



Graduate Medical Education 2008 Annual Report

Submitted from Division of Education
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Introduction

Throughout 2008, the Graduate Medical Education community at Lehigh Valley Health Network has continued to develop and implement policies and learning strategies that achieve accreditation requirements and that prepare our resident physicians to serve the Lehigh Valley community and beyond. The Graduate Medical Education Committee (GMEC) and the Division of Education have provided the institutional oversight required to achieve these ends.

Mission – The mission of GMEC is to offer graduate medical education programs in which physicians in training develop personal, clinical, and professional competence under the guidance and supervision of the faculty and staff.

Vision – The vision of GMEC is to develop the strategies and mechanisms needed to ensure that LVHN’s graduate medical education programs have adequate educational, financial, and human resources to demonstrate measurable improvements in learning outcomes.

Strategy – GMEC’s strategy is based on organizational objectives and the Accreditation Council for Graduate Medical Education (ACGME)’s definition of “institutional competency”, which includes an organization’s ability to:

- Gather and analyze data from the educational and clinical environments
- Ensure resident education in patient safety and quality of care
- Lead program and academic innovations
- Predict and trend performance
- Develop, align and implement policies and procedures that impact graduate medical education programs.
- Ensure the necessary educational, financial and human resource provisions to support all graduate medical education training programs.

We are pleased to provide the following 2008 Graduate Medical Education Report providing evidence of ongoing strengths, opportunities and the larger trends affecting Lehigh Valley Health Network’s Graduate Medical Education programs.

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Overview

As an accredited member of the Council of Teaching Hospitals of the Association of American Medical Colleges, LVHN has an established history of providing high quality education programs to developing healthcare professionals. Specifically, graduate medical education (GME) has been a valued tradition for more than a half-century at our hospital.

Currently, LVHN trains 203 residents in 17 ACGME, AOA, and ADA accredited and non-accredited residency, specialty and fellowship programs. LVHN has approximately 500 physician faculty. The Medical Education Development (MED) section in the Division of Education provides institutional oversight for the administration and development of these programs through the Graduate Medical Education Committee (GMEC), program and faculty development, academic development, and administrative functions.

- 203 residents FY09
184 residents FY08
182 residents FY07
185 residents FY06
175 residents FY05
- 70 visiting residents FY08
68 visiting residents FY07
94 visiting residents FY06
87 visiting residents FY05
- Major affiliate: Penn State College of Medicine Hershey Medical Center
- ACGME accredited (**M.D.**): Cardiology, Colon/Rectal Surgery, Family Medicine, General Surgery, Internal Medicine, Obstetrics/Gynecology, Plastic Surgery, Surgical Critical Care, and Transitional Year.
- AOA accredited (**D.O.**): Emergency Medicine, Family Medicine, Osteopathic Internship (LVH-CC, LVHM, LVH-17th)
- ADA accredited: Dental LVH-M, LVH-17th
- Re-accredited programs in 2008: Plastic Surgery (5yrs), Transitional Year (5yrs), General Surgery (4yrs), and AOA Osteopathic Internship-CC (2yrs),
- New Accredited Program in 2008: Emergency Medicine received ACGME accreditation (3yrs)
- Internal Reviews in 2008: Cardiology Fellowship and Colon/Rectal Surgery

Physician Residency Programs:

- Dental Medicine
 - LVH-M
 - LVH-17th
- Emergency Medicine (dually)
- Family Medicine (dually)
- General Surgery
- Internal Medicine
- Obstetrics and Gynecology
- Osteopathic Internship
 - LVH-CC
 - LVH-M
 - LVH-17th
- Transitional Year

Specialty and Fellowship Programs:

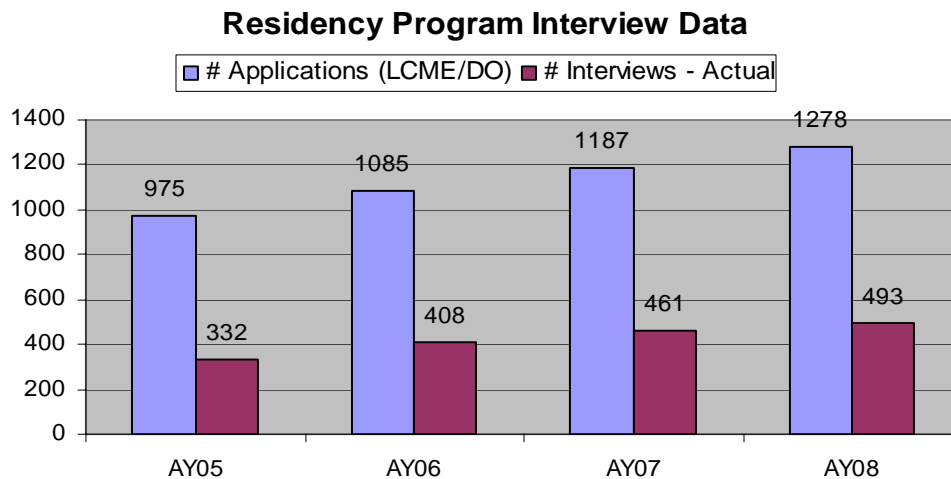
- Cardiology
 - Colon and Rectal Surgery
 - Hematology/Oncology *
 - Surgical Critical Care
 - Plastic Surgery
 - Pulmonary Critical Care *
- (*Sponsored by Penn State)

Resident Recruitment, Interviews and Match Results

Residency Recruitment – Many programs conduct their own recruiting strategy. However, this year, Division of Education collaborated with residency programs to further support programs’ recruitment efforts in the design of a Residency Recruitment DVD. This project included the total production of eight, 7-minute videos (7 program overviews, 1 hospital overview, 1 welcome) which were compiled onto one master recruitment DVD. Program recruitment videos are available on each residency’s internet site.

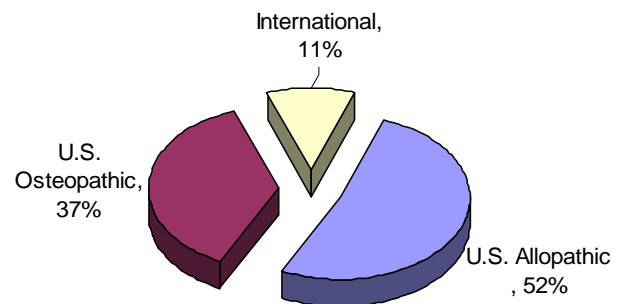


Applicants and Interviews - Medical student interest in our residency programs are reflected in the number of applicants applying to and being granted interviews for residency training. As demonstrated in the below graph, interest in all LVHN residency programs has increased. These interview data represent applicants from U.S. allopathic and osteopathic schools of medicine.



2008 Match Results - Graduate Medical Education programs posted another successful year in terms of quality of resident applicants, selection and fill rate in the national match process.

- 73 total positions available
- 73 filled (includes 3 scrambled)
- 52% from U.S. Allopathic schools
- 37% from U.S. Osteopathic schools
 - 50% slotted for EM osteopathic interns
- 11% from International medical schools
 - 25% from U.S. international schools



Match from Allopathic/Osteopathic Schools

- 40% Non-PA based
- 60% PA-based (some listed below)

Philadelphia College of Osteopathic Medicine (11)
Jefferson Medical College (6)

Temple University School of Medicine (5)
Drexel University College of Medicine (3)

Resident Supervision, Evaluation and Policies

The Graduate Medical Education Committee (GMEC) is committed to offer graduate medical education programs in which physicians in training develop personal, clinical, and professional competence under the guidance and supervision of the faculty and staff. GMEC provides institutional oversight of LVHN's graduate medical education programs which is limited to ensuring resident supervision, evaluation, and policy development and implementation.

Resident Supervision - All post-graduate medical education trainees at LVHN are supervised by an attending physician who also has clinical privileges in the area they are supervising. Currently, LVHN has over 500 physician faculty with academic appointments through Penn State College of Medicine. All patient care is supervised by these faculty who have expressed interest in resident education and who have attained baseline education on teaching and learning mostly through their respective disciplinary associations, conferences, etc. The program director ensures and documents adequate supervision of residents at all times through residents' rotation schedules. Faculty schedules are structured to provide residents with continuous supervision and consultation. Faculty and residents are educated annually to recognize signs of fatigue.

Resident Evaluation – Each residency program adheres to ACGME, AOA, or ADA program requirements to demonstrate that it has an effective plan for assessing resident performance and for utilizing the results to improve resident performance. Each post-graduate year level has a job description and delineation of privileges (updated regularly and available on the intranet for clinical staff). The description of the role, responsibilities, and patient care activities of each resident are program-specific and are documented for each residency-training program. Furthermore, each program has a mechanism in place to make decisions about the promotion of trainees in that particular program (i.e. education committee, promotions committee, etc).

In 2008, GMEC developed and implemented a policy and procedure to ensure accurate and timely feedback for residents to improve their skills. Specifically, for programs to ensure accurate and timely feedback for residents, core faculty need to complete 75% of the evaluations assigned to them within 30 days of a resident's completion of a rotation. In the first quarter of AY09, programs' core faculty achieved a collective 80% compliance of this goal. Program directors with support from Division of Education's faculty development initiative are working with their core faculty to improve this metric and overall timing of feedback to residents.

Policy Development and Implementation – GMEC developed or updated the following graduate medical education institutional policies in 2008.

- Disaster Policy
- Disciplinary Action Review Policy
- Faculty Evaluation of Residents Policy
- Fair Hearing Policy
- GMEC Annual Performance Review Policy
- Graduate Training Agreement
- Renewal/Non-renewal of Resident Contracts
- Resident Compensation and Benefits
- Resident Grievance Policy
- Restrictive Covenant

Resident Work and Learning Environment

The Graduate Medical Education Committee (GMEC) is an advocate for resident satisfaction. The purpose of our resident satisfaction survey process is to assess and improve the learning environment for our residents. In addition to residency programs receiving data on their learning environment, this survey helps GMEC comply with ACGME Institutional and Common Program Requirements.

Improving the Learning Environment - Each year, program directors meet with their residents to discuss and improve survey results and the overall learning climate. Action plans are sent to the DIO and DME and reviewed during regular meetings with program directors. In addition, the DIO and DME meet with each program's residents. A report is submitted to the program director should any issues emerge that were not identified in the survey results or discussed during the action planning meetings.

2008 Results - 130 residents from nine GME programs participated in the survey including: Cardiology, Dental Medicine, Emergency Medicine, Family Medicine, General Surgery, Internal Medicine, LVH-M Osteopathic Internship, Obstetrics/Gynecology, and Transitional Year. Below are key observations and findings regarding overall resident satisfaction.

	FY 2007	FY 2008
Participation Rate	76%	71%
Overall Satisfaction	3.98	3.90
Desire to Work at LVHN after Residency	4.24	3.69

Top 5 Mean Scores:

- I would recommend LVHN to a friend or relative who needed care.
- I'm proud to tell others that I work for LVHNN.
- I would recommend LVHN's residency program to medical students.

Bottom 5 Mean Scores:

- Within duty hours restrictions, my residency program operates at 100% efficiency.
- LVHN's physicians consistently treat my co-residents with courtesy and respect.
- LVHN's benefits package meets my needs.

Greatest increase in satisfaction from FY07:

- Within mandated service and duty hours restrictions, my residency program operates at 100% efficiency.
- LVHNN has developed work/life policies that address my needs.
- In my residency program, we have the equipment and supplies necessary to do our jobs well.

Greatest decrease in satisfaction from FY07:

- Desire to be working for LVHNN after residency.
- My program director shares all the information my co-residents and I need in order to feel part of the LVHNN team.
- My program director listens to my co-residents in our residency program.

Resident Duty Hours

GMEC and each residency program have written policies governing resident duty hours that foster education and the safe care of patients. These policies are based on requirements mandated by each programs' ACGME resident review committee. The Duty Hour Policy for LVHN provides residents with a sound academic and clinical education that is carefully planned and balanced with concerns for patient safety and resident well-being. Duty hour assignments recognize that faculty and residents have responsibility for the safety and welfare of patients.

Internal Tracking and Reporting - LVHN residency programs track duty hours through an electronic residency management system. Duty hour compliance reports are generated, analyzed and presented at GMEC on a quarterly basis. These reports identify problematic rotations. When violations in duty hours occur, program directors are required to report back to GMEC explaining details of the violation(s) and the plan to ensure that the violation does not repeat.

Duty Hours: A National Patient Safety Issue - In 2007, the Institute of Medicine (IOM) formed the "*Committee on Optimizing GME Trainee (Resident) Schedules to Improve Patient Safety*". The committee's task was to develop strategies to enable optimization of work schedules to improve safety in the healthcare work environment. Below is a summary of the committee's recommendations. If these recommendations became accreditation requirements, they could impact overall residency programmatic costs. Source: IOM website.

Comparison of IOM Committee Adjustments to Current ACGME Duty Hour Limits

	2003 ACGME Duty Hour Limits	2008 IOM Recommendations
Maximum hours of work/week	80 hours, averaged over 4 weeks	No change
Maximum shift length	30 hrs (admitting patients up to 24 hrs then 6 additional hrs for educational activities)	30 hrs (admitting patients for up to 16 hours, plus 5 hrs protected sleep period with remaining hrs for educational activities) 16 hrs with no protected sleep period.
Maximum in-hospital on-call frequency	Every third night, on average	Every third night, no averaging
Minimum time off between scheduled shifts	10 hrs after shift length	10 hrs after day shift 12 hrs after night shift 14 hrs after any extended duty period of 30 hrs and not return until 6am of next day
Maximum frequency of in-hospital night shifts	Not addressed	4 night max; 48 hrs of after 3 or 4 nights of consecutive duty
Mandatory time off duty	4 days off per month 1 day off/week, avg. over 4 weeks	5 days off/month 1 day off/week, no averaging One 48-hour period off/month
Moonlighting	Internal moonlighting is counted against 80-hr weekly limit	Internal and external moonlighting counted against 80-hr weekly limit All other duty hour limited apply to moonlighting
Limit on hours for exceptions	88 hrs for select programs with sound educational rationale	No change
Emergency room limits	12 hr shift limit, an equivalent period of time off between shifts	No change

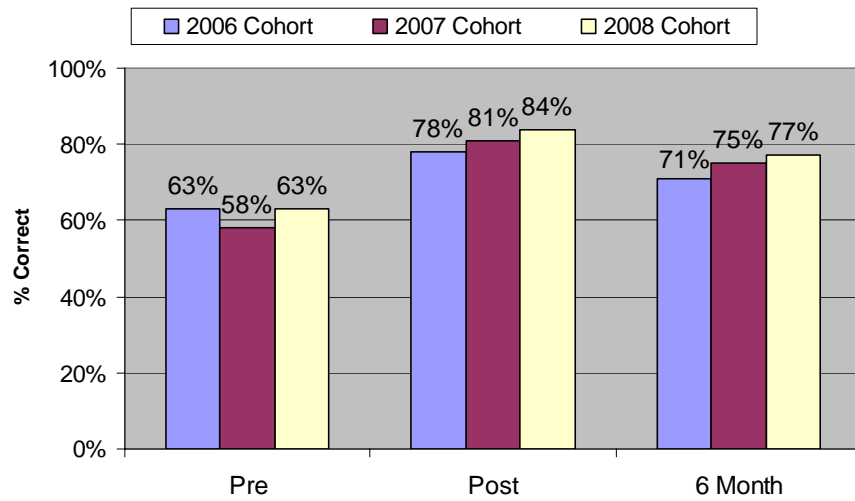
Resident Education in Patient Safety and Quality

Central Lines Simulation Course - GMEC is an advocate for ensuring resident education in patient safety and quality. The purpose of this GME initiative is to prevent catheter-related bloodstream infections by educating residents on the five components of care in the Institute for Healthcare Improvement (IHI) Central Lines bundle. Physician assistants and nurse practitioners also attend the course.

The course includes a half day simulation portion during which the residents and mid level providers are able to perform central line insertion on all three anatomical sites with mannequins, use sterile technique, use ultrasound for target vessel verification, perform the time out verification, and receive a checklist based competency evaluation.

Since 2006, the course has generated **increases** in participants' knowledge base of central lines techniques and the IHI central line bundle. A total of 224 residents, fellows, physician assistants and nurse practitioners have gone through the course since 2006.

First-Year Residents' Level of Knowledge
Central Lines Insertion Techniques and Patient Safety Protocols

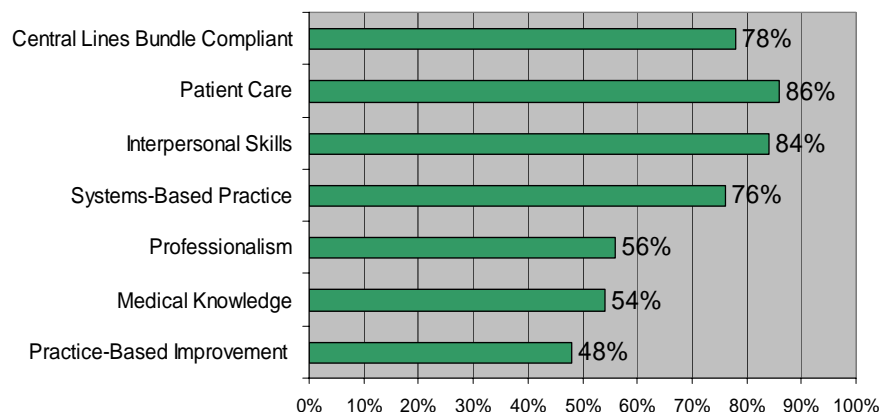


Demonstration of General Competencies during Simulated Central Lines Testing - In 2007 and 2008, smaller group sizes gave each participant up to 50% more time to practice and receive feedback on placement techniques and demonstration of the central lines patient safety protocols. In 2008, these practice sessions were followed by formal 'performance checks' to ensure

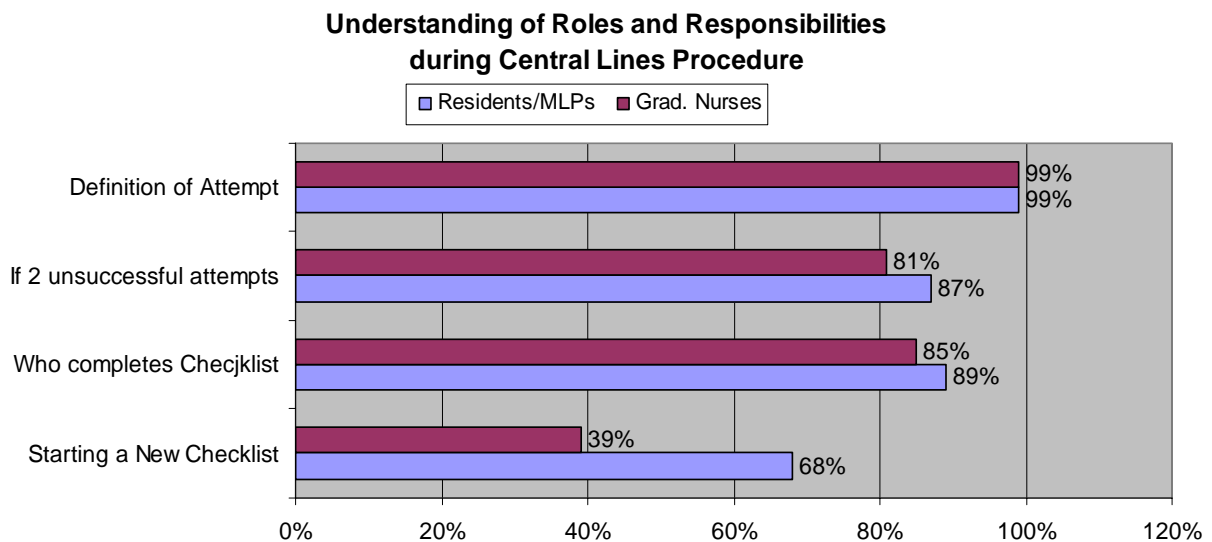
procedural competence, including demonstration of the ACGME general competencies within the procedure, and bedside collaboration with nurse education leaders present.

Forty-three physicians and nurse faculty participated in these practice sessions. This chart (*to the right*) is data on performance outcomes of 72 residents during the simulated performance check.

Performance during Simulated Central Lines Procedure Check
n=72



Bedside Collaboration for Patient Safety - The Institute for Healthcare Improvement’s Central Lines Bundle encourages bedside collaboration before, during and after the procedure to ensure patient safety. As of June 2008, the Graduate Nurse Critical Care Internship includes education on the Central Lines Bundle and a pre/post evaluation to test new nurses’ understanding of roles and responsibilities during the procedure. The pre/post evaluations administered to new residents and new nurses contains four similar test questions. When compared, these items help to assess resident and graduate nurses’ level of understanding regarding their individual roles and responsibilities during a central lines procedure. Results of this kind of comparison identify areas for improvement in future learning and readiness interventions.



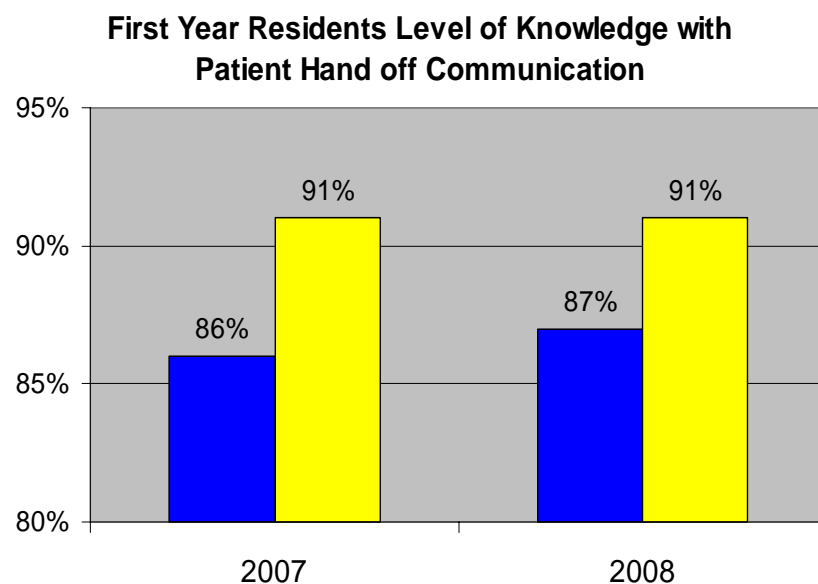
Ensuring Competency and the Reduction/Elimination of Infections from Central Lines - To achieve higher levels of performance on central lines, the Division of Education and Department of Quality and Patient Safety collaborated on an institutional initiative to design a bedside checklist and update current hospital protocols related to line insertion and maintenance. Implementation of these new protocols started in April 2008. In addition, the multidisciplinary group was charged to consult on the design of a registry. The purpose of the registry is to “stitch” together fragmented databases and data elements in order to support procedural competency, evaluate the Central Lines Course, and to support educational research efforts.

Financial Impact - In calendar year 2007, forty-nine patients acquired an infection from a central line (equals 1% infection rate). These patients had a total of 550 days in excess of our 2007 average length of stay. Approximately, \$500,000 in potential revenues could have been collected if these excess bed days would have been available for additional admissions. In addition, according to a 2002 study by the Centers for Disease Control and Prevention, these infections cost LVHN approximately \$1.2 million. For many of these costs, Medicare no longer reimburses healthcare providers. In addition to better patient safety, an objective of the central lines course and this organizational initiative is to improve reduce these costs and enhance institutional capacity.

Resident Education in Patient Hand-Off Communication and Other Patient Safety Topics

Patient Hand-Off Communication - According to an Institute of Medicine report, communication failure between caregivers is the root cause for 60% of reported sentinel events. In response to this report and in alignment with ACGME Outcomes Project, Phase 3, the Division of Education designed, developed and implemented an e-learning module. The e-learning solution was designed to instruct and evaluate all first year residents on the knowledge and application of Patient Hand-Off Communication Standards.

Before starting their orientation, 70 first year residents were asked to complete an e-learning module on Patient Hand-Off Communication Standards. The module included **pre/post** assessments and four video/audio interactive course lessons that included assessment and instruction on: a) Rationale for Standard Communication, b) Hand-Off Communication, c) Explanation of SBAR Methodology, and d) Review of Scenarios.



Evaluation was conducted before and after the course and at a six-month interval. Post-course scores showed improvement in residents' knowledge of Patient Hand-off Communications Standards (*see graph*). The curriculum team is reviewing course design to improve effectiveness, evaluation and methods for assessment of resident knowledge and competency.

Other Resident Education in Patient Safety - In addition, all residents are required to complete the *Annual Core Curriculum* on the Learning Content Management System. The *Annual Core Curriculum* consists of the following fourteen e-learning patient safety and risk management modules.

- Bloodborne Pathogens
- Basic Infection Control - Hand Hygiene
- Emergency Response
- Fall Prevention
- Hazard Communication
- HIPAA
- MCARE/Act 13
- National Patient Safety Goals
- Pharmacy and Medication Overview
- Restraints Reduction
- Patient Rights
- Risk Management/Patient Safety Overview
- Sharps Safety
- TB and Respiratory Protection

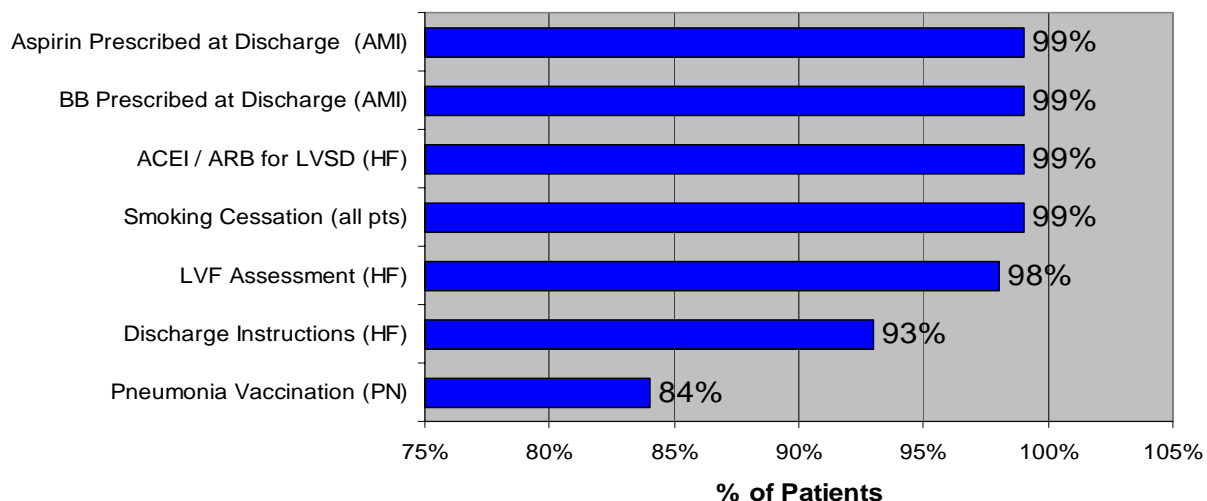
Resident Patient Safety and Quality Improvement Officer - In order to demonstrate patient safety and quality improvement advocacy in resident education, GMEC created a resident patient safety and quality improvement officer for participating in selected network wide QA/QI meeting activities. This 2-year appointment is mentored by the Senior Vice President, Quality and Patient Safety. The resident selected represents residents at various network quality improvement and patient safety forums.

Resident Membership on Institutional Committees - Currently, 27 residents are members of the following 18 institutional committees, some of which are focused on improving quality and patient safety. For example, this year, twenty residents participated in two discharge process improvement sessions at the institutional level. Resident participation on committees, such as these, provides them with additional educational experiences and the institution with additional perspectives on problems.

- Cancer Committee
- Clinical Case Review
- Code Blue
- Code Blue Second Review
- Credentials
- Emergency Management
- Ethics
- Graduate Medical Education Committee
- Infection Control Committee
- Medical Advisory
- Medical Records
- Multi-Specialty Quality Improvement Council
- Occurrence Analysis Committee
- Patient Safety Council
- Patient Satisfaction Improvement Council
- Quality Improvement Team
- Technology Assessment Committee
- Therapeutics

Resident Performance on Core Quality Measures - Since 2004, The Joint Commission and Centers for Medicare and Medicaid Services have worked together to align core quality measures. Core measures track a variety of evidence-based, scientifically-researched standards of care which have been shown to result in improved clinical outcomes for patients. In FY08, 128 residents in four programs had contact with patients where core measures were applicable. To illustrate how residents performed in each core measure, the graph below is provided. The Quality/Patient Safety dept provides feedback to program directors on a quarterly basis.

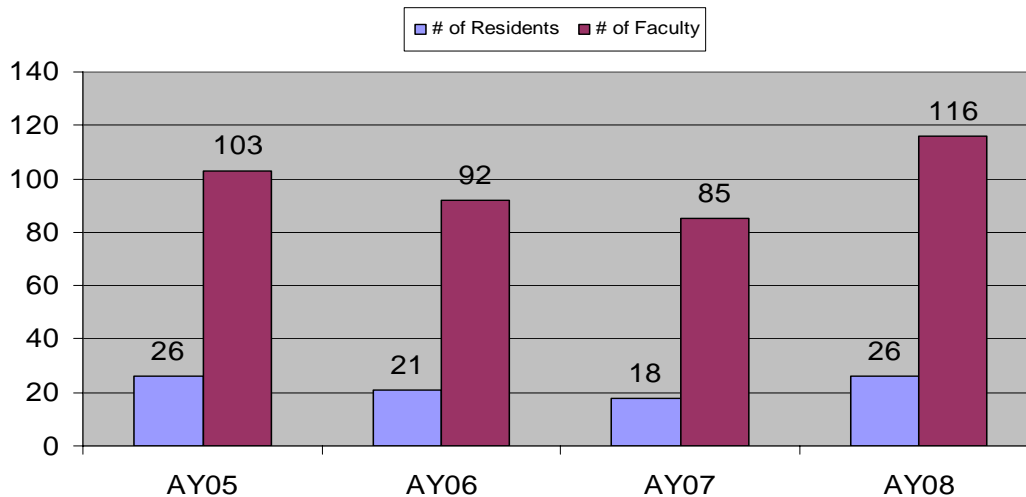
FY08 Resident Performance on Core Measures



Graduate Medical Education Scholarly Activities

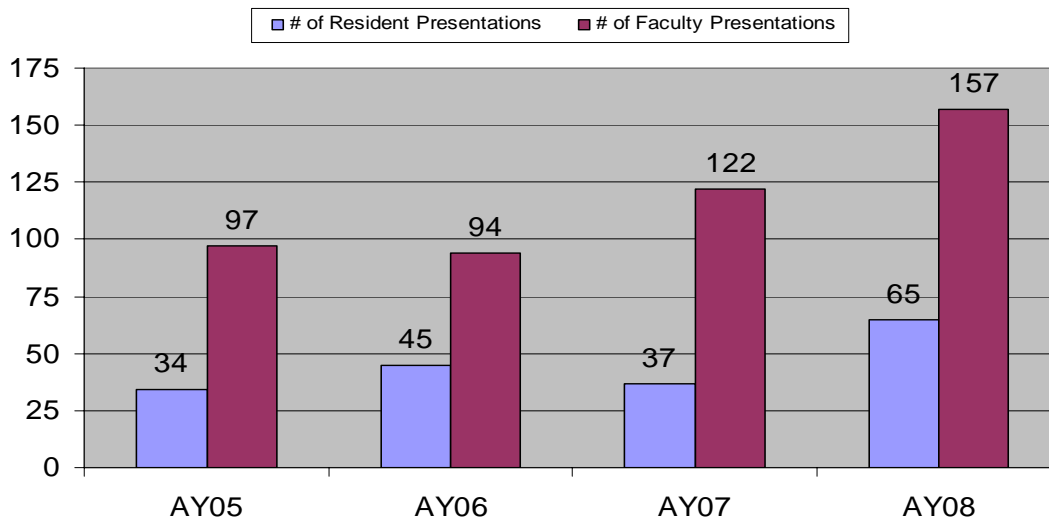
GMEC also promotes and advocates for an environment that promotes scholarly activity. Each program provides opportunities for residents to participate in research or other scholarly activities. The responsibility for establishing and maintaining an environment of inquiry and scholarship rests with the faculty, per ACGME Common Program Requirements. To enhance scholarly and research activity, residency programs develop a customized curriculum for residents around their specific interests. Fundamental concepts of research and scholarship are woven directly into the design and implementation of individual research projects. Typically, research is collaborative where the resident is mentored by a physician faculty member. Below are two charts that illustrate the number of resident and faculty publications and presentations from academic years 2005-2008.

Contributors to Publications (Residents and Faculty)



Publications included peer-reviewed journals and book chapters. Publications with both resident and faculty authors were counted once in each category. Presentations include posters and oral.

Presentations (Residents and Faculty)



Residency Program Innovations

The LVHN Family Medicine and Internal Medicine Residency Programs are participating in nationally recognized innovations to redesign residency training. These innovations include Family Medicine’s P4 initiative and Internal Medicine’s ECLS floor in Kasych Tower. In addition, LVHN was invited to participate in the beta test of ACGME’s Learning Innovation and Improvement Project.

Family Medicine – The Family Medicine initiative, P4, stands for “Preparing the Personal Physician for Practice”. The Family Medicine Residency is one of only fourteen programs selected nationwide to participate in this redesign, and is only one of two dually accredited residencies that are participating in the program. The P4 project aims to simultaneously redesign the primary care delivery system and the primary care physician by ultimately creating a “patient centered medical home”.

“Leading The Way” - In 2008 the national family medicine collaborative, who initiated P4, conducted a site visit with Family Medicine’s faculty, residents and administrators about their progress. The site visitors were most impressed and commented that whereas the other thirteen programs were doing just one or two things, LVHN family medicine residency was doing a lot more in terms of curriculum development, assessment and evaluation. The site visitors also commented that if they had started their P4 site visits with LVHN’s family medicine residency, they would have looked very differently at the other thirteen programs.

Internal Medicine – The concept of an Exemplary Care and Learning Site (ECLS) was born out of collaboration between the Association of American Medical Colleges (AAMC) and the Institute for Healthcare Improvement (IHI). In 2004, LVHN’s Pediatric Clerkship became part of this national experiment to incorporate Performance Improvement education and concepts into medical student training. The curriculum consists of lectures and a mock project in addition to several system support functions, such as collaborative bedside rounding. In 2008, an ECLS was created on the fifth floor of Kasych Tower. The principles guiding the Exemplary Care and Learning Site include the demonstration of outstanding performance in the dual aims of patient care and professional development. Additionally, this site will stimulate the redesign of the clinical curriculum for both teachers and learners and will allow for continual quality improvement in care delivery and learning. In the Exemplary Care and Learning Site each individual member of the micro-system including the learners is defined as having a role in the quality of care and learning process.

ACGME’s Learning Innovation and Improvement Project (LIIP) – In 2007, the ACGME initiated LIIP to gain deeper insight into the factors and attributes that make some institutions more successful in innovation and improvement in their learning environment. In 2008, LVHN was invited to participate in this national learning initiative. LVHN is one of fifteen institutions that is participating in the beta phase of the study. LVHN was selected because of its reputation and re-accreditation commendations for being successful for developing innovations in teaching and learning that improves resident education and patient care.

Interprofessional Faculty Development

With generous support from the Dorothy Rider Pool Health Care Trust, the Division of Education sponsors and coordinates interprofessional workshops for all clinical educators (i.e. physicians, nurses, physician assistants, etc). This workshop series called, *The Teaching Leader Series*, has been designed to assess and build LVHN’s capacity and capabilities for teaching and outcomes-based education. In Fall 08, the following workshops were designed and delivered:

- Adult Learning (Sept)
- Giving Feedback (Oct)
- Small Group Teaching/Facilitation (Nov)
- Interactive Team Communication (Dec)

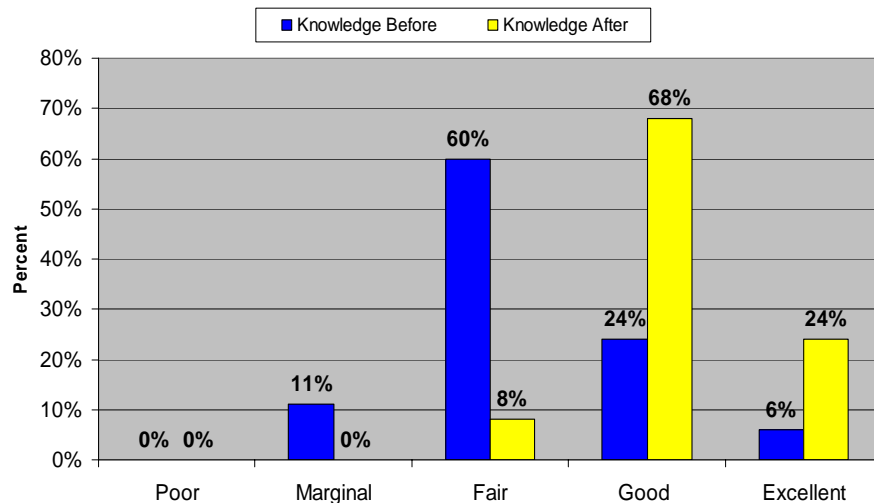
Below is the post-evaluation summary of the Fall 08 workshops.

Increases in Faculty’s Knowledge of Teaching and Learning:

At the conclusion of each workshop, participants were asked to complete a self-retrospective evaluation rating their level of knowledge prior to and at the conclusion of the workshop on the topic that was presented. Overall, participants rated increases in knowledge.

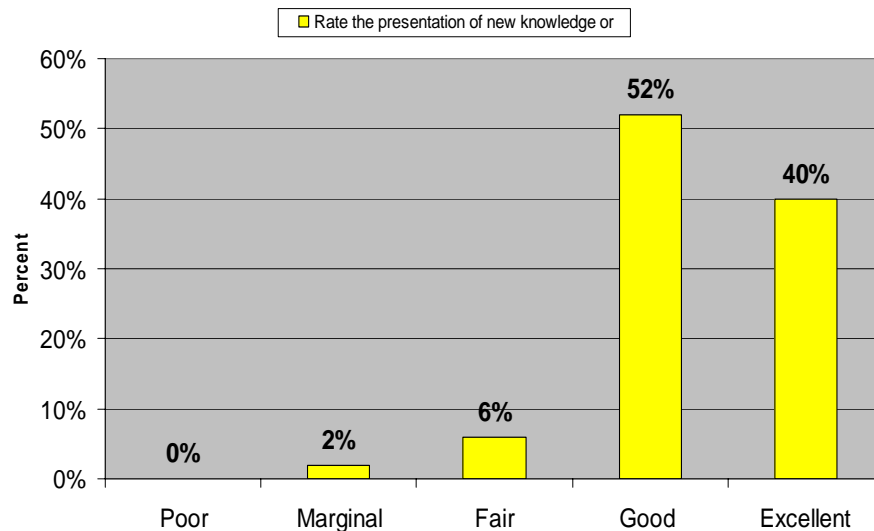
Workshop topics on *Giving Feedback (Oct)* and *Small Group Teaching / Facilitation (Nov)* generated the highest increases in self-retrospective knowledge gains.

The Teaching Leader Series - Fall 08 Summary



Also, as part of the self-retrospective evaluation, participants rated each workshop in terms of “Presentation of New Knowledge or Ideas”. Workshop topics on *Giving Feedback (Oct)* and *Interactive Team Communication (Dec)* provided faculty with the most in terms of new knowledge and ideas.

The Teaching Leader Series - Fall 08 Summary



Of the 190 workshop attendees...

- 50% nurses
- 25% physicians
- 25% pharmacists, nurse practitioners, physician assistants, administration

Sample of Participant Comments on the program...

Adult Learning Workshop (Sept)

- *“Able to take a few teaching strategies and apply to my teaching and to teaching, teaching/clinical coaching skills”*
- *“Very useful, practical, applicable concepts to incorporate.”*
- *“Helps in teaching patients as well as other practitioners. It was a good reflection in the adult learning experience and provided some new ideas to take with me.”*

Small Group Teaching / Facilitation (Nov)

- *“Excellent. I will incorporate this into teachings for my clinical instructors and staff involved in team meetings currently. Reinforce concepts to staff as well.”*
- *“It helps to understand what is needed in small group roles.”*
- *“Help with clearer guidelines for teaching small groups.”*

Giving Feedback / Microskills (Oct)

- *“Very useful – will apply these skills as I coach and mentor others.”*
- *“Very useful. I am a resource for new and experienced staff. I give feedback everyday (night!)”*
- *“The feedback provided from the microskills workshop was extremely beneficial. One group member had a lot of experience with giving feedback and provided additional examples I will remember.”*

Interactive Team Communication (Dec)

- *“Very useful techniques and ways to foster interdisciplinary teaching rounds.”*
- *“I am becoming involved with the hospital initiative for Family Presence/Narrative Medicine and what timely information!”*
- *“Case scenario provided information gathering sessions – they were helpful to me.”*

Spring 2009 Workshop Topics (see DOE intranet site for dates/times/location/speaker, etc)

- Adult Learning
- Feedback and Microskills
- Difficult Feedback/Bad News
- Small Group Facilitation
- Interactive Team Care
- Teaching Professionalism
- Narrative Medicine
- Ethics: Peer and Patient Care
- System-Based Practices and Healthcare
- Evidence-Based Medicine
- Teaching and Learning in Generations
- Using Technology to Enhance Learning

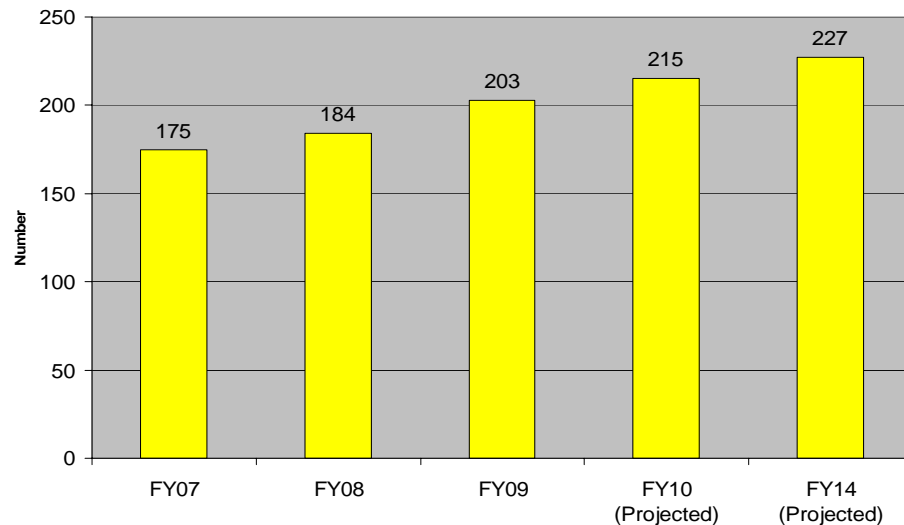
Graduate Medical Education Growth

New and Expanding GME Programs - New GME programs are starting and some existing programs are expanding. In 2005, as part of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, the Centers for Medicare and Medicaid Services awarded LVHN 41 newly funded GME positions. These newly funded GME positions allowed LVHN to plan for programmatic growth that aligned to organizational strategy. Below is a projection of the number of residents and fellows who will be training at LVHN and the programs

**Number of LVHN Residents and Fellows
2007-2014**

Over the next four years, several clinical departments will add more residents and fellows or start new programs.

Below is a summary of the residency and/or fellowship programs that are planning to expand or start a program.



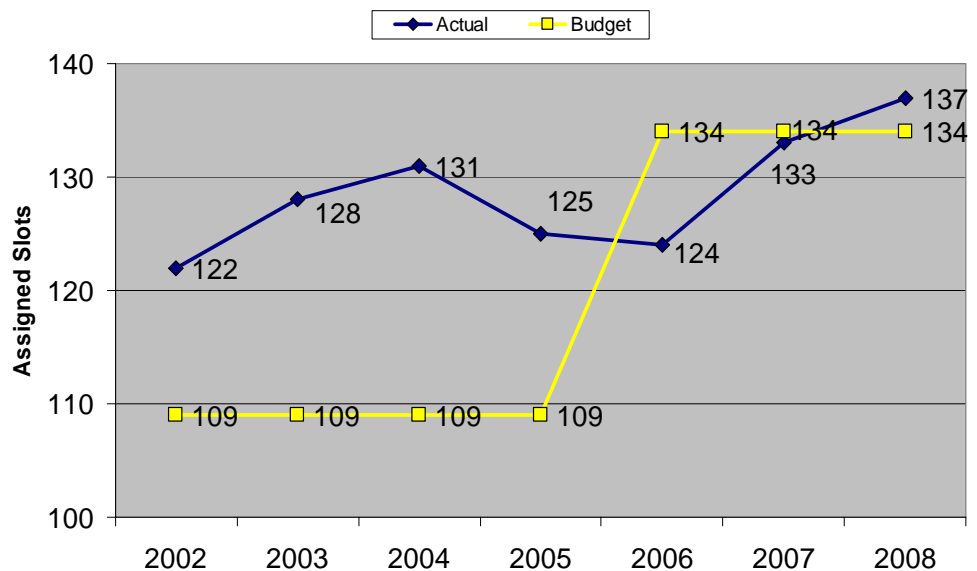
	FY08 (# of residents/fellows)	FY14 (# of residents/fellows)
Cardiology Fellowship	4	12
Colon/Rectal Surgery	2	2
Dental Medicine	7	7
Emergency Medicine*	43	56
Emergency Medicine Services Fellowship	1	1
Family Medicine*	20	21
General Surgery	23	28
Geriatrics Fellowship	0	3
Internal Medicine	52	52
Neurology (<i>site visit completed 10/30/08</i>)	0	6
OB/GYN	16	20
Palliative Care Fellowship	0	3
Pediatrics (exploring)	---	---
Plastic Surgery	3	3
Psychiatry (exploring)	---	---
Surgical Critical Care Fellowship	1	1
Transitional Year	12	12
TOTALS	184	227

* Dually Accredited programs (allopathic and osteopathic)

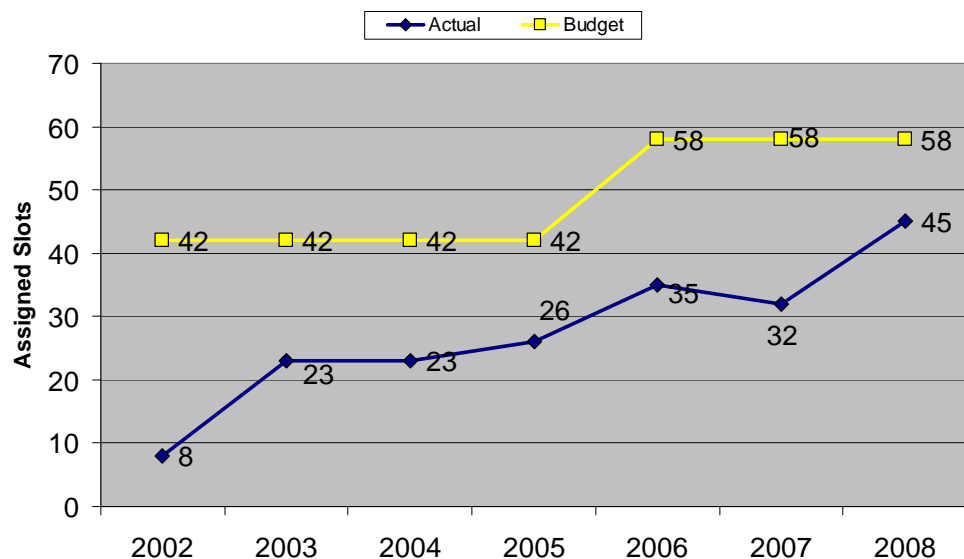
GME Finance – Since 1965, Medicare has been reimbursing teaching hospitals for their training of doctors. In 1996, based on individual teaching hospital’s cost reports, Medicare capped graduate medical education reimbursements. Under the LVH-CC/17th Medicare number, indirect medical education GME reimbursements were capped at 109 resident FTE’s (not equivalent to the number of resident/fellow bodies). Under the LVH-M Medicare number, indirect medical education GME reimbursements were capped at approximately 41 resident FTE’s (not equivalent to the number of resident/fellow bodies).

In 2005, as part of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, the Centers for Medicare and Medicaid Services awarded LVHN 41 newly funded GME positions (25 at LVH-CC/17 and 16 at LVH-M). These newly funded GME positions increased pre-existing caps at both LVH-CC/17 and LVH-M sites. To illustrate changes in Medicare GME caps compared to actual resident FTE counts, the graphs are provided for LVH-CC/17th and LVH-M.

LVH-CC/17: Medicare Resident FTE's - Budget vs Actual



LVH-M: Medicare Resident FTE's - Budget vs Actual



The GME Finance group (sub-group of GMEC) monitors FTE budget vs. actual counts and advises GMEC and Senior Management on plans that maximize GME reimbursements while improving resident education and clinical needs.

Trends in Graduate Medical Education

Resident Duty Hours and Patient Safety

In 2007, the Institute of Medicine (IOM) formed the “Committee on Optimizing GME Trainee (Resident) Schedules To Improve Patient Safety”. The committee’s tasks are to: 1) synthesize current evidence on medical resident schedules and healthcare safety and 2) develop strategies to enable optimization of work schedules to improve safety in the healthcare work environment. As reflected in a recent May 2008 testimonial to the IOM committee, there is concern that the current 80 hour work restriction will be decreased despite the fact that this relatively new restriction has not been thoroughly examined for impact on education and patient care. Potential Unintended Consequences of Duty Hour Limits include:

- Residents may be less available to their patients and families.
- Increased responsibility for decision making to a physician less familiar with the patient.
- Reduced opportunity to consult on clinical decisions.
- More hand-offs of responsibility between physicians can increase susceptibility to error.
- Other members of the health care team can become overburdened and subject to increased fatigue.
- Elimination of some elective rotations.
- Programs will seek to expand the number of residents and fellows. As a result, academic hospitals will increase their costs without additional reimbursement.
- Recruitment of additional nurse practitioners, physician assistants and attending physicians.

The committee’s recommendations (p.8) will stimulate discussion at the national level. GMEC will monitor closely the outcome of these discussions.

Rapid Workforce Growth Segments

Physician Workforce Growth: Citing growing evidence of a national physician shortage, in 2006, the AAMC (Association of American Medical Colleges) recommended that enrollment in U.S. medical schools be increased 30 percent by 2015. This expansion may impact LVHN in several ways. First, our medical school affiliates may advocate for more clerkship rotations at LVHN. The number of LVHN clerkship rotations has grown incrementally over the last several years. This trend may accelerate as medical schools’ enrollments increase. It is important to mention that medical school enrollments have been fairly flat for more than 25 years. Second, assuming our clinical departments have the capacity to absorb more students, GME operations (such as student housing facilities, administrative resources and faculty development) will need to expand. It is important to note that capacity is also related to specific service line growth. Third, more medical students in the U.S. Healthcare system may translate into GME program growth as more students seek residency training. However, more residency applicants will translate into a more selective recruitment model and higher quality residents.

Physician Assistant (PA) and Nurse Practitioner (NP) Workforce Growth: The number of PA’s and NP’s with privileges at LVHN has increased by 85% over the last three years according to internal personnel data. Yet this workforce segment has little to no formal education or development program. At the national level according to the Physician Assistant Education Association, employment opportunities and roles for PA’s are rapidly expanding, formal postgraduate training is assuming a greater importance, and the mean number of months of health care experience continues to decline. PA’s and NP’s are likely to assume an expanding

role in medical care in the future. This assumption is based in part on the view that the physician workforce will not be able to meet the anticipated future demand for medical care services. At LVHN, a proposal to start an accredited PA Hospitalist Fellowship program has been submitted. Also the number of PA's and NP's attending the June 2008 DOE's Central Line Simulation Course tripled.

Faculty/Clinical Educators: The number of faculty/clinical educators at LVHN is estimated to range between 700-900 clinicians. A clinical educator is defined as a physician or nurse who has either an academic appointment with one of our school affiliates, has been identified as a preceptor/mentor, and/or has a formal education role in the institution. At LVHN over the next five years, the number of house staff will grow over 25% and the number of nurses is expected to increase over 30%. With generous support from the Leonard Pool Trust, a network-wide faculty development model is being developed. The purpose of faculty development will be to assess, even out and enhance teaching performance while also disseminating academic innovations, learnings and knowledge.

Medicare GME Reimbursements

In the August 7, 2008 issue of The New England Journal of Medicine, an article entitled, “*Medicare, GME, and New Policy Directions*”, laid out some key issues that surround Medicare GME reimbursement and a potential shift in policy in how Medicare supports GME. Overall, there is a probable Congressional attempt to reduce and/or realign federal support for Medicare GME reimbursement that could lead to greater support for training primary physicians in a neutral-base fashion and more scrutiny of how Medicare GME dollars are spent.

The Problem: In 1965 when Medicare was enacted, legislation determined that teaching hospitals needed to be reimbursed for their training of doctors who would care for Medicare recipients “until the community undertakes to bear such education costs in some other way”. Private insurers support GME implicitly with higher add-on payments on behalf of the inpatients they cover but will not support explicitly. In addition, an increasing number of medical school graduates are pursuing specialties with “controllable lifestyles”. Family medicine applicants have been decreasing, especially among graduates of US Medical schools. This is where somewhat stronger interest has emerged in recalibrating how Medicare GME reimbursement is used. Currently, the call-for-action to mitigate this issue has come in the form of increasing medical school enrollments (2003 AAMC physician workforce study). At the same time, there has been an increase in accredited positions mostly for subspecialties fellowships. The next administration will have to deal with Medicare GME reimbursement if they extend coverage to millions of uninsured people and discover there is insufficient number of doctors to care for them (ex. newly insured people are already having problems making appointments in some areas).

Proposed Solutions: In 2008, the Bush Administration proposed cuts that would decrease Indirect Medical Education (IME) payments by 60% over 3 years. This would have reduced IME payments from 5.5% add-on adjustments to 2.2%. The administration argued that current adjustments were set at more than twice what can be justified empirically with no accountability in place. In addition, in 2008, legislation was introduced to modify the cap policy as follows:

- Support of 1222 new training positions (1% increase overall) in 24 states over a 5 year period, mostly primary care slots. The DHHS would require additional positions to be

filled within 3 years. As a result, the number of entry-level GME position would be aligned more closely to the number of graduates of U.S. medical schools.

- Also, there is interest in tying future federal support to promote training in primary care to include not only physicians but support for nurse practitioners and physician assistants.

Lastly, the Medicare Payment Advisory Commission has pledged to re-examine physician workforce issues more closely and has recommended that Congress increase Medicare fees to primary care physicians in a budget-neutral fashion. The LVHN GME Finance group (sub-group of GMEC) will continue to monitor proposals and changes in Medicare GME reimbursements closely.

Further Research in Web 2.0 and Mobile Learning Technologies

The way undergraduate and graduate students are learning is being shaped by the accessibility of web 2.0 and mobile technologies. For example:

- Today's students, health professionals, and patients use their computers and mobile devices to interface with the world. Using distribution channels like iTunes U allows them to easily expand the curriculum, delivering audio/video content to deepen the learning experience.
- There are many medical products that are now formatted for mobile devices and growing in common usage; many are "free" to medical students available through iTunes application services.
- Use of mobile devices for learning means a radical rethinking of what defines learning; for example the 1 hour lecture is redesigned as 8 five-minute micro lessons that can be bundled and unbundled by the student. "Learning bites" or what an instructional designer would call "learning objects."
- Changes in education use show that while desktop usage is down -10.8%, laptops increase by 7% and smartphones are outpacing everything by +10.1%.

M-learning or "mobile learning" is learning that happens across locations, or that takes advantage of learning opportunities offered by portable technologies. The term covers: learning with portable technologies, learning across contexts, and learning in a mobile society, with a focus on how society and its institutions can accommodate and support the learning of an increasingly mobile population that is not satisfied with existing learning methodologies.

The term "Web 2.0" describes the changing trends in the use of WWW technology and web designed that aim to enhance creativity, communications, secure information sharing, collaboration and functionality of the web. Web 2.0 concepts have led to the development and evolution of web culture communities and hosted services, such as social-networking sites, video sharing sites, wikis, blogs, and folksonomies.

Second Life is used as a platform for education by many institutions, such as colleges, universities, libraries and government entities. Research has uncovered development, teaching and/or learning activities which use Second Life in over 80 percent of UK Universities. At least 300 universities around the world teach courses or conduct research in SL.

In 2009, DOE is exploring the practical application, design implications and system support issues to consider these as viable learning platforms.

2009 Graduate Medical Education Committee: Areas of Focus

Accreditation Internal Reviews – Established by the ACGME and AOA, the purpose of the internal review process is to ensure teaching hospitals have a mechanism for continuous improvement (i.e. educational, financial, human resources, etc), to support the residents and their work environment, and to ensure substantial compliance with the Program Requirements. In 2009, four residency programs and the institution are scheduled for accreditation internal reviews: Dental Medicine, Family Medicine, Internal Medicine, OB/GYN, and LVHN (institutional). To start this review cycle, GMEC will review and update the internal review policy and procedures to identify opportunities for improvement. The institutional internal review will also include updating all 30 plus GMEC policies and procedures.

Interprofessional Faculty Development - Next steps for assessing and building LVHN's capacity and capabilities for teaching and outcomes-based education is to develop a teaching competency model, tap into local college/university expertise, incorporate with faculty/preceptor onboarding process, enhance evaluation of learning and application, and apply for CME/CNE credits. In addition, there are other opportunities to develop faculty in their teaching that require administrative support such as Schwartz Rounds, Balint Groups, Flinders Training, Direct Observations, Narrative Medicine, and Difficult Case Resolution. Over the next year, administrative support and curriculum development for many of these learning opportunities will be explored.

Measurement and Evaluation – In 2009, GME programs will be part of a Division of Education initiative to update curriculum evaluation standards and processes. More specifically, GME programs will be part of a Front-End Analysis to identify the personnel, factors, business processes, technologies and performance support solutions that will be required to support the successful implementation of a comprehensive and standardized approach to complete Level 0, 1 and 2 evaluations. Recently, the ACGME reaffirmed their commitment to achieving competency-based education (a.k.a. The Outcomes Project) by identifying and standardizing evaluation tools and methods that accurately document competency development. As such, this Division of Education initiative is one of the very few instances in which Front-End Analysis will be conducted on GME program evaluation tools and methods. Complementing this work, GMEC-X plans to develop and implement a GME Balanced Scorecard as a mechanism for ensuring continuous improvement and alignment with changing organizational strategy.

Spreading Innovations and Expanding Use of Simulation – As highlighted earlier in this report, there are several GME program innovations which are in their second and third years of development (i.e. Family Medicine's P4 initiative and Internal Medicine's ECLS). Other residencies have also been recognized for their programmatic strengths in various areas such as faculty development, scholarly activity, and competency development using simulation. In 2009, GMEC will facilitate several learning sessions where program leaders will present outcomes, learnings, and potentially transferable curriculum elements. Department-specific simulation curriculums and resources will also be presented. GMEC-X will identify, prioritize, and sponsor at least one learning innovation to pilot in another residency program.