LEHIGH VALLEY
HOSPITAL AND
HEALTH NETWORK

PROGRESS NOTES
Medical Staff

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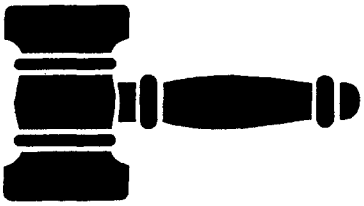

From the President

"Greatness is not in where we stand, but in what direction we are moving. We must sail sometimes with the wind and sometimes against it -- but sail we must, and not drift, or lie at anchor."

- Oliver Wendell Holmes

A Holiday Greeting

On behalf of your medical staff leadership, Drs. Rae-Grant, Caccese and myself, I would like to extend our sincere wishes for a warm and meaningful Holiday Season — one that emphasizes the importance of our relationships with family and friends. This is a valuable opportunity to strengthen the bonds that make our society a strong fabric, and ultimately make us strong and stable individuals. In some ways now, we recognize the values that our country holds in common more than those in which we agree to differ. Make this a very special Holiday Season by reinforcing what is important to us all.

Appreciate our freedoms. Savor and enjoy the customs, the gatherings, the heritage and that which is our way of life at this holiday time. Recognize and appreciate those who touch our lives and wish them well.

We extend our greetings at this holiday time to all members of the LVHHN extended medical family. We thank you for your contributions and value working with you.

"America at its best matches a commitment to principle with a concern for civility. A civil society demands from each of us good will and respect, fair dealing and forgiveness. Civility is not a tactic or a sentiment. It is the determined choice of trust over cynicism, of community over chaos. And this commitment, if we keep it, is a way to shared accomplishment."

- George W. Bush - Inaugural Address - 1/20/01

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First the Good News

J. Michael Eakin has been elected to the Pennsylvania Supreme Court, Giving the Prospect of Tort Reform a Significant Boost.
Eakin narrowly defeated fellow Superior Court Judge Kate Ford Elliott to give Republicans control of the state's highest court for the first time in three decades, reported the Associated Press. Eakin was supported by physicians through a grassroots fundraising campaign in the belief that his election to the Pa. Supreme Court would give it a majority of strict constructionists who would be less likely to strike down tort reform provisions passed in the Pa. Legislature, which has been a serious obstacle to tort reform in Pa. Eakin has also told physicians that he is aware that the medical liability problem is exacerbated by reimbursements that are dramatically lower than they are in surrounding states and that the problem is causing physicians to leave the state and to retire early, as well as creating a significant physician recruitment problem. (Associated Press, November 7, 2001)

We would like to thank all members of the LVH medical staff who contributed to the campaign of Judge Mike Eakin for Pennsylvania Supreme Court. The contest was a victory for tort reform and a step in the right direction. He was supported by PMS and HAP.

The judge is a self-effacing jurist with a sense of humor. At his fundraiser, he mentioned that a State Superior Court judge has to be careful not to take himself too seriously. I found him refreshingly self-effacing, and very savvy about the legal status of the Pennsylvania malpractice crisis. It is with renewed optimism that we now contact our state senators and representatives to help their constituents with this nagging problem. This is a problem that is boiling over in our sister state, West Virginia. (See below)

Try not. There is no try. Do or do not.

- The Wisdom of Yoda

West Virginia's Charleston Area Medical Center is preparing to halt surgeries and shut down its Emergency Room by the end of year unless lawmakers find a solution to the state's looming malpractice crisis.
The hospital's physicians, many of whom are facing non-renewal of their medical liability insurance, are preparing 30-day notices to patients that their services will no longer be available unless the Legislature solves West Virginia's medical malpractice insurance crisis by the end of November, reported the Charleston Daily Mail. West Virginia Senate Finance Chairman Oshel Craigo said that he expects hospitals and physicians around the state to be making similar preparations and noted that lawmakers consider Nov. 30 to be the "drop-dead" date for working out a solution to the situation, which could include having the state extend malpractice insurance to physicians as a stopgap measure, the Daily Mail added. (Charleston Daily Mail, November 14, 2001)

Eighteen Delaware County Orthopedic Surgeons, the large majority of the county's total, announced they will no longer perform surgery or respond to trauma calls beginning January 1 due to unaffordable medical liability insurance.
Testifying at a Pennsylvania House Insurance Committee meeting, the Premier Orthopaedic & Sports Medicine Associates physicians noted that their primary malpractice premiums would increase up to 100 percent for 2002, with total costs projected at $130,000 per surgeon, compared with $65,000 per surgeon just two years ago. The physicians pointed to the increasing number and size of medical malpractice jury awards in southeastern Pa. as a reason for the steady climb in insurance costs. (Pennsylvania Orthopaedic Society, 10/ 24/01.)

Although not as high in Lehigh County as in Philadelphia, the malpractice premiums for our orthopedic colleagues are high and have risen about 50% this year. The manpower numbers for the high profile (high malpractice premium) specialties, which are orthopedics, neurosurgery, and ob-gyn, are down 10% across Pennsylvania and down 20% in Philadelphia.

A day without sunshine is like night.

I have kleptomania, but when it gets bad, I take something for it.

Length of Stay and at LVHHN....Capacity Issues in OR, ED, and on med-surg floors

The utilization of hospital beds has been cyclic in the past. We are now struggling with capacity constraints, which seem to be related to availability of med-surg beds at a time when our length of stay across the network has slowly risen. We certainly realize that a contributing factor might be delay in taking an in-patient to the OR for a necessary procedure.

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However, the LOS has gone up for non-surgical patients as well. When the hospital beds are full, we cannot move patients out of the Emergency Department (which may require the ED to go on "divert") or out of the recovery room (which in turn backs up patients leaving the operating rooms). We note that both outcomes are challenges to quality patient care.

Bed management (Lisa Romano) has been alert to this issue and monitors admissions and discharges daily in an effort to anticipate and manage this problem.

In the past, the LVH medical staff has been responsible and responsive to this issue. Again, we are asking for your help and cooperation in reducing the length of LVH hospital stay. Please work with the discharge planners to arrange the best care for your patients.

"Yosemite Park is a place of rest, a refuge ... None can escape its charms, its natural beauty cleans and warms like a fire, and you will be willing to stay forever in one place like a tree."
- John Muir, 1895

Anesthesia Anyone?

At a recent meeting of the Department of Surgery, there was a frank and productive discussion about the theme of OR efficiency – start times, room turnover, avoiding delays, etc. The issue of anesthesia providers was discussed openly by Dr. Tom McLoughlin, and the meeting was well attended by the surgeons and OR administrative leadership. The outcome is an increased focus on efficiency – one that will take the combined will of all members of the OR team and creative incentives for each component.

Room captains? Productivity recognition and awards? Suggestions from the OR staff about reducing room turnover times? Room flow analysis? (sounds Urologic, I admit)

We are asking all surgeons to start their rooms on time, see their patients (if necessary) before the case, and contribute to OR efficiency.

The best way to forget all your troubles is to wear tight shoes.

You Say the Door is Locked?

You may have noticed that more hospital access doors now require your photo ID badge. This is actually a continuation of a LVHHN security policy, which has been in place for the past several years. E. Gerald Kresge, Director of Security, has asked all members of the medical staff to be patient with the increased emphasis on identification of everyone on campus. Remember that the ultimate goal is safety and security for patients and staff alike.

Golfer: "Well, caddy, how do you like my game?"
Caddy: "Very well, Sir. But personally, I prefer golf."

Ed

Edward M. Mullin, Jr., MD
Medical Staff President

New Chairperson of OB/GYN Named

Effective September 24, **L. Wayne Hess, MD**, was named the new Chairperson of the Department of Obstetrics and Gynecology.

Dr. Hess comes to Lehigh Valley Hospital and Health Network from the University of Missouri-Columbia Health Sciences Center in Columbia, Missouri, where he served as Professor and Chairman of the Department of Obstetrics and Gynecology. His prior experience includes major leadership positions at the University of Mississippi in Jackson, Miss., and the United States Naval Hospitals in Portsmouth, Va., and Bethesda, Md.

Dr. Hess received his medical degree from the Medical College of Virginia. He completed his internship at the U.S. Naval Hospital in Portsmouth, Va., where he also completed his Obstetrics and Gynecology residency. He then completed a fellowship in Maternal-Fetal Medicine at Walter Reed Army Medical Center in Washington, D.C.

Dr. Hess is board certified in Obstetrics and Gynecology and in Maternal-Fetal Medicine. He has had a distinguished career as a clinician, educator, researcher, and leader. Dr. Hess has relocated to the Lehigh Valley along with his wife, Darla, a cardiologist, and family.

Contact Your U.S. Senators!
Urgent Action Needed to Fix Medicare Physician Payment Update

Senator James Jeffords (I-VT) and Senator John Breaux (D-LA) have offered a bill in the U.S. Senate to dramatically improve the physician Medicare payment update for 2002. The bill is S. 1660, the"Medicare Physician Payment Fairness Act of 2001." The Jeffords-Breaux bill would change the payment update for 2002 from -5.4 percent to -0.9 percent.

Unless Congress intervenes, payments for all Medicare services provided by all physicians and other health care professionals will be 5.4 percent lower next year.

Please contact Pennsylvania's U.S. Senators as soon as possible to urge them to co-sponsor and support the Jeffords-Breaux "Medicare Physician Payment Fairness Act of 2001," S. 1660.

To read more about U.S. Senate Bill 1660 and for a quick method to send your Senator an e-mail message or to create and print a letter, follow the "ACTION ALERT!" at www.capwiz.com/pamedsoc <http://www.capwiz.com/pamedsoc>

Recognizing the Impaired Health Care Professional

The impaired health care professional – physician, nurse, ancillary provider – is one who is unable to practice his or her profession with reasonable skill, care and diligence as well as safety to patients because of an emotional disorder, substance abuse or some other personal problem.

A recent study by the National Institute for Occupational Health and Safety indicates that health care professionals may have a higher than average risk of developing debilitating personal problems. Research suggests that 12-14 percent of all practicing physicians are, or will become, impaired during their careers.

This may be due, in part, to the fact that many health care professionals are so idealistic and perfectionistic and work-addicted in the name of healing everyone else that they don't know how to handle their personal and emotional lives.

The impaired professional will exhibit subtle personality changes as the problem or disorder worsens. Mood swings may be common, ranging from irritability, outbursts of anger, and paranoia to sudden euphoria and hyperactivity.

In the office or hospital, the impaired professional may have frequent schedule disruptions, behave inappropriately toward patients, staff and colleagues, have complaints made by patients or staff regarding his/her unusual behavior, and be absent frequently due to "illness."

The impaired physician may display abnormal behavior during rounds, give inappropriate orders and be unavailable for the emergency room or call. His/her charting may deteriorate and handwriting change. Allegations by staff may occur regarding inappropriate behavior.

Regardless of profession, additional symptoms of impairment include:

- Deterioration in physical appearance and grooming
- Multiple physical signs and complaints
- Withdrawal from friends and colleagues and from involvement in community activities
- Embarrassing behavior at social functions
- Poor judgment
- Inappropriate conversations with patients
- Neglect of commitments and responsibilities
- Decreasing quality of patient care

If you are concerned about a possibly impaired physician, you are encouraged to contact the appropriate Chairperson of the physician's department, a member of Troika, or John W. Hart, Vice President, at (610) 402-8980. In the case of physicians, appropriate referrals may be made to the Physician Assistance Program or the Physician Health Program of the Pennsylvania Medical Society, of which the hospital and medical staff are major contributors.

Please remember – all contacts will be kept confidential.

? ? ? Mystery Medical Staff Member ? ? ?

? Born in Wilkes-Barre, Pa.
? Received a Bachelor of Science degree at King's College
? Received Medical degree from Jefferson Medical College of Thomas Jefferson University
? Surgical internship at New Rochelle Hospital Medical Center
? Residency in Public Health at SUNY at Stony Brook
? Joined the Medical Staff in 1997
? Drives a Green Chrysler Sebring
? Enjoys gardening

Give up? Please see Page 13 for the answer.

How Do You Achieve Patient Satisfaction?

Four LVHHN Physicians Check In With Service Excellence Tips

What's the key to patient satisfaction? Four LVHHN physicians who have received high marks from patients and are active in service excellence initiatives had the following to say:

Vincent R. Lucente, MD

Chief, Division of Gynecology

"We don't want to just satisfy patients, we want to *wow* them--truly and honestly treat them as if they are a family member. The doctor-patient relationship is a very special one and the cornerstone is effective communication—careful listening and talking in layman's terms."

Tips

- Build a team that embraces patient satisfaction every day.
- Be sincere in customer service and demonstrate that with a smile on your face. If you're not enjoying your work, patients will know.
- Be honest in scheduling patients so you're not squeezing people in—or you're just setting yourself up for failure.

Wayne F. McWilliams, MD

Division of General Internal Medicine

"Be as empathic as possible. Put yourself in their shoes and try to understand what they're feeling. Then you can understand their specific needs and develop a treatment plan that makes them feel comfortable."

Tips

- Make good eye contact.
- Make sure there is a caring tone in your voice so they know that you understand what they're going through.
- Manage your time carefully from the time you enter the exam room. Use an internal clock to move as efficiently through the appointment as possible.

Charles D. Peters, MD

Division of General Internal Medicine

"Sit and listen to your patients because they usually can give you information that will help you understand what is wrong with them and how to treat them. Listening is more important than some of the technology we have, and it's something we try to instill in our medical residency program."

Tips

- Listen—really listen—to your patients.
- Make a connection with your patients when you speak with them.
- Have enough administrative support in your office so you have enough time to spend with patients.

Prodromos A. Ververeli, MD

Chief, Division of Orthopedic Surgery

"I try to relate to patients and families at their level of understanding. This includes explaining complex medical issues in understandable terms and analogies. The patient and family need to understand what is going on in order to have realistic expectations for their health care."

Tips

- Explain clinical details in simple terms.
- Make sure the patient and family understand the issues by asking them to review what you have explained.
- Touch on a personal note at each visit. Make notes in their chart about any upcoming anniversaries, vacations or graduations, and then inquire about it at the next visit.

The Medical Letter

As most of you know from my previous announcement, *The Medical Letter* is now on-line on the LVH Intranet. It can be accessed by going to Clinical, then scrolling down to *The Medical Letter* and double clicking.

In order to search and pull up articles from *The Medical Letter,* you will need to have Adobe Acrobat installed on the hard drive of your workstation. Not all of the hospital workstations have Acrobat installed on their hard drives. The installation of this software is easy and is available on the LVH network. Follow the procedure below to install Adobe Acrobat:

If you have trouble looking up articles from *The Medical Letter:*

- Click on START (bottom left of the screen)
- Go to PROGRAMS - double click
- See if *Adobe Acrobat* is there
- If it is -- you're all set to access *The Medical Letter*
- If it isn't, proceed as follows:
- Go to the icon on your desktop called Win Install Interactive
- Double Click on the icon
- You will see a list of programs which can be installed from the network
- Click on *Adobe 4.05*

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- Follow the instructions which will take you through the installation process
- After installation, you will need to re-boot the computer to begin to use Acrobat to access articles from *The Medical Letter*

Hopefully, this will help to solve a simple problem which has made it difficult to get the full benefit from having *The Medical Letter* "on-line".

David M. Caccese, MD

News from CAPOE Central

By now, many of you have made rounds on 6B and have seen the implementation of computer based Medication Administration and Vital Sign charting by the staff. The staff has done a wonderful job of adapting to the new processes and using the wireless devices. We have learned a tremendous amount from the implementation on TTU, and clearly many of the processes have been improved. This change has an impact on the physicians and physician extenders. On 6B and TTU, the most recent medication records and vital signs are now on the computer. *The expectation is that the medical staff, housestaff, and physician extenders will use the computer (either wireless handheld devices or desktop computers) to view vital signs and medications for their patients.* It is not the role of the nursing staff or the Administrative Partners to print this information out for the rounding teams.

You may have noticed various physicians carrying wireless devices with them in the hospital. We are piloting different configurations (carrying cases and keyboards) with various groups. The goal is to find the configuration that works best for each group. The advantage of using a wireless device is that the user remains logged in while using the device. This eliminates the need to log in and log out on the desktop computers on each unit during rounds. Thus, a physician can check patient information for any patient from any location in the hospital. The wireless device can also be used to read e-mail and look up clinical information on the Internet.

Please use the wireless devices when you are on TTU and 6B. Given the availability of access points throughout both the Cedar Crest & I-78 and LVH-Muhlenberg campuses, wireless access can be realized by anyone who cares for patients at these locations. If you or your group would like a wireless device to use on rounds on a continuous basis, please contact me or one of the Physician Educators – Lynn Corcoran-Stamm at (610) 402-1425, Kimberlee Szep at (610) 402-1431, or Carolyn Suess at (610) 402-1416.

Donald Levick, MD, MBA
(610) 402-5100 7481 (Pager)

Tumor Boards Reinstated at LVH-M

Since the arrival of John P. Ford, MD, Associate Chief, Division of Hematology-Medical Oncology, Tumor Boards have been reinstated at LVH-Muhlenberg. The first of these was held on November 7 with a review of three cases preceded by a presentation on breast cancer by Elizabeth A. Dellers, MD, Associate Chief, Division of Anatomic Pathology (LVH-M). The conference was well attended, with representatives from the various campuses and community physicians.

Tumor Boards at LVH-Muhlenberg will continue to be held every Wednesday, from Noon to 1p.m. in the O.R. Conference Room on the second floor of the hospital. With Dr. Ford as moderator, the format will be that of a "combined" tumor board with cases not restricted to a specific organ site. Each session begins with a short presentation and discussion of a current, controversial topic in medicine, particularly in oncology.

Physicians wishing to participate as presenters are encouraged to contact Maria Dreher, CTR, who coordinates the Tumor Boards at (484) 884-5809 on Tuesdays and Wednesdays, or at (610) 402-0518 on Mondays, Thursdays, and Fridays. Cases for review are identified primarily by review of pathology reports by the tumor registry. A listing of newly identified cases (diagnosed and/or treated at LVH-Muhlenberg) is compiled and three cases are selected for presentation. Physicians wishing to have cases reviewed can request their addition to the agenda either by calling Maria Dreher or by impromptu requests at the meeting.

The agenda for Tumor Boards will be posted one week prior to presentation on the Lehigh Valley Hospital TAO e-mail system. It can be accessed by clicking first on "Bulletin Boards" and then on "Tumor_Board_*Agenda*". *It is flagged with an identifier to distinguish it from Tumor Boards held at LVH-CC.*

Tumor Boards are open to both clinicians and non-clinicians alike. Nursing staff, social workers, technicians, and those with an interest in and/or involvement in cancer care are invited to attend. Continuing education credits will be offered as part of attendance, and sign-in sheets will be provided.

For more information, contact Maria Dreher at one of the numbers listed above.

Dorothy Rider Pool Health Care Trust Awards $3.6 Million to Lehigh Valley Hospital and Health Network

The Trustees of the Dorothy Rider Pool Health Care Trust have awarded seven grants totaling $3,595,000 to Lehigh Valley Hospital and Health Network (LVHHN). The seven grants include:

- $2,700,000 over five years to the Department of Medicine for enhancement of the medical education/residency program. The resources will be used to help further the growth and development of the education and research activities within the department. Funds will also be used to support three fellowships at LVH in the areas of cardiology, pulmonary/critical care and hematology-oncology.
- $225,000 over three years to the Department of Obstetrics and Gynecology for discretionary use by the new chair of the department, L. Wayne Hess, MD.
- $200,000 over three years for the development of an anticoagulation service. The anticoagulation service will incorporate a multidisciplinary team to provide the opportunity for improved patient outcomes through fewer complications and enhanced patient education.
- $180,000 over three years to the Department of Emergency Medicine for the Emergency Medicine Residency Program. The funds will be used to develop and enhance the resources necessary to train future emergency physicians and support continuing education of the faculty.
- $150,000 over three years to the Department of Emergency Medicine for the sexual assault response team (SART). The goal of the program is to develop a consistent, comprehensive, expert, compassionate approach to care for victims of sexual assault. The project seeks to continue as well as enhance the existing sexual assault forensic examiner (SAFE) program funded by Pool Trust in 1998. The current plans include creating a Sexual Assault Response Team to improve care by enhancing equipment and services across the three sites – Cedar Crest & I-78, 17th & Chew, and LVH-Muhlenberg locations. Services will also be provided for children under age 12.
- $120,000 over three years for the Physician Leaders in the Lehigh Valley program. The resources will be used to provide ongoing assistance in furthering to develop physician skills as leaders and mentors as health care practitioners in the community. Physician Leaders in the Lehigh Valley is a leadership development program for the LVHHN medical staff. The program was started in 1997 and has been supported by the Pool Trust since its inception.
- $20,000 to the Department of Surgery for the development of a cardiothoracic surgery database. The resources will help stimulate the development of a comprehensive cardiovascular database that includes clinical, demographic, and outcomes data for patients who have procedures performed either in the operating room or in the cardiac catheterization laboratory by cardiothoracic or vascular surgeons or by medical cardiologists. The complete cardiovascular database/registry will be designed to integrate with and to complement the capacity of LVH's Regional Heart Center.

Coding Tip of the Month

Diabetes Mellitus - Controlled or Uncontrolled

It is important to let coders know whether a diabetic patient is controlled or uncontrolled. For example, when a diabetic becomes hypoglycemic because of overexercise or starvation and passes out with a blood sugar of 40, indicate whether you consider that uncontrolled. When a patient is admitted with sepsis from a urinary tract infection and a blood sugar of 650, please document whether you consider that uncontrolled. After surgery, a patient taking varying doses of insulin based on blood sugar determination is not likely uncontrolled but rather being controlled with sliding scale. If the uncontrolled diabetes takes extra work to maintain homeostasis, then writing uncontrolled in the record will allow the coder to pick this important information up. Remember if it is not written, it cannot be coded.

Radiology's Interpretation of "STAT"

STAT is interpreted as **"do the study as soon as possible"** NOT "read the study as soon as possible." Physicians who wish an immediate wet reading should order the test "STAT with immediate wet read."

Congratulations!

Joel M. Glickman, DMD, Division of Endodontics, was awarded Fellowship in the American College of Dentists on October 12 during their Annual Meeting and Convocation in Kansas City, Mo. The American College of Dentists was founded in 1920 to recognize dentists who have made significant contributions to the advancement of dentistry.

Papers, Publications and Presentations

Julie A. Dostal, MD, Vice Chairperson (LVH), Department of Family Practice, presented on "Bridge Over Troubled Water: Understanding the Cultural Chasm at the End of Life in Nursing Homes" at the NAPCRG's 29th Annual Meeting which was held in Halifax, Nova Scotia, in October. At the same meeting, **William L. Miller, MD**, Chairperson, Department of Family Practice, co-presented a full-day workshop titled "Multimethod Approaches to Researching Practice Settings." The workshop focused on the collection and analysis of multimethod data designed to understand family practices from the ground up through intensive direct observation of the practice environment and patient care. Dr. Miller also co-presented a workshop – "Literature Review as Qualitative Research: An International, Collaborative, Participatory Search for the Value of Family Practice." In addition, Dr. Miller co-authored two articles – "Practice Jazz: Understanding Variation in Family Practices Using Complexity Science" and "Understanding Practice from the Ground Up" – which were published in ***The Journal of Family Practice***.

Several members of the Department of Family Practice also presented at the 20th Annual Society of Teachers of Family Medicine Northeast Region Meeting, which was held in Mystic, Conn., in October.

- **Eamon C. Armstrong, MD**, gave a poster presentation titled "Morning POEMs" Teaching Point of Care, Patient Centered EBM." Dr. Armstrong along with **Brian Stello, MD**, presented on "Evidence-Based Medicine Starts and Ends with the Patient." Dr. Stello also had a paper presentation – "Just-in-Time" Clinical Practice: Resident Use of Informatics during the Clinical Encounter."
- A paper presentation was given by Dr. Dostal titled "Screening for Health Risk Indicators: Domestic Violence and Tobacco Use." In addition, **Jennifer Neuendorff, DO**, Family Practice resident, and Dr. Dostal gave a paper presentation titled "Bringing Health to Adolescents Through E-COPC."
- **Sarah Nicklin, MD**, gave a paper presentation – "Observation of Resident Skill in Promoting the Doctor-Patient Relationship."

Mark A. Gittleman, MD, Division of General Surgery, recently was an invited speaker at the Annual Clinical Congress of the American College of Surgeons held October 7 to 10, in New Orleans, La. His topics included "Image Guided Breast Biopsy" and "Interventional Breast Ultrasound."

Geoffrey G. Hallock, MD, Division of Plastic Surgery, recently attended the Inaugural Congress of the World Society for Reconstructive Microsurgery in Taipei, Taiwan. He presented a paper on "Further Nomenclature Simplification of Compound Flaps." In addition, he was a discussant on a panel describing "Perforator Flaps." Both are unique approaches in an attempt to improve the versatility of free tissue transfers. Of special interest during the conference was an "on-site" visit to the microsurgery unit in Taipei where they have a 24-bed intensive care unit specifically for microsurgical reconstruction patients only. This is needed to accommodate the almost 1,000 cases of replantation and free flaps that the Chinese do on an annual basis, and represents probably one of the largest such case volume of any institution in the world.

Gregory R. Harper, MD, PhD, Physician in Chief, Cancer Services, co-conducted two workshops during the annual Keystone Breast Cancer Coalition Conference on the STAR Breast Cancer Prevention Trial held October 18, in Harrisburg, Pa. The STAR trial compares tamoxifen and raloxifene in the prevention of breast cancer among high-risk, post-menopausal women.

Indru T. Khubchandani, MD, Lester Rosen, MD, John J. Stasik, MD, and **Robert D. Riether, MD**, all members of the Division of Colon and Rectal Surgery, co-authored an article – "Rectal Prolapse: A Search for the "Best Operation" – which appeared in the July issue of ***The American Surgeon*** (2001;67:622-627).

Michael K. Kim, MD, Division of Otolaryngology-Head & Neck Surgery, gave a presentation in November at the American Thyroid Association National Meeting held in Washington, D.C. His talk was titled "Morbidity Following Central Compartment Reoperation for Recurrent Thyroid Cancer."

Vincent R. Lucente, MD, Chief, Division of Gynecology, co-authored five poster presentations at the recent American Urogynecology Society meeting held October 25 to 28 in Chicago, Ill. He was also the senior author on a video presentation regarding the Laparoscopic Burch procedure, which was presented by **T. Russell Horton, MD**, Chief Resident, Department of Obstetrics and Gynecology. In addition, he was an invited speaker for a panel discussion regarding the Tension Free Vaginal Tape (TVT) for Female Incontinence. Dr. Lucente presented the U.S. Experience. While in Chicago, he was the invited visiting professor for Grand Rounds at Northwestern University Hospital where he presented "New Concepts in Female Lower Urinary Tract Infections."

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Marisa A. Mastropietro, MD, Section of Pelvic Reconstructive Surgery, had an oral presentation at the recent American Urogynecology Society meeting titled, "Pelvic Organ Prolapse: A Range of Normal Values."

Gary G. Nicholas, MD, Chief, Division of Vascular Surgery, and Program Director, General Surgery Residency, was invited to present at surgical grand rounds at Mercy Hospital in Scranton, Pa., on September 7. Dr. Nicholas' presentation – "Ischemic Stroke: Current Therapy" – provided the audience with information on the use of lytic therapy for ischemic stroke, indicators for carotid endarterectomy, and the value of non-invasive testing with ischemic stroke treatment.

Michael D. Pasquale, MD, Chief, Division of General Surgery and Division of Trauma-Surgical Critical Care, co-authored an article titled, "Multi-institutional Experience with the Management of Superior Mesenteric Artery Injuries," which appeared in the October issue of ***The Journal of the American College of Surgeons*** (2001:193:354-366).

Upcoming Seminars, Conferences and Meetings

Emergency Medicine Grand Rounds

Emergency Medicine Grand Rounds are held on Thursdays, beginning at 8 a.m., at alternate locations. Topics for December will include:

December 6 - Auditorium, Cedar Crest & I-78
- Pediatric Case Review – St. Luke's Emergency Medicine Residency
- "Pulmonary Edema: From Blue as a Squid to Happy as a Clam" and "Children are Not Just Small Adults and Other Pediatric Myths"
- Tintinalli Club

December 13 - 4th Floor Conference Room, LVH-M
- M & M
- Lower Extremity Injuries
- Physician Wellness
- Medical Command Tapes

December 20 - 4th Floor Conference Room, LVH-M
- CO Poisoning
- Domestic Violence
- Alcohol Emergencies
- Tintinalli Club

December 27
- No Grand Rounds – Happy Holidays!

For more information regarding Emergency Medicine Grand Rounds, please contact Dawn Yenser in the Department of Emergency Medicine at (484) 884-2888.

Medical Grand Rounds

Medical Grand Rounds are held every Tuesday beginning at noon in the Auditorium of Lehigh Valley Hospital, Cedar Crest & I-78, and via videoconference in the First Floor Conference Room at Lehigh Valley Hospital-Muhlenberg. Topics to be discussed in December will include:

- December 4 - "Hometown Defense by Division of Infectious Diseases and Infection Control"
- December 11 - "Asthma and the Athlete"
- December 18 - "Update in Sleep Medicine"

Medical Grand Rounds will resume on January 8, 2002. For more information, please contact Diane Biernacki in the Department of Medicine at (610) 402-5200.

Department of Pediatrics

Pediatric conferences are held every Tuesday beginning at 8 a.m., in the Auditorium of Lehigh Valley Hospital, Cedar Crest & I-78. Topics to be discussed in December include:

- December 4 – "Imaging the Pediatrics Abdomen"
- December 11 – "The Muscular Dystrophies – An Update"
- December 18 – "Case Presentation"
- December 25 – No Conference

For more information, please contact Kelli Ripperger in the Department of Pediatrics at (610) 402-2540.

General Medical Staff Meeting

A meeting of the General Medical Staff will be held on **Monday, December 10**, beginning at 6 p.m., in the Auditorium at Lehigh Valley Hospital, Cedar Crest & I-78, and via teleconference in the First Floor Conference Room at Lehigh Valley Hospital-Muhlenberg. All members of the Medical Staff are encouraged to attend.

GLVIPA Quarterly General Membership Meeting

The next quarterly general membership meeting of the Greater Lehigh Valley Independent Practice Association will be held on **Monday, December 17**, beginning at 6 p.m., in the Auditorium of Lehigh Valley Hospital, Cedar Crest & I-78. The meeting agenda will include the latest updates regarding contract negotiations, CAPOE, and a presentation on HIPAA compliance. Reminder – in order to receive credit for your attendance, please remember to sign in.

Who's New

The Who's New section of ***Medical Staff Progress Notes*** contains an update of new appointments, address changes, resignations, etc. Please remember to update your directory and rolodexes with this information.

Medical Staff

Appointments

Michael M. Badellino, MD
LVPG-Trauma Surgery
1210 S. Cedar Crest Blvd., Suite 3100
Allentown, PA 18103-6264
(610) 402-1350
Fax: (610) 402-1356
Department of Surgery
Division of Trauma-Surgical Critical Care/General Surgery
Site of Privileges - LVH & LVH-M
Provisional Active

Sabrina J. Logan, MD
LVH Pediatric Intensive Care
Lehigh Valley Hospital
Cedar Crest & I-78, P.O. Box 689
Allentown, PA 18105-1556
(610) 402-7632
Fax: (610) 402-7600
Department of Pediatrics
Division of Hospital Based Pediatrics
Section of Critical Care Medicine
Site of Privileges - LVH & LVH-M
Provisional Active

Ali Salim, MD
LVPG-Trauma Surgery
1210 S. Cedar Crest Blvd., Suite 3100
Allentown, PA 18103-6264
(610) 402-1350
Fax: (610) 402-1356
Department of Surgery
Division of Trauma-Surgical Critical Care/General Surgery
Site of Privileges - LVH & LVH-M
Provisional Active

Anuja Singh, MD
Primary Care Associates in the LV, PC
1150 S. Cedar Crest Blvd., Suite 101
Allentown, PA 18103-7900
(610) 776-1603
Fax: (610) 776-6344
Department of Medicine
Division of General Internal Medicine
Site of Privileges - LVH & LVH-M
Provisional Active

Alex T. Thomas, MD
Base Service Unit 392
2604 Schoenersville Road
Bethlehem, PA 18017-3592
(610) 691-8028
Fax: (610) 954-0608
Department of Psychiatry
Division of Psychiatric Ambulatory Care
Site of Privileges - LVH & LVH-M
Provisional Associate

Appointment to Medical Staff Leadership Positions

L. Wayne Hess, MD
Department of Obstetrics and Gynecology
Position: Chairperson, Department of Obstetrics and Gynecology

Thomas M. McLoughlin, Jr., MD
Department of Anesthesiology
Position: Chairperson, Department of Anesthesiology

Address Changes

Hamburg Family Practice Center
700 Hawk Ridge Drive
P.O. Box 488
Hamburg, PA 19526-9219
- **Robert B. Blauser, MD**
- **David G. Clymer, MD**
- **Paul J. Chwiecko, MD**
- **Nicholas A. DiMartino, DO**
- **E. Brian Petrasek, MD**

Muhlenberg Primary Care, PC
- **Jeffrey S. Brown, DO**
- **Robert L. Stull, DO**

Health Center at Hellertown
1072 Main Street
Hellertown, PA 18055-1508

Thomas R. Lambert, DMD
2299 Brodhead Road
Suite E
Bethlehem, PA 18020-8990
(610) 868-9928
Fax: (610) 868-1289

Status Change

Suzette V. Barreto, MD
Department of Medicine
Division of General Internal Medicine
From: Associate
To: Active
Site of Privileges - LVH & LVH-M

Tamar D. Earnest, MD
Department of Surgery
Division of General Surgery
From: Affiliate
To: Honorary

Robert G. Madeira, MD
Department of Medicine
Division of General Internal Medicine
From: Limited Duty
To: Active
Site of Privileges - LVH & LVH-M

Douglas C. Wiseman, DO
Department of Medicine
Division of Allergy
From: Affiliate
To: Associate
Site of Privileges - LVH-M

One-Year Leaves of Absence

David M. Flowers, MD
Department of Medicine
Division of Cardiology
From: Affiliate
To: Affiliate/LOA

Carla M. Rossi, MD
Department of Medicine
Division of Infectious Diseases
From: Provisional Active
To: Provisional Active/LOA

Additional One-Year Leave of Absence

Robert M. Russo, MD
Department of Family Practice
Affiliate/LOA

Resignations

Jeffrey B. Alpern, DO
Department of Surgery
Division of Cardio-Thoracic Surgery

Richard D. Bellah, MD
Department of Radiology-Diagnostic Medical Imaging
Division of Diagnostic Radiology

Larissa Bilaniuk, MD
Department of Radiology-Diagnostic Medical Imaging
Division of Diagnostic Radiology

Harry W. Buchanan IV, MD
Department of Surgery
Division of Ophthalmology

Luis I. Campos, MD
Department of Surgery
Division of General Surgery

Rene A. Chapados, MD
Department of Pediatrics
Division of Hospital Based Pediatrics
Section of Critical Care Medicine
(Effective 1/2/2002)

Edward C.H. Chen, MD
Department of Medicine
Division of Gastroenterology

William F. Dunleavy, DPM
Department of Surgery
Division of Orthopedic Surgery
Section of Podiatry

David A. Edmonds, DPM
Department of Surgery
Division of Orthopedic Surgery
Section of Podiatry

Janet E. Erickson, MD
Department of Medicine
Division of General Internal Medicine

Jerald N. Friedman, MD
Department of Surgery
Division of General Surgery

Richard M. Hughes, MD
Department of Surgery
Division of Urology

Jimmy W. Huh, MD
Department of Pediatrics
Division of Hospital Based Pediatrics
Section of Critical Care Medicine

Jill V. Hunter, MD
Department of Radiology-Diagnostic Medical Imaging
Division of Diagnostic Radiology
Section of Neuroradiology

William J. Kitei, MD
Department of Surgery
Division of Ophthalmology

Timothy C. Lin, DMD
Department of Dentistry
Division of Endodontics

John K. Mahon, MD
Department of Medicine
Division of Neurology

Richard I. Markowitz, MD
Department of Radiology-Diagnostic Medical Imaging
Division of Diagnostic Radiology
Section of Pediatric Radiology

Whitney J. McBride, MD
Department of Surgery
Division of General Surgery
Section of Pediatric Surgery

Sethuraman Muthiah, MD
Department of Medicine
Division of General Internal Medicine

John L. Potter, DMD
Department of Dentistry
Division of Periodontics

Marion B. Rose, MD
Department of Pediatrics
Division of Pediatric Subspecialties
Section of Cardiology

Eugene M. Saravitz, MD
Department of Surgery
Division of Ophthalmology

Chetan K. Shah, DO
Department of Medicine
Division of Nephrology

Bryan E. Shapiro, MD
Department of Anesthesiology

David A. Shields, MD
Department of Medicine
Division of General Internal Medicine

Lisa J. States, MD
Department of Radiology-Diagnostic Medical Imaging
Division of Diagnostic Radiology
Section of Pediatric Radiology

Terrill E. Theman, MD
Department of Surgery
Division of Cardio-Thoracic Surgery

Julio E. Torres, MD
Department of Medicine
Division of Hematology-Medical Oncology

Robert A. Zimmerman, MD
Department of Radiology-Diagnostic Medical Imaging
Division of Diagnostic Radiology
Section of Neuroradiology

Allied Health Professionals
Appointments

Kristin L. Degler, PA
Physician Extender
Physician Assistant - PA
(Lehigh Valley Medical Associates - Edward J. Rosenfeld, MD)
Site of Privileges - LVH & LVH-M

Denise E. Emery
Physician Extender
Technical - Pacemaker/ICD Technician
(St. Jude Medical)
(Supervising Physician - Steven L. Zelenkofske, DO)
Site of Privileges - LVH & LVH-M

Robert L. Havlicsek II
Physician Extender
Technical - Pacemaker/ICD Technician
(St. Jude Medical)
(Supervising Physician - Steven L. Zelenkofske, DO)
Site of Privileges - LVH & LVH-M

Amy J. Loutrel, PA
Physician Extender
Physician Assistant - PA
(Neurosurgical Associates of LVPG - P. Mark Li, MD)
Site of Privileges - LVH & LVH-M

Eddie W. Malrey, PA-C
Physician Extender
Physician Assistant - PA-C
(Orthopaedic Associates of Allentown - Peter A. Keblish, MD)
Site of Privileges - LVH & LVH-M

Sandra L. Malys, RN
Physician Extender
Technical - Pacemaker/ICD Technician
(St. Jude Medical)
(Supervising Physician - Steven L. Zelenkofske, DO)
Site of Privileges - LVH & LVH-M

Carla B. Peck
Physician Extender
Technical - Pacemaker/ICD Technician
(St. Jude Medical)
(Supervising Physician - Steven L. Zelenkofske, DO)
Site of Privileges - LVH & LVH-M

Mark A. Sabatino
Physician Extender
Technical - Pacemaker/ICD Technician
(Medtronic Incl)
(Supervising Physician - Steven L. Zelenkofske, DO)
Site of Privileges - LVH & LVH-M

Change of Supervising Physician

Brian J. Damweber, PA-C
Physician Extender
Physician Assistant - PA-C
From: Orthopaedic Associates of Allentown - Peter A. Keblish, Jr., MD
To: Lehigh Valley Medical Associates - Anthony P. Buonanno, Jr., MD
Site of Privileges - LVH & LVH-M

Resignations

John J. Malazia, CRNA
Physician Extender
Professional - CRNA
(Allentown Anesthesia Associates Inc)

Bradley A. Nace, PA-C
Physician Extender
Physician Assistant - PA-C
(Lehigh Valley Orthopedic Group, PC)

Robert J. Peterson, PA-C
Physician Extender
Physician Assistant - PA-C
(Orthopaedic Associates of Bethlehem)

We've Moved!

On November 1, Breast Health Services at LVH-Muhlenberg moved to a new location.

The new address is:
2597 Schoenersville Road
Suite 202
(Medical Office Building closest to Westgate Mall)

New phone number (front desk):
(484) 884-MAMM (6266)
New phone number (file room):
(484) 884-5419
New phone number to schedule an appointment: (610) 402-2791

Answer to Mystery Medical Staff Member -
Basil Dolphin, MD

The entire staff of Medical Staff Services and Physician Relations wishes you and your family a very happy and safe holiday season!

MDC Update

What is MDC?

The Multidisciplinary Council (MDC) was developed in early 2001 to address systems issues in quality improvement that involve multiple LVHHN clinical departments. The council aims to develop and implement systems solutions that deliver health care that is: safe, effective, patient-centered, timely, efficient, and equitable. Quality assurance cases are reviewed for trends, multi-department issues, and opportunities for improved communication.

Council members include:

- Karen A. Bretz, MD, Vice Chairperson for Quality Assurance, Department of Anesthesiology
- David M. Caccese, MD, Past President, Medical Staff, and Division of General Internal Medicine
- Kim Hitchings, Manager, Professional Development
- Laurence P. Karper, MD, Vice Chairperson (LVH-M), Department of Psychiatry
- Michael W. Kaufmann, MD, Chairperson, Department of Psychiatry
- Robert Kricun, MD, Chairperson, Department of Radiology-Diagnostic Medical Imaging
- Susan Lawrence, Administrator, Case Management
- Pamela F. LeDeaux, MD, Residency Program Director, Department of Family Practice
- Zubina M. Mawji, MD, Division of General Internal Medicine
- Francine Miranda, Risk Manager, Legal Services
- Michael D. Pasquale, MD, Chief, Division of General Surgery and Division of Trauma-Surgical Critical Care
- Albert J. Peters, DO, Chief, Section of Reproductive Endocrinology & Infertility
- David M. Richardson, MD, Department of Emergency Medicine
- Howard D. Rosenberg, MD, Co-chief, Section of Pediatric Radiology
- Paula L. Stillman, MD, MBA, Senior Medical Director, Care Management
- John D. Van Brakle, MD, Chairperson, Department of Pediatrics
- Michael S. Weinstock, MD, Chairperson, Department of Emergency Medicine

From time to time, the MDC will submit updates, evidence-based suggestions, and systems changes to *Medical Staff Progress Notes*. Members of the Medical Staff are invited to relay questions about MDC or suggestions for systems issues of concern to the MDC Chairperson via email at Zubina.Mawji@lvh.com or via direct page at 610-402-5100 1456.

MDC Issue #1—Surgical patients with COPD
Recommendation #1: Order Pre-operative ABGs in selected COPD patients

Literature review:

- Post-operative pulmonary complications contributing to morbidity and mortality are at least as common as cardiac complications, yet no clear guidelines exist for pre-operative pulmonary evaluations.
- As the surgical incision site approaches the diaphragm, the risk of pulmonary complications increases, but is rare following procedures outside the thorax and abdomen.
- Dyspnea at rest, hypoxemia, and in some studies elevated Pa CO_2 values, are associated with the need for post-operative mechanical ventilation.

Therefore, pre-operative ABG values may be helpful for those patients with known or suspected hypercapnea, and patients hypoxemic on room air, or who require the use of supplemental home oxygen.

Sources: Ann Int Med 1990; 112: 793-4
NEJM 1999; 340: 937-44
NEJM 1999; 341: 613-14

Authors: Karen Bretz, MD
Stephen Matchett, MD
David Caccese, MD

The Last Word...

Tips and Techniques for the Lastword™ User

December, 2001 – Volume 1, Issue 2

INBOX Alerts & Reminders

by Carolyn K. Suess, R.N.

The *INBOX – Alerts & Reminders* window on the *Physician Base* screen in Lastword serves as a reminder to review abnormal lab results, as well as new ancillary results. The alerts are provided as a courtesy to physicians practicing at Lehigh Valley Hospital.

Abnormal Lab Results

To access abnormal lab results, click on this alert, then click on the **Select** button located at the bottom of the *INBOX - Alerts & Reminders* window (you may also double-click on the alert to open it – see Figure 1). The *Inbox: Resolve Lab Results* screen opens, displaying abnormal results (see Figure 2).

The window on the left side of the screen lists the patient's name, the name of the test, and abnormal and FYI indicators (see heading *FYI and Primary Alerts*). Click on the patient then, click on the **Select** button at the bottom of the window to choose the result you wish to view (you may also double-click to select the patient). Upon selecting the patient, the *Result Text* window displays the abnormal result information. Click

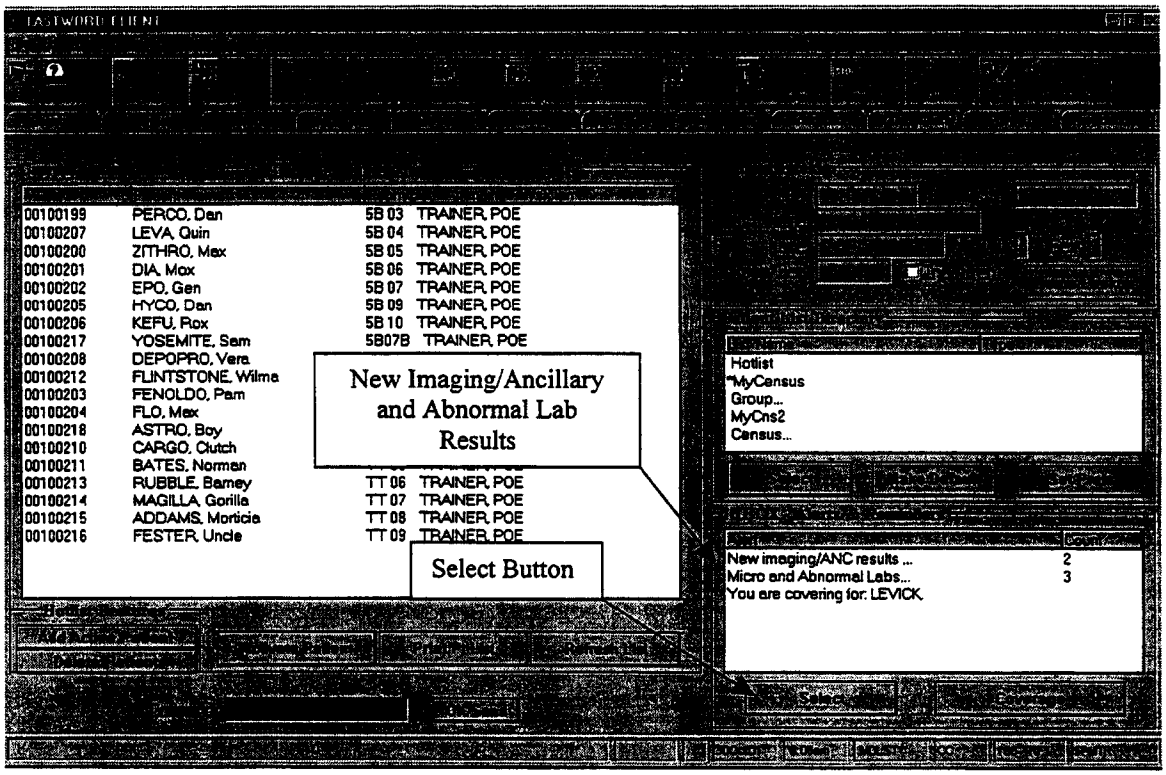

Figure 1 - Physician Base Screen

on the **Acknowledge** button to indicate you have viewed the result.

To forward the result to another provider, click on the **Forward to...** button. The *Forward Alert* window opens (see Figure 3). Right click on the *Forward to:* text box to view a provider list. You may also free text the provider name by entering last name followed by a comma and full first name. The result may be forwarded to a total of four providers.

If you wish to include a reason for forwarding the result, click on the **Enter Editor** button and free text a message in the *Reason for Forward* window. Adding a reason for forwarding a result is strictly optional. When you have completed your message, click on the *Navigate* pull-down menu and select **OK**.

To reassign the abnormal lab result to another provider for sign-off, click on the pull-down list next to the *Reason for Reassign* text box and make a selection (you may also free text your reason in the text box). Click on the **Reassign** button and the alert will be reassigned to the provider you listed in the *Forward to:* text box.

Click on the **Forward on Record** button to create a record of the forward transaction. If you prefer not to have a record of the transaction, click on the **Forward off Record** button.

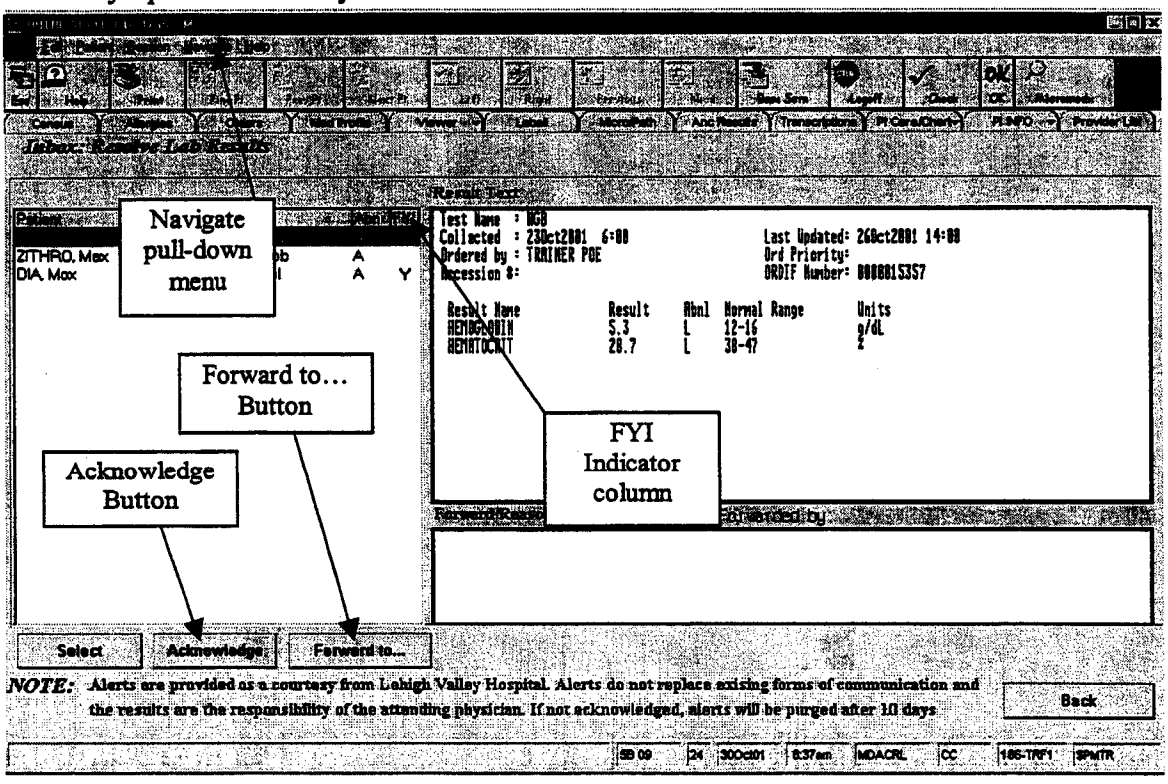

Figure 2 - Inbox: Resolve Lab Results window

Should you decide you do not want to forward the result, click on the **Cancel** button to return to the *Inbox: Resolve Lab Results* screen.

New Imaging Results

Accessing new imaging results is done in much the same way as accessing abnormal lab results. Click on the *New imaging/ANC results...* alert, then click on the **Select** button located at the bottom of the *INBOX* window (you may also double-click on the alert to select it). The *Inbox: Resolve Ancillary/Radiology Results* screen opens, displaying new results.

The left side of the screen lists the patient's name, the name of the test, and FYI indicators (see heading *FYI and Primary Alerts*). Click on the patient then click on the **Select** button at the bottom of the window to choose the result you wish to view (you may also double-click on the patient to select it). Upon your selection, the *Result Text* window displays the ancillary/radiology result information for the patient. Click on the **Acknowledge** button to indicate you have viewed the result. This removes the entry from your list.

As with abnormal lab results, the same steps are used to forward imaging results to other providers.

It is important to note, acknowledging an *INBOX* result is **not the same** as verifying and signing them in the IMNET/PIM medical records system.

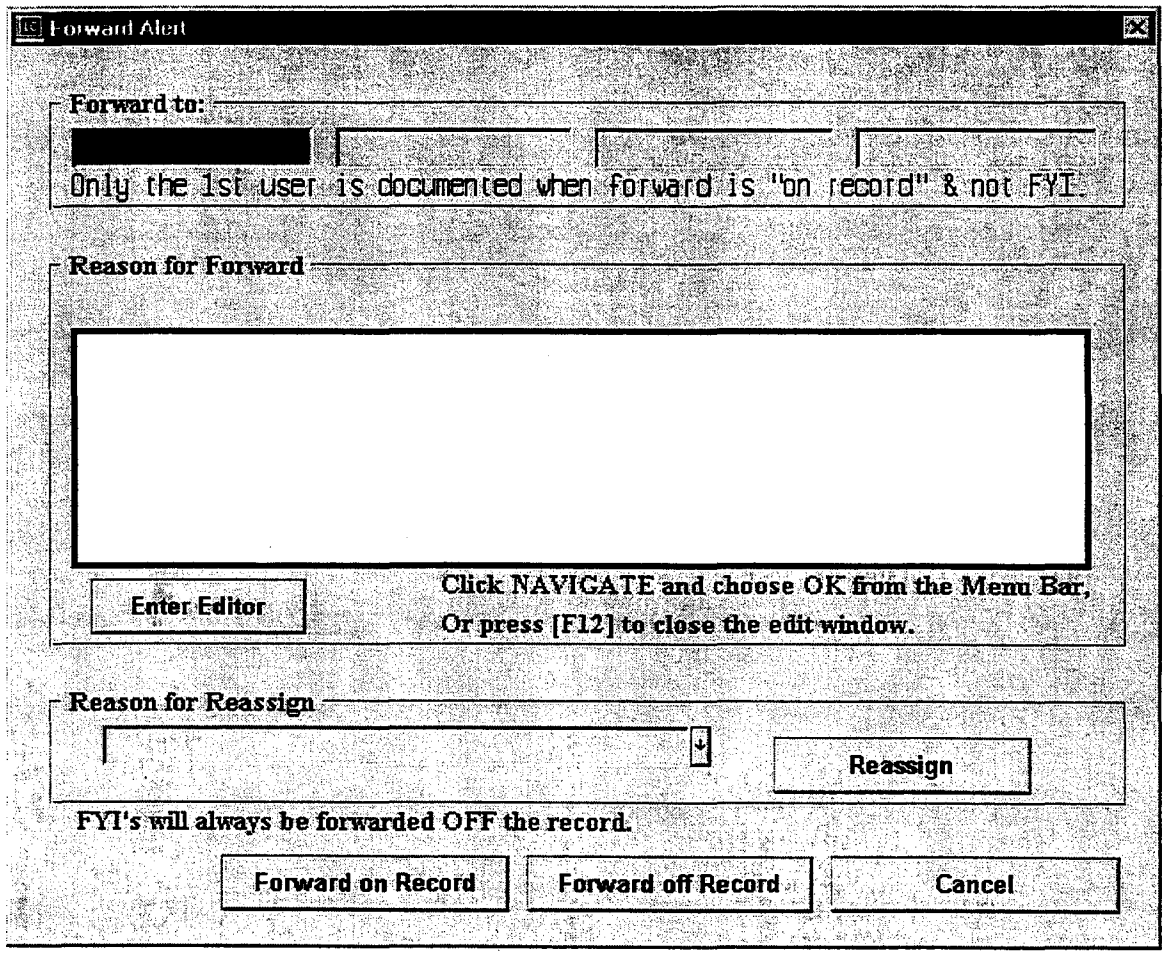

Figure 3 - Forward Alert window

FYI and Primary Alerts

As mentioned in the previous paragraphs, FYI indicators may appear in either the *Inbox: Resolve Lab Results* or the *Inbox: Resolve Ancillary/Radiology Results* screens (see Figure 2). *FYI* alerts are those that had been ordered by another physician in your group. These alerts are sent to your *INBOX* as a courtesy.

Primary alerts are those that are associated with the ordering physician. That is to say, any lab or ancillary result you order generates a primary alert.

Starting in mid-December of this year all FYI alerts will automatically purge from your *INBOX* after five days, and all primary alerts will automatically purge after 10 days. This does not mean the results are purged. Lab results can be displayed in the *Viewer* and *Laball* chart tabs, and imaging results can be displayed in *Anc Results* chart tab.

To learn more about INBOX and other Lastword features, please take a moment and review the on-line documentation for Lastword Version 4.1.7. Both the CAPOE and Non-CAPOE Physician User Guides can be found on the LVHNN Intranet under the *Resources* heading **Lastword for Physicians.**

If you wish to obtain a paper copy of either document, please contact one of the Physician Software Educators on staff:

Lynn Corcoran-Stamm - ext.1425
Kimberlee Szep, R.N. - ext. 1431
Carolyn K. Suess, R.N. – ext.1416

Lynn, Kimberlee and Carolyn will be pleased to assist you.

LAB-LINK

Information And Advice About Our Laboratory

November 15, 2001

Effective **December 4, 2001**, at 10:00 a.m., **Arterial Blood Gas** testing at **Lehigh Valley Hospital-Muhlenberg** will be transferred from Respiratory Services to Health Network Laboratories Rapid Response lab. Collection procedures will continue to be maintained by the respiratory staff.

As with laboratory reports at all Lehigh Valley Hospital sites, results will be sent from the laboratory computer system directly to Phamis terminals.

The following parameters will be phoned by the laboratory:

- Critical Values
  - pH: <7.20 or >7.55
  - pCO_2: <20mmHg or >60mEq/L
  - pO_2: <60mmHg
  - TCO_2: <15mEq/L or >40mEq/L
- All specimens originating from the Operating Room
- When requested by the ordering physician

Changes in the Phamis system are being defined by Information Services and educational inservices will be conducted by nurse educators for their respective staff.

Note: To provide standardized reporting at all hospital sties, the TCO_2 parameter will be added to the ABG battery at Cedar Crest and 17th Street sites.

If you have any questions, please call Dolores Benner at 610-402-8177, Dr. Elizabeth Dellers at 484-884-4267, or Dr. William Dupree at 610-402-8140.

Health Network LABORATORIES

CHEMISTRY

LAB-LINK

Information And Advice About Our Laboratory

November 15, 2001

When testing for Beta Human Chorionic Gonadotropin (BhCG), a spuriously elevated result may be obtained in **those individuals with the presence of heterophil antibodies**.

Therefore, **effective December 3, 2001,** the following comment will be attached to all BhCG results:

> ***"A spuriously elevated BhCG result may be obtained in the presence of heterophil antibodies. Before making a final diagnosis based on an elevated or repetitively inconclusive BhCG result, an additional BhCG test - with the use of heterophilic antibody blocking mechanism (not FDA approved) - may be indicated.***
> ***The test must be ordered by a physician as:***
> ***"Beta hCG with heterophilic antibody blocking mechanism" (Test Code BhCGH)."***

NOTE: This test is **not replacing the basic pregnancy test** (Beta Human Chorionic Gonadotropin, BhCG). **It is to be utilized as a follow-up test** when the initial results do not correlate with the clinical picture.

If you have any questions, please call our Customer Care Call Center at 610-402-8170 or Dolores Benner at 610-402-8177.

THERAPEUTICS AT A GLANCE

The following actions were taken at the October 2001 Therapeutics Committee Meeting - Joseph Ottinger, R.Ph., MS, MBA, Janine Barnaby, R.Ph., Jenny Boucher, Pharm.D., Viraj Patel, Pharm.D., Heidi Mayville, Pharm.D.

COMPAZINE AUTOSUB

The Therapeutics committee approved a therapeutic substitution to address an on-going product shortage of prochlorperazine **injection.** The Pharmacy was authorized to change all **'prn'** prochlorperazine injection orders to promethazine injection. The following dose conversion was endorsed:

> prochlorperazine doses of 5mg or less will be converted to 12.5 mg of promethazine
> prochlorperazine doses > than 5mg but ≤ 10mg will be converted to 25mg of promethazine.

The initial route and frequency of administration will be preserved in the conversion process, as will any limits on the number of doses or duration of therapy specified in the original order.

FORMULARY ADDITIONS

The Therapeutics committee approved the following agents to the Formulary at its October meeting:
Hydrocodone/acetaminophen tablets- Vicodin and Vicodin ES formulations
Dorzolamide/timolol ophth soln- CoSopt ophth soln
Fluticasone/salmeterol diskus inh- Advair Diskus inh
Oxcarbazepine tablet-Trileptal
Levetiracetam tablet- Keppra
Glargine insulin- Lantus insulin

HEPARIN THERAPEUTIC RANGE CHANGES

The annual recalibration of the therapeutic heparin range has been performed by the Clinical Laboratory. This activity is necessitated by a change in the lot number of the existing reagent. Usually the titration curve is modified by a small degree- unlike our previous year's adjustment, that was the result of a the purchase of a new high sensitivity reagent. The new therapeutic target, coincident with a heparin activity level of 0.3 units/ml-0.7 units/ml, is 69-101 seconds. ALL heparin regimens previously identified on preprinted order sheets will be adjusted accordingly. Attached to this newsletter is the template for the revised Heparin Order Sheet, based on the modified therapeutic range.

DROTRECOGIN ALFA

A unique 'physician order form' was approved that combined a criteria for use section along with the medication order for this novel agent. Although not yet FDA approved, this agent appears to have provided a significant mortality benefit in a limited study population. Therefore, the intent of the new document was to provide the clinician with a clearly identified set of criteria (established in the PROWESS study), where this agent was found to be beneficial. This extraordinary step was motivated not only by the unique mechanism of action of this product, but also by its forecasted financial impact. Although, not known at this time, the cost of a course of treatment with this agent may range from $5,000-$20,000 per patient. A limitation on perspective prescribers and usage in selected patient-care areas was also approved.

Attached is the template for this document, which was formulated through the combined efforts of Leslie Baga, (Trauma Study Coordinator), Dr. Mark Cipolle, Dr. Marcelo Gareca, Dr. Stephen Matchett and Joe Ottinger (Clinical Pharmacy).

PROTOCOL ORDER SHEET FOR Drotrecogin Alfa (XIGRIS™) IN SEVERE SEPSIS

RESTRICTED TO PHYSICIAN SPECIALITIES PRACTICING IN THE ICU INCLUDING:

PULMONARY SPECIALISTS, INFECTIOUS DISEASE SPECIALISTS, AND SURGEONS

CRITERIA SHEET MUST BE COMPLETED AND SENT TO PHARMACY PRIOR TO DISPENSING DRUG

PATIENT MUST SATISFY ALL CRITERIA TO RECEIVE DROTECOGIN ALFA

YES	NO	
		Known or suspected infection (e.g., positive blood culture, perforated viscus, WBC count in normally sterile body fluid, radiographic evidence of pneumonia with the production of purulent sputum)

AND

3 OF THE FOLLOWING:

YES	NO	
		Fever ≥ 38 degrees C (100.4 degrees F) or hypothermia ≤ 36 degrees C (96.8 degrees F)
		HR ≥ 90 beats/minute except in those patients with a medical condition known to increase the heart rate
		WBC count ≥ 12,000/mm^3 or ≤ 4,000/mm^3 or > 10% immature neutrophils
		Respiratory rate ≥ 20 breaths per minute or a PaCO2 ≤ 32mm Hg or the use of mechanical ventilation for an acute process

AND

ORGAN DYSFUNCTION WITHIN 48 HOURS DUE TO *SEPSIS* DESPITE ADEQUATE FLUID RESUSCITATION

(One of the following)

		CRITERIA
YES	NO	Organ Dysfunction
		1. Cardiovascular **An arterial sytolic BP ≤ 90 mm Hg OR a MAP ≤70mm Hg for at least 1 hour despite adequate fluid resuscitation, adequate intravascular volume status and/or the need for vasopressors to maintain systolic blood pressure ≥ 90 mm Hg or MAP ≥ 70 mm Hg.**
		2 Renal **Urine output < 0.5 ml/kg/hr for > 1hour, despite adequate fluid resuscitation**
		3 Respiratory **PaO2/FiO2 ratio ≤ 250 in the presence of other dysfunctional organs. (If patient has pneumonia alone, the patient must have a PaO2/FiO2 ratio ≤ 200)**
		4 Hematology **Platelet count of < 80,000/ mm^3 or a 50% decrease in the platelet count from the highest value recorded over the past 3 days.**
		5 Metabolic Acidosis **PH ≤ 7.30 or base deficit ≥ 5.0 mEq/L or a plasma lactate level > 1.5 times the upper limit of normal.**

AND NONE OF THE FOLLOWING

Of the following Contraindications:

-Yes___ No___ Active internal bleeding
-Yes___ No___ Recent (within 3 months) hemorrhagic stroke
-Yes___ No___ Recent (within 2 months) intracranial or intraspinal surgery, or severe head trauma requiring hospitalization
-Yes___ No___ Any history of intracerebral arteriovenous malformation, cerebral aneurysm, or mass lesion of the CNS
-Yes___ No___ Less than 12 hours post surgery requiring general or spinal anesthesia
-Yes___ No___ Trauma patients with increased risk of life-threatening bleeding
-Yes___ No___ Patients with an epidural catheter
-Yes___ No___ Patients with known hypersensitivity to drotrecogin alfa (activated) or any component of the product
-Yes___ No___ Patients who have via Advanced Directives indicated that therapy of this type not be pursued.

Other patient specific Issues THAT MAY PRECLUDE USE OF THIS AGENT, BUT THAT ARE LEFT TO THE DISGRESSION OF THE PRESCRIBING PHYSICIAN INCLUDE:

-Initial platelet count < 20,000/mm3
-History of congenital bleeding diatheses
-GI bleeding within 6 weeks
-Less than 3 months from ischemic stroke
-Chronic renal failure requiring dialysis
-Known or suspected portosystemic hypertension, chronic jaundice, cirrhosis, or chronic ascites
-Unfractionated heparin within the last 8 hours (<15,000 units per 24 hours permitted)
-Concurrent use of a direct thrombin inhibitor
-Use of 'Treatment dose' Low Molecular Weight Heparins (LMWH) wthin the past 12 hours.
-ASA (>650 mg/ day within the past 3 days) or NSAIDS should be discontinued
-Anti-platelet agents, thrombolytics (Within the past 3 days), or glycoprotein IIb/IIIa inhibitor (within the past 7 days)
-Pregnancy and/or active breast feeding
-Known hypercoaguable condition
-Recent history of bone marrow or solid organ transplantaton.
-Patients with HIV (CD4 <50)
-Patients with poorly controlled neoplasms or other end-stage processes
-Age < 18 yo.
-Weight >135 KG

MEDICATION ORDER:

Start Drotecogin alfa 24 mcg/kg/hr. (patient wgt._____ kg; no dosing guidelines exist for pateints >135 kg)) ASAP. Infuse at this rate for 96 hours. If therapy is interrupted, drotrecogin should be discontinued 97 hours after therapy was initially started

Drotrecogin should be administered via a dedicated line.
Hold all other anticoagulant agents..
Hold infusion and contact physician immediately, if any bleeding is noted.
Hold infusion 1 hour prior to any percutaneous procedure or major surgery.
Resume infusion 1 hour after a percutaneous procedure and 12 hours after major surgery, unless otherwise instructed.

Monitor:
CBC daily, while on drotrecogin.

PATIENT MEETS ALL PROTOCOL CRITERIA DESCRIBED ABOVE.. INITIATE THERAPY DECSCRIBED ABOVE:

Physician Signature:_____ Date:_____

HEPARIN ORDER SHEET 12-Nov-1

DRUG INTOLERANCES: REACTIONS: DRUG ALLERGIES: REACTIONS: NONE KNOWN **Selected Protocols for Treatment and heparin dose adjustments are listed on the reverse side of this form**	

If the patient is a candidate for Low Molecular Weight heparin for the treatment of uncomplicated DVT with or without PE, enoxaparin 1mg/kg q12h SQ or 1.5 mg/kg q24h SQ has been shown to be as equally efficacious and safe as unfractionated heparin. Please initiate the "Outpatient" DVT treatment protocol and use that order set.

Height=	Current laboratory standards for aPTT are listed below: **Normal= 21-37 seconds** **Equivalent therapeutic aPTT range for 0.3- 0.7 units/ml heparin level (based on anti-factor Xa activity)= 69-101 seconds**
Weight (kg)=	

1. Identify reason for use (CHECK ONE): Unstable angina/MI ___ Treatment of DVT/PE ___
Stroke ___ Other ___

SELECT TREATMENT REGIMEN (CHECK ONE)

2. ___ Use "Cardiac" dosing protocol (ACC/AHA Model)-*See reverse side of order.*
___ Use Modified Raschke dosing protocol (PE/DVT)-*See reverse side of order.*
___ Use Stroke/TIA dosing protocol. *See reverse side of order.*
___ Use specific dosing regimen identified below (Must describe heparin dose modifications and PTT targets on this order sheet below)

3. Obtain baseline , aPTT, CBC prior to initiating therapy, if not already done in previous 24 hr period. If baseline aPTT elevated, call physician to notify.

4. Obtain patient weight in kg. prior to initiating therapy. Complete weight field

5 Obtain aPTT 6 hours after each dosing adjustment until targeted aPTT range is achieved. Modify dose as directed by preselected protocol or as directed below. Once targeted aPTT range is achieved, obtain aPTT daily to monitor.

6. Obtain platelet count every _____ day(s). Call if platelet count <100,000/mm^3

7. If heparin dose is greater than 20 units/kg hr without attaining a targeted aPTT, obtain HEPARIN LEVEL
Yes ___ No ___

8. Test all stools for occult blood

9 Make all dosing adjustments as promptly as possible as directed. Round all doses to the nearest 100 units.

Dosing scale must be completed below, if none of the formatted protocols is selected above

Initial heparin bolus: _____ units now.

Immediately follow with infusion of heparin 25,000 units/ 250 mls (100 units/ml) and adjust the infusion rate as follows: **(Only Complete if you checked off 'specific dosing protocol**

PTT value (s) (SECONDS)	Heparin adjustment (s)
IF PTT	
IF PTT	
IF PTT	
IF PTT	
IF PPT	
IF PTT	
IF PTT	

ACC/AHA (Cardiac Protocol) Loading dose of 60 units/kg (maximum bolus 4,000 units), followed by an initial infusion rate of 12 units/kg/hr (maximum 1,000 units/hr. Adjust as indicated below.

Cardiac heparin protocol adjustments

PTT <38	Give 40 unit/kg bolus (maximum 4,000 units):increase heparin infusion rate by 100 units/hr (<80kg) OR 200 units/hr (≥80kg)
PTT 38-55	Give 20 unit/kg bolus; increase heparin infusion rate by 100 units/hr (all weights)
PTT 56-68	Increase heparin infusion by 100 units/hr (all weights)
PTT 69-89	NO CHANGE
PTT 90-119	Decrease heparin infusion rate by 100 units/hr (all weights)
PTT 120-145	Decrease heparin infusion rate by 100 units/hr (<80kg) OR 200 units/hr (≥80kg)
PTT 146-180	Stop heparin for 1 hour. Decrease heparin infusion rate by 200 units/hr (<80kg) 300 units/hr (≥80kg)
PTT > 180	CALL PHYSICIAN FOR FURTHER ORDERS

Raschke (DVT/PE protocol) Loading dose of 80 units/kg, followed by an initial infusion rate of 18 units/kg/hr. Adjust as indicated below.

Modified Raschke heparin protocol adjustments (PE/DVT)

PTT < 38	80 unit/kg bolus. Increase infusion rate by 4 units/kg/hr
PTT 38-68	40 units/kg bolus. Increase infusion rate by 2 units/kg/hr
PTT 69-101	NO CHANGE
PTT 102-130	Reduce infusion rate by 1units/kg/hr
PTT 131-155	Reduce infusion rate by 2 units/kg/hr
PTT 156-179	Hold heparin for one hour. Reduce infusion rate by 3 units/kg/hr.
PTT≥180	CALL PHYSICIAN FOR FURTHER ORDERS.

Stroke/TIA protocol Loading dose not recommended. Initiate infusion rate at 15 units/kg/hr. Adjust as indicated below

Stroke/TIA heparin protocol adjustments

PTT < 55	Increase infusion rate by 100 units/hr
PTT 55-100	NO CHANGE
PTT 101-140	Decrease infusion rate by 100 units/hr
PTT> 140	Hold heparin for 2 hours. Reduce infusion rate by 200 units/hr

RENAL TRANSPLANT DRUGS -DRUG INTERACTIONS

Many patients who have undergone transplantation take more than 8 different medications daily as part of their required therapy. Renal transplant recipients are prescribed multiple medications to sustain the transplanted organ and to treat concomitant conditions; therefore, encountering a drug-related problem is common in this patient population. The purpose of this article is to identify drug-related problems, specifically interactions involving drugs commonly used in renal transplant patients. Drug interactions, a common type of drug-related problem, are categorized as pharmacokinetic, pharmacodynamic, or a combination of both. Pharmacokinetic drug interactions include changes in absorption, distribution, excretion, and metabolism, whereas pharmacodynamic drug interactions may lead to antagonistic or synergistic effects. Not all drug interactions are undesirable; in fact, many drug interactions are used to produce desirable effects (e.g, using a calcium channel antagonist to increase immunosuppressant concentrations, thereby requiring a lower immunosuppressant dose).

Patients who take a drug that has a narrow therapeutic index with another drug(s) that interferes with the pharmacokinetic properties of the object drug are at increased risk of experiencing a drug interaction. Also, patients who take multiple medications daily or take multiple doses of medications daily are at an increased risk for an undesirable drug interaction. Because renal transplant patients often take immunosuppressive agents that have narrow therapeutic indices and are subjected to multiple medications daily, these patients are vulnerable to experiencing adverse drug events. To prevent adverse drug interactions, an alternative therapy should be considered when possible or the dose or schedule of the drugs should be adjusted to reduce the occurrence of an adverse effect. Careful monitoring to prevent and detect adverse effects is an essential part of patient care.

Pharmacokinetic Drug Interactions

A common pharmacokinetic interaction involves drugs that interfere with the absorption of other medications. Drugs that bind (e.g, cholestyramine) potentially increase the gastrointestinal absorption of another drug (e.g, tacrolimus). Typically administering the agents 2-3 hours apart can prevent this interaction. Prokinetic agents (e.g,,metoclopramide) interfere with the rate of absorption. Since many transplant patients take prokinetic agents, this may increase the bioavailability of other medications. This is of clinical significance with immunosuppressive agents, such as cyclosporine. If the prokinetic agent cannot be avoided, careful monitoring (e.g, serum drug levels, clinical presentation of patient) and adjustments should be made to prevent immunosuppressant toxicity.

CYP-450 Inhibition

Cyclosporine and tacrolimus are two of the most commonly used immunosuppressants in renal transplant patients. Both cyclosporine and tacrolimus are metabolized by the 3A-4 subfamily of the cytochrome P450 (CYP-450) system. This system is responsible for the metabolism of more than 30% of drugs, and therefore many

medications that induce or inhibit the CYP-450 system are commonly administered and may potentially cause a drug interaction. Examples of classes that inhibit the CYP-450 system include azole antifungals, macrolide antibiotics, and calcium channel antagonists. Examples of drugs that induce the CYP-450 system include phenytoin and rifampin. Although it is difficult to predict the onset of the interaction on an individual basis, the time to onset is related to the half-life of the drugs involved and the half-life of enzyme production. Significant drug interactions of this type have been known to cause nephrotoxicity, neurotoxicity, and graft rejection.

HMG-CoA Reductase Inhibitors

Many transplant patients have hyperlipidemia and are frequently prescribed HMG-CoA reductase inhibitors. Cyclosporine, tacrolimus, and sirolimus may interact with HMG-CoA reductase inhibitors, which could result in increased serum concentrations of HMG-CoA reductase inhibitors up to 20-fold. This interaction can result in serious injury by causing rhabdomyolysis, acute renal failure, and even graft loss. It is recommended when using these agents in combination with cyclosporine, tacrolimus, or sirolimus to begin therapy with a low-dose HMG-CoA reductase inhibitor and to obtain baseline and follow-up creatinine phosphokinase measurements every 6 months.

Pharmacodynamic Drug Interactions

There are numerous pharmacodynamic interactions associated with immunosuppressive drug therapy. The concomitant use of cyclosporine or tacrolimus with aminoglycosides, vancomycin, amphotericin B, ganciclovir, acyclovir, and nonsteroidal anti-inflammatory medications may increase nephrotoxicity. Gingival hyperplasia is another adverse effect associated with agents commonly used in transplant patients, such as cyclosporine, phenytoin, and calcium channel antagonists. Other adverse drug effects seen in this population include hyperkalemia caused by ACE inhibitors, potassium-sparing diuretics, and cyclosporine or tacrolimus; and excessive hair growth as a result of minoxidil and cyclosporine. Myelosuppression can result from administration of agents commonly prescribed in the transplant population. Drugs such as ganciclovir, trimethoprim-sulfamethoxazole, mycophenolate, allopurinol, and azathioprine can cause myelosuppression. To avoid adverse events, selection of another drug in a different class should be considered. However, in many situations, avoiding a medication is not possible, and it may be necessary to use more than 1 medication associated with a particular adverse event (e.g, gingival hyperplasia associated with the concomitant use of phenytoin and cyclosporine). In these instances, careful attention to monitoring (e g, adequate dental hygiene, electrolyte measurements, and complete blood count monitoring) is necessary. Refer to Tables 1, 2, and 3 for lists of common drug interactions with immunosuppressive agents.

TABLE 1: Cyclosporine (CsA) and Tacrolimus Drug Interactions

DRUG	MECHANISM	EFFECTS	COMMENTS
Acetazolamide	Decreases clearance	Increases Cs/FK level	Monitor levels
Acyclovir	Crystallization in renal tubules	Nephrotoxicity	Make sure patient is adequately hydrated; monitor SCr and renal function; infuse slowly
Amikacin	Synergistic nephrotoxicity	Nphrotoxicity	Monitor levels; Monitor Scr and renal function
Amiloride	Decreases K+ secretion	Hyperkalemia	Avoid in transplant recipients
Amiodarone	Decreases clearance	Nephrotoxicity	Monitor SCr and renal funct
Amlodipine	Decreases clearance	Increases CsA/FK level	10% to 15% increase in CsA/FK level; monitor levels
Amphotericin B	Synergistic nephrotoxicity	Nephrotoxicity	Make sure patient is adequately hydrated and monitor electrolytes
Atorvastatin	Decreases clearance of statins	Myopathy, rhabdomyolysis	Monitor CPK and for the development of rhabdomyolysis
Azithromycin	Decreases clearance	Increases CsA/FK level	Monitor levels
Bromocriptine	Decreases clearance	Increases CsA/FK level	Monitor levels
Calcium channel antagonists	Synergistic gingival hyperplasia	Gingival hyperplasia	Adequate dental hygiene
Carbamazepine	Increases clearance	Decreases CsA/FK level	Monitor levels
Carvedilol	Decreases clearance	Increases CsA/FK level	Monitor levels
Chloroquine	Decreases clearance	Increases CsA/FK level	Monitor levels
Cholestyramine	Decreases absorption	Decreases CsA/FK level	Separate doses by 3 hours
Cimetidine	Decreases clearance	Increases CsA/FK level	Use another H2 antagonist agent (ranitidine, famotidine
Clarithromycin	Decreases clearance	Increases CsA/FK level	Monitor levels
Clotrimazole	Decreases clearance	Increases CsA/FK level	Monitor levels
Colchicine	Increases neurotoxicity	Gastrointestinal dysfunction and neuromyopathy	
Co-trimoxazole	Inhibits creatinine secretion	Increases serum creatinine	Monitor SCr and renal function
Danazol	Inhibits clearance	Increases CsA/FK level	Monitor levels
Digoxin	Decreases clearance of digoxin	Increases digoxin level	Monitor digoxin level
Diltiazem	Decreases clearance	Increases CsA/FK level	Monitor levels

Enalapril	Renal dysfunction	Increases serum creatinine	Monitor SCr and renal function
Erythromycin	Decreases clearance	Increases CsA/FK level	Monitor levels
Fluconazole	Decreases clearance	Increases CsA/FK level	Monitor levels
Fluvoxamine	Decreases clearance	Increases CsA/FK level	Monitor levels
Fosinopril	Renal dysfunction	Nephrotoxicity	Monitor SCr and renal function
Fosphenytoin	Increases clearance	Decreases CsA/FK level	Monitor levels
Ganciclovir	Synergistic nephrotoxicity	Nephrotoxicity	Make sure patient is adequately hydrated; monitor SCr and renal function
Gentamicin	Synergistic nephrotoxi	Nephrotoxicity	Monitor levels; monitor SCr and renal function
Grapefruit juice	Increases bioavailability	Increases CsA/FK level	Monitor levels
Griseofulvin	Decreases CsA/FK level	Decreases CsA/FK effectiveness	
Isoniazid	Decreases clearance	Increases CsA/FK level	Monitor levels
Itraconazole	Decreases clearance	Increases CsA/FK level	Monitor levels; decrease dosage 50% to 85%
Ketoconazole	Decreases clearance	Increases CsA/FK level	Monitor levels; decrease dosage 25% to 75%
Lovastatin	Decreases clearance of statins	Myopathy, rhabdomyolysis	Monitor CPK and for the development of rhabdomyolysis
Methylprednisolone	Decreases clearance	Increases CsA/FK level	Seen at high doses of methylprednisolone
Methyltestosterone	Decreases cyclosporine metabolism	Increases CsA/FK level	Monitor levels
Metoclopramide	Decreases gastric emptying time	Increases CsA/FK level	Increase peak and AUC by 25% to 50%; monitor levels
Metronidazole	Decreases clearance	Increases CsA/FK level	Monitor levels
Nafcillin	Increases CsA/FK clearance	Decreases CsA/FK level	Monitor levels
Nefazodone	Decreases CsA/FK clearance	Increases CsA/FK level	Monitor levels
Nicardipine	Decreases CsA/FK clearance	Increases CsA/FK level	Monitor levels
NSAIDs	Synergistic nephrotoxicity	Nephrotoxicity	CsA/FK induced vasoconstriction is influenced by prostaglandin inhibition; monitor SCr and renal function
Octreotide	Decreases intestinal absorption of CsA/FK	Decreases CsA/FK level	Monitor levels
Phenobarbital	Increases CsA/FK clearance	Decreases CsA/FK level	Monitor levels

Phenytoin	Synergistic gingival hyperplasia	Gingival hyperplasia	Adequate dental hygiene
Pravastatin	Decreases clearance of statins	Myopathy, rhabdomyolysis	Monitor CPK and for the development of rhabdomyolysis
Rifabutin	Increases CsA/FX clearance	Decreases CsA/FK level	Monitor levels; rifabutin is a less potent hepatic enzyme inducer than rifampin
Rifampin	Increases CsA/FX clearance	Decreases CsA/FK level	Monitor levels
Simvastatin	Decreases clearance of statins	Myopathy, rhabdomyolysis	Monitor CPK and for the development of rhabdomyolysis
Sirolimus		Increases CsA levels	Monitor levels; monitor SCr and renal function
Spironolacton	Decreases K+ secretion	Hyperkalemia	Monitor K+
Terbinafine	Decreases CsA/FK clearance	Increases CsA/FK level	Monitor levels
Ticlopidine	Increases CsA/FK clearance	Decreases CsA/FK level	Monitor levels
Tretinoin	Inhibits tretinoin metabolism	Increases tretinoin toxicity	
Triamterene	Decreases K+ secretion	Hyperkalemia	Monitor K+
Tobramycin	Synergistic nephrotoxicity	Nephrotoxicity	Monitor levels; monitor SCr and renal function
Vaccines		Decreases response to vaccination	
Valacyclovir	Hemolytic uremic syndrome	Renal dysfunction	Monitor SCr and renal function
Valproic acid	Decreases clearance	Increases CsA/FK levels	Monitor levels
Vancomycin	Synergistic nephrotoxicity	Nephrotoxicity	Monitor SCr and renal function
Verapamil	Inhibit CsA/FK clearance	Increases CsA/FK levels	Monitor levels

TABLE 2. Sirolimus Drug Interactions

DRUG	MECHANISM	EFFECTS	COMMENTS
Amiodarone	Decreases clearance	Increases sirolimus levels	
Atorvastatin	With sirolimus and cyclosporine	Rhabdomyolysis	Monitor CPK and for development of rhabdomyolysis
Azithromycin	Decreases clearance	Increases sirolimus levels	
Carbamazepine	Increases clearance	Decreases sirolimus levels	
Cimetidine	Decreases clearance	Increases sirolimus levels	
Clarithromycin	Decreases clearance	Increases sirolimus levels	
Clotrimazole	Decreases clearance	Increases sirolimus levels	
Cyclosporine	Decreases clearance	Increases sirolimus and cyclosporine levels	
Danazol	Decreases clearance	Increases sirolimus levels	
Diltiazem	Decreases clearance	Increases sirolimus levels	
Erythromycin	Decreases clearance	Increases sirolimus levels	
Fluconazole	Decreases clearance	Increases sirolimus levels	
Fluvastatin	Rhabdomyolysis* (shown with coadministration with sirolimus and cyclosporine)	Monitor CPK and for development of rhabdomyolysis	
Fluvoxamine	Decreases clearance	Increases sirolimus levels	
Grapefruit juice	Increases bioavailability	Increases sirolimus levels	
Griseofulvin	Increases clearance	Decreases sirolimus levels	
Indinavir	Decreases clearance	Increases sirolimus levels	
Isoniazid	Decreases clearance	Increases sirolimus levels	
Itraconazole	Decreases clearance	Increases sirolimus levels	
Ketoconazole	Decreases clearance	Increases sirolimus levels	
Lovastatin	Rhabdomyolysis* (shown with coadministration with sirolimus and cyclosporine)	Monitor CPK and for development of rhabdomyolysis	

Metronidazole	Decreases clearance	Increases sirolimus levels	
Nafcillin	Increases clearance	Decreases sirolimus levels	
Nefazodone	Decreases clearance	Increases sirolimus levels	
Phenobarbital	Increases clearance	Decreases sirolimus levels	
Phenytoin	Increases clearance	Decreases sirolimus levels	
Pravastatin	Rhabdomyolysis* (shown with coadministration with sirolimus and cyclosporine)	Monitor CPK and for development of rhabdomyolysis	
Rifabutin	Increases clearance	Decreases sirolimus levels	
Rifampin	Increases clearance	Decreases sirolimus levels	
Ritonavir	Decreases clearance	Increases sirolimus levels	
Saquinavir	Decreases clearance	Increases sirolimus	
Sertraline	Decreases clearance	Increases sirolimus levels	
Simvastatin	Rhabdomyolysis* (shown with coadministration with sirolimus and cyclosporine)	Monitor CPK and for development of rhabdomyolysis	
Vaccines		Decrease response to vaccination	
Valproic acid	Decreases clearance	Increases sirolimus levels	
Verapamil	Decreases clearance	Increases sirolimus levels	

TABLE 3. Azathioprine and Mycophenolate Mofetil (MMF) Drug Interactions

DRUG	MECHANISM	EFFECTS	COMMENTS
ACE inhibitors	Synergistic myelosuppression	Anemia, neutropenia	Increase bone marrow toxicity; monitor CBC
Acyclovir	Competition for tubular secretions	Increases toxicity	Anemia, neutropenia
Allopurinol	Inhibits xanthine oxidase	Severe neutropenia	Decrease azathioprine dose by 75%; monitor CBC
Cholestyramine	Decreases absorption of MMF		Do not administer together; increase bone marrow toxicity; monitor
Ganciclovir	Synergistic myelosuppression	Anemia, neutropenia	Monitor CBC
Probenecid	Inhibition of tubular secretions		Increase levels
Salicylates	Increase free fraction of mycophenolate	Increase toxicity	Usually seen at high doses of salicylates TMP/SMX
TMP/SMX	Synergistic myelosuppression	Anemia, neutropenia	Monitor CBC

Transfusion Related Acute Lung Injury

(You are encouraged to copy and distribute this letter)

Department of Health and Human Services
Public Health Service
Food and Drug Administration
1401 Rockville Pike
Rockville, MD 20852-1448

August 13, 2001

Dear Colleague:

This is to alert you to the possibility that patients who receive blood products, particularly plasma-containing products, may be at risk for Transfusion Related Acute Lung Injury (TRALI), a serious pulmonary syndrome that can lead to death if not recognized and treated appropriately. Even small amounts of plasma in packed red blood cells may induce TRALI. Recognition of symptoms and immediate treatment are imperative.

Reports

The first TRALI fatality was reported to the Center for Biologics Evaluation and Research (CBER) in 1992. Since then, CBER has received more than 45 fatality reports of TRALI. As of FY2000 this represented 13 percent of all transfusion fatalities. TRALI is thought to be the third leading cause of transfusion related death. The majority of deaths were associated with fresh frozen plasma transfusions; fewer were caused by packed red blood cell transfusions and platelet transfusions. In most cases, follow-up donor antibody screens implicated donors who were multiparous females and were positive for anti-HLA or anti-granulocyte antibodies. Non-fatal TRALI events reported by licensed blood establishments through Med Watch or as Biological Product Deviation reports are also on the increase. There have been 26 such reports since 1999. This finding may be attributable to better recognition and reporting of events. Because of misdiagnosis and/or underreporting, the full scope of TRALI is not known.

Description and Cause of Problem

TRALI is a well-characterized clinical constellation of symptoms including dyspnea, hypotension, and fever. The radiological picture is of bilateral pulmonary infiltrates without evidence of cardiac compromise or fluid overload. Symptoms typically begin 1-2 hours after transfusion and are fully manifest within 1-6 hours. Products typically implicated in TRALI are whole blood, packed red blood cells, fresh frozen plasma, cryoprecipitate, platelet concentrates, apheresis platelets, and rarely IGIV [1]. The etiology of TRALI may be attributable to the presence of anti-HLA and/ or anti-granulocyte

antibodies in the plasma of multiparous females or donors who have received previous transfusions. TRALI recipients have no specific demographics such as age, gender, or previous transfusion history. Some investigators have hypothesized that TRALI is the result of two independent insults: patient clinical status and anti-white cell antibodies. Transfusion recipients who developTRALI may have had a predisposing event such as surgery, active infection, massive transfusion, or cytokine therapy that causes activation of the pulmonary endothelium and priming of the recipient's white blood cells [2]. Although TRALI does not always occur through transfusions from donors with anti-HLA or anti-granulocyte antibodies, one or both of these antibody types have been found in 89% of TRALI cases. [3]

1 Rizk A, Gorson K, Kenny L, and Weinstein R: Transfusion-related acute lung injury after the infusion of IVIG. *Transfusion 2001; 41:264-268.*

2 Popovsky,MA, Chaplin, HC, and Moore, SB. Transfusion-related lung injury: a neglected serious complication of hemotherapy. *Transfusion 1992; 32:589-592.*

3 Silliman,C Transfusion-related acute lung injury. *Transfusion 1999; 13:177-186.*

Diagnosis and Treatment

It appears that unlike allergic or anaphylactic immune-mediated transfusion reactions, antibodies implicated in TRALI are usually of donor origin. Once transferred to the recipient, these antibodies may cause complement activation resulting in neutrophilic influx into the lungs and damage to the pulmonary microvasculature. The clinical result may be subtle or significant. In either case, there is typically a marked hypoxemia, hypotension, fever, and severe bilateral pulmonary edema. Respiratory support should be as intensive as dictated by the clinical picture. Diuretics play no role in TRALI as the underlying pathology involves microvascular injury, rather than fluid overload.

Recommendations

1. Be alert that any respiratory distress occurring during or following blood or blood component(s) transfusion could potentially be TRALI. Discontinue the transfusion immediately. Begin oxygen and supportive therapy.

2. Notify the Blood Center that supplied the blood component and return remaining product to be tested for anti-HLA and/or anti-granulocyte antibodies in the donor.

3. Fatalities from TRALI should be reported to CBER in accordance with 21CFR 606.170(b). FDA encourages voluntary reporting of TRALI as a serious adverse reaction to transfusions. Reports can be filed via MedWatch by phone at 1-800-FDA-1088, by fax at 1-800-FDA-0178, by US mail at MedWatch, HF-2, 5600 Fishers Lane, Rockville, MD 20852, or by email at http://www.fda.gov/medwatch.

For More Information

If you have questions regarding this alert, please contact Dr. Leslie Holness, Center for Biologics Evaluation and Research, FDA, 1401 Rockville Pike, Mail Stop HFM-375, Rockville, MD 20852-1448, by fax at 301-827-3534, or by e-mail at HOLNESS@cber.fda.gov.

Sincerely,

Kathryn C. Zoon, Ph.D.
Director
Center for Biologics Evaluation and Research
Food and Drug Administration

THE CENTER FOR EDUCATIONAL DEVELOPMENT AND SUPPORT

December 2001

NEWS FROM THE LIBRARY.

OVID Instruction

Contact Barb Iobst at 610-402-8408 to arrange for instruction in the use of OVID's MEDLINE and its other databases.

Announcing New Online Full-text Products.

Several new online full-text products are available from any workstation that has access to the LVHHN INTRANET home page. When at the home page, select "*Departments*" then "Clinical," and pick one of the following from the list:

"The Medical Letter" - Information regarding anthrax was available in the last two issues.

"Books@ Ovid" is a new entry in the list of databases available to LVHHN from "Ovid Online."

You can access the following Lippincott books using "Ovid Online":

Scott: "Danforth's Obstetrics and Gynecology," 8th ed. 1999.

Sadock: "Kaplan's & Sadock's Comprehensive Textbook of Psychiatry," 7th ed. 2000.

Goroll:"Primary Care Medicine," 4th ed. 2000.

Hume:"Kelley's Textbook of Internal Medicine," 4th ed. 2000.

_____: "Drug Facts & Comparison," - Pocket Version. 2001.

While in "Ovid Online," don't forget to try LVHHN's free trial subscription to "Evidence Based Medicine."

New Library Publications.

CC & I-78 Site
"Pediatric and Adolescent Gynecology," 2nd edition.
"Multiple Organ Failure: Pathophysiology, Prevention, and Therapy"
"Rosen's Breast Pathology," 2nd edition.

Computer-Based Training (CBT):

Computer Based Training (CBT) programs are available for LVHHN staff. Topics covered by the CBT programs include:

Access 2.0	Power-Point 4.0
Windows NT 4	Word 97
Excel 97	Access 97
PowerPoint 97	Lotus 1-2-3 Millennium
WordPerfect 8	E-mail GUI

PHAMIS LastWord Inquiry Only commands

CBT programs replace the instructor-led classes previously held at Lehigh Valley Hospital. A proctor will be in the room with the learner while he/she takes the CBT, but the learner will control the pace and objectives of the learning.

Computer Based Training takes place in **Suite 401** of the **John & Dorothy Morgan Cancer Center** (the computer training room) and in the **Muhlenberg Hospital Center computer training room** (off the front lobby). The schedule of upcoming dates is as follows:

CBT sessions for JDMCC, suite 401 are as follows:

December 18, noon - 4pm
January 8, 8am - noon
February 12, noon - 4pm
March 26, 8am - noon
April 23, 8am - noon

Sessions at MHC, I.S. Training room are as follows:

March 5, noon – 4pm
May 14, noon – 4pm

Twelve slots are available for each session.

To register, please contact Suzanne Rice via e-mail or at 610-402-2475 with the following:

date of session
second date choice
department
phone number

You will receive an e-mail confirming your choice within two business days. If you have any questions, please contact Craig Koller at 610-402-2413 or through e-mail.

Center for Educational Development and Support
Presents the following Educational Activities:

ETHICAL ISSUES IN PAIN MANAGEMENT
A Satellite Teleconference from The University of Vermont

Thursday, December 6, 2001
1:30 - 3:30 PM
Classroom #2 - Cedar Crest & I-78
VTC Room - 17th & Chew Sts.

On a daily basis, health care professionals face pain management dilemmas that involve serious ethical considerations. The questions surrounding this issue are complex & often the answers have been hard to find.

Using an interdisciplinary approach, this compelling program analyzes the real-life ethical challenges that providers confront in the course of doing what's best for their patients.

This two-hour program offers a forum to explore the ethical questions surrounding pain management and provides a framework for tackling the most common dilemmas faced in everyday practice. Learn the concepts necessary to help you address critical medical ethical issues.

Program Overview:
Under Treatment of Pain
- Provider bias and beliefs: barriers & constraints
- Fear of criminal prosecution
- Misconceptions concerning addiction & tolerance

Drug Addiction and Diversion
- Definition of addiction & pseudo-addiction
- Dependence & tolerance issues
- Drug diversion & its impact on pain treatment practices

Ethical Principles and Decision Making
- Developing a knowledge base & self awareness
- Applying ethical principles & pain management knowledge
- Generating solutions in consultation with the patient

Ethical Obligations of Providers
- Accountability for pain relief
- Pain prevention, assessment & treatment
- Assuring institutional & clinical standards

Presenters:
Benjamin W. Moulton, J.D., M.P.H.
Executive Director, American Society of Law, Medicine and Ethics, Boston, MA

Myra J. Christopher
President and CEO, Midwest Bioethics Center, Kansas City, MO

Robert Orr, MD
Director of Clinical Ethics, Fletcher Allen Health Care, Burlington, VT

Rodney Bolejack, D.Min.
Chaplain, VistaCare Family Hospice, Temple, TX

John Coleman, MA, MS
Drug Enforcement Administration, Assistant Administrator (Retired), Clifton, VA

Moderator: Portland Helmich

Host, Vermont Public Television, Burlington, VT

Continuing Education Credits:
The University of Vermont programs are designed to meet the continuing education needs of health care professionals. Nursing Contact Hours, Continuing Medical Education Credits & Nursing Home Administration Contact Hours are available to this teleconference. Please note, continuing education credit is available to participants viewing the event live via satellite only. Credit is not available for viewing the videotape.

To register:
Advanced registration is required since seating is limited.

Using E-mail:
-- Please access the Bulletin Board entitled Forms_Nursing.
-- Select the Cont. Education Registration Form.
-- **Right** click on the form and choose "Use Form".
-- Complete all areas (refer to "How To Register" for more help on using forms).
-- **Indicate which site you will be attending.**
-- Use the comments section to provide us with any additional information that may be useful.
-- **We will be unable to process incomplete registrations.**

Using Phone or Fax:
-- Please either call (610-402-2277) or fax (610-402-2203) the following information: name, hospital affiliation, position, mailing address, social security #, daytime phone #, and day attending. **We will be unable to process incomplete registrations.**

PRECEPTOR PROGRAM

Educational program for RN's who will be assigned responsibility to orient new staff to their clinical unit.

Date	Time	Location
Mon., December 10, 2001	0745-1630	Classroom #8-JDMCC

REGISTRATION:

Using e-mail...
-- Please access the Bulletin Board entitled Forms_Nursing.
-- Select the Cont. Education Registration Form.
-- **Right** click on the form and choose "Use Form".
-- Complete all areas (refer to "How To Register" for more help on using forms).
-- Indicate which day you will be attending.
-- Use the comments section to provide us with any additional information that may be useful.
-- **We will be unable to process incomplete registrations.**

For staff without e-mail access...
-- Please either call (610-402-2277) or fax (610-402-2203) the following information: name, hospital affiliation, position, mailing address, social security #, daytime phone #, and day attending. **We will be unable to process incomplete registrations.**

If you have any questions, please call the Center for Education at 610-402-2277.

Any questions, concerns or comments on articles from CEDS, please contact Bonnie Schoeneberger 610-402-2584

December

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3 12 noon Colon/Rectal TB JDMCC CR1	4 7am Family Practice GR-JDMCC 1A/B 7am Surgical GR CC-Aud 8am Pediatric GR CC-Aud 12 noon Medical GR CC-Aud	5 12 noon MHC TB OR Conf. Rm	6 8am Emergency Medicine GR LVH-CC Aud 12 noon Combined TB JDMCC CR1	7 7am GYN GR CC CR1 11 am Neurology Conf CC Cr1 12 noon Breast TB JDMCC CR1	8
9	10	11 7am Surgical GR CC-Aud 8am Pediatric GR CC-Aud 12 noon Medical GR CC-Aud	12 12 noon MHC TB OR Conf. Rm	13 8am Emergency Medicine GR LVHM-4th Fl Conf Rm 12 noon GI TB JDMCC CR1	14 7am OBGYN GR CC CR1 11 am Neurology Conf CC Cr1 12 noon Breast TB JDMCC CR1	15
16	17 12 noon Colon/Rectal TB JDMCC CR1	18 7am Surgical GR CC-Aud 8am Pediatric GR CC-Aud 12 noon Medical GR CC-Aud	19 12 noon MHC TB OR Conf. Rm	20 8am Emergency Medicine GR LVHM 4th Fl Conf Rm 12 noon ENTTB JDMCC CR1	21 7am OBGYN GR CC CR1 12 noon Breast TB JDMCC CR1	22
23	24	25	26 12 noon MHC TB OR Conf. Rm	27 12 noon Combined TB JDMCC CR1	28 7am OBGYN GR CC CR1 12 noon Breast TB JDMCC CR1	29
30	31					

2001

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Medical Staff Progress Notes

Medical Executive Committee

Medical Staff Progress Notes **is published monthly to inform the Medical Staff of Lehigh Valley Hospital and employees of important issues concerning the Medical Staff.**

Articles should be submitted to Janet M. Seifert, Physician Relations, Lehigh Valley Hospital, Cedar Crest & I-78, P.O. Box 689, Allentown, PA 18105-1556, by the 15th of each month. If you have any questions about the newsletter, please call Mrs. Seifert at (610) 402-8590.