A Message From The Co-Chairs Of The GME Committee

The Office of GME continues to develop bold new initiatives to support residents, fellows, training program directors, and faculty in their goals of excellence in graduate medical education. In conjunction with the Boston Combined Residency Program (BCRP), the GME Office sponsored a GME Winter Retreat for training program directors on February 12, 2010, at the Conference Center at Harvard Medical School on Avenue Louis Pasteur. More than 40 faculty attended and participated in an interactive session led by Drs. Ted Sectish (BCRP), Jennifer Kesselheim (OGME) and Nancy Spector (St. Christopher Hospital, Philadelphia). Please read the article in this issue of GME ON CALL for details of this exciting event. We extend our thanks to all who organized and participated in this session of a very successful series of faculty development events.

The Office for GMEC has developed a novel way to help individual programs satisfy the dual ACGME competencies of practice-based learning & improvement and systems-based practice, in partnership with the Program in Patient Safety & Quality (PPSQ) at Children’s Hospital and officials at the Institute for Healthcare Improvement (IHI). This new program intends to provide succinct, internet-based curricular materials on the principles of quality improvement so as to familiarize residents and fellows with these critical aspects of health care services. A second arm of the program is to provide some choices of experiential opportunities for housestaff to participate in clinically relevant, rapid cycle change, quality improvement endeavors. Drs. Mira Irons, Caleb Nelson, and David Waisel are leading that effort on behalf of the GMEC.

The annual national meeting of the ACGME was held on March 4-7, 2010 in Nashville, Tennessee. Drs. Alan Woolf and Jennifer Kesselheim and Ms. Tery Noseworthy attended the meeting on behalf of Children’s Hospital and the Office of GME. Innovative programs in graduate medical education were showcased at this meeting. ACGME officials communicated new directions of the organization and how its regulations are changing. A wide array of workshops were designed for training program directors, designated institutional officials, incumbent RRC members, program coordinators, physician trainees, and others.

The next meetings of the GMEC will be held on two Wednesdays, May 19th and June 16th from 5-6 pm in the Gamble Room in the house-staff library. All training program directors, associate directors, coordinators, and resident/fellow representatives are invited to attend. We hope to see you there!

- Alan Woolf, MD, MPH & Frederick H. Lovejoy, Jr., MD
The Children’s Hospital Boston Simulator Program
On-site Simulation: a new Paradigm in Hospital-based
Pediatric Education

Peter Weinstock MD PhD, Director
Div of Critical Care Medicine

The Children’s Hospital Boston Simulator Program (CHBSP) brings state of the art high fidelity pediatric simulation to the CHB and represents the first hospital-based “on-site” simulation program at a teaching hospital in New England. Since 2002, the Program has grown steadily to now >40 component courses and programs that interweave into the daily fabric of a busy teaching hospital. To date the on-site approach has brought pediatric simulation to more than 1600 CHB trainees and staff, from multiple departments/divisions throughout the Hospital.

The CHBSP operates as an interdisciplinary “Pediatric University” for CHB trainees and staff across all expertise gradients—from nursing and medical students through seasoned staff and allied health care. A wide range of courses represent 6 main organizational pillars including:

- Multidisciplinary Team Training
- Clinical Skills/Competency
- Policy & Guideline Implementation
- Point of Care Rapid Cycle Quality Improvement
- Simulator Program Faculty Development
- International Collaboration around Center Development

Courses are developed collaboratively by joining specialty content experts with CHBSP staff and follow a structured Course Development Cycle (CDC) that includes step-wise guidance in (1) needs assessment, (2) identification of research project, (3) curriculum development, (4) course piloting, (5) instructor training, (6) course administration, implementation and review. Crisis Resource Management/Leadership Training, Forming the basis of its inception in 2002, readily accessible multidisciplinary team and leadership training (Crisis Resource Management, CRM) has remained a mainstay of the Program. CRM adapts the five well-established principles used within the airline industry to promote robust teamwork:

1. Leadership/Role Clarity
2. Communication
3. Personnel Support
4. Resources
5. Global Assessment/Situational Awareness

By The Numbers
2009 Main Residency Match

36,972
Number of Registrants

26,919
U.S. Senior Medical Students

788
Number of Couples Registered

25,185
Number of Positions Offered

22,427
Number of 1st Year Residency Positions
CRM courses emphasize the development of trainee leadership skills and are centered on a standardized simulation-based team-training model taught throughout the Hospital. Scenarios are drawn from real-life events by animating important sentinel/teaching cases on-demand with structured discussion/debriefings. Courses are developed to address the complete time-line of a crisis—from “the first 3-5 minutes” for ward teams to full code team involvement and transfer to the ICU. The “off the shelf” CRM curricular model provides a turn-key solution to rapid development of high quality team training programs that emphasize a common language for trainees around crisis management independent of clinical specialty or location. Two to five hour CRM courses are built on a multimodal curricular approach to appeal to a variety of learning styles—including high fidelity simulation complemented by didactics, video/trigger tape review, game play, and debriefing via trained instructors. Graduate level CRM courses build further to include topics such as parent presence, ethics, and conflict resolution. CHBSP currently runs 16 courses among 8 department/divisions. Examples include all ICUs, Neurology Step-up Unit, clinics, wards, transport, operating rooms, trauma and full team ECMO training.

Skills/Competency Training.
By providing realistic simulated encounters on demand, the CHBSP provides innovative training solutions to achieve positive volume-outcome relationships regarding all clinical competencies in an era of work-hour restrictions as well as lowering thresholds for attending physician-level involvement in direct patient care. Through a mix of realistic whole body mannequin simulators, innovative training adapters produced on-site, and the use of professional actors, the Simulator Program provides support and training in the full range of interdisciplinary clinical competencies for all levels of expertise. Given the full complement of on-site resources, the Program can respond quickly to particular curricular needs to round out training experiences. Examples include:

- PGY-1 Resident Procedural Skills Training
- PGY-2 Resident ACGME competency-based Critical Care Curriculum for Junior Residents
Simulator Program (Cont’d)

- PGY-3 Resident PALS/Leadership Reinforcement and Training
- Clinical Skills “Boot Camps” for Critical Care and Emergency Medicine Fellows
- Cannulation/ECMO Skills Training for Cardiothoracic and General Surgery Fellows
- Cath-lab training for Cardiac and Anesthesia Fellows
- Exploring Pediatric Physiology and the Patient/Doctor/Parent Triad for 3rd Year HMS Students during their Pediatric Clerkship
- Multiple Nursing Orientation Programs
- Respiratory Care Skills and Mentor Training Programs
- Simulation-training to Prepare Teams to Deliver Care in Haiti and other Austere Environments

Simulator Program Faculty Development.

Given the complexity and inherent emotionality of the pedagogical tool and to insure quality educational experiences for all its participants, a basic tenet of the CHBSP has been to develop faculty formally trained in the art and science of simulation-based teaching as well as high quality debriefing. To this end, the Program has developed a comprehensive Simulator Faculty Development Program including multi-day Pediatric Simulation Instructor and Debriefing Refresher courses all offered on-site at CHB. The hands-on 3-day workshops are geared for those interested in utilizing simulation as a teaching modality and include the fundamentals of adult learning theory, scenario design, CRM, curriculum development and debriefing methodologies. To date, the Program has trained more than 70 CHB staff including senior and chief residents with a career focus on education. Simulator Faculty comprise the CHBSP User’s Group, established in 2005 with activities including bi-annual meetings as well as visiting lectureships from internationally renowned experts in simulation science. The CHBSP has extended these efforts to assist in the development of Pediatric Simulation Faculty and Centers around the world including collaborative relationships internationally with institutions in England, Italy, New Zealand, and Sweden.

The Simulator Suite and Mobile Simulation Program.

The simulator suite is located within the Medical-Surgical ICU (MSICU) and is fully equipped to replicate an acute care bed space. Its unique location within the Hospital itself, affords Children’s Hospital trainees and staff frequent opportunities for hands-on simulation-based education within a typical work day, with minimal interruption and without need for travel. In order to recreate realistic scenarios among the many unique clinical environments throughout CHB, a growing number of courses are now delivered in-situ, to the point at which care is delivered. The approach “brings simulation to the practitioners” and therefore facilitates participation among bona fide native teams. In addition to team training, simulation at the point of care allows for study of the systems in which we work to uncover latent safety threats that can be addressed via rapid cycle improvement measures. Multiple mobile simulation carts have been developed with state of the art A/V and simulator technology to easily transfer the complete
complement of simulation-based education to the bedside. Current in-situ courses cover nearly all floors of the hospital and include Trauma, Cath Lab, Cardiac ICU and Clinics, PACU, Neuro SUU, 11S MICU, GI Procedure Unit, as well as CHB operating rooms. Published in 2009, the CHB mobile carts now serve as a novel model for transportable, cost-effective, widespread simulation-based training at several Harvard teaching hospitals as well as for pediatric teaching hospitals in several countries.

For more information on Children’s Hospital Boston Simulator Program activities, courses as well as new curriculum development, please contact:

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References:

THE ACGME’S “MILESTONES” PROJECT: ADDING A DEVELOPMENTAL CONTEXT TO COMPETENCIES

Alan Woolf, MD, MPH

The ACGME has embarked on a bold new initiative termed the ‘Milestones Project’. This concept re-envisions the patterns of a resident’s progress in achieving competency during the course of his or her training, by viewing it through a developmental lens. The Figure depicts the professional development of competency, as applied to Harvard-trained physicians, in the attainment of proficiency and mastery in medicine. This is a dynamic process acquired over time from student to trainee to independent practitioner, with graded levels of supervision, competence, and independence.

**Figure: Progressive Gradation of Independent Proficiency & Competency**
**Milestones Project** *(Cont’d)*

The Milestones Project engages the ACGME, the individual Residency Review Committees (RRCs), and academic specialty programs to develop specialty-specific 'educational milestones' that residents are expected to attain at different stages throughout their training careers. Aggregated to the program level, data on the achievements of residents in this area will become an important new part of the accreditation process in the not too distant future.

Within the Milestones Project, the ACGME will limit its efforts to establish a national comparable approach to assessing the competencies to a few generic, but important measures. First, educators must agree on the ‘Milestones’ of competency development in each discipline. Next the educational community must define the level of performance required to be declared “proficient”. Then, they must agree on and implement common evaluation tools in each discipline to document their residents’ achievement of those milestones. An electronic Learning Portfolio (LP) would be provided to all ACGME-accredited programs for use in archiving data. The portfolio would have specialty-specific core data elements that would be required of residents and program directors (as recommended by the specialty-specific educators and required by the RRC). This LP would provide uniformly gathered, identical core information to the Review Committees. After implementation of this initiative, the ACGME would then be able to look at the percentage of residents who have met or exceeded each milestone and compare that rate with the national average of all programs in the specialty.

In developing such quantitative tools and developmental guidance within the scope of competencies as outcomes, it is not the intent of the ACGME to ignore the rich contextual experience of the developing health professional. The Milestones Project does not seek to embark on a misguided reductionist attempt to develop a few checklists or templates to gauge outcomes. Ongoing formative assessment, tailored to local needs and with feedback to the learning of residents will be integrated with the attainment of milestones, and will play a critical role in the professional development of residents and fellows during their training. At the completion of training, the milestones are the articulation of the level of performance expected at entry into unsupervised practice of the specialty, and are the levels of clinical competency required to gain eligibility for ABMS certification.

The milestones will be just what their name implies—important markers, applied in a periodic fashion, to ensure residents, the program, the educational community, and the public that basic features of the educational process are in line with comparable programs and general expectations currently being developed in collaborative effort involving the ACGME, the RRC, and the education and specialty community.

*Source: ACGME Bulletins – May & September, 2008*
The Office of GME and the Boston Combined Residency Program in Pediatrics (BCRP) sponsored a Faculty Development Retreat on February 12, 2010. Retreats of this kind have previously focused on building ACGME competency-based curricula, writing goals and objectives for educational experiences, and developing and implementing competency-based evaluations and assessment tools. As a natural next step, this most recent retreat explored the topic of feedback.

Faculty facilitator Nancy Spector, MD returned to help us master the essential elements of effective feedback as well as strategies for precise and concise written documentation of learner performance. Participants were given the opportunity to role-play in order to practice giving feedback that was both positive and constructive in tone. This exercise was a useful and hands-on way to improve skills in this important area. Next, a small-group, interactive format was utilized to examine how to deliver feedback to learners efficiently and effectively given the time constraints with which we already deal. Lastly, Dr. Sectish, BCRP Program Director, and leaders from the Office of Compliance helped us structure an approach to learner remediation, using the BCRP experience as an example.

If you missed this retreat, don't worry as more retreats of this kind will certainly be coming in the upcoming months! In addition, many retreat materials will still be made available on the GME website and at www.competenciesandbeyond.com (username: sectish; password: sectish1). For questions about the retreat, feel free to contact Dr. Jennifer Kesselheim at Jennifer.kesselheim@childrens.harvard.edu
July 1st, House Staff Orientation
Tery Noseworthy

The hospital will hold its annual orientation for new residents and clinical fellows on July 1, 2010 at the Conference Center at Harvard Medical School. The 120 attendees will be welcomed by Sandra Fenwick, President and Chief Operating Officer at Children’s Hospital Boston. In the morning they will hear lectures on human factors and sleep deprivation, infection control, compliance, HiPAA, teaching, medication safety, the Office of Clinician Support, clarity in communication, graduate medical education, clinical research and patient safety. In the afternoon they will meet with Human Resources, Benefits, Occupational Health, Telecommunications, Interpreter Services, Library Services, Medical Records and Parking. After all of this, they will get their ID card and be on their way back to their departments, ready to start their training program at Children’s Hospital Boston.

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