

From the Desk of R. Lewis Dark...

THE
REPORT

**RELIABLE BUSINESS INTELLIGENCE, EXCLUSIVELY
FOR MEDICAL LAB CEOs/COOs/CFOs/PATHOLOGISTS**

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“Value Added” Services Essential to Success

ONE ELEMENT COMMON TO SUCCESSFUL LABORATORY ORGANIZATIONS of the future will be the ability to both understand the concept of “value added” services and to offer such services to customers. At its core, value added is an essential business strategy.

There are many ways to define “value added.” But the intent is unquestioned. Any product or service which is “value added” has recognizable benefits to the customer. Some examples make this clear. In overnight package delivery, what company would you say is the value added leader: **Airborne Express**, **UPS**, **Federal Express**, or **U.S. Postal Service**? Among department stores, which is considered the value added leader: **Bloomingdales**, **Macys**, **Nordstroms**, **Neiman Marcus**, or **Marshall Fields**?

Most financial analysts, and a large number of the public, would pick Federal Express and Nordstroms. These companies have the ability to deliver something extra to customers which is recognized. It is because of this something “extra” that customers repeatedly return to buy. There was a day when Neiman Marcus was an unquestioned value added leader. Same for **Cadillac**. But those companies failed to maintain that capability and many customers ceased to buy from them.

THE DARK REPORT is excited to bring you two examples of “value added” in this issue. For pathologists, **IMPATH Inc.** (pages 2-7) demonstrates how to give anatomic pathology services a “value added” twist in the clinical marketplace. It’s growth rate has been phenomenal and its market share is increasing steadily. Many pathologists can duplicate the product positioning of IMPATH’s anatomic pathology services by applying similar techniques to their particular specialty.

Within the clinical laboratory world, the story of **Northwestern Memorial Hospital** in Chicago should be a wake-up call. Microbiologist Lance Peterson, M.D. arrived at Northwestern in 1992 with a vision. He recognized the potential of the laboratory to contribute to a substantial reduction in the number of hospital infections. He created the “value added” capability of speedy in-house DNA typing, then helped infection control staff at the hospital use this tool with impressive effectiveness.

The message from both stories should be clear: in a time of increasing costs and declining reimbursement, laboratories and pathologists can offer “added value” services which help clinicians, help patients, and result in more revenues to the laboratory.

TDR

IMPATh Creates Its Brand Of Value-Added Pathology

Fast-growing firm offers a comprehensive package of anatomic pathology services

CEO SUMMARY: IMPATH Inc. is a pathology company with an interesting twist. It doesn't compete directly with community hospital-based pathologists like some national AP providers. Instead, it offers AP services which supplement the capabilities of the local pathologist. The formula must work. During IMPATH's short life, it has grown rapidly. Revenues are up, profits are up, and the future looks bright.

IT'S NOT OFTEN THAT SOMEONE IN THE pathology business hits a financial home run. But the executives at IMPATH Inc. in New York City seem to have done precisely that.

Such success is no accident. IMPATH accurately spotted a market opportunity within the pathology profession several years ago. It organized itself to pursue that market opportunity and has never looked back.

A \$10.1 million dollar company in 1994, IMPATH will post annual revenues approaching \$55 million for 1998. Its profits and earnings are up, as are the number of cases referred. More importantly, many financial analysts expect IMPATH to continue its growth, becoming a dominant force in both anatomic pathology and oncology disease management.

There is good reason for these predictions. Approximately 1.4 million new cases of cancer are diagnosed annually in the United States. In 1998, over 100,000 cancer cases were referred to IMPATH for follow-on diagnosis and prognostic assessment by the pathologist who made the primary diagnosis. It has received case referrals from more than 1,670 hospitals nationwide.

This means that IMPATH is already involved in 7% of all new cancer cases diagnosed annually in this country! And 34% of the nation's 5,000 hospitals have sent cases to IMPATH. These are impressive market share numbers, particularly for such a young company.

Continued growth at IMPATH will only increase its existing market share. For pathologists interested in the future of their profession, IMPATH

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provides an excellent case study of how market opportunity, good business management, and anatomic pathology services can be combined to create a successful enterprise.

The company's business proposition is simple. "IMPATH is a company organized around 'difficult-to-diagnose' cancer," stated Anu Saad, Ph.D., President and CEO at IMPATH. "We provide a full range of advanced, sophisticated anatomic pathology services to community hospital-based pathologists throughout the United States."

Difficult-To-Diagnose Cancer

Besides difficult-to-diagnose cancer cases, IMPATH handles a significant number of cases involving breast cancer, lymphoma, and leukemia. It is fielding a growing volume of prostate cases.

"IMPATH is among the world leaders right now in providing patient-specific prognostic information," Dr. Saad noted. "Further, we are developing our resources in lymphoma and leukemia analysis so they integrate with disease management activities involving these patients."

IMPATH recognized that community hospital-based pathologists had many patients where, once the primary diagnosis of cancer was made, there was the need for additional testing. Traditionally, local pathologists would refer these cases to pathology subspecialists at academic or tertiary care centers.

Opportunity To Add Value

"We saw the opportunity to add value in these case referrals in two ways," explained Dr. Saad. "For example, when a lymphoma case is referred to a major academic center, it may have four procedures (immunohistochemistry, flow cytometry, molecular analysis, and cytogenetic analysis) done in three different departments.

"The local pathologist would have to refer three specimens to three different departments," she continued. "After two or three weeks he would

have to track the results down. He might also find that the results may or may not correlate with each other.

"When such a case is referred to IMPATH, the pathologists send specimens to one location and gets his results back generally within 48 hours. The reports are integrated and if the local pathologist has questions, a single contact here can get the answers for him."

For the local pathologist, IMPATH's speed, responsiveness, and integrated clinical services mean a savings in time, less aggravation, and a faster answer to the referring physician and his patient.

The second way of adding value is IMPATH's clinical capabilities. "Over the last ten years we've added technologies such as molecular pathology, cytogenetics, flow cytometry and more," stated Dr. Saad. "This means we provide a wide range of appropriate and cutting-edge technologies for cancer diagnosis.

Large Cancer Caseload

"Combine these in-house capabilities with the fact that our pathologists and clinical specialists diagnose large volumes of cancer cases," she continued, "and we provide pathologists based in community hospitals with a very sophisticated level of clinical expertise."

Dr. Saad offered another benefit. "Among those who refer cases to us are a number of pathologists who realize their value to the clinician increases as they, in the role of anatomic pathologist, provide the clinician with more than a simple diagnosis that the patient has cancer."

Dr. Saad explained, "these local pathologists appreciate the fact that IMPATH can provide them, in their community hospital setting, with rapid answers on more than diagnostics. For certain types of cancers, IMPATH can provide the referring pathologist with prognostic and treatment-defining information about the patient.

"This means that the local pathologist remains involved longer with the

IMPATH Builds Pathology-Based Company

At-A-Glance

Founded: 1988

Main Labs: New York, Los Angeles

Sales/Marketing Force: 50

Employees: Approx. 500

Pathologists: 13+

Annual Cases: over 100,000

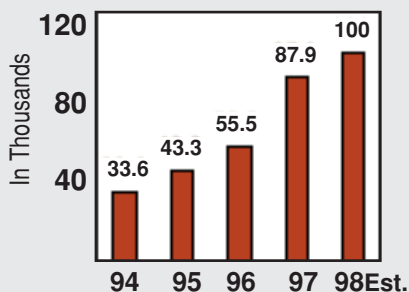
Database: over 400,000 cases

Average Revenue/Case: \$440

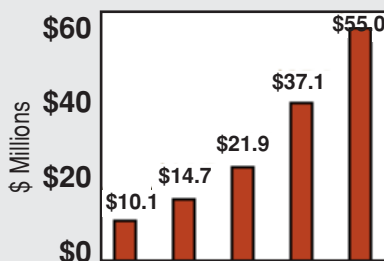
referring hospitals: 1,670

physicians served: 4,000

Annual Cases Are Climbing...



...Leading To Higher Revenues



Primary Customers

Pathology departments of small-to-medium-sized community hospitals (100 to 500 beds). There are approximately 2,250 hospitals which meet this criteria in the U.S.

IMPATH's Strategy

- Increase market share of diagnostic and prognostic services
- Pursue strategic acquisitions/alliances
- Expand and enhance data base
- Become information resource to drug companies
- Expand internationally

Service Capabilities

- Immunohistochemistry
- Flow cytometry and image analysis
- Molecular pathology
- Cytogenetics
- Serum analysis

clinician, in ways that the clinician finds invaluable," she added. "That, in turn, makes it a win-win situation, where IMPATH adds value to the local pathologist, who in turn can add value to the clinician and his patient."

Another key element in IMPATH's business success, as well as a source for future revenue growth, is its emphasis on data collection. "Currently we have more than 400,000 cancer cases in our data base," said Dr. Saad. "Not only is this the largest cancer data base in the world today, but it is growing at the rate of 100,000 cases per year. More importantly, IMPATH's cancer data base is not simply demographic data based on

age, geography, and similar information. It contains biological profiles on over 400,000 patients."

Dr. Saad is describing an invaluable asset. THE DARK REPORT is convinced that laboratory data will become the "gold ore" for integrated healthcare. Clinical laboratories which move ahead on mining, refining, and marketing this "gold ore" will have a product worth millions of dollars to managed care plans, integrated healthcare systems, and clinicians. IMPATH recognized this opportunity early in the 1990s. It has steadily upgraded its ability to capture cancer data and convert it to useful information.

"Our goal with acquisitions during 1998 was to begin linking our patient data with treatment decisions made on these patients and the outcomes of their case," said Dr. Saad.

"This is important because our clients [pathologists and oncologists] are under increasing pressure to demonstrate the value of what they do," continued Dr. Saad. "Patients, payers, and employers all want clear evidence that the cost of chemotherapy and other treatment protocols are not only medically optimal, but cost-effective.

"Another use for our data base, when combined with outcome data, is in pharmaceutical research," she added. "These companies have a huge appetite for any clinical data which is useful to their research into new oncology drugs."

IMPATH Inc. should be seen as a relevant model for how anatomic pathologists can create added value in the marketplace. Since 1994, the company's rapid growth in case volume demonstrates that an untapped demand for useful anatomic pathology services exists.

The facts speak for themselves. At a time when the **American Cancer Society** says 1.4 million new cases of cancer are diagnosed per year in the United States, IMPATH is involved in more than 100,000 of those cases. That is market clout, in an environment where pathology is fragmented into small provider units.

Key Success Drivers

THE DARK REPORT recommends that pathologists understand the key drivers behind IMPATH's success, because individual pathology practices can adopt these same drivers to their practice.

First, develop a win-win value proposition for clinicians. IMPATH's 48-turnaround time, for example, allows their client pathologists to deliver an answer to clinicians and patients without waiting weeks to get results from cases sent out to academic centers.

Second, understand the value of laboratory data and convert it to useful information for the clinician. This should include a cost-benefit analysis so the clinician can better defend his treatment decisions to payers and patients.

Most importantly, pathologists should appreciate the value of sales and marketing in building their practice revenues. It's impossible for your prospects to use your pathology services if they don't know you exist or don't understand why your services are better than those of competitors. Sales and marketing is a critical success factor for pathology practices.

TDR

(For further information, contact IMPATH INC at 800-447-5816.)

Improving Accuracy At Primary Diagnosis

As new developments in clinical procedures make it possible to diagnose cancer earlier than ever before, misdiagnosis becomes an issue.

Cases referred to IMPATH demonstrate that a significant number of misdiagnoses still occur in certain types of cancer. During 1997, for example, 9,589 suspected lymphoma cancers were referred to IMPATH. More than 12% were determined to be infection or inflammation, rather than cancer.

Providing the referring pathologist with this information spared the patient a possible misdiagnosis of cancer, with the accompanying trauma, risk, and cost associated with unnecessary treatment. Not only is such diagnostic accuracy appreciated by the local pathologist, but clinicians soon notice the difference in a pathologist's misdiagnoses rate. Clinicians consider it added value when a pathologist can document demonstrably superior diagnoses rates, combined with a lower misdiagnosis rate, than those of competing pathologists.

IMPATh Points Pathology Toward a Winning Future

Pathology is soon to enter a new golden era built upon increased demand for AP services

CEO SUMMARY: *Pathology is about to undergo a market transformation similar to radiology. As clinicians insist on more precise diagnostic and prognostic information about their patients, pathologists will have a perfect opportunity to reposition themselves as essential partners with the referring physician. IMPATH points the way, but there is room for many other pathologists to follow.*

ONE BRIGHT SPOT IN THE PROFESSION of pathology is **IMPATh Inc.** At a time when most pathology practices are under financial siege, this company is posting record increases in both cases and revenues.

In one sense, studying IMPATH's business strategies and market successes is like looking into the future through a crystal ball. Pathologists can get a peek at the way anatomic pathology services will evolve to serve the needs of tomorrow's integrated clinical environment.

The profession of pathology is about to embark on a golden age. The transformation of anatomic pathology can be compared to that of radiology. With the arrival of MRIs, CATs, PETs, and related alphabet soup technologies, clinicians increased their reliance on radiologists to aid in each step of a patient's disease: diagnosis, prognosis, therapy, and treatment follow-up.

IMPATh is an early pioneer at integrating the various clinical advances in cancer detection, and making them available to community hospital-based pathologists as a "one-stop" shop. In

this regard, its business strategy is a winner, because it is positioned to be an ally of a local pathology practice, not a competitor for specimens.

But there is a more subtle business strategy at work, which pathologists should better appreciate. As new clinical discoveries unlock the secrets of different types of cancer, several consequences result which benefit pathologists. IMPATh is anticipating these discoveries and establishing a clinical organization which can recognize them and bring them to market as early as possible.

Proven Business Formula

Most laboratorians know this proven business formula. In the 1970s and 1980s, Albert Nichols, M.D. positioned **Nichols Institute** as the market channel which took newly-discovered assays from the research laboratory and became the first to introduce them into clinical usage. IMPATh is similarly positioning itself to be a market channel between research laboratories and clinicians.

Several trends make this feasible. First, detection of the cancer can occur earlier and earlier in the disease cycle.

This opens up new opportunities for successful intervention.

Second, as different forms of a cancer are identified and better understood, it becomes important that pathologists and clinicians incorporate this knowledge into their diagnoses.

IMPATH's President, Anu Saad, Ph.D., talks about the impact of this clinical trend. "Take lung cancer, for example. Right now, early diagnosis of lung cancer is more difficult to accomplish than for breast cancer. As early diagnostic tests for lung cancer are developed, the opportunity for the pathologist to add value increases proportionately."

"What pathologists have done for hundreds of years is look in a microscope and do pattern recognition. Soon objective technologies and an algorithmic process will supplant reliance on the microscope."

Anu Saad, PH.D.
President, IMPATH Inc.

Three, advances in the understanding of breast cancer and prostate cancer demonstrate that:

- 1) technology which permits early detection increases the volume of specimens referred to pathologists;
- 2) technology which allows the pathologist to differentiate the disease means that clinicians can tailor treatment of the patient in the most appropriate ways; and
- 3) it becomes vital for the pathologist to then be involved in diagnosis, prognosis, and follow-up as part of the clinician's team.

From THE DARK REPORT's perspective, these are established dynamics in the clinical marketplace. Match these clinical dynamics with demographic trends of an aging population and an increase in the prevalence of cancer, and

it becomes reasonable to conclude that pathology is about to enter its golden age.

As these events unfold and anatomic pathologists find themselves more intensely involved with clinicians than before, another benefit will accrue. Pathologists will find reimbursement for these emerging services to be generous.

Early Detection of Cancer

The reason is simple. Early detection of a cancer, combined with a speedy and accurate determination of its specific type, will save thousands of dollars in misapplied treatment, not to mention improving the patient's personal comfort during the course of the disease. Informed consumers will insist that their health plans (and their employers) pay pathologists for these value-added services.

In making these predictions, THE DARK REPORT notes that market parallels exist in other segments of health-care. Radiology has already been mentioned. Minimally-invasive surgical methods, based upon lapriscopes and similar instruments, have created new clinical opportunities for surgeons.

Anatomic pathology will undergo its own transformation, using new technology. IMPATH demonstrates how new technology is increasing the demand for non-traditional anatomic pathology services. Automated cytology companies are making similar demonstrations.

In contrast to the doom and gloom about declining reimbursement, anticipating these technology and market developments make it clear that a golden age for anatomic pathology is soon to appear.

TDR

(For further information, contact IMPATH Inc. at 800-447-5816.)

UPCOMING...

PART TWO: A look at how IMPATH sees technology transforming the profession of anatomic pathology.

The Dark Index

Beckman Coulter Gets New CEO, Stock Gets Analyst Downgrade

AFTER SPENDING MOST OF 1998 digesting its 1997 acquisition of **Coulter Corporation**, **Beckman Coulter, Inc.** is ready for new business initiatives in the diagnostics marketplace.

Beckman Coulter enters 1999 with a new leader. John P. Wareham, currently President and CEO, will assume the additional duties of Chairman. Louis T. Rosso, Beckman's long-time chief executive, stepped down as President and CEO last September. He is retiring from Beckman's board, effective February 4.

Beckman Coulter has a motive to perform well in the coming year. Although no major operational or financial surprises resulted from its acquisition of Coulter, Beckman has not met the expectations of shareholders and financial analysts. On the same day that Beckman reported fourth quarter and full year earnings, **Bear Stearns** analyst Ethan T. Lovell downgraded the company's rating from "attractive" to "buy."

Fifth Largest Company

As the fifth largest diagnostics company in the world, Beckman Coulter's financial performance is closely watched. For the fourth quarter, Beckman reported revenues of \$483 million, up 14% from same quarter in 1997.

Revenues for 1998 were \$1.7 billion, a 43% increase. Its acquisition of Coulter Corporation (*See TDR, October 6, 1997*) occurred on October 31, 1997, so 1998 revenues are the result of the consolidation. Pre-tax earnings were unimpressive, at \$24.6 million and \$46.6 million for fourth quarter and full year, respectively.

Since the Coulter acquisition, about 1,400 positions have been eliminated. Sales and marketing teams from both companies were consolidated and an integrated information systems capability is now in place. Manufacturing facilities in England were closed, and plants in San Diego and Puerto Rico will be closed in 1999, in keeping with earlier announcements.

Watching The Changes

Hospital laboratory administrators are warily watching developments within the Beckman Coulter organization. Laboratorians tend to be skeptical of change. As the sales force and service departments were consolidated, some hospital labs lost their long-time favorite Beckman or Coulter representative and now deal with a new face.

Diagnostics represents about 80% of the company's annual sales and Beckman has several new instruments that it is introducing in the marketplace. The remaining 20% of the company's business is in bioresearch. In particular, a fast-growing segment is biopharmaceutical sales. This is perceived to be a more profitable and stable market than diagnostics.

It is still too early to determine how the newly-consolidated diagnostics giant will market itself to the clinical laboratory industry. But with new leadership at the helm, and shareholders pressing for better financial performance, it can be expected that Beckman Coulter will try something different to make a big splash in the marketplace.

Outcomes Data Used by Clinicians

Lab Leads Hospital In Successful Effort To Reduce Infections

CEO SUMMARY: *Most laboratorians struggle to get clinicians to pay close attention to the potential for lab data to improve healthcare outcomes. At Northwestern Memorial Hospital, the laboratory acquired in-house molecular typing test capability as one cornerstone for an aggressive infection control program. Physicians, nurses, med techs, pharmacists and even maintenance staff now regularly participate in the infection control effort. Northwestern's modest investment in expanding its lab's capability now generates \$2.5 million in annual savings—a yearly 10-1 payoff from its investment!*

HERE'S AN UNUSUAL STORY about laboratory data and outcomes improvement. It is unusual for several reasons, most of them familiar to hospital-based laboratory executives.

During the last three years, the provider team at Chicago's **Northwestern Memorial Hospital** mounted an effective effort to stomp out nosocomial infections. By itself, this is not uncommon. All hospitals pay attention to nosocomial infections and launch campaigns to reduce or eliminate them.

But it is how Northwestern went about attacking nosocomial infections that makes this a particularly outstanding story. It is a story that demonstrates

how clinical laboratory data can drive significant improvement in healthcare outcomes, while at the same time reducing costs by a substantial amount.

It's a story with several heroes, or more properly, champions. After all, teamwork was the secret behind this success. But one unusual twist to the story is that the catalyst of all this change was a laboratorian.

It was this laboratorian who designed the "attack plan" on hospital infection rates and sold it to administration. He obtained funding to build the necessary laboratory infrastructure and generated enthusiasm among his hospital colleagues. In that respect, he lit the

match. It was the hospital team which maintained the fire.

Another aspect of this story which makes it unusual is the the laboratory became an integral and accepted part of the infection SWAT team. Clinicians and professional staff welcome its contributions, and rely upon clinical laboratory data as an essential tool for changing clinical practices to the benefit of Northwestern's patients.

As most laboratorians know, it is difficult to get doctors to look at laboratory data with the suggestion that such data provides relevant insight into ways they might improve their practice of medicine. Directly or indirectly, physi-

cians don't like to feel as if their clinical practices are under criticism. The harmony between doctors and laboratorians on the Northwestern infection control effort proves that both groups can benefit from each other's talents and clinical contributions.

Given these unusual circumstances, it makes the Northwestern story all the more interesting. The protagonist is a microbiologist. Meet Lance Peterson, M.D., Director of Microbiology at **Northwestern Memorial Hospital's** pathology department. He is also Professor of Medicine and Pathology at **Northwestern University** (separate but affiliated organizations).

It was Dr. Peterson's brainstorm to attack nosocomial infections using a different approach. When he arrived at Northwestern in 1992, conditions were ripe for ideas he had developed over the years.

"Prior to coming to Northwestern, I was at the VA hospital in Minneapolis," said Dr. Peterson. "A colleague, Dr. Dale Gerding, and I were doing academic work in infectious diseases and how to control them.

Infectious Disease Organisms

"We both appreciated a basic fact about infectious disease," he continued. "If you know that the organisms are the same, then the likely mode of transmission is from person to person. If you know that the organisms are different, then some other factor is causing the increased rate of infection.

"Our frustration was that existing laboratory technology made it time-consuming and expensive to identify the organisms," added Dr. Peterson. "It became obvious that, if a laboratory could identify organisms in a timely manner, then infection control efforts could become significantly more productive. But existing laboratory technology could not support these goals."

By the time Dr. Peterson arrived at Northwestern in 1992, things had changed. "New molecular technology for genetic typing was emerging. Most importantly, Northwestern had a long history of monitoring outcomes, infection rates, costs, and a variety of other useful

information. This type of information was unavailable at my prior hospital.”

Northwestern’s extensive data base was essential to proving the benefits of an enhanced infection control program. Dr. Peterson explains, “With good information covering prior years, it permits us to demonstrate the effectiveness of the program. The cost analysis demonstrates that money invested in infection control was repaid in multiples by reduced infection rates.”

Dr. Peterson is referring to the fact that historical infection control data and costs were used to convince hospital administrators to invest in laboratory infrastructure. As the laboratory came onstream, it was used to show the cost-effectiveness of the laboratory.

“That’s right,” confirmed Dr. Peterson. “It took about eight to 12 months to write the business plan and get administration to approve it. Gary Noskin, M.D. is an infectious disease practitioner and Medical Director of the hospital’s infection control and prevention department. He was committed to this project from the start and helped with this process. We proposed expanding some lab space, acquiring the necessary instruments, and adding two employees.”

Administrations’ Support

Northwestern’s administration supported the initiative. “We proposed this as a two-year financial trial,” he said. “‘Here’s the cost, here’s the projected outcomes, and if we don’t improve things, then we’ll quit.’ The administration encouraged us to proceed.”

According to Dr. Peterson, the two-year proposal required about \$250,000 per year. “Of this money, about \$60,000 was spent on remodeling. Another \$80,000 went towards equipment. The balance represents consumables, additional salaries, and the like.”

By the end of two years, the microbiology project was returning \$2.5 mil-

lion *per year* in identifiable savings! But more on that later.

The essence of Dr. Peterson’s game plan for enhancing infection control was rapid typing, done by the lab on-site. If organisms could be identified rapidly, then the source of infections could be tracked and stopped.

“Speed is the key,” commented Dr. Peterson. “By definition, you can’t identify organisms rapidly enough if the hospital is sending specimens to outside labs for testing. Having in-house capability is what makes our program successful.”

Monday Morning Meetings

As the new laboratory came on-line, the infection control SWAT team began to take shape. “Obviously everyone on staff needs to help with the effort. We have meetings every Monday morning,” said Dr. Peterson. “These working sessions only last about 30 to 45 minutes. In attendance are physicians, infectious disease practitioners, infection control practitioners, pharmacists, laboratorians, and anyone else with useful ideas to contribute.

“It was in the fall of 1994 that the laboratory began molecular typing and these Monday meetings were launched,” he noted. “To show the team nature of our project, within months the pharmacy joined us. As successes mounted, people become more excited about contributing to the project.”

Now entering its fifth year of operation, Northwestern’s new infection control program has evolved into a broad-based effort and it is laboratory data which drives much of the team’s response.

“Typing in the laboratory tells us one of two things,” said Dr. Peterson. “Either the organisms are related or they are not. If related, then we look for ways that it could spread, maybe by conducting a surveillance investigation.”

“If they are not related, then we look for something else,” he continued.

In-House DNA Typing Unlocks Major Benefits, Reduces Infection Rates

NORTHWESTERN'S INFECTION CONTROL SCORECARD

- Infection Rate*:**
- 1995: 6.3** • 750 patients prevented from acquiring infections;
 - 1996: 5.7** • Resulting in savings of 3,000 hospital days;
 - 1997: 5.9** • Cumulative reduction of \$7.5 million in costs.
 - 1998: 5.3** • Two year cost of DNA-Typing lab: \$500,000
 - Results: cumulative 15-1 return on invested capital.

* Per 1,000 patient bed days. National average is 9.8 in 1995 (source: NY Times, 1998)

Northwestern's infection rate was already significantly below the national average when the enhanced infection control program was launched. Cumulative savings of \$7.5 million on a \$500,000 investment demonstrate that the laboratory can, and should, play a more active role in improving clinical practices. Northwestern provides a compelling example of how hospital-based laboratories should organize themselves to add value to the physicians, patients and hospitals they serve.

Published papers on Northwestern's infection control effort:

1. DM Hacek, T Suriano, GA Noskin, J Kruszynski, B Reisberg, LR Peterson, "Medical and Economic Benefit of a Comprehensive Infection Control Program That Includes Routine Determination of Microbial Clonality;" *American Journal of Clin Path*, in press 1999.
2. LR Peterson, RA Petzel, CR Clabots, CE Fasching, DN Gerding, "Medical Technologists Using Molecular Epidemiology as Part of the Infection Control Team;" *Diagnostic Microbiology and Infectious Diseases*. 16:303-311, 1993.

"Was there new antibiotic use? Did nursing practices change? For example, there was an outbreak of *Candida krusei* on one of the oncology floors. The literature says this would be the result of too much use of fluconazole.

"However, we typed the strains. They were all the same. If the fluconazole was stopped on all the patients, these bacteremias would still be present. It was being passed between a few patients. Our solution was to enhance gowns and gloves worn by the staff on the ward. The infections disappeared within a month and we were not required to change the prophylaxis.

"This demonstrates what a powerful tool laboratory data can be," he continued. "It reinforces intuitive thinking and doesn't replace the infection con-

trol practitioners, but makes them more effective. It also gives them additional time to intervene, which further enhances the end result."

Technology used in the special microbiology laboratory is not complex. "We do some PCR, but most of our tests are run using gel electrophoresis," said Dr. Peterson. "We will take the whole bacterial genome, cut it up into smaller pieces and run it a simple one-dimensional gel electrophoresis process. We end up with 30 to 50 bands.

"The interesting thing is that med techs who do this full time get very good at identifying the organism by its basic footprint," he continued. "Our cost per test is very modest, particularly with the pay-off in reduced rates of nosocomial infection."

Success at Northwestern's team is undisputed. Since Northwestern had good data prior to this project's start, administration was able to measure improvements in outcomes and the direct cost of the project. The numbers are impressive.

"The baseline nosocomial rate at Northwestern was already half of the national average when we launched this project in 1994-95," noted Dr. Peterson. "So we started from a tightly-managed position. Nonetheless, during 1998, the hospital infection rate remains now at 5.3 per 1,000 patient days. This is about a 23% reduction from our starting rate.

"This also occurred at a time when our patient population was becoming increasingly sick," he added. "We calculate that some 750 patients were prevented from acquiring infections in the first three years of the enhanced infection control program. This represents 3,000 patient days and cumulative savings of \$7.5 million!"

This is a remarkable testimony to the power of laboratory data to improve healthcare outcomes and save significant sums of money. For Northwestern's administration, adding in-house DNA-typing capability to the microbiology laboratory has been a big winner.

"Our experience might be called revolutionary in one sense," said Dr. Peterson. "This type of infection control effort, keyed around in-house molecular typing capability, can and should be done by local hospitals.

"This cannot be done by referring tests out to a reference center," he continued. "Such testing must occur immediately, while the patient is still in the hospital. This is a change in the thinking of most laboratorians from five years ago.

"But during that time, the industry has caught on. There is an increasing number of instruments and kits reaching the market that allow smaller hospital laboratories to do this kind of typing. The result is that both the capability and the economics of bringing this testing in-house support such a decision."

Pharmacy, Maintenance Join In Infection Control

Momentum built as the infection control team demonstrated its effectiveness. Hospital ID pharmacist Mike Postelnick began active involvement in 1995.

His contribution was to recognize that antibiotics can sometimes actually nurture the growth of many bacteria. Postelnick's input has caused physicians to reduce antibiotic use in favor of alternate treatments.

When studies by the infection control team indicated that a sink shortage was inhibiting hand-washing, maintenance officials were enlisted in a project to increase the number of sinks throughout the facility. In fact, the infection control team joined in the design phase of a new \$580 million building. Staff-only sinks were installed next to the entries to 500 private rooms. Staff will have to walk by a sink to get to the patient.

THE DARK REPORT recommends that laboratory executives and pathologists look at Dr. Peterson's microbiology effort as an unbeatable way for the laboratory to add value inside the hospital.

At a time of widespread budget cutbacks and pressure to cut costs, here is a blueprint that laboratorians can use to extend its influence and relevance to hospital care and operations.

TDH
(For further information, contact Lance Peterson, M.D. at 312-908-8192.)

SEE LANCE PETERSON, M.D. AT EXECUTIVE WAR COLLEGE

On May 11-12, 1999, he will discuss the lab's role in this project. Call 800-560-6363 for information or to register.

Top-Performing Labs at Executive War College

Nation's most innovative clinical laboratories will share management secrets and strategies

CEO SUMMARY: *Once again, Executive War College time approaches. Scheduled for May 11-12, 1999 at the New Orleans Sheraton, this year's roster of innovative laboratories promises to provide valuable insight about winning strategies. An expanded program offers a lab industry first: a knowledge track exclusively focused on the sales and marketing of laboratory and pathology services.*

THIS YEAR'S *EXECUTIVE WAR COLLEGE* is a must-attend event for all laboratory executives and pathologists seeking inside information about the state of the laboratory industry.

Case study presentations from the leading laboratory organizations in the United States and Canada will reveal how successful laboratories are coping with declining reimbursement and spiraling costs.

The fourth annual *Executive War College* will convene on May 11 and 12 at the New Orleans **Sheraton Hotel**. It is expected that more than 300 senior laboratory administrators, pathologists, and industry executives will be on hand.

"Participants at this year's War College will hear some fascinating case studies," said Robert Michel, Editor of *THE DARK REPORT*. "We travel thousands of miles and spend a lot of time and money searching out the real innovators in the laboratory and pathology community. The effort pays off, because each case study presentation reveals a wealth of information about

how laboratories are positioning themselves to be winners in today's troubled healthcare system."

Laboratories already confirmed for this year's event demonstrate that point. **Bay State Reference Laboratories** of Springfield, Massachusetts will document its successes in making modular automation pay off inside a consolidated laboratory organization of a three-hospital healthcare system.

Modular Lab Automation

Douglas Jaciow, Bay State's Director of Pathology Services, will discuss the management methods Bay State used to effectively implement modular laboratory automation. One strategy was to expand outreach testing, through a successful, tightly managed sales program, to feed increasing volumes of specimens into Bay State's lab system.

"As part of a three-hospital lab system, we maintain two sales reps in the field," stated Jaciow. "Our outreach program is a leading laboratory provider in Western Massachusetts. Outreach is integral to making our automation pay off."

Joining Jaciow at the *War College* podium will be JoAnne Schroeder, Dir-

ector of **LabNet of Middle Tennessee**. This regional laboratory network consists of 11 hospital laboratories. It is developing an information system link which will connect physician offices, member laboratories, and its reference laboratory partner.

Laboratory regionalization is still an appropriate response to healthcare trends. LabNet of Middle Tennessee is organized to give its member laboratories

the capability of serving managed care plans as a contract provider.

Managed care contracting will receive special emphasis at the *Executive War College*. John Monaghan, Director of Network Development at **HMO Blue of New Jersey**, will give a no-holds barred, candid overview of what an HMO really needs from its laboratory provider panel.

"HMO Blue is a major player in New Jersey, with almost 700,000 members," stated Michel. "I've heard John speak. He has a great ability to make laboratories understand the inner workings of HMOs. His list of 'laboratory must-dos' will be a real eye-opener for those who've puzzled about why their RFPs never get serious consideration."

Two new features will add value to this year's *Executive War College*. First, a special learning track for laboratory sales and marketing creates the opportunity to learn from the country's leading sales producers. (See sidebar at left.)

New "CEO-Only" Program

Second, at the request of laboratory CEOs and senior lab administrators at last year's War College, a special CEO Day event is scheduled. This is by invitation only. Senior executives from several leading industry suppliers will provide lab CEOs with strategic overviews of emerging trends and technologies that promise to transform laboratory operations.

"This year's *Executive War College* faculty is one of the best we've ever presented," observed Michel. "We have some surprises for the program that will be announced in coming months. Our goal is to identify leading laboratory organizations, and let them share their story with War College participants."

"This formula seems to work," he added. "Each year, the cross-section of case studies reveals important industry trends that no one had yet spotted. In that regard, it is a 'must-attend' event."

TDR

(For further information, contact

Sales/Marketing Added to Agenda

One critical success factor for laboratories and pathology practices is effective sales and marketing. Yet as important as this subject is, there has never been a national gathering of the best sales managers and marketing directors in the lab industry.

This year's Executive War College is offering a special sales and marketing learning track. Designed with input from some of the leading sales producers in the lab industry today, it will provide an unprecedented opportunity for sales and marketing managers to learn from top producers.

Topics will include "developing a high performance outreach sales force;" "marketing pathology services in a value-added manner;" "gaining provider status on managed care contracts;" "marketing strategies that work;" and "sales tactics for regional laboratory networks."

In addition to the special War College sales and marketing track, an optional third day sales program is scheduled for Thursday, May 13. It will be the first national gathering of sales and marketing managers ever to take place in the United States. For information or to register, call Mark Bowman at 503-699-

HMO Membership Shows First-Ever Decline in 1998

THE DARK REPORT believes this is early sign of consumer rebellion against managed care

CEO SUMMARY: *One of the most closely-tracked surveys of health cost trends was released last week. William H. Mercer Inc.'s report revealed two significant facts. One, enrollment growth in HMO/POS plans actually declined for the first time. Two, costs rose at the fastest rate in five years. Each fact may be early warning to laboratory executives of fundamental shifts occurring in the managed care marketplace.*

When the 1998 national survey of employer-sponsored health plans was released last week by **William H. Mercer Inc.**, it contained surprising news.

HMO/POS enrollment as a percent of all employees covered dropped from 50% in 1997 to 47% in 1998. This is the first-ever decline reported for the most restrictive type of health plans.

Further, during 1998, employers saw the largest jump in health benefit costs since 1994. The increase was 6.1%. This was also twice the increase in the Consumer Price Index (CPI), which was 3.4% in 1998.

Rising Insurance Premiums

THE DARK REPORT had earlier documented the trend in rising health insurance premiums. (See *TDR*, November 30, 1998.) HMO's socked employers with healthy premium increases for 1999 as a way to recoup from their huge losses during the last 24 months.

For laboratory executives and pathologists, news of a first-ever drop in HMO/PSO enrollment percentages signals a potentially important switch in the evolution of healthcare. Experts

attribute some of the decline to the fact that huge numbers of people had shifted from indemnity and PPO programs to HMOs in recent years because of their lower premiums. By 1998, this massive migration wave was over.

BUT THE DARK REPORT agrees with a number of analysts who believe that enrollees in HMOs are disappointed with their experience. The HMO enrollment decline was actually a result of individual consumers opting to return to a plan with more choice.

One fact supporting this view is that enrollment gains for PPOs have been significant. Enrollment rose from 35% to 40% just in the last year. And over the past four years, enrollment in PPOs is up 60%! THE DARK REPORT interprets this as an expression of consumer choice.

Consumer choice will be the driving force in shaping the parameters of healthcare. And it seems that consumers are unhappy with the service delivered by HMOs. When denied access to the quality and choice of healthcare they deem appropriate, consumers will simply vote with their feet and move to plans offering choice.

Remember another HMO-consumer trend we reported on earlier this year? One reason for 1997 HMO losses was that a significant number of consumers had, in the fall of 1996, elected to pay extra and chose an HMO with an out-of-plan option. Several large HMOs lost money in 1997 as these consumers generated extra medical expenses because they spurned their HMO physicians and exercised their out-of-plan privileges.

These two consumer trends, the increased enrollment in PPOs and HMO out-of-plan options, prove that consumers are already demonstrating their intolerance for health insurance plans that limit care and deny choice.

Should these two consumer-driven trends gather momentum, it will be a positive development for clinical laboratories. As consumers insist on choice, their health plans will place less limitations on the clinical laboratories to which physicians refer specimens.

Effectively, the trend toward increased consumer choice will be a market counterforce to the limited lab provider panels now enforced by major HMOs. But this trend will not play out overnight. It will take several years to work itself through the marketplace.

National Survey

The employer health cost survey performed by Mercer tallied a nationally-representative sample of 4,200 employers with ten or more employees. It is performed annually and closely-tracked by employee benefits managers and the healthcare industry.

Author of this year's survey, Blaine Bos, a principal at Mercer, said "it's too early to tell whether the decline in HMO/POS enrollment is a short-term phenomenon or—more ominously—a sign that these managed care plans may not become the centerpiece of the nation's healthcare delivery system after all."

Bos referenced the "selling benefit" touted by HMOs, their promise that "if you agree we can limit your access, we

will give you higher quality care for less cost." Bos' conclusion? "That promise is in question."

THE DARK REPORT concurs. Another fact backing our view that consumer choice will prevail is the litigation situation. The survey discovered that nearly half of large employers (500 or more employees) declared their concern about the threat of participant litigation.

These employers are proactively preparing for litigation. Some 17% purchased additional liability insurance and another 17% included protection clauses in their contracts with healthcare vendors.

Who do these employers think will file a lawsuit against them? It may be their own employees, in response to HMO denials for care the employee considers appropriate and necessary.

Employee Lawsuits

This is more than speculation. It is a little publicized fact that, while only 3% of all large employers report having been named in a legal action involving health care, more than 19% of employers with 20,000 employees or more have already been named in at least one such lawsuit.

THE DARK REPORT believes this is another sign of market forces moving against large HMOs. After all, why would an employer offer its employees a restrictive healthcare provider option, only to find its employees upset about the quality of healthcare, denial of access, and restriction on choice?

Employers operate in the free market as well. They will react with any of several strategies. One strategy is to force their HMO vendors to loosen restrictions on choice. Another strategy is to drop HMO/POS plans entirely.

Overall, the facts uncovered by Mercer's annual survey indicate that consumers have yet to exert their collective influence in reshaping our nation's healthcare system. **TDR**

(For further information, contact Robert Michel at 503-699-0616.)

INTELLIGENCE

LATE & LATENT
Items too late to print,
too early to report



Are the financial fortunes of the national laboratories about to take a turn for the better? Financial analysts at **FMR Corp.** must think so. Last month the company disclosed that it had purchased 3 million common shares in **Quest Diagnostics Incorporated**, giving it a 10.3% ownership stake in the laboratory firm. FMR is the parent company of **Fidelity Management & Research Co.**, the mutual fund giant. At \$18 per share, FMR's investment in Quest would be around \$54 million dollars.

Whistleblowers may have tapped out the clinical laboratory piggy bank. If so, that will be a relief to laboratory executives everywhere. The Inspector General of the U.S. **Department of Health and Human Services** reported a significant drop in settlements involving Medicare Fraud and Abuse for 1998. Payments to the feds totalled only \$516 million for the year, compared to \$1.2 billion in 1997. Criminal fraud convictions were up however, from 215 in 1997 to 261 in 1998.

LAB ONE HITS \$100 MILLION MARK

Congratulations are in order for Thomas Grant II, Chairman, President, and CEO and Robert Thompson, CFO at **LabOne, Inc.** of Lenexa, Kansas. Their laboratory reported that 1998 was the first year in its history that revenues topped \$100 million. LabOne has enjoyed blistering growth in recent years. The company's revenues in 1995 were only \$57 million. It shows that, despite managed care, opportunities still exist for laboratories with strong sales programs.



Speaking of the OIG and laboratory investigations, there remains one unresolved piece of "fraud and abuse" business. The OIG supeona, issued to **Nichols Institute** in 1993, has yet to be settled. **Quest Diagnostics Incorporated**, which purchased Nichols in 1994, has a sizeable reserve set aside for any eventual settlement.



Every now and then, tangible evidence surfaces to demonstrate reimbursement differences in California versus other states. Average employee premiums in Los Angeles in 1998 were the lowest in the United States, at \$3,375. New York City was the highest, with premiums at \$4,743 per employee. Since premiums reflect the "cost" of healthcare in that market, providers in Los Angeles seem to be getting some 29% less reimbursement than their counterparts in New York City. Figures are from **William M. Mercer, Incorporated's** 1998 National Survey of Employer-sponsored Health Plans. (See pages 16-17 in this issue.)

Last Christmas morning, the laboratory industry lost a true gentleman. Lemuel J. Bowie, Ph.D. passed away. He had been diagnosed with colon cancer earlier in 1998. Lem was Director of Clinical Laboratories at **Evanston Hospital** in Evanston, Illinois. But he may best known for his term as President of the **American Association of Clinical Chemistry** in 1993.

*That's all the insider intelligence for this report.
Look for the next briefing on Monday, February 22, 1999*



UPCOMING...

- ***Outsourcing Outreach Sales Program Pays Big Dividends For Hospital Lab.***
- ***Year-End Financials At National Labs Confirms New Industry Trends.***
- ***At Death's Door: A California Laboratory Refuses To Expire--Frustrating Competitors.***
- ***Automated Cytology Reimbursement: Payment Reality Follows New CPT Codes.***