

HOD ACTION: Council on Medical Education Report 5 adopted as amended and the remainder of the report filed.

REPORT 5 OF THE COUNCIL ON MEDICAL EDUCATION (A-14)
AMA Duty Hours Policy
(Reference Committee C)

EXECUTIVE SUMMARY

American Medical Association (AMA) Policy D-310.955, “Resident/Fellow Duty Hours, Quality of Physician Training, and Patient Safety,” asks that our AMA “continue to monitor the enforcement and impact of the Accreditation Council for Graduate Medical Education duty hour standards . . . with a report back no later than the 2014 Annual Meeting of the AMA House of Delegates (HOD).” This report fulfills that directive and builds on information provided in three previous Council reports to the House of Delegates on this topic in 2011, 2009, and 2008.

Scrutiny of resident/fellow duty hours has increased significantly since the implementation of duty hour limits in 2003 by the Accreditation Council for Graduate Medical Education (ACGME). With a revised set of regulations released in 2011, the debate continues as to the impact of duty hour limits on patient safety, physician preparedness for practice, professionalism, well-being, and costs, among others. This report reviews recent research on duty hours and related concerns and outlines potential areas for further research.

This research (and numerous commentaries in the general media) raises a number of concerns about intended and unintended consequences of the 2003 and 2011 ACGME standards. Studies of program directors and resident/fellow physicians alike reflect such issues as the impact on opportunities for clinical exposure (and the downstream effect on the competence of practicing physicians), continuity of patient care (and the need for increased handoffs necessitated by shorter shift lengths), patient safety and quality of care, and medical error. Other studies reported noncompliance with duty hour standards, with residents caught between the regulatory need to comply with ACGME standards versus the ethical and professional expectations of physicians, which call for placing a patient’s or the profession’s needs above one’s own personal needs. Due to the wide range of issues that are related to duty hours, and duty hour limits, systemic change in residency education (and medical practice) may be needed to fully address this issue—beyond the simple metric of hours worked each week.

This need is reflected in the work of the ACGME as it seeks to improve the quality and safety of residency training and move from a focus on process toward outcomes. Its Clinical Learning Environment Review (CLER) program, for example, is intended to measure the work of U.S. teaching hospitals to engage residents in six focus areas, including duty hours and fatigue management and mitigation as well as professionalism.

A second goal of this report is to review and consolidate existing AMA policy on duty hours. Over the last several years, our AMA has written numerous reports and adopted policy on this issue. A significant portion of this policy, however, is redundant, inconsistent or no longer relevant. To ensure that AMA policy serves as a tool for effective advocacy on duty hours, this report recommends rescission of all existing AMA policy thereof and implementation of new, streamlined policy that incorporates all relevant concerns and reflects current ACGME standards.

REPORT OF THE COUNCIL ON MEDICAL EDUCATION

CME Report 5-A-14

Subject: AMA Duty Hours Policy

Presented by: Jeffrey P. Gold, MD, Chair

Referred to: Reference Committee C
(Kesavan Kutty, MD, Chair)

1 This report is in response to AMA Policy D-310.955, “Resident/Fellow Duty Hours, Quality of
2 Physician Training, and Patient Safety,” which asks that our American Medical Association
3 (AMA) “continue to monitor the enforcement and impact of the Accreditation Council for
4 Graduate Medical Education duty hour standards . . . with a report back no later than the 2014
5 Annual Meeting of the AMA House of Delegates (HOD).” This report builds on information
6 provided in three previous Council reports to the House of Delegates on this topic, 2011¹, 2009²,
7 and 2008.³

8 9 BACKGROUND

10
11 Public and professional attention to the issue of resident/fellow duty hours has increased
12 significantly since the implementation of duty hour limits in 2003 by the Accreditation Council for
13 Graduate Medical Education (ACGME) and the revised set of regulations that became effective in
14 2011. Debate continues as to the impacts on a host of key issues, including patient safety, physician
15 preparedness for practice, professionalism, well-being and costs. This report reviews recent
16 research on duty hours and related concerns and outlines potential areas for further research.

17
18 Over the last several years, our AMA has written numerous reports and adopted policy on this
19 issue. A significant portion of this policy, however, is redundant, inconsistent or no longer relevant.
20 To ensure that AMA policy serves as a tool for effective advocacy on duty hours, this report
21 recommends rescission of all existing AMA policy thereof and implementation of new, streamlined
22 policy that incorporates all relevant concerns and reflects current ACGME standards.

23 24 RECENT RESEARCH AND MEDIA COVERAGE ON DUTY HOURS

25
26 A number of recent studies/reports raise questions about both the intended and unintended
27 consequences of the 2003 and 2011 ACGME standards. Some key conclusions and findings from
28 these publications are highlighted below.

29
30 The 2011 ACGME regulations “produced increased sleep duration during the on-call period, [but]
31 they also decreased continuity of patient care, intern and nurse perceptions of quality of care, and
32 educational opportunities from teaching and patient care.”⁴

33
34 Program directors share these concerns. Nearly three out of four responding to a survey felt that
35 residents were less prepared to take on more senior roles under the 2011 ACGME standards. About
36 two out of three believed that resident education had gotten worse, and only six percent reported

1 that patient safety and quality of care had improved. Further, less than half thought resident quality
2 of life had improved. The authors note, “Perhaps our most important finding is the strongly
3 negative response to the 16-hour shift limitation for first-year residents, which mirrors that of
4 earlier surveys.”⁵ Meanwhile, pediatric program directors reported negative effects from the duty
5 hour standards on patient care as well as resident education and quality of life. Nearly three of four
6 respondents expressed disapproval of the 16-hour limit for interns. Further, fewer than half
7 reported that their residents always complied with the 2011 regulations.⁶

8
9 Like program directors, resident physicians also have expressed dissatisfaction with the 2011 rules.
10 A 2012 survey of residents found that only 23 percent approved of the regulations.⁷ Surgery
11 residents, in particular, disapprove of the 2011 duty hour standards, citing “decreased continuity
12 with patients, coordination of patient care, and time spent in the operating room. Furthermore,
13 suboptimal quality of life, burnout, and thoughts of giving up surgery were common, even under
14 the new paradigm of reduced work hours.”⁸

15
16 Some positive news was reported in a study finding that clinical exposure did not decrease for
17 internal medicine interns after the 16-hour limit was enacted in 2011; in fact, interns “saw more
18 patients, produced more detailed notes, and attended more conferences.”⁹ A separate study,
19 however, found that operative case volume for surgery interns saw a “significant decrease” with the
20 16-hour limit; this early gap in experience may have “a domino effect on subsequent
21 competence.”¹⁰

22
23 For trainees at the other end of the spectrum—that is, chief resident physicians—a study found that
24 total cases declined, “especially acutely following implementation of the 80-hour work week [in
25 2003,] but have since rebounded.” It was also noted that “case mix has narrowed . . . [and] broad-
26 based general surgery training may be jeopardized by reduced case diversity.” Innovation is needed
27 to ensure that the surgical chief residency year continues to offer a “robust educational
28 experience.”¹¹ The authors of a related commentary noted that the “erosion of the chief resident’s
29 evolution toward independent practice may be the most threatening finding.”¹² Indeed, the number
30 of residents failing board exams in thoracic surgery has risen significantly since 2000. Failure rates
31 nearly doubled between 2000 and 2005, from 14.4 percent to 28.1 percent, and reached 30 percent
32 in 2012.¹³

33
34 Medical errors were also cited in one study as an unfortunate consequence of duty hour limits.
35 About one in five interns reported committing an error that harmed a patient in 2010; this number
36 increased to 23.3 percent after the 2011 standards were implemented. Meanwhile, hours of sleep
37 and risk for symptoms of depression remained steady. It was suggested that work compression may
38 be to blame; reductions in intern duty hour limits (to 16 hours) were not accompanied by an
39 increase in funding, leaving current interns with less time to complete the same amount of work.¹⁴
40 Work compression was also cited in a study finding that today’s internal medicine interns spent
41 “less time in direct patient care and sleeping, and more time talking with other providers and
42 documenting” compared to interns prior to 2003.¹⁵

43
44 Limited duty hours also lead to an increase in patient care handoffs—which in turn become a pivot
45 point for the possibility of medical error. This highlights the need for more robust and efficient
46 handoff protocols.¹⁶ Nonetheless, note the authors of one study, the 2003 iteration of duty hour
47 limits “was associated with no significant change in mortality [rates] in the early years after
48 implementation, and with a trend toward improved mortality [rates] among medical patients in the
49 fourth and fifth years. . . [C]oncerns about worsening outcomes seem unfounded.”¹⁷ Despite a
50 plethora of studies, researchers have yet to definitively connect resident fatigue with adverse
51 patient outcomes.

1 While ACGME data on duty hours reflect a high rate of compliance among programs, published
2 reports tracking resident work hours and anonymous resident surveys have identified frequent
3 noncompliance and underreporting of duty hours. More than half of residents surveyed in one study
4 reported noncompliance with the 2011 duty hour standards; those at earlier stages of training
5 reported higher rates, perhaps reflecting the difficulty of complying with the new 2011 requirement
6 that caps intern shifts at 16 hours. In short, many residents may be caught between complying with
7 ACGME standards and adhering to their ethical and professional standards of medical practice.¹⁸

8
9 A related commentary considers the unintended ethical consequences of duty hour limits:
10 “[P]unitive measures created to keep residents compliant, while well intentioned, have
11 inadvertently generated a learning environment muddied with dishonest behavior.”¹⁹ A second
12 commentary on this topic noted, “Old values do not simply die in a new system . . . [but]
13 consistently placing a patient’s or the profession’s needs above one’s own personal needs” may, at
14 times, “directly conflict with the current system of medical training.”²⁰

15
16 In addition to the many studies on duty hours, the general media continues to cover this issue and
17 to raise questions about duty hour limits and their potential consequences on physician quality and
18 patient safety. One article asks, “Medical interns may be more awake, but are they getting enough
19 training?”²¹ Similarly, asks another, “Why doesn’t medical care get better when doctors rest
20 more?”²² The author, a cardiologist, laments the toll duty hour restrictions have taken on continuity
21 of care and wonders whether the new system might actually yield more errors than in the pre-
22 reform era of 30-hour shifts.

23
24 Many of these issues are highlighted in a point/counterpoint that asks, “Should Medical Residents
25 Be Required to Work Shorter Shifts?” The authors square off over patient safety and physician
26 well-being, on the pro side, versus the need for more opportunities to learn and develop
27 competence in a supervised environment, on the con side.²³ Another article considers the issue of
28 work compression. The piece quotes a researcher, who notes, “Fatigue is bad, but overwork is
29 worse,” and describes the issues for residency program directors as “a Rubik’s-cube conundrum of
30 covering all the work with the same number of interns working fewer hours.”²⁴

31
32 Finally, one physician blogger and medical educator calls for systemic change in residency
33 education: “We have to adjust call schedules for the benefit of continuity. We need call schedules
34 that value ‘ownership’ and patient responsibility. We have to help our residents function as a team,
35 with different members of the team working different shifts.”²⁵

36 37 ACGME WORK IN ADDRESSING ISSUES SURROUNDING DUTY HOURS

38
39 Work is under way by the ACGME to improve the quality and safety of residency training and
40 move from a focus on process toward outcomes.^{26,27} The ACGME’s Clinical Learning
41 Environment Review (CLER) program is intended to measure the work of U.S. teaching hospitals
42 to engage residents in six focus areas, including duty hours and fatigue management and mitigation
43 as well as professionalism. CLER is the first component of the ACGME’s Next Accreditation
44 System (NAS) to be operationalized nationally.

45
46 CLER site visits have been initiated at all ACGME-accredited sponsoring institutions with two or
47 more training programs. After CLER site visits, the institution is provided with feedback and a
48 written report. The current plan is for the ACGME to repeat the CLER visits every 18 months “to
49 assess institutional progress in improving resident involvement in the six focus areas.” In addition,
50 the aggregated experience/data that are collected from institutions will be used to inform and shape
51 future ACGME accreditation requirement. A second component of NAS is the ACGME’s

1 Milestones project, in collaboration with relevant member boards of the American Board of
2 Medical Specialties (ABMS). Milestones “are observable developmental steps that describe
3 progression from a beginning learner to the expected level of proficiency at the completion of
4 training. Accordingly, predefined milestones can be used to assess and document a trainee’s
5 developmental progression toward competence.”²⁸

6
7 In addition, the ACGME has recently awarded seed funding for duty hours research as part of its
8 five-year diligence in review of the requirements it established. One research project examines the
9 effect of reduction of duty hour restrictions for first-year residents in internal medicine programs at
10 multiple sites nationally. To start the work, the ACGME provided partial funding of \$1 million
11 over four years. The project’s leadership team also plans to submit the study to the National
12 Institutes of Health for additional peer-reviewed funding to complete the study. As part of this
13 work, the ACGME granted a duty hours’ exemption to participating programs, waiving the 16-hour
14 work limit for first-year residents (interns). In another such project, the American Board of Surgery
15 was funded to study the impact of reducing duty hour requirements for some surgical trainees.
16 Patient outcomes will be examined using National Surgical Quality Improvement Program data.
17 The ACGME board approved a waiver of some of the duty hour rules to permit the conduct of this
18 research project in the participating programs.

19 20 KEY ISSUES, AND QUESTIONS FOR FURTHER STUDY

21
22 A number of key issues continue to rise to the forefront during discussion of duty hour limits,
23 including patient safety, trainees’ preparedness for practice, flexible solutions for different
24 disciplines, biologic variation among individuals in their tolerances for sleep deprivation and
25 fatigue, workload and patient volume, handoffs and continuity, professionalism and personal
26 responsibility, resident physician well-being, faculty supervision, impact on the overall physician
27 workforce and interprofessional training, and costs.

28
29 Other questions that may merit further study and research:

- 30
31
- 32 • What has been the impact on the workload and learning of students?
 - 33 • What has been the impact on attending physicians? Will duty hour limits eventually extend
34 to practicing physicians as well (as in Europe)?
 - 35 • Will some specialties extend the length of training programs because of the need for more
36 clinical exposure? If so, what effect does this have on workforce? Will students be less
37 likely to choose a field with such extended residency periods?
 - 38 • What will be the effect of competency-based frameworks on resident progression and
39 graduation from training programs?
 - 40 • Will the transition into real-world practice (in which duty hour limits do not apply) become
41 more difficult for young physicians who trained with duty hour limits?
 - 42 • Do residents learn to function in a sleep-deprived environment and to recognize and
43 compensate for their limits?

44 CURRENT AMA POLICY ON DUTY HOURS

45
46 A recent search of current AMA policy using the term “duty hours” returned the following six
47 HOD policies and 10 directives (see Appendix for full policies):

- 48
49 1. H-310.918, “Resident and Duty Hours: A Review of the Institute of Medicine
50 Recommendations”

- 1 2. H-310.926, “Resident/Fellow Work and Learning Environment”
- 2 3. H-310.927, “Resident Physician Working Conditions”
- 3 4. H-310.928, “Resident/Fellow Work and Learning Environment”
- 4 5. H-310.957, “Resident Working Conditions Reform Update”
- 5 6. H-310.963, “Residency/Fellowship Working Hours and Supervision”
- 6 7. D-310.955, “Resident/Fellow Duty Hours, Quality of Physician Training, and Patient
- 7 Safety”
- 8 8. D-310.961, “Use of At-Home Call by Residency Programs”
- 9 9. D-310.964, “Enforcement of Duty Hours Standards and Improving Resident, Fellow and
- 10 Patient Safety”
- 11 10. D-310.973, “Enforcement of ACGME Duty Hour Standards”
- 12 11. D-310.978, “Enforcement of ACGME Duty Hours Standards”
- 13 12. D-310.981, “Resident/Fellow Work and Learning Environment”
- 14 13. D-310.984, “Resident/Fellow Work and Learning Environment”
- 15 14. D-310.986, “Accreditation Council for Graduate Medical Education Enforcement of Duty
- 16 Hour Standards”
- 17 15. D-310.989, “Resident Physician Working Conditions”
- 18 16. D-310.991, “Intern and Resident Working Hours”

19
20 Many of these policies are no longer relevant or already accomplished; those that are still relevant
21 serve as the basis for this report’s recommendation for a new, centralized policy on duty hours.

22 23 SUMMARY AND RECOMMENDATIONS

24
25 This report provides an update on resident/fellow duty hour regulation and its impact on patient
26 safety and physician preparedness to practice, among other variables. It also encompasses a review
27 of current AMA policies on duty hours, to ensure such policy is consistent, accurate and up-to-date.
28 These policies are recommended for rescission, with relevant portions included in the new
29 proposed policy below and minor editorial changes added where appropriate.

30
31 The Council on Medical Education, therefore, recommends that the following be adopted and that
32 the remainder of this report be filed.

- 33
34 1. That our American Medical Association adopt the following Principles of Resident/Fellow
35 Duty Hours, Patient Safety, and Quality of Physician Training:
 - 36
37 1) Our AMA reaffirms support of the 2003 Accreditation Council for Graduate Medical
38 Education (ACGME) duty hour standards.
 - 39
40 2) Our AMA will continue to monitor the enforcement and impact of duty hour standards, in
41 the context of the larger issues of patient safety and the optimal learning environment for
42 residents.
 - 43
44 3) Our AMA encourages publication and supports dissemination of studies in peer-reviewed
45 publications and educational sessions about all aspects of duty hours, to include such topics
46 as extended work shifts, handoffs, in-house call and at-home call, level of supervision by
47 attending physicians, workload and growing service demands, moonlighting, protected
48 sleep periods, sleep deprivation and fatigue, patient safety, medical error, continuity of
49 care, resident well-being and burnout, development of professionalism, resident learning
50 outcomes, and preparation for independent practice.

- 1 4) Our AMA endorses the study of innovative models of duty hour requirements and, pending
2 the outcomes of ongoing and future research, should consider the evolution of specialty-
3 and rotation-specific duty hours requirements that are evidence-based and will optimize
4 patient safety and competency-based learning opportunities.
5
- 6 5) Our AMA encourages the ACGME to:
7
 - 8 a) Decrease the barriers to reporting of both duty hour violations and resident
9 intimidation.
 - 10 b) Ensure that readily accessible, timely and accurate information about duty hours is not
11 constrained by the cycle of ACGME survey visits.
 - 12 c) Use, where possible, recommendations from respective specialty societies and
13 evidence-based approaches to any future revision or introduction of resident duty hour
14 rules.
 - 15 d) Broadly disseminate aggregate data from the annual ACGME survey on the
16 educational environment of resident physicians, encompassing all aspects of duty
17 hours.
- 18 6) Our AMA recognizes the ACGME for its work in ensuring an appropriate balance between
19 resident education and patient safety, and encourages the ACGME to continue to:
20
 - 21 a) Offer incentives to programs/institutions to ensure compliance with duty hour
22 standards.
 - 23 b) Ensure that site visits include meetings with peer-selected or randomly selected
24 residents and that residents who are not interviewed during site visits have the
25 opportunity to provide information directly to the site visitor.
 - 26 c) Collect data on at-home call from both program directors and resident/fellow
27 physicians; release these aggregate data annually; and develop standards to ensure that
28 appropriate education and supervision are maintained, whether the setting is in-house
29 or at-home.
 - 30 d) Ensure that resident/fellow physicians receive education on sleep deprivation and
31 fatigue.
- 32 7) Our AMA supports the following statements related to duty hours:
33
 - 34 a) Resident physician total duty hours must not exceed 80 hours per week, averaged over
35 a four-week period (Note: “Total duty hours” includes providing direct patient care or
36 supervised patient care that contributes to meeting educational goals; participating in
37 formal educational activities; providing administrative and patient care services of
38 limited or no educational value; and time needed to transfer the care of patients).
 - 39 b) Scheduled on-call assignments should not exceed 24 hours. Residents may remain on-
40 duty for an additional 4 hours to complete the transfer of care, patient follow-up, and
41 education; however, residents may not be assigned new patients, cross-coverage of
42 other providers’ patients, or continuity clinic during that time.

- 1 c) Time spent in the hospital by residents on at-home call must count towards the 80-hour
2 maximum weekly hour limit, and on-call frequency must not exceed every third night
3 averaged over four weeks. The frequency of at-home call is not subject to the every-
4 third-night limitation, but must satisfy the requirement for one-day-in-seven free of
5 duty, when averaged over four weeks.
6
- 7 d) At-home call must not be so frequent or taxing as to preclude rest or reasonable
8 personal time for each resident.
9
- 10 e) Residents are permitted to return to the hospital while on at-home call to care for new
11 or established patients. Each episode of this type of care, while it must be included in
12 the 80-hour weekly maximum, will not initiate a new “off-duty period.”
13
- 14 f) Given the different education and patient care needs of the various specialties and
15 changes in resident responsibility as training progresses, duty hour requirements
16 should allow for flexibility for different disciplines and different training levels to
17 ensure appropriate resident education and patient safety; for example, allowing
18 exceptions for certain disciplines, as appropriate, to the 16-hour shift limit for first-year
19 residents, or allowing a limited increase to the total number of duty hours when need is
20 demonstrated.
21
- 22 g) Resident physicians should be ensured a sufficient duty-free interval prior to returning
23 to duty.
24
- 25 h) Duty hour limits must not adversely impact resident physician participation in
26 organized educational activities. Formal educational activities must be scheduled and
27 available within total duty hour limits for all resident physicians.
28
- 29 i) Scheduled time providing patient care services of limited or no educational value
30 should be minimized.
31
- 32 j) Accurate, honest, and complete reporting of resident duty hours is an essential element
33 of medical professionalism and ethics.
34
- 35 k) The medical profession maintains the right and responsibility for self-regulation (one
36 of the key tenets of professionalism) through the ACGME and its purview over
37 graduate medical education, and categorically rejects involvement by the Centers for
38 Medicare & Medicaid Services, The Joint Commission, Occupational Safety and
39 Health Administration, and any other federal or state government bodies in the
40 monitoring and enforcement of duty hour regulations, and opposes any regulatory or
41 legislative proposals to limit the duty hours of practicing physicians.
42
- 43 l) Increased financial assistance for residents/fellows, such as subsidized child care, loan
44 deferment, debt forgiveness, and tax credits, may help mitigate the need for
45 moonlighting. At the same time, resident/fellow physicians in good standing with their
46 programs should be afforded the opportunity for internal and external moonlighting
47 that complies with ACGME policy.
- 48 m) Program directors should establish guidelines for scheduled work outside of the
49 residency program, such as moonlighting, and must approve and monitor that work

- 1 such that it does not interfere with the ability of the resident to achieve the goals and
2 objectives of the educational program.
3
- 4 n) The costs of duty hour limits should be borne by all health care payers.
5
- 6 o) The general public should be made aware of the many contributions of resident/fellow
7 physicians to high-quality patient care and the importance of trainees’ realizing their
8 limits (under proper supervision) so that they will be able to competently and
9 independently practice under real-world medical situations. (New HOD Policy)
10
- 11 8) Our AMA is in full support of the collaborative partnership between allopathic and
12 osteopathic professional and accrediting bodies in developing a unified system of
13 residency/fellowship accreditation for all residents and fellows, with the overall goal of
14 ensuring patient safety.
15
- 16 2. That our AMA rescind the following policies:
17
- 18 H-310.918, “Resident and Duty Hours: A Review of the Institute of Medicine
19 Recommendations”
20 H-310.926, “Resident/Fellow Work and Learning Environment”
21 H-310.927, “Resident Physician Working Conditions”
22 H-310.928, “Resident/Fellow Work and Learning Environment”
23 H-310.957, “Resident Working Conditions Reform Update”
24 H-310.963, “Residency/Fellowship Working Hours and Supervision”
25 D-310.955, “Resident/Fellow Duty Hours, Quality of Physician Training, and Patient
26 Safety”
27 D-310.961, “Use of At-Home Call by Residency Programs”
28 D-310.964, “Enforcement of Duty Hours Standards and Improving Resident, Fellow and
29 Patient Safety”
30 D-310.973, “Enforcement of ACGME Duty Hour Standards”
31 D-310.978, “Enforcement of ACGME Duty Hours Standards”
32 D-310.981, “Resident/Fellow Work and Learning Environment”
33 D-310.984, “Resident/Fellow Work and Learning Environment”
34 D-310.986, “Accreditation Council for Graduate Medical Education Enforcement of Duty
35 Hour Standards”
36 D-310.989, “Resident Physician Working Conditions”
37 D-310.991, “Intern and Resident Working Hours” (Directive to Take Action.)

Fiscal Note: \$1,000.

APPENDIX

H-310.918, “Resident and Duty Hours: A Review of the Institute of Medicine Recommendations”

Our AMA supports: (1) current duty hour requirements as set forth in the Common Program Requirements, Accreditation Council for Graduate Medical Education, Section VI; and (2) additional study of the issues raised with respect to duty hours in the IOM report and consider further modifications of the current duty hours requirements based on the results of this inquiry. (Res. 327, A-09)

H-310.926, “Resident/Fellow Work and Learning Environment”

Our AMA supports education during residency training programs on sleep deprivation and fatigue. (Res. 322, A-03).

H-310.927, “Resident Physician Working Conditions”

(1) Our AMA adopts the following definitions for resident physician education: (a) “Total duty hours” represents those scheduled hours of activity associated with a residency program and include: (i) scheduled time providing direct patient care or supervised patient care that contributes to the ability of the resident physician to meet educational goals and objectives; (ii) scheduled time to participate in formal educational activities, (iii) scheduled time providing administrative and patient care services of limited or no educational value, and (iv) time needed to transfer the care of patients; and (b) “Organized educational activities” are of two types: (i) “Formal educational activities” include scheduled educational programs such as conferences, seminars, and grand rounds and (ii) “Patient care educational activities” include individualized instruction with a more senior resident or attending physician and teaching rounds with an attending physician.

(2) Resident physician total duty hours must not exceed 80 hours per week, averaged over a two-week period and that our AMA work with GME accrediting bodies to determine if an increase of 5% may be appropriate for some training programs.

(3) Workdays that exceed 12 hours are defined as on-call.

(4) Scheduled on-call assignments should not exceed 24 hours. Residents may remain on-duty for up to 30 hours to complete the transfer of care, patient follow-up, and education; however, residents may not be assigned new patients, cross-coverage of other providers’ patients, or continuity clinic during that time.

(5) On-call shall be no more frequent than every third night and there be at least one consecutive 24-hour duty-free period every seven days both averaged over a two-week period.

(6) On-call from home shall be counted in the calculation of total duty hours and on-call frequency if the resident physician can routinely expect to get less than eight hours of sleep.

(7) There should be a duty-free interval of at least 10 hours prior to returning to duty.

(8) Limits on total duty hours must not adversely impact resident physician participation in the organized educational activities of the residency program. Formal educational activities must be scheduled and available within total duty hour limits for all resident physicians for at least eight hours per week averaged over a two-week period.

(9) Scheduled time providing patient care services of limited or no educational value be minimized

(10) Program directors should establish guidelines for scheduled work outside of the residency program, such as moonlighting, and must approve and monitor that work. (CME Rep. 9, A-02)

H-310.928, “Resident/Fellow Work and Learning Environment”

1. Our AMA may draft original, modify existing, or oppose legislation and pursue any regulatory or administrative strategies when dealing with resident work hours and conditions.

2. Our AMA will oppose any efforts by the federal government, including the Department of Labor’s Occupational Safety and Health Administration, to regulate resident education and

training, including resident and fellow duty hours. (Res. 310, I-01; Reaffirmed: Res. 322, A-03; Appended: Res. 219, I-10)

H-310.957, “Resident Working Conditions Reform Update”

(1) Our AMA supports the following new language pertaining to resident work hours and environment for the “General Requirements” of the “Essentials of Accredited Residencies in Graduate Medical Education”: Each residency program must establish formal policies governing resident duty hours and working environment that are optimal for both resident education and the care of patients. (a) Special requirements relating to duty hours and on-call schedules shall be based on an educational rationale and patient need, including continuity of care. (b) The educational goals of the program and learning objectives of residents must not be compromised by excessive reliance on residents to fulfill institutional service obligations. Duty hours, however, must reflect the fact that responsibilities for continuing patient care are not automatically discharged at specific times. Programs must ensure that residents are provided backup support when patient care responsibilities are especially difficult or prolonged. (c) Resident duty hours and on-call schedules must not be excessive. The structuring of duty hours and on-call schedules must focus on the needs of the patient, continuity of care, and the educational needs of the resident. Duty hours must be consistent with the General and Special Requirements that apply to each program. Detailed structuring of resident service is an integral part of the approval process and therefore close adherence to the General and Special Requirements is essential to program accreditation.

(2) Our AMA supports the following proposed revision of the “Special Requirements” for surgery: It is desirable that residents’ work schedule be designed so that on the average, excluding exceptional patient care needs, residents have at least one day out of seven free of routine responsibilities and be on-call in the hospital no more often than every third night. The ratio of hours worked and on-call time will vary, particularly at the senior levels, and therefore necessitates flexibility. (BOT Rep. YY, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CME Rep. 2, A-11)

H-310.963, “Residency/Fellowship Working Hours and Supervision”

It is the policy of the AMA (1) to continue to work with the Accreditation Council for Graduate Medical Education to implement AMA policy for residency work hours reform; and (2) to use existing policy as a guideline in working with state medical societies and medical specialties to obtain modification, if needed, of pending and future legislation on or changes to total residency work hours, conditions and supervision. (Sub. Res. 191, I-90; Reaffirmed: Sunset Report, I-00; Modified: CME Rep. 2, A-10)

D-310.955, “Resident/Fellow Duty Hours, Quality of Physician Training, and Patient Safety”

1. Our American Medical Association will continue to monitor the enforcement and impact of the Accreditation Council for Graduate Medical Education duty hour standards, as they relate to the larger issue of the optimal learning environment for residents, and monitor relevant research on duty hours, sleep, and resident and patient safety, with a report back no later than the 2011 Annual Meeting of the AMA House of Delegates.
2. Our AMA will, as part of its Initiative to Transform Medical Education strategic focus, utilize relevant evidence on patient safety and sleep to develop a learning environment model that optimizes supervision, professionalism, communication, and teamwork as well as finding a balance between resident education, patient care, quality and safety, and a wholesome personal life for physician learners and teachers, with a report back no later than the 2012 Annual Meeting.
3. Our AMA (through the AMA GME e-Letter and other communications) encourages publication of studies (in peer-reviewed publications, including the ACGME’s newly developed Journal of Graduate Medical Education) and will promote educational sessions about a) the potential effects of the Institute of Medicine recommendations and b) the effects of duty hour standards, extended work shifts, handoffs and continuity of care procedures, and sleep deprivation and fatigue on

patient safety, medical error, resident well-being, and resident learning outcomes, and will disseminate study results to GME designated institutional officials (DIOs), program directors, resident/fellow physicians, attending faculty, and others.

4. Our AMA will call for pilot programs and further research into protected sleep periods during prolonged in-house call and, until such research shows improved patient care and safety, will encourage the ACGME to not adopt the IOM report's call for a protected sleep period, which could have significant unintended consequences for continuity of patient care and safety, as well as being difficult and expensive to implement and monitor.

5. Our AMA encourages the ACGME to allow appropriate flexibility for different disciplines and different training levels within the current ACGME maximum duty hour standards to best train residents for professional practice within their specialties while optimizing patient safety during their training.

6. Our AMA will communicate to all Graduate Medical Education Designated Institution Officials, program directors, resident/fellow physicians, and attending faculty the importance of accurate, honest, and complete reporting of resident duty hours as an essential element of medical professionalism and ethics.

7. Our AMA will ensure that medicine maintain the right and responsibility for self-regulation, one of the key tenets of professionalism, and categorically reject outside involvement by the Centers for Medicare & Medicaid Services or The Joint Commission and other state and federal government bodies in the monitoring and enforcement of duty hour regulations.

8. Our AMA will urge the ACGME to include external moonlighting hours in the calculation of duty hours, as defined in the IOM report, and also will work to ensure increased financial assistance for residents/fellows, such as subsidized child care, loan deferment, debt forgiveness, and tax credits, which may help mitigate the need for moonlighting.

9. Our AMA will collaborate with other key stakeholders to educate the general public about the many contributions of resident/fellow physicians to high-quality patient care; further the public should be made aware that residency/fellowship education offers trainees the opportunity to realize their limits (under proper supervision) so that they can competently and independently practice under real-world medical situations.

10. Our AMA will urge that any costs of further duty hour limits be borne by all health care payers, and that any proposed changes to the ACGME standards have adequate funding allocated prior to implementation.

11. Our AMA encourages the American Osteopathic Association to monitor duty hours and related issues in collaboration with the ACGME.

12. Our AMA Council on Medical Education, Resident and Fellow Section, and Young Physicians Section will collaborate in developing a formal response, based on the best evidence for improving resident education as well as patient safety and quality, to the upcoming revisions of the duty hour requirements by the Accreditation Council for Graduate Medical Education.

13. Our AMA encourages the ACGME to allow appropriate flexibility for different disciplines and different training levels within the current ACGME maximum duty hours standards and will work with other key stakeholders to continue to develop strategies for implementing optimal work schedules to improve resident education and patient safety in healthcare.

14. Our AMA will continue to monitor the enforcement and impact of the Accreditation Council for Graduate Medical Education duty hour standards, as they relate to the larger issues of patient safety and the optimal learning environment for residents, and to track relevant research on duty hours, sleep, and resident and patient safety; and report back to the House of Delegates as needed, with a report back no later than the 2014 Annual Meeting of the AMA House of Delegates.

15. Our AMA, through the AMA GME e-Letter and other communications, will encourage publication of studies (in peer-reviewed publications, including the ACGME's newly developed Journal of Graduate Medical Education) and promote educational sessions about the impact of duty hour limits, extended work shifts, handoffs, protected sleep periods during in-house call, sleep

deprivation, and fatigue on patient safety, medical error, continuity of care, resident well-being, and resident learning outcomes. Further, our AMA should facilitate wide dissemination of this information to the GME community.

16. Our AMA will strongly advocate to all Designated Institutional Officials (DIOs), program directors, resident/fellow physicians, and attending faculty the importance of accurate, honest, and complete reporting of resident duty hours as an essential element of medical professionalism and ethics.

17. Our AMA will ensure that the medical profession maintains the right and responsibility for self-regulation, one of the key tenets of professionalism, and categorically reject involvement by the Occupational Safety and Health Administration in the monitoring and enforcement of duty hour regulations.

18. Our AMA will lobby against any regulatory or legislative proposals to limit the duty hours of practicing physicians.

19. Our AMA will collaborate with other key stakeholders to educate the general public about the many contributions of resident/fellow physicians to high-quality patient care and the importance of trainees' realizing their limits (under proper supervision) so that they can competently and independently practice under real-world medical situations.

20. Our AMA will urge that the costs of duty hour limits be borne by all health care payers, and that any proposed changes to the ACGME standards have adequate funding allocated prior to implementation.

21. Our AMA will encourage the American Osteopathic Association to monitor duty hours and related issues in collaboration with the ACGME. (CME Rep. 2, I-09; Appended: Res. 322, A-10; Appended: CME Rep. 7, A-11)

D-310.961, "Use of At-Home Call by Residency Programs"

1. Our AMA encourages the Accreditation Council for Graduate Medical Education to collect data on at-home call by specialty from both program directors and from residents and fellows and to release these aggregate data annually to the Graduate Medical Education community.

2. Our AMA and the ACGME will collaborate on a survey (similar to those conducted by the AMA in 1989 and 1999) on the educational environment of resident physicians, encompassing all aspects of duty hours, including at-home call.

3. Our AMA will ask that the Council on Medical Education incorporate a review of at-home call issues in the duty hours follow-up report due at the 2010 Annual Meeting.

4. Our AMA will define "at-home" call and its appropriate or inappropriate uses, allowing for flexible solutions from one specialty to the next, with a report back to the House of Delegates.

5. Our AMA encourages the ACGME and the GME community to examine the effects of the increased use of at-home call on resident education and supervision and develop appropriate standards to ensure that appropriate education and supervision is maintained, regardless of the setting. (CME Rep. 5, I-08)

D-310.964, "Enforcement of Duty Hours Standards and Improving Resident, Fellow and Patient Safety"

Our AMA:

1. Reaffirms support of the current Accreditation Council for Graduate Medical Education duty hour standards.

2. Continues to monitor the enforcement and impact of the ACGME duty hour standards, as they relate to the larger issue of the optimal learning environment for residents, and will monitor relevant research on duty hours, sleep, and resident and patient safety, with a report back at the 2010 Annual Meeting of the AMA House of Delegates.

3. Will, as part of its Initiative to Transform Medical Education strategic focus, utilize relevant evidence on patient safety and sleep to develop a learning environment model that optimizes

balance between resident education, patient care, quality and safety, and report back at the 2010 Annual Meeting.

4. Will review, evaluate, and publicize the work of the ACGME Committee on Innovation, in particular its pilot projects related to duty hours, and will encourage participation by ACGME Residency Review Committees and residency programs in these and other efforts towards innovation and improvement in graduate medical education and patient safety.
5. Will ask the ACGME to consider offering programs/institutions additional incentives, such as longer accreditation cycles or reduced accreditation fees, to ensure programmatic and institutional compliance with duty hour limits.
6. Encourages publication of studies about the effects of duty hour standards, extended work shifts, hand offs and continuity of care procedures, and sleep deprivation and fatigue on patient safety, medical error, resident well-being, and resident learning outcomes, and will disseminate study results to GME designated institutional officials (DIOs), program directors, resident/fellow physicians, attending faculty, and others.
7. Will communicate to all GME DIOs, program directors, resident/fellow physicians, and attending faculty about the importance of accurate, honest, and complete reporting of resident duty hours as an essential element of medical professionalism and ethics.
8. Will use the GME e-Letter, AMA Resident and Fellow Section publications, and other communications vehicles to raise awareness among residents (particularly first-year residents) of the ACGME and its role in monitoring and enforcing duty hours.
9. Council on Medical Education will closely monitor the progress of the Institute of Medicine (IOM) committee studying resident duty hours and patient safety and to respond, and/or assist the AMA Washington Office in responding, to any legislative or regulatory initiatives that arise from the IOM or other bodies.
10. Urges the ACGME and AOA to decrease the barriers to reporting duty violations and resident intimidation. (CME Rep. 5, A-08)

D-310.973, “Enforcement of ACGME Duty Hour Standards”

Our AMA will:

- (1) Continue to monitor the enforcement and impact of the Accreditation Council for Graduate Medical Education duty hour standards, as they relate to the larger issues of optimal patient care and learning environment for residents, with a report back at the 2008 Annual Meeting of the AMA House of Delegates.
- (2) Encourage and disseminate the results of studies that link compliance with duty hours standards to patient care quality and medical errors, as well as to resident learning and professionalism.
- (3) Work with other interested groups to regularly inform GME designated institutional officials (DIOs), program directors, resident physicians, and attending faculty about the adverse effects of sleep deprivation and fatigue on patient safety and resident well-being.
- (4) Work with the ACGME to improve the reporting mechanisms for duty hour violations in order to better protect resident confidentiality and improve the learning environment. (CME Rep. 4, A-06)

D-310.978, “Enforcement of ACGME Duty Hours Standards”

Our AMA will:

- (1) continue to monitor the enforcement of the Accreditation Council for Graduate Medical Education duty hour standards, including the consistency, accuracy, and validity of reporting, and report back at the 2006 Annual Meeting; (2) work with other interested groups to assist residency programs in educating resident physicians and attending faculty about the adverse effects of sleep deprivation and fatigue on patient safety and resident well-being; (3) strongly encourage Residency Review Committees to ensure that site visits include meetings with peer-selected or randomly-selected residents and that residents who are not interviewed during site visits have the opportunity

to provide information directly to the site visitor; (4) recommend to the ACGME that the Common Program Requirements be amended to charge program directors, along with the designated institutional official, with the responsibility of creating an environment where resident physicians, without fear of retaliation, may make complaints and report noncompliance with ACGME standards, including duty hours; (5) investigate ways to protect resident physicians who file a complaint to the ACGME, and report back at the 2006 Annual Meeting; and (6) encourage and disseminate the results of studies that link compliance with duty hour standards to patient care quality outcomes and patient safety. (CME Rep. 1, I-04)

D-310.981, “Resident/Fellow Work and Learning Environment”

(1) Our AMA will, with the input of other groups involved in medical education, pursue the creation and dissemination of a survey in 2005 to medical students, resident physicians, and attending faculty to determine the effects of the 2003 Accreditation Council for Graduate Medical Education (ACGME) duty hours standards on the clinical learning environment, with the scope of future surveys on the learning environment to be determined based on the results of the 2005 survey; and (2) our AMA and other relevant groups will offer to work with the ACGME in the design and analysis of the ACGME resident survey. (CME Rep. 8, A-04)

D-310.984, “Resident/Fellow Work and Learning Environment”

Our AMA will: (1) ask the Board of Directors of the Accreditation Council for Graduate Medical Education to reconsider the changes made in the Common Program Requirements for duty hours and the procedures for the approval exemptions at their meeting of February 11, 2003, and approve the original language and intent from June 2002 prior to the implementation of requirements on July 1, 2003; (2) study all options to address enforcement and compliance with the ACGME Duty Hour requirements (Joint Commission of Accreditation of Healthcare Organizations, legislation, private methods, etc.) with a report back to the House of Delegates at the 2004 Annual Meeting; (3) study, develop, and promote a method of creating an environment for residents to safely report violations on resident duty hours without any repercussions; (4) request an annual report to ACGME’s Member Organizations from the ACGME, which includes the number of complaints received, the number not in compliance due to duty hours and working conditions and the action taken by ACGME, and that this report be indexed by specialty; and (5) continue to work with the ACGME to refine the duty hours standards, and work with ACGME and other appropriate entities to collect evidence on the impact of current standards in regards to patient and resident safety, resident education, and eliminating fatigue and sleep deprivation. (Res. 322, A-03)

D-310.986, “Accreditation Council for Graduate Medical Education Enforcement of Duty Hour Standards”

Our AMA will: (a) continue to work with the Accreditation Council for Graduate Medical Education (ACGME) to further refine the standards for resident physician duty hours and to collect additional evidence on the impact of the current standards with respect to preserving the quality of resident physician education and eliminating fatigue and sleep deprivation; (b) continue to strongly encourage the ACGME to vigorously enforce its accreditation standards regarding resident physician duty hours; (c) request that an annual report be provided to the Member Organizations of the ACGME (AMA, American Association of Medical Colleges, American Board of Medical Specialties, American Hospital Association, Council of Medical Specialty Societies) on the number of programs by specialty that were not in compliance with resident physician duty hour standards and the action taken by the ACGME; (d) continue to monitor the enforcement of ACGME standards on resident physician duty hours and report back to the House of Delegates as soon as possible, but no later than the 2004 Interim Meeting and regularly thereafter; and (e) work with the ACGME to objectively evaluate the impact of the new standards for resident work hours upon patient care and safety.

(2) The Council on Medical Education will continue to explore all possible approaches to the enforcement of duty hours and the protection of residents who report duty hour violations and report its findings to the ACGME Task Force on Duty Hours for its consideration. (CME Rep. 6, A-03)

D-310.989, “Resident Physician Working Conditions”

(1) As continued evidence is developed and collected regarding resident work hours, patient safety, resident well-being, and resident education, resident physician total duty hours shall be reassessed.

(2) Our AMA shall: (a) strongly encourage the Accreditation Council for Graduate Medical Education (ACGME) to vigorously enforce the common accreditation standards adopted by their Board of Directors on June 11, 2002 regarding resident duty hours; and (b) requests that ACGME provide the AMA with a report on the number of programs by specialty that were required to provide immediate progress reports to Residency Review Committees and the Institutional Review Committee as well as the number of programs for which resident surveys and focused follow-up visits were conducted, beginning with the period of July 1, 2001-June 30, 2002 and then on an annual basis. (CME Rep. 9, A-02)

D-310.991, “Intern and Resident Working Hours”

The ACGME:

(1) through its Residency Review Committees (RRC) and the Institutional Review Committee, enforce work hour guidelines rigorously and ensure compliance with work hour standards; and (2) be requested to investigate mechanisms to provide readily accessible, timely and accurate information about work hours for individual programs that is not constrained by the cycle of survey visits. (CME Rep. 1, I-01; Reaffirmed: CME Rep. 2, A-11)

REFERENCES

- ¹ Resident/Fellow Duty Hours, Quality of Physician Training, and Patient Safety. AMA Council on Medical Education. Available at: <http://www.ama-assn.org/resources/doc/council-on-med-ed/cmereport7a11.pdf>.
- ² Resident/Fellow Duty Hours, Quality of Physician Training, and Patient Safety. AMA Council on Medical Education. Available at: <http://www.ama-assn.org/resources/doc/council-on-med-ed/cme-report-2i-09.pdf>.
- ³ Enforcement of Duty Hours Standards and Improving Resident, Fellow and Patient Safety. AMA Council on Medical Education. Available at: <http://www.ama-assn.org/resources/doc/council-on-med-ed/a-08cmerpt5.pdf>.
- ⁴ Desai SV, et al. Effect of the 2011 vs 2003 Duty Hour Regulation–Compliant Models on Sleep Duration, Trainee Education, and Continuity of Patient Care Among Internal Medicine House Staff: A Randomized Trial. *JAMA Intern Med*. 2013;173(8):649-655. Available at: <http://archinte.jamanetwork.com/article.aspx?articleID=1672279>.
- ⁵ Drolet BC, Khokhar MT, Fischer SA. The 2011 Duty-Hour Requirements — A Survey of Residency Program Directors. *N Engl J Med* 2013; 368:694-697. Available at: <http://www.nejm.org/doi/full/10.1056/NEJMp1214483>.
- ⁶ Drolet BC, Whittle SB, Khokhar MT, Fischer SA, Pallant A. Approval and Perceived Impact of Duty Hour Regulations: Survey of Pediatric Program Directors. *Pediatrics* 2013; 132:5 819-824; published ahead of print October 7, 2013. Abstract at: <http://pediatrics.aappublications.org/content/132/5/819.abstract>.
- ⁷ Drolet BC, Christopher DA, Fischer SA. Residents' Response to Duty-Hour Regulations — A Follow-up National Survey. *N Engl J Med* 2012; 366:e35. Available at: <http://www.nejm.org/doi/full/10.1056/NEJMp1202848>.
- ⁸ Antiel RM et al. Effects of Duty Hour Restrictions on Core Competencies, Education, Quality of Life, and Burnout Among General Surgery Interns. *JAMA Surg*. 2013;148(5):448-455. Available at: <http://archsurg.jamanetwork.com/article.aspx?articleid=1557237>.
- ⁹ Theobald CN et al. The effect of reducing maximum shift lengths to 16 hours on internal medicine interns' educational opportunities. *Acad Med*. 2013 Apr;88(4):512-8. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/23425987>.
- ¹⁰ Schwartz SI. Effect of the 16-Hour Work Limit on General Surgery Intern Operative Case Volume: A Multi-institutional Study. *JAMA Surg*. 2013;148(9):829-833. Available at: <http://archsurg.jamanetwork.com/article.aspx?articleID=1710513>.
- ¹¹ Drake FT, Horvath KD, Goldin AB, Gow KW. The General Surgery Chief Resident Operative Experience: 23 Years of National ACGME Case Logs. *JAMA Surg*. 2013;148(9):841-847. Available at: <http://archsurg.jamanetwork.com/article.aspx?articleid=1714657>.
- ¹² Deveney K. Chief Resident Operative Experience: A Moving Target. *JAMA Surg*. 2013;148(9):847-848. Available at: <http://archsurg.jamanetwork.com/article.aspx?articleid=1714654>.
- ¹³ Fewer graduates, more thoracic surgery board failures. *Family Practice News*. Available at: <http://www.familypracticenews.com/news/cardiovascular-disease/single-article/fewer-graduates-more-thoracic-surgery-board-failures/85bf38b26ad4a1e3e9ccd5e306d767ec.html>.

- ¹⁴ Sen S et al. Effects of the 2011 Duty Hour Reforms on Interns and Their Patients: A Prospective Longitudinal Cohort Study. *JAMA Intern Med.* 2013;173(8):657-662. Available at: <http://archinte.jamanetwork.com/article.aspx?articleid=1672284>.
- ¹⁵ Block L. In the Wake of the 2003 and 2011 Duty Hours Regulations, How Do Internal Medicine Interns Spend Their Time? *Journal of General Internal Medicine.* August 2013, Volume 28, Issue 8, pp 1042-1047. Abstract at: <http://link.springer.com/article/10.1007/s11606-013-2376-6>.
- ¹⁶ Starmer AJ et al. Rates of Medical Errors and Preventable Adverse Events Among Hospitalized Children Following Implementation of a Resident Handoff Bundle. *JAMA.* 2013;310(21):2262-2270. Available at: <http://jama.jamanetwork.com/article.aspx?articleid=1787406>.
- ¹⁷ Volpp KG. Teaching hospital five-year mortality trends in the wake of duty hour reforms. *Journal of General Internal Medicine.* August 2013, Volume 28, Issue 8, pp 1048-1055. Abstract at: <http://link.springer.com/article/10.1007/s11606-013-2401-9>.
- ¹⁸ Drolet BC, Schwede M, Bishop KD, Fischer SA. Compliance and falsification of duty hours: reports from residents and program directors. *J Grad Med Educ.* 2013 Sep;5(3):368-73. Available at: <http://www.jgme.org/doi/pdf/10.4300/JGME-D-12-00375.1>.
- ¹⁹ Fargen KM, Rosen CL. Are Duty Hour Regulations Promoting a Culture of Dishonesty Among Resident Physicians? *Journal of Graduate Medical Education.* December 2013, Vol. 5, No. 4, pp. 553-555. Available at: <http://www.jgme.org/doi/full/10.4300/JGME-D-13-00220.1>.
- ²⁰ Arora VM, Farnan JM, Humphrey HJ. Professionalism in the Era of Duty Hours: Time for a Shift Change? *JAMA.* 2012;308(21):2195-2196. Available at: <http://jama.jamanetwork.com/article.aspx?articleid=1475198>.
- ²¹ Boodman SG. Medical interns may be more awake, but are they getting enough training? *Washington Post,* July 8, 2013. Available at: http://www.washingtonpost.com/national/health-science/medical-interns-may-be-more-awake-but-are-they-getting-enough-training/2013/07/08/e7886116-cec9-11e2-8845-d970ccb04497_story.html.
- ²² Rosenbaum L. Why Doesn't Medical Care Get Better When Doctors Rest More? *The New Yorker,* August 20, 2013. Available at: <http://www.newyorker.com/online/blogs/elements/2013/08/hospital-residency-hour-limits-problem-with-medical-care.html>.
- ²³ Lockley SW, Orient J. Should Medical Residents Be Required to Work Shorter Shifts? *The Wall Street Journal,* February 18, 2013. Available at: <http://online.wsj.com/article/SB10001424127887324156204578273721688122486.html>.
- ²⁴ Chen PW. The Impossible Workload for Doctors in Training. *The New York Times,* April 18, 2013. Available at: <http://well.blogs.nytimes.com/2013/04/18/doing-the-math-on-resident-work-hours/?ref=health>.
- ²⁵ Centor R. Time to redesign residencies. db's Medical Rants. April 18, 2013. Av at: <http://www.medrants.com/archives/7255?shared=email&msg=fail>.
- ²⁶ Weiss KB, Bagian JP, Nasca TJ. The Clinical Learning Environment: The Foundation of Graduate Medical Education. *JAMA.* 2013;309(16):1687-1688. Available at: <http://jama.jamanetwork.com/article.aspx?articleid=1681422>.
- ²⁷ Nasca TJ, Weiss KB, Bagian JP. Improving Clinical Learning Environments for Tomorrow's Physicians. *NEJM.* January 27, 2014. Available at: <http://www.nejm.org/doi/full/10.1056/NEJMp1314628>.
- ²⁸ Caverzagie KJ et al. The Internal Medicine Reporting Milestones and the Next Accreditation System. *Ann Intern Med.* 2013;158(7):557-559. Available at: <http://annals.org/article.aspx?articleid=1567230>.