KINGSTON GENERAL HOSPITAL

DEPARTMENT OF PATHOLOGY AND MOLECULAR MEDICINE

ANNUAL REPORT

APRIL 1, 2002 - MARCH 31, 2003

1. EXECUTIVE SUMMARY

1.1 Preamble

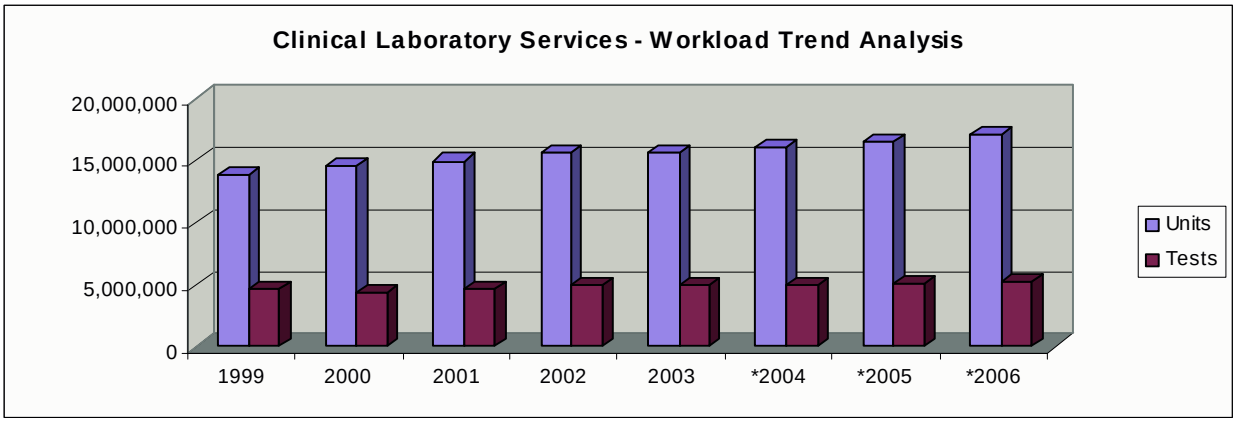
The Department of Pathology and Molecular Medicine at Kingston General Hospital is a medical department reporting through the Medical Advisory Committee. The Department is closely integrated with the KGH Division of Clinical Laboratory Services, which reports corporately through the Vice President, Program Support. The Department is organized into five divisions: Anatomical Pathology, Clinical Chemistry, Clinical Microbiology, Hematopathology, and Genetics and Molecular Medicine. The Clinical Laboratory Services are organized into four departments: Core Laboratory Services, Pathology Services, Microbiology Services and Genetics Services.

In addition to providing clinical service, education and research, laboratory physicians and scientists have significant administrative responsibilities for clinical supervision of a large number of technical staff and co-management of operational and capital budgets.

1.2 Utilization & Workload Trends

Over the past several years the department has experienced a steady increase in work activity. The average annual increase in workload between 1999 and 2003 has been approximately 3%. We anticipate that this trend will continue over the next several years.

Fiscal	1999	2000	2001	2002	2003	*2004 Projected	*2005 Projected	*2006 Projected
Units	13,801,309	14,598,490	14,964,303	15,673,069	15,572,532	16,053,723	16,549,783	17,061,172
% Increase		5.78%	2.51%	4.74%	-0.64%	3.09%	3.09%	3.09%
Tests	4,597,574	4,406,379	4,659,627	4,917,338	4,932,580	5,024,326	5,117,778	5,212,969
% Increase		-4.16%	5.75%	5.53%	0.31%	1.86%	1.86%	1.86%



*Volumes projected based on the average year-to-year increase/decrease from 1999 - 2003

Each year, the complexity of laboratory testing continues to increase. Examples include molecular diagnostic work-up of bone marrow aspirates containing malignant hematologic neoplasms and complex microbiological work-ups of multi-drug resistant pathogenic organisms. These tests reflect the increase in information that the laboratory provides to improve care, predict and prevent disease, and to determine therapy.

1.3 Quality Improvement Activities

Our departmental quality assurance committee continued to monitor a number of key indicators in each of the laboratory disciplines, particularly turnaround time for test results and medical diagnoses (e.g. biopsies). Our results are generally well within, or better than, accepted published benchmarks. Our focus continues to be upon the development of a quality system within the laboratories, in preparation for an upcoming new province-wide laboratory accreditation process.

1.4 Teaching and Research

Our educational mission crosses multiple programs at Queen's as well as other regional and transregional institutions. The department continues to be extensively involved in the undergraduate medical curriculum and both intra- and extra-departmental residency programs. The department has a substantial graduate program which includes approximately 30 Master's and PhD students and also has 12 postdoctoral research fellows. The department offers 7 courses in pathology, genetics and molecular medicine within the undergraduate life sciences and graduate programs and also participates in courses within the nursing, rehabilitation medicine and biology programs at Queen's. The department plays a significant role in the supervision and training of technology students from St. Lawrence College and the Michener Institute. Furthermore, the department coordinates an extremely successful course in the enrichment program given annually by Queen's to high school students.

Recruitment to pathology residency programs is a major challenge that we and most other Canadian departments face. We have had a successful year in addressing this issue and will see our total resident complement, effective July 1, 2003 increase to five and possibly six residents. We are increasing our recruitment initiatives internally in order to build on this momentum and continue the repopulation of our programs. Recruitment to pathology is an important national issue as there is a well documented, and worsening, shortfall in laboratory physician person power.

Our department continues to be a leader in biomedical research at Queen's. The current total value of research grants and awards to primary appointees in our department is approximately $5.9 million. This represents an increase of 5.4% over the previous year's total. The productivity of the department's research enterprise during the reporting year includes: 86 peer reviewed papers; 9 book chapters; and, 90 abstracts. Lists of departmental research grants, publication records and scholarly presentations are available upon request.

1.5 Staffing Issues

The most significant change in the Department over the past year was a change in the leadership. Dr. Iain Young replaced Dr. Paul Manley as Head of the Department effective July 2002. Dr. Sandip SenGupta was appointed the Medical Director of the Clinical Laboratory Services, also in July 2002. A new Administrative Director, John Stoneman, joined the Department in February 2003. Within the divisions, there were two major changes: Dr. Sandy Boag was appointed Service Chief of Anatomical Pathology (replacing Dr. Young). Dr. Dick Zoutman replaced Dr. Lewis Tomalty as Service Chief of Medical Microbiology.

We welcomed two new pathologists to our Department in mid 2002 to replace vacated positions due to resignation and retirement: Dr. Tim Childs (one of our former residents) and Dr. Phil Isotalo (who came to us from the Mayo Clinic where he completed a fellowship in Surgical Pathology). We continued our search for an additional pathologist to replace Dr. Sally Ford's position, which became officially vacant in 2002.

Amongst our Ph.D. laboratory scientists, Dr. Jenny Raymond, our biochemical geneticist, took early retirement. This was a loss not only to our department and academic health sciences centre, but to clinicians across the country, as Dr. Raymond single-handedly performed and interpreted many metabolic screening tests and maternal screening tests. While her talents could not be replaced internally, we were pleased to be able to appoint Dr. Harriet Feilotter, a Clinical Molecular Scientist, to an Adjunct position within the Department. Her appointment strengthens our expertise in the rapidly burgeoning field of molecular pathology.

For more detailed information about our Department and its activities, please visit our website at: ***http://www.path.queensu.ca***

2. REVIEW OF GOALS & OBJECTIVES FOR THE PAST YEAR

Listed below is a review of key achievements in selected areas of the Department over the past year:

1. Autopsy Suite/Forensic Unit renovations: plans finalized - awaiting MOHLTC approval.
2. Autopsy turnaround time optimization: achieved for hospital cases, underway for coroner's cases
3. Specimen grossing function efficiency review: completed full review and revision of specimen handling and dictation protocols and implemented major reduction in tissue submission from bone specimens.

4. Optimization of surgical pathology reporting: completed full review and revision of synoptic reporting of cancer specimens and implemented expanded of diagnosis only reporting .

5. External funding for tumor bank: Participating in OCRN tumor banking initiative, first hospital in province to receive local IRB approval for consent process, awaiting local IRB approval of intellectual property rights process and OCRN roll-out of funding process.

6. A pilot project for collection of bone marrows without technical support in the KRCC was implemented. This has removed time restraints for oncologists, as well as saved technologist time.

7. DNA requests on all bone marrows are now screened by haematopathologists, and unnecessary DNA studies cancelled. This has reduced bone marrow DNA studies by more than one third.

8. Fresh frozen plasma usage in cardiovascular surgery was audited. This suggested a need to implement point-of-care coagulation testing, and a Business Plan is being submitted by the Department of Anaesthesia.

9. Standardization of blood film reporting is not yet complete.

3. CURRENT STAFFING & STAFFING CHANGES

3.1 KGH Department of Pathology Faculty

Division of Anatomic Pathology

Faculty	Position	FTE in Department		Main Service Responsibilities	Notes
		Nominal	Effective		
Boag, A.	Service Chief, Anatomic Pathology	1.0	1.0	GU, lung, cytology, autopsy	
Childs, T.	Attending Staff	1.0	1.0	Gyne, cytology, perinatal, autopsy	
Dexter, D.	Medical Dir., Autopsy	1.0	1.0	GI, lymphoma, head/neck, autopsy, forensics	
Hurlbut, D.	Attending Staff	1.0	1.0	GI, head/neck, autopsy, forensics	

Isotalo, P.	Attending Staff	1.0	1.0	GU, breast, lung, head/neck, autopsy	
Kisilevsky, R.	Attending Staff	1.0	1.0	Autopsy	Retires June 30, 2003
Lebrun, D.	Medical Dir., Immunohist.	1.0	1.0	Lymphoma, autopsy	
Ludwin, S.	Assoc. Dean & V.P. Research	1.0	0.25	Neuropathology, autopsy	75% time = Assoc. Dean of Research
Manley, P.	Attending Staff	1.0	0.0	GI, head/neck, autopsy	Admin. LOA (as of May '03)
Rossiter, J.	Medical Dir., Neuropath.	1.0	1.0	Neuropathology, autopsy	
Rowlands, C.	Medical Dir., Cytology & Dir. Postgrad.	1.0	1.0	Dermatopath, gyne, breast, cytology, autopsy	
SenGupta, S.	Medical Dir., Laboratories	1.0	1.0	Breast, gyne, orthopedic, autopsy	
Young, I.	Dept. Head & Pathologist in Chief	1.0	1.0	Dermatopath, GU, renal, autopsy, forensics	
Vacant position		1.0	0.0		Currently recruiting
Total FTE		14.0	11.25		

Notes:

1. Dr. A. Fletcher retirement, replaced by new recruitment of Dr. T. Childs effective July, 2002
2. Recruitment of Dr. P. Isotalo to vacant position, effective August, 2002

Division of Haematopathology

Dr. Dilys Rapson	-	Service Chief, Haematopathology
	-	General Hematology, Hemostasis
Dr. Lois Shepherd	-	Director, Blood Bank
	-	General Haematology, Transfusion Medicine
Dr. David Dexter	-	General Haematology, Lymph Node Pathology
Dr. David Lillicrap	-	Regional Haemophilia clinic, Haemostasis
	-	Molecular Genetics of Haemostatic Disorders
Dr. David Lee	-	Clinical Haematology
	-	Haemostasis research

Notes:

1. Dr. Lee is a cross-appointee from the Department of Medicine.

2. The time commitment to Laboratory Haematology varies amongst the members: Dr. Rapson 1.0 FTE; Dr. Shepherd 0.5 FTE; Dr. Dexter 0.2 FTE; Dr. Lillicrap 0.25 FTE.

Division of Clinical Chemistry

Dr. Michael Raymond	-	Service Chief, Clinical Chemistry
Dr. Christine Collier	-	Clinical Chemist

Division of Clinical Microbiology

Dr. Dick Zoutman	-	Service Chief, Medical Microbiology
	-	Director, Infection Control Service
Dr. Lewis Tomalty	-	Clinical Microbiologist
Dr. Tim Karnauchow	-	Clinical Microbiologist

Division of Genetics and Molecular Medicine

Dr. David Lillicrap	-	Chief of Division
Dr. Karen Harrison	-	Clinical Coordinator, Laboratory Genetics
Dr. Sherry Taylor	-	Molecular geneticist
Dr. Harriet Feilotter	-	Molecular geneticist
Dr. Mohamed Khalifa	-	Clinical genetics
Dr. Jennifer Mackenzie	-	Clinical genetics
Dr. Cynthia Forster-Gibson	-	Clinical genetics

Clinical Laboratory Services Staffing

Laboratory Administrator - 1
Departmental managers - 5
Senior technologists, full-time - 8
Medical laboratory technologists, full-time - 79
Medical laboratory technologists, part-time – 22
Infection Control Practitioners - 3
Other technicians - 4
Laboratory assistants, full-time - 15
Laboratory assistants, part-time – 9
Clerical and Secretarial - 29

3.2 Staffing Issues

Attending Staff

The Division of Anatomic Pathology will begin the Summer of 2003 with a nominal staffing level of 14.0 FTE pathologists but an effective strength of only 10.25 FTE's due to unfilled vacancies (for which there is ongoing recruitment), an administrative leave of absence and administrative appointments. This short staffing will lead to major challenges for provision of adequate service coverage let alone academic activities. In addition to filling existing positions at

least one and preferably two additional positions will be required in the next SEAMO negotiation to provide maintain a high quality of diagnostic service in the face of continued increases in workload in the coming years.

In the Division of Hematopathology, despite rising workload and workload complexity, there has been no change in staffing in the last year. With the disseminated responsibilities in haematopathology and limited manpower availability, maintenance of turnaround times and high quality clinical service, as well as the ability to teach and do research concurrently, have been increasingly more difficult to achieve.

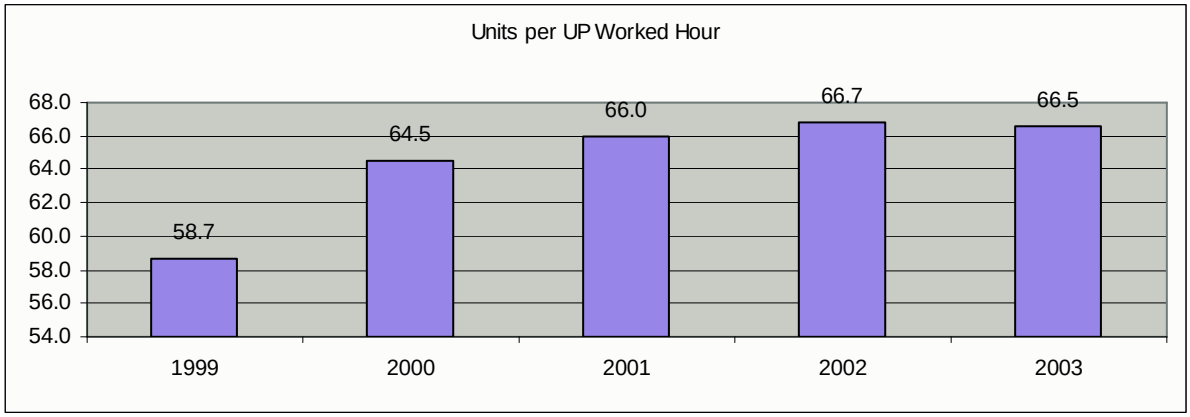
In Clinical Genetics, recruitment efforts are continuing to recruit a second academic clinical geneticist to this academic centre.

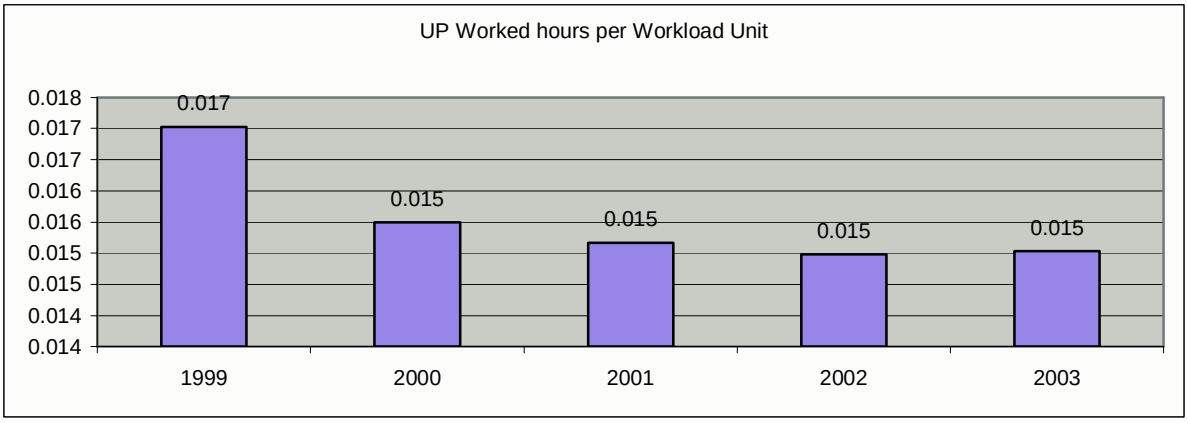
Technical Staff Levels and Productivity

Technologist staffing has been at a critical level and continues to be a serious concern. This is compounded by an increasing shortage of medical laboratory technologists – a shortage that is likely to become much worse in the next few years. It is becoming ever more difficult to find qualified replacements for technologists who are on pregnancy or long term sick leave. Currently, staffing is barely meeting service demands in several areas, quite apart from any developmental work. We continue to anticipate significant challenges over the next year as we prepare for laboratory accreditation, regionalization and a new laboratory information system.

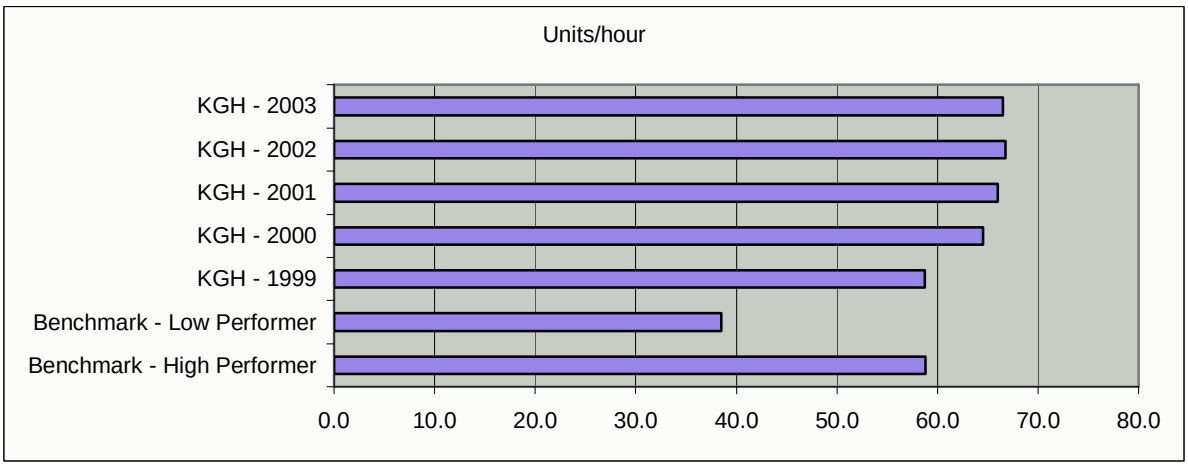
Despite the challenges, the following tables and graphs demonstrate the level of productivity within the Laboratory departments.

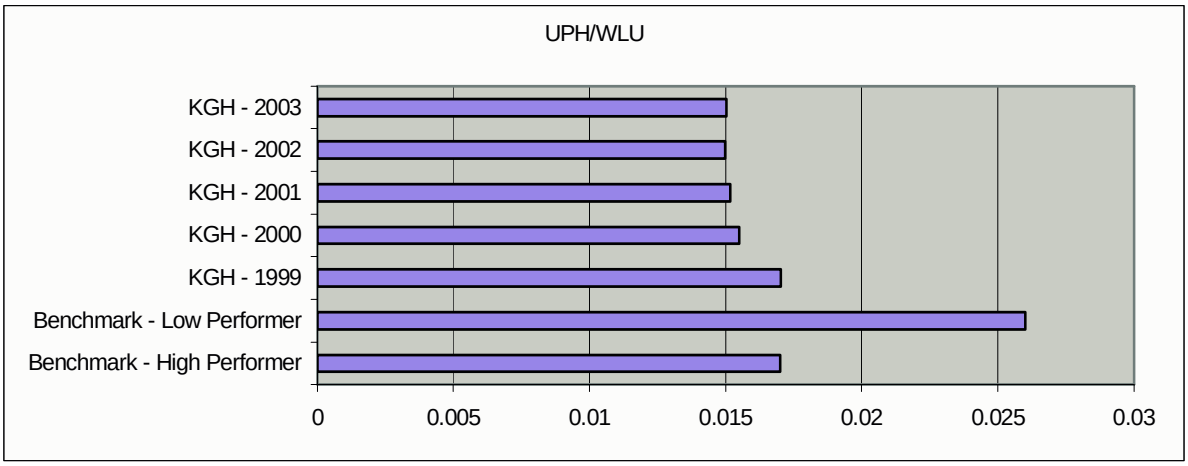
Fiscal	1999	2000	2001	2002	2003
Units	13,801,309	14,598,490	14,964,303	15,673,069	15,572,532
Unit producing worked hours	235,017	226,259	226,879	234,819	234,100
Units per UP Worked Hour	58.7	64.5	66.0	66.7	66.5
UP Worked hours per Workload Unit	0.017	0.015	0.015	0.015	0.015





Productivity	UPH/WLU	Units/hour
Benchmark - High Performer	0.017	58.8
Benchmark - Low Performer	0.026	38.5
KGH - 1999	0.017	58.7
KGH - 2000	0.015	64.5
KGH - 2001	0.015	66.0
KGH - 2002	0.015	66.7
KGH - 2003	0.015	66.5





4. PROFILE OF ACTIVITIES

4.1 Division of Anatomic Pathology

Surgical pathology, which comprises the bulk of day-to-day service work for most faculty members, showed slow growth in total case numbers (1 year - 2.0% and 5 year -7.4% increases) but a much more significant trend to increasingly complex and professionally demanding cases (e.g. 5 year increases of 81% in breast cases requiring immunohistochemistry, 51% in external consults and KRCC second reviews, 69% in liver cases and 37% in prostate cases). Breast case growth leveled off in 2002 but increases in other complex cases continued at rates of approximately 10% per year. In contrast, simple cases showed modest growth or a decline, such that total case number no longer adequately reflects workload trends. On the Cytology and Autopsy Services the ongoing trends of more non-gyne cases/fewer pap smears and more coroner's cases/fewer hospital cases continued respectively while total case numbers remained relatively stable. While these trends are perhaps appropriate in an academic department with a forensic unit, the increasing complexity of our case mix presents a real workload challenge for technical and medical staff.

Surgical Pathology Service

Activity Indicator	Calendar 2003 Activity	Change in Activity	
		One Year	5 Year
Total Cases	24,540	+2.0%	+7.4%
Indicator cases, complex			
Breast, requiring IHC	602	0.0%	+81%
Consults	1876	+10%	+51%
Liver	346	+7.8%	+69%
Prostate	916	+13%	+37%
Indicator cases, simple			
Bone	625	0.0%	-7.5%
Gallbladder	639	+2.5%	+1.9%
Skin	6640	-2.0%	+6.0%
Products of Conception	881	+5.0%	-2.9%

Comment: In surgical pathology the slow climb in total case count continued in 2003, as did the more marked increases in complex cases such as external consults (largely second review of cancer cases for KRCC), liver biopsies and prostate cases. The 81% increase in breast cases requiring immunohistochemistry seen over the past five abated in 2003, although this work continues to place a heavy load on both the medical and technical staff. In contrast simple cases continued to show minimal growth or even declined in numbers. The overall trend is to more complex professional and technical work that is not reflected in crude total case counts.

Cytopathology Service

Activity Indicator	Calendar 2003 Activity	Change in Activity	
		One Year	5 Year
Total Cases	18,620	-1.9%	-35%
Non-gynecological cases			
Total	7419	+5.7%	+7.9%
Fine needle aspiration	1070	+6.9%	+8.2%
Cervical ("pap") smears			
Total	11201	-6.4%	-39%
Colposcopy	1258	-2.2	-9.4%
Reviewed by pathologist	5217	-2.0%	+6.0%

Comment: The drop in community pap smears coming into the hospital lab continued in 2003. However, this was largely made up by increases in more technically and professionally demanding non-gynecologic specimens, particularly in the area of fine needle aspiration biopsy material.

Autopsy Service

Activity Indicator	Calendar 2003 Activity	Change in Activity	
		One Year	5 Year
Hospital Cases	92	-16%	-39%
Coroner's Cases	189	-3.8%	+33.1
Total Cases	281	-3.8%	-3.8%

Comment: The major trend in the autopsy service continues to be the shift from hospital consent cases to coroner's medical legal cases. While the increased numbers of the latter are consistent with the developing forensic unit now sited at KGH, the drop in hospital cases is a concern from a teaching and hospital quality assurance standpoint.

4.2 Division of Hematopathology

Laboratory Workload Units

	Fiscal 2000	Fiscal 2001	Fiscal 2002	Fiscal 2003
Routine Haematology	1,536,050	1,593,045	1,495,010	1,492,539
Special Haematology	111,003	108,555	108,617	115,789
Coagulation	873,360	921,666	957,214	979,571
Transfusion Medicine	997,836	1,048,555	1,015,438	1,023,095
Immunology	391,826	405,528	442,861	462,644

Rising workload units are reflected in a gradual increase in, for example:

	Fiscal 2003		Fiscal 2002
Bone Marrow Requests	456	versus	442
Von Willebrand Antigen	239	versus	± 218
Immunophenotyping Interpretation	727	Versus	661

4.3 Division of Clinical Chemistry

Workload Units

	Fiscal 2001	Fiscal 2002	Fiscal 2003
Routine Chemistry	2,440,937	3,168,462	3,117,846
Urinalysis	151,965	145,209	144,493
Therapeutic drug monitoring/Toxi-cology	92,618	144,372	158,780
Immunoassays	471,216	495,548	521,611
Special Chemistry	523,926	445,402	402,790

Comment:

Our new instrumentation – the Roche Modular system – has continued to operate nearly flawlessly for the year. Roche has brought several visitors from other hospitals to look at our process, and most of those clients have been sufficiently impressed to go on and acquire similar instrumentation for their own institutions. We underwent a major software upgrade to the Modular which has made some operational issues much more user friendly, in addition to preparing the system for the upgrade involved in adding the immunoassay module to the system.

The Remedi drug analyzer was installed in January 2003 and is now in live operation. Our correlation studies with the Triage system previously in use revealed a startling number of false positive results on Triage, further justifying the decision to purchase the Remedi. All technologists

in Core laboratory have now been trained on the system, and an algorithm is place to simplify the reporting procedure. All reports are scrutinized by a biochemist before finalization. One concern has been a lack of mechanical reliability resulting in significant down time. The vendor has acknowledged these problems and has extended our warranty by six months.

4.4 Division of Clinical Microbiology

Number of Tests Performed for Major Specimen Categories

L Code	Test	Fiscal 2002	Fiscal 2003
L621	Antibiotic Sensitivity	6,080	6,825
L624	Blood Culture	17,172	19,197
L625	Cervical, Vaginal Culture	4,485	4,108
L628	Wound Culture	11,807	13,857
L629	Sputum Culture	2,846	2,726
L630	Stool Culture	2,182	1,982
L634	Urine Culture	18,572	18,999
L640	Throat Culture	3,097	2,746
L626	Fungal Culture	996	1,259
L650	Parasitology – concentration	2,107	2,236
Total Workload Units		2,443,019	2,467,932

Comment:
The service mix provided by Medical Microbiology was stable over the last year. We continued to provide rapid viral testing during the winter months and this will continue to be important for the respiratory infection season October 2003-April 2004 to help differentiate between SARS and non-SARS diagnoses. There may be a more available rapid test for SARS within the next year.

4.5 Division of Genetics and Molecular Medicine

Laboratory Genetics: Number of Tests Performed for Major Specimen Categories

	Fiscal 2001	**Fiscal 2003**
Molecular Diagnostics	5,069	5,204
Cytogenetics	798	1,004
Biochemical Genetics	N/A	731

Number of Samples	**Fiscal 2001**	**Fiscal 2003**
Breast Cancer Mutation testing	4	120
Fluorescent in hybridization (FISH) for microdeletions, etc. – all tissue types	106	111
a) Prenatal FISH screening	0 (referred to Toronto)	4
b) Subtelomere FISH screening	0	13

Comment:

The biochemical genetics laboratory closed in November 2002 following Dr. J. Raymond's retirement. All biochemical tests are now referred out to referral laboratories through Anne Hanley, Manager, Genetic Services or the Core Laboratory.

The acquisition of a new instrument in the molecular genetics laboratory, a DHPLC analyzer enabled us to provide BRCA gene testing in-house.

Clinical Genetics: Activity Report

	Fiscal 2002	Fiscal 2003
Local Patient encounters	722	780

5. QUALITY & UTILIZATION IMPROVEMENT ACTIVITIES

Some of the medical quality improvement activities of the Department are highlighted below. The full range of activities is documented in the 2002 – 2003 annual report of the Department's Quality & Utilization Improvement Committee.

5.1 Anatomic Pathology

A well-developed quality assurance program is in place, which has documented excellent lab

performance, with standards not only being met but exceeded in most areas. Upgrades in laboratory document management have been initiated to comply with new provincial standards.

Surgical Pathology

1. Diagnostic biopsy TAT auditing, ongoing (91% reported within 2 working days, within standard of 80% reported in 2 working days)
2. All case TAT auditing, ongoing (monthly avg. 1.87-2.13 working days, within 3 day standard)
3. Clinical conference secondary case review, ongoing auditing (5.2% of all cases reviewed, no significant discrepancies identified)

Cytology

1. Pap smear diagnostic rate (LSIL, HSIL, ASCUS) monitoring - within standards
2. Pap smear rescreen discrepancy monitoring - within standards
3. Cytologic-histologic correlation - within standards
4. FNA adequacy rate audit - majority of unsatisfactory specimens from superficial lesions rather than image guided deep biopsies
5. TAT auditing - transient failure to meet pap smear TAT standard due to technical short staffing (prolonged medical leave), now back within standards

Autopsy and Forensic Unit

1. Hospital TAT: drop in 80th percentile from 98 working days (Jan 02-Mar 02) to 33 working days (Jan 03-Mar 03) on implementation of a comprehensive TAT monitoring and process improvement program.
2. Forensic Unit: ongoing monitoring of QA indicators problematic due to lack of a formal administrative structure and case tracking process. Program instituted to develop central coordinating structure, policies and procedures.

5.2 Hematopathology

Audits conducted included:

- CBC Turnaround Time
- Prothrombin Time Turnaround Time
- Platelet Compatibility in Transfusion
- Appropriateness of Requests for Low Molecular Weight Heparin Monitoring
- Utility and Timeliness of PT/INR Results in Decision Making of the Transfusion of Fresh Frozen Plasma
- Audit of Diagnostic Concordance on Referred in Marrow Consultations
- Age of Red Cell Concentrates Transfused
- Audit of Completion of Documentation on Blood Bank Requisitions

5.3 Microbiology

The following activities have been undertaken in Fiscal 2003:

#	Indicator	Indicator Definition	Dimension of Quality Measured	Calc. Formula
1	Blood culture Percent pos.	Percent positive cultures	Efficiency	Percent positive culture
	Action Threshold	**Effective Goal**	**Action Plan**	**Resolved/ Ongoing**
	10% positive cultures with 8.4% significant positives	10% positive cultures with >7% significant	Annual Monitoring	Ongoing

#	Indicator	Indicator Definition	Dimension of Quality Measured	Calc. Formula
2	Multiple antibiotic resistant. organisms: incidence			
	Action Threshold	**Effective Goal**	**Action Plan**	**Resolved/ Ongoing**
			Continue to monitor	Continued surveillance

#	Indicator	Indicator Definition	Dimension of Quality Measured	Calc. Formula
3	Blood culture contamination rate:	Percent contaminated cultures:	Efficiency	Percent contaminated cultures
	Action Threshold	**Effective Goal**	**Action Plan**	**Resolved/ Ongoing**
	1.2% contamination rate	3% contamination rate	Annual monitoring	Ongoing

#	Indicator	Indicator Definition	Dimension of Quality Measured	Calc. Formula
4	CSF Gram stain reporting	TAT of CSF Gram stain results	Efficiency	Percent within activity standard TAT
	Action Threshold	**Effective Goal**	**Action Plan**	**Resolved/ Ongoing**

	85% within 1 hour	≤ 1 hour TAT	1 month retrospective 2003	Ongoing
#	**Indicator**	**Indicator Definition**	**Dimension of Quality Measured**	**Calc. Formula**
5	TAT; notification of positive Blood Cultures	TAT of positive BC results	Efficiency, acceptability, competence	Max TAT Min TAT Mean TAT
	Action Threshold	**Effective Goal**	**Action Plan**	**Resolved/ Ongoing**
	< 100% within 1 hour	TAT 1 hour	Staff education and Reaudit in 6 months	Reaudit
#	**Indicator**	**Indicator Definition**	**Dimension of Quality Measured**	**Calc. Formula**
6	Blood Culture Collection of 3bottles within 24 hours	3 blood culture bottles collected within 24 hours (septic episode)	Acceptability	Percent of specimen collection within guidelines of 3 bottles per 24 hour period
	Action Threshold	**Effective Goal**	**Action Plan**	**Resolved/ Ongoing**
	<90% compliance with collection guidelines	100%	2 month retrospective audit	Ongoing

6. REGIONAL ACTIVITIES

In addition to continuing its longstanding tradition of providing medical diagnostic services and laboratory directorship to several of the community hospitals in Southeastern Ontario, the Department provided medical and administrative leadership in the Ministry led regional planning activities for laboratory services. Formation of the East 2 region Laboratory Alliance (E2LA), a working group of laboratory medical directors and laboratory managers across the region, was one of the positive outcomes this year. E2LA has begun to develop a regional inventory of human resources (i.e. laboratorians) and capital equipment. We have developed a quality gap analysis tool which we have shared with E2LA members so that all of us can meet the new Ontario Laboratory Accreditation standards through pooling of technical expertise.

Some of the other key regional activities, programs and initiatives within the Department include:

- A regional immunohistochemistry service
- KRCC new patient secondary regional pathology review service
- KGH/KRCC multidisciplinary rounds (KRCC Tumor Boards and Site Groups, Medical Mortality Rounds, numerous specialty rounds)
- A Regional Forensic Unit
- A regional pap smear screening program via private lab partnership
- Re-alignment of the Organ Transplantation and Procurement Committee. A Nurse Coordinator, Mrs. Doris Flynn, worked extensively with clinical services to improve blood conservation and risk containment.

In Clinical Genetics, staff from the Peterborough City County Health Unit, Maureen Provencher (MOH), Peter O'Brien, Dr. Iain Young, Dr. David Lillicrap and other members of the genetics group met earlier this year to review the provision of genetic services at the Peterborough Genetics Outreach Clinic. A new medical director, Dr. Cynthia Forster-Gibson, was appointed. The genetics counsellor employed by the PCCHU resigned and a MSc. in Genetics Counselling has been hired.

7. GOALS & OBJECTIVES FOR COMING YEAR

Within the Department as a whole, the key goals include:

- Completion of revised mission, vision, and values statements.
- Development of a formal strategic plan using the balanced scorecard approach and begin implementation.
- Complete information gathering and RFP phase of LIS replacement.
- Implement the laboratory order entry system for the hospital's PCS.
- Implement a quality management program within the clinical laboratories which meets the new provincial laboratory standards for accreditation.
- Provide leadership in the Ministry-driven regional laboratory services reform planning process for Southeastern Ontario.
- Successfully recruit to vacant faculty positions (Anatomic Pathology, Hematopathology) and begin the process to increase faculty numbers by at least one pathologist in the next SEAMO re-negotiation.

Additional division specific goals and objectives include:

Anatomic Pathology:

1. Implement tumor banking under OCRN funded initiative.
2. Complete Autopsy Suite/Forensic Unit renovations and implement centralized management of coroner's cases.

3. Implement focused secondary review of KRCC new patient referral cases to reduce unnecessary workload and improve handling efficiency.

Microbiology:

1. Complete implementation and role out of order entry via PCS. This new functionality will simplify data entry and reporting through the PCS. Ultimately, PCS order entry will permit Medical Microbiology to perform detailed utilization analysis of its services in real time.
2. Develop a successful business case for on-site performance of required serology for organ donors. This is to support corporate organ donation program and to meet new federal directives on organ and tissue donation safety.
3. Develop a business case for the introduction of molecular epidemiology and diagnostic techniques for controlling the emergence and spread of antibiotic resistant organisms and for making pathogen diagnoses.
4. Complete the relocation of microbiology services from L&A Hospital to KGH.
5. Goals for Infection Control Service - see attached Annual report previously submitted to MAC.

Hematopathology:

1. Provide dynamic high quality haematopathological training for two haematopathology residents.
2. Integrate new flow cytometer instrument into clinical practice.
3. Triage cytogenetic requests on bone marrows.

Clinical Chemistry:

1. Complete the re-instrumentation project through the installation of the E170 module. This will integrate immunoassay testing into the regular chemistry analyzer, which was our ultimate goal at the beginning of the project.

Genetics:

1. Successfully recruit an academic clinical geneticist.
2. Successfully recruit two genetic counselors.

7. OPPORTUNITIES & CHALLENGES

The department is currently undertaking a comprehensive strategic planning initiative which will establish the directions the department will take over the short to intermediate term. The strategic plan will address the major challenges and opportunities that the department faces in each of the following areas:

1. Quality Enhancement
    - Development and implementation of molecular diagnostic technology while respecting budget imperatives.
    - Enhancement of departmental translational research capability and productivity.

2. Personnel

    - The current highly competitive marketplace will demand an aggressive approach to the recruitment and retention of high quality, skilled professional, technical and management's staff.

3. Laboratory Regionalization

    - The MOH LTC-initiated movement to regionalize laboratory services will provide opportunities to increase the quality and availability of laboratory services across our region but will also create new external demands on our professional and management expertise.

4. Information Management

    - It is anticipated that the corporate plan to implement a new laboratory information system will be effected.