Volume XI, Number 14 Monday, October 11, 2004

From the Desk of R. Lewis Dark...

THE DARK REPORT

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

Restricted information, see page 2

Commentary & Opinion by...

R. Lewis Dark

Founder & Publisher

Hospital Labs Produce Moderate Cost Increases

ALL PATHOLOGISTS AND HOSPITAL LAB ADMINISTRATORS who feel beat up about endless budget cuts should take heart. During the period 2000-2002, the cost of laboratory services in hospitals increased by 18%. That is something to brag about—and here's why!

The lab services cost increase was less than diagnostic imaging (up 36%), operating rooms (up 32%), intensive care (up 27%), medical supplies (up 26%), and even drugs (up 22%). The information was produced by **Solucient**, one of the nation's more respected healthcare consulting firms. The database tapped by Solucient included 20 million discharges per year from nearly 2,500 hospitals.

I can make a couple of important observations from this information. First, pathologists and lab directors in the nation's hospitals are doing an excellent job of controlling costs, harvesting efficiencies, and judiciously introducing new diagnostic technologies. The comparative data from other hospital services bear this out.

Second, I find the diagnostic imaging cost increase to be significant. At 36%, it rose at twice the rate of laboratory testing over the same time period. I can speculate that two interesting factors might be at play. For example, could the economic effectiveness of new diagnostic assays be significantly better than the economic effectiveness of new diagnostic imaging procedures? If this is true, comparative advantage will accrue to anatomic pathology and clinical laboratory services.

Or could the dramatic costs of diagnostic imaging in hospitals during the 2000-2002 period be attributed to increased utilization—utilization driven by incentives that encourage radiologists to recommend more procedures because of beneficial reimbursement? Like many of you, I am picking up lots of comments in the healthcare press about concerns that physician groups establishing their own radiology and imaging services are driving utilization rates—and the amount reimbursed for imaging services—through the roof. Both public and private payers are starting to zero in on this problem. That can only end up badly for radiologists.

However, lab medicine seems to be facing a brighter future. Solucient's findings provide solid evidence that pathologists and lab managers are ahead of their peers in controlling costs. That bodes well for the future. TDR

Memphis Path Lab JV Purchased By AEL

Hospital lab-commercial lab joint venture ends with sale to American Esoteric Labs

CEO SUMMARY: Memphis Pathology Labs' two hospital owners and their JV partner, MDS, surprised many with the sale of the lab venture to American Esoteric Laboratories (AEL). It's the end of a successful joint venture between several hospitals and a commercial laboratory company. It also positions AEL to use Memphis as a base to market its reference and esoteric tests to hospitals and physicians' offices.

ANOTHER JOINT VENTURE between hospitals and a commercial laboratory company ended last month when **American Esoteric Laboratories, Inc.** (AEL) purchased **Memphis Pathology Laboratory** (MPL).

In purchasing MPL, American Esoteric Laboratories cashed out the three partners in the laboratory joint venture: **MDS, Inc.**, **Baptist Memorial Health Care**, and **Methodist Healthcare**. The sale was announced on September 24, 2004, the day when AEL took control of the laboratory.

For its ownership share, MDS was paid US$20.4 million. Neither Baptist nor Methodist disclosed the prices paid for their shares in the laboratory joint venture.

The sale of MPL to American Esoteric Laboratories is significant for several reasons. First, it marks another step in the withdrawal of MDS, Inc. from the laboratory marketplace in the United States. Second, with its purchase of MPL, American Esoteric Labs shrewdly gains a major laboratory asset in one of the nation's best transportation hubs.

Third, by deciding to sell their shares of a laboratory joint venture that included what outsiders considered to be a profitable and growing outreach program, hospital administrators again demonstrate that they consider such enterprises to be complex and a distraction from their core business, which is managing acute care hospitals.

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THE DARK REPORT Intelligence Briefings for Laboratory CEOs, COOs, CFOs, and Pathologists are sent 17 times per year by The Dark Group, Inc., 21806 Briarcliff Drive, Spicewood, Texas, 78669, Voice 1.800.560.6363, Fax 512.264.0969. **(ISSN 1097-2919.)**

R. Lewis Dark, Founder & Publisher. Robert L. Michel, Editor.

SUBSCRIPTION TO THE DARK REPORT INTELLIGENCE SERVICE, which includes THE DARK REPORT plus timely briefings and private teleconferences, is $11.90 per week in the US, $12.50 per week in Canada, $13.55 per week elsewhere (billed semi-annually).

Fourth, because the buyer is a new laboratory company, the willingness of MPL's existing owners to sell to this entity shows that a credible laboratory business start-up can gain traction quickly in the marketplace. Also, since the sellers selected AEL to be the buyer, that decision implies that other bidders for Memphis Pathology Laboratories may have been viewed as having certain strategic conflicts in how they would develop MPL's assets going forward.

AEL Acquires MPL

To understand why the MPL acquisition is a coup for AEL, it is necessary to review this infant lab company's business strategy. American Esoteric Laboratories launched operations in August, 2003. It has $70 million in venture capital funding and a bank credit facility.

Over the past fourteen months, it acquired three small specialty laboratory companies. It also began construction of a central laboratory in Dallas. It expects this lab facility will become operational in November.

In an exclusive interview with THE DARK REPORT earlier this year, AEL Chairman and CEO Brian Carr laid out a simple business strategy. AEL wants to be a national provider of high-end reference and esoteric testing to hospitals and office-based specialist physicians. *(See TDR, April 26, 2004.)*

Central Lab In Dallas

It selected Dallas as the location for its central lab facility because of the city's excellent air service, with direct flights daily from the major population centers of the United States. AEL's first three acquisitions involved lab companies that specialized in coagulation, virology, and molecular-based assays. Each lab is located in Texas and can be easily folded into the new Dallas facility.

In contrast, MPL is neither a specialty lab company nor located in Texas. Nonetheless, AEL believes its acquisition of Memphis Pathology Laboratories brings it, in a single transaction, several important business advantages.

"Acquiring Memphis Pathology Laboratories jumps our business plan forward by seven or eight steps," said Brian Carr, Chairman and CEO of AEL. "Over the course of its 40 years of operating experience and business success, it has created several valuable assets.

"To support AEL's national testing program, MPL provides an interesting capability in both test menu and logistics," explained Carr. "Let me explain. Within the hospital marketplace, the reference testing needs of larger, urban hospitals are different from smaller hospitals, particularly those in rural areas. The logistics challenges are also different and we believe our labs in Dallas and Memphis are well-suited to serve these differences.

Send-Out Test Mix

"Larger hospitals are generally located in urban areas. They tend to perform many common reference tests internally. The specimens they refer out are thus primarily complex reference and esoteric tests," he explained.

"Our Dallas laboratory is designed to provide this menu of high-end reference and esoteric tests," said Carr. "Because there are multiple direct flights daily from the nation's larger urban centers to Dallas, AEL has the capability to transport these specimens directly into our Dallas lab and provide excellent turnaround times for those hospital laboratory clients.

"In contrast to the rather sophisticated reference/esoteric testing needs of larger hospital labs, the specimens referred for testing by smaller hospitals generally involve more routine types of reference and esoteric tests. This is a consequence of their patient mix. Patients with complex diseases

and severe health problems are typically referred by smaller hospitals and rural hospitals to the tertiary care centers in their region.

"Memphis Pathology Laboratories is perfectly positioned to serve this market segment in both logistics and test menu. Memphis has the logistics hub for **Federal Express**. It also is the third largest logistics hub for **UPS**. These companies pick up packages from nearly every population center in the United States, whether small or large. This gives AEL the ability to move specimens quickly from small hospitals and rural hospitals into the laboratory at MPL.

"For the most part, these specimens can be tested at MPL in Memphis. That's because MPL already performs a wide menu of reference and esoteric testing for the hospitals owned by Baptist and Methodist," added Carr. "Any specimens received in Memphis that require complex reference or esoteric testing will be forwarded to our Dallas laboratory."

Competitive Advantages

"We believe this system will give us two competitive advantages," observed Jim Billington, AEL's President and COO. "One is speedy, reliable transport of specimens into our laboratory, whether from an urban center or a rural town, allowing us to provide a fast turnaround time on test results.

"The second advantage is a full test menu of reference and esoteric assays, without redundancies, across our Dallas and Memphis laboratories," he commented. "We should be cost-competitive while offering high quality results and in-depth clinical expertise."

Even as AEL recognized how Memphis Pathology Laboratories could provide it with the capability of providing targeted and more intense services to smaller and rural hospitals, it did not overlook other assets. "MPL brings us a top-flight lab operations and clinical lab services team," stated Carr. "Every laboratory knows how tough it is to find and recruit talent in today's laboratory marketplace. The existing skill mix at MPL closely matches the needs of AEL."

Battle-Tested Lab Systems

"Along with a pool of talented people, another resource that AEL values highly is the existing operations and lab testing systems already in place at MPL," added Billington. "MPL's current test menu allows us to move to market even faster because these tests and the lab systems which support them are battletested and are operating daily. In the short term, that allows our Dallas laboratory to concentrate on the business initiatives which

American Esoteric Labs At-A-Glance

Formed:
August, 2003

Headquarters:
Nashville, TN

Main Labs:
Dallas, TX 40,000 s.f. (*currently under construction*)
Memphis, TN (MPL) 35,000 s.f.

Acquisitions Since April 2004:
Thrombocare Laboratories, *Dallas, TX*
Viral Diagnostics, *Dallas, TX*
Cenetron Diagnostics, LTD, *Austin, TX*
Memphis Pathology Laboratories (MPL), *Memphis, TN*

Management Team:
Chair & CEO: Brian Carr
President & COO: Jim Billington
VP, Operations: William Sledge, Ph.D.
CIO: Mark Farrington
VP, Executive Director, MPL: John Mazzei

Website:
www.ael.com

Bidding For MPL: It was All or Nothing

WHY DID THE PARTNER/OWNERS of the Memphis Pathology Laboratory (MPL) joint venture decide to sell the entire business?

When asked that question, Don Pounds, Senior Vice President and CFO for Baptist Memorial Healthcare had a simple answer. He stated that several potential buyers expressed an interest in acquiring MPL. During negotiations, all potential buyers stated their interest was specifically in acquiring 100% ownership of MPL. They would not tender a bid to purchase a partner's share in the laboratory joint venture.

None of the principals in this deal have spoken on the record about which laboratory companies entered the bidding for MPL. On the short list, it would be expected that **Laboratory Corporation of America**, **Quest Diagnostics Incorporated**, and Lab*One*, Inc. would be included. As a bidder, American Esoteric Laboratories (AEL) would have probably been considered a dark horse candidate.

Yet its selection as the winning bidder probably rested on several interesting factors. First, it was clear that AEL would continue to maintain MPL's existing lab facilities in Memphis. Second, AEL intends to fully utilize the management and staff of MPL. That means no lay-offs, always a big plus to sellers.

If these assumptions are correct, it explains why MPL's selling partners considered more than highest sales price to select the winning bidder for Memphis Pathology Laboratory.

It also is another sign that a new laboratory company can have credibility as a bidder when laboratory assets are shopped for sale.

most complement the existing resources at MPL. This accelerates our ability to sell aggressively in the field."

Probably the single most interesting conclusion to be made about the decision of MPL's owner/partners to sell to American Esoteric Laboratories is that it once again illustrates the unpredictable nature of the lab testing marketplace.

A Highly-Valued Prize

This was demonstrated earlier this year when **Lab*One*, Inc.** outbid the two blood brothers and acquired **Health Alliance Laboratories** in Cincinnati, Ohio. *(See TDR, February 23, 2004.)* Now American Esoteric Laboratories has outbid the "usual suspects" and walked away with a highly-valued prize.

Equally surprising is the way AEL believes it can capitalize on the assets of Memphis Pathology Laboratories. MPL's existing test menu gives it added capability, without having to build it from scratch. The excellent logistics offered by the Memphis hubs of Federal Express and UPS may enable AEL to offer faster turnaround times to a class of reference clients—smaller hospitals—that can sometimes be underserved in this regard.

Bold Business Move?

Was AEL's acquisition of Memphis Pathology Laboratories a bold business move that quickly establishes this new lab company as a tough competitor? Or will it turn out to be a case of over-reaching, the too-big acquisition done too soon? Carr and Billington paint a detailed picture of how and why the acquisition of Memphis Pathology Laboratory gives them the perfect platform for growth. The challenge will come in execution, and whether competitors are effective in their response to this acquisition. **TDR**

Contact Brian Carr at 615-627-3252 and Jim Billington at 972-702-6247.

Going, Going, Soon Gone: MDS Pulling Out of U.S.

17-year affinity for lab joint ventures not enough to justify continued development of new projects

CEO SUMMARY: Even as the best of its lab testing joint ventures with hospitals and health systems prove profitable, MDS Diagnostic Services is taking active steps to resolve its participation as a partner. In a candid interview, its President and CEO acknowledged the best attributes of such joint ventures and identified specific business dynamics which challenge laboratory firms seeking to create similar joint ventures.

WITH ONLY TWO LAB BUSINESS ARRANGEMENTS remaining in the United States, **MDS Diagnostic Services** is close to resolving its 17-year involvement in hospital lab/commercial lab joint ventures in this country.

What lies ahead for MDS in the United States? Why did it decide to rethink its strategy for clinical diagnostic services in this country? Do lab testing joint ventures between hospitals, integrated delivery networks (IDNs) and commercial lab companies have a future? To learn the answer to this and other questions, THE DARK REPORT caught up with its President and CEO, Cam Crawford.

"Going into 2004, MDS was involved in five laboratory service arrangements," said Crawford. "Since January, we have sold our interest in three. Moving forward, MDS will continue to work with its remaining partners to insure that the eventual solution is consistent with our commitment to the long-term value of these laboratory ventures. It will be done with our full support for the lab testing services they provide and continuity for the people who make all this happen."

Crawford emphasized the importance of this goal. "MDS enjoys an extraordinary relationship with all of its partners in these ventures," he commented. "From the beginning of each lab joint venture, we took methodical and deliberate steps to create and operate a laboratory business model that met the needs of all participants. In resolving our remaining two relationships, our actions will be equally measured and systematic to fully meet the expectations of each of our partners."

Hospital-Centric Lab Services

For Crawford, this stage of the business cycle represents a bittersweet outcome. "MDS strongly believes in the value of a regionalized laboratory services platform which is hospital-centric," he explained. "We also believe that **Memphis Pathology Laboratories** (Memphis, Tennessee), **Duke University Health System Clinical Laboratories** (Durham, North Carolina), and **Integrated Regional Laboratories** (IRL–Fort

Lauderdale, Florida) are solid performers. Their clinical and financial success validates the concept of a regional laboratory services venture.

"Obviously, if these joint ventures can be successful, why did MDS Diagnostic Services make a strategic decision to wind down this business unit?" asked Crawford. "That's not easy to answer, because there was no clear and compelling business case for either option: moving forward or moving out.

"Obviously, if these joint ventures can be successful, why did MDS Diagnostic Services make a strategic decision to wind down this business unit?" asked Crawford.

"Let me explain that in more detail," he continued. "The first business challenge is to educate administrators of hospitals and IDNs about the benefits of participating in such lab testing ventures. This takes time and the process is often interrupted when administrators divert their attention to other more pressing issues.

"Second, where administration does become interested, it is a long and lengthy process to work with them to develop the right business model and create an operational laboratory testing venture. This brings us to a third business challenge. Each joint venture usually ends up with more unique attributes than common characteristics," explained Crawford. "Individually, each of these joint venture business models can be managed successfully. However, this creates complexity for the executives of the managing partner, who must respond to the unique differences of each joint venture."

Crawford's comments reflect the experience learned at MDS over the past ten years. It was in the mid-1990s that MDS Diagnostic Services established a major presence in the United States and began to approach hospitals and IDNs with the concept of a shared laboratory testing services venture.

At that time, MDS wanted to sell its "Total Laboratory Automation" (TLA) technology. Like other vendors offering first-generation TLA solutions, MDS had found hospitals to be a tough sell. It decided to approach the market in a different fashion.

By developing a laboratory joint venture with interested hospitals, MDS could build a core laboratory that included its TLA system. It would provide management support, sales and marketing expertise, and capital. The hospital partner would provide inpatient specimens, laboratory staff and managers, and capital.

MDS quickly found an interested partner: **Columbia HCA Corporation** (now **HCA Inc.**). Two central labs were constructed. One was in Atlanta (and sold to **Laboratory Corporation of America** early this year). The other is Integrated Regional Laboratories.

Too Few Opportunities

However, as Crawford stated earlier, MDS Diagnostic Services found the entire process of developing a lab joint venture with hospitals both very rewarding and very long. That was the contradiction mentioned by Crawford. Most of the joint ventures developed by MDS performed to the expectations of the partners. But from a purely business standpoint, it took too long, and the number of JVs was too few, for MDS to justify maintaining an entire business division devoted to laboratory joint ventures.

As a business case study, the experience of MDS mirrors the efforts of other commercial labs in past years. Creating a lab testing joint venture with hospitals is challenging and time-consuming. TDR

Contact Cam Crawford at 416-675-6777.

Lab Crisis Planning

Anatomic Path Lab Weathers Florida's Blitz of Hurricanes

EMERGENCY RESPONSE PLANS always get rewritten after a crisis. That's certainly the case with **Palm Beach Pathology**, which survived the recent blitz of hurricanes that hammered Florida's east coast.

"Our laboratory is located in West Palm Beach, a city hit hard by Hurricane Frances and Hurricane Jeanne," said Gary Onofry, Administrator. "If we didn't get it right when Frances came ashore the night of September 4, we certainly worked hard to get it right when Jeanne hit, just 21 days later!

"One big lesson is that power can be out for extended periods," stated Onofry. "Our buildings survived with minor damage, but power was out for more than a week following Jeanne. Our administration building is on the hospital's emergency power grid. We moved lab instruments to that location and continued to process specimens.

Generator Power

"By Hurricane Jeanne, we had found a temporary generator, but it provided only enough power for the instruments," he said. "Without power for the air conditioning, there were plenty of 'sweat shop' jokes from the staff until the utility company restored power to our building."

Onofry noted that Palm Beach Pathology, which has 16 pathologists and serves five hospitals, will upgrade its generator capability in the near future. "Our first choice was propane," he said. "But we've learned that fire stations, telephone installations, and the cell phone system all use propane for their emergency power generation. In an emergency, propane supplies will be diverted to them on first priority. So we think a diesel-powered generator will best serve our needs.

"Our emergency plan also did not address when we should start and stop processing pathology specimens," added Onofry. "Once a specimen goes on the processor, it can take up to four or five hours before it is ready for the next steps, which often must happen immediately. When a hurricane approaches, we learned that we needed policies and procedures to address when we would stop and restart specimen processing."

Another interesting issue which surfaced was picking up specimens and storing them until processing could begin. "As a hurricane approaches, physicians want us to come by their offices and pick up the specimens," he observed. "However, that is also a time of maximum chaos in the community with mandatory evacuations. So we need procedures to pick up these specimens and accurately track them through our system. Because the computer may be inoperable during this time, it means some type of tracking log must be instituted.

"Communication with pathologists and staff, and their ability to travel between home and the lab or hospital was also a challenge," noted Onofry. "With downed power lines, curfews, and flooding, it is imperative to have someone who can assess damage to the lab ASAP without putting themselves in jeopardy. This should be part of every lab's emergency response plan." TDR

Contact Gary Onofry at 561-659-0770.

NEWSMAKER INTERVIEW

"Conflict in groups stems from trying to use one measurement system to meet all practice goals. This is the pitfall to avoid."
—Dennis Padget

Measuring Daily Productivity Of Pathologists Can Be Complex

Pathologist productivity is becoming a key factor in competitive success

CEO SUMMARY: Productivity measurement systems are widely used outside the healthcare industry to better manage operations and to incentivize staff. Many pathology groups have a gnawing feeling that they should be looking at performance in ways beyond accounting numbers alone. In Part Two and Part Three of our series on measuring pathologist productivity, THE DARK REPORT interviews Dennis Padget of **DLPadget Enterprises, Inc.**, based in Simpsonville, Kentucky. Padget, recently retired, is a pathology practice consultant. His advice and insights on the "do's and don'ts" about establishing a measurement system to evaluate the productivity of pathologists are rooted in four decades of experience. Editor Robert L. Michel conducted the interview.

PART TWO OF A SERIES

EDITOR: If we are going to discuss pathologist productivity, it would be good to establish a definition of productivity for our readers.

PADGET: Let's start with the classic definition used in management. "Productivity" is the measurement of the amount of time taken to perform a given job or task compared to the required amount of time. The "required" amount of time is determined by some objective method. Examples would be a stopwatch "time and motion study" or statistical analysis of time and workload data for a broad sample of equally-skilled people performing the same task. The principles underlying "productivity" are the same for all products and services.

EDITOR: This definition implies, then, that there is some recognized "ideal time" required to properly accomplish a task. Productivity is the measurement of actual performance against this "ideal."

PADGET: Correct. We express productivity as a percentage. Somebody working at 100% of standard is exactly on par with his or her peers. A productivity rating of 110% means you're getting the job done a bit faster than average, without cutting corners that affect the quality of the job or product. Numbers much below 100% mean there's a problem that should be investigated and corrected.

EDITOR: When measuring the productivity of pathologists, what makes them unique from other medical specialists?

PADGET: Internal medicine provides a good comparison. Internists primarily work with patients and do few other tasks. The major variables when measuring the productivity of an internist are the severity and complexity of each patient's presenting complaint. Medicare's RBRVS relative value units take severity and complexity into account by CPT code. Internists have to CPT code each patient visit. Voilà! You have a ready-made productivity measurement system that accurately covers 90% or so of an internist's workday.

EDITOR: By contrast, the varied types of cases handled daily by the typical pathologist makes controlling for complexity and severity more challenging.

PADGET: Correct. On any given day, one measurement standard cannot capture the varied duties and tasks performed by a typical community hospital-based pathologist. For example, in one ten-hour period, a pathologist might perform five frozen sections, examine the slides and dictate the reports on ten large inpatient cases and 20 straightforward outpatient endoscopic biopsies, interpret and report five peripheral blood smears and ten protein electrophoresis tests, investigate and report on a patient's transfusion reaction, QC several Pap tests, prepare a performance review on the lab manager, prepare for and attend a meeting of the hospital's infection control committee, and participate in a planning session preparatory to the upcoming hospital contract negotiations.

EDITOR: That is a diverse range of activities! That is why a different "ideal" or "standard" time is required to accurately measure each different group of activities. A pathologist has more than the one or two types of primary activities—unlike the internist.

PADGET: Yes. Each specific activity grouping has a different productivity time allotment. You also have to carefully account for the factors that influence time requirements within a particular grouping.

EDITOR: What primary variables must be considered when developing a system to measure pathologist productivity?

PADGET: Over several years I developed a mathematical model to evaluate productivity and physician staffing for pathology groups. A key variable in the model is practice setting: independent lab versus teaching hospital versus community hospital. Another very important variable is the measurement of surgical case complexity. This can be closely approximated by separating the count of inpatient, day surgery, and biopsies referred by office-based physicians. Of course, other medical work done by the pathologists must also be considered.

EDITOR: You mean like cytopathology and laboratory medicine?

PADGET: Yes, precisely. My model takes into account these added variables: 1) whether or not a pathologist performs the surgical procedure associated with bone marrow and fine needle cases; 2) cytopathology caseload, broken down among non-gynecological, fine needle, and Pap test; 3) medical autopsy count; and 4) the average number of clinical lab and Pap test interpretations rendered per year. For teaching hospitals, the number of specialty cases like outside consults,

in-house neuropathology and in-house renal pathology specimens must also be considered.

EDITOR: I know different models work in different ways. Is a workload count for each variable you've enumerated all that's needed for your model, or is more information required?

PADGET: These variables reflect a particular group's verifiable workload and general practice environment. To get an accurate representation of a group's expected worked-hour requirements, several factors beyond workload count alone must also be considered . For example, do pathologists gross the tissue specimens? Or is this done by pathology assistants or residents? Is a detailed microscopic description regularly dictated? Or is this done only when indicated? How up-to-date is the report dictation/transcription system? Do pathologists still write their diagnoses in longhand, or is a voice-recognition system in place? Of course, more factors need to be considered, but these show the level of detail required to establish an accurate system for measuring productivity.

EDITOR: Continue, please. This is important to our readers.

PADGET: Is the percentage of cases requiring frozen section consult, special stains, immunohistochemistry, or flow cytometry at, above, or below the norm? Is there a physical plant or other exogenous issue that directly impacts pathologist productivity? Two examples would be a frozen section room located far from pathology or a radiology work flow so disorganized that pathologists are often forced to wait to begin immediate studies of fine needle specimens.

EDITOR: What other categories of variables affect productivity measurement systems?

PADGET: To this point, I've only discussed variables that involve a pathologist's "hands-on" work, meaning specimen exams and test interpretations. There's another major dimension to a pathologist's professional life.

EDITOR: Administration and teaching?

PADGET: Yes. Often a significant part of each day is spent on medical direction and oversight of the laboratory. In academic settings, there is also education and training of residents and fellows.

EDITOR: Does practice setting or hospital size play a role in how much management work is expected?

PADGET: For a pathologist whose practice is limited to an independent lab setting, the amount of so-called "Part A" time is negligible. But if it's a larger community hospital, "Part A" time will typically account for 35% to 45% of the total workday. For a teaching physician, the commitment can easily reach 60%. I commonly approach this side of a pathologist's overall job duties using a physician-completed time diary and lab-to-lab peer group comparison. This is necessary because, when it comes to "Part A" activities, reliable productivity standards are unavailable.

EDITOR: Wow! Given what you've described, if a pathology group wants to develop its own productivity measuring system, that television line "don't try this at home!" is probably good advice.

PADGET: It can be complicated. When a pathology group initiates a productivity measurement process, it is useful to enlist the guidance and assistance of someone with experience in such systems. However, the process, analysis, and data interpretation steps are not difficult to learn and apply. During the learning curve, an experienced consultant can help the pathology group avoid land mines and get it right from the start. It also helps to understand that productivity measurement involves some "art" as well as "science."

Planning Tool for Pathologist Workload Helps Identify Staffing Requirements

For Group-Level Macro Analysis of Staffing Needs:

	Teaching		Non-Teaching	
	Low	High	Low	High
Surgical pathology cases:				
• Inpatient	1,800	2,200	4,400	5,300
• Outpatient	3,400	4,200	8,700	10,700
• Outreach patient	4,800	5,900	19,600	24,000
Bone marrow cases:				
• With path extraction of specimens	900	1,100	1,600	2,000
• Without path extraction of specimens	1,200	1,500	2,200	2,700
(several categories intentionally omitted)				
Clinical lab test interpretations	15,000	20,000	25,000	29,400
Medical autopsies	350	350	350	350

Total workload based hours (FTE x 2,080): _____

Total "Part A" hours (per time study): _____

Total hours requiring staffing: _____

Shown above is the intentionally incomplete "macro-planning" table developed by Dennis Padget of DLPadget Enterprises, Inc. The worksheet is designed to aid a pathology group, as part of its strategic planning, to determine basic staffing requirements. As noted throughout this briefing, a complex range of variables, unique in each group practice, must be taken into consideration. This table is not appropriate for use in developing individual productivity parameters.

EDITOR: Is the mathematical model you mentioned earlier something you'd be willing to share today, at least enough to give our readers a better understanding of how it works?

PADGET: I'll happily show you meaningful, illustrative pieces of the model. But this isn't a "plug-and-play" worksheet. I've only discussed a few of the key things someone needs to know about properly using the model. I don't want anyone getting hurt by using the model in a way not intended or appropriate, so I'll only give you part of the whole thing.

EDITOR: Are you saying that "a little knowledge is a dangerous thing?"

PADGET: Yes. A prime example of altruism backfiring big time is what happened to Dr. Seth Haber several years ago. He published a concise little article in which he enumerated the productivity standards he and his pathology associates at a **Kaiser Permanente** facility in California had developed for use in monitoring their own performance. His aim was to encourage other pathologists to manage their time via some type of objective, numbers-oriented approach. The article was clear in its warning: no one should just glom on to his numbers. Rather it stressed the need to follow the process, adopt the approach, but ignore the specific figures relevant only to the Kaiser experience.

EDITOR: Let me guess: Haber's advice was ignored by certain individuals. As a result, some pathologists got "burned."

PADGET: You guessed right. At least two consultants I've run into over the years obviously just grabbed Haber's numbers as "gospel." They used them without consideration for intent, comparability, compatibility, or anything else. In my opinion, this mindless practice by these consultants was at least unethical, if not outright malpractice. And yes, more than a few pathologists were harmed in the past due to numbers misrepresented or misused.

EDITOR: Your point is well made and taken: you are not providing a turnkey model, and no one should apply it that way. The portion of your productivity model that you are sharing is reproduced in the sidebar on page 12. Please walk us through the key things to understand about your worksheet.

And yes, more than a few pathologists were harmed in the past due to [productivity] numbers misrepresented or misused.

PADGET: The two main columns show the expected average workload for a full-time pathologist in a teaching versus a non-teaching setting. The non-teaching column applies to both hospital-based and independent lab practices. However, for a laboratory that doesn't station pathologists on-site at a hospital, the inpatient and outpatient lines don't apply. In those situations, it's unlikely there will be much, if any, "Part A" time for that laboratory.

EDITOR: Walk us through a line of numbers to help us understand how the model works.

PADGET: Okay. Assume it's a pathology group at a large non-teaching hospital with a busy surgical staff. The pathology department is state-of-the-art. It includes two or three pathology assistants to gross tissue specimens and there is voice-recognition report dictation software. Our pathologists don't regularly dictate a detailed microscopic description and special stains/studies are used sparingly. We'll say the group's inpatient surgical pathology caseload—the only line in the worksheet of interest at this moment—is 13,250 cases per year.

EDITOR: What comes next?

PADGET: Given these assumptions, this model predicts that the group will need 2.5 pathologists working full-time (2,080 worked hours per year) on nothing but inpatient cases. That's 13,250 cases divided by 5,300 cases per year per full-time physician. In my example, I used the high end of the productivity range because all the assumed subjective factors point to maximum workload ability. The model takes into account all the frozen sections to be done, special stains, all the "curbside" consults the surgeons will demand, and most everything else commonly associated with signing out an inpatient case. It does not, however, take into account any "Part A" duties; that time must be added at the end.

EDITOR: You have a way to incorporate "Part A" time into this formula?

PADGET: The most accurate way to add "Part A" time to the worksheet is to have each pathologist in the group do a two-week time analysis, then add the total at the end. A quick, ballpark way is to estimate the percentage that workload-based time bears to total group time, then calculate what the grand total and the "Part A" portion must be. For example, let's say when you plug in all your workload statistics and do the math called for in the

worksheet, you determine you need six full-time-equivalent pathologists just to handle the specifically-listed medical activities. That is 12,480 worked hours a year. Assume, on average, you and your associates spend 40% of your time on unlisted "Part A" duties. That means 12,480 is 60% of your total time. Divide 12,480 by 60% to get 20,800 total worked hours per year. Then subtract 12,480 to get 8,320 (4 FTE) as the unlisted "Part A" duty portion.

EDITOR: In your example, does this say the group needs ten full-time pathologists to handle all the patient care, lab direction and oversight, and other work at the hospital?

PADGET: Not exactly. Again, the model predicts how many worked hours are needed, not paid hours. In my example the group needs ten bodies present and working eight hours a day, five days a week, 52 weeks a year. The members of the group have to decide how much leisure time they want, because that is on top of the worked-hour requirement. The more leisure time, the more bodies needed—and the less income per member.

EDITOR: That reflects reality. The group can hire more physicians so each one doesn't have to work too many hours. Or, pathologists can work more hours and keep a bigger share of the same income pie. Okay. Let's now focus on the teaching/non-teaching numbers. Why such a big difference in the workload standards?

PADGET: The biggest factor is resident education. From my work with teaching pathologists, I know that each resident consumes, on average, nearly one quarter of a full-time pathologist's time—about 450 hours per year. That obviously has a big impact on the teaching pathologist's 'scope-time. He or she simply can't churn out the same number of cases per time period as a pathologist who isn't simultaneously teaching residents.

EDITOR: What other differences are relevant between these two settings?

PADGET: A teaching hospital will generally have a higher proportion of major surgery cases, such as radical necks, colectomies, Whipple procedures, and mastectomies. It will also make greater use of frozen sections, special stains, and other special studies. Its pathologists will do more "curbside" consults with surgeons and surgery residents.

The more leisure time, the more bodies needed — and the less income per member.

EDITOR: That's why you stress that someone must take these differences into account to reach an appropriate conclusion about the number of pathologists needed at a particular teaching hospital, compared to other practice settings.

PADGET: Absolutely! Remember the NASA space probe mission that flopped because someone plugged inches instead of centimeters into the navigation software? That same "garbage in/garbage out" principle applies to productivity systems. Such mistakes can lead a pathology group to disaster, just like at NASA.

EDITOR: I'll bet you have an example of such a disaster affecting pathologists.

PADGET: Several years ago a teaching medical center with a very heavy oncology load hired a new VP of lab and pathology. The VP's background was with a national clinical lab. He soon convinced the med center's CEO and CFO that his "numbers" showed only half the pathologists on staff were actually needed! His "numbers" were straight out of the commercial lab's guide book.

EDITOR: Surely he adjusted his prior employer's workload standards for resident education, case complexity, Ph.D. versus M.D. in the commercial clinical lab setting, and such! That's common sense.

PADGET: Maybe to you and me, but not to the VP. His logic was: if the pathologists at the commercial lab could sign out 75-90 surgical cases a day, there's no reason the docs at the teaching medical center couldn't too! We ultimately were able to rebut the VP's contentions and convince the CEO and CFO that such draconian measures would kill the pathology department. However, morale had fallen so low by then that 50% of the pathologists left for much greener pastures!

EDITOR: How can the productivity measurement model you've developed be used? For example, could it be used to monitor the productivity of Pathologist A versus B? Could it be used as the basis for compensation allocation?

PADGET: No, because the model presented here is designed to measure and monitor pathologist staffing and productivity *at the group level*. This serves several needs for the typical pathology practice. For example, hospital officials sometimes claim the pathology group is overstaffed, and that's why "Part A" money needs to be cut. My model meets the challenge of having to prove that you're appropriately staffed, possibly even understaffed. Either way, it's credible evidence the group isn't padding its "Part A" hours.

EDITOR: It sounds like there may be strategic planning uses for the model too.

PADGET: It is useful in strategic planning. If a group expects its surgical volume to increase 30% over the next three years, this model predicts how many more pathologists will be needed to handle the extra work. It also determines, for example, what level of case volume would be needed to justify a full-time, dedicated hematopathologist, cytopathologist, or dermatopathologist.

EDITOR: Is it useful for determining needs in operations and infrastructure?

PADGET: Yes. For example, it can identify the volume at which you'd be better off hiring a pathology assistant instead of another physician. It can also help evaluate whether an investment in a state-of-the-art anatomic pathology reporting system will pay for itself by freeing-up the leisure time the pathologists are demanding.

...the model presented here is designed to measure and monitor pathologist staffing and productivity at the group level.

EDITOR: Can it be used to monitor the ongoing productivity within a group, for general management purposes?

PADGET: Certainly. That's an important and frequent use of such a system: to identify trends in the group's productivity. This gives the physician group leader and practice administrator a chance to get ahead of the curves and to act decisively to promote positive change and avert problems.

EDITOR: It can tip you off to either good trends or bad trends, right?

PADGET: That's correct. If productivity is improving, it may be due to something the group wants to encourage, like cutting fewer tissue sections that weren't all that necessary in the first place, or instituting clinical protocols that reduce the number of special stains that must be reviewed. On the other hand, declining productivity at the group level may be caused by a problem that needs to be nipped in the bud: examples would be an

under-trained histotechnologist or a malfunctioning slide stainer that generates too many poor-quality slides.

EDITOR: Let me play devil's advocate for a moment. Certainly some pathology groups will be tempted to take your productivity numbers—designed for use at the group level—and apply them to individual pathologist performance. What advice would you give those groups?

PADGET: I can see where the model might be used to compare one pathologist's productivity to another, but I've never used it that way. I'd advise caution. It would be necessary to conduct several trial runs to confirm that it performs accurately in that group's particular environment for that alternative purpose.

EDITOR: Your advice is consistent, because a trial run means factoring in all the variables which affect the outcomes—and means these numbers should not be used "as-is."

PADGET: If I were advising a pathology group, I'd have them look into a different type of productivity model before committing to this one as a way to monitor and compare individual physicians within the group. For example, a model based on blocks or slides may be more apropos for micromanagement purposes. This is really what is involved when looking at individual doctors instead of the group as a whole.

EDITOR: We've not yet discussed how compensation should be linked to any model of pathologist productivity.

PADGET: My model is entirely inappropriate for use in allocating pathologist compensation. To repeat, it's designed to facilitate strategic planning and macro-management functions. There are too many additional factors which must be included for any productivity measurement system to be used as a basis for the important and politically sensitive decisions which determine how much one physician is to be paid versus another.

EDITOR: Do you have any recommendations on a particular productivity measurement system which is accurate, objective, and appropriate for use in allocating pathologist compensation?

PADGET: I must say I haven't encountered a compensation system based 100% on productivity that consistently produces fair and equitable results over the long-term. But that doesn't mean productivity is inherently incompatible with compensation. In fact, we know that's not true at all. You must, however, have a clear objective in mind when marrying the two. Further, the integration has to be done in a thoughtful way to avoid unintended adverse consequences.

EDITOR: Dennis, you provided a wealth of information on the subject of designing a system to accurately and objectively measure pathologist productivity. However, we have run out of time and space. Would you be willing to share your experience in the design of compensation systems for pathology groups in a future conversation?

PADGET: Yes. Linking compensation to productivity in inappropriate ways is one of the most common sources of conflict within a pathology group practice. I'd be willing to share what experience has taught me about the right way to approach this topic. TDR

Contact Dennis Padget at 502-722-8873.

UPCOMING: PART THREE

Building upon the discussion of pathology productivity measurement systems presented here in Part Two, Part Three moves to the next step in the process: different approaches to appropriately link pathologist productivity with compensation.

Lab Industry Briefs

LABONE AND HUMANA INK NATIONAL CONTRACT FOR LAB SERVICES

IN A MOVE THAT REINFORCES its intention to compete as a national laboratory, **Lab*One*, Inc.**, signed an expanded national agreement with **Humana Inc.**

The contract, announced on August 31, 2004, covers Lab*One*'s full test services menu and allows Lab*One* to provide services to the physicians and beneficiaries of Humana's Midwest Region. The agreement also makes Lab*One* a provider for all Humana product lines.

Also in August, Lab*One* reported its second quarter financial performance. Its revenues jumped 40% over the same quarter in 2003, from $83.9 million to $117.5 million. Operating earnings increased by 32%, from $8.5 million to $11.2 million.

The biggest factor in this gain was Lab*One*'s acquisition of **Health Alliance Laboratories** in Cincinnati, which took place earlier this year. Accessions increased 28% during second quarter. But if the impact of the Health Alliance and **Northwest Toxicology** acquisitions are factored out, accessions increased by 8.7% from second quarter 2003 to second quarter 2004.

2ND MARYLAND LAB CLOSES, 3,000 PATIENTS TO BE RETESTED FOR STDs

ONCE AGAIN, A WHISTLEBLOWER in a troubled laboratory in Maryland alerted public health officials and triggered serious enforcement action.

In late August, the Maryland **Department of Health and Mental Hygiene** (DHMH) ordered that **Reference Pathology Services of Maryland** (RPSM) be closed by September 5 due to operational failures that produced unreliable results for tests of chlamydia, gonorrhea, and HPV.

Public health officials have offered retesting to as many as 3,000 patients. RPSM's violations are believed to have started in October 2002 and continued through at least April 2004. It was a whistleblower who alerted health officials to problems within the lab.

Prior to its closure on September 5, RPSM's Medical Director was Jesus U. Socrates, M.D., who also works as a pathologist at **Hanover Hospital** in Hanover, Pennsylvania. RPSM's Laboratory Director was Timothy P. Frank, CT/MT ASCP and the Supervisor of DNA/HPV Testing was Debbie Adams, MT/ASCP.

Because Reference Pathology Services of Maryland was accredited by the **College of American Pathologists** (CAP), government health officials and at least one congressman are questioning the effectiveness of its lab accrediting process. "The accreditations process is flawed and we need to fix it," said Nelson Sabatini, who was the Maryland Health Secretary at the time RPSM was closed. "As public policy makers, we need to resolve to sit down and find an effective way to fix it. It can be done. During the nursing home scandals of the 1970s, we put in place a new oversight process that cleaned things up."

Lab accreditation is under scrutiny because similar problems went undetected at the lab of **Maryland General Hospital** in Baltimore. Unreliable HIV and HCV test results were reported on at least 2,100 patients over a 14-month period. As in the RPSM lab case, it was a whistleblower who alerted government officials to this lab's problems. TDR

INTELLIGENCE LATE & LATENT

Items too late to print, too early to report

One reason why certain health plans are posting better numbers in several key clinical quality measures are "Pay for Performance" plans that reward providers with better outcomes, according to a just-released report by the **National Committee for Quality Assurance** (NCQA), based in Washington, DC. For example, NCQA data indicates that, among health plans which publicize their data, 62.2% of patients diagnosed with high blood pressure received treatment in 2003, up from 58.4% in 2002. Labs will be interested to know that 2003 data is the first to track colorectal screening, quality of osteoporosis management, and two measures of antibiotic overuse. All three of these items can utilize laboratory tests as part of desired treatment protocols.

HSA OPTIONS FOR FEDS

Federal employees can now select either a Health Savings Account (HSA) or Health Reimbursement Account (HRA). This is the first year that the **Federal Employees Health Benefits Program** (FEHBP) includes both options in its health plan offerings. It's a step that further encourages the consumer-directed healthcare trend.

NEW MICROSCOPE USES LASER LIGHT TO VIEW UNCUT TISSUE

It's a microscope that can view tissues without the need to cut the specimen. It was developed by researchers at the **European Molecular Biology Laboratory** in Heidelberg, Germany. The selective plane illumination microscope uses a "slice of laser light" to illuminate the specimen one layer at a time. A lens and camera system captures an image of each layer. The images, when combined, form a high-resolution picture of the entire specimen. The new microscope allows researchers to keep samples alive and study them over time, as they differentiate. In one experiment, researchers captured images of a fruit fly embryo throughout a 16-hour period.

ADD TO: *New Microscope*

The technology works because the laser beam is just two to eight microns wide. It only illuminates the target area and eliminates extraneous fluorescence that often fuzzes the image. Also, only organisms which are genetically altered to produce green fluorescent protein (GFP) have been studied with the new microscope. This eliminates the problems that occur when a specimen is dyed, then viewed through the microscope. This study was recently published in *Science*. Researchers say the technology is simple and they expect others to build similar microscopes.

NCCLS WITH NEW NAME, NEW EXECUTIVE VP

On January 1, 2005, **NCCLS**, located in Wayne, Pennsylvania, will have a new name: **Clinical and Laboratory Standards Institute** (CLSI). The new name is designed to eliminate "brand confusion among key stakeholders and constituencies in the standards-development community." Meanwhile, it announced that Glen A. Fine will assume the position of Executive Vice President and Chief Staff Officer, effective November 1, 2004. Fine currently is Vice President, Ethics, Regulatory Compliance, and Privacy at **MDS Laboratories, U.S. Inc.**

That's all the insider intelligence for this report. Look for the next briefing on Monday, November 1, 2004.