone marrow failure, called PNH (paroxysmal nocturnal hemoglobinuria). For the past seven years, Silvia has needed transfusions of red blood cells every month. Now a volunteer with Canadian Blood Services’ Speakers Bureau program, she wants donors to know that there are many people like her who regularly require blood and blood products to stay alive.

“In the last 12 years there has not been one time that I have needed blood and it has not been available. Donors have always come through for me.”
Canadian Blood Services has been examining the frozen-blood programs it currently operates with the aim of developing a comprehensive understanding of the factors affecting the utilization and delivery of frozen blood in Canada.

Transfusion Clinical Research and Epidemiology

The McMaster Transfusion Research Program in collaboration with Canadian Blood Services has been developing a large blood utilization database, a Transfusion Registry for Utilization Tracking and Surveillance (TRUST). Over the past year, six years of anonymous data from three Hamilton hospitals has been electronically collected from medical records and the laboratory computer systems, providing a comprehensive source of clinical, demographic and blood transfusion data on hospital patients. The approach has been extended to London Health Sciences Centre, successfully demonstrating that this method of bringing together information could be applied to other hospitals using different computer systems.

STRATEGIES FOR TRANSFUSION OF PLATELETS

With the support of Canadian Blood Services, Canada has taken a lead role in an international study that will determine how many platelets should be transfused to patients with leukemia during the period of treatment for their disease. Currently, five bags of platelets are combined for each adult patient (each bag is obtained from a single blood donation) when a transfusion is required to prevent bleeding. There is some evidence to suggest that this could be reduced to four or potentially even three bags in the pool without any increased risk for the patient.

In this randomized, controlled trial, patients will receive a pool of three or a pool of five platelet bags each time a platelet transfusion is required. The patients will be carefully assessed each day to determine if there is evidence of bleeding. It is anticipated that the lower dose of platelets will be as effective as the current dose of five bags. Currently, Norway, the United States and Canada are participating in this important study. The McMaster Transfusion Research program, which is a joint collaborative initiative between Canadian Blood Services and McMaster University, is the coordinating centre for this study.

Nanotechnology and Cryopreservation for Blood and Stem Cells

BLOOD GROUPING

Blood grouping is a fundamental requirement in transfusion medicine. The ABO and RH blood groups are of the most clinical importance due to the severity of transfusion reactions that can occur when incompatible blood is transfused. Developing improved methods for blood group determination that are cost-effective and automated will reduce human errors and address some of the limitations facing current manual and automated techniques. Current research is focusing on the development of techniques for the microseparation of whole blood into plasma and cellular fractions and the automated assessment of blood groupings.
CRYOPRESERVATION
Since 1950, cryopreservation has been used in transfusion medicine to preserve red blood cells (RBCs) from donors with rare or unusual phenotypes and to stockpile for military and civilian use. While cryopreserved RBCs have been shown to have similar properties to fresh RBCs, the overall utilization of frozen RBCs in Canada is low. The labour-intensive nature of the pre- and post-processing procedures and the need for specialized processing equipment and trained staff make RBC cryopreservation an expensive process that is reserved for rare or autologous units. Unfortunately, cryopreservation is the only technology that can readily deliver multiple units of pre-screened RBCs to patients with rare blood groups or complex alloimmunity (immune system response to foreign materials). For that reason, significant efforts are being made to ensure that the quality of cryopreserved RBC is consistent with liquid RBC and that these products are available for patients requiring rare-blood transfusions.

Canadian Blood Services has been examining the frozen-blood programs it currently operates with the aim of developing a comprehensive understanding of the factors affecting the utilization and delivery of frozen blood in Canada. Over the past year, a detailed analysis of the number of RBC units frozen and thawed annually in Canada from 1992 to 2003 has been performed. Information on the disposition of the thawed units, as well as the motivation for freezing specific RBC units, has been tracked to determine the overall efficiency of the programs.

Blood Product Processing, Storage and Substitutes

NETWORK CENTRE FOR APPLIED DEVELOPMENT

The first laboratory of the Network Centre for Applied Development (NetCAD) was opened in Vancouver in October 2003. This laboratory is a small-scale reproduction of a blood centre, operating under Good Laboratory Practices/Good Manufacturing Practices (GLP/GMP), in which donor blood is collected and used for research purposes.

NetCAD donors are individuals who are ineligible to donate for transfusion purposes due to such things as travel, false reactive test results, or recent tattoos or body piercing, but are eligible to donate for research. This program allows Canadian Blood Services to advance transfusion science while maintaining a relationship with these donors.

Since its opening, the laboratory has completed a three-month evaluation of blood bags for the Request for Proposal (RFP) process undertaken by Canadian Blood Services during the fourth quarter of 2003/2004. It has also set up evaluation systems for products that will be collected during the evaluation of automated blood collection devices.

Volunteers of the blood system are invaluable as they contribute immensely to a blood donor’s experience. Canadian Blood Services is fortunate to have many loyal volunteers, like Michael Pinder, who will come into the clinic at a moment’s notice to assist where he can. Michael has been volunteering with the blood system since 1995, giving out refreshments and ensuring donors are comfortable after they have made their donation.

“Throughout the years I’ve gotten to know many donors and staff members at clinics in the Winnipeg area — this plus knowing that I am giving back to society is the best reward.”
As well as providing a full picture of the activities and programs of the R&D group, *A Focus on R&D* highlights the research work being done by Canadian Blood Services staff scientists, adjunct scientists, and medical directors and consultants.

**Research and Development Programs**

In the past year, Canadian Blood Services Research and Development (R&D) group has independently run four types of personnel support programs. These include two cycles of the Canadian Blood Services Graduate Fellowship Program, the Canadian Blood Services Postdoctoral Fellowship Program, the Canadian Blood Services Summer Internship Program and the Canadian Blood Services-Novo Nordisk Fellowship in Haemostasis.

In partnership with the Canadian Institutes of Health Research (CIHR), Canadian Blood Services has had two successful applicants for the Canadian Blood Services-CIHR New Investigator Awards.

In direct support of specific research projects, Canadian Blood Services’ Intramural Operating Grant competition and the Ken Fyke Award competition were conducted.

In addition two cycles of a Request for Applications on Blood Conservation and Utilization within the Canadian Blood Services-CIHR Partnership in Transfusion Science were completed.

**R&D Communications**

In 2003/2004, the first R&D Report, *A Focus on R&D*, was produced and published by Canadian Blood Services. As well as providing a full picture of the activities and programs of the R&D group, *A Focus on R&D* highlights the research work being done by Canadian Blood Services staff scientists, adjunct scientists, and medical directors and consultants. This first edition covers 2002/2003 and will be updated every two years. The report is available in three formats: a full 70-page report; a condensed 16-page report (both accompanied by a CD-ROM with additional information); and an electronic version that is posted on the Canadian Blood Services Web site.

To obtain a copy of the report, please contact: feedback@bloodservices.ca.

In addition to the completion of the report, several Canadian Blood Services staff gave public lectures on transfusion science for lay audiences, participated as speakers at technologist conferences, gave “visiting scientist” sessions in public schools as part of outreach activities, hosted high school volunteers in our laboratories, and provided research laboratory tours for school groups and the Canadian Blood Services’ British Columbia and Yukon Community Liaison Committee.

**Partnerships**

In a continuous effort to build transfusion science research capacity through partnership, members of the R&D group have maintained a number of existing partnerships or developed new ones, including:

- sponsorship of a CIHR Institutes of Circulatory and Respiratory Health Young Investigators’ Conference;
- participation in a successfully funded application to start the first CIHR-funded Training Program in Transfusion Science at the University of British Columbia (UBC);
- membership in the BEST Collaborative (a research consortium), for participation in international studies including platelet storage and transportation studies and the platelet dose study;
- holding an inaugural meeting between the Canadian Blood Services scientist group and the research scientists belonging to the Health Canada Centre for Biologicals Research; and
- promoting communication and scientific exchange between Canadian Blood Services and Héma-Québec scientists.
The most advanced of Canadian Blood Services’ partnership initiatives is the Centre for Blood Research (CBR) at UBC. This past year has seen the near completion of the CBR laboratory space within the new Life Sciences Centre building and the acceptance of all Vancouver-based Canadian Blood Services scientists as members of the Life Sciences Institute at UBC.

In addition, the Centre for Blood Research has opened the Proteomics facility, funded by the Canada Foundation for Innovation (CFI) Award, in temporary quarters in order to initiate studies of the deterioration of stored platelets.

The Centre for Blood Research received a multi-year infrastructure support grant from the Michael Smith Foundation for Health Research and a grant from the Peter Wall Institute of Advanced Studies to hold an exploratory workshop on the blood system of the future.

Results and Recognition
Throughout the fiscal year, four new patents were filed and multiple external research operating grants were obtained from the CFI, the Bayer Partnership Fund, and the Heart and Stroke Foundation.

In recognition of their outstanding contributions to transfusion medicine, Canadian Blood Services scientists were recognized throughout the year by peers in their field.

In May 2003, Dr. Donald Branch received the Ortho Award by the Canadian Society for Transfusion Medicine, presented in Halifax.

In April 2003, Dr. Heyu Ni, Associate Scientist, received the Connaught New Staff Matching Fund Award, intended to encourage research of exceptional calibre or the development of new areas of research by scholars of outstanding achievement. The award is issued by the Connaught Committee, a Standing Committee that reports annually through the University of Toronto Academic Board to the Governing Council on matters concerning the Connaught Fund, and the University of Toronto.

In November 2003 at the American Association of Blood Banks Conference in San Diego, Dr. Branch was awarded one of two awards received by Canadian Blood Services scientists. He received the Morten Grove-Rasmussen Memorial Award, which recognizes advances in the field of immunohematology. Dr. Nancy Heddle, Canadian Blood Services Adjunct Scientist, received the Ivor Dunsford Memorial Award, which recognizes superior research, teaching and/or service abilities in the technical aspects of immunohematology.

EVELYN YORK
MEDICAL LABORATORY TECHNOLOGIST
TORONTO, ONTARIO

Evelyn has worked for the blood system for more than 11 years and as a Charge Technologist, she is responsible for 45 staff members who oversee units of blood coming into the laboratory from donor clinics. Once units are received, they are assessed for various factors such as weight and temperature, appearance and proper labelling. When the units pass this inspection, they are processed into different components such as red cells, platelets, plasma or cryoprecipitate (used to treat certain blood disorders) for use by Canadian patients. Once test results are received, a final label is put on the unit and it is distributed to hospitals. Evelyn and her team work toward one primary goal throughout their day — distributing the best and safest blood products possible.
In late 2003, the Foundation obtained registered charitable status to support Canadian Blood Services’ commitment to provide a safe, secure, cost-effective, affordable, and accessible supply of quality blood and blood products.

Like virtually all not-for-profit providers of health or social services in our country, Canadian Blood Services recognized that through community support, it would be able to enhance programs and services over and above funding from provincial government sources.

Over the course of the year, the Foundation developed its governance framework and identified needs and projects where financial donations could best be applied to assist Canadian Blood Services. The Foundation sought input from Canadian Blood Services’ Community Liaison Committees across the country, and from the National Liaison Committee to gauge stakeholder reaction and help define the role for philanthropy. The mandate, vision, core values and mission of the Foundation were established, providing a clear guiding structure on which to build for the future.

The Foundation’s mission is to develop philanthropic relationships to support and enhance the mission of Canadian Blood Services. Through the Foundation, supporters can invest in Canadian Blood Services’ efforts to build excellence – by helping to fund such things as research, transfusion science and medicine, education and awareness, blood collection facilities and technology, and the production and distribution of blood and stem cell products, over and above core funding provided by the provinces.

“Canada is fortunate to have the excellence in transfusion medicine research that resides in Canadian Blood Services’ research labs. Personally, I find it very rewarding to have supported these brilliant and dedicated scientists in their efforts. I’m glad the Foundation is there to accept donations and ensure they are used wisely in support of Canadian Blood Services.”

Rod McLennan, Truro, Nova Scotia
Former Canadian Blood Services Board Member and 100+ blood donor
Financial Report

Funding Provided to Canadian Blood Services from the Members
The Provincial and Territorial Ministers of Health provide operational funding to Canadian Blood Services. Budgets include measures to ensure that appropriate financial arrangements exist to maintain the capacity within Canadian Blood Services to respond in a timely manner to health and safety emergencies and to indemnify Canadian Blood Services, its officers and directors and members of advisory bodies for uninsured liabilities and approved borrowings.

The Federal/Provincial/Territorial Memorandum of Understanding provides that the Members are responsible for the approval of Business Plans submitted by the Board of Directors. Each year a three-year business plan is submitted to the Members and funding is approved for the first year of the plan.

Canadian Blood Services receives funding from Members for: the Blood Operations program, the Fractionated Products program and the captive insurance company. The Blood Operations program is funded by an amount that is allocated to each province and territory based on the number of red blood cells units shipped. Funding for the Fractionated Products program is based on the actual quantity of each product used. Funding for the captive insurance company was $15 million in 2003/2004 and is allocated to provinces and territories on a per capita basis.

Canadian Blood Services Insurance
Canadian Blood Services has established a wholly-owned captive insurance company, CBS Insurance Company Limited (“CBSI”), with the objective of providing Canadian Blood Services with primary insurance coverage of up to $250 million with respect to risks associated with the operation of the blood system. Reserves and equity currently stand at approximately $200 million, with the balance of coverage and reserving requirements supported by a stand-by letter of credit of $67 million provided by Canadian Blood Services. The letter of credit financial exposure to Canadian Blood Services is expected to decrease over the next five years as the insurance captive increases its reserves.

Additional coverage of $750 million has been arranged through reinsurance markets on an 84.5% quota share basis for a period of three years, with a two-year renewal option. Due to adverse exchange rate and insurance industry circumstances that resulted in extended negotiations upon renewal of the program in September 2003, full coverage of this $750 million excess layer coverage is not currently available. As a result, the Corporation retains 15.5% of the insurance risk associated with this additional coverage.

Financial Highlights
The consolidated financial statements include the operations of the blood system and the results of the Corporation’s wholly-owned captive insurance company, CBS Insurance Company Limited.

Operating Results
The excess of revenues over expenses was $3.7 million for 2003/2004. This amount includes $3.2 million related to CBSI that is restricted for use by CBSI and therefore not available for Canadian Blood Services operations.

Total operating revenues recognized in the period ended March 31, 2004, were $797.3 million (2003 – $878.1 million) which includes Members’ contributions of $736.8 million (2003 – $703.4 million), amortization of deferred contributions, UBMDR (Unrelated Bone Marrow Donor Registry) revenues, and investment and other income. Revenues decreased year over year because Héma-Québec began to manage its own Fractionated Products program. In prior years Héma-Québec was purchasing fractionated products from Canadian Blood Services.

Canadian Blood Services uses the deferral method of revenue recognition, which means that contributions restricted for a specific purpose are deferred and recognized as revenue in the same period in which the expense is incurred.

Total expenses were $796.8 million (2003 – $875.9 million). Expenses decreased year over year largely due to the reductions in costs associated with Héma-Québec managing its own fractionated products program.
For the fiscal year ending March 31, 2004 the cost of fractionated products shipped to hospitals located in the Members’ jurisdictions totalled $375.2 million, up $12.7 million (3.5%) from last year. From a financial perspective, recombinant Factor VIII and IVIG continue to be the dominant products. Together, these products represent 63% of the total cost of the fractionated products program. The cost of recombinant Factor VIII was $113.7 million, up $8.1 million (7.7%) from last year. This increase includes $9.1 million related to volume partially offset by price reductions of $1.0 million. The cost of IVIG was $122.6 million, down $7.1 million (5.5%) from last year. This overall decrease reflects price reductions of $15.9 million, partially offset by an increase of $8.8 million related to volume. The price reductions are primarily related to favourable movements in the U.S. dollars (USD) to Canadian dollars (CAD) exchange rates. In the case of IVIG, the price reduction is also related to a change in the proportion of products coming from Canadian Blood Services plasma. This proportion can vary from year to year based on the timing of production lots by the fractionator.

Fractionated products are billed to the provinces/territories at cost for the volume used. As a result, the increase in cost of plasma products is offset by a corresponding increase in revenues and has no impact on Canadian Blood Services’ excess of revenues over expenses. Some provinces and territories have demonstrated that for certain plasma products they can control costs by managing utilization. Because provinces and territories are billed for actual volumes used, any reduction in volumes or reductions in the growth rate of product utilization can result in lower than budgeted costs for fractionated products.

WEST NILE VIRUS
The efforts to deal with the threat arising from the emergence of the West Nile Virus cost $19.3 million in 2003/2004. This was funded using the contingency fund, which is a fund established to allow Canadian Blood Services to respond to health and safety emergencies in a timely manner. This fund was subsequently replenished by the provinces and territories and currently stands at $20 million. The major components of this cost were: (1) the project to implement the WNV test, (2) capital equipment and renovations to set up the WNV laboratories, (3) supply and labour costs to operate the WNV laboratories from July 2003 to March 2004, (4) the stockpiling of products to deal with emergencies and (5) communications to stakeholders. The ongoing costs in 2004/2005 for WNV testing are estimated at $13.5 million using pooled testing.

WORKING CAPITAL
Canadian Blood Services requires working capital to operate the Blood Operations program and the Fractionated Products program. When Canadian Blood Services was established in 1998 it received funding for large projects such as the implementation of MAK. In 2003/2004, the implementation of MAK was completed and the funds that had been received and deferred were used for that purpose. Prior to 2003/2004 these funds were available to provide working capital.

This reduction of the working capital situation was foreseen. To address this situation Canadian Blood Services obtained approval from the Members to establish a line of credit and a funding process that will gradually cover the working capital requirements of the Fractionated Products program which represents more than 47% of total Canadian Blood Services expenses. Canadian Blood Services receives $5 million in funding annually to address the working capital. If inventory levels remain constant, it will take 10 years to ensure that there is adequate working capital for fractionated products. To support this program an inventory of Products must be maintained and financed thereby creating a need for working capital.

In 2003/2004, and in accordance with the approval received from Members, a $50 million line of credit was established to address the working capital requirements of the fractionated products program.
FINANCIAL RISK

Canadian Blood Services is exposed to foreign currency, multi-year funding and interest rate risk. The foreign currency risk is related to the significant proportion of fractionated products and medical supplies for the Blood Operations program that are purchased in USD. Canadian Blood Services actively manages this risk using foreign exchange tools such as forward contracts. The objective of the foreign exchange policy is to reduce the risk of significant difference between budgeted and actual CAD/USD exchange rates.

Canadian Blood Services undertakes projects to transform the business that span many fiscal years. However, funding is only approved on an annual basis. To manage this risk, Canadian Blood Services presents Members with a multi-year view of funding requirements and engages in continuous dialogue related to large initiatives.

Financial risk associated with interest rate volatility is related to long-term debt instruments to finance facilities. Canadian Blood Services manages this risk by entering into interest rate swap contracts resulting in fixed interest rates over the period of the loan.

CBS FOUNDATION

On November 7, 2002, the Canadian Blood Services Foundation was created to seek out and access new sources of additional funding in support of research and development and other potential priority needs of Canadian Blood Services and other qualified areas. The foundation is a not-for-profit entity and has been granted status as a registered charity. Canadian Blood Services does not consolidate the results of the Foundation. The Foundation incurred costs of $0.3 million in 2004. As at March 31, 2004, Canadian Blood Services had a receivable from the Foundation of $0.3 million. Canadian Blood Services recovers administrative expenses and the cost of the office premises occupied by the Foundation.

CORPORATE GOVERNANCE

The Finance and Audit Committee is a mandatory committee of the Board of Directors that advises the Board with respect to financial affairs of the Corporation. The following are some of the functions included in the committee’s Terms of Reference.

- Oversee the integrity of Canadian Blood Services’ financial affairs, financial disclosure obligations and financial systems, policies and procedures.
- Oversee the development and review of an appropriate budget and three year business plan, and ensure its submission to the Board for approval.
- Review regular financial statements to ensure compliance with established budgets and operating objectives.

All members of the committee are financially literate and at least one member, John Dawson, has accounting and audit experience. The Chairperson of the Board is an ex-officio voting member of the committee.
Management Report to the Members of Canadian Blood Services

The consolidated financial statements contained in this report have been prepared by management in accordance with Canadian generally accepted accounting principles. The integrity and reliability of the data in these financial statements are management’s responsibility. Management is also responsible for ensuring that all other information in this report is consistent, where appropriate, with the financial statements.

Management maintains a system of internal control to provide reasonable assurance as to the reliability of the financial information and safeguarding of assets.

The Board of Directors is responsible for ensuring that management fulfills its responsibilities for financial reporting and internal control and exercises this responsibility through the Finance and Audit Committee of the Board, which is composed of directors who are not employees of the Corporation. The Finance and Audit Committee meets periodically during the year with management and the external auditors.

The external auditors, KPMG LLP, conduct an independent audit, in accordance with Canadian generally accepted auditing standards, and express an opinion on the financial statements. The external auditors, whose report follows, have full and free access to the Finance and Audit Committee of the Board and meet with the committee on a regular basis.

Auditors’ Report to the Members

We have audited the consolidated statement of financial position of Canadian Blood Services as at March 31, 2004 and the consolidated statements of operations, changes in net assets and cash flows for the year then ended. These financial statements are the responsibility of the Corporation’s management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these consolidated financial statements present fairly, in all material respects, the financial position of the Corporation as at March 31, 2004 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles. As required by the Canada Corporations Act, we report that, in our opinion, these principles have been applied, on a basis consistent with that of the preceding year.

KPMG LLP
Chartered Accountants
Ottawa, Canada
May 31, 2004
## Consolidated Statement of Financial Position

*As at March 31, 2004 with comparative figures for 2003 (In thousands of dollars)*

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASSETS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current assets:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents <em>(note 3)</em></td>
<td>$119,444</td>
<td>$75,954</td>
</tr>
<tr>
<td>Members’ contributions receivable</td>
<td>3,888</td>
<td>19,882</td>
</tr>
<tr>
<td>Other amounts receivable</td>
<td>8,735</td>
<td>18,297</td>
</tr>
<tr>
<td>Inventory</td>
<td>88,227</td>
<td>86,424</td>
</tr>
<tr>
<td>Prepaid expenses</td>
<td>12,808</td>
<td>9,512</td>
</tr>
<tr>
<td><strong>Total Current assets</strong></td>
<td>$233,102</td>
<td>$210,069</td>
</tr>
<tr>
<td>Investments, captive insurance operations <em>(note 4)</em></td>
<td>186,895</td>
<td>171,269</td>
</tr>
<tr>
<td><strong>Capital assets:</strong> <em>(note 5):</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land, buildings, software and equipment</td>
<td>151,226</td>
<td>139,472</td>
</tr>
<tr>
<td>Right to the blood supply system</td>
<td>30,363</td>
<td>31,243</td>
</tr>
<tr>
<td><strong>Total Capital assets</strong></td>
<td>$181,589</td>
<td>$170,715</td>
</tr>
<tr>
<td><strong>Total ASSETS</strong></td>
<td>$601,586</td>
<td>$552,053</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LIABILITIES, DEFERRED CONTRIBUTIONS AND NET ASSETS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current liabilities:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts payable and accrued liabilities</td>
<td>$100,697</td>
<td>$78,301</td>
</tr>
<tr>
<td>Current portion of obligation under capital lease <em>(note 6)</em></td>
<td>283</td>
<td>295</td>
</tr>
<tr>
<td>Current portion of long-term debt <em>(note 7)</em></td>
<td>1,267</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>Total Current liabilities</strong></td>
<td>$102,247</td>
<td>$79,596</td>
</tr>
<tr>
<td>Provision for future insurance claims <em>(note 13)</em></td>
<td>163,092</td>
<td>135,108</td>
</tr>
<tr>
<td><strong>Long-term liabilities:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obligation under capital lease <em>(note 6)</em></td>
<td>812</td>
<td>1,011</td>
</tr>
<tr>
<td>Long-term debt <em>(note 7)</em></td>
<td>22,222</td>
<td>20,000</td>
</tr>
<tr>
<td><strong>Total Long-term liabilities</strong></td>
<td>$23,034</td>
<td>$21,011</td>
</tr>
<tr>
<td><strong>Deferred contributions:</strong> <em>(note 8):</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenses of future periods</td>
<td>104,443</td>
<td>109,459</td>
</tr>
<tr>
<td>Capital assets</td>
<td>148,387</td>
<td>140,316</td>
</tr>
<tr>
<td>Captive insurance</td>
<td>7,377</td>
<td>17,309</td>
</tr>
<tr>
<td><strong>Total Deferred contributions</strong></td>
<td>$260,207</td>
<td>$267,084</td>
</tr>
<tr>
<td><strong>Net assets:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Invested in capital assets <em>(note 9a)</em></td>
<td>9,704</td>
<td>9,199</td>
</tr>
<tr>
<td>Restricted for captive insurance purposes <em>(note 9b)</em></td>
<td>36,846</td>
<td>33,596</td>
</tr>
<tr>
<td>Unrestricted net assets</td>
<td>6,456</td>
<td>6,459</td>
</tr>
<tr>
<td><strong>Total Net assets</strong></td>
<td>$53,006</td>
<td>$49,254</td>
</tr>
<tr>
<td><strong>Guarantees and contingencies:</strong> <em>(note 15)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Commitments:</strong> <em>(notes 14 and 16)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$601,586</td>
<td>$552,053</td>
</tr>
</tbody>
</table>

See accompanying notes to consolidated financial statements.

On behalf of the Board:

[Verna M. Skanes PhD](#)
Director and Chair

[W. John Dawson](#)
Director

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*A REPORT TO CANADIANS*
## Consolidated Statement of Operations

*Year ended March 31, 2004 with comparative figures for 2003 (In thousands of dollars)*

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Member contributions – blood operations</td>
<td>$361,618</td>
<td>$340,930</td>
</tr>
<tr>
<td>Member contributions – fractionation</td>
<td>375,193</td>
<td>362,493</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>736,811</td>
<td>703,423</td>
</tr>
<tr>
<td><strong>Amortization of deferred contributions:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relating to capital assets</td>
<td>17,300</td>
<td>15,603</td>
</tr>
<tr>
<td>Relating to capital asset disposals</td>
<td>205</td>
<td>156</td>
</tr>
<tr>
<td>Relating to operations</td>
<td>30,671</td>
<td>16,036</td>
</tr>
<tr>
<td><strong>Total contributions recognized as revenue</strong></td>
<td>784,987</td>
<td>735,218</td>
</tr>
<tr>
<td><strong>Other revenues:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Héma-Québec, fractionated product</td>
<td>–</td>
<td>130,769</td>
</tr>
<tr>
<td>UBMDR revenue</td>
<td>5,375</td>
<td>5,586</td>
</tr>
<tr>
<td>Investment income <em>(note 10)</em></td>
<td>2,371</td>
<td>2,011</td>
</tr>
<tr>
<td>Other income</td>
<td>4,561</td>
<td>4,468</td>
</tr>
<tr>
<td><strong>Total revenues</strong></td>
<td>797,294</td>
<td>878,052</td>
</tr>
<tr>
<td><strong>Expenses:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood centres</td>
<td>258,590</td>
<td>249,355</td>
</tr>
<tr>
<td>Field support</td>
<td>32,206</td>
<td>30,664</td>
</tr>
<tr>
<td>Head office</td>
<td>49,124</td>
<td>47,137</td>
</tr>
<tr>
<td>Research and development</td>
<td>3,800</td>
<td>4,027</td>
</tr>
<tr>
<td>UBMDR</td>
<td>9,819</td>
<td>10,299</td>
</tr>
<tr>
<td>Projects – CBS funded</td>
<td>34,145</td>
<td>11,341</td>
</tr>
<tr>
<td><strong>Fractionation program</strong></td>
<td>387,684</td>
<td>352,823</td>
</tr>
<tr>
<td><strong>Total operating expenses <em>(note 12)</em></strong></td>
<td>762,877</td>
<td>715,316</td>
</tr>
<tr>
<td><strong>Other expenses:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Héma-Québec, cost of fractionated product</td>
<td>–</td>
<td>130,769</td>
</tr>
<tr>
<td>Amortization of capital assets</td>
<td>17,300</td>
<td>15,603</td>
</tr>
<tr>
<td>Projects – transition</td>
<td>10,339</td>
<td>7,448</td>
</tr>
<tr>
<td>Projects – externally funded</td>
<td>5,951</td>
<td>6,429</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>325</td>
<td>383</td>
</tr>
<tr>
<td><strong>Total expenses</strong></td>
<td>796,792</td>
<td>875,948</td>
</tr>
<tr>
<td><strong>Excess of revenues over expenses</strong></td>
<td>$3,752</td>
<td>$6,120</td>
</tr>
<tr>
<td>before insurance income</td>
<td>502</td>
<td>2,104</td>
</tr>
<tr>
<td>Net insurance income of CBSI <em>(note 13)</em></td>
<td>3,250</td>
<td>4,016</td>
</tr>
</tbody>
</table>

*See accompanying notes to consolidated financial statements.*
## Consolidated Statement of Changes in Net Assets

*Year ended March 31, 2004 with comparative figures for 2003 (In thousands of dollars)*

<table>
<thead>
<tr>
<th></th>
<th>Invested in capital assets</th>
<th>Restricted for captive insurance</th>
<th>Unrestricted</th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance, beginning of year</td>
<td>$ 9,199</td>
<td>$ 33,596</td>
<td>$ 6,459</td>
<td>$ 49,254</td>
<td>$ 43,134</td>
</tr>
<tr>
<td>Excess of revenues over expenses</td>
<td>–</td>
<td>3,250</td>
<td>502</td>
<td>3,752</td>
<td>6,120</td>
</tr>
<tr>
<td>Change in investment in capital assets</td>
<td>505</td>
<td>–</td>
<td>(505)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Balance, end of year</td>
<td>$ 9,704</td>
<td>$ 36,846</td>
<td>$ 6,456</td>
<td>$ 53,006</td>
<td>$ 49,254</td>
</tr>
</tbody>
</table>

*See accompanying notes to consolidated financial statements.*
### Consolidated Statement of Cash Flows

**Year ended March 31, 2004 with comparative figures for 2003** (In thousands of dollars)

<table>
<thead>
<tr>
<th>Operating activities:</th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excess of revenues over expenses</td>
<td>$3,752</td>
<td>$6,120</td>
</tr>
<tr>
<td>Items not involving cash and cash equivalents:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amortization of capital assets</td>
<td>17,300</td>
<td>15,603</td>
</tr>
<tr>
<td>Amortization of deferred contributions</td>
<td>(48,176)</td>
<td>(31,795)</td>
</tr>
<tr>
<td>Loss on sale of capital assets</td>
<td>44</td>
<td>57</td>
</tr>
<tr>
<td>Provision for future insurance claims</td>
<td>27,984</td>
<td>32,258</td>
</tr>
<tr>
<td></td>
<td></td>
<td>904</td>
</tr>
<tr>
<td>Decrease (increase) in members’ contributions receivable</td>
<td>15,994</td>
<td>(9,347)</td>
</tr>
<tr>
<td>Decrease in other amounts receivable</td>
<td>9,562</td>
<td>11,372</td>
</tr>
<tr>
<td>Increase in inventory</td>
<td>(1,803)</td>
<td>(8,573)</td>
</tr>
<tr>
<td>Decrease (increase) in prepaid expenses</td>
<td>(3,296)</td>
<td>1,027</td>
</tr>
<tr>
<td>Increase (decrease) in accounts payable and accrued liabilities</td>
<td>22,396</td>
<td>(1,220)</td>
</tr>
<tr>
<td>Increase in deferred contributions related to expenses of future periods</td>
<td>25,655</td>
<td>12,764</td>
</tr>
<tr>
<td>Increase (decrease) in deferred contributions related to captive insurance</td>
<td>(9,932)</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>59,480</td>
</tr>
</tbody>
</table>

### Financing and investing activities:

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in investments</td>
<td>(15,626)</td>
<td>(35,506)</td>
</tr>
<tr>
<td>Increase in deferred contributions related to capital assets</td>
<td>25,576</td>
<td>22,565</td>
</tr>
<tr>
<td>Proceeds on sale of capital assets</td>
<td>161</td>
<td>99</td>
</tr>
<tr>
<td>Purchase of capital assets</td>
<td>(28,273)</td>
<td>(21,449)</td>
</tr>
<tr>
<td>Repayment of obligation under capital lease</td>
<td>(317)</td>
<td>(84)</td>
</tr>
<tr>
<td>Proceeds of long-term debt</td>
<td>4,000</td>
<td>–</td>
</tr>
<tr>
<td>Repayment of long-term debt</td>
<td>(1,511)</td>
<td>(1,000)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(15,990)</td>
</tr>
</tbody>
</table>

Increase (decrease) in cash and cash equivalents | 43,490 | (7,060) |

Cash and cash equivalents, beginning of year | 75,954 | 83,014 |

Cash and cash equivalents, end of year *(note 3)* | $119,444 | $75,954 |

*See accompanying notes to consolidated financial statements.*
Notes to the Consolidated Financial Statements

Year ended March 31, 2004 (In thousands of dollars)

1: Nature of the organization and operations

Canadian Blood Services/Société canadienne du sang (CBS or the Corporation) owns and operates the national blood supply system for Canada, except Quebec, and is responsible for the collection, testing, processing and distribution of blood and blood products as well as the recruitment and management of blood donors.

CBS was incorporated on February 16, 1998 under Part II of the Canada Corporations Act. It is a corporation without share capital and qualifies for tax-exempt status as a registered charity under paragraph 149(1)(f) of the Income Tax Act (Canada). The Members of the Corporation, the Ministers of Health of the Provinces and Territories of Canada except Quebec, provide contributions to fund the operation of the blood supply system. CBS operates in a regulated environment, pursuant to the requirements of the Federal Food and Drugs Act, with licensing required from the Biologics and Genetic Therapies Directorate of Health Canada.

As a result of the Krever Commission of Inquiry on the Blood System of Canada, the Federal, Provincial and Territorial Ministers of Health agreed in 1996 to create CBS as the new national authority to operate Canada’s blood system. On September 28, 1998, Héma-Québec, for Quebec, and CBS for the balance of Canada, acquired the blood system assets from the Canadian Red Cross Society and from this date, assumed their respective responsibilities for the management and operation of the blood system.

On November 7, 2002, the Canadian Blood Services Foundation/Fondation de la Société canadienne du sang (the Foundation) was created to access new sources of additional funding in support of research and development and other potential priority needs of CBS and other qualified donees. The Foundation is a not-for-profit entity and obtained its designation as a charitable organization on October 24, 2003.

2: Significant accounting policies

A) FINANCIAL STATEMENT PRESENTATION

The consolidated financial statements of CBS include the results of operations of the blood system and the accounts of the Corporation’s wholly-owned insurance company, CBS Insurance Company Limited (CBSI).

CBS does not consolidate the results of the Foundation (note 17).

Contributions received to fund premiums, together with investment income earned on these contributions and other components of the captive insurance operations, are included on a net basis as insurance income in the consolidated statement of operations and separately disclosed in the consolidated statement of changes in net assets. The portion of contributions received that relates to future operations is included in deferred contributions on the consolidated statement of financial position.

B) USE OF ESTIMATES

The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses in the financial statements. Estimates and assumptions also may affect disclosure of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates. Significant estimates include assumptions used in estimating the current year’s expense for pension and other post-employment benefits and the provision for future insurance claims, which are described in more detail in notes 11 and 13 respectively.

C) REVENUE RECOGNITION

The Corporation follows the deferral method of accounting for contributions, which include donations and government contributions.

Operating contributions are recorded as revenue in the period to which they relate. Amounts approved but not received at the end of an accounting period are accrued. Where a portion of a contribution relates to a future period, it is deferred and recognized in the subsequent period.

Externally restricted contributions are recognized as revenue in the year in which the related expenses are recognized. Contributions restricted for the purchase of capital assets other than land are initially deferred and then amortized to revenue on a straight-line basis, at a rate corresponding with the amortization rate for the related capital assets. Contributions restricted for the purchase of land are recognized as direct increases in net assets invested in capital assets.
2: Significant accounting policies (cont.)

C) REVENUE RECOGNITION (CONT.)

Unrestricted funding or donations are recognized as revenue when received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured.

Restricted investment income is recognized as revenue in the year in which the related expenses are recognized. Unrestricted investment income is recognized as revenue when earned.

Revenue from fees and contracts is recognized when the services are provided or the goods are sold.

D) DONATED GOODS AND SERVICES

Donors are not paid for the blood or plasma collected in Canada. Additionally, a substantial number of volunteers contribute a significant amount of time each year in support of the activities of CBS. The value of such contributed goods and services is not quantified in the financial statements.

E) INVESTMENTS

Investments in marketable fixed interest securities are carried at amortized cost. Investments in marketable equity securities are carried at cost. Where a decline in value of marketable securities is considered to be other than temporary the carrying value is reduced.

Interest income is recognized on the accrual basis and includes the amortization of premium or discount on fixed interest securities purchased at amounts different from their par value.

Short-term investments, consisting of certificates of deposit and commercial paper, are carried at fair value. Any appreciation in value is recorded as interest income. Dividends are recorded as income when declared.

F) INVENTORY

Inventory consists of fractionated products, blood products and supplies related to the collection of blood. Fractionation inventory is recorded at average cost and is charged to expense upon distribution to hospitals; supplies are recorded at average cost and charged to expense on usage.

G) CAPITAL ASSETS

Purchased capital assets are recorded at cost. Contributed capital assets are recorded at fair value at the date of contribution. Repairs and maintenance costs are charged to expense. Betterments, which extend the estimated life of an asset, are capitalized. When a capital asset no longer contributes to the Corporation’s ability to provide services, its carrying amount is written down to its residual value.

Capital assets are amortized on a straight-line basis over the following useful lives:

<table>
<thead>
<tr>
<th>Asset</th>
<th>Useful life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buildings</td>
<td>40 years</td>
</tr>
<tr>
<td>Machinery and equipment</td>
<td>8 years</td>
</tr>
<tr>
<td>Furniture and office equipment</td>
<td>10 years</td>
</tr>
<tr>
<td>Motor vehicles</td>
<td>8 years</td>
</tr>
<tr>
<td>Computer equipment</td>
<td>3 years</td>
</tr>
<tr>
<td>Computer software</td>
<td>2 to 5 years</td>
</tr>
</tbody>
</table>

Leasehold improvements are amortized on a straight-line basis over the shorter of the lease term or their estimated useful lives. Assets under construction are not amortized until they are available for use by the Corporation.

Furniture and office equipment under capital lease is amortized over the term of the lease.

The right to the blood supply system represents the non-amortized excess of the purchase price of the system over the fair value of the tangible net assets acquired in 1998, and is being amortized on a straight-line basis over 40 years.

H) DERIVATIVE FINANCIAL INSTRUMENTS

The Corporation is party to certain derivative financial instruments, principally interest rate swap contracts (used to manage the exposure to market risks from changing interest rates) and foreign exchange contracts (used to manage foreign currency exposures). These instruments are not recorded in the financial statements on inception. Payments under the interest rate swap agreements are recognized as adjustments to interest expense. Gains and losses related to foreign exchange contracts are recognized as adjustments to interest expense. Gains and losses resulting from the adjustment are included in the statement of operations.

I) FOREIGN CURRENCY TRANSACTIONS

Foreign currency transactions of the Corporation are translated using the temporal method. Under this method, transactions are initially recorded at the rate of exchange prevailing at the date of the transaction. Thereafter, monetary assets and liabilities are adjusted to reflect the exchange rates in effect at the statement of financial position date. Gains and losses resulting from the adjustment are included in the statement of operations.
J) **EMPLOYEE FUTURE BENEFITS**

The Corporation accrues its obligations under employee benefit plans as the employees render the services necessary to earn pension and other post-employment benefits.

The cost of pensions and other post-employment benefits earned by employees is actuarially determined using the projected benefit method prorated on service, market interest rates and management’s best estimate of expected plan investment performance, salary escalation, retirement ages of employees and expected health care costs.

Market values are used to value plan assets for the purpose of calculating the expected return on plan assets.

Cumulative unrecognized net actuarial gains and losses in excess of 10% of the greater of the accrued pension benefit obligation or value of plan assets are amortized over the average remaining service life of the employees.

3: **Cash and cash equivalents**

Cash equivalents include deposits with financial institutions that can be withdrawn without prior notice or penalty and short-term deposits (i.e., bankers’ acceptances and commercial paper), with an original maturity of 90 days or less.

Cash and cash equivalents include $13,563 (2003 – $1,617) that is restricted for captive insurance operations.

4: **Investments**

All of the investments are restricted for captive insurance operations.

The amortized cost and fair market value of marketable securities are as follows:

<table>
<thead>
<tr>
<th></th>
<th>2004 Amortized cost</th>
<th>2004 Fair value</th>
<th>2003 Amortized cost</th>
<th>2003 Fair value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term notes</td>
<td>$ 2,485</td>
<td>$ 2,485</td>
<td>$ 124</td>
<td>$ 124</td>
</tr>
<tr>
<td>Fixed interest securities</td>
<td>150,922</td>
<td>156,563</td>
<td>135,902</td>
<td>137,752</td>
</tr>
<tr>
<td>Equity securities</td>
<td>33,488</td>
<td>39,973</td>
<td>35,243</td>
<td>32,125</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$ 186,895</strong></td>
<td><strong>$ 199,021</strong></td>
<td><strong>$ 171,269</strong></td>
<td><strong>$ 170,001</strong></td>
</tr>
</tbody>
</table>

The fixed interest securities have contractual maturities from 5 to 10 years at rates ranging from approximately 2.2% to 4.9% (2003 – 3.1% to 5.2%).

5: **Capital assets**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>$ 9,704</td>
<td>–</td>
<td>$ 9,704</td>
<td>$ 9,199</td>
</tr>
<tr>
<td>Buildings</td>
<td>101,749</td>
<td>11,268</td>
<td>90,481</td>
<td>82,545</td>
</tr>
<tr>
<td>Machinery and equipment</td>
<td>38,477</td>
<td>19,006</td>
<td>19,471</td>
<td>17,053</td>
</tr>
<tr>
<td>Furniture and office equipment</td>
<td>11,121</td>
<td>5,139</td>
<td>5,982</td>
<td>5,971</td>
</tr>
<tr>
<td>Motor vehicles</td>
<td>7,914</td>
<td>3,373</td>
<td>4,541</td>
<td>4,916</td>
</tr>
<tr>
<td>Computer equipment</td>
<td>20,401</td>
<td>12,687</td>
<td>7,714</td>
<td>6,882</td>
</tr>
<tr>
<td>Computer software</td>
<td>14,076</td>
<td>9,397</td>
<td>4,679</td>
<td>5,488</td>
</tr>
<tr>
<td>Leasehold improvements</td>
<td>8,802</td>
<td>2,546</td>
<td>6,256</td>
<td>2,561</td>
</tr>
<tr>
<td>Furniture and office equipment under capital lease</td>
<td>1,493</td>
<td>408</td>
<td>1,085</td>
<td>1,275</td>
</tr>
<tr>
<td>Assets under construction</td>
<td>1,313</td>
<td>–</td>
<td>1,313</td>
<td>3,582</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>215,050</strong></td>
<td><strong>63,824</strong></td>
<td><strong>151,226</strong></td>
<td><strong>139,472</strong></td>
</tr>
<tr>
<td>Right to the blood supply system</td>
<td>35,203</td>
<td>4,840</td>
<td>30,363</td>
<td>31,243</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$ 250,253</strong></td>
<td><strong>$ 68,664</strong></td>
<td><strong>$ 181,589</strong></td>
<td><strong>$ 170,715</strong></td>
</tr>
</tbody>
</table>

During the year capital assets were acquired at an aggregate cost of $28,404 (2003 – $22,840) of which $131 (2003 – $1,391) were acquired by means of capital lease. Cash payments of $28,273 (2003 – $21,449) were made to purchase capital assets.

Cost and accumulated amortization at March 31, 2003 amounted to $225,767 and $55,052 respectively.
6: Obligation under capital lease

The following is a schedule of minimum lease payments under a fixed rate capital lease expiring October 31, 2007, together with the balance of the obligation:

<table>
<thead>
<tr>
<th>Year ended March 31:</th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>–</td>
<td>$422</td>
</tr>
<tr>
<td>2005</td>
<td>361</td>
<td>337</td>
</tr>
<tr>
<td>2006</td>
<td>361</td>
<td>337</td>
</tr>
<tr>
<td>2007</td>
<td>361</td>
<td>337</td>
</tr>
<tr>
<td>2008</td>
<td>180</td>
<td>169</td>
</tr>
<tr>
<td></td>
<td>1,263</td>
<td>1,602</td>
</tr>
</tbody>
</table>

Less amount representing interest (at approximately 8.8%)

|                     | 168  | 296  |
|                     | 1,095| 1,306|

Current portion of obligation under capital lease

|                     | 283  | 295  |
|                     | $812 | $1,011 |

7: Credit facilities

CBS has entered into the following credit facilities that are secured by the assets of the Corporation:

A) Long-term debt

The purchase of the Winnipeg Blood Transfusion Service Centre (WBTSC) and the Ottawa Manufacturing Facility (OMF) were financed by collateral mortgages.

<table>
<thead>
<tr>
<th>A collateral mortgage agreement bearing interest at BA plus 0.33%, requiring minimum annual principal repayments of $1,000 with the balance due in 2010, secured by the WBTSC.</th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>$20,000</td>
<td>$21,000</td>
<td></td>
</tr>
</tbody>
</table>

A collateral mortgage agreement bearing interest at BA plus 0.45%, requiring minimum annual principal repayments of $267 with the balance due in 2018, secured by the OMF.

<table>
<thead>
<tr>
<th>A collateral mortgage agreement bearing interest at BA plus 0.45%, requiring minimum annual principal repayments of $267 with the balance due in 2018, secured by the OMF.</th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3,489</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>$23,489</td>
<td>21,000</td>
<td></td>
</tr>
</tbody>
</table>

Less current portion

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>$22,222</td>
<td>$20,000</td>
<td></td>
</tr>
</tbody>
</table>

The Corporation is party to interest rate swap contracts which have the effect of converting the Bankers’ Acceptance (BA) floating rates of interest to a fixed rate of 6.8% for the WBTSC, and 5.79% for the OMF, over the full term of the loan.

B) Operating line of credit

Bank lines of credit of $25,000 and $50,000 have been arranged for blood operations and the fractionated products program. The line of credit for blood operations was arranged for purposes of public health and safety to cover events not anticipated in the annual budget. The line of credit for fractionated products was arranged to provide working capital for the fractionated products program. At March 31, 2004, no amounts had been borrowed under these facilities.
C) LETTER OF CREDIT
To meet certain regulatory capital requirements related to its captive insurance subsidiary, the Corporation has established a committed, stand-by letter of credit facility of $67,000.

8: Deferred contributions
A) EXPENSES OF FUTURE PERIODS
Deferred contributions represent externally restricted contributions to fund expenses of future periods.

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance, beginning of year</td>
<td>$109,459</td>
<td>$112,730</td>
</tr>
<tr>
<td>Add amount received related to future periods</td>
<td>34,478</td>
<td>18,660</td>
</tr>
<tr>
<td>Less amounts recognized as revenue in the year</td>
<td>(30,671)</td>
<td>(16,036)</td>
</tr>
<tr>
<td>Less capital assets purchased from deferred contributions</td>
<td>(9,158)</td>
<td>(6,445)</td>
</tr>
<tr>
<td>Add income earned on resources restricted for transition</td>
<td>335</td>
<td>550</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$104,443</strong></td>
<td><strong>$109,459</strong></td>
</tr>
</tbody>
</table>

The capital assets purchased represent capital assets purchased with contributions that were deferred at March 31, 2003.

B) CAPITAL ASSETS
Funds received to purchase capital assets are recorded as deferred revenues – capital assets, in the consolidated statement of financial position. They are amortized to revenue in the consolidated statement of operations at the same rate as capital assets are amortized to expense.

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance, beginning of year</td>
<td>$140,316</td>
<td>$133,510</td>
</tr>
<tr>
<td>Capital assets purchased</td>
<td>28,273</td>
<td>21,449</td>
</tr>
<tr>
<td>Capital funding received for repayment of WBTSC loan</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Capital funding received for repayment of OMF loan</td>
<td>511</td>
<td>–</td>
</tr>
<tr>
<td>Capital funding received for leased assets</td>
<td>297</td>
<td>116</td>
</tr>
<tr>
<td>Less capital assets financed by long-term debt</td>
<td>(4,000)</td>
<td>–</td>
</tr>
<tr>
<td>Less capital assets sold</td>
<td>(205)</td>
<td>(156)</td>
</tr>
<tr>
<td>Less purchase of land</td>
<td>(505)</td>
<td>–</td>
</tr>
<tr>
<td>Less amounts amortized to revenue</td>
<td>(17,300)</td>
<td>(15,603)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$148,387</strong></td>
<td><strong>$140,316</strong></td>
</tr>
</tbody>
</table>

Included in capital assets purchased of $28,273 (2003 – $21,449) is $9,158 (2003 – $6,445) of capital assets that were purchased using contributions deferred for expenses of future periods at March 31, 2003.
8: Deferred contributions (cont.)

C) CAPTIVE INSURANCE

Deferred contributions represent externally restricted contributions to fund future operations of CBSI.

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance, beginning of year</td>
<td>$17,309</td>
<td>$17,260</td>
</tr>
<tr>
<td>Comprehensive Blood Risk contributions</td>
<td>15,000</td>
<td>35,000</td>
</tr>
<tr>
<td>Other insurance risk contributions</td>
<td>508</td>
<td>566</td>
</tr>
<tr>
<td>Less amounts amortized to revenue (note 13c)</td>
<td>(25,440)</td>
<td>(35,517)</td>
</tr>
<tr>
<td></td>
<td>$7,377</td>
<td>$17,309</td>
</tr>
</tbody>
</table>

9: Net assets

A) The change in investment in capital assets is calculated as follows:

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance, beginning of year</td>
<td>$9,199</td>
<td>$9,199</td>
</tr>
<tr>
<td>Purchase of land</td>
<td>505</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>$9,704</td>
<td>$9,199</td>
</tr>
</tbody>
</table>

B) All of the net assets restricted for captive insurance purposes are subject to externally imposed restrictions stipulating that they be used to provide insurance coverage with respect to risks associated with the operation of the blood system.

Investment income earned on the assets restricted for insurance captive purposes is also externally restricted for these purposes (note 13).

10: Investment income

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income earned on unrestricted funds</td>
<td>$2,371</td>
<td>$2,011</td>
</tr>
<tr>
<td>Income earned on resources restricted for captive insurance</td>
<td>15,244</td>
<td>6,516</td>
</tr>
<tr>
<td>Income earned on resources restricted for transition</td>
<td>335</td>
<td>550</td>
</tr>
<tr>
<td></td>
<td>17,950</td>
<td>9,077</td>
</tr>
<tr>
<td>Less amounts deferred</td>
<td>(335)</td>
<td>(550)</td>
</tr>
<tr>
<td>Less amounts included in net insurance income (note 13c)</td>
<td>(15,244)</td>
<td>(6,516)</td>
</tr>
<tr>
<td></td>
<td>$2,371</td>
<td>$2,011</td>
</tr>
</tbody>
</table>
Notes to the Consolidated Financial Statements
Year ended March 31, 2004 (In thousands of dollars)

11: Employee benefits

CBS sponsors a number of defined benefit plans and a defined contribution plan providing pension, other retirement and post-employment benefits to most of its employees.

A) DEFINED BENEFIT PLANS

Information about the Corporation’s defined benefit plans as at March 31, 2004 is as follows:

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accrued benefit obligation</td>
<td>$83,598</td>
<td>$64,527</td>
</tr>
<tr>
<td>Fair value of plan assets</td>
<td>77,699</td>
<td>60,012</td>
</tr>
<tr>
<td>Funded status – fund deficit</td>
<td>$(5,899)</td>
<td>$(4,515)</td>
</tr>
<tr>
<td>Accrued benefit liability</td>
<td>$1,223</td>
<td>$1,565</td>
</tr>
</tbody>
</table>

The difference between the accrued benefit liability of $1,223 recorded on the Corporation’s consolidated statement of financial position and the actuarially determined fund deficit of $5,899 principally comprises experience losses. These losses represent differences between actual results in the fund and estimated results used for accounting purposes based on actuarial assumptions. Experience gains and losses are amortized to pension expense over the average expected remaining service lives of employees when the aggregate gain or loss exceeds 10% of the greater of the accrued benefit obligation and the fair value of assets at the beginning of the year.

The significant actuarial assumptions adopted in measuring the Corporation’s defined benefit plans accrued benefit obligations are as follows:

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discount rate</td>
<td>6.25%</td>
<td>7.0% to 7.25%</td>
</tr>
<tr>
<td>Expected long-term rate of return on plan assets</td>
<td>7.25%</td>
<td>7.0% to 7.25%</td>
</tr>
</tbody>
</table>

The expected rate of compensation increase for the year ended March 31, 2005 is 4.25% to 5.7% (2004 – 5.0% to 5.63%). The rate is expected to change as follows: 2006 – 4.25% to 5.0%; and thereafter – 4.25%. 
11: Employee benefits (cont.)

A) DEFINED BENEFIT PLANS (CONT.)

Other information about the Corporation’s defined benefit plans for the year ended March 31, 2004 is as follows:

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer contributions</td>
<td>$4,744</td>
<td>$4,207</td>
</tr>
<tr>
<td>Employee contributions</td>
<td>3,543</td>
<td>3,069</td>
</tr>
<tr>
<td>Benefits paid</td>
<td>4,338</td>
<td>1,240</td>
</tr>
</tbody>
</table>

B) PENSION PLAN EXPENSE

The net expense for the Corporation’s benefit plans for the year ended March 31, 2004 is as follows:

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defined benefit plans</td>
<td>$5,029</td>
<td>$4,470</td>
</tr>
<tr>
<td>Defined contribution plan</td>
<td>4,753</td>
<td>4,685</td>
</tr>
<tr>
<td>Total</td>
<td>$9,782</td>
<td>$9,155</td>
</tr>
</tbody>
</table>

C) OTHER RETIREMENT AND POST-EMPLOYMENT BENEFITS

Information about the Corporation’s other retirement and post-employment benefits is as follows:

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accrued benefit obligation</td>
<td>$12,861</td>
<td>$10,508</td>
</tr>
<tr>
<td>Accrued benefit liability</td>
<td>(8,138)</td>
<td>(6,569)</td>
</tr>
<tr>
<td>Benefits paid</td>
<td>460</td>
<td>285</td>
</tr>
<tr>
<td>Net expense</td>
<td>2,029</td>
<td>2,032</td>
</tr>
</tbody>
</table>

Included in the above-noted benefit obligation, is $4,887 (2003 – $5,419), which represents the unamortized transitional obligation. This amount is being amortized over the expected remaining life of the employee group covered by the benefit plans.

The significant actuarial assumptions adopted in measuring the Corporation’s other retirement and post-employment accrued benefit obligations are as follows:

- Discount rate: 5.5% to 6.25% for 2004, 7.25% to 7.5% for 2003
- Hospital costs: 9% per annum, decreasing to 4.5% per annum over 10 years, starting in 2005
- Drug costs: 10% per annum, decreasing to 5.0% per annum over 10 years, starting in 2005
- Other health costs: 4% per annum
### 12: Operating expense summary: Current year

<table>
<thead>
<tr>
<th></th>
<th>Blood centres</th>
<th>Field support</th>
<th>Corporate services (Head Office)</th>
<th>R&amp;D</th>
<th>UBMDR</th>
<th>Projects (CBS funded)</th>
<th>Fractionation</th>
<th>2004 Total operating expenses</th>
<th>% of Subtotal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of goods sold</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$ 97</td>
<td>$ 362,031</td>
<td>$ 362,128</td>
<td>47.5%</td>
</tr>
<tr>
<td>Staff costs</td>
<td>148,598</td>
<td>26,460</td>
<td>26,111</td>
<td>2,876</td>
<td>2,071</td>
<td>10,293</td>
<td>2,439</td>
<td>218,848</td>
<td>28.7%</td>
</tr>
<tr>
<td>Medical supplies</td>
<td>73,127</td>
<td>1,340</td>
<td>–</td>
<td>158</td>
<td>215</td>
<td>7,600</td>
<td>321</td>
<td>82,761</td>
<td>10.8%</td>
</tr>
<tr>
<td>Clinic costs</td>
<td>5,822</td>
<td>–</td>
<td>311</td>
<td>2</td>
<td>2</td>
<td>140</td>
<td>25</td>
<td>6,302</td>
<td>0.8%</td>
</tr>
<tr>
<td>Travel</td>
<td>1,397</td>
<td>1,005</td>
<td>2,218</td>
<td>174</td>
<td>167</td>
<td>453</td>
<td>95</td>
<td>5,509</td>
<td>0.7%</td>
</tr>
<tr>
<td>Administrative services</td>
<td>9,278</td>
<td>538</td>
<td>8,803</td>
<td>48</td>
<td>242</td>
<td>4,410</td>
<td>9,926</td>
<td>33,245</td>
<td>4.4%</td>
</tr>
<tr>
<td>Professional fees</td>
<td>3,674</td>
<td>1,818</td>
<td>4,940</td>
<td>449</td>
<td>67</td>
<td>8,563</td>
<td>251</td>
<td>19,762</td>
<td>2.6%</td>
</tr>
<tr>
<td>Other purchased services</td>
<td>4,852</td>
<td>655</td>
<td>4,466</td>
<td>70</td>
<td>166</td>
<td>1,248</td>
<td>311</td>
<td>11,768</td>
<td>1.5%</td>
</tr>
<tr>
<td>Property expenses</td>
<td>11,143</td>
<td>255</td>
<td>2,122</td>
<td>–</td>
<td>132</td>
<td>1,059</td>
<td>430</td>
<td>15,141</td>
<td>2.0%</td>
</tr>
<tr>
<td>Equipment</td>
<td>699</td>
<td>143</td>
<td>306</td>
<td>28</td>
<td>5</td>
<td>332</td>
<td>10</td>
<td>1,523</td>
<td>0.2%</td>
</tr>
<tr>
<td>Miscellaneous expenses (income)</td>
<td>–</td>
<td>(8)</td>
<td>(153)</td>
<td>(5)</td>
<td>–</td>
<td>(86)</td>
<td>(646)</td>
<td>(898)</td>
<td>-0.1%</td>
</tr>
<tr>
<td>UBMDR search and transplant costs</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>6,752</td>
<td>–</td>
<td>–</td>
<td>6,752</td>
<td>0.9%</td>
</tr>
<tr>
<td>Royalties</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>36</td>
<td>–</td>
<td>–</td>
<td>36</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$258,590</td>
<td>$32,206</td>
<td>$49,124</td>
<td>$3,800</td>
<td>$9,819</td>
<td>$34,145</td>
<td>$375,193</td>
<td>$762,877</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

### Operating expense summary: Prior year

<table>
<thead>
<tr>
<th></th>
<th>Blood centres</th>
<th>Field support</th>
<th>Corporate services (Head Office)</th>
<th>R&amp;D</th>
<th>UBMDR</th>
<th>Projects (CBS funded)</th>
<th>Fractionation</th>
<th>2003 Total operating expenses</th>
<th>% of Subtotal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of goods sold</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$ 270</td>
<td>$ 362,614</td>
<td>$ 362,884</td>
<td>50.7%</td>
</tr>
<tr>
<td>Staff costs</td>
<td>144,580</td>
<td>24,586</td>
<td>22,373</td>
<td>2,980</td>
<td>1,966</td>
<td>4,732</td>
<td>1,099</td>
<td>202,316</td>
<td>28.3%</td>
</tr>
<tr>
<td>Medical supplies</td>
<td>71,097</td>
<td>1,567</td>
<td>(514)</td>
<td>145</td>
<td>218</td>
<td>131</td>
<td>–</td>
<td>72,644</td>
<td>10.2%</td>
</tr>
<tr>
<td>Clinic costs</td>
<td>5,465</td>
<td>1</td>
<td>516</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>–</td>
<td>5,993</td>
<td>0.8%</td>
</tr>
<tr>
<td>Travel</td>
<td>1,038</td>
<td>1,142</td>
<td>2,093</td>
<td>216</td>
<td>162</td>
<td>488</td>
<td>133</td>
<td>5,272</td>
<td>0.7%</td>
</tr>
<tr>
<td>Administrative services</td>
<td>9,125</td>
<td>685</td>
<td>13,320</td>
<td>58</td>
<td>125</td>
<td>1,105</td>
<td>1,638</td>
<td>26,056</td>
<td>3.6%</td>
</tr>
<tr>
<td>Professional fees</td>
<td>2,206</td>
<td>1,912</td>
<td>3,544</td>
<td>336</td>
<td>310</td>
<td>4,080</td>
<td>179</td>
<td>12,567</td>
<td>1.8%</td>
</tr>
<tr>
<td>Other purchased services</td>
<td>4,718</td>
<td>698</td>
<td>3,222</td>
<td>49</td>
<td>81</td>
<td>242</td>
<td>63</td>
<td>9,073</td>
<td>1.3%</td>
</tr>
<tr>
<td>Property expenses</td>
<td>10,422</td>
<td>138</td>
<td>2,187</td>
<td>225</td>
<td>123</td>
<td>172</td>
<td>–</td>
<td>13,267</td>
<td>1.9%</td>
</tr>
<tr>
<td>Equipment</td>
<td>723</td>
<td>129</td>
<td>250</td>
<td>11</td>
<td>3</td>
<td>162</td>
<td>1</td>
<td>1,279</td>
<td>0.2%</td>
</tr>
<tr>
<td>Miscellaneous expenses (income)</td>
<td>(19)</td>
<td>(194)</td>
<td>146</td>
<td>–</td>
<td>(23)</td>
<td>(6)</td>
<td>(3,234)</td>
<td>(3,330)</td>
<td>-0.5%</td>
</tr>
<tr>
<td>UBMDR search and transplant costs</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>7,331</td>
<td>–</td>
<td>–</td>
<td>7,331</td>
<td>1.0%</td>
</tr>
<tr>
<td>Royalties</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>(36)</td>
<td>–</td>
<td>(36)</td>
<td>–</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$249,355</td>
<td>$30,664</td>
<td>$47,137</td>
<td>$4,027</td>
<td>$10,299</td>
<td>$11,341</td>
<td>$362,493</td>
<td>$715,316</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
13: Insurance

A) The Corporation has established a wholly-owned captive insurance company, CBS Insurance Company Limited (CBSI), to provide insurance coverage up to $250,000 with respect to risks associated with the operation of the blood system. Additional coverage of $750,000 has been arranged through reinsurance markets on an 84.5% quota share basis for a period of three years, with a two year renewal option. As a result, the Corporation retains 15.5% of the insurance risk associated with this additional coverage.

B) The members of CBS have agreed to provide a contribution of $15,000 in September 2004. A bank letter of credit facility, renewable on an annual basis in the amount of $67,000 has been arranged to provide standby bridge financing.

C) Insurance income includes the results of operations of CBSI on a net basis which are summarized as follows:

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contribution received</td>
<td>$15,508</td>
<td>$35,566</td>
</tr>
<tr>
<td>Change in deferred</td>
<td>9,932</td>
<td>(49)</td>
</tr>
<tr>
<td>contribution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investment income</td>
<td>25,440</td>
<td>35,517</td>
</tr>
<tr>
<td></td>
<td>15,244</td>
<td>6,516</td>
</tr>
<tr>
<td>Expenses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase in provision</td>
<td>28,012</td>
<td>32,260</td>
</tr>
<tr>
<td>for future insurance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>claims</td>
<td>8,270</td>
<td>4,250</td>
</tr>
<tr>
<td>Net reinsurance costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General and administrative</td>
<td>462</td>
<td>641</td>
</tr>
<tr>
<td>Claims and administration</td>
<td>50</td>
<td>88</td>
</tr>
<tr>
<td>Letter of credit fees</td>
<td>640</td>
<td>778</td>
</tr>
<tr>
<td></td>
<td>37,434</td>
<td>38,017</td>
</tr>
<tr>
<td>Net insurance income</td>
<td>$3,250</td>
<td>$4,016</td>
</tr>
</tbody>
</table>

The increase in provision for future claims expense is an actuarially based estimate of the cost of settling claims relating to insured events (both reported and unreported) that have occurred to March 31, 2004. A significant proportion of both the future claims expense for the period and the related cumulative estimated liability at March 31, 2004 of $163,092 (2003 – $135,108) covers the manifestation of blood diseases, which is inherently difficult to assess and quantify. There is a variance between these recorded amounts and other reasonably possible estimates. It is reasonably possible that changes in future conditions in the near term could require a change in the amount estimated.

14: Financial instruments:

RISK MANAGEMENT ACTIVITIES

The Corporation has entered into interest rate swaps as described in note 7 to reduce its exposure to fluctuations in interest expense.

The Corporation also entered into foreign exchange contracts to hedge approximately 21% of its estimated foreign currency exposure on foreign purchases. The contracts oblige the Corporation to buy U.S. dollars in the future at predetermined exchange rates over a period ending September 30, 2004. The contracts are matched with anticipated future purchases in foreign currencies. The amount of future purchases is forecasted in light of expected blood collections and past experience. At March 31, 2004, the Corporation had purchased contracts to buy USD $57,000 over the next 6 months.
FAIR VALUES

The carrying value of cash and cash equivalents, members’ contribution receivable, other amounts receivable and accounts payable and accrued liabilities approximate their fair value because of the relatively short period to maturity of these financial instruments.

The fair value of the long-term debt, as calculated by a financial institution is unfavourable by $2,821 (2003 – unfavourable by $1,893).

The carrying value of the obligation under capital lease approximates its fair value as the current rate of interest available to the Corporation for a similar debt instrument has not changed significantly.

The fair value of off-balance sheet derivative instruments is provided by a financial institution and represents amounts required to realize favourable contracts or settle unfavourable contracts given current foreign exchange rates. The fair value of the Corporation’s foreign exchange contracts at March 31, 2004 is favourable by $28 (2003 – unfavourable by $272).

The fair value of the provision for future insurance claims is not provided since it is not practicable to determine fair value with appropriate reliability.

15: Guarantees and contingencies

A) GUARANTEES

In the normal course of business, the Corporation enters into lease agreements for facilities. In the Corporation’s standard commercial lease the Corporation as the lessee agrees to indemnify the lessor and other related third parties for liabilities that may arise from the use of the leased premises where the event triggering liability results from a breach of a covenant, any wrongful act, neglect or default on the part of the Tenant or related third parties. However, this clause may be altered through negotiation. The maximum amount potentially payable under any such indemnity cannot be reasonably estimated. The Corporation has liability insurance that relates to the indemnifications described above.

Historically, the Corporation has not made any significant payments related to the above-noted indemnities and accordingly, no liabilities have been accrued in the financial statements.

B) CONTINGENCIES

The Corporation is party to legal proceedings in the ordinary course of its operations. In the opinion of management, the outcome of such proceedings will not have a material adverse effect on the Corporation’s financial statements or its activities. Claims and obligations related to the operation of the blood supply system prior to September 28, 1998 are not the responsibility of CBS.

16: Commitments

At March 31, 2004, the Corporation had the following contractual commitments:

A) Future minimum payments under operating leases of approximately $12,012, with payments in each of the next five years of: 2005 – $3,890; 2006 – $2,300; 2007 – $1,266; 2008 – $1,064; 2009 – $706; and thereafter $2,786.

B) Research and development project grants of approximately $5,953.

17: CBS Foundation

The Foundation was established to raise, receive, maintain and manage funds to be distributed towards research and development and special projects to address priority needs of CBS.

The Foundation incurred costs of $267 in 2004. As at March 31, 2004, CBS had a receivable from the Foundation of $302. CBS recovers administrative expenses and the cost of the office premises occupied by the Foundation.

18: Related party transactions

Members of the Corporation are the Ministers of Health within the provincial and territorial governments of Canada, except Quebec. The Members provide funding for the operating budgets of CBS. The Corporation enters into other transactions with these related parties in the normal course of business.

19: Comparative figures

Certain comparative figures have been reclassified to conform to the presentation adopted for 2004.
Corporate Members

As of March 31, 2004

The Honourable Colin Hansen, MLA
Minister of Health Services
Province of British Columbia

The Honourable Gary Mar, MLA
Minister of Health & Wellness
Province of Alberta

The Honourable John Nilson, MLA
Minister of Health
Province of Saskatchewan

The Honourable Dave Chomiak, MLA
Minister of Health
Province of Manitoba

The Honourable George Smitherman, MPP
Minister of Health and Long Term Care
Province of Ontario

The Honourable Elvy Robichaud, MLA
Minister of Health & Wellness
Province of New Brunswick

The Honourable Angus MacIsaac, MLA
Minister of Health
Province of Nova Scotia

The Honourable Chester Gillan, MLA
Minister of Health & Social Services
Province of Prince Edward Island

The Honourable Elizabeth Marshall, MHA
Minister of Health & Community Services
Government of Newfoundland and Labrador

The Honourable William Jenkins, MLA
Minister of Health & Social Services
Government of Yukon Territory

The Honourable J. Michael Miltenberger, MLA
Minister of Health & Social Services
Government of Northwest Territories

The Honourable Levinia Brown, MLA
Minister of Health & Social Services
Deputy Premier
Minister Responsible for Status of Women
Government of Nunavut

The Honourable Dr. M. Bernadette Garvey
Safety, Science and Ethics Committee
Vancouver, British Columbia

Dr. Kenneth Hughes
Human Resources Committee
Winnipeg, Manitoba

Dr. T. Douglas Kinsella
Safety, Science and Ethics Committee
Kington, Ontario

Dr. Chandrakant Shah
Safety, Science and Ethics Committee
Toronto, Ontario

Provincial/Territorial Contacts

As of March 31, 2004

Gerald White
Newfoundland and Labrador

Joyce Thompson
Prince Edward Island

Dr. Jeff Scott
Nova Scotia

Pierre Léveillé
New Brunswick

Kathryn Pagonis
Ontario

Carol Renner
Manitoba

George Peters
Saskatchewan

Madelaine Swaters
Alberta

Wendy Trotter
British Columbia

Violet van Hees
Yukon

Eric Whitworth
Nunavut

Dr. André Corriveau
Northwest Territories

Board of Directors

As of March 31, 2004

Chair
Dr. Verna Skanes
Finance and Audit Committee
Safety, Science and Ethics Committee
Human Resources Committee
St. John's, Newfoundland and Labrador

Vice Chair
Frank D. Jones Q.C.
Finance and Audit Committee
Human Resources Committee
CBS Insurance Board of Directors
Edmonton, Alberta

Consumer Interest Representatives
James Kreppner
National Liaison Committee Co-Chair
Safety, Science and Ethics Committee
Toronto, Ontario

Adélaide La Plante
National Liaison Committee Co-Chair
Safety, Science and Ethics Committee
Moncton, New Brunswick

Medical, Scientific, Technical, Business and Public Health Representatives
W. John Dawson
Finance and Audit Committee Chair
Human Resources Committee
Vancouver, British Columbia

Dr. M. Bernadette Garvey
Safety, Science and Ethics Committee
Toronto, Ontario

Regional Representatives

ATLANTIC
Kenneth Wayne Ezeard
Human Resources Committee
Winnipeg, Manitoba

Dr. T. Douglas Kinsella
Safety, Science and Ethics Committee
Kington, Ontario

ONTARIO
William H. Gleed
Finance and Audit Committee
Defined Benefits Committee
Edmonton, Alberta

Kathryn Pagonis
Ontario

Carol Renner
Manitoba

Dr. M. Bernadette Garvey
Human Resources Committee
Toronto, Ontario

ALBERTA, SASKATCHEWAN, MANITOBA, NORTHWEST TERRITORIES AND NUNAVUT
Neil R. Wilkinson
Defined Benefits Committee
Human Resources Committee
Edmonton, Alberta

JEFF SCOTT
Nova Scotia

KATHRYN PAGONIS
Ontario

M. RENNER
Manitoba

George Peters
Saskatchewan

Madelaine Swaters
Alberta

Wendy Trotter
British Columbia

Violet van Hees
Yukon

Eric Whitworth
Nunavut

Dr. André Corriveau
Northwest Territories

BRITISH COLUMBIA AND YUKON
Leah Hollins
Finance and Audit Committee
Human Resources Committee Chair
Pension Plan for Executive Employees Advisory Committee
Victoria, British Columbia
Advisory Committees

As of March 31, 2004

National Liaison Committee

CO-CHAIRS
James Kreppner
Canadian Blood Services
Board of Directors
Toronto, Ontario

Adélaïde La Plante
Canadian Blood Services
Board of Directors
Moncton, New Brunswick

PARTICIPANTS
Wendy Chaulk
Candlelighters Childhood Cancer Foundation
Mount Pearl, Newfoundland and Labrador

Dr. Davy Cheng
Canadian Cardiovascular Society
London, Ontario

Kate Gagliardi
Canadian Society for Transfusion Medicine
Ancaster, Ontario

Gord Hickman
Community Liaison Committee NS/PEI Representative
Truro, Nova Scotia

Eleanor Holmgren
Canadian Association of Transplantation
Ottawa, Ontario

Kathie Leigh
Community Liaison Committee London Representative
London, Ontario

Howard Leung/John Maiorano
Thalassemia Foundation of Canada
Mississauga, Ontario

Dr. Robin Moore-Orr
Anemia Institute for Research & Education
St. John’s, Newfoundland and Labrador

Tokie Onoda
Community Liaison Committee Calgary Representative
Calgary, Alberta

François Perron
Canadian Society of Clinical Perfusion
North Vancouver, British Columbia

Morley Reid
Community Liaison Committee
Newfoundland and Labrador Representative
Blaketown, Newfoundland and Labrador

Jim Rodger
Community Liaison Committee Winnipeg Representative
Argyle, Manitoba

Melanie Rowe
Community Liaison Committee BC/Yukon Representative
Cochrane, British Columbia

Nikki Roy
Physicians & Nurses for Blood Conservation Inc.
Mississauga, Ontario

Lorna Stevens
Neutropenia Support Association Inc.
Winnipeg, Manitoba

Elizabeth Tough
Canadian Immunodeficiencies Patient Organization
Edmonton, Alberta

John F. Tremblay
Bruce Denniston Bone Marrow Society
Powell River, British Columbia

Howard Waldner
Canadian Healthcare Association
Calgary, Alberta

Dr. Anargyros Xenocostas
Canadian Blood & Marrow Transplant Group
Ottawa, Ontario

PARTICIPANTS
Ramone Bartel
Donor

Charm Cottingham
President, Canadian Hemoschrolossis Society

Ken Donohue
B.C. Transplant Society

Tom Huang
Donor/Community Partner

Julian Keresztesi
Donor/Volunteer

Dr. Samuel Krikler
Medical Director, Blood Transfusion Service
Department of Pathology, Surrey Memorial Hospital

Mary MacDonald
Volunteer

Heather MacIntosh
Donor/Community Partner

Ken Mcguire
Donor

Melanie Rowe
Recipient/National Liaison Committee Representative

Community Liaison Committee Calgary

CO-CHAIRS
Julie VanDusen
Centre Director

Chad Milford
Charge Technologist, Whitehorse General Hospital

PARTICIPANTS
Ramone Bartel
Donor

Charm Cottingham
President, Canadian Hemoschrolossis Society

Ken Donohue
B.C. Transplant Society

Tom Huang
Donor/Community Partner

Julian Keresztesi
Donor/Volunteer

Dr. Samuel Krikler
Medical Director, Blood Transfusion Service
Department of Pathology, Surrey Memorial Hospital

Mary MacDonald
Volunteer

Heather MacIntosh
Donor/Community Partner

Ken Mcguire
Donor

Melanie Rowe
Recipient/National Liaison Committee Representative

Community Liaison Committee Ottawa

CO-CHAIRS
Jesse Alves
Centre Director

PARTICIPANTS
Trevor Trinh
Donor/Volunteer

Richard Adam
Heart & Stroke Foundation of Manitoba

David Angus
Community Partner/President Winnipeg Chamber of Commerce

Roger Currie
Donor

Ken Donaldson
Volunteer

Thom Irving
Donor

Dr. Kerry MacDonald
Laboratory Director, Lake of the Woods District Hospital

Jay MacLeod
Recipient

Angela Narth
Recipient

Jim Nicholas
Canadian Liver Foundation

Karen Olson
Hemophilia Society of Manitoba

David Sonnichsen
Donor/Volunteer

Amalia Pempengco
Volunteer

Jim Rodger
Donor/National Liaison Committee Representative

Shane Wood
Volunteer

Community Liaison Committee London

CO-CHAIRS
Myrtle Nichols
Centre Director

Irene Freyinet
Volunteer

PARTICIPANTS
Joan Beavers
Volunteer

George Bisanz
Community Partner

Jocelyne Brent
Recipient

Glen Dietz
Donor/Blood Bank Transfusion Specialist

Heather Fisher
Canadian Transplant Association

Maryla Gallagher
Recipient

Barbara Garvin
Canadian Cancer Society

Mary Gillet
Health Partner

Lisa Howe
Recipient

Rebecca Howse
Community Partner

Johanna Kerr
Donor/Volunteer

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Blood Bank Transfusion Specialist

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Perioperative Blood Conservation Program, QEII Health Sciences Centre/Physicians & Nurses for Blood Conservation

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Tony Richard
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Medical Director, Blood Transfusion Services, QEII Health Sciences Centre

Derek Shanks
Volunteer

Karen Turner-Lienaux
Blood Transfusion Service of Capital District Health Authority & Tissue Typing Laboratory, QEII Health Sciences Centre

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Recipient/Executive Director, RealTime Acaner

Jean Hall
Volunteer

Ruby Haynes
Senior Blood Bank Technologist

Donald W. McKay
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Paula Mullins
Heart and Stroke Foundation

Dennis Newman
Laboratory Technologist

Dorothy Turpin
Assistant Laboratory Director

Craig White
Volunteer/Community Partner

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Consultant Transfusion Medicine, Epidemiologist Secretary Medical Affairs Sanquin Blood Supply Foundation Amsterdam, The Netherlands

Dr. Lorna Williamson
Lecturer/Consultant in Transfusion Medicine National Blood Service/University of Cambridge, Division of Transfusion Medicine Cambridge, U.K.
### Executive Management Team

**As of March 31, 2004**

- **Dr. Graham Sher**
  - Chief Executive Officer

- **Ian Mumford**
  - Executive Vice-President, Operations

- **Wesley Rees**
  - Executive Vice-President, Safety and Performance Management

- **Dr. Eleftherios (Stephen) Vamvakas**
  - Executive Vice-President, Medical, Scientific and Research Affairs

- **Watson Gale**
  - Vice-President and General Counsel

- **Kathryn Butler Malette**
  - Vice-President, Human Resources

- **Pauline Port**
  - Vice-President, Corporate Services and Chief Financial Officer

- **Sophie de Villers**
  - Executive Director, Policy and Planning

- **Darren Praznik**
  - Executive Director, Government Relations

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### Canadian Blood Services Locations Across Canada

*Canadian Blood Services operates 42 permanent collection sites in the following cities and more than 15,000 mobile donor clinics annually.*

#### Toll Free
1 888 2 DONATE
(1 888 236-6283)

#### Web Site
www.bloodservices.ca

#### Head Office
1800 Alta Vista Drive
Ottawa, Ontario
K1G 4J5
Tel: (613) 739-2300
Fax: (613) 731-1411

#### BC & Yukon
- Vancouver
- Prince George
- Kelowna
- Surrey
- Victoria

#### Saskatchewan
- Regina
- Saskatoon

#### Manitoba
- Winnipeg
- Brandon

#### Ontario
- Thunder Bay
- London
- Guelph
- Burlington
- Hamilton
- Sarnia
- Windsor
- St. Catharines
- Kitchener-Waterloo
- Barrie
- Sudbury
- Toronto
- Mississauga
- Peterborough
- Ottawa
- Kingston

#### New Brunswick
- Saint John

#### Nova Scotia
- Halifax
- Sydney

#### Prince Edward Island
- Charlottetown

#### Newfoundland and Labrador
- St. John’s
- Corner Brook
- Grand Falls