

Lehigh Valley Health Network

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Department of Education: FY2007 Annual Report

Lehigh Valley Health Network

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DIVISION *of* EDUCATION

LEHIGH VALLEY HOSPITAL
AND HEALTH NETWORK

**FY 07 Annual Report
Detailed**

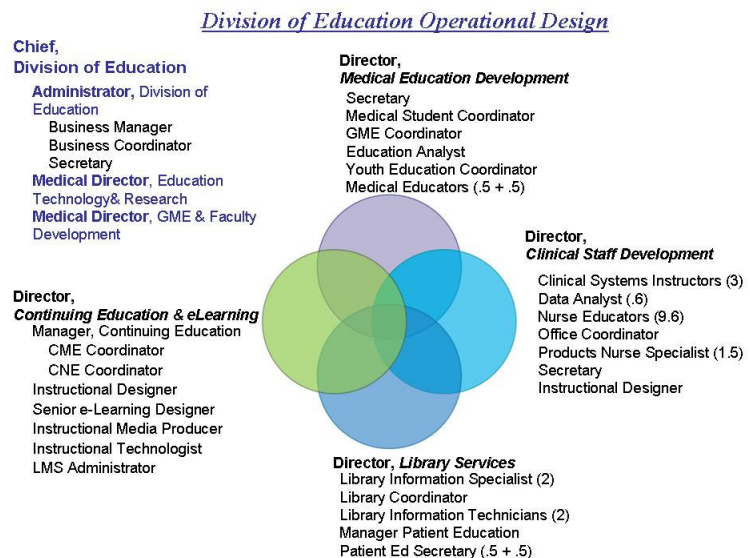
Introduction

Over the last year the Division of Education continued to mature into a framework supporting innovation and a foundation for growth. Our vision in the Division of Education is to provide the culture, environment and tools to support timely and ongoing solutions that meet the educational needs of people at Lehigh Valley Hospital and Health Network and the communities it serves.

- We promote synergistic efforts across the network pursuing excellence in education.
- We support the continuum of education from life-changing high school experiences to advanced professional continuing education.
- We seek to extend our educational solutions to our community and regional affiliate partners.

Our mission is to identify and deliver learning opportunities that enhance knowledge through the most efficient methods available. These learning opportunities enable employees and partners to provide superior patient care and contribute to employee competency, growth and development while supporting the organizational priorities of the institution.

While there is a hierarchical organization for the Division of Education the following functional diagram is representative of the collaboration that has evolved between our respective sections. Introducing a matrix approach to projects and services versus reporting lines has enabled us to make use of efficiencies across programs while facilitating multidisciplinary collaboration. This organic approach is becoming pervasive through our major projects accelerating the innovation and outcomes we seek.



Our theme for the Division of Education moving into the 2008 fiscal year is to *lay the foundation for the learning organization of 2012* through the use of emerging educational theory, methodology and state-of-the-art instructional technologies. You will see this reflected in our FY2007 accomplishments, future goals, and major grant requests. This theme is also evident in several substantial projects:

- Building the infrastructure and curriculum for incorporating simulation as a curricular and andragogical methodology

- Implementation of a new Learning Content Management System
- Designing and developing the curriculum and content for digital medical e-learning
- Research, design and initiation of a interdisciplinary faculty development program
- Continuation of an established intern program for regional college students

This will be realized through our diligent functional planning, assessment and improvement of participant satisfaction, direct support of care management, continuous operations improvement, and building a robust learning infrastructure.

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Clinical Staff Development

- 5 key affiliates for nursing students (Cedar Crest College, Northampton Community College, Lehigh Carbon Community College, DeSales University, East Stroudsburg University)
- 60 affiliation agreements in total
- 758 student nurses visit the network from our key affiliates annually for clinical experience
- 540 orientation classes annually
- 250 nurse faculty (approx)
- 967 new hired clinical staff through our training programs including 282 graduate nurses and 183 registered nurses.

Services

- Graduate Nurse internships
- Registered Nurse orientation and development
- Orientation and training of unlicensed assistive personnel
- Competency Based Education consultation
- Clinical product consultation
- Patient Education resources
- Coordination clinical affiliations for Clinical Services and Student Nurse programs

The Clinical Staff Development section facilitates nurses' and other health care providers' pursuit of lifelong learning, and their commitment to safety, patient education and clinical excellence through the provision of quality orientation, continuing education activities and initiatives.

Improvements Achieved:

New Maternal-Child Education Series for Graduate Nurses: This new education series consisted of a new NICU orientation program and a new PICU advanced education program for graduate nurses. The new series increased the knowledge-base and skill level of graduate nurses when working in Maternal-Child clinical areas.

Redesigned Medical-Surgical Graduate Nurse Internship: The purpose of this redesign was to enhance retention, skill development and job satisfaction of new graduate nurses during their first year. This redesign incorporated skill development and socio-transitional models into the internship program. A nurse leadership development series was also added to further support the new graduate in their first year. The redesigned curriculum was implemented in May 2007 and has already advanced over 100 new graduate nurses to the next phase of their orientation training.

New Bedside Scientist Education Modules: The purpose of these modules was to enhance the use of evidence based practices at the bedside. These 14 modules were designed, developed and implemented in collaboration with Patient Care Services personnel. This curriculum helped to foster the use of evidence-based practice, development of network-wide evidence-base policies and procedures, and development of patient care plans that are evidence based. Patient care plans were placed online which enhanced patient documentation and nurse access to evidence-based practice. Next steps will be to upload these modules to the new Learning Content Management System and to expand enrollment.

New Technical Partners Education Track: The new program for inexperienced technical partners hires high school graduates into a course designed to provide them with the skill, knowledge, and ability to provide technical support at the bed side. This program is collaboration with Northampton County Community College combining classroom and on the job training with

educator and preceptor support. In FY07, 36 were trained through this new education track. In FY08, over 150 are expected to be trained.

Expanded Clinical Associates Program: The purpose of the clinical associate program is to increase the number of nursing student clinical rotations that can be offered by LVHN, to provide an opportunity for experienced nurses to explore the role of nurse educator and to develop clinical teaching skills under the tutelage of experienced nursing faculty. Since Fall 2004, LVHN has implemented this program on several medical-surgical and two progressive critical care units. In FY07, this program was expanded network wide. In FY08, this program will continue to expand into other clinical areas.

Pilot of online AACN Essentials of Critical Care Orientation: This new online curriculum was piloted with select (56 total) new graduate nurses in the critical care internship program. This online experience resulted in higher final exam scores than the exam scores from the traditional, classroom experience. In FY08, this online curriculum will be expanded to all (approximately 150) new graduate nurses in the critical care internship program.

Pilot of Casey Fink Graduate Nurse Retention Survey: The Casey Fink Graduate Nurse survey is a process to help improve the retention rates of graduate nurses by helping them to develop not only new skills, but also to develop confidence in their new roles. In FY07, the Casey Fink methodology was piloted in the critical care internship program. Since the Casey Fink methodology looks at the graduate nurse experience as a two year process, quantitative and qualitative data is still being collected. Opportunities for FY08 will be based on data analysis but may include improvements in educational programs such as the preceptor educational and mentoring programs. Also, the survey will be expanded to the Medical-Surgical Graduate Nurse Internship program.

Organizational Opportunities:

Redesign Clinical Service Orientation: As part of the network's clinical staff retention strategy, clinical service orientation will be redesigned and updated. Existing programs have not kept up with changes in institutional requirements, learner needs, or market trends. As a result resources are over extended and outcomes are unsatisfactory. An extensive assessment and program redesign provides the opportunity to make significant improvements in effectiveness and efficiency of this program.

Enhance Preceptor Program and Learning Partners:- As more non-traditional nursing students come to clinical services orientation with less clinical experience, preceptor and unit readiness will become increasing essential. In collaboration with patient care specialists, unit preceptors and learning partners Clinical Staff Development will assess, improve and evaluate current faculty development offerings to patient care specialists, preceptors, and learning partners.

Develop an Integrated Interdisciplinary Faculty Development: With approximately 700 clinician educators (physicians and nurses) who teach the essential skills of providing superior patient care, an interdisciplinary platform is needed to standardize, sustain, and improve faculty development programs and initiatives.

Improving Nursing Student Education: Using student evaluation data as a quality metric, Clinical Staff Development will work with Patient Care Services to improve LVHN's nursing student education. Improving nursing student education will enhance recruitment and retention

efforts. In addition, Clinical Staff Development will develop an online evaluation process to ensure continuous educational improvement for the 1600 senior practicum and clinical experiences we host each year. Measurement indicators will be based on a synthesis of student evaluations and a literature review of suggested student and faculty performance indicators.

Accomplishments

758 students from key affiliates for nursing completing clinical rotations

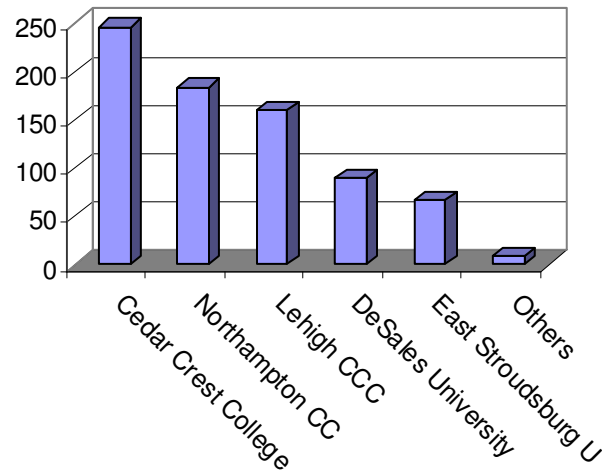
657 students in 2005

556 students in 2004

14% average annual increase

Key Affiliates for Other Clinical Students

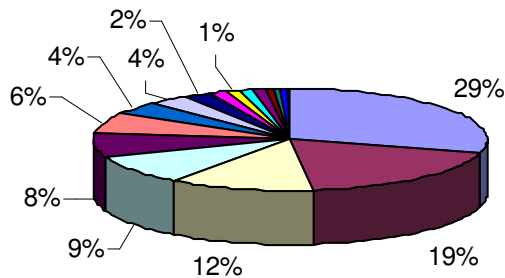
Bloomsburg University
Cedar Crest College
College Misericordia
East Stroudsburg University
Gwynedd-Mercy College
Kutztown University
Lehigh Carbon Community College
Luzerne County Community College
Millersville University
Moravian College
Northampton County Community College
Reading Area Community College
Thomas Jefferson
University of Scranton
Villanova University
Widener University



Clinical Staff Education Programs Delivered:

- 163 orientation programs made up of 540 classes average 45 classes per month
- 8 preceptor programs

967 Newly hired clinical staff trained through one of our programs



Graduate Nurses	282	% 29
Registered Nurses	183	19
Technical Partners	115	12
PSNA	89	9
Patient Transporters	75	8
Support Partners	61	6
Administrative Partner	42	4
Certified Nurse Aid	35	4
Surgical Tech	20	2
Emergency Dept Registrars	13	1
Student Nurse Extern	12	1
Mental Health Tech	11	1
Respiratory Therapists	10	1
Patient Observations	6	0.6
Patient Care Specialists	5	0.5
Licensed Practical Nurses	4	0.4
Respiratory Equip Tech	2	0.2
Skilled Care Coordinators	1	0.1
Clinical Resource Specialist	1	0.1

Continuing Education & eLearning

Continuing Education & eLearning partners with network members to provide effective and efficient learning solutions that integrate quality educational experiences for our members, patients and community. This encompasses CME, CNE and other forms of accredited continuing education for clinical and administrative personnel; traditional classroom and multi media based digital productions for employees, patients and our community.

Along with the infrastructure to administer and deliver traditional continuing education, Continuing Education & eLearning department is staffed with instructional media developers, e-learning designers and instructional technologists. This team collaborates on the development of multi media based learning products.

Improvements Achieved

Two major initiatives set the pace for Continuing Education & eLearning section during fiscal year 2007. Continuing Education focus was on a pre-audit initiative to assure our state reaccreditation and process alignment for CME/CNE activity planning. The eLearning teams activities centered on the selection and pre-implementation of a new Learning Content Management System and laying the ground work for an infrastructure to support rapid eLearning development.

Learning Content Management System Project Plan: Establish a multiyear project plan covering the selection and pre-implementation of a qualified LCMS product. This resulted in engagement of a significant stakeholder group laying a foundation for the implementation of a major technology based learning-infrastructure. As a result specific technologies and methodologies have been selected and prototyped. New tool sets have been built to support general use. The project lost momentum mid-year due to funding delays. The adoption of new teaching and learning paradigm figures in future success.

Successful Reaccreditation of CME Program: Complete a detailed review of existing Continuing Medical Education policies and operating procedures, establish new processes to support event planning, audit and correct last two years files while assuring all current planning aligns with new state and federal processes and procedures. This resulted in a successful reaccreditation of the program for five (5) years with commendations for excellence in education planning and business operations. Opportunity for improvement continues in adequate physician representation on the

Highlights

- DOE is directly accredited by Pennsylvania Medical Society with Joint Sponsorship privileges for Continuing Medical Education AMA PRA category 1 credits.
- DOE is an approved provider of continuing nursing education by PA State Nurses Association, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.
- We are currently in pursuit of AOA accreditation through the Philadelphia College of Osteopathic Medicine; *ETA Q1 FY08*
- We are currently expanding continuing education to include other licensed healthcare professions

Continuing Education Oversight Board and direct physician participation in the academic planning and development of events.

Learning Strategy and Methodology: After initial research this was expanded to become the chartering of an *Education Oversight Committee* to establish an institution wide governance structure supporting the decentralized delivery of quality educational activities. This resulted in a stated strategy and redefinition of the project to centralize oversight of education with the objective of aligning academic, business and clinical outcomes. A second project will be initiated in FY08.

CME Online Application Tool & CE Web Site: Development of an online and semi-interactive application to stream line “application process” planning teams go through for state accredited activities. In addition, the development of a web destination providing planning teams the most current tools, guidelines and SOP’s reflecting state accrediting agency standards. Results include documented specifications for the online application and a new sub section on the DOE intranet site providing tools as intended. Unfortunately the application is a substantial and complex development request that would require I/S subcontracting the work. This was not budgeted for in FY07 and eliminated from 08.

Improve Quality of Materials Available Patient Education: Identify and document a set of design standards that define quality elements (layout, graphics, content...) for patient education materials in print or digital format. Review existing materials comparing against current design standards and documenting an improvement plan. This resulted in creation of several standards and templates successfully in use. The project was limited by a key resource leaving on extended maternity leave and then resigning. Long recruitment cycle delayed this until FY08.

Implement Consistent Project Management Practices: Implement use of MS Project to track all projects greater than 40 hours. Create a set of template tools for project scope, estimating effort, risk analysis, communications and evaluation. Incorporate project management theory into our standard processes. Results include a standard tool kit implemented in this section and expanding into other DOE areas. Greatly improved our communications and expectation-management with internal customers; capturing resource effort behind projects as benchmarks for future estimating and planning. Project management improved satisfaction and final product quality however adding average of 25% to total effort. Additional finding is that implementing project management tools does not preclude the need for learning formal project management as a theory and methodology. Special considerations need to be made aligning this methodology with the instructional development life cycle.

Management of Project Requests for Continuing Education Events: Establish standard planning process lead times and distribute events evenly across the calendar. Results include reduced demand on coordinators to handle heavy project loads in spring and fall. Even distribution of events resulted in reducing demand on other network resources

including marketing, A/V, catering etc. Distributing events also prevents participants from having to choose between multiple events occurring at the same time.

Expansion of CE Credit Offerings: Include credit types beyond CME and CNE. Processes and/or contacts in place to offer Social Work, Respiratory Therapy, Pharmacy, and American Nephrology Nurse's Association credits. Current efforts to expand credit availability to include: CME for Osteopathic doctors, ACHE, Physician Assistant, Nurse Practitioner, College Equivalency Units, Act 48 etc.

Deliver Event Planning Workshops: Workshops reviewed accreditation guidelines, provided planning tips including a reference book with guides and examples, and detailed the process for planning a continuing education event. Results include efficient and consistent training for activity planners and development of a planner's guidebook. Next steps are to complete development of workshops as online modules for planners to access at their convenience.

Organizational Opportunities

Building a Close Relationship with Information Services: Many technologies support the teaching and learning process however not necessarily evaluated or selected with representation of experts in this area. There is an opportunity for Division of Education and Information Services to work jointly in needs analysis, specifications, selection criteria, user acceptance and implementation. Areas of special concern are audio visual, mobile distributed technology, patient education systems, telecommunications, desktop content development software, and standard hardware configurations.

Alignment of eLearning with Simulation: We will be leveraging our future eLearning platform to store and access multi media content, case based scenarios and other content part of curricula as preparation and debrief to simulation activities. However, it should not be about the technology when designing courses. Our focus should always remain on the academic and business outcomes. As such our concerns will be about the instructional design which may use any number of blended instructional technologies. By aligning eLearning with Simulation we assure that respective projects do not become limited in their conception and execution to a specific technology. Instead, a team of instructional designers will consider any and all technologies available to best support outcomes.

Link Quality and PI with Continuing Education: Establish relationships with medical staff services and quality assurance to provide educational opportunities that have been identified as needs for the network. Investigate ways to integrate identified needs tied to quality assurance and performance improvement into continuing education activities.

Support CE Planning Teams: Provide communication and education for planning teams beyond completion of forms and generic process steps. Methods include, e-learning, newsletters, lectures, one-on-one consultation etc. Topic ideas include, writing objectives, tips on performing needs assessment and outcomes measurement,

responsibilities of planning team members, and obtaining commercial support for continuing education activities.

Implementation of Continuing Education Program Evaluation: Design needs assessment survey for participants and planners. Perform event audits to provide feedback and tips to event planning teams.

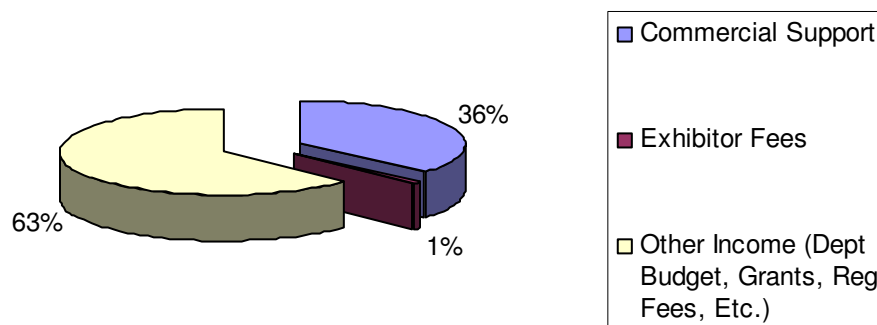
Accomplishments

Continuing Education Volume

Continuing Nursing and Medical Education is reported on the calendar year per state requirements, not our fiscal year cycle.

- 58 CME activities, 722 credits taken by 6,852 physicians and 8,404 others CY06
60 CME activities, 737 credits taken by 7,954 physicians and 5,545 others CY05
67 CME activities, 939 credits taken by 6,578 physicians and 5,885 others CY04
Number of physician attendees per hour matches state trends reported by PMS
State trends show 35% decrease in credit hours of CME which matched our trend
- \$103,500.00 Commercial support grants for CME
11% average increase over the last three years
Commercial support trends are decreasing across the state while LVHN increased
LVHN not as dependent on commercial support as others reported across the state
- 5-year PA Medical Society reaccreditation (Accredited through 2012!) in FY07
2-year reaccreditation in FY05
1-year reaccreditation in FY04 plus probation
- 151 CNE events, 1,294 contact hours, 4,066 RN attendees and 1,896 others CY06
223 CNE events, 2,013 contact hours, 6,327 RN attendees and 1,900 others CY05
115 CNE events, 1,077 contact hours, 3,075 RN attendees and 884 others CY04

Sources of Activity Income CY06



Program Expansion

- Pilot *Learning Alliance Program* with Greater Hazleton Healthcare Alliance extending our CME and CNE programs to them.
- Continuing Education Advisory Board expansion of membership.
- New relationship with Cedar Crest College for Social Work credit.
- Additional credit offerings for Regularly Scheduled Activities including Social Worker and CNE.
- CME new credit types including Performance Improvement and assigning credit for teaching at category-1 live activities.
- Partnering with internal departments to cross promote activities including PND, Marketing, Medical Staff Services, and HR.

Regional Presentations:

The Pitfalls and Plums of Regularly Scheduled Conferences at the Pennsylvania Medical Society 2007 CME Accreditation Conference April, 2007. A best-practice presentation by Kelly Roberts, Manager Continuing Education.

Continuing Education and e-Learning

- Electronic recording and archiving of LVHN live lectures for webcasting.
- Teleconferencing of CE activities for remote participation.
- Family Medicine journal club online.

Quality, Process Improvement:

- Implemented ACCME changes in direction of CME.
- Management of commercial grant process.

eLearning Major Projects:

DaVinci Medical Challenge Exhibits instructional design, production and construction
DaVinci Center Live from LVH: Operation C Section curriculum and production
Learning Content Management System selection and pre-implementation project
Stroke Awareness: What you Need to Know ½ hour patient education video
Physician Communication video used at a national conference
NICU Graduates video teaching parents how to properly care for their baby
SBAR Handoff Communications Protocol multi media self study for clinical services
Resident Graduation Support multimedia presentation
DaVinci Center C Section student educational videos
Burn Conference multimedia eLearning module
Capacity Conference multimedia eLearning module
Resident *SBAR* Module
eLearning User Guide to using video equipment and integration in presentations
Introduction to Project Management online modules
LCMS sponsor and stakeholder digital presentations
Ortho equipment bed setup presentation

Goals for the Future

Rapid e-Learning Development Tools: Provide a set of computer desktop tools readily available to our faculty, clinical professionals and staff to expedite the creation, distribution and assessment of learning and knowledge artifacts.

Learning Content Management System: Implementation of a state-of-art distributed learning infrastructure. A computer based online learning platform will provide a readily accessible learning resource for the diverse learning styles and needs of our health care professionals. A learning content management system will allow us to expand distributed learning beyond the computer desktop to multiple mobile devices including MP3 players, personal data assistants, cellular smart phones and mini laptops. Introducing this kind of technology in residency, nursing and continuing education will create a shift from traditional live lecture to online synchronous and asynchronous formats.

DOE Educational Services Portal: An aggregate intranet destination site accessible to all employees providing online support tools and services relevant to the sections making up the Division of Education.

Clinical Staff Virtual Clinical Observations: In collaboration with Information Services develop virtual-presence clinical observation opportunities for local college nurse, physician assistant and other healthcare professional programs to participate in clinical observations hosted by LVHN. This would be incorporated with our recruitment and retention initiatives.

Medical Education Development

Currently, LVHN trains over 200 physician residents in 19 ACGME, AOA, and ADA accredited residency and fellowship programs. LVHN has approximately 450 physician faculty.

Medical Education Development (MED) provides institutional oversight for the administration and development of these programs through institutional policy implementation, program development, regulatory compliance, academic development, and administrative functions. In addition, MED administers the youth education programs, which currently enroll over 700 youths annually.

In 2006-2007, the section of Medical Education Development (MED) upgraded its capabilities through the addition of a Medical Director and a Ph.D-level medical educator. These upgrades have enriched the administration and oversight of LVHN's graduate medical education (GME) programs in the areas of faculty development, education finance, and measurement and evaluation. Below is an overview of our accomplishments per LVHN priority area.

Scope

- Graduate, Undergraduate and Youth Programs

Residency and Fellowship Programs:

- Colon and Rectal Surgery
- Dental Medicine
- Emergency Medicine
- Family Medicine
- General Surgery
- Internal Medicine
- Obstetrics and Gynecology
- Osteopathic Internship
- Osteopathic Emergency Medicine
- Plastic Surgery
- Surgical Critical Care
- Transitional Year

Improvements Achieved

Distribution of GME Funded Positions: Expansion and start-up of several programs including new Cardiology, Geriatrics, and Neurology programs, resulting in a 24% growth in GME programming. Observations indicate a need to develop an academic culture at LVH-M and leverage the scholarly activity and educational infrastructure of the Emergency Medicine residency program throughout other departments at LVH-M.

Maximizing GME Reimbursement: Designed and implemented an improvement process enabling LVHN to capture over a \$1 million in additional CMS reimbursement per year. There is opportunity to further improve efficiency through eliminating intensive paper work and automation of payment to non-LVPG private practices.

Successful Re-Accreditation: Emergency Medicine, Family Medicine, Internal Medicine, and Dental Medicine institutional site visits resulted in maximum number of re-accreditation 5-years. We clearly see a new academic standard has been established defining the institutional commitment to academic innovation and distinction that needs to be replicated through all programs. For example Plastics program only received reaccredited for a 3-year term and Colon/Rectal for a 4-year term. DOE is attending

monthly meetings with the program directors and faculty reviewing monthly scorecard. Our intent is to help faculty become accountable for their accreditation requirements.

Development of Graduate Medical Education Dashboard: The GME Dashboard upgraded our reporting of key GME metrics in order to maintain institutional/program accreditation compliance. This resulted in the identification of several GME metrics to track the quality of our resident education programs, a GME performance improvement and annual review policy, and the initial defining of core GME values and education philosophy. There is opportunity to link this with an overall institutional measure correlating academic indicators with institutional core measures. Opportunity to use this model across other DOE programs such as Clinical Staff Development, Continuing Education and Patient Education.

Creation of GMEC Executive Group: This executive GME group was newly formed and has sponsored the development of a Resident Recruitment DVD and core requirements for teaching faculty. More effort is needed by this newly established group defining the core values and education philosophy. The group will also be responsible for performance improvement and annual reviews of the GME programs. This aligns with our overall need for establishing an *Education Oversight Committee* and coordinated effort towards institutional level education philosophy and learning strategy.

Institutional Central Lines Course: MED facilitated the development of an interdepartmental “best practices” central lines course for all incoming medical residents. This curriculum introduced all new residents to the “best practices” of central line placement that reduce infection. This curriculum also enhanced the new residents’ knowledge base of best practices in central lines by over 20%. There remains opportunity to verify resident and program performance through the implementation of the IHI central lines bundle and registry database.

Improvement in Medical Student/Clerkship Education: Using student evaluation data, the Clerkship Council significantly improved LVHN’s medical student education and created its own dashboard for clerkship education. We have the opportunity to utilize clerkship data as needs assessment to faculty development programming.

Penn State College of Medicine Curriculum on Systems Improvement: Designed, delivered and evaluated a day-long, Systems Improvement Curriculum to over 125 MS-3 at PSCOM. This resulted in an increase in medical students’ knowledge of quality improvement concepts, tools and methods. We have the opportunity to enhance medical students’ application of quality improvement concepts, tools, and methods through curriculum improvement process.

Research Scholar Program: Improvements in this program have included an online student application and evaluation, program website, online relationship management applications, funding for Fall and Spring scholars, and organizing a Selection Committee. This resulted in an increase in applicant pool and a more objective selection process. The

opportunity exists to link outcomes data from evaluations to program improvements. For example, offering presentation or publication skills workshops to scholars during regularly scheduled check-in's coordinated by DOE.

Emerging Health Professionals: In partnership with Penn State Lehigh Valley and Lehigh Career Technical Institute, MED pioneered a year-long, half-day program for high school seniors in Lehigh County. This resulted in increased knowledge of healthcare systems and career roles for the participants.

Organizational Opportunities

Implementation of GME Funded Positions: The purpose of this plan is to assist in new program development and to maximize GME funded positions across LVHN.

Integrated Interdisciplinary Faculty Development (I-LEARN): The purpose of an integrated interdisciplinary faculty development platform for our pre-identified 700+ clinical educators is to upgrade faculty teaching skills across LVHN, increase physician and nursing satisfaction, and link learning practices to operational improvements.

Improving the Chronic Care Delivery System: Focus will be on developing curriculum in the skill of patient centered care (esp. chronic care) through motivational interviewing, agenda setting and self-management goal-setting techniques.

Implementation of Graduate Medical Education Dashboard: Implementation of the GME Dashboard will link select patient care and satisfaction data to resident education and development.

Design of Institutional Graduate Medical Education Curriculum: The purpose of an institutional curriculum will be to improve resident education by leveraging state of the art learning modalities.

Accomplishments

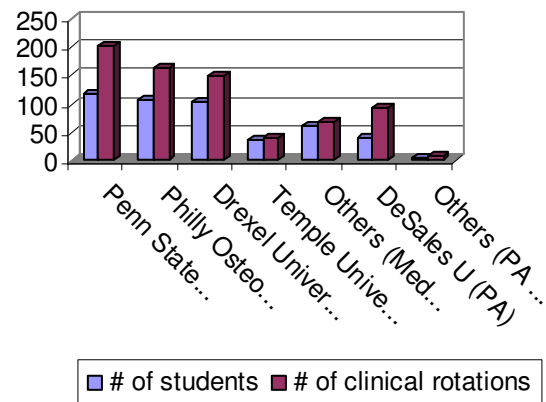
Seven Abstracts Accepted for Oral and Poster Presentations at National Conferences:

Conference	Presentation	Title/Topic
Association of American Medical Colleges (AAMC)	Oral	Benchmarking and Transparency: Quality Improvement Practices for Clerkship Enhancement
American College of Emergency Physicians (ACEP)	Poster	Standardized Orientation on Central Line Placement Leads to Persistent Knowledge Improvement
Accreditation Council of Graduate Medical Education (ACGME)	Oral	Reinventing the Definition of Good Teaching through Direct Observation
	Poster	GME Dashboard Development: Blueprint for Outcomes Measurement
	Poster	Improving the Resident Learning Environment
American College of Osteopathic Emergency Physicians (ACOEP)	Oral	Resident Satisfaction: Influencing the Learning Environment
	Oral	Program Director Leadership Development Workshop

Medical School Affiliations

- 431 students from Medical Schools
- 628 clinical rotations
- 49 student from physician assistant programs using an additional 108 rotations

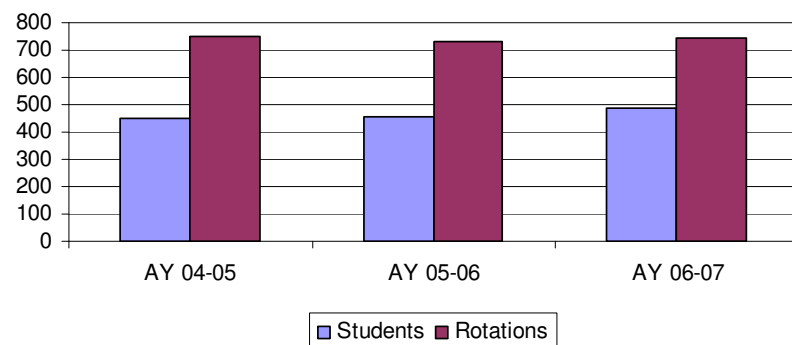
Medical School Affiliations FY07



Graduate Medical Education

- 182 residents FY07
- 185 residents FY06
- 175 residents FY05
- 68 visiting residents FY07
- 94 visiting residents FY06
- 87 visiting residents FY05
- 95th percentile overall resident satisfaction scores in the Jackson Group Database with a 76% participation rate
- 450 (approx) physician faculty
- 18 residency and fellowship programs
- Major affiliate: Penn State College of Medicine
- ACGME accredited (MD): Family Medicine, General Internal Medicine, obstetrics/Gynecology, Transitional Internship, General Surgery, Surgery
- Fellowships/Specialties: Colon/Rectal Surgery, plastic Surgery, Surgical Critical Care, Minimally Invasive Surgery
- Internal Medicine Fellowships; Cardiology, Hematology/Oncology , Pulmonary Critical Care
- AOA accredited (DO): Internship LVH-CC , Internship LVH-M , Emergency Medicine, Family Medicine
- ADA accredited: LVH-M, LVH-17th
- Programs reviewed in the most recent academic year. First time in GME history that all reviewed programs received maximum accreditation: Family Medicine, Internal Medicine - five commendations, Emergency Medicine, Dental Medicine, Institutional - two commendations

Last 3 Years Student / Rotations



12 GME Scholarly Activities

P4 initiative in Family Medicine

IHI sponsored Exemplary Learning Site initiative in Internal Medicine

Ambulatory redesign in Internal Medicine

Dual accreditation in EM/work on new Neurology residency/Geriatrics fellowship

National publications addressing education

Curriculum for national hospitalist movement

Position paper on redesign of Internal Medicine Residency Training

Cognitive errors

Flinders Chronic Care Model in GME

Direct Observation of Clinical Teaching Skills

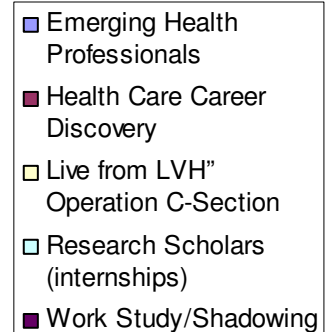
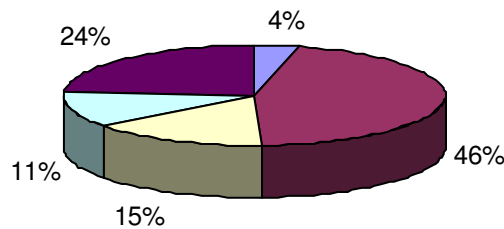
Chapters on GME finance, quality improvement, and portfolio use

Correlation of performance on self exam

Youth Programs

- 661 students participated

The Emerging Health Professionals, Health Care Career Discovery, and Live from LVH" Operation C-Section" are high school programs. The Research Scholars (internships) and Work Study/Shadowing are college programs.



- 97,000 + visitors Da Vinci Science Center: Mark J. Young, MD, Medical Challenge (experiential exhibit)

Library Services & Patient Education

Library Services offers comprehensive information services to meet the needs of the hospital's inpatient and outpatient programs, its educational and research activities, administration, and healthcare consumers.

Improvements Achieved

Electronic Journal List: The library increased the number of electronic journal titles in its collection from 350 to approximately 2286. An alphabetical electronic journal list was created on the library services website so patrons could link directly from the title list to the vendor / aggregator website that provides the electronic full text journal. The creation of the list was phase 1. Phase 2 includes the ability to obtain statistics from the library services website to determine the frequency of the use of this valuable resource.

Services

- Literature Searches
- Information Literacy Instruction
- Online Research and Evidence Based Databases
- Interlibrary Loans
- Literature Alerts to Patrons
- Electronic Book and Journal Access
- Patient, Family and Consumer Education Resources

Increased Number of Information Literacy Classes: Number of participants increased from 98 in FY'06 to 235 in FY'07. This was possible as the Library Information specialist position at LVH-M was filled and that person was able to increase the number of classes taught. The Library Director was previously teaching the classes.

Interlibrary Loan Process Change: Method of delivery of requested articles to other libraries went from 0% transmitted electronically to approximately 90% transmitted electronically in one year. Electronic transmission is now possible because the library has increased its number of electronic journal subscriptions and has had one of its photocopiers equipped with a scanning board.

Process Change for Collecting Statistics Regarding Library Services: In the past a pilot project was conducted with Residents to determine intended outcomes for them when they utilized interlibrary loan services. Statistics on intended outcomes will be captured during FY'08 for all library users in the following areas: information literacy classes, literature searches performed by library staff, assistance by library staff in finding or providing specific articles for patrons. As evidence based practice becomes more prevalent it is anticipated that library services should see an increase in requests for services that support evidence based practice.

Improving Interlibrary Loan Services: A pilot project was conducted to determine how interlibrary loan materials were utilized by Residents. The following outcomes were determined: 106 projects recorded in the pilot during FY'07. 418 articles borrowed from other libraries broken down as 233 education, 71 patient care and review current treatments, 107 research projects, and 7 evidence based or quality improvement. This has

resulted in faster delivery time of information via digital access; decreased resource costs by eliminating handling of materials.

Subject Guides Satisfaction: Subject guides were created to save patrons time in locating required readings for certification exams or courses taken. Links are provided from the article citation to the electronic copy of the article at the publisher's website. This year subject guides were created for Emergency Medicine certification, Obstetrics certification and for the Residents' Central Venous Access and Line Placement. The first 2 subject guides have been in use since December, 2006 and the feedback has been extremely positive.

Organizational Opportunities

Access to Evidence Based Point of Care Products: Provide instruction to residents in each discipline with respect to evidence-based point of care products available through the LVHN digital library supporting the ACGME core competency requirements, particularly the ones related to patient care, medical knowledge and practice-based learning and improvement.

Access to Evidence Based Literature: Support the office of Evidence-Based Surgery (American College of Surgeons) training requirements, particularly ones related to establishing accessible sources of the best evidence available on important clinical issues by targeting surgical residents with respect to evidence-based literature available through the LVHN digital library.

Knowledge Translation: Apply for an IAIMS Testing and Evaluation grant to determine attitudes and behavior necessary to accept and embrace Evidence Based Medicine. This focuses on closing the evidence-to-practice gap by conceptually combining the elements of research, education, quality improvement, and electronic systems development to create a seamless linkage between interventions that improve patient care and their routine implementation in daily clinical practice.

Improve Resident Educational Experience: The first step will be for the Library Information Specialist to meet with Residents in each program and show them what is in the digital library and how to access the electronic resources. The Residents will also be asked where they feel electronic library resources are deficient. After a gap analysis is conducted, a list will be generated with prices of requested resources to determine whether obtaining them is feasible.

Accomplishments

Regional and National Presentations:

Management of Information and Technology in Health Care Systems by Linda Schwartz presented a lecture at DeSales University as part of a course taught by Barbara Moyer for their MBA program.

Magnet Again-Librarian's Role In Collaboration to Maintain Magnet Status. Poster presentation by Barb Iobst and Linda Schwartz at the Medical Library Association annual conference in Philadelphia, PA May 18-23, 2007

Planning for Integration of the Digital Library, Clinical Decision Support, and Evidence at the Point of Care (EPOC) Paper presentation by Linda Schwartz at the Medical Library Association annual conference in Philadelphia, PA May 18-23, 2007

IAIMS LVHN Digital Library presentation by Barb Iobst and Linda Schwartz to visitors from UMDNJ, who were previous IAIMS grant recipients October 6, 2006

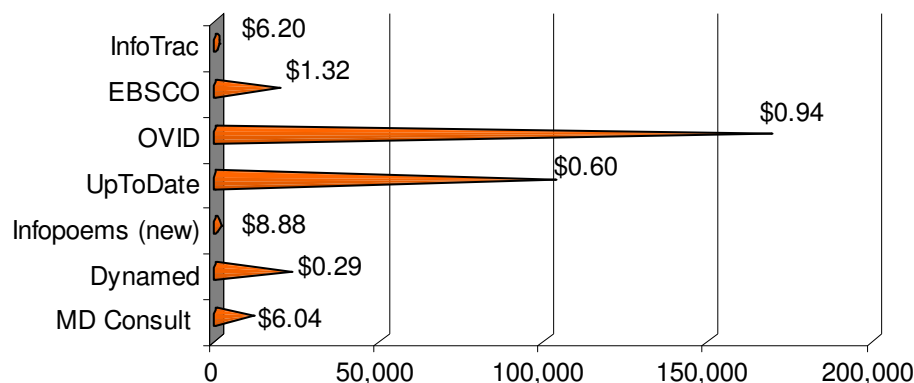
Research and Grants:

FPIN (Family Practice Inquiry Network) certification – Linda Schwartz was approved to do the literature search for a project with Brian Stello. The clinical question they collaborated on was “*Do leukotriene receptor antagonists (Singulair, Accolate) have any effect on eczema or other allergic skin disorders?*”

IAIMS grant recipient – Integrated Advanced Information Management Systems (IAIMS) – promote the digital library and seamless integration of electronic full text library resources at the point of care.

Usage of Electronic Library Resources:

Statistics Reflect 1 year usage. The purpose of each database below is different. Some provide exclusive content for a journal title. Graph shows number of searches by database and cost-per-search.

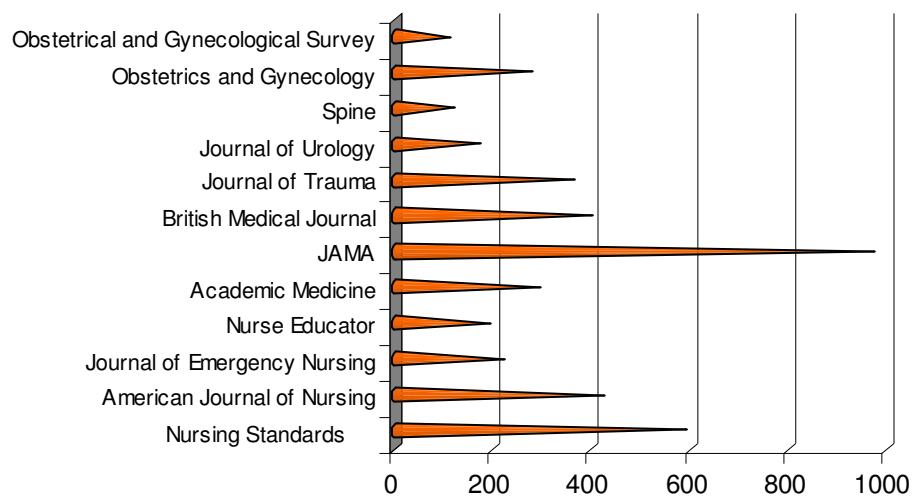


- 327,433 total numbers of searches across all databases FY07
30% increase in usage from FY06 231,177 searches
- \$1.04 average cost per search FY07
15% increase in costs from FY06 average of \$0.88
- The number of UpToDate searches is inflated with unlicensed access by LVPG. This has been corrected and expect the cost per search to double in FY08 as usage/cost are aligned with our license agreement.

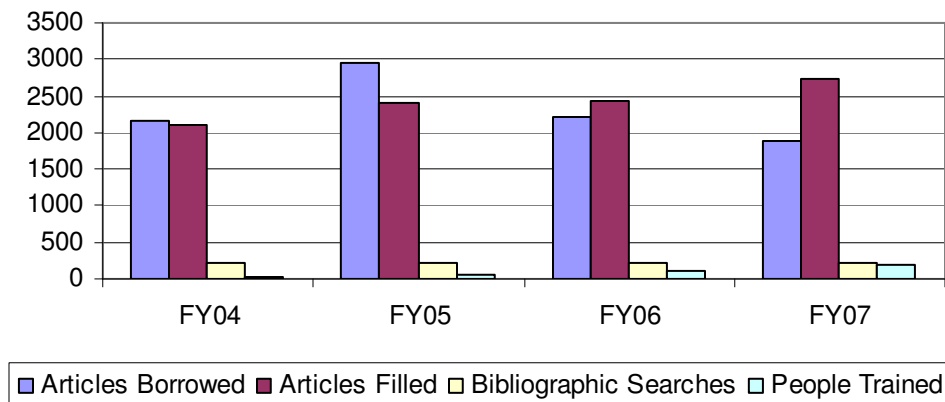
- Dynamed has been acquired by EBSCO. We expect the license costs will increase quadrupling the cost per Dynamed search in FY08.

OVID:

Following are examples of heavily used journal titles. Number reflects the number of times an article was viewed electronically from that journal title:



Library Services Requests



Article Locations/ Questions Answered

- 5,989 instances of assisting patrons FY07

Goals for the Future

Use instructional technology to deliver training on how to access electronic resources in the digital library, meeting volume demands in information literacy and increasing satisfaction with available resources.

Enhance the reputation and visibility of Library Service's digital library through marketing, communications and training. We believe this will be important since the library will temporarily move to the basement of Kasych in January, 2008.

Enhance Library Services community and consumer health information program.

Create a database for easy retrieval of materials from the Hospital Archives.

Patient Education

Improvements Achieved

On Demand Patient Education Tool: The KRAMES on demand system will be implemented by Information Services during FY'08. It is an online system of patient education materials that can be printed out when required. Materials are automatically available in both English and Spanish. 10 Topics which KRAMES customers have identified as high demand are available in 10 languages. Documentation is automatically entered into the electronic medical record when the material is printed. Anticipated results include: Increased compliance in documenting patient education; Decrease in the number of materials purchased and stored; Automated process for reviewing and revising materials; Increase the quality of the patient education experience; Improved patient satisfaction.

Organizational Opportunities

Materials Review Process: Approximately 25% of the time reviewers require second and third reminders by the Patient Education coordinators to return updates or approvals. Of this 66 pieces were not returned after being sent out for review in FY07. A new materials review process is needed documenting steps and providing an easy to use review tool for clinicians.

Accomplishments

- 62,220 pieces of literature supplied in 2006. This is a 33% reduction from prior year due to making the *Learn More About* series available from our web site and printable at the unit.
 - 80,046 in 2005
 - 68,014 in 2004

- 55 different patient education programs shown on CCTV
54 in 2005
46 in 2004
- 190 times patient education programs are shown in one day (*They are shown 365 days per year*)
189 in 2005
101 in 2004
- 19 T-System revisions were handled
- 697 pieces of literature were sent to reviewers for revision. (Calendar year)
- 631 pieces were returned
- 369 were revised or deleted based upon reviewers' recommendations
- 262 pieces did not require revisions but the revision date expired
- 30 pieces were translated into Spanish

Goals for the Future

Collaborate with Library Services to develop a framework for the patient, family, consumer education department of the future.

Collaborate with the Nursing Informatics Department to develop a plan to implement the KRAMES on demand system.

Collaborate with the Patient Centered Encounter task force to determine which recommendations should be pursued from the JOG II report.

Enhance patient, family, and consumer education by increasing visibility and availability of materials and interactivity of the learner. Assess community and inpatient educational needs with respect to materials, programs, and classes. Measure effectiveness of patient education through follow-up surveys.

Simulation Lab

The implications for simulation for employee orientation and training are immense. The simulation lab will increase the exposure of LVHN learners to simulation and other advanced learning techniques. The simulation lab will offer another option to meet curricular objectives both in terms of technique and physical capacity. By using simulation we intend to increase the quality of nursing and medical education. This should manifest itself in higher numbers of nursing graduates seeking employment at LVHN. The simulation lab will also help attract high quality residents to LVHN.

Improvements Achieved

Proposal for a Patient Safety Focused,

Healthcare Simulation Center: This involved input from stakeholders from inside and outside of DOE. Although not currently funded, the proposal raised important issues for the network in the development of its educational plan going forward. As a result of this work additional research topics have come up in the following areas and will help guide our investigations and prototyping in our simulation lab: simulation as an instructional strategy, assessment of current efforts, benchmarking, governance and educational priorities, evidence as to the effectiveness of simulation for education and improving patient safety, and potential use as a competency evaluation of staff at various levels.

Simulation Lab Purpose:

- Pilot curriculum redesign and development using simulation, problem based learning and team based activity design principles
- Continuing medical education and continuing nursing education events
- New process rollouts such as pharmacy training efforts
- Critical care team members such as respiratory therapy technicians
- Attending physicians will participate as simulation center faculty, simulation center curriculum builders, and as simulation training participants
- We expect our nursing leaders to participate in the same fashion

Support of Collaborative Projects Involving Simulation: Assisted with grant writing for Dept of OB/Gyn simulation efforts led by Dr. Kristin Friel. Provide support of project development and evaluation. Assisted with grant writing for Dept of Pediatrics simulation efforts led by Dr. Kyle Walker. Support of project development, execution and evaluation. Assisted with IRB proposal, project planning for Dept of Emergency Medicine Lumbar Puncture training project led by Dr. Steven Conroy. Will continue support in the execution and evaluation of the project.

Support of Research in Dept of Community Health, Health Studies, and Div of Ed:

Collaboration on research project to validate the Emergency Department Algorithm.

Support of Research in Dept of Emergency Medicine: Grant writing for a project entitled “The Formation of an Emergency Medicine Electronic Medical Record Data Repository”

Accomplishments

The Use of Simulation in Emergency Medicine: A Research Agenda. Bond WF, Lammers RL, Spillane LL, Smith-Coggins R, Fernandez R, Reznick MA, Vozenilek JA, Gordon JA on Behalf of the Society for Academic Emergency Medicine Simulation Task Force. Academic Emergency Medicine 2007; 14: 353-363. 2007

Is Early Analgesia Associated with Delayed Treatment of Appendicitis? Frei SP, Bond WF, Bazuro RK, Richardson DM, Sierzega GM, Wasser TE. American Journal of Emergency Medicine. (in press) 2007

Profiles in Patient Safety: A "Perfect Storm" in the Emergency Department Campbell SG, Croskerry P, Bond WF. Academic Emergency Medicine. (in press) 2007

Goals for the Future

Revision of the Simulation Center Proposal including its integration into the larger perspective of education at LVHN.

Begin Ob/gyn crisis simulations by 12/31/07 and begin Pediatric mock code simulations by 12/31/07.

Demonstrate one educational project that is a collaboration between Quality/Safety and the Division of Education.

Ensure that 1247 building facilities we be able to provide for nursing simulation opportunities and integration of simulation in our curriculum.

Business Office, Administration and Support

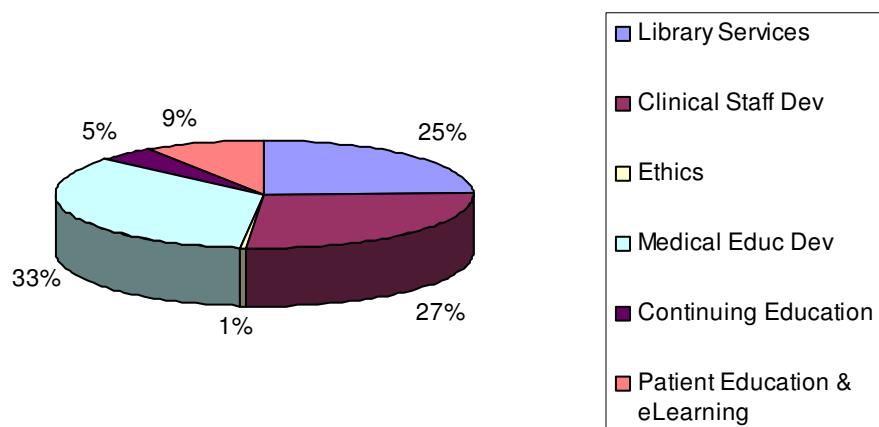
Improvements Achieved

Continuing Education Conferences Expense Tracking: Centralized CME and CNE conference expenses from disparate planning teams into the DOE Business Office creating supporting electronic ledger. Resulted in immediate efficiencies for planning teams, accurate book keeping, accessible audit trail, expedited processing of grants, easy reporting of grant funds to agencies and improved communications between stakeholders. Our current accounting processes limit our ability to easily and efficiently transfer funds between internal cost centers and accounts.

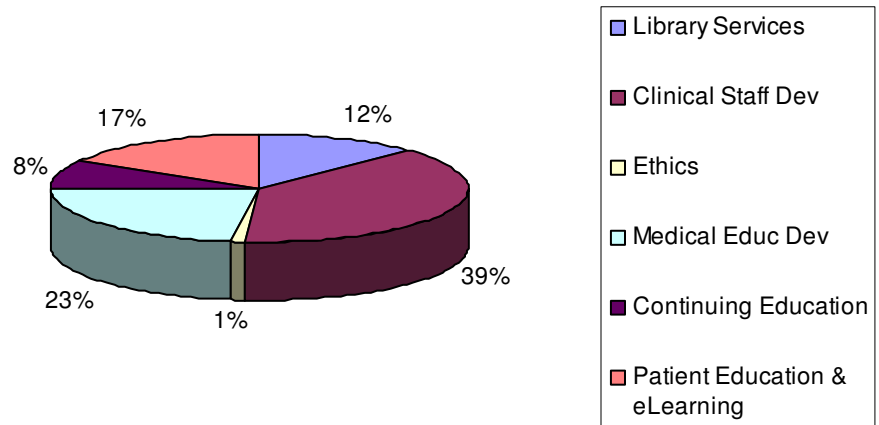
Division Budget Process: Incorporate the financial planning with operational strategic planning to anticipate future funding requirements. In past years, the budget process was isolated from the strategic planning of the overall goals of each functional area. For the 2008 Budget cycle, each team met prior to January to develop goals and project lists which generated a needs requirement list for funding. The management team then met on various occasions to determine which projects would be submitted to the Pool Trust for the next fiscal year, in addition to which would be submitted for Capital and Operational budget requests through hospital dollar funding. This resulted in a concise plan for each request submission, as well as enhanced documentation to support the dollars that were requested for each area. The additional planning and documentation resulted in a more thorough knowledge of each functional area's needs, which contributed to better managerial decisions when the SMC team requested additional revisions.

Accomplishments

Operating Budget by Section



Labor Distribution by Section



Goals for the Future

Implement a more precise time and materials tracking tool accurately matching resource costs to projects. Establish program wide metrics and analytics for the division and research benchmark data from external sources.

Define a division specific strategy to recruit and retain personnel.

Determine best practices to meet goals with reduced FY08 budget constraints. Identify where possible additional efficiencies.