LEHIGH VALLEY
HOSPITAL AND
HEALTH NETWORK

PROGRESS NOTES
Medical Staff

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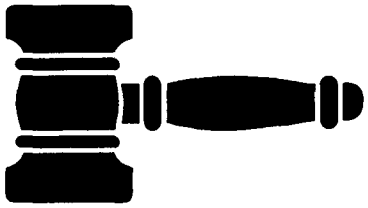
In This Issue . . .



From the President

Research is to see what everybody else has seen, and to think what nobody else has thought.

- Albert Szent-Gyorgyi

♥ ♥ ♥ ♥ ♥

Medicare Payments

As we read about the failure of Congress to avert the scheduled 5.4% cut in 2002 Medicare physician reimbursements, despite bipartisan support, one concludes that physicians are being "used" to control Medicare spending. Warren Jones, MD, president of the American Academy of FP, confirmed that across the board 2002 payment cuts would have "immediate negative consequences" on access to patient care. He points out that physicians are facing rising practice costs, soaring liability insurance premiums, and burdensome regulatory loads.

We remain optimistic that Congress will act to reverse this ill-considered cut in Medicare payments.

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I don't even like money; it just quiets my nerves.

- Bob Hope

♥ ♥ ♥ ♥ ♥

Medical Manpower

December's ***Pro Tempore*** carried a report about the growing shortage of physicians in southeastern Pennsylvania. The newswire item below confirms that the issue is real. It is also consistent with the numerous stories in the last year about the "vanishing healthcare worker." We are aware of the shortage of nurses, pharmacists, skilled health aids, technologists, physical therapists, radiology techs, etc. The "service professions" are being stretched and stressed. We need to understand the forces shaping our society while we value and support each other as healthcare team members.

The U.S. will soon be facing a shortage of physicians that will become progressively more severe, leading to a deficit of 200,000 physicians by 2020, according to a study in Health Affairs.

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Using a newly developed physician supply trend model, researchers said the data debunk predictions over the past 20 years that there would be a 15 to 30 percent surplus of specialty physicians by 2000, reported AMNews. Researchers said previous studies had failed to accurately account for population growth, work-effort of physicians, contribution of services by non-physicians and economic expansion, AMNews added. (***Health Affairs***, January/February, 2002; ***American Medical News***, January 21, 2002)

♥ ♥ ♥ ♥ ♥

Bons mots
I'm living so far beyond my income that we may be said to be living apart.

- E.E.Cummings

♥ ♥ ♥ ♥ ♥

Malpractice Crisis

Gov. Schweiker called on the State Legislature to put "Strong Reforms" of PA's Medical Malpractice System at the top of its agenda for January.
Schweiker gave no details, but he said the legislature should address patient-safety issues as well as legal reforms, reported the Philadelphia Inquirer.

LVHHN has continued to emphasize patient safety initiatives in every aspect of patient care, and we understand that this is our first priority. A comprehensive program (called Primum Non Nocere) with multiple safety projects is underway with periodic reports to Senior Management Council. Progress is being made on a number of fronts.

Let us all think clearly about the essential elements of the malpractice situation.

There are two separate questions here:

1. Do medical errors occur (yes) and are patients injured as a result? (unfortunately, yes again).
2. What is the best system to reduce errors and protect our patients?

Any impartial observer would conclude that the present tort system has FAILED to reduce errors and compensate fairly those patients injured by medical errors. (Less than one in eight patients so injured is compensated.) In addition, the COST has gotten out of control (about 60% of premium dollars goes to our legal colleagues). As significant monetary beneficiaries of the present tort system, the Pennsylvania Trial Lawyers Association will find it impossible to be impartial in these discussions. Our legislators should understand this. We certainly do.

An alternative system that has worked in California for 26 years is a variation of workers' compensation no-fault system. Countries in Scandinavia have a no-fault patient compensation insurance system. Screening panels and arbitration are also alternatives.

The medical staff enthusiastically supports medical accountability and responsibility in patient safety efforts, which require blame-free reporting of all medical errors and the system changes to prevent such errors in the future. The present tort system not only is NOT helping in this effort; it has become an obstacle. In a way, the tort system is contributing to continued patient injuries.

♥ ♥ ♥ ♥ ♥

Nothing great was ever achieved without enthusiasm.

- Ralph Waldo Emerson (Circles)

♥ ♥ ♥ ♥ ♥

A swift first step in the struggle might be to reinstate the malpractice legislation previously passed by the Legislature in 1997 and struck down by the PA Supreme Court...

Pennsylvania Attorney General Mike Fisher today sent a letter to Chief Justice Stephen A. Zappala of the Pennsylvania Supreme Court asking that the Court take steps to alleviate the high costs of medical malpractice insurance.
In January 1997, the Supreme Court suspended several key provisions of the Health Care Services Malpractice Act, saying it interfered with the court's rulemaking authority. The court then ordered its Civil Procedural Rules Committee to recommend changes to cover the issues. However, no recommendations have been made. "...I would urge the court to consider reversing the suspension of the provisions of Act 135." (Pennsylvania Office of Attorney General, January 7, 2002)

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A rich man is nothing but a poor man with money.

- W.C. Fields

♥ ♥ ♥ ♥ ♥

Nursing at LVHHN - The Draw of the Magnet

At LVHHN, our nursing turnover rate has dropped from 16.5% to 10%. Our vacancy rate is 7-10% -- the lowest in years – compared with national vacancy rates of 20%. We strive to provide more individualized caring with ratios that exceed other local hospitals and are excellent compared with national averages.

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At LVHHN, nurses have: a voice in decision making, active role in nursing improvements, flexible schedules, compensation incentives, scholarships, tiered float pool, educational and professional development, succession planning, endowed chair in nursing, three Nightingale of Pennsylvania award finalists, and increased communications with physicians.

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Let us not look back in anger or forward on fear, but around in awareness.

- James Thurber

♥ ♥ ♥ ♥ ♥

PHO Update

With some recent contract signings by Mr. Greg Kile, Valley Preferred (our wholly owned PPO) has become one of the largest PPO's in Pennsylvania with 80,000 enrollment. The PHO has enthusiastically supported the CAPOE project and receives regular progress reports from Dr. Don Levick. The hospital and the PHO (represented by Dr. John Jaffe) jointly run the Care Management Council, which oversees LOS issues among others. With the help of Dr. Paula Stillman and medical staff members, successful efforts are underway to reduce the LOS creep. We ask your help in this effort to maximize our capacity and our ability to care for our community.

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Golfer: "This golf is a funny game."
Caddy: "It's not supposed to be."

♥ ♥ ♥ ♥ ♥

Time may be a great healer, but it's also a lousy beautician.

Ed

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

Attention: PalmPilot Users

The **LVHHN Medical Staff Directory**, a listing of the **LVHHN Residents**, and the **LVHHN Telephone Hotlist** are now available through the Medical Staff Services Office. If you have a Palm III, Palm V, Palm M505, or a HandSpring, the above information can be hot synced to your PalmPilot. For more information or to schedule a convenient time to stop by, please contact Beth Martin in Medical Staff Services at (610) 402-8980.

Spotlight on . . .

David P. Carney, MD

Dr. Carney is originally from State College, Pa. He completed his undergraduate education at the Pennsylvania State University where he earned a Bachelor of Science degree. He received his medical degree from Hahnemann Medical College of Philadelphia. He completed a rotating internship and medical residency at the Allentown Affiliated Hospitals, and went on to serve as the first Chief Medical Resident of that program.

Dr. Carney is certified in both Internal Medicine and Geriatric Medicine by the American Board of Internal Medicine.

Dr. Carney joined the hospital's Medical Staff in 1979 and is a member of the Department of Medicine, Division of General Internal Medicine/Geriatrics. He is currently Associate Chief of the Division of Geriatrics, and is the Medical Director of the Lehigh Valley Transitional Skilled Unit at 17th & Chew. He is also a Clinical Assistant Professor of Medicine at Pennsylvania State University College of Medicine.

On a more personal note, Dr. Carney and his wife, Barbara, have three children. In his spare time, Dr. Carney enjoys sailing, music, and woodworking.

In conclusion, Dr. Carney has the following comments to share with his colleagues on the Medical Staff:

"Medicine is a continuum, and we are responsible for propagating our profession to those who follow. I'd like to share some of the valuable lessons I've learned from those who taught me."

"When the patient talks - listen. He is telling you his diagnosis." "Always try to treat people a little better than they may deserve to be treated." - Paul L. Carney, MD

"Be attentive to detail in clinical examination, lest you miss something important." - Stanley E. Zeeman, MD

"Within medical reason, give patients what they want - the customer is always right." - Herbert L. Hyman, MD

" The core of professionalism is staying consistent and focused in dealing with patients." - Barre D. Kaufman, MD

"You're never alone in medicine when facing a problem; there's a wealth of information waiting to help in the medical library." - Dean F. Dimick, MD

LVHHN to Expand Facilities and Services at Lehigh Valley Hospital-Muhlenberg

To better serve the needs of the growing and aging Northampton County community, Lehigh Valley Hospital and Health Network (LVHHN) has announced plans for the continued expansion and improvement of facilities and services at Lehigh Valley Hospital-Muhlenberg (LVH-Muhlenberg) on Schoenersville Road in Bethlehem.

A multi-story building will be constructed to house an extension of the network's Regional Heart Center and contain 56 beds for critical care, cardiac and general medical/surgical patients. Work on this pavilion is expected to begin in the fall and be completed in June 2004. At its January 9 meeting, the health network's board of trustees approved $39 million in funding for these facilities and services improvements, of which $13.5 million ($8.5 million for invasive cardiology; $5 million for surgery) is designated for Regional Heart Center expansion. A comprehensive open heart surgery program, an integral part of LVH's Regional Heart Center, will be launched at LVH-Muhlenberg in June.

"This project further demonstrates LVHHN's continuing commitment to providing high-quality and easily accessible services at LVH-Muhlenberg to meet the health care needs of our community in Northampton County and the surrounding region," said Elliot J. Sussman, MD, LVHHN's president and chief executive officer.

The Regional Heart Center space will comprise non-surgery cardiology diagnostic testing and treatment services--two cardiac catheterization/electrophysiology laboratories, and patient preparation and recovery areas--and patient care units for medical cardiology and recovering open heart surgery patients.

In addition, the building will house an intensive care unit and a general medical/surgical unit. The top floor will be reserved for future development. The 100,000+-square-foot wing will be located adjacent to the Children's Hospital of Philadelphia Specialty Care Center on the western edge of the campus. The new addition's entrance will face north, and it will be visible and accessible from Routes 378 and 22, and Schoenersville Road.

"The Lehigh Valley Health Network board of trustees has studied this carefully for some time now, and we are excited to invest further in the future health of the community as we bring more services to Lehigh Valley Hospital-Muhlenberg," said William Lehr, chairman of the board of LVH-Muhlenberg.

Open heart surgery at LVH-Muhlenberg will be performed in a specially designed operating room within the hospital's surgical suite. During construction of the wing, a second cardiac catheterization lab will be built on the hospital's second floor adjacent to the current lab. This new lab will be moved to the new building upon its completion, where a second new lab will be added.

"These improvements will enhance and expand our ability to provide high-quality heart care to any patient who comes to this hospital," said cardiologist Anthony Urbano, MD, medical director of interventional cardiology at LVH-Muhlenberg. "As a Lehigh Valley Hospital and Health Network initiative, this project brings to the LVH-Muhlenberg campus the combined resources and expertise of a broad range of network specialists."

Dr. Urbano and his colleagues in Lehigh Valley Cardiology Associates -- the largest cardiology practice serving Northampton County -- recently relocated their practice to a larger facility on the LVH-Muhlenberg campus.

"Cardiovascular disease is the leading cause of death in the U.S. and is primarily responsible for about 40 percent of all deaths in the Lehigh Valley," said Fernando Garzia, MD, chief of cardio-thoracic surgery at LVH-Muhlenberg. "With national research predicting an even greater need for cardiology services in the future, Lehigh Valley Hospital and Health Network's decision to enhance heart services at the Muhlenberg campus is an important step in responding to the health care needs of Bethlehem and the surrounding Northampton County communities."

According to Robert J. Laskowski, MD, LVHHN's chief medical officer, "We are expanding our 25-year-old nationally recognized heart program at Cedar Crest & I-78 in response to patients and physicians in Northampton County who desire access to the resources of LVHHN's Regional Heart Center." Work began in August to expand and modernize LVH's Regional Heart Center located on its Cedar Crest & I-78 campus in Allentown.

The LVHHN Regional Heart Center performs the largest volume of interventional and surgical heart care in the region, in keeping with its tradition of innovative leadership. The first case of open heart surgery in the Lehigh Valley was performed at Lehigh Valley Hospital, 17th & Chew (then called Allentown Hospital) in 1974. The Regional Heart Center is also a pioneer in new technologies, including the use of radiation to prevent the re-closing of vessels after angioplasty, and stenting; beating heart surgery; and radio-frequency ablation to cure atrial fibrillation, an irregular quivering of the heart, which can lead to stroke. Each year, cardiac care teams at LVHHN

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perform 5,000 catheterizations, 1,900 angioplasties, 1,250 procedures for electrical problems of the heart, and more than 1,000 cases of open heart surgery.

Since the 1997 merger of LVHHN and Muhlenberg Hospital Center, the following services and facilities have been added at Lehigh Valley Hospital-Muhlenberg:

- The Children's Hospital of Philadelphia Specialty Care Center
- The Behavioral Health Science Center
- The Lehigh Valley Hospital Cancer Center
- The region's only advanced technology in-vitro fertilization laboratory
- The new ambulatory surgery unit, including the area's only ambulatory pediatric surgery facility
- The Sleep Disorders Center
- The Wound Care Center
- The Rehabilitation, Physical Therapy and Sports Medicine Center
- A new Breast Health Center

News from CAPOE Central

One of the advantages of a CAPOE system is the potential for clinical decision support. The CAPOE system is an excellent platform to provide physicians with feedback and information pertaining to the orders being written. A great example of this is the maximum dosing calculation, which has been created through a tremendous amount of work by the Pharmacy Department. When medications are ordered on-line, the system will compare the order against the maximum dose (both single dose and total daily dose) based on age. If the maximum dose is exceeded, a warning will appear in the Status Bar in the lower left corner of the screen. The alert is for information only, and the ordering physician or provider can still place the order.

A special "thank you" goes out to Karen Johnston, Mary Beth Karoly and Janine Barnaby in the Pharmacy Department for their hard work and energy in completing this project. Also, many thanks to Jill Green and the rest of the Pharmacy Department for their commitment and support. The Pharmacy identified the maximum dosing project as an important and valuable clinical tool, and they worked hard to bring the project to completion.

The success of CAPOE will come as a result of collaborative work between all the departments and the desire by the physicians and staff to improve patient care.

Don Levick, MD, MBA
(484) 884-4593 (office) or (610) 402-5100 7481 (pager)

News from the HIM Department

Histories and Physicals

Over the past several months, two problems have been identified relating to history and physical (H&P) documentation: (1) H&P for elective admissions are done more than 30 days prior to the scheduled admission; and (2) Transcription is being requested to go back to old dictations and update with new dates to meet the 30 day requirements.

Regulatory agencies require that histories and physicals be dictated no more than 30 days prior to admission. History and physical documentation not meeting regulatory requirements will be returned to the physician.

Redictations

Are you looking for a report you dictated and can't find it in IDX or PIM? Your first thought is that it must be lost in the dictation system. The dictation system has proven to be very reliable in capturing identifying information and dictations. Before you redictate the report, call the Transcription Department at (610) 402-8364 to verify whether or not the dictated report is in the system. If you redictate the report, not only will this cause duplicate dictations and work, but it will also have an effect on the turnaround time of all dictations.

If you have any questions regarding these issues, please contact Zelda Greene, Director, Health Information Management, at (610) 402-8330.

Coding Tip of the Month

Non-specific Principal Diagnosis: Identifies principal diagnoses codes identified by the Medicare Code Editor as Non-Specific diagnosis for patients discharged alive that may indicate a PRO review. More precise codes should be used for the principal diagnosis.

CAN a more Specific code be assigned?

PLEASE, remember to specify: Sites, Chronicity, and Organisms.

SITE: which specific topographical site of the organ. Especially, important in *malignancies* and other neoplasm.

Phlebitis - which vein was involved?
MIs - which site was the infarction?
CVAs - please specify cause such as embolus, thrombus, or stenosis of cerebral artery with infarct?

Information Services News

Customer Service

Information Services Customer Service (610-402-8303) is covered 24 hours, seven days a week by the I/S Helpdesk (the first level of any I/S assistance) and the I/S Call Center (the same department that handles the hospital Paging Services).

Normal Customer Service hours are Monday through Friday, 7 a.m. to 5:30 p.m. During these hours, the department is staffed to handle service calls directly to the Helpdesk, with overflows going to the Call Center (to obtain the necessary information to process calls and refer them to the Helpdesk staff).

During off-shift hours, the Call Center will continue to answer calls. Calls will be routed to the Computer Operator Staff for assistance. If they can, they will handle the problem. If the problem is out of the realm of the operator, and of a serious nature, the call will be forwarded to the OnCall team. Unfortunately, the low volume of calls on the night shift does not warrant around the clock Helpdesk service. In the event that I/S is unable to handle your call immediately, they will make every effort to get back to you as soon as possible.

If you have any questions regarding this issue, please contact Rob Bortz in I/S Operations at (610) 402-1481.

Computer Passwords

Login passwords change every 90 days in compliance with policy and regulatory requirements. When your password expires, you will be forced to change it to a new password. Your new password must:

1. Be at least six characters (a-zA-Z)
2. Contain at least one non-alphabet character (0-9,!@#...)
3. Contain at least one alphabet character
4. Be different from your user ID and your old password

How to Make It Easier

- Pick a word and add a sequence to it when it must change:
  Security1, Security2, Security3,...
- Pick a word and substitute symbols for letters:
  r011ca11 (a zero and some one's for the Ls)
  r00tb33r (zero's and three's for the E's)
  $talks (money talks)
- Use a song/poem/phrase to make a password:
  Ride across the river, deep and wide
  R a t r d a w
  I pledge allegiance to the flag
  I p a t t f

Changing Your Password

Normally when your password expires, you are prompted to change your password during the login process. Follow the instructions on the screen and the system 'walks' you through the process.

You can also change your password at any time by initiating a change. Press Ctrl-Alt-Del and select the "Change Password" option, then follow the instructions on screen.

If you have trouble with your account password, please call the I/S Helpdesk at (610) 402-8303.

New Anti-Aging Medicine Initiative

In an effort to meet patient demands for enhancement of their well-being and appearance, an Anti-Aging Medicine Program has been established for Lehigh Valley Hospital and Health Network. The **Youthful You Institute at Lehigh Valley Hospital-Muhlenberg** will offer a comprehensive approach to looking and feeling younger.

According to Robert X. Murphy, Jr., MD, who has been named Medical Director for the Anti-Aging Medicine Program, "People are excited about opportunities to improve their health and appearance. Wellness, health and pampering are now a combined experience."

The Youthful You Institute at Lehigh Valley Hospital-Muhlenberg, which will open its doors off the main lobby in March, will offer the following services: natural nail care services, skin care treatments, massage therapies, nutrition/weight management therapies along with personal exercise training consults, aesthetic procedures, physician consultations, and physician-approved products. The phone number for the Youthful You Institute is (484) 884-7045.

For more information regarding this new program, please contact Greg Salem, Program Administrator, at (610) 402-7000.

Currently, the secretary for the Diagnostic Care Center at Cedar Crest & I-78 answers the phone number -- (610) 402-8390 -- for the Nuclear Medicine Department. Although she is not physically located within the Nuclear Medicine Department, she will direct calls to the appropriate person.

All requests for reports/films should be directed to the Radiology File Room at (610) 402-8070. This includes requests for PET Scans.

Community Acquired Pneumonia

Lehigh Valley Hospital participated in the national KePRO project -- Community Acquired Pneumonia (CAP). This project used five quality indicators developed by the Health Care Financing Administration (HCFA) in consultation with content area experts. Data obtained during the KePRO re-evaluation period (4/1/00 - 12/31/00) revealed significant improvement in four out of five of these quality indicators, as evidenced in the table below:

	BASELINE			REMEASUREMENT		
INDICATORS	Numerator	Denominator*	%	Numerator	Denominator*	%
Initial antibiotics within 8 hours after arrival	21	30	70%	40	44	91%
Initial antibiotics consistent with current recommendations	19	23	83%	39	42	93%
Blood cultures collected before antibiotics administered	22	25	88%	35	37	95%
Patient screened or given influenza vaccination (Oct-Dec)	3	6	50%	11	18	61%
Patient screened or given pneumococcal vaccination	12	29	41%	16	46	35%

*The number of cases who qualified for the indicator. This number differs for each indicator because of varying inclusion/exclusion criteria.

However, LVH data from April, July, and October 2001 revealed three of these indicators, as well as Length of Stay (LOS) and Variable Cost per Case improvements have not been sustained, as evidenced in the chart below:

DRG 89 PATIENTS WITH ADMITTING DIAGNOSIS OF PNEUMONIA

		Target	Apr-01	Jul-01	Oct-01
1. Total # of Patients			13	20	23
2. Total LOS	Avg	5.0	4.7	5.3	7.0
3. Ave Var Cost/Case	#	$1,900	$1,632	$2,133	$3,529
4. Median Time					
• Arrival until Antibiotic Ordered	Hours		1.2	2.4	2.9
• Arrival until Antibiotic Administration	Hours	3.0	3.0	6.1	4.3
5. Key Indicators					
• Patients with Antibiotics started within 3 hours of arrival		80%	46%	10%	26%
• Patients with Antibiotics started within 8 hours of arrival			92%	60%	74%
• Patients with Blood Cultures drawn before Antibiotic Administration			100%	70%	78%

NOTE - Admitting Diagnosis of Pneumonia was determined by Physician documentation via chart review.

The current focus of the Community Acquired Pneumonia (CAP) team is to shorten time until antibiotics are ordered and administered. Emergency Department and other physicians admitting patients with pneumonia are encouraged to help improve the quality of care to pneumonia patients.

- Please consider using the CAP pre-printed orders that are available in the Emergency Department and on all inpatient units.
- KePRO Collaboration Newsletter (3/6/00) reports that the **use of standing pre-printed orders** has shown up to a 69% improvement in some aspects of the quality of care.
- Please remember to order the initial dose of antibiotic and blood cultures **STAT** in all pneumonia patients. Blood cultures should be obtained prior to administration of antibiotics, if possible.
- Consider administering the pneumococcal and/or influenza vaccine prior to hospital discharge in the clinically stable patients. The CDC recommends the pneumococcal vaccine for patients over 65 and for those with chronic medical conditions. When unsure of vaccination status, the CDC recommends administering one dose of vaccine.
- If you have any questions, please contact Jay H. Kaufman, MD, LVH Physician Leader, KePRO Pneumonia Project, at Pager (610) 920-7221 or Marlene Ritter, BS, RRT, at (610) 402-1707.

Physician Assistance Program

Success in the work environment depends on everyone's contribution. That's why no one can afford to ignore depression.

According to the National Institute of Mental Health (NIMH), America faces an epidemic of depression.

- At any given time, one out of 20 workers suffers from this disease
- Every year, depression causes 200 million lost days of work
- Workplace depression drains $44 billion from the economy each year, mostly because of absenteeism and lower productivity
- Depressed workers have between 1.5 and 3.2 more short-term disability days

However, there is good news. More than 80% of depressed people can be treated quickly and effectively. The key is to recognize the symptoms of depression early and to receive appropriate treatment. Unfortunately, nearly two out of three people with depression do not receive the treatment they need.

The Medical Staff of Lehigh Valley Hospital recognizes that a wide range of problems in life can affect a physician's health and well being, and, at times, professional performance.

In fact, studies conducted by the National Institute for Occupational Health and Safety report that physicians, along with other caregivers, may have a higher than average risk of developing debilitating personal problems.

Since 1993, the Physician Assistance Program has been available to help members of the Medical Staff deal with personal problems before they affect health, family life, or professional effectiveness.

The Physician Assistance Program is a confidential (and if so desired, anonymous), professional counseling and referral service available to active members of the Medical Staff of Lehigh Valley Hospital and their dependents.

This service is provided through an agreement with Preferred EAP which operates the Lehigh Valley Hospital's Employee Assistance Program (EAP) and has been involved with over 4,000 employees and dependents since 1985.

The Physician Assistance Program offers physicians and their families counseling services for a wide range of personal problems -- anything that can turn stress into distress -- including marital or relationship difficulties; depression and anxiety; alcohol or drug abuse; family problems, or stress from work or personal concerns.

Program users can choose from a multi-disciplinary team assembled to provide Physician Assistance Program services. This team includes:

- Michael W. Kaufmann, MD, Chairperson, Department of Psychiatry
- John C. Turoczi, EdD, licensed psychologist and member of the Allied Health Professional Staff of Lehigh Valley Hospital
- Staff of Preferred EAP including licensed social workers, masters level clinicians, and certified addiction counselors.

To use the Physician Assistance Program during normal working hours, telephone the Preferred EAP office at (610) 433-8550 or 1-800-327-8878, identify yourself ONLY as a member of the Lehigh Valley Hospital's Medical Staff (or a family member), and ask to speak to the Clinical Manager, Robin Chase, or Program Director, Oliver Neith. Please note that callers may remain **anonymous**.

Ms. Chase, or the Preferred EAP receptionist, will conduct a brief telephone interview, offer a choice among the above listed provider team members, and advise the caller how to arrange an appointment.

Other professional staff of Preferred EAP are available after hours to respond to emergency situations.

The number of visits will vary with the nature and severity of the problem. Up to five visits with Physician Assistance Program providers are available to active Medical Staff members (and their dependents) at no cost.

If their is a need for further service or treatment, a referral may be made to a private practitioner or community resource, or the user may continue with the original Physician Assistance Program provider on a self-pay basis.

For more information, contact Robin Chase or Oliver Neith at Preferred EAP at (610) 433-8550, or John W. Hart, Vice President, in Medical Staff Services, at (610) 402-8980, or any member of TROIKA.

? ? ? Mystery Medical Staff Member ? ? ?

? Born in Philadelphia
? Bachelor of Science degree at Wilkes College
? Medical degree from Hahnemann Medical College of Philadelphia
? Three-year residency at Cleveland Clinic Foundation
? One-year fellowships at both Brigham & Women's Hospital and Hahnemann University Hospital
? Joined the Medical Staff in 1982
? Offices on LVH-M campus and on Pond Road

Give up? Please see Page 11 for the answer.

On-Call Policy for Nuclear Medicine

For your information, following is the on-call policy for the Section of Nuclear Medicine at Lehigh Valley Hospital.

After hours and on weekends and holidays, a nuclear medicine technologist and a nuclear medicine physician are on-call for emergency cases only. These cases include ventilation perfusion lung scans, GI bleed scans, gallbladder scans to rule out acute cholecystitis, nuclear medicine brain death scans, and bone scans to rule out osteomyelitis in pediatric patients who will be taken to the operating room that same day if the scan is positive. In all non-emergent cases or if the scan would not change the course of therapy for the patient that day, the nuclear medicine study will be performed during the next normal working day.

It is also important for the ordering physician to contact the nuclear medicine physician on-call directly for any emergency on-call case. This will provide the nuclear medicine physician with important clinical information so that the technologist can better tailor the study to that particular patient's needs if indicated.

It is felt that this policy will meet the emergency needs of our patients and will optimally utilize hospital resources in terms of radioisotope purchase and on-call technologists' time.

If you have any questions or concerns about the nuclear medicine on-call policy, please contact Robert J. Rienzo, MD, Chief, Section of Nuclear Medicine, at (610) 402-8373.

LOVAR News

The LOVAR (Lowering of Vascular Atherosclerotic Risk) Study has recently completed recruitment of the 500 patients needed for the intervention and control arms of the study. Although recruitment of patients is now closed, the LOVAR team will be following the 500 participants closely over the next three years. The LOVAR team will continue to keep you informed of your patient's progress in the study.

Using the principles and strategies gleaned in LOVAR, the goal of the LOVAR team is to assist LVHHN and the medical staff with building a program of vascular preventive medicine and case management services for you and your patients. Thank you for supporting the LOVAR Study for the past three years.

If you have any questions or concerns regarding the LOVAR Study, please contact John E. Castaldo, MD, LOVAR Principal Investigator, or Jane Nester, MPH, MEd, LOVAR Co-Principal Investigator, at (610) 402-4088.

Pain Management Flow Sheet

As part of LVHHN's commitment to Pain Management and compliance with JCAHO Standards, a new **Pain Management Flow Sheet** has been instituted on all nursing units. The Pain Management Flow Sheet will be utilized for **ALL** patients who are receiving PCA or EPIDURAL analgesia, as well as patients who receive **ANY** pain medication. The flow sheet will allow you to better see your patients pain progress and response to current pain management therapy.

As part of JCAHO regulations, the patient has a right to ongoing assessment of pain, interventions to help meet their pain goal and appropriate treatment of pain.

A copy of the Pain Management Flow Sheet is attached on Page 14 for your information.

If you have any questions regarding this issue, please contact Maryjane Cerrone, RN, Clinical Research Specialist, Neurosciences and Pain Research, at (610) 402-9003.

Congratulations!

Mark A. Gittleman, MD, Division of General Surgery, completed Auditor Training for the American College of Surgeons Oncology Group (ACOSOG) and is now a certified Auditor for clinical trials for the ACOSOG.

Peter A. Keblish, Jr., MD, Division of Orthopedic Surgery, was awarded the 2001 Sir John Charnley Award. This award was presented by the Arthritis Foundation at the *Grand Soiree -- An Evening of Honors* held October 20 at the Blue Mountain Ski Area Special Events Center in Palmerton, Pa.

The Sir John Charnley Award is given for excellence and achievement in the field of orthopedics. Sir John Charnley was an English orthopedic surgeon who invented the modern total hip replacement in 1962. He was a master surgeon, innovator and bioengineer whose techniques have been studied by surgeons around the world. Sir John Charnley's work has contributed immensely to the relief of human suffering.

For Your Calendar

GLVIPA General Membership meetings have been scheduled on the following dates:

- Tuesday, March 26, 2002
- Monday, June 24, 2002
- Tuesday, September 24, 2002
- Monday, December 16, 2002

All meetings will begin at 6 p.m., in the Auditorium of Lehigh Valley Hospital, Cedar Crest & I-78.

Papers, Publications and Presentations

George A. Arangio, MD, Chief, Section of Foot and Ankle Surgery, co-authored an article -- "Medial displacement calcaneal osteotomy reduces the excess forces in the medial longitudinal arch of the flat foot" -- which was published in ***Clinical Biomechanics*** 16 (2001) 535-539.

Indru T. Khubchandani, MD, Division of Colon and Rectal Surgery, lectured at the Continuing Medical Education aspect of the Association of Colon and Rectal Surgeons of India held in Bombay on December 29-31, 2001. The symposium was telecast at the Annual Meeting of the Association of Surgeons of India in Patna, India.

Later in January, 2002, Dr. Khubchandani performed a surgical procedure on one of the sheiks of the ruling family in Abu Dhabi, United Arab Emirates.

Marisa A. Mastropietro, MD, Section of Pelvic Reconstructive Surgery, recently had two peer reviewed articles published. The first article -- "Effect of Tension-Free Vaginal Tape Procedure on Urodynamic Continence Indices" -- was published ***in Obstetrics & Gynecology***, Volume 98, Number 4, October, 2001. The second -- "Detrusor Biopsy as a Potential Clinical Tool" -- was published in the ***International Urogynecology Journal and Pelvic Floor Dysfunction***, Volume 12, Number 6, 2001.

Alexander D. Rae-Grant, MD, Division of Neurology, authored an article -- "Transient Symptoms in MS" -- which was published in the Winter, 2001 edition of ***Multiple Sclerosis Quarterly Report***.

Craig J. Sobolewski, MD, Division of Primary Obstetrics and Gynecology, and Residency Program Director, Department of Obstetrics and Gynecology, attended the American Association of Gynecologic Laparoscopists Global Congress of Gynecologic Endoscopy held in San Francisco, Calif., in November. "Laparoscopic Burch: Pearls Learned Over a Seven Year Experience," a video which Dr. Sobolewski co-produced, was presented at the meeting.

Howard S. Selden, DDS, Division of Endodontics, authored a paper -- "Apexification: An Interesting Case" -- which was published in the January 2002 issue of the ***Journal of Endodontics***.

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 February will include:

February 7 - Banko Building, Rooms 1 & 2
- Pediatric Case Review - St. Luke's Emergency Medicine Residency
- "The Quick Diagnostic Psychiatric Interview in the ED"
- "Management of the Difficult and Violent Patient"
- Ten Rashes You Must Know

February 14 - 4th Floor Conference Room - LVH-M
- M & M
- Resident Case Presentations
- Tintinalli (Pages 539-580)

February 21 - 4th Floor Conference Room - LVH-M
- Resident Case Presentations
- Alcohol Emergencies

February 28 - 4th Floor Conference Room - LVH-M
- Acute Coronary Syndrome Part II
- Abdominal Pain in the Elderly
- Satisfaction Guaranteed
- Tintinalli (Pages 580-669)

For more information, 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 LVH-Muhlenberg. Topics to be discussed in February will include:

- February 5 - "Management of the Medically Complex Geriatric Patient at Home"
- February 12 - "Hematology for the Internist"
- February 19 - "Life Ending Acts in the Dying Patient"
- February 26 - "DVD Prophylaxis in the Hospitalized Patient - A Panel Discussion"

For more information, please contact Diane Biernacki in the Department of Medicine at (610) 402-5200.

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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 February include:

- February 5 - "Medical Education: Techniques to Improve Teaching"
- February 12 - "Smiles for Tomorrow"
- February 19 - "Imaging the Pediatric Abdomen" - Part 2
- February 26 - Case Presentation

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

General Medical Staff Meeting

A General Medical Staff meeting will be held on Monday, March 11, beginning at 6 p.m., in the Auditorium of Lehigh Valley Hospital, Cedar Crest & I-78, and via teleconference in the First Floor Conference Room at Lehigh Valley Hospital-Muhlenberg. During the meeting, "Malpractice Suit Prevention" will be presented by Lawrence P. Levitt, MD, Division of Neurology, and Janine Fiesta, Esq., Vice President, Legal Services. All members of the Medical Staff are encouraged to attend.

Answer to Mystery Medical Staff Member
Ellen M. Field-Munves, MD

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

Eugene B. Nor, MD
Christine & Bren Family Practice
1365 Blue Mountain Drive
Danielsville, PA 18038-9738
(610) 767-4315
Fax: (610) 767-9420
Department of Family Practice
Site of Privileges - None
Provisional Affiliate

Susan K. Pedott, DMD
(Solo Practice)
3894 Courtney Street, Suite 105
Bethlehem, PA 18017-8920
(610) 317-2400
Fax: (610) 317-8600
Department of Dentistry
Division of Endodontics
Site of Privileges - LVH & LVH-M
Provisional Active

Gary W. Szydlowski, MD
The Heart Care Group, PC
Jaindl Pavilion, Suite 500
1202 S. Cedar Crest Blvd.
P.O. Box 3880
Allentown, PA 18106-0880
(610) 770-2200
Fax: (610) 776-6645
Department of Surgery
Division of Cardio-Thoracic Surgery
Section of Cardiac Surgery
Site of Privileges - LVH & LVH-M
Provisional Active

Address Changes

Lehigh Valley Foot and Ankle Surgeons
- **Jay H. Kaufman, DPM**
- **Dean L. Sorrento, DPM**

1575 Pond Road, Suite 202
Allentown, PA 18104-2254
(Effective February 15, 2002)

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(Continued from Page 11)

Laurence P. Karper, MD
LVPG-Psychiatry
Lehigh Valley Hospital-Muhlenberg
2545 Schoenersville Road
5th Floor
Bethlehem, PA 18017-7384
(484) 884-6503
Fax: (484) 884-6504

Michael W. Kaufmann, MD
LVPG-Psychiatry
Lehigh Valley Hospital-Muhlenberg
2545 Schoenersville Road
5th Floor
Bethlehem, PA 18017-7384
(484) 884-6503
Fax: (484) 884-6504

Susan D. Wiley, MD
LVPG-Psychiatry
1255 S. Cedar Crest Blvd., Suite 3800
Allentown, PA 18103-6256
(610) 821-2036
Fax: (610) 821-2038

Practice Change

Brendan J. O'Brien, DO
(No longer associated with Coordinated Health Systems)
Orthopaedic Associates of Allentown
1243 S. Cedar Crest Blvd.
Second Floor
Allentown, PA 18103-6268
(610) 433-6045
Fax: (610) 433-3605

Status Changes

Frank G. Baloh, MD
Department of Surgery
Division of Ophthalmology
From: Active
To: Affiliate
Site of Privileges - None

Thomas O. Burkholder, MD
Department of Surgery
Division of Ophthalmology
From: Associate
To: Affiliate
Site of Privileges - None

Joseph J. Grassi, MD
Department of Medicine
Division of Physical Medicine-Rehabilitation
From: Provisional Active
To: Associate
Site of Privileges - LVH-M

Joseph Kavchok, Jr., MD
Department of Surgery
Division of Ophthalmology
From: Active
To: Affiliate
Site of Privileges - None

Dennis W. Kean, MD
Department of Pediatrics
Division of General Pediatrics
From: Active/LOA
To: Honorary

Robert Kiesel, MD
Department of Surgery
Division of Ophthalmology
From: Associate
To: Affiliate
Site of Privileges - None

Howard J. Kushnick, MD
Department of Surgery
Division of Ophthalmology
From: Active
To: Affiliate
Site of Privileges - None

Alan B. Leahey, MD
Department of Surgery
Division of Ophthalmology
From: Active
To: Affiliate
Site of Privileges - None

Alan D. Listhaus, MD
Department of Surgery
Division of Ophthalmology
From: Active
To: Affiliate
Site of Privileges - None

Marnie P. O'Brien, DO
Department of Surgery
Division of Ophthalmology
From: Active
To: Affiliate
Site of Privileges - None

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One-Year Leave of Absence

Steven L. Zelenkofske, DO
Department of Medicine
Division of Cardiology
From: Active
To: Active/LOA

Resignations

John R. Anderson, MD
Department of Surgery
Division of Urology

William F. Gadbois, MD
Department of Surgery
Division of Urology

Karen M. Matz, MD
Department of Obstetrics and Gynecology
Division of Primary Obstetrics and Gynecology

Peter J. Meyer, MD
Department of Psychiatry
Section of Child-Adolescent Psychiatry

Death

Raul M. Abad, MD
Department of Surgery
Division of Neurological Surgery

Allied Health Staff

Appointments

Guy T. Hornig, CRNA
Physician Extender
Professional - CRNA
(Lehigh Valley Anesthesia Services, Inc. - Thomas M. McLoughlin, Jr., MD)
Site of Privileges - LVH & LVH-M

David J. Isgan, PA-C
Physician Extender
Physician Assistant - PA-C
(Gastroenterology Associates - Lawrence W. Bardawil, MD)
Site of Privileges - LVH & LVH-M

Craig I. Matsumoto, CNIM
Physician Extender
Technical
Intraoperative Neurophysiological Monitoring Specialist
(Surgical Monitoring Associates)
(Supervising Physician - Mark C. Lester, MD)
Site of Privileges - LVH & LVH-M

Heather L. Posavek, GRNA
Physician Extender
Professional - GRNA
(Lehigh Valley Anesthesia Services, Inc. - Thomas M. McLoughlin, Jr., MD)
Site of Privileges - LVH & LVH-M

William R. Sevold
Physician Extender
Technical - Pacemaker/ICD Technician
(Guidant Corp)
(Supervising Physician - Norman H. Marcus, MD)
Site of Privileges - LVH & LVH-M

Mark E. Unger, CRNA
Physician Extender
Professional - CRNA
(Anesticare Anesthesia Services Inc)
(Supervising Physician - Thomas M. McLoughlin, Jr., MD)
Site of Privileges - Lehigh Magnetic Imaging Center only

Resignations

Donald G. Connell, CRNA
Physician Extender
Professional - CRNA
(Allentown Anesthesia Associates Inc)

John E. Kresge, CRNA
Physician Extender
Professional - CRNA
(Allentown Anesthesia Associates Inc)

Michael C. Loomis, CRNA
Physician Extender
Professional - CRNA
(Allentown Anesthesia Associates Inc)

Terrance McGinley, CRNA
Physician Extender
Professional - CRNA
(Allentown Anesthesia Associates Inc)

Ann J. Peiffer, PA-C
Physician Extender
Physician Assistant - PA-C
(Opcor, P.C.)

William J. Waldron, CRNA
Physician Extender
Professional - CRNA
(Allentown Anesthesia Associates Inc)

LEHIGH VALLEY HOSPITAL
ALLENTOWN, PA

LEHIGH VALLEY HOSPITAL-MUHLENBERG
BETHLEHEM, PA

PAIN MANAGEMENT FLOW SHEET

SEDATION SCALE
A–ALERT, AWAKE
B–DOZING,EASILY AROUSED
C–DOZING, AROUSED WITH DIFFICULTY
D–UNAROUSABLE, UNRESPONSIVE

SENSORY LEVEL
N–NORMAL
T–TINGLING
Nb–NUMB
A–ABSENT

MOTOR STRENGTH
5–NORMAL
4–GOOD
3–FAIR
2–POOR
1–TRACE
0–NONE

Date_____ ☐ Epidural ☐ PCA

Medication and Concentration _____

TIME	BASE LINE PAIN SCORE	PAIN LOCATION	INTER-VENTION	ROUTE	PAIN SCORE AFTER INTER-VENTION / TIME	PATIENT'S GOALS	BASAL RATE / PCA DOSE	PCA DELAY TIME / 1HR LIMIT	BOLUS	8HR TOTAL / REMAIN OR DISCARD	SEN. LEVEL	MOTOR STRENGTH	RESP. RATE / RESP. DEPTH (R - REGULAR NORMAL; S - SHALLOW; A - APNEIC)	SED. SCALE	SIDE EFFECTS (N–NAUSEA; V–VOMITING; I–ITCHING; R–URINARY RETENTION)	EPIDURAL SITE CLEAN AND DRY	COMMENT	INIT	INIT

ROUTE
IV =Intravenous
IM =Intramuscular
PO =By Mouth
D =Dermal
R =Rectally
IT =Intrathecal
E =Epidural

INTERVENTION
N =Narcotic
NS =NSAID
MR =Muscle Relaxer
D =Distraction
P =Position Change
MT =Music Therapy
M =Massage
RT =Relaxation Technique
HA =Heat Application
CA =Cold Application
T =Tens
AD =Antidepressant
AC =Anticonvulsant
BT =Breathing Technique
O =Other

INTERVENTION (PEDS)
S =Swaddle
PA =Pacifier
R =Rocking

THERAPEUTICS AT A GLANCE

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

Formulary Additions

Nesiritide/Natrecor ™

Nesiritide is indicated for the intravenous treatment of patients with acutely decompensated congestive heart failure who have dyspnea at rest or with minimal activity.

Human b-type (brain) natriuretic peptide is an endogenous 32-amino acid peptide hormone found in brain and cardiac tissue that exerts cardiovascular and renal activity. Although originally identified in porcine brain tissue, it is now recognized to be excreted primarily by the cardiac ventricle. Nesiritide is synthetic human b-type natriuretic peptide and is identical in amino acid sequence to the naturally occurring hormone. It is produced by *E. coli* using recombinant DNA technology.

B-type natriuretic peptide is a vasodilator, reducing both preload and afterload, with additional diuretic and natriuretic activity. B-type natriuretic peptide is structurally and functionally similar to atrial natriuretic peptide (ANP). Levels of both endogenous peptides are increased in fluid overload states including congestive heart failure and chronic renal failure. Normally, b-type natriuretic peptide levels are lower than those of atrial natriuretic peptide; however, levels rise with cardiac injury in proportion to the severity of cardiac dysfunction and may exceed atrial natriuretic peptide levels. In severe heart failure, levels of b-type natriuretic peptide are greatly elevated (20 to 100-fold). It is believed that the two hormones play a complementary role in modulating cardiac function and fluid status.

Nesiritide was associated with reduction in pulmonary wedge pressure, mean right atrial pressure, and systemic vascular resistance, and increases in cardiac index and stroke volume index, with no effect on heart rate.

Following administration of the recommended nesiritide dosing regimen (2 mcg/kg IV bolus followed by an intravenous infusion dose of 0.01 mcg/kg/min), 60% of the 3-hour effect on pulmonary capillary wedge pressure reduction is achieved within 15 minutes after the bolus. Within 1 hour, 95% of the 3-hour effect is achieved. Approximately 70% of the 3-hour effect on systolic blood pressure reduction is achieved within 15 minutes. After discontinuation or reduction of dose in patients with symptomatic hypotension, half of the recovery of the systolic blood pressure toward baseline is observed in about 60 minutes. At higher doses, the duration of hypotension has been prolonged to several hours· Pulmonary capillary wedge pressure returns to within 10% of baseline within 2 hours after discontinuation of nesiritide.

The effects of nesiritide persist longer than would be expected from the short half-life, possibly due to receptor-mediated hemodynamic effects.

Natriuretic peptides are cleared from the circulation by three mechanisms: binding to natriuretic peptide clearance receptors on endothelial cells resulting in cellular internalization and lysosomal proteolysis; proteolytic cleavage by endopeptidases, such as neutral endopeptidases; and renal filtration.

Although nesiritide is partially eliminated through renal filtration, dosage adjustment is not required in patients with renal insufficiency.

Nesiritide should not be used as primary therapy for patients with cardiogenic shock or in patients with a systolic blood pressure less than 90 mmHg. Nesiritide use should also be avoided in patients suspected of having or known to have low cardiac filling pressures.

It is not recommended for patients for whom vasodilating agents are not appropriate, such as patients with valvular stenosis, restrictive or obstructive cardiomyopathy, constrictive pericarditis, pericardial tamponade, or other conditions in which cardiac output is dependent upon venous return.

At higher doses, hypotensive episodes occurred more frequently and were generally of greater intensity and duration and more frequently required medical intervention. Administration of nesiritide is recommended only in settings where blood pressure can be monitored closely. The nesiritide dose should be reduced or nesiritide therapy discontinued if hypotension occurs. Nesiritide should be administered cautiously in patients with a systolic blood pressure less than 100 mmHg at baseline. The potential for hypotension may also be increased when nesiritide is administered with other medications that may cause hypotension, such as an ACE inhibitor.

Nesiritide may affect renal function. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with nesiritide may be associated with azotemia. At doses higher than 0.01 mcg/kg/min, an increased rate of elevated serum creatinine over baseline compared with other therapies was observed, although the rate of acute renal failure and need for dialysis was not increased.

The most common adverse effects have included hypotension and associated symptoms including headache, nausea, substernal pain, diaphoresis, lightheadedness, and sinus bradycardia. Other adverse effects reported in clinical trials have included palpitations, vomiting, superficial phlebitis, epigastric discomfort, and junctional rhythm. Hypotension and nausea appear to occur more frequently at higher doses. Table 2 summarizes the adverse effects occurring with at least 3% frequency during the first 24 hours of nesiritide infusion in several clinical trials.

In clinical trials, nesiritide has been administered concomitantly with diuretics, oral ACE inhibitors, digoxin, oral vasodilators, dobutamine, anticoagulants, oral nitrates, statins, class III antiarrhythmic agents, beta-blockers, calcium channel blockers, angiotensin II receptor antagonists, and dopamine. The coadministration of nesiritide with IV vasodilators such as nitroglycerin, nitroprusside, milrinone, or IV ACE inhibitors has not been evaluated and these agents were not coadministered with nesiritide in clinical trials.

Nesiritide is administered intravenously. Blood pressure should be closely monitored during nesiritide administration. If hypotension occurs during nesiritide administration, the dose should be reduced or discontinued and other measures to support blood pressure should be started (IV fluids, changes in body position). In the VMAC trial, nesiritide therapy was discontinued when symptomatic hypotension occurred and could be subsequently restarted at a dose that was reduced by 30% (with no bolus administration) once the patient was stabilized.

Hypotension may be prolonged up to hours; therefore, a period of observation may be necessary before restarting nesiritide.

The recommended dose of nesiritide is an IV bolus of 2 mcg/kg followed by a continuous infusion at a dose of 0.01 mcg/kg/min. Therapy should not be initiated at a higher dose. The infusion solution should be prepared by adding 1.5 mg to 250 ml of solution, resulting in a concentration of 6 mcg/mL of nesiritide. The IV tubing should be primed with an infusion of 25 mL prior to connecting the patient's vascular access port and prior to administering the bolus or starting the infusion. To administer the bolus dose, the bolus volume recommended in Table 1 should be withdrawn from the infusion bag and administered over approximately 60 seconds through an IV port in the tubing. Immediately after administration of the bolus dose, an infusion should be initiated at a flow rate of 0.1 mL/kg/hr that will deliver a nesiritide infusion dose of 0.01 mcg/kg/min. Table 1 or the following formulas should be used to calculate the appropriate weight-based bolus volume and infusion flow rate:

Bolus volume (mL) = 0.33 x patient weight (kg)
Infusion flow rate (mL/hr) = 0.1 x patient weight (kg)

Table 1: Weight-Based Bolus Volume and Infusion Flow Rate:

Patient Weight (kg)	Volume of Bolus (mL)	Rate of Infusion (mL/h)
60	20	6
70	23.3	7
80	26.7	8
90	30	9
100	33.3	10
110	36.7	11

In the VMAC trial, 23 patients who had central hemodynamic monitoring received increased doses of nesiritide. The infusion dose was increased by 0.005 mcg/kg/min no more frequently than every 3 hours up to a maximum dose of 0.03 mcg/kg/min. Nesiritide should not be titrated at frequent intervals. There is limited experience with administration of nesiritide for longer than 48 hours.

Nesiritide is physically and/or chemically **incompatible** with injectable formulations of heparin, insulin, ethacrynate sodium, bumetamide, enalaprilat, hydralazine, and furosemide. Nesiritide should not be coadministered with these agents through the same IV catheter. The **preservative sodium metabisulfite is also incompatible with nesiritide** and injectable drugs containing sodium metabisulfite should not be administered in the same infusion line as nesiritide. The catheter must be flushed between administration of nesiritide and incompatible agents. **Nesiritide binds heparin** and could bind the heparin lining of a heparin-coated catheter, thereby reducing nesiritide delivery to a patient. Nesiritide must not be administered through a central heparin-coated catheter.

Table 2: Adverse Events Reported in the Product Labeling of Nesiritide:

Adverse Event	VMAC Trial	Other Trials			
	Nitrogly-cerin (n=216)	Nesiritide (n=273)	Control* (n=256)	Nesiritide 0.015 mcg/kg/min (n=253)	Nesiritide 0.03 mcg/kg/min (n=246)
Cardiovascular					
Hypotension	12%	11%	8%	22%	35%
Symptomatic hypotension	5%	4%	3%	11%	17%
Asymptomatic hypotension	8%	8%	5%	12%	20%
Ventricular tachycardia (VT)	5%	3%	10%	10%	4%
Non-sustained VT	5%	3%	9%	9%	4%
Ventricular extrasystoles	1%	3%	6%	4%	4%
Angina pectoris	2%	2%	2%	6%	2%
Bradycardia	<1%	1%	<1%	3%	5%
Body as a Whole					
Headache	20%	8%	9%	9%	7%
Abdominal pain	5%	1%	4%	2%	3%
Back pain	3%	4%	2%	2%	1%
Central Nervous System					
Insomnia	4%	2%	3%	6%	6%
Dizziness	2%	3%	3%	6%	5%
Anxiety	3%	3%	1%	3%	2%
Digestive					
Nausea	6%	4%	6%	9%	13%
Vomiting	2%	1%	1%	2%	4%

*includes dobutamine, milrinone, nitroglycerin, placebo, dopamine, nitroprusside, or amrinone.

CONCLUSION: Nesiritide may offer an alternative to dobutamine, nitroglycerin, nitroprusside, milrinone and other agents used in the therapy of hospitalized patients with acute congestive heart failure. It may be less likely to cause ventricular arrhythmias than dobutamine, but was associated with a high incidence of symptomatic hypotension in earlier trials, which featured higher dosing regimens. The reduced dosage used in the VMAC study and approved by the FDA resulted in a comparable incidence of hypotension Vs. nitroglycerin. Nesiritide therapy does help to lower the pulmonary capillary wedge pressure and improve other hemodynamic parameters in hospitalized patients with decompensated heart failure, but its comparative advantages have not been clearly illustrated in any trial to date. Additional comparative data are necessary to determine the role of nesiritide in the therapy of acute congestive heart failure. A provisional formulary availability status was approved to allow for cardiology to gain some experience with this agent in the treatment of acute decompensated congestive heart failure. The Pharmacy will monitor patients receiving this agent and report back to theTherapeutics Committee its findings.

Twenty-four hours of therapy with nesiritide for an 80 kg patient (one vial) will cost $370, while comparable therapy with milrinone would cost $360. Nitroglycerin infusion bottles currently cost the institution @ $1.10 per 100mg/250ml bottle. Three bottles would be required to treat an 80 kg patient at 200 mcg/minutes for 24 hours.

Dobutamine infusion dosed at 10 mcg/kg min for this same patient would require 5 vials of 250mg for a 24 hour treatment—costing $16.25. Nitroprusside infusion in this same scenario would cost $26.40.

Etomidate/Amidate

Etomidate is a hypnotic drug without analgesic activity. Intravenous injection of etomidate produces hypnosis characterized by a rapid onset of action, usually within 1 minute. Duration of hypnosis is dose dependent but relatively brief, usually 3-5 minutes when an average dose of 0.3 mg/kg is employed. Immediate recovery from anesthesia (as assessed by awakening time, time needed to follow simple commands and time to perform simple tests after anesthesia as well as they were performed before anesthesia), based upon data derived from short operative procedures where intravenous etomidate was used for both induction and maintenance of anesthesia, is about as rapid as, or slightly faster than, immediate recovery after similar use of thiopental.

The most characteristic effect of intravenous etomidate on the respiratory system is a slight elevation in arterial carbon dioxide tension (PaCO2).

Reduced cortisol plasma levels have been reported with induction doses of 0.3 mg/kg etomidate. These persist for approximately 6-8 hours and appear to be unresponsive to ACTH administration.

The intravenous administration of up to 0.6 mg/kg of etomidate to patients with severe cardiovascular disease has little or no effect on myocardial metabolism, cardiac output, peripheral circulation or pulmonary circulation. The hemodynamic effects of etomidate have in most cases been qualitatively similar to those of thiopental sodium, except that the heart rate tended to increase by a moderate amount following administration of thiopental under conditions where there was little or no change in heart rate following administration of etomidate. There are insufficient data concerning use of etomidate in patients with recent severe trauma or hypovolemia to predict cardiovascular response under such circumstances.

Clinical experience and special studies to date suggest that standard doses of intravenous etomidate ordinarily neither elevate plasma histamine nor cause signs of histamine release.

Etomidate is rapidly metabolized in the liver.

Etomidate is indicated by intravenous injection for the induction of general anesthesia. When considering use of etomidate, the usefulness of its hemodynamic properties should be weighed against the high frequency of transient skeletal muscle movements.

Intravenous etomidate is also indicated for the supplementation of subpotent anesthetic agents, such as nitrous oxide in oxygen, during maintenance of anesthesia for short operative procedures such as dilation and curettage or cervical conization.

BECAUSE OF THE HAZARDS OF PROLONGED SUPPRESSION OF ENDOGENOUS CORTISOL AND ALDOSTERONE PRODUCTION, THIS FORMULATION IS NOT INTENDED FOR ADMINISTRATION BY PROLONGED
INFUSION.

Plasma Cortisol Levels Induction doses of etomidate have been associated with reduction in plasma cortisol and aldosterone concentrations. These have not been associated with changes in vital signs or evidence of increased mortality; however, where concern exists for patients undergoing severe stress, exogenous replacement should be considered.

The most frequent adverse reactions associated with use of intravenous etomidate are transient venous pain on injection and transient skeletal muscle movements, including myoclonus:
Transient venous pain was observed immediately following intravenous injection of etomidate in about 20% of the patients, with considerable difference in the reported incidence (1.2-42%). This pain is usually described as mild to moderate in severity but it is occasionally judged disturbing. The observation of venous pain is not associated with a more than usual incidence of thrombosis or thrombophlebitis at the injection site. Pain also appears to be less frequently noted when larger, more proximal arm veins are employed and it appears to be more frequently noted when smaller, more distal, hand or wrist veins are employed.

Transient skeletal muscle movements were noted following use of intravenous etomidate in about 32% of the patients, with considerable difference in the reported incidence (22.7-63%). Most of these observations were judged mild to moderate in severity but some were judged disturbing. The incidence of disturbing movements was less when 0.1 mg of fentanyl was given immediately before induction. These movements have been classified as myoclonic in the majority of cases (74%), but averting movements (7%), tonic movements (10%), and eye movements (9%) have also been reported. No exact classification is available, but these movements may also be placed into three groups by location:

Most movements are bilateral. The arms, legs, shoulders, neck, chest wall, trunk and all four extremities have been described in some cases, with one or more of these muscle groups predominating in each individual case. Results of electroencephalographic studies suggest that these muscle movements are a manifestation of disinhibition of cortical activity; cortical electroencephalograms, taken during periods when these muscle movements were observed, have failed to reveal seizure activity.

Other movements are described as either unilateral or having a predominance of activity of one side over the other. These movements sometimes resemble a localized response to some stimuli, such as venous pain on injection, in the lightly anesthetized patient (averting movements). Any muscle group or groups may be involved, but a predominance of movement of the arm in which the intravenous infusion is started is frequently noted.

Still other movements probably represent a mixture of the first two types. Skeletal muscle movements appear to be more frequent in patients who also manifest venous pain on injection.

Other Adverse Observations include the following:

Respiratory System: Hyperventilation, hypoventilation, apnea of short duration (5-90 seconds with spontaneous recovery), laryngospasm, hiccup and snoring suggestive of partial upper airway obstruction have been observed in some patients. These conditions were managed by conventional countermeasures.

Circulatory System: Hypertension, hypotension, tachycardia, bradycardia and other arrhythmias have occasionally been observed during induction and maintenance of anesthesia. One case of severe hypotension and tachycardia, judged to be anaphylactoid in character, has been reported.

Gastrointestinal System: Postoperative nausea and/or vomiting following induction of anesthesia with etomidate is probably no more frequent than the general incidence. When etomidate was used for both induction and maintenance of anesthesia in short procedures such as dilation and curettage, or when insufficient analgesia was provided, the incidence of postoperative nausea and/or vomiting was higher than that noted in control patients who received thiopental.

Etomidate injection is intended for administration only by the intravenous method. The dose for induction of anesthesia in adult patients and in children above the age of 10 years will vary between 0.2 and 0.6 mg/kg of body weight, and it must be individualized in each case. The usual dose for induction in these patients 0.3 mg/kg, injected over a period of 30-60 seconds. There are inadequate data to make dosage recommendations for induction of anesthesia in patients below the age of 10 years; therefore, such use is not recommended.
Smaller increments of intravenous etomidate may be administered to adult patients during short operative procedures to supplement subpotent anesthetic agents, such as nitrous oxide. The dosage employed under these circumstances, although usually smaller than the original induction dose, must be individualized. There are insufficient data to support this use of etomidate for longer adult procedures or for any procedures in children; therefore, such use is not recommended. The use of intravenous fentanyl and other neuroactive drugs employed during the conduct of anesthesia may alter the etomidate dosage requirements.

Conclusion: Etomidate has been utilized for almost 20 years. It is considered a safe and effective induction agent The current cost for etomidate 40mg/20ml is $13.90. An induction dose of 0.2mg/kg of etomidate will cost about $7.00. An equivalent dose of thiopental would cost $3.50. Its selected use in anesthesia and the ER areas is anticipated.

Valganciclovir Hydrochloride/ Valcyte ™

Valganciclovir has been recommended for approval for use in the induction and maintenance treatment of cytomegalovirus retinitis in patients with AIDS. Table 1 compares the other agents approved for this indication.

Table 1: Antiviral Agents Used in the Treatment of CMV Retinitis:

Generic Name	**Cidofovir Cidofovir Cidofovir**	**Fomivirsen**	**Foscarnet**	**Ganciclovir Insert**	**Ganciclovir IV**	**Ganciclovir PO**	**Valgan-ciclovir**
Brand Name	*Vistide*	*Vitravene*	*Foscavir*	*Vitrasert*	*Cytovene-IV*	*Cytovene*	*Valcyte*
Manufacturer	Gilead	Ciba Vision	AstraZeneca	Bausch & Lomb	Roche	Roche	Roche
Indications							
CMV retinitis in immunocompromised patients, including patients with AIDS					X	X	
CMV retinitis in patients with AIDS	X		X	X			X[a]
CMV retinitis in patients with AIDS who are intolerant of or have a contraindication to other treatments for CMV retinitis or who were insufficiently responsive to previous treatments							
Induction	X	XXXX		X	X		X[a]
Maintenance	X	X	X	X	X	X	X[a]
Combination therapy in CMV retinitis			X				
Prevention of CMV disease in organ transplant recipients					X	X	
Prevention of CMV disease in patients with advanced HIV infection						X	
Acyclovir-resistant mucocutaneous HSV infection in immunocompromised patients			X				

a=anticipated upon approval

Valganciclovir is rapidly and completely hydrolyzed to ganciclovir following oral administration. The absolute bioavailability of ganciclovir from valganciclovir is approximately 60%. In contrast, the bioavailability of oral ganciclovir is about 6%. Unlike ganciclovir, valganciclovir is a substrate of the intestinal peptide transporter PEPT1, resulting in its increased bioavailability. Hepatic and intestinal esterases rapidly convert valganciclovir to ganciclovir.

Phase III studies are ongoing with valganciclovir for the prevention of CMV retinitis in solid organ transplant recipients. The manufacturer is currently conducting a double-blind, multicenter study comparing valganciclovir 900 mg once daily and oral ganciclovir 1000 mg three times daily for the prevention of CMV disease in high-risk heart, liver, and kidney allograft recipients.

The contraindications, warnings, and precautions for valganciclovir are similar to those of ganciclovir..

The most frequently observed adverse events during valganciclovir induction therapy included diarrhea, nausea, vomiting, fever, fatigue, headache, oral candidiasis, neutropenia, anemia, and thrombocytopenia.

Diarrhea occurred more frequently with valganciclovir than IV ganciclovir (16% vs 10%); however, nausea occurred more frequently with IV ganciclovir (14% vs 8%). During valganciclovir maintenance therapy, 29% of patients treated with valganciclovir induction therapy developed hemoglobin levels below 8 g/dL compared to 16% of patients who had received IV ganciclovir.

As valganciclovir is rapidly converted to ganciclovir, the drug interactions associated with ganciclovir will also apply to valganciclovir. Seizures have been reported in patients who received ganciclovir and imipenem-cilastatin; therefore, concomitant use is not recommended unless the potential benefits outweigh the risks.

Drugs that inhibit replication of rapidly dividing cell populations such as bone marrow, spermatogonia, and germinal layers of skin and gastrointestinal mucosal may have additive toxicity when administered with ganciclovir. Such agents would include dapsone, pentamidine, flucytosine, vincristine, vinblastine, doxorubicin, amphotericin B, co-trimoxazole, or other nucleoside analogs.

Recommended monitoring should be similar to that for ganciclovir and includes frequent complete blood counts and platelet counts, especially in patients with a history of leukopenia during ganciclovir therapy or in whom neutrophils counts are less than 1000 cells/mL upon initiation of therapy. Serum creatinine or creatinine clearance should also be closely monitored to allow for dosage adjustments in patients with renal impairment.

The dose evaluated in the primary clinical trial in patients with AIDS and CMV retinitis used an oral valganciclovir dose of 900 mg twice daily for 21 days during induction therapy followed by 900 mg once daily for maintenance therapy.

CONCLUSION: Valganciclovir appears to offer a promising alternative to oral and intravenous ganciclovir, with the advantage of once- or twice-daily oral administration. It appears to achieve ganciclovir levels comparable to those achieved with the intravenous administration of ganciclovir, and appeared as effective as intravenous ganciclovir in the induction therapy of CMV retinitis in patients with AIDS. Although the efficacy of the valganciclovir in maintenance therapy has not been established in clinical trials, there is no reason to believe it should not be as effective as oral or intravenous ganciclovir in maintenance therapy based on the levels of ganciclovir achieved in pharmacokinetic studies. The adverse effects of valganciclovir appear comparable to those of ganciclovir. Currently, 1 gram of oral ganciclovir administered thrice daily would cost $75.00/day, while 900mg/daily of valganciclovir costs $46.75.

The improved bioavailability of this agent makes it especially attractive in the regimens of renal transplant patients.

Angiotensin Receptor (ARBs) Formulary Streamlined

No study has shown any of these agents to be preferable over the angiotensin converting enzyme inhibitors (ACEI) in controlling blood pressure, improving the clinical status of patients with heart failure (sans ELITE 1) or in use in mitigating the effects of diabetic nephropathy. Although, in patients that can not tolerate ACEI therapy, angiotensin receptor blockers may provide an alternative in these situations. Certainly, no published comparative study has suggested that any of the individual molecules has any superiority vs. other members of this drug class in these two latter areas.

Based on the limited comparative studies in hypertension, irbesartan was at least as effective as either losartan or valsartan. Candesartan was considered equivalent to losartan at low doses and statistically superior to losartan in higher doses in one study. Irbesartan and candesartan have the most bioavailability amongst all the currently available agents and can be dosed on a once daily basis. Both products have no demonstrated food/drug interactions. Candesartan does require biotransformation, but this is not a clinically relevant limitation. Neither agent requires dosing modifications in renal dysfunction. As candesartan will provide some marginal cost savings and it allows for a stratified dose adjustment across multi-product dosage ranges, it was selected as the primary angiotensin receptor blocking (ARB) agent for the LVH Formulary. Losartan will also remain on the Formulary for its unique uricosuric effects and its current high frequency of use amongst this class of drugs.

Candesartan will be substituted for the other current ARBs based on the dosing schedule elucidated below. Patients on losartan therapy WILL NOT have their therapy modified.

Approved Dose conversions (based on total daily doses)

Candesartan	Irbesartan	Valsartan
4 mg	75 mg	80 mg
8 mg	150 mg	160 mg
16 mg	225 mg	240 mg
32 mg	300 mg	320 mg

Candesartan	Telmisartan	Eprosartan
8mg	40 mg	600 mg
8mg	40 mg	600 mg
16 mg	80 mg	400mg bid
16 mg	80 mg	400mg bid

Comparative Acquisition Costs for ARBs based on Total Daily Dosage

Losartan	Valsartan	Candesartan	Telmisartan	Eprosartan	Irbesartan
25mg=$1.02	80mg=$1.04	4mg=$1.10	40mg=$1.11	600mg=$1.07	75mg=$1.11
50mg=$1.02	160mg=$1.13	8mg=$1.10			150mg=$1.17
75mg=$2.04	240mg=$2.17	16mg=$1.10	80mg=$1.18	800mg=$1.60	225mg=$2.18
100mg=$1.46	320mg=$2.16	32mg=$1.47			300mg=$1.33

Comparative Pharmacology

Parameter	Losartan	Valsartan	Irbesartan	Candesartan	Telmistartan	Eprosartan
Food Interactions	10% decrease	50% decrease	None	None	20% decrease	Delayed absorption
Drug Interactions	Rifampin, fluconazole	None	None	None	Digoxin	None
Metabolism	2C9 and 3A4	Unknown	Glucuronide oxidation and conjugation, 2C9	O-demethylation	Minimal metabolism	Glucuronide conjugation
T ½ (hr)	2 (meta 6-9)	6	11-15	4 (meta 3-11)	24	5-9
Hepatic dysfunction	Decrease initial dose	Unknown Change in severe disease	Unknown Change in severe disease	Unknown Change in severe disease	No Change	No Change
Renal dysfunction (If NOT volume depleted)	No Change	Unknown Change in severe disease	No Change	No Change	Unknown Change in severe disease	No Change
Active metabolite	Yes	No	No	Yes	No	No

Additional Proton Pump Inhibitor Autosubstitutions

The Therapeutics committee approved therapeutic substitutions for two additional agents in the proton pump inhibitor category. The Pharmacy was authorized to change rabeprazole (Aciphex) and esomeprazole (Nexium) to pantoprazole (Protonix). The updated class conversions are as follows:

Rabeprazole	**Pantoprazole**
20 mg QD	40mg QD
40 mg QD	40mg BID
Esomeprazole	**Pantoprazole**
20-40 mg QD	40mg QD
40 mg BID	40mg BID
Lansoprazole	**Pantoprazole**
15 mg QD or BID	40mg QD
30 mg QD	40mg QD
30mg BID	40mg BID
Omeprazole	**Pantoprazole**
10-20mg QD	40mg QD
20mg BID	40 mg QD
40mg QD	40 mg QD
40mg BID	40 mg BID

Abbreviation/Dose Expression	Intended Meaning	Misinterpretation	Correction
Apothecary symbols	dram minim	Misunderstood or misread (symbol for dram misread for "3" and minim misread as "mL").	Use the metric system.
AU	aurio uterque (each ear)	Mistaken for OU (oculo uterque—each eye).	Don't use this abbreviation.
D/C	discharge discontinue	Premature discontinuation of medications when D/C (intended to mean "discharge") has been misinterpreted as "discontinued" when followed by a list of drugs.	Use "discharge" and "discontinue."
Drug names			Use the complete spelling for drug names.
ARA°A	vidarabine	cytarabineARA°C	
AZT	zidovudine (RETROVIR)	azathioprine	
CPZ	COMPAZINE (prochlorperazine)	chlorpromazine	
DPT	DEMEROL-PHENERGAN-THORAZINE	diphtheria-pertussis-tetanus (vaccine)	
HCl	hydrochloric acid	potassium chloride (The "H" is misinterpreted as "K.")	
HCT	hydrocortisone	hydrochlorothiazide	
HCTZ	hydrochlorothiazide	hydrocortisone (seen as HCT250 mg)	
MgSO4	magnesium sulfate	morphine sulfate	
MSO4	morphine sulfate	magnesium sulfate	
MTX	methotrexate	mitoxantrone	
TAC	triamcinolone	tetracaine, ADRENALIN,cocaine	
ZnSO4	zinc sulfate	morphine sulfate	
Stemmed names			
"Nitro" drip	nitroglycerin infusion	sodium nitroprusside infusion	
"Norflox"	norfloxacin	NORFLEX	
µg	microgram	Mistaken for "mg" when handwritten.	Use "mcg."
o.d. or OD	once daily	Misinterpreted as "right eye" (OD—oculus dexter)and administration of oral medications in the eye.	Use "daily."
TIW or tiw	three times a week.	Mistaken as "three times a day."	Don't use this abbreviation.
per os	orally	The "os" can be mistaken for "left eye."	Use "PO," "by mouth," or "orally."
q.d. or QD	every day	Mistaken as q.i.d., especially if the period after the "q" or the tail of the "q" is misunderstood as an "i."	Use "daily" or "every day."
qn	nightly or at bedtime	Misinterpreted as "qh" (every hour).	Use "nightly."
qhs	nightly at bedtime	Misread as every hour.	Use "nightly."
q6PM, etc.	every evening at 6 PM	Misread as every six hours.	Use 6 PM "nightly."
q.o.d. or QOD	every other day	Misinterpreted as "q.d." (daily) or "q.i.d. (four times daily) if the "o" is poorly written.	Use "every other day."
sub q	subcutaneous	The "q" has been mistaken for "every" (e.g., one heparin dose ordered "sub q 2 hours before surgery" misunderstood as every 2 hours before surgery).	Use "subcut." or write "subcutaneous."
SC	subcutaneous	Mistaken for SL (sublingual).	Use "subcut." or write "subcutaneous."
U or u	unit	Read as a zero (0) or a four (4), causing a 10-fold overdose or greater (4U seen as "40" or 4u seen as 44").	"Unit" has no acceptable abbreviation. Use "unit."
IU	international unit	Misread as IV (intravenous).	Use "units."
cc	cubic centimeters	Misread as "U" (units).	Use "mL."
x3d	for three days	Mistaken for "three doses."	Use "for three days."
BT	bedtime	Mistaken as "BID" (twice daily).	Use "hs."

ss	sliding scale (insulin) or ½ (apothecary)	Mistaken for "55."	Spell out "sliding scale." Use "one-half" or use "½."
> and <	greater than and less than	Mistakenly used opposite of intended.	Use "greater than" or "less than."
/ (slash mark)	separates two doses or indicates "per"	Misunderstood as the number 1 ("25 unit/10 units" read as "110" units.	Do not use a slash mark to separate doses. Use "per."
Name letters and dose numbers run together (e.g., Inderal40 mg)	Inderal 40 mg	Misread as Inderal 140 mg.	Always use space between drug name, dose and unit of measure.
Zero after decimal point (1.0)	1 mg	Misread as 10 mg if the decimal point is not seen.	Do not use terminal zeros for doses expressed in whole numbers.
No zero before decimal dose (.5 mg)	0.5 mg	Misread as 5 mg.	Always use zero before a decimal when the dose is less than a whole unit.

MEC Approval for Expanded Role of Registered Dietitians

The following recommendations by the Therapeutics Committee for the Expanded Role of Registered Dietitians have been approved by the MEC.

I. Registered Dietitians Taking Verbal Orders - MEC approval 9/4/01

Registered Dietitians may take verbal orders from physicians related to nutritional care and to document those orders in the patient record.

Changes to the Rules and Regulations to conform to the recommendation are:

C. Patient Care #2

(a) Verbal Orders:

(iv) Verbal orders shall be taken only by a professional nurse except that the following individuals may take verbal orders:.....Registered Dietitians.....each with respect to procedures they are authorized to perform.

(b) Telephone Orders:

(iii) Telephone orders shall be taken only by a professional nurse except that the following may take telephone orders:.....Registered Dietitians.....with respect to procedures they are authorized to perform.

II. Expanded Role of Registered Dietitians - MEC approval 12/4/01

1. May provide discharge diet education to patients different from current order (*Example: post-op patient currently on Clear Liquids being given discharge diet education for low residue diet for when he goes home*)
2. May adjust diet orders, based on RD assessment, without obtaining physicians's order (*Example: current diet order for Regular diet, but patient doesn't have dentures; RD adjust to mechanical soft diet)*
3. Certified Nutrition Support Registered Dietitian may adjust tube feeding rates and products (Therapeutic Substitution) without physicians orders.

Therapeutic Substitution is an approved practice throughout the organization. It is well documented that timely nutrition intervention is crucial to positive patient outcomes and reduced length of stay. The American Society for Parenteral and Enteral Nutrition Standards of Practice for Nutrition Support Dietitians states: "[Nutrition Support Dietitians] may recommend, write orders, or obtain verbal orders for enteral and parenteral formulations (as guided by professional licensure or delineated by clinical privileges of an institution)". The Joint Commission on Accreditation of Health care Organizations Standards, standard TX.4.2 states, "Food and nutrition products are administered only on the prescription or order of a medical staff member or another individual who has been granted clinical privileges to write such prescriptions or orders." Therefore, clinical privileges as stated above is permissible.

The clinical privileges outlined above will enable the provision of timely Medical Nutrition Therapy (MNT) significantly reducing the drain on Dietitian, Nursing, and Physician time in receiving orders to initiate routine nutrition care plans. This time will better be spent on direct patient care and more effective communication discussing a patients's medical condition, treatment plan, and progress with the patient care team. The entire clinical nutrition team at LVHN is dedicated in providing the highest quality MNT in support of our physicians and patients. We appreciate your continued support.

The Last Word...

Tips and Techniques for the Lastword™ User

February, 2002 – Volume 1, Issue 4

CAPOE: What's it all About?

by Carolyn K. Suess, R.N.

Over the past year the term *CAPOE* has been heard throughout the corridors of Lehigh Valley Hospital. Computer Assisted Physician Order Entry has certainly created a lot of excitement, as well as some confusion as to expectations of physicians. To help alleviate any feelings of uncertainty, it is important to communicate expectations to those that will receive CAPOE training in the near future, and at the same time dispel some myths.

Myth #1: I have to be a computer expert to master CAPOE

Anyone newly introduced to CAPOE is *not* expected to be a computer expert. The system is intuitive by design and typing is kept to a minimum. The greatest challenge is time. The *CAPOE Order Pad* arranges orders in a logical fashion by ordering department, and the more time spent using CAPOE the easier it becomes to find orders in the system. Additionally, multiple orders that are commonly placed at the same time (such as admission orders) are grouped into *CAPOE Order Sets.* Order sets alleviate the need to search for orders individually in the system.

You will be notified through your chairman when you are expected to begin using CAPOE. An appointment for training with a Physician Software Educator will be arranged through your office manager.

One-on-one training is conducted privately, to avoid distractions, and is "hands-on." A minimum of two hours of training time is required to learn the CAPOE system. However, if additional time is needed, the physician will be accommodated. Reference material, in the form of a user guide is provided to every physician trained in CAPOE.

Myth #2: Once I'm trained, I'm on my own

No one is ever left without a resource to fall back on. Problems and questions pertaining to CAPOE are addressed through the **Helpdesk extension 8303, option #9.** You will be prompted to enter your call back phone number, and the on-call trainer/analyst will return your call immediately.

After a CAPOE unit activation, on-site user assistance is provided for the first few weeks by Physician Software Educators and I.S. Analysts. Following this period, Physician Software Educators round on a regular basis to provide additional assistance while physicians are on the unit.

Myth #3: If I don't have time to enter my orders, I can just give the nurse a verbal order

Although this may sound reasonable, the expectation is for physicians to enter their own orders once they have been trained on CAPOE. Of course, there may be extenuating circumstances. If you are experiencing difficulty finding or placing an order, it is important to contact the Helpdesk immediately (**ext. 8303, option #9**).

Myth #4: I won't need to look up patient labs and vital signs on-line because the nurse will print them and place them on the chart

For units that have implemented electronic entry of vital signs and medication administration as a prelude to CAPOE, the expectation is for physicians (both CAPOE and non-CAPOE) to view them on-line. Nursing staff will not print reports and place them on the chart, since more accurate and timely information is available in the Lastword system.

Patient information can be viewed not only on the unit where the patient is bedded, but anywhere in the hospital. For more information on viewing vital signs on-line, see the next article in this issue titled, ***Expect Improvements to Lastword Chart Tabs***.

Myth #5: There are never any wireless devices available for use

Each CAPOE active unit should have several PenCentra hand-held devices available exclusively for physician use. Two devices reside in both physician dictation areas. If wireless devices are not available or if they are not working properly, please contact the Helpdesk for assistance, or page a Physician Software Educator directly.

Myth #6: I have to be on the patient's unit to enter my orders

This is not true. CAPOE orders can be entered from any Lastword workstation and may also be entered remotely, from the physician's office. This is particularly convenient when admitting a patient to the hospital directly from the physician office.

As we know, change is inevitable and CAPOE is bringing significant positive changes to Lehigh Valley Hospital. The Physician Software Educators on staff are here to smooth the transition to computer order entry, and you are encouraged to contact them with any training issues you may have:

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

If you have training needs that pertain only to the Lastword system, please call ext. 1703. Arrangements can be made for training at your convenience.

Expect Improvements to Lastword Chart Tabs

by Carolyn K. Suess, R.N.

A New Year has arrived and so have new improvements to the chart tabs in the *Physician Base* screen in Lastword.

The most significant difference you may notice is with the *Viewer* chart tab. The menu is more descriptive, allowing the user to better distinguish between the available views (see Figure 1).

The views on the chart tab menu are as follows:

VIEWALL – This view displays Flowsheet Charted Results* (vital signs, height/weight, I/O), Laboratory results, and Microbiology results. Values display for the past seven days and at four-hour intervals by default.

Vital Signs and I/O – This view displays only vital signs and intake/output values*. Values display for the past seven days at eight-hour intervals by default.

Intake and Output – This view displays only intake/output values*. Values display for the past seven days at 24-hour intervals.

LABS/MICRO – This view displays only Laboratory and Microbiology results. Values display for the past seven days and at four-hour intervals by default.

Definition Screen – This selection displays the View Definition screen, offering the ability to select and customize views.

*This data is only available on patient care units that utilize electronic entry of vital signs and medication administration.

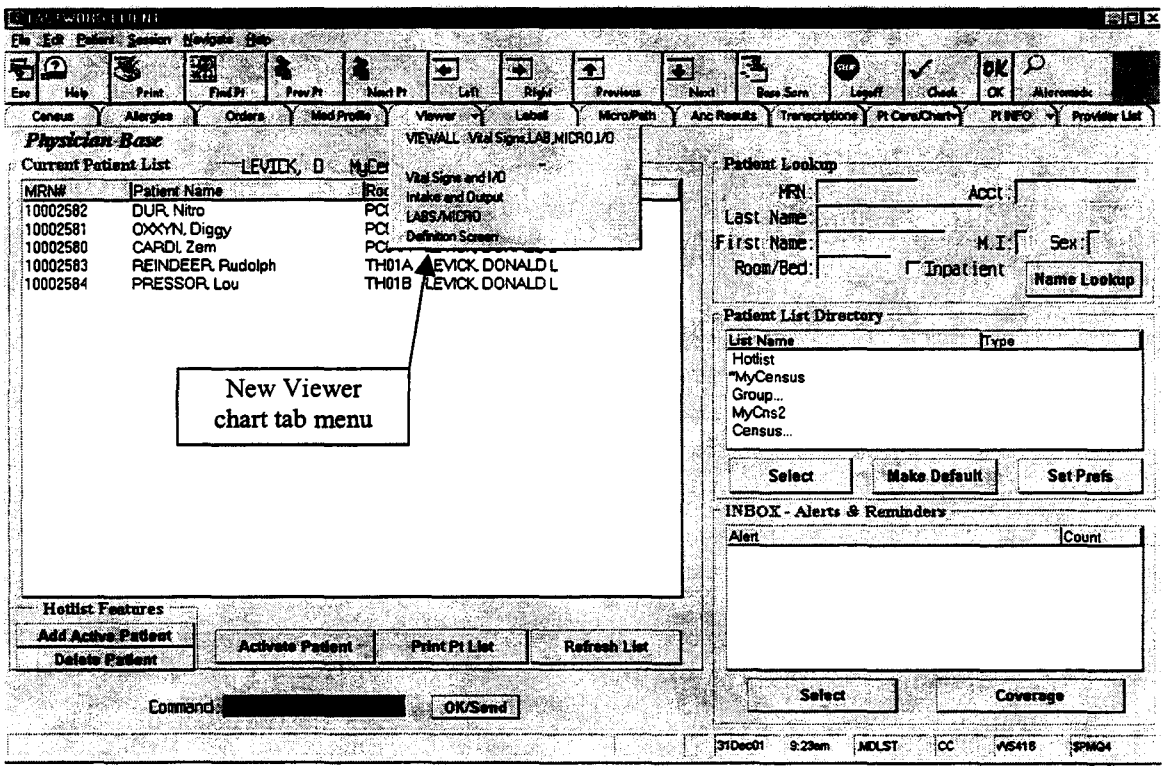

Figure 1 – Viewer chart tab displaying new menu selections

The second change impacts the *Pt Care/Chart* tab. Typically, only nursing should use this chart tab to enter vital signs and patient data. But due to its name, it sometimes confuses users who seek patient vital signs. Therefore, the menu was changed and a link to the *Viewer* was added to assist providers in finding vital signs for their patients (see Figure 2).

To view patient vital signs from the *Pt Care/Chart* tab, after selecting a patient click on the tab to display the menu, then click on the **Vital Signs – PHYSICIAN** selection. The *Viewer* opens and displays vital signs and intake/output values for your patient.

To learn more about the *Viewer* and other Lastword features, please take a moment to review the on-line documentation for Lastword. 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, or are interested in a personal training session, 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.

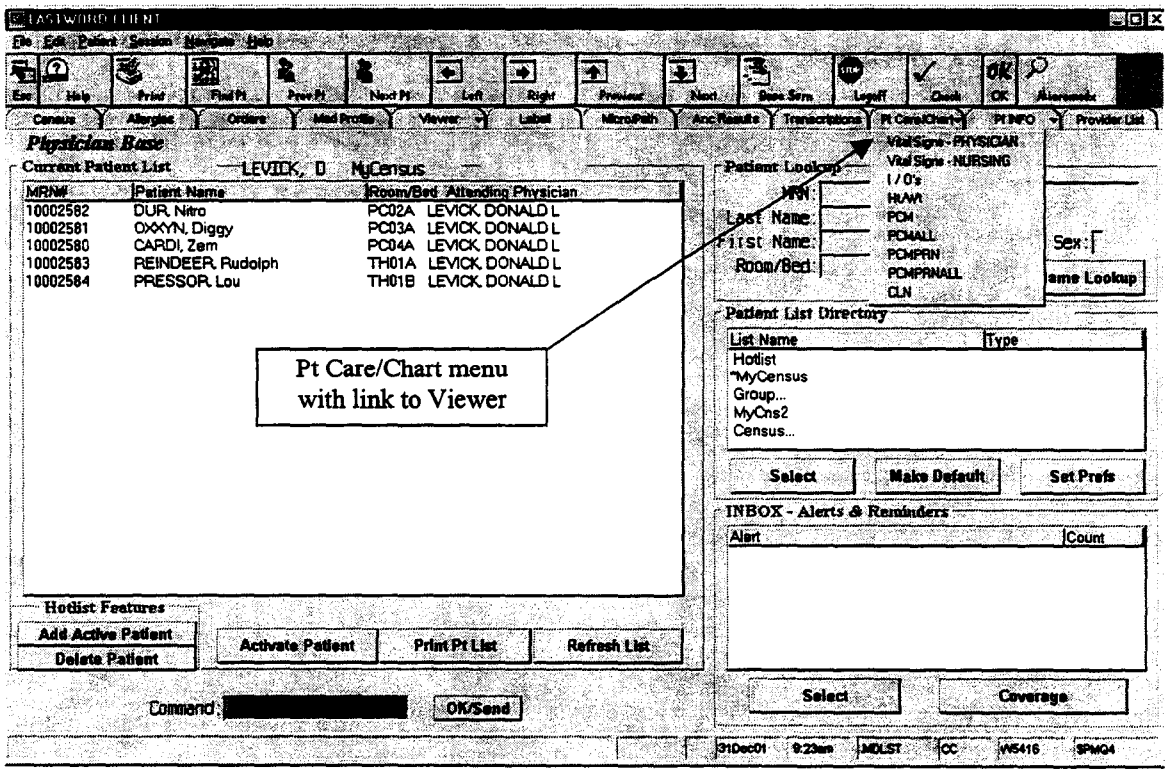

Figure 2 – Pt Care/Chart tab showing new menu selection with link to Viewer

THE CENTER FOR EDUCATIONAL DEVELOPMENT AND SUPPORT

February 2002

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.

After-Hours Access to LVH-MUHLENBERG Library.
Recently, the LVH-Muhlenberg library door was converted to a card-access area for the convenience of our patrons. You can now gain entrance to the Library by running your hospital I.D. through the card reader outside the door. If your card does not open the library door, please email Barbara Iobst with your name and social security number.

Recently Acquired Publications.

Library at 17th and Chew Streets
"Innovations in End-of-Life Care: Practical Strategies and International Perspectives," 2000
"Innovations in End-of-Life Care" Vol. 2, 2001

Library at CC & I-78 Campus
"Occupational Medicine:State of the Art Reviews."
(Subject: *"Health Hazards in the Arts"*
December, 2001 – Volume 16, No. 4

"Facial Plastic Surgery Clinics of North America."
(Subject: *"Vascular Birthmarks of the Head and Neck"*
November, 2001 – Volume 9, No. 4

Library at LVH-Muhlenberg
"Surgical Clinics of North America"
(Subject: *"Vascular Trauma: Complex and Challenging Injuries"* Part I)
December, 2001 – Volume 81, No. 6

LVH-Muhlenberg and Library 17
"Dental Clinics of North America."
(Subject: *"Evidence-Based Dentistry"*
January, 2002 – Volume 46, No. 1

Future Educational Activity

Next EPEC conference will be on Thursday, March 14th and Friday, March 15th in the School of Nursing?

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:

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.

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

February

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1 7am GYN GR CC CR1 11 am Neurology Conf CC Cr1 12 noon Breast TB JDMCC CR1	**2**
3	**4** 12 noon Colon/Rectal TB JDMCC CR1	**5** 7am Family Practice GR-JDMCC 1A/B 7am Surgical GR CC-Aud 8am Pediatric GR CC-Aud 12 noon Medical GR CC-Aud	**6** 12 noon MHC TB OR Con Rm	**7** 8am Emergency Medicine GR Banko Rm 1&2 12 noon Combined TB JDMCC CR1	**8** 7am OBGYN GR CC CR1 11 am Neurology Conf CC Cr1 12 noon Breast TB JDMCC CR1	**9**
10	**11**	**12** 7am Surgical GR CC-Aud 8am Pediatric GR CC-Aud 12 noon Medical GR CC-Aud	**13** 12 noon Pulmonary TB JDMCC CR1 12 noon MHC TB OR Con Rm	**14** 8am Emergency Medicine GR 4th Fl Conf. Rm 12 noon Combined TB JDMCC CR1	**15** 7am OBGYN GR CC CR1 11 am Neurology Conf CC Cr1 12 noon Breast TB JDMCC CR1	**16**
17	**18** 12 noon Colon/Rectal TB JDMCC CR1	**19** 7am Surgical GR CC-Aud 8am Pediatric GR CC-Aud 12 noon Medical GR CC-Aud	**20** 12 noon MHC TB OR Con Rm	**21** 8am Emergency Medicine GR 4th Fl Conf Rm 12 noon G.I.TB JDMCC CR1	**22** 7am OBGYN GR CC CR1 11 am Neurology Conf CC Cr1 12 noon Breast TB JDMCC CR1	**23**
24	**25**	**26** 7am Surgical GR CC-Aud 8am Pediatric GR CC-Aud 12 noon Medical GR CC-Aud	**27** 12 noon MHC TB OR Con Rm	**28** **7:30am Trauma 2002 Conference Holiday Inn** 8am Emergency Medicine GR 4th Fl Con. Rm 12 noon Combined TB JDMCC CR1		

2002

RECOMMENDATIONS TO THE BOARD OF TRUSTEES
FROM THE GENERAL MEDICAL STAFF
FOR REVISIONS TO THE MEDICAL STAFF BYLAWS

FROM MEETING OF DECEMBER 10, 2001

The following proposed revisions, having received the recommendation of the Bylaws Committee, the Medical Executive Committee, and the General Medical Staff, are being presented for action.

Registered Dieticians Taking Verbal Orders – A recommendation by the Therapeutics Committee to the Medical Executive Committee requesting that Registered Dieticians be able to take verbal orders from physicians related to nutritional care and to document those orders in the patient record was approved at the 9/4/01 Medical Executive Committee. The corresponding proposed changes to the Rules and Regulations follow:

C. PATIENT CARE #2:

(a) Verbal Orders:

(iv) Verbal orders shall be taken only by ~~a professional registered nurse~~ Registered Nurses and ~~except that the following individuals may take verbal orders: Practitioners~~, Licensed Practical Nurses, Respiratory Therapy Technicians, Physical Therapy Technicians, Pharmacists, Registered Dieticians, and Paramedics practicing under PA Code 117.30 (relating to emergency paramedic services) each with respect to procedures they are authorized to perform.

(v) In the Emergency Department, verbal orders may only be given to a Registered Nurse.

(b) Telephone Orders:

(i) Telephone orders must be signed within twenty-four (24) hours.

(ii) A member of the Medical Staff may, but is not required to, sign the order of another member of the Medical Staff. A resident physician may sign for another resident physician on his or her same PGY level or below.

(iii) Telephone orders shall be taken only by ~~a professional registered nurse~~ Registered Nurses and ~~except that the following may take telephone orders:~~ Respiratory Therapy Technicians, Physical Therapy Technicians, ~~and~~ Pharmacists, and Registered Dieticians, ~~and~~ with respect to procedures they are authorized to perform.

Certified Registered Nurse Practitioners – In November, 2000 the State Board of Medicine and the State Board of Nursing have promulgated regulations, which permit qualified Pennsylvania CRNPs to prescribe and dispense drugs. With this change, the attached changes are being proposed to the Rules and Regulations:

C. PATIENT CARE #3:

3. Orders shall be written only by physicians, dentists, oral surgeons, podiatrists, certified registered nurse practitioners, and physician assistants acting within the scope of their respective licenses and authorized according to Medical Staff Bylaws and these Rules and Regulations. Orders may only be written by a physician extender under the following circumstances:

(i) The physician employs a physician extender whom he or she directly supervises and for whom he or she has responsibility.

(ii) The physician extender has been approved and credentialed pursuant to these Bylaws and by the Governing Body for such duties.

(iii) Except as specifically noted below, no medication orders may be written by any physician extender unless such order is written in the presence of and immediately countersigned by the supervising physician. ~~However, where a certified physician assistant has been specifically credentialed and approved by the Governing Body to prescribe medications, such order, must be documented when relayed and must be countersigned by the supervising physician within 72 hours.~~ The following apply to medication orders written by physician extenders who are specifically credentialed and approved by the Governing Body to prescribe medications:

a. Certified registered nurse practitioners – Countersignature by the collaborative physician is not required.

b. Certified physician assistants – The order must be documented when relayed and must be countersigned by the supervising physician within 72 hours.

(iv) Certified physician assistants may write routine diagnostic, diet, and activity orders as directed and countersigned by the supervising physician.

(v) All medical student orders shall be countersigned by a licensed physician.

(vi) Certified registered nurse practitioner orders do not require countersignature by their collaborative physician.

17. Members of the Medical Staff, and appropriately credentialed certified registered nurse practitioners and physician assistants, are responsible for providing a complete medication order. All orders for medications or intravenous solutions should contain the drug nomenclature, strength, frequency of dosage, and route of administration, where applicable. With respect to intravenous solutions, the desired flow rate and/or volume should be included. Ordering medication by package size (e.g. one ampule, a vial, etc.) is considered an incomplete order and will require clarification by the Pharmacist. Certain combination injectable products do not contain clear quantitative descriptions and are exempt from this requirement. These include multi-vitamin injections and standard injectable multi-trace elements.

18. Drugs shall be administered only upon the proper order of a practitioner, appropriately credentialed certified registered nurse practitioner, or appropriately credentialed physician assistants, acting within the scope of his or her license and authorized according to these Medical Staff Bylaws and Rules and Regulations. Drugs shall be administered directly by a practitioner qualified according to Medical Staff Bylaws, Rules and Regulations, or by a certified registered nurse practitioner, ~~or by~~ a ~~professional~~ registered nurse or by a licensed practical nurse with pharmacy training. Graduate practical nurses, graduate nurses, and students in approved schools of nursing may be authorized to administer drugs, but only under the supervision of a registered ~~professional~~ nurse or a physician under 49 PA Code 21.14 (relating to the administration of drugs).

19. Narcotics and other dangerous medications (as defined by the Pharmacy & Therapeutics Committee and/or Medical Executive Committee) that are ordered without time limitation of dosage shall be automatically discontinued after seventy-two (72) hours. Drugs shall not be discontinued without notifying the physician at least 48 hours before an order is automatically stopped. If the order expires after 12:00 a.m., it shall be called to the attention of the physician after 6:00 a.m. on the same day. Members of the Medical Staff, and appropriately credentialed certified registered nurse practitioners and physician assistants, shall make every effort to order only those drugs, or the generic equivalents, listed in the Facility's Formulary. Under special circumstances, drugs not listed in the Formulary, but necessary for the patient, will be obtained by the pharmacy. Any drugs so ordered, but not yet approved by the FDA, must be approved by the institution or Review Committee, prior to its administration.

20. In order to prevent the continuation of antibiotics and steroids in dosages larger or periods of time longer than indicated, all new or rewritten orders for antibiotics and steroids, shall specify a time limit for administration of the drug. In the event that no limit is specified, the ordering member of the Medical Staff, or appropriately credentialed certified registered nurse practitioner or physician assistant, shall be contacted within twenty-four (24) hours to so specify. Unless otherwise specified, all antibiotic orders shall be instituted as STAT orders.

Chiropractor Clinical Duties – Clinical duties have been approved by the Medical Executive Committee for Chiropractors which requires the following change to the Rules and Regulations:

C. PATIENT CARE #3:

3. Orders shall be written only by physicians, dentists, oral surgeons, podiatrists, certified registered nurse practitioners, chiropractors, and physician assistants acting within the scope of their respective licenses and authorized according to Medical Staff Bylaws and these Rules and Regulations. Orders may only be written by a physician extender under the following circumstances:

Deletion of New Procedure Committee - The recent approval of the Technology Assessment Committee eliminates the need for the New Procedure Committee as the TAC Committee is a more inclusive Committee for the acquisition and/or implementation of new technology or advances in existing technology. Recommendation was made to delete the New Procedure Committee:

~~p. New Procedures Committee:~~

~~(i) Purpose: To review the feasibility of and policies for the implementation of new procedures, techniques and treatment modalities in the Hospitals. A new procedure is a procedure, technique or treatment modality that is used in the hospital on a patient, excluding research studies and new drugs, that has not been done previously at the applicable Hospital.~~

~~(ii) Duties:~~

~~A. To meet at least quarterly, or more often when called upon by Department Chairpersons or the Medical Executive Committee, for the purpose of reviewing and recommending institutional policy for the implementation of new procedures, techniques and treatment modalities.~~

~~B. To report the results of the Committee's investigations in the form of a recommendation to the Medical Executive Committee including a complete description of the procedure, a financial analysis, and recommended credentialing criteria for the new procedure.~~

~~(iii) Composition:~~

~~Chairperson – Medical Staff Member~~
~~Recording Secretary~~
~~Administrative Services/Assistant to the President~~
~~Director, Safety~~
~~Director, Bio-Medical Engineering~~
~~Financial Services – Financial Analyst~~
~~Risk Manager~~
~~(6) Medical Staff Members~~

Rules and Regulations – E. Records - #20 – ("Housekeeping detail") – The following is a "housekeeping" issue to update the Rules and Regulations to conform to current administrative titles:

20. Free access to all medical records of all patients shall be afforded to members of the Medical Staff in good standing for bona fide study. Any study must preserve the confidentiality of personal information concerning individual patients. Certain studies may fall within the category of peer review. As a result, all studies must have prior approval by:

(a) an appropriate Audit Committee; or

(b) Chairperson of the Department; or

(c) the ~~Senior Vice President~~ Chief Medical Officer ~~for Clinical Services~~ or ~~Vice President of Medical Affairs~~ Senior Medical Director.

Deletion of New Procedure Committee – The recent approval of the Technology Assessment Committee eliminates the need for the New Procedure Committee as the TAC Committee is a more inclusive Committee for the acquisition and/or implementation of new technology or innovative technology. Recommendation was made to delete the New Procedure Committee.

~~n. New Procedure Committee~~

~~(a) Purpose: To review proposals for new procedures [illegible] and treatment modalities [illegible] Hospital.~~

~~(b) Duties~~

~~(1) To review all proposals [illegible] the Medical Executive Committee [illegible] modalities.~~

~~(2) To review [illegible] the Medical Executive Committee [illegible]~~

~~(c) Composition~~

~~Chairperson – Member of the Medical Staff~~
~~Recording Secretary~~
~~Administrator – Senior Vice President for the Hospital~~
~~Director, Safety~~
~~Director, Bio-Medical Engineering~~
~~Financial Services – Financial Analyst~~
~~Risk Manager~~
~~(3) Medical Staff Members~~

Rules and Regulations – E. Records – #20 – ("Housekeeping detail") – The following is a "housekeeping" issue to update the Rules and Regulations to conform to current administrative titles.

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(a) an appropriate Audit Committee

(b) Chairperson of the Department or

(c) the ~~Senior Vice President~~ Chief Medical Officer, ~~or [illegible]~~ Senior Medical Director.

Health Network
LABORATORIES

LAB-LINK

Information And Advice About Our Laboratory

January 2, 2002

Effective January 16, 2002, Health Network Laboratories (HNL) will implement a change in methodology for **Troponin I** and **Creatine Phosphokinase Isoenzyme** both of which are orderable separately and are included in a MI Profile.

SPECIMEN REQUIREMENTS:

- Troponin I
- Creatine Phosphokinase Isoenzyme (Total CK and Mass CK-MB fraction)
- MI Profile

} **one green top (lithium heparin) tube**

NEW ORDER CODES:

TEST	OLD TEST CODE	NEW TEST CODE
MI Profile, Initial	MIIN	**MIPIN**
MI Profile, #2	MI2	**MIP2**
MI Profile, #3	MI3	**MIP3**
Troponin I	TROPN	**TROPI**
Creatine Phospholinase Isoenzyme	CKI	**CKIMB**

NEW REFERENCE RANGES:

Interpretation of Results	OLD TROPONIN Reference Range	**NEW TROPONIN Reference Range**	OLD MCKMB Reference Range	**NEW MCKMB Reference Range**
Consistent with non-MI condition	< 0.10 ng/mL	**< 0.08 ng/mL**	≤ 3.38 ng/mL	**≤ 2.37 ng/mL**
Consistent with MI condition (Critical Call Back Value)	> 1.00 ng/mL	**> 0.40 ng/mL**	> 3.38 ng/mL	**> 2.37 ng/mL**

Please post this announcement to ensure compliance on January 16, 2002.

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

LEHIGH VALLEY
HOSPITAL AND
HEALTH NETWORK

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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.