LEHIGH VALLEY
HOSPITAL AND
HEALTH NETWORK

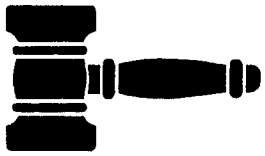
PROGRESS NOTES

Medical Staff

Lehigh Valley Hospital ⌘ Muhlenberg Hospital Center

September, 1998 ⌘ Volume 10, Number 9

In This Issue . . .



From the President

All rising to a great place
is by a winding stair

- Sir Francis Bacon

I surely hope that, by the end of my term as your president four months hence, I can look back and say that our staff and institution finds itself rising to a great place. After a month in which I've found myself being consumed by my duties as a member of the Board Ad Hoc Committee to evaluate the cardiac surgery exclusive contract arrangement issue, it seems I've been going around and around and around, ad nauseum.

The committee has received letters from many members of our staff. In addition, several of our physicians have chosen to meet with the committee to discuss their individual opinions personally. At the time of this writing, we still have three more evenings of interviews scheduled prior to compiling our data, formulating a report, and providing a preliminary document to the LVH Board of Trustees at its next meeting on September 9, 1998. No doubt, this report is being anxiously awaited by the members of both our medical staff and the Board of Trustees. Interest in our situation has been generated across the Commonwealth and beyond. I assure everyone that our committee is taking its charge to deliberate on this matter extremely seriously. Alice G. Gosfield, Esq., continues to examine this situation on behalf of our staff. Hopefully, her opinion will be forthcoming in the near future as well.

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In the world of hospital and health system network evolution, a very significant partnership was announced between the Children's Hospital of Philadelphia and Lehigh Valley Hospital on August 12, 1998. A pediatric outpatient specialty medical center, The Children's Hospital of Philadelphia Specialty Care Center of the Lehigh Valley, will be developed on the campus of Muhlenberg Hospital Center in Bethlehem. This facility will be constructed with funds solely donated by the Foundation of Muhlenberg Hospital Center and is expected to open in 18 months. An advanced pediatric intensive care unit will open at Lehigh Valley Hospital, Cedar Crest & I-78, by January 1, 2000, as well. Our congratulations to all involved in consummating the negotiations to bring these specialized and needed services to our patients here in the valley.

This month, the Third Annual Nite Lites gala will be held on Saturday, September 19, at Allentown College. The beneficiary of this event will be the Center for Educational Development and Support. I hope many of our staff are planning to attend and enjoy an evening of fellowship.

Finally, I have two mundane reminders: 1) the next General Medical Staff Meeting will be held on Monday, September 14, beginning at 5:45 p.m., in the Auditorium; and 2) the Medical Staff Services Office, including John W. Hart, Vice President; Beth Martin, Executive Secretary; Janet M. Seifert, Physician Relations Rep, and myself, has relocated to the second floor of the hospital adjacent to Radiology Ultrasound and across from the O.R. Lounges.

So, I thank everyone who has offered to provide me with antivert during these last dizzying weeks, and I look forward to seeing you on September 14.

Robert X. Murphy, Jr., MD
Medical Staff President

For Your Calendar

* A meeting of the General Medical Staff of Lehigh Valley Hospital will be held on Monday, September 14, beginning at 5:45 p.m., in the hospital's Auditorium at Cedar Crest & I-78. All members of the Medical Staff are encouraged to attend.

* A general membership meeting of the Greater Lehigh Valley Independent Practice Association, Inc., will be held on Tuesday, September 22, beginning at 6 p.m., in the hospital's Auditorium at Cedar Crest & I-78. This session will include information and discussion regarding the PennCARE Physician Services Agreement.

LVH and Children's Hospital of Philadelphia to Build Pediatric Outpatient Center & ICU

The Children's Hospital of Philadelphia and Lehigh Valley Hospital (LVH) announced they will collaborate to develop a pediatric outpatient specialty medical center and inpatient intensive care unit, the first of their kind in the area.

The outpatient center, which will be called The Children's Hospital of Philadelphia Specialty Care Center of the Lehigh Valley, is anticipated to open within 18 months and will be on the campus of Muhlenberg Hospital Center (MHC) in Bethlehem. It will house pediatric and adolescent medicine specialists and offer a range of services, many of which are not currently available locally. An advanced pediatric intensive care unit also will be constructed at LVH's Cedar Crest & I-78 location and will begin operations by January 1, 2000. When completed, the facilities will provide families living within the Lehigh Valley with easy access to highly specialized medical care for their children.

The Children's Hospital of Philadelphia and LVH will work with community-based primary care physicians and pediatric specialists, as well as consult with families throughout the area, to plan for the array of services that will be available. The shared goal is to complement and support existing pediatric services (allergy, cardiology, general pediatric surgery, neurology, ophthalmology and pulmonary) and provide new services to the Lehigh Valley: adolescent medicine, cancer care, child and adolescent psychiatry, dermatology, developmental pediatrics, endocrinology/diabetes, genetic counseling, gastrointestinal and nutrition, nephrology, physical and occupational therapy/rehabilitation, and rheumatology.

Prior to the center's opening, specialists from The Children's Hospital of Philadelphia will begin seeing patients this fall at 401 N. 17th Street in Allentown.

"We are extraordinarily pleased that the country's first and foremost children's hospital has chosen to partner with Lehigh Valley Hospital," said Elliot J. Sussman, MD, President and Chief Executive Officer, LVHHN. "This is a major step toward enhancing the caliber and scope of children's health care services available right here in our community."

According to Steven M. Altschuler, MD, Physician-in-Chief at The Children's Hospital of Philadelphia: "Many families we see at the main campus in Philadelphia are from the Lehigh Valley. To bring these services to the area will make a difference in the lives of these families, who before had to drive great distances to get the care their pediatricians and physicians believed they needed."

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John D. VanBrakle, MD, Chairperson, Department of Pediatrics at LVH, agreed. "More than 1,000 children and their families travel outside our area each year for specialized medical care. Parents continually ask that these services be more convenient. Our goal is to provide most of the pediatric resources these children need in a setting closer to their homes and families' place of work. We believe there will be a tremendous benefit to all if the pediatric care they need can be provided within their own community whenever possible," he said.

LVH will construct the outpatient center, which will connect to the north side of MHC. Construction is expected to begin next summer. The center will be between 5,000 to 10,000 sq. ft.

The Children's Hospital of Philadelphia will lease, operate, and staff the facility. It will work with LVH to recruit physicians in such pediatric specialties as oncology and gastrointestinal medicine. These physicians will live and practice full time in the Lehigh Valley. In addition, The Children's Hospital of Philadelphia will schedule its own pediatric specialists based at the Philadelphia hospital to come see area patients as needed. A small percentage of children with highly complex medical conditions will be treated at the Philadelphia location.

The center at Muhlenberg will be modeled after The Children's Hospital of Philadelphia Specialty Care Center in Exton, Pa. That center has 14 exam rooms, an outpatient surgical suite, an audiology suite, a diagnostic radiology suite, an ophthalmology suite, and a physical/occupational therapy suite, along with various testing facilities.

Similar outpatient centers are located in King of Prussia, Pa., and Vorhees, NJ, with the latest one scheduled to open in April in Chalfont, Pa.

Pediatricians from LVH will collaborate with The Children's Hospital of Philadelphia to develop a Level II pediatric intensive care unit at LVH. This unit has the capability to care for severely ill children requiring hospitalization, including children on ventilators, those recovering from extensive surgical procedures, and others requiring continuous bedside nursing care. The new unit also will be able to stabilize and support a patient during the critical time before transfer to The Children's Hospital of Philadelphia should the nature of the illness require the care of a Level I unit.

The LVH pediatric intensive care unit will be adjacent to the pediatric inpatient unit and the new neonatal intensive care unit at Cedar Crest & I-78. It will extend the capabilities of LVH's Level I Trauma Center, one of four trauma centers in the state that is also qualified to treat children with critical injuries.

The Children's Hospital of Philadelphia opened in 1855 as the nation's first children's hospital, and today provides medical and surgical care to children from throughout the world. It has been ranked by U.S. News and World Report as one of America's best pediatric hospitals for seven years in a row.

On August 17, Patient Access relocated to the third floor of the 1770 Building on the Muhlenberg Hospital Center campus.

Patient Access Scheduling Telephone Number:
(610) 317-4545

Hours of operation:
Monday - Friday - 8 a.m. to 4:30 p.m.

The address to use for U.S. Mail is:
Patient Access
Room 333
1770 Bathgate Drive
Bethlehem, PA 18017

The address for Inter-office mail is:
Patient Access
Room 333
1770 Bathgate

Shock/Trauma and CNS Merger Set for September

Fewer inpatients and briefer stays in the Shock/Trauma and Central Nervous System units have led to the decision to merge the units on September 9. This will reduce the total number of beds and staff, and save several million dollars per year.

The new 12-bed "Trauma/CNS Unit" will occupy the former shock/trauma (STU) area at Cedar Crest & I-78, and treat both trauma and neurosurgery patients. The merged unit will contain eight fewer beds than the combined total of STU and central nervous system (CNS), which have 12 and eight, respectively. After the merger, the special care unit will move to the vacant CNS space on the sixth floor.

Clinical work redesign over the past year has significantly decreased the patient census and length of stay in both units, said Kate Quinn O'Hara, Administrator for STU and CNS. "Because of these trends and the expected loss of trauma patients to a local competitor, we saw an opportunity to merge the two similar units and improve our overall costs," she added.

According to Michael D. Pasquale, MD, Chief, Division of Trauma/Surgical Critical Care, and Medical Director of the Shock/Trauma Unit, "We're seeing the same number of trauma patients in the Emergency Department, but admitting fewer. We don't need as many beds." Dr. Pasquale and Mark C. Lester, MD, Chief, Division of Neurological Surgery, have been named co-medical directors for the merged unit.

The average length of stay for trauma patients is a day shorter than six months ago, due chiefly to newly devised clinical protocols that focus on providing the right care in the right setting, Dr. Pasquale added. "We don't keep blunt cardiac injury patients for a mandatory 24 hours in shock/trauma anymore, for example. We do an EKG, and if it's normal, we discharge the patient."

Likewise, most brain surgery patients, whether being treated for trauma, cancer or another neurologic condition, now spend only a day in CNS, down from three to four days last year, said Carol Fox, RN, CNS Director since 1994, who will be Patient Care Director of Trauma/CNS.

Shock/Trauma's current Director, Mary Jean Osborne, RN, calls the merger "a good idea, one whose time has come." She is working with Mrs. Fox to prepare for the integration of the units' staff member committees and reviewing the educational requirements for the new nursing staff.

"We're changing cultures, which is challenging," Mrs. Osborne says. "Some of these are long-standing committees." After the merger, she will assume the patient care director position in the Open Heart and Transitional Open Heart units.

All staff will require several months of cross-training before being able to care for both trauma and neurosurgery patients, according to Mrs. Fox. "The patients, though similar, are not identical. Initially, staff will treat the types of patients they're familiar with, while they develop expertise in caring for the other types of conditions.

The consolidation will reduce a total of 22 FTEs from both units. Most staff have been placed in positions on the new unit, filling vacancies that have been open since January.

While staff may have some discomfort or concerns about the upcoming change, Drs. Pasquale and Lester have nothing but praise for the planning and people involved.

"The decision-making process has gone smoothly because it involves nurses, physicians and respiratory therapists," Dr. Pasquale noted. "The change has been painful for staff, but they have been truly phenomenal in handling the situation."

Dr. Lester agrees: "They have shown incredible professionalism and are very committed to the merger. Mary Jean and Carol have done an impressive job working with the staff. The merger is a real tribute to their leadership."

Reminder

When a patient expires, it is the responsibility of the family/significant other to contact the funeral director. If a patient does not have any family/significant other, contact Clinical Resource Management at 402-8604 for the Discharge Planner involved with the case. After hours, page the on-call discharge planner.

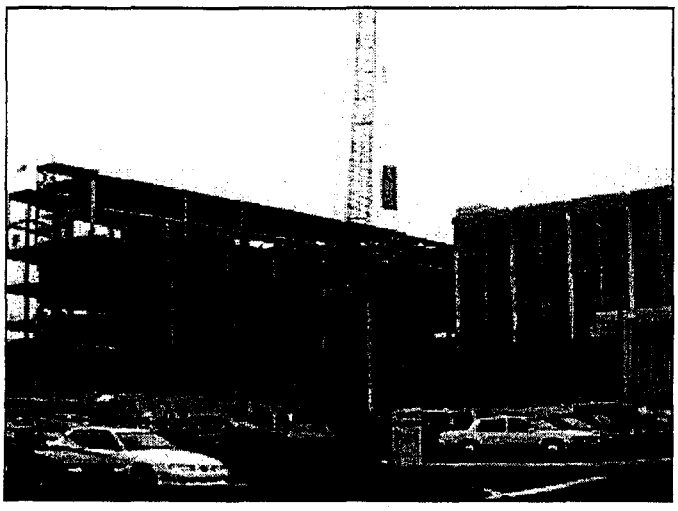
It is extremely important that this be communicated during your interactions with the family/significant other of the deceased patient as they may otherwise assume that the hospital will contact the funeral director.

East Building Update

Progress continues on the East Building. Structural steel was completed on June 24, with a "Topping Off" ceremony on the 25th. All concrete floors are poured, and piping and ductwork installation continues in the basement and on the upper floors.

The next major milestone is to cover the building with the precast concrete and glass "skin". This activity, which will be accomplished using a crane the same size as the one used to erect the structural steel, began on August 11 and will take approximately 20 working days. Precast panels will be placed on the west exposure first and continue around the front of the building toward the 1210 building. After completion of the north tower, the large crane will be moved to the south of the facility to continue erecting the precast. During the later part of August, air handlers and a boiler were placed onto the penthouse. In addition, the glass curtainwall will start to appear on the north facade of the building. This phase should take about two months to complete. Plans are to have the entire building enclosed and weathertight by the end of the year.

Please be careful when traveling between buildings on the south side of the facility. Observe all safety signs and do not enter the construction area without the proper safety gear.



Above, the large crane hoists one of the large precast panels to be placed on the outside of the East Building.

Illegible Handwriting

Physicians with illegible handwriting continue to be a chronic problem in that subsequent caregivers are unable to decipher orders, notes, etc., and are also unable to identify the physician's name so that he or she could be contacted to clarify the documentation.

According to Medical Staff Bylaws, "All orders must be written clearly, legibly and completely. Orders which are illegible or improperly written will not be carried out until rewritten or understood by the nurse. Any practitioner with non-legible handwriting will be required to print or stamp his or her full name under his or her signature."

The medical record currently has an "Initial and Signature Record" (Form # NSG-25) on which other caregivers print their names and write their signatures. At its October meeting, the Medical Executive Committee approved the policy whereby those physicians who are identified as having illegible handwriting will be required to print their names and write their signatures on this sheet as well.

When physicians with illegible handwriting are identified, the Medical Record Committee will make a recommendation to the Medical Executive Committee to require those physicians to utilize the "Initial and Signature Record" on all of their patients medical records.

Furthermore, a letter of warning will be issued from the Medical Staff President to offenders at the time the illegible handwriting is identified. Following a six month review, if illegible handwriting continues, another letter will be issued requiring the physician to print or stamp their names after each signature in the record. If a third six-month review reveals continual illegible handwriting or failure to utilize the methods outlined above (signature sheet, rubber stamp, printing name), the physician will be placed on probation and subject to further corrective action.

If you have any questions regarding this issue, please contact Zelda Greene, Director, Medical Records, at 402-8330.

Medical Staff Services Relocates at Cedar Crest & I-78

The Office of Medical Staff Services, including John W. Hart, Vice President; Robert X. Murphy, Jr., MD, Medical Staff President; Beth Martin, Executive Secretary; and Janet M. Seifert, Physician Relations Rep., recently relocated to the second floor of the hospital adjacent to Radiology Ultrasound and across from the O.R. Lounges.

Telephone numbers for these individuals remain the same. The main number is 402-8980. The telephone number for Janet Seifert is 402-8590.

Please note that Rita Mest, Director of Medical Staff Services, and Karen Fox, Credentialing Technician, will remain in their present location on the first floor of the hospital adjacent to the Medical Staff Lounge. Rita's telephone number is 402-8975; Karen's number is 402-8957.

Effective March 1, 1998, Cardiac Rehabilitation services at LVH can accept patients with U.S. Healthcare coverage for Phase II cardiac rehabilitation.

LVH Programs Meet National Standards

The Pennsylvania Department of Health recently granted recognition to the Center for Health Promotion and Disease Prevention's Helwig Diabetes Center and the Division of Maternal Fetal Medicine's Northeast

Pennsylvania Diabetes in Pregnancy Program. Recognition is a voluntary process of identifying hospital-based diabetes outpatient education programs that meet national standards for diabetes patient education. This is the third time a three-year term has been awarded to the programs.

Currently, 85 our of 200 acute care hospitals in Pennsylvania have recognized programs. Lehigh Valley Hospital has one of two recognized programs in the Lehigh Valley.

Both programs address the educational needs of persons with type 1 and type 2 diabetes. A physician's referral is necessary.

The Helwig Diabetes Center provides individual and group education on a variety of diabetes related topics to more than 800 patients annually. For more information about this program, please call (610) 402-9385.

The Northeast Pennsylvania Diabetes in Pregnancy Program serves over 180 women each year. Services include preconception counseling for women with diabetes and education for women with pregnancy complicated by diabetes, including gestational diabetes. For more information about this program, please call (610) 402-9511.

You're invited to participate in the 6th Annual Foundation of Muhlenberg Hospital Center Golf Classic
Monday, October 5, 1998
Brookside Country Club
Tee Off - 11 a.m.

Golf and sponsorship opportunities are available. A tennis tournament will also be held.

Proceeds benefit Muhlenberg Hospital Center and Muhlenberg Rehabilitation Center.

For more information, contact the Foundation Office at 861-2446.

Congratulations!

Gregory R. Harper, MD, PhD, Medical Director of the John and Dorothy Morgan Cancer Center, has been appointed as the medical oncology representative on the Medicare Carrier Advisory Committee for a two-year term. The Medicare Carrier Advisory Committee provides a formal mechanism for physicians to participate in the development of local medical review policy in an advisory capacity. It also provides a forum for information exchange and identification of issues between Xact Medicare Services and members' constituencies.

Thomas M. McLoughlin, Jr., MD, Chief, Division of Cardiac Anesthesia, has received certification in perioperative tranesophageal echocardiography by passing the inaugural examination in this discipline offered by the Society of Cardiovascular Anesthesiologists and the National Board of Echocardiography.

In addition, Dr. McLoughlin has agreed to serve as Guest Editor for an upcoming issue of ***Seminars in Cardiothoracic and Vascular Anesthesia***, published by W.B. Saunders Company. The journal is a bimonthly collection of articles focusing on a particular topic in cardiothoracic or vascular anesthesia. The issue Dr. McLoughlin will edit is scheduled for publication in September, 1999, and will focus on "Anesthesia for Minimally Invasive Cardiac Surgery."

Papers, Publications and Presentations

A Case Report -- Cardiac Metastasis from Carcinoma of the Cervix: Report of Two Cases, which was co-authored by **Gazi Abdulhay, MD**, Section of Gynecologic Oncology; **Craig J. Sobolewski, MD**, Division of Primary Obstetrics and Gynecology; and **Victor R. Risch, MD, PhD**, Chairperson, Department of Radiation Oncology, was published in the June 1998 issue (Volume 69, Number 3) of ***Gynecologic Oncology***.

The May 1998 issue of ***The Journal of Family Practice*** contains several articles co-authored by **Will Miller, MD**, Acting Chairperson, Department of Family Practice. The articles include "The Value of a Family Physician," "Understanding Change in Primary Care Practice Using Complexity Theory," "Illuminating the 'Black Box': A Description of 4,454 Patient Visits to 138 Family Physicians," and "Primary Care Practice Organization and Preventive Services Delivery: A Qualitative Analysis." All four of these articles are based on the direct observation of primary care (DOPC) study, a large and complex study of the content and processes of family practice, funded by the National Cancer Institute. DOPC, based on a multi-method assessment of 4,454 patient visits to 138 family physicians in 84 practices, is the first systematic look inside the "black box" of primary care practice.

Jay S. Talsania, MD, Division of Orthopedic Surgery/Hand Surgery, recently had his article, "Normal Digital Contribution to Grip Strength Assessed by a Computerized Digital Dynamometer," published in the ***Journal of Hand Surgery*** (British and European Volume, 1998) 23B:2:162-166.

Upcoming Seminars, Conferences and Meetings

Medical Grand Rounds

Medical Grand Rounds are held every Tuesday beginning at Noon in the hospital's Auditorium at Cedar Crest & I-78.

Topics to be discussed in September include:

- September 8 - Update from the 12th World's AIDS Conference
- September 15 - Update on New NSAIDS including Cyclo-Oxyzenase II Inhibitors
- September 22 - Evaluation & Treatment of Impotence/Erectile Dysfunction
- September 29 - Special Lecture

For more information, please contact Evalene Patten in the Department of Medicine at 402-1649.

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From the Streets to the Stretcher

From the Streets to the Stretcher, sponsored by the Emergency Department of Lehigh Valley Hospital, will be presented on Thursday, October 1, from 7:15 a.m. to 5 p.m., at Brookside Country Club of Allentown in Macungie, Pa.

This program is designed for all professionals related to emergency care including EMT's, paramedics, physician assistants, emergency and critical care nurses, and physicians.

Objectives of the program include:

- Describe the critical window of time from onset of stroke, "Brain Attack," to the initiation of thrombolytic therapy.
- Identify how the sexual assault nurse examiner, SANE, program leads to positive patient outcomes.
- Discuss the street smart approach to handling gang violence encountered by the EMS and in the emergency department.
- Differentiate between the agreement for and against euthanasia and the legal implications.
- Explain the insidious course of the Hantavirus infection and its implications on the Lehigh Valley
- Describe the impact of managed care in the health care system.

A fee of $85.00 per person includes a continental breakfast, breaks, lunch, wine and cheese reception, and all course materials.

For more information, please call Susan Borman at (610) 402-1700.

Current Concepts in Head and Neck Cancer

Learn the most recent trends and techniques in the management of patients with head and neck cancer by local, regional, and national experts in the field at Current Concepts in Head and Neck Cancer to be held on Saturday, October 3, from 7 a.m. to Noon in Conference Rooms 1A & B in the John and Dorothy Morgan Cancer Center.

At the completion of the program, participants should be able to:

- define the risk factors, symptoms, and signs of hea and neck cancer
- discuss appropriate diagnostic work-up and treatment options currently available
- provide multidisciplinary perspective on management of the head and neck cancer patient

The registration fee is waived for employees and medical staff affiliated with Lehigh Valley Hospital and Health Network and PennCARE.

For more information, please contact Bonnie Schoeneberger at (610) 402-1210.

Who's New at LVH

Medical Staff
Change of Address

Allentown Anesthesia Associates, Inc.
Karen A. Bretz, MD
In-Ho Chang, MD
J. John Collins, MD
Edgardo S. Cruz, MD
Domenico Falcone, MD
Dorothy I. Hartman, MD
Howard E. Hudson, Jr., MD
Jay S. Jung, MD
Serena A. Jung, MD
Jin I. Kim, MD
Samuel M. Lerner, MD
Alphonse A. Maffeo, MD
Thomas M. McLoughlin, Jr., MD
Carmen B. Montaner, MD
James C. Shaheen, MD
Toeruna S. Widge, MD
Wen-Shiong Yang, MD
1245 S. Cedar Crest Blvd.
Suite 301
Allentown, PA 18103
(610) 402-9082
Fax: (610) 402-9029

Tomkin Otolaryngology Associates, PC
Andrew J. Pestcoe, DO
Edward A. Tomkin, DO
311 S. Cedar Crest Blvd.
Allentown, PA 18103

News from

MUHLENBERG HOSPITAL CENTER

Bed Check System Coming to MHC

Muhlenberg Hospital Center (MHC) is dedicated to improving patient care and patient outcomes by continually evaluating and reviewing the standards for patient care and patient safety. In an effort to increase patient safety and continue to meet JCAHO standards for providing a "least restrictive" environment, a Bed Check System will be put into place.

The Bed Check System will be implemented on the inpatient units at MHC to assist with preventing injury to patients at risk of falling out of bed or getting out of bed unassisted. This system will replace the use of posey vest restraints.

The Bed Check System consists of two components: the control unit that hangs under the bed, and the disposable pressure-sensitive sensormat. One cord from the control unit is plugged into a wall outlet and the other adapted to the existing call bell system. The sensormat, which is placed across the width of the bed between the patient and the mattress, senses whether or not the patient's weight is in the vicinity of the sensormat and then relays this information to the control unit. When no weight is on the pad for a preselected number of seconds, the control unit activates two alarms -- one is the call bell and the other is an audible alarm in the patient's room.

Preliminary work to standardize the patient call bell system is scheduled for early September. Implementation of the Bed Check System will follow and is targeted for mid-September. Use of all vest poseys at MHC will be discontinued with the implementation of the Bed Check System.

This is just one example of the hospital's commitment to continuous improvement and quality care for our patients. If you have any questions regarding this change, please contact Linda Shaffer-Kropf, Critical Care PCS, at 861-4235, or Sharon Rabuck, Med-Surg PCS, at 861-2413.

MRI to Offer New Service

In keeping with a long tradition of progress, Muhlenberg Hospital Center has decided to begin scanning patients with intracranial aneurysm clips in the MRI suite. Since the early days of MRI, patients with aneurysm clips in the brain have been prevented from entering the MRI room or undergoing MR imaging because of the possibility that the metal clips could move in the presence of the strong magnetic fields used in MRI. Over time, the manufacturers of aneurysm clips designed for use in the brain have modified the composition of the clips so that they are constructed of materials that are non-magnetic or weakly magnetic. Approximately 75% of the aneurysm clips currently implanted in the United States are made of these materials. These newer clips are designated by the manufacturers as MRI compatible, and patients with these clips can safely be scanned with MRI.

In order to assure the safety of the patient, no patient will be examined until the pedigree of the clip can be established. The staff of the MRI center will obtain information about the implantation procedure and the implanting surgeon. If the implanting surgeon properly documents the type of clip used, the clip's manufacturer, and the material the clip is composed of, and if that clip is listed in the published literature as MRI compatible, then the patient will be accepted for MRI scanning.

If the aneurysm surgery was performed at Muhlenberg Hospital Center, the procedure is less involved. Muhlenberg Hospital Center is implementing a protocol whereby all of the aneurysm clips on the implantation tray are designated by the manufacturer as MRI compatible. Additionally, all of the clips implanted at Muhlenberg Hospital Center are physically tested for magnetic compatibility inside a high field 1.5 Tesla scanner before they are sterilized, adding an extra layer of safety.

It is important to remember that while Muhlenberg Hospital Center will be scanning certain aneurysm clips, NOT ALL PATIENTS with intracranial aneurysm clips can have MRI exams. It is imperative that any patient with an aneurysm clip in the brain be identified as such immediately so that they can be properly evaluated. However, if the pedigree of the clip is well documented as compatible, the benefits of MRI scanning can be realized by many patients who have previously been excluded from the MRI department.

If you have any questions or need more information, please contact John Posh, Chief MRI Technologist, at (610) 691-3900.

Nuclear Medicine Update

Traditionally, thyroid uptake and scan studies performed in the Nuclear Medicine Department have been ordered together. However, 24-hour uptake and scans may be ordered separately. In order to provide cost-effective care and to limit radiation exposure (to comply with the ALARA principle), ***preferred alternatives to thyroid scans are described below,*** based on the clinical indication.

CLINICAL INDICATIONS	RECOMMENDED PROCEDURE
Solitary or dominant nodule: evaluate function to assess risk of malignancy.	Fine-needle aspiration biopsy is a more logical and cost-effective diagnostic approach.
Solitary nodule: evaluate for multinodularity.	Ultrasonography is a more sensitive approach with no radiation exposure.
Solitary nodule with equivocal results of fine-needle aspiration biopsy.	Nuclear thyroid scan is acceptable; I-123 imaging generally preferable.
Evaluate morphology of multinodular or diffuse goiter.	Usually no radiology exam in necessary. (Scan results usually do not influence management.)
Equivocal physical examination results: evaluate for nodule.	Ultrasonography is a more sensitive approach with no radiation exposure.
Evaluate neck mass (? relation to thyroid) or metastatic cancer unknown primary source.	Ultrasonography is a more sensitive approach with no radiation exposure.
Evaluate for substernal goiter.	CT is generally the preferred approach. If nuclear thyroid scan is needed, I-123 generally is preferable.
Evaluate for other ectopic thyroid tissue (e.g., lingual) or exclude that "thyroglossal duct cyst" is patient's only thyroid tissue.	Nuclear thyroid scan is acceptable.
Confirm subacute or painless thyroiditis.	Nuclear thyroid scan gives faster result; I-123 uptake is less costly. Both are acceptable.
Distinguish Plummer's disease from Grave's disease superimposed on nodular goiter.	Nuclear thyroid scan is acceptable.

◊ CPT 78001 Thyroid Update / CPT 78010 Thyroid Scan / CPT 78007 Thyroid I-123 Uptake & Scan.

◊ A physician's written request is required. A patient referral form may be necessary per some insurance carriers.

If you have any questions regarding this information, please contact Gregg D. Schubach, MD, Chief, Section of Nuclear Medicine, Muhlenberg Hospital Center, at (610) 861-2231.

Who's New at MHC

Medical Staff

Appointments

Eugene Alexandrin, MD
Health Network Laboratories
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Section of Pathology
Provisional Active

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Section of Nephrology
Provisional Active

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Section of Cardiology
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Department of Pathology
Section of Pathology
Provisional Active

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Provisional Active

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Appointment to Leadership Position

Gregg D. Schubach, MD
Chief, Section of Nuclear Medicine

Resignations

F. Geoffrey Toonder, MD
Department of Surgery
Section of Thoracic Surgery
Courtesy

John B. Weigele, MD
Department of Radiology
Section of Radiology
Provisional Active

A meeting of the General Medical Staff of Muhlenberg Hospital Center will be held on Monday, September 21, beginning at 6:30 p.m., in the hospital's cafeteria. All members of the medical staff are encouraged to attend.

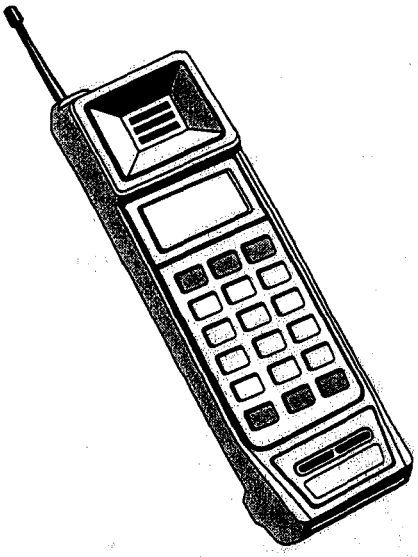
You've Waited Patiently -- Now It's Here . . .

Digital Phone Service

Exclusive to Lehigh Valley Hospital and Health Network -- Lehigh Valley Hospital and Muhlenberg Hospital Center employees and physicians -- Cellular One now offers a unique digital phone service program.

Digital service offers the power of unmatched voice quality together with extensive coverage, extended battery life, and calling features to help you manage your time.

Digital Package Features:



- ***First Incoming Minute Free***
- ***Caller ID***
- ***Basic Voice Mail***
- ***Message Notification***
- ***Call Waiting***
- ***Call Forwarding***
- ***Three Party Conferencing***
- ***Call Transfer***
- ***Activation fee - $25.00 (waived)***
- ***New Lower Monthly Access fee - $9.95***
- ***One Low per minute rate - .25***
- ***Largest Digital Coverage in Pennsylvania (see map on reverse side)***
- ***Reduced Roaming Rate for the Jersey Shore areas of .49 per minute***

This package is available exclusively to Lehigh Valley Hospital and Muhlenberg Hospital Center employees and physicians with the purchase of a Cellular One digital phone. Phones range from $129.00 to $199.00.

For more information regarding this new service, please contact Gail Keinert at HealthPage at (610) 402-1811, or Tiffany Noll at Cellular One at (610) 704-1014.

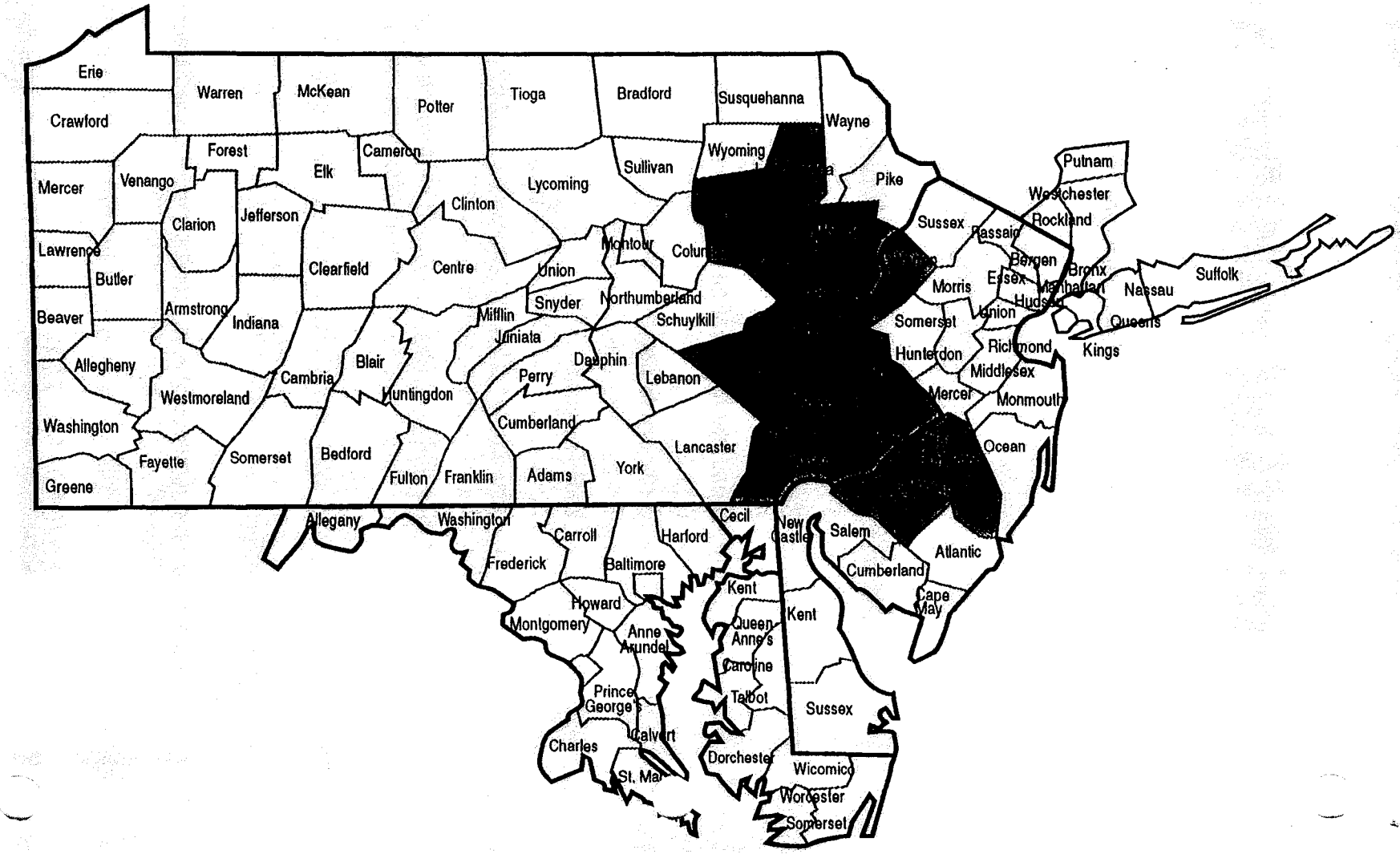
LEHIGH VALLEY HOSPITAL

MUHLENBERG HOSPITAL CENTER

LEHIGH VALLEY

HOSPITAL AND
HEALTH NETWORK

Digital Coverage Area



CARDIAC TROPONIN I

Cardiac Troponin I (cTnI) is a tissue damage marker with absolute specificity for cardiac damage. To date, no origin for cTnI has been found other than the heart.

Biochemical assessment of tissue damage relies heavily upon markers of intracellular origin. When tissues are damaged on the cellular level, the cell membranes often loose their integrity. This loss of membrane integrity allows intracellular substances such as enzymes and polypeptides to leak into the bloodstream. Detection of increased serum amounts of intracellular components serves as a powerful indicator of tissue (cellular) damage. Furthermore, since the maintenance of cellular structure relies heavily upon oxygen dependent chemical reactions, the appearance of intracellular Cardiac Troponin I (cTnI) and Creatine Kinase (CK) serves as powerful indicators of cardiac oxygen deprivation resulting from ischemia.

Production of proteins and polypeptides "from" DNA is under the localized control of each cell type. Thus, it is not surprising to find that different tissues can make different proteins characteristic of each tissue. This is the case for Troponin I, a small protein component of muscle tissues. Skeletal muscle makes one type of Troponin I while cardiac Troponin I, cTnI, has been found in **NO** tissues other than the heart. The gene for cTnI is expressed in no other tissues. Increased levels of cTnI are absolutely specific indicators of cardiac muscle damage. This is in contrast to CK, where heart muscle is relatively rich in isoenzyme MCKMB but where MCKMB is also found in other tissues. cTnI is a specific marker for cardiac damage, but MCKMB is not.

Health Network Laboratories has performed analyses for cTnI for some time. Now, our continuing efforts to improve on the delivery of information about your patients has lead us to adopt a new analytical procedure for cTnI. Beginning August 10, we began using the Abbott AxSym for the analysis of both cTnI and MCKMB. Our ability to provide timely information is expected to be better.

New reference ranges for cTnI and MCKMB are found with the new method. These changes appear to result from a lack of calibration standardization across the industry, not from antibody (method) specificity. Our new values are as follows:

For Troponin I we found that AxSYM = 3.5 X Stratus - 0.47 with a correlation coefficient of 0.98 for the range of AxSYM data of 0 - 22 ng/ml.

Troponin I	Normal:	0.0 - 0.4 ng/ml
	Gray Zone:	Values from 0.5 - 2.0 ng/ml are not "normal" and may indicate a myocardial event with unstable angina with subsequent risk for an AMI
	Elevated:	> 2.0 ng/ml, consistent with an AMI

For MCKMB we found that AxSYM = 1.2 X Stratus + 1.4 with a correlation coefficient of 0.98 for AxSYM values < 30.0 ng/ml.

MCKMB	Normal:	0.0 - 10.4 ng/ml
	Elevated:	> 10.4 ng/ml, consistent with an AMI

RELATIVE INDEX:

MCKMB ÷ Total CK. We will continue our current practice of defining the "cutoff" value as MCKMB cutoff ÷ mean of CK male normal. The new cutoff value is 9.2. See the "Cardiac Profile Interpretation Chart".

Any questions can be addressed to Dr. Norman Coffman, Technical Director, HNL at Ext. 8219, Tuesdays and Wednesdays or Dolores Benner, Manager Automation at Ext. 8177.

Clinical data from studies conducted by the manufacturer indicate that, with a cutoff value of 2.0 ng/ml, cTnI has a sensitivity of 93.9% and a specificity of 93.4% for AMI. A patient was considered positive if any one of the serial specimens drawn within 24 hours of the onset of chest pain or of presentation at the medical center was elevated.

Norman Coffman, Ph.D.
Technical Director, HNL

D.G. Beckwith, Ph.D.
Clinical Director, HNL

John J. Shane, MD
Medical Director, HNL

CARDIAC PROFILE INTERPRETATION ON SEQUENTIAL SAMPLES

INTERPRETATION OF RESULT	TOTAL CK (U\L)	MCKMB (ng/mL)	RELATIVE INDEX (%) *	TROPONIN I (ng/mL)
Consistent with non-MI condition	Male: 55-170 Female: 30-135	≤ 10.4	< 9.2	< 0.4
Consistent with Skeletal Muscle Inj	Increased	<or> 10.4	< 9.2	< 0.4
Consistent with MI	NORM or INCR	> 10.4	> 9.2	> 2.0
Suggests Myocardial Ischemia	NORM or INCR	<or> 10.4	< 9.2	0.5 - 2.0

* Relative Index (%) = 100 X (MCKMB/Total CK)

Interpretation should consider the serial presentation of results from all three specimens.

Notes from Transfusion Medicine: Solvent Detergent Plasma (S/DP) vs. Donor Retested Plasma

S/DP (Solvent/Detergent Plasma) was licensed for use in the United States on June 6, 1998. American Red Cross (ARC) has been granted exclusive rights to market this component in the U.S. This component is being marketed as an alternative to fresh frozen plasma (FFP).

This blood component is prepared from a pool of 2,500 units of plasma. This pool is treated with the solvent tri-(N-butyl) phosphate and detergent (triton-X100) which inactivates lipid enveloped viruses including Hepatitis B and C, and HIV. It has no effect on the non-envelope viruses such as Parvovirus B19 and Hepatitis A virus. It has no effect on prions of CJD, if indeed these can be transmitted by blood transfusions. Additionally, the effect of this on yet unknown viral infections which may be transmitted by transfusion is unknown.

Aside from the inability of SD Plasma to inactivate non-lipid envelope viruses as well as possibilities of short supplies in the future, because of a single supplier, the major concern with this component is that it is prepared from a large pool "2,500 units of donor plasma." The current estimated risk for viral transmission on a per-unit basis is approximately 1 in 670,000 for HIV, 1 in 80,000 for Hepatitis B, 1 in 30,000 for Hepatitis C and 1 in 4,000 for Parvovirus B19. The S/DP will be available in a fixed volume of 200cc packaged following the treatment with solvent detergent.

Parvovirus B19 causes a mild viral exanthem in immunocompetent individuals with normal bone marrow functions. However, in patients who are immunocompromised or have accelerated bone marrow kinetics it can be associated with aplastic anemia.

Community blood centers, like Miller Memorial Blood Center, in the United States have developed an alternative product called donor-retested fresh frozen plasma or delayed release fresh frozen plasma (FFP-DR). This component is not currently approved by the FDA (approval is anticipated in the near future.) This component is obtained from volunteer donors. The "standard" FFP is held in quarantine beyond the estimated infectious "window period" for the currently recognized transfusion associated viral pathogens until the donor returns, is retested and found to be negative by all required tests.

Currently, the quarantine period is estimated to be 112 days. Component is not pooled and has a standard volume which varies from 200 to 300cc. The advantages of FFP-DR are straight forward: 1) By using only individual blood donors and maintaining FFP in quarantine beyond current estimates of the period when infectious diseases can be reliably ruled out, the transmission of the HIV, HCV, HTLV and HBV should be minimized. 2) As a single donor derived product the disadvantages of the large pool plasma are not an issue. The recipient is exposed to only a single donor and not to a component prepared for a pool of 2,500 donors. 3) The cost of the FFP-DR will be only those of assuring appropriate segregation and storage of quarantine (estimated cost $85.00 per unit) products. This is in contrast to the high cost of SD plasma which is estimated to be approximately $125.00 unit (200cc) as compared to the current cost of FFP of less than $50.00.

Comparison of 2 components below:

Characteristic	Solvent Detergent Plasma (pooled)	Fresh Frozen Plasma Donor Retested (single donor)
Contains all labile and stable clotting factors	Yes	Yes
Can substitute for Fresh Frozen Plasma	Yes	Yes (is FFP)
Chemically treated	Yes	No
Donor Retested Delayed Release for HIV, HBV & HCV	No	Yes
Pooled product	**Yes (2,500 donors)**	**No (single donor)**
Virtually eliminates risk of HIV, HBV & HCV transmission	Yes	Yes
Decreased risk for unknown lipid enveloped viruses	Yes	No
Increased risk for unknown non-lipid enveloped viruses	Yes	No
Dose	200mL	Up to 275 mL
Costs to patients/payers	$125.00	$85.00

The use of SD plasma would have a major financial impact on the cost of providing fresh frozen plasma in our institution. **Lehigh Valley Hospital uses 7,000 components of fresh frozen plasma a year. Using only packs of SD plasma available in 200cc will increase the numbers of units transfused.** After analysis of the two components, the Therapeutics Committee recommended and approved using the Donor Retested Fresh Frozen Plasma.

We are assessing the appropriateness of blood usage in LVH, by performing audits in patient care units. As a result of these audits, we feel that the initial use of FFP in most clinical situation is appropriate, but the follow-up usage may be amenable to an educational process, especially for the housestaff. This involves normalization of INR in patients who are clinically stable several days post-op and not experiencing any bleeding. Therefore we request the prudent use of blood products.

Please contact Dr. Bala Carver, Medical Director/Lab-Blood Bank at Ext. 8142 with any questions.

THERAPEUTICS AT A GLANCE

The following actions were taken at the May - July, 1998 Therapeutics Committee Meeting - Maria Barr, Pharm.D., BCPS, Rebecca Hockman, Pharm.D., BCPS, Joseph Ottinger, R.Ph., MS, MBA, Monica Yost, Pharm.D.

Prevacid: LVH & MHC Preferred PPI

The Therapeutics Committee with the support of the Division of Gastroenterology has unanimously approved the replacement of omeprazole (Prilosec® - Astra Merck) with lansoprazole (Prevacid® - Tap Pharm) to the LVH formulary based on safety efficacy, and cost. Prevacid is on the Group Purchasing contract for LVH and MHC.

Available since 1989, proton pump inhibitors (PPI) are a class of drugs used extensively for a variety of gastric acid diseases including those associated with *H. Pylori*. Currently, this class is comprised of only two agents: lansoprazole and omeprazole with a third agent on the way. Review of these agents reveals that both agents are similar with respect to FDA labeled efficacy and safety. Neither agent is approved for use in pediatrics, however, anecdotal information is available regarding dosing for omeprazole. As a result, omeprazole will remain on formulary for this population until further information is available.

Lansoprazole is available in 15mg and 30mg extended-release capsules in which the dosage regimen is dependent on the treatment diagnosis. The onset of action ranges between 1-3 hours, appears to be dose-dependent and is affected by food. Lansoprazole administration is flexible offering oral, sprinkle, and NG routes, however, it should be taken on empty stomach or 30 minutes prior to meals to achieve desired effects. For NG administration lansoprazole should be opened and the intact granules mixed in 40ml apple juice to maintain the integrity of the granules with an acidic pH and administered through the tube. Additional apple juice should be used as a flush to clear the tube.

Although lansoprazole undergoes metabolism via the CYP-450 3A4/2C9 system, it does not appear to interact with drugs such as the benzodiazepines, phenytoin, warfarin, digoxin, and nifedipine which have been documented with omeprazole. Caution should be taken when prescribing lansoprazole in combination with theophylline since patients taking both agents may experience decreased theophylline levels and require dosage adjustments. Administration with sucralfate (Carafate®) should be separated by 30 minutes to avoid a potential drug interaction. Both lansoprazole and omeprazole have admirable safety profiles where headache (7%), diarrhea (3%), and abdominal pain (2%) are the most frequently encountered side-effects.

A Therapeutic Substitution of omeprazole to lansoprazole will result in a cost-savings for LVH. A summary of LVH and MHC average outpatient costs per day is represented in Table 1 below.

TABLE 1

Cost Analysis	LVH/MHC Cost/Day	Outpatient cost/month*
lansoprazole 15mg	$2.64	$111.27
30mg	$2.64	$110.27
omeprazole 10mg	$2.81	$110.72
20mg	$3.13	$116.87
40mg	$4.93	$199.99

*Average Cash Cost of 1 month supply without discount obtained from 6 area retail pharmacies.

Uninhibited Choice for Angiotensin II Receptor Inhibitors:

The Therapeutics Committee has deferred any Formulary decisions regarding this relatively new class of drugs. Therefore, all three currently

approved agents (Avapro®, Cozaar® and Diovan®) will be available for patient treatment regimens until more comparative data is available and competitive pricing is submitted.

Indicators: All three agents have an FDA approved indication for treatment of hypertension. Studies related to their use in adjunctive treatment of CHF are ongoing.

Mechanism Of Action: Angiotensin II is formed from angiotensin I in a reaction catalyzed by angiotensin-converting enzyme (ACE). Angiotensin II is the principal agent of the renin-angiotensin system, with effects that include vasoconstriction, acceleration of synthesis and release of aldosterone, cardiac stimulation, and renal reabsorption of sodium. All three agents block the vasoconstrictor and aldosterone-secreting effects of angiotensin II by selectively blocking the **binding** of angiotensin II to the AT receptor in many tissues, such as vascular smooth muscle and the adrenal gland. Its action is therefore independent of the pathways for angiotensin II synthesis.

Blockade of the renin-angiotensin system is also accomplished via use of the ACE inhibitors, which inhibit the **biosynthesis** of angiotensin II from angiotensin I. Additionally, ACE inhibitors inhibit the degradation of bradykinin, a reaction also catalyzed by angiotensin converting enzyme. Because the Angiotensin Receptor Inhibitors (ARB) do not inhibit this specific enzyme, they do not affect the response to bradykinin. Whether this difference has any clinical relevance is not yet known.

Drug Interactions:
(Irbesartan)- No significant drug interactions were found with hydrochlorothiazide, digoxin, warfarin and nifedipine. In vitro studies show a significant inhibition of the formation of irbesartan
metabolites by the CYP2C9 inhibitors; sulphaphenazole, tolbutamide and nifedipine but the pharmacokinetics of irbesartan were not effected by co-administration of nifedipine.

(Losartan)- The pharmacokinetics or pharmacodynamics of warfarin, hydrochlorthiazide and digoxin were not affected when co-administered with losartan. Coadministration with cimetidine led to an increase of about 18% in AUC of losartan but did not affect the pharmacokinetics of its active metabolite. Coadministration of losartan and phenobarbital led to reduction of about 20% in the AUC of losartan and that of its active metabolite. The level of significance of the cimetidine and phenobarbital interactions is considered to be minimal. Potent inhibitors of cytochrome P450 3A4 and 2C9 have not been studied clinically, but in vitro studies show significant inhibition of the formation of the active metabolite by inhibitors of P450 3A4 (ketoconazole, troleandomycin) or P450 2C9 (sulphaphenazole). The pharmacodynamic consequences of concomitant use of losartan and these inhibitors have not been examined.

(Valsartan)- No clinically significant pharmacokinetic interactions were observed when valsartan was coadministered with amlodipine, atenolol, cimetidine, digoxin, furosemide, hydrochlorothiazide, or indomethicin. The valsartan-atenolol combination was more antihypertensive than either component, but it did not lower the heart rate more than atenolol alone. Coadministration of valsartan and warfarin did not change the pharmacokinetics of valsartan or the time-course of the anticoagulant properties of warfarin. The enzymes responsible for valsartan metabolism has not been identified but do not seem to be CYP 450 isoenzymes.

Adverse Drug Reactions to body:
All agents have similar profiles and include dizziness, headache, and fatigue. These agents should be discontinued if the patient becomes pregnant.

Please, refer to the comparison chart that accompanies this article for further informati regarding these products.

Angiotensin II Receptor Antagonist Comparison

	Avapro (irbesartan)	Cozaar (losartan)	Diovan (valsartan)
Strengths	75,150,300 mg tablets	25,50 mg tablets	40,80,160 mg capsules
Dosing (usual)	75-300mg (QD)	50-100mg (QD or BID)	80-320mg (QD)
Food	+/-	+/-	+/-
Elderly	no adjustment	>75 y.o.	>75 y.o.
Renal	no adjustment	mod-severe=start 25mg	mod-severe=start 40mg
Hepatic	no adjustment	mod-severe=start 25mg	mod-severe=start 40mg
Cost - Hospital (daily)	75mg= $0.95 150mg= $1.00 300mg= $1.75	25mg= $0.92 50mg= $0.92	40mg= N/A 80mg= $0.97 160mg= $0.97
Est. outpatient based on AWP + 20% (30 day supply)*	75mg= $41.05 150mg= $43.20 300mg= $75.60	25mg= $43.55 50mg= $43.55	40mg= N/A 80mg= $43.55 160mg= $43.55
*This will vary based on various market forces			

Zocor Rejoins Lipitor

In February, the Therapeutics Committee voted to carry atorvastatin (Lipitor®) as our sole HMG-CoA Reductase inhibitor of choice at LVH. Please refer to the April, 1998, Medical Staff Progress News for background data on the comparison of "statins." This decision was based on both the efficacy and side effect profile.

Due to overwhelming prescribing of simvastatin (Zocor®) in the community and lack of published head-to-head comparisons of these agents, numerous physicians requested the readdition of simvastatin to the LVH formulary. Also, there was a significant decrease in cost of simvastatin for hospital patients. Based on the present prescribing habits, it was felt that both agents were needed to be maintained on the LVH formulary. As a result, atorvastatin will remain on formulary and be dispensed as written. Additionally, simvastatin will be available for LVH prescribers and will be utilized via a therapeutic substitution for all other "statins" marketed.

A review of all statins will occur in the future once the results of the present ongoing study comparing simvastatin vs. atorvastatin are available. Until more data is known, both agents will remain on formulary. Please refer to the Therapeutics Equivalent Substitution list located in the hospital formulary Section 4, Appendix XIV for other statin equivalencies.

Patients on Propulsid?

On June 26, 1998, the News Media succeeded again! Taken from information printed in the "FDA talk Paper", the news reported the revised package labeling that has been issued by Janssen Pharmaceuticals regarding their product cisapride (Propulsid®).

Changes in the labeling involve the following: 1) addition of drugs with known potential to interact,

2) specification of disease states where use is CONTRAINDICATED, 3) PRECAUTIONS regarding use in the PEDIATRIC population, 4) recommendations for dosage adjustments in patients with hepatic insufficiency. All of these changes are to decrease the risk potential for fatal cardiac arrhythmias including VT, VF, torsades de pointes, and QT prolongation known to occur with cisapride.

Several new medications including Serzone, Crixivan, and Norvir have been identified to interact with cisapride. These and all other agents that are metabolized via the CYP-450 3A4 pathway have the potential to increase serum concentrations of cisapride and should be avoided. Also, drugs known to prolong the QT interval such as Class IA and III antiarrhythmics increase this risk and should be AVOIDED. These are CONTRAINDICATIONS. Please refer to package insert for additional drugs.

Cisapride labeling has always identified the importance of judicious use in patients with certain disease states for which the risk of arrhythmia may be increased. Based on post-marketing reports, Janssen has identified and specified disease states which cisapride should be avoided or used precautiously.

CONTRAINDICATED in patients with
- hx prolonged QT interval
- hx ventricular arrhythmias
- RENAL FAILURE > due to electrolyte abnormalities
- CHF > due to electrolyte abnormalities/medications (ie. K wasting diuretics)
- respiratory failure
- ischemic heart disease
- uncorrected electrolyte disorders (hypomagnesium/kalemia)

PRECAUTION in patients with
- COPD, apnea, advanced cancer
- severe dehydration, vomiting, malnutrition

This agent is not FDA INDICATED for use in the pediatric and neonatal populations, however it is sometimes utilized when alternatives are limited. Serious adverse events including death have been reported in infants and children treated with cisapride. Several of these deaths were cardiovascular in nature. Other serious event have been reported and are included in the package insert.

Due to hepatic elimination it is necessary to decrease the dose in patients with hepatic insufficiency. The usual dose in healthy patients is 10-20mg PO Q6H. It is recommended to reduce the dose by half in these patients.

So, who can take this drug safely?
1. Patient selection is KEY. Weigh the risks vs. benefits of therapy as at times there are no reasonable alternatives.
2. Stay within recommended dosage guidelines and dose adjust in hepatic impairment.
3. Review medications thoroughly for possible drug-drug interactions or drugs known to prolong QT interval.

The Department of Pharmacy will continue to place cisapride information sheets as part of an on-going education effort to recognize the potential risks associated with cisapride usage.

Policy Update: Dextran-1 Test Dose

Dextran-1 is a test dose utilized prior to the administration of Dextran 40% or 70% to help identify those patients at risk of allergic reactions. To provide consistency in the management of patients receiving IV dextran and a standardization of practice and to assist in preventing adverse effects from dextran, a pharmacy policy has been developed. This policy outlines the **automatic** administration of Dextran-1 (Promit®) prior to all first time orders of IV infusions of dextran or for additional doses of dextran separated by more than 48 hours. This will occur without a separate physician's order.

This pharmacy policy is an addition to the Dextran-1 policy which presently exists in the Patient Care Manual (PCM) and will go into effect immediately.

Post-Operative Nausea and Vomiting (PONV)

A variety of medications and techniques are

available to prevent and manage patients who experience PONV. An anesthesia subcommittee has been working on an algorithm and guidelines for potential use by ALL disciplines for management of PONV. A review of the 5HT-3 medications, such as ondansetron (Zofran®), and alternatives will be incorporated into the recommendation along with specific populations. Stay tuned for the final guidelines!

Nimbex, the NMB, is now Floorstock!

On Tuesday, June 23, 1998, a housewide conversion of vecuronium (Norcuron®) to cisatracurium (Nimbex®) as the preferred neuromuscular blocking agent, took place. The switch of cisatracurium occurred due to less risk of prolonged paralysis, decreased risk of drug interactions, similar onset and duration of activity and an overall decrease in cost to the institution comparing equivalent doses of each medication when administered in a bolus fashion.

Conversion cards were provided with the cisatracurium stock to assist staff with dosing conversion for cisatracurium compared to vecuronium. Besides the dosing, all other factors regarding the administration, cautions and effects of the neuromuscular blocking agents remain constant.

Cisatracurium will be promoted as the first-line agent for continuous infusion of a neuromuscular blocking agent within the hospital. Vecuronium will remain on the formulary for continuous infusion for specific populations such as pediatrics and those patients which may not be adequately controlled with cisatracurium ie. patients who are hypermetabolic, though usage is expected to be limited.

The above recommendation was approved by the Anesthesia Subcommittee of the Therapeutics Committee.

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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 402-8590.