

Accreditation Council for Graduate Medical Education (ACGME)
The ACGME's Approach to Limit Resident Duty Hours 2007-08:

A Summary of Achievements for the Fifth Year under the Common Requirements

Rationale for the Duty Hour Limits

July 1, 2008 marked the five-year anniversary of the implementation of the Accreditation Council for Graduate Medical Education (ACGME) common duty hour standards. In July 2003, the ACGME implemented common duty hour standards for residents and fellows in accredited programs in response to changes that include growing acuity and intensity of service in teaching institutions and scientific knowledge about the negative effect of sleep loss on performance. As the organization responsible for the accreditation of nearly 8,500 programs that provide for the education of more than 107,000 residents and fellows, the ACGME is the entity to which the medical community and public look to set and enforce resident duty hour limits.

This document summarizes achievements in promoting compliance with the duty hour standards for Academic Year 2007-08, and summarizes data for the five years the standards have been in effect. Limiting resident hours is one element of a comprehensive approach to promote high-quality learning and safe and effective patient care. Others include faculty supervision, teaching and mentoring, educational curricula, clinical rotations that facilitate acquisition of competence for independent practice, and regular evaluation of residents, including assessment of their clinical and procedural skills.

The ACGME Duty Hour Standards and Compliance

- The ACGME uses a comprehensive, systematic approach to promote compliance with the duty hour standards including: (1) annual resident surveys to monitor duty hours; (2) follow-up with programs where surveys indicate substantial non-compliance; (3) document review and interviews with residents, faculty and program leadership during accreditation site visits; (4) responding to complaints about duty hour violations; (5) vesting responsibility in the sponsoring institution for monitoring and oversight of duty hour compliance and monitoring this during institutional reviews; and (6) education to increase residents' and faculty physicians' knowledge about the adverse consequences of fatigue and countermeasures to maintain alertness.
- The ACGME Monitoring Committee, which has oversight over Residency Review Committee (RRC) performance, annually reviews the duty hour data from the ACGME resident survey and the citation database and recommends action. The Monitoring Committee analyzes compliance data at the national level and requests Residency Review Committees to issue warnings and follow-up, which can include moving up the site visit, for significant noncompliance identified via the survey. In its enforcement, the ACGME uses a substantial compliance model that distinguishes between individual residents reporting they work beyond the duty hour limits, and programs where several residents report they worked beyond the hour standards.
- During accreditation site visits, ACGME site visitors interview program directors, faculty, residents and sponsoring institution representatives, and review documents that detail resident hours, including rotation schedules, call rosters and other program and institutional data to verify compliance with the standards. During the 2,000 site visits conducted each year, ACGME site visitors interview some 12,000 residents.

Highlights for the Fifth Year under the Common Duty Hour Standards

- The ACGME, the review committees and the residency education community continued their efforts to monitor compliance with the common duty hour standards and the more restrictive RRC specific standards that exist in many specialties. During Academic Year 2007-08 (July 1, 2007 through June 30, 2008), 2,553 of the 8,490 accredited specialty and subspecialty programs underwent accreditation reviews and 1,489 received one or more citations.
- Of the 6,837 citations received by programs during 2007-08, 208(3.0%) related to non-compliance with the duty hour limits. Duty hour citations make up a small percentage of total citations, which has

remained relatively constant over the five years since the common duty hour standards were instituted (duty hour citations made up 3% of all citations in 2003-4, 4% in 2004-05, and 3% in 2005-06 and 2006-07). In contrast, citations related to the Education Program comprise the largest single category (3,526 citations or 52% of the total). Exhibit 1 compares duty hour citations by specialty for Academic Years 2003-04 through 2007-08.

- Detailed information on duty hour citations by type and specialty is shown in Exhibit 2. Similar to prior years, non-compliance with the 24 + 6 hour limit on continuous duty continues to account for the most non-compliance with the numeric standards (37 citations), followed by compliance with the 80-hour weekly limit (28 citations). The category “other duty hour citations,” which encompasses citations for specialty-specific duty hour requirements and non-numeric standards such as the requirement for education about fatigue and countermeasures, comprises the largest share. The specialties with the most duty hour citations (as a percentage of all citations) were anesthesiology (11.4%), followed by thoracic surgery (9.3%) and surgery (9.2%).
- In 2003, the ACGME instituted a duty hour exception, which allowed residents in the programs to work up to 88 weekly hours. The number of programs operating under a duty hour exception has decreased, from its high of 68 programs in 2004-05, to 39 programs in Academic Year 2007-08. For the current Academic Year (2008-09), the number has declined further to 35, comprising 32 Neurological Surgery programs and 3 Thoracic Surgery programs. The ACGME performs added monitoring of programs under a duty hour exception, including annual surveys of all residents.
- The ACGME collects data on duty hour compliance from its resident survey. In 2008, the survey was sent to 2,865 programs totaling 50,952 residents (46.9 % of residents in accredited programs), and 44,835 (88.0%) residents responded. Approximately 93% of residents said they always or usually meet the ACGME's weekly duty hour standards, 6.8% said they sometimes met those requirements and 0.5% said they rarely or never meet them.
- The highest percentage of duty hour non-compliance reported was 9.5% of residents reporting that they did not have a 10-hour rest period between duty shifts and after in-house call (9.5%), and the second highest related to the 24 + 6 hours limit on continuous hours, with 8.0% reported meeting this standard only sometimes or rarely. Using a substantial compliance model, the ACGME identified 101 out of the 2865 (3.5%) programs surveys as potential outliers. Programs with successive years of non-compliance with the duty hour standards had their accreditation review cycles shortened resulting in earlier site visits.

Expanding the Focus to the Learning Environment

The ACGME communicates its standards and its monitoring and compliance approach to the academic community and the public through its web site, articles, interviews and information in the *ACGME Bulletin*. It solicits from and shares with the education community innovative ideas for education and patient care under reduced hours for adoption or adaption by programs and institutions. In the five years since the implementation of the common duty hour standards, programs and institutions have continued to make changes to residents' clinical education, patient care activities and mechanisms for duty hour monitoring. Many programs, particularly those in surgical specialties, have made significant changes to adapt to reduced resident hours. At the same time, the number of programs that have instituted major redesign and innovated in their patient care and education systems is still relatively small.

Believing that an effective approach to promote safe care, resident learning and resident well-being requires a broader approach, the ACGME authorized a Committee on Innovation in the Learning Environment to develop new models of patient care and learning for dissemination, and to test refinements to the common duty hour standards. Work is ongoing in implementing the recommendations in the Committee's first report, released in September 2007, and focuses on the relationship between duty hour limits and resident learning and engagement in clinical care, and development of a small number of accreditation pilots to refine the duty hour standards for individual specialties or specialty groups.

Comparing Total Duty Hour Citations for Academic Years 2003-04 through 2007-08

	AY 2003-04	AY 2004-05	AY 2005-06	AY 2006-07	AY 2007-08	2007-08 programs cited as % of programs reviewed
Specialty	Programs cited	Programs cited	Programs cited	Programs cited	Programs cited	
Allergy and Immunology	3	0	3	3	3	7.9%
Anesthesiology	2	1	6	6	8	22.2%
Anesthesiology Subsp.	5	2	2	2	1	3.1%
Colon and Rectal Surgery	0	1	4	0	3	30.0%
Dermatology	0	0	1	0	0	0.0%
Dermatology Subsp.	0	1	0	2	0	0.0%
Emergency Medicine	1	3	9	21	8	28.6%
Emergency Med. Subsp.	0	0	1	2	2	16.7%
Family Practice	26	18	25	25	12	7.2%
Family Practice Subsp.	0	2	1	0	4	12.9%
Internal Medicine	14	14	12	16	14	8.7%
Internal Medicine Subsp.	10	12	12	10	14	3.3%
Medical Genetics	1	0	0	0	0	0.0%
Mol. Genetic Pathology	0	0	0	0	0	0.0%
Neurological Surgery	0	3	5	2	4	14.3%
Neurol. Surgery Subsp.	0	0	0	1	0	--
Neurology	2	5	5	7	5	20.8%
Neurology Subspecialties	0	3	2	8	6	11.5%
Nuclear Medicine	0	2	1	3	2	20.0%
Obstetrics & Gynecology	4	9	13	12	10	13.3%
Ophthalmology	0	0	0	4	3	3.9%
Orthopaedic Surgery	3	3	3	1	4	7.7%
Ortho. Surgery Subsp.	0	2	0	3	0	0.0%
Otolaryngology	0	1	2	3	7	8.0%
Otolaryngology Subsp.	0	1	0	0	0	0.0%
Pain Medicine	0	0	0	2	0	0.0%
Pathology	0	0	2	3	2	6.3%
Pathology Subspecialties	2	1	1	4	3	3.9%
Pediatrics	2	8	15	9	9	15.5%
Pediatrics Subspecialties	4	9	10	10	9	5.5%
Ph. Med. & Rehabilitation	0	3	5	2	3	11.1%
PM & R Subspecialties	0	0	0	0	1	9.1%
Plastic Surgery	2	3	2	0	1	2.4%
Plastic Surgery Subsp.	0	1	1	0	0	0.0%
Preventive Medicine	1	0	0	1	4	6.2%
Prev. Med. Subspecialties	0	0	0	0	0	0.0%
Psychiatry	1	2	3	6	4	13.8%
Psychiatry Subspecialties	1	2	4	3	1	1.6%
Radiation Oncology	0	1	0	3	1	6.3%
Diagnostic Radiology	0	4	4	5	3	5.4%
Diagn. Radiology Subsp.	0	2	2	4	8	11.4%
Sleep Medicine	0	0	0	0	0	0.0%
Surgery	2	10	20	19	11	7.1%
Surgery Subsp.	1	4	1	7	1	2.1%
Thoracic Surgery	3	3	2	5	4	12.9%
Th. Surg. Subspecialties	0	0	0	0	0	0.0%
Urology	2	2	2	5	2	5.0%
Urology Subspecialties	0	0	0	0	0	0.0%
Transitional Year	3	8	7	2	2	7.4%
Internal Medicine- Pediatrics	--	--	--	6	0	0.0%
Totals, All Specialties/ Subspecialties	101	147	187	227	179	7.0%

Source: ACGME Citation Database, July 2004, August 2005, August 2006, August 2007, August 2008

AY 2007-08 Duty Hour Citations by Specialty, Citation Detail

	Pro-grams	Pro-grams Cited	All Cita-tions	Duty hours	% Duty Hours	80 hours	1 day in 7	10 hours	24 + 6 hours	Call q 3 days	Moon lighting-	Over-sight	Other (1)
Overall	8,490	1,489	6,837	208	3%	28	20	17	37	4	13	28	61
Allergy & Immunology	71	13	62	3	5%						1		2
Anesthesiology	131	26	79	9	11%	1		2			1	3	2
Anesthes. Subspecialties	128	22	79	1	1%							1	
Col. & Rectal Surgery	45	9	48	3	6%								3
Dermatology	110	14	35	0									
Dermatol. Subspec.	82	11	27	0									
Emergency Medicine	145	27	139	8	6%	1		1	3				3
EM Subspec.	49	10	44	2	5%		1						1
Family Medicine	462	123	962	16	2%	1	1	1	8		2	1	2
FM Subspec.	136	27	100	5	5%						1	1	3
Internal Medicine	385	64	384	16	4%	1	1	2	8			2	2
IM Subspec.	1,530	239	1177	20	2%	1	4	1	2		1	5	6
Medical Genetics	48	9	25	0									
Molecular Gen. Path.	23	0	0	0									
Neurological Surgery	97	15	60	4	7%	3	1						
Neurosurg. Subspec.	1	0	0	0									
Neurology	122	21	103	7	7%	2	1		3		1		
Neurol. Subspec.	223	44	206	6	3%	4			1				1
Nuclear Medicine	57	5	24	2	8%							2	
Ob-Gynecology	250	57	313	10	3%	5		1	1				3
Ophthalmology	118	28	128	3	2%		1				1		1
Orthopaedic Surgery	153	39	120	5	4%	2		2					1
Orthop. Surg. Subspec.	216	20	47	0									
Otolaryngology	103	21	101	9	9%	2	2	3	1				1
Otolaryng. Subspec.	22	6	17	0									
Pain Medicine	92	17	80	0									
Pathology	150	24	90	2	2%			1			1		
Pathology Subspec.	380	43	134	4	3%		1	1				2	
Pediatrics	198	41	214	11	5%		2		4		1		4
Pediatrics Subspec.	674	137	750	10	1%					1	1		8
Phys. Med. & Rehab.	79	22	72	3	4%		1		1				1
PM&R Subspec.	32	8	36	1	3%								1
Plastic Surgery	88	19	45	1	2%							1	
Pl. Surg. Subspec.	17	4	12	0									
Preventive Medicine	73	19	74	4	5%						1	1	2
Prev. Med. Subspec.	5	0	0	0									
Psychiatry	181	24	86	6	7%	1			2		1	1	1
Psych. Subspec.	299	38	111	1	1%	1							
Radiation Oncology	80	15	57	1	2%							1	
Radiology, Diagnostic	187	45	161	3	2%							2	1
Diagn. Rad. Subsp.	276	53	206	8	4%			1				3	4
Sleep Medicine	61	16	74	0									
Surgery	251	37	131	12	9%	2	2		2				6
Surgery Subspec.	227	26	57	2	4%					1		1	
Thoracic Surgery	81	13	43	4	9%		1			1		1	1
Thor. Surg. Subspec.	3	0	0	0									
Urology	119	17	45	4	9%	1	1	1					1
Urol. Subspec.	22	1	2	0									
Transitional Year	127	17	64	2	3%				1	1			
Intern. Med.-Pediatrics	81	3	13	0									

(1) "Other" includes citations related to specialty-specific duty hour standards, home call and education about fatigue, among others.