

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

REPORT OF THE COUNCIL ON MEDICAL EDUCATION

CME Report 5-I-08

Subject: Use of At-Home Call by Residency Programs
(Resolutions 821 and 825, I-07)

Presented by: Claudette E. Dalton, MD, Chair

Referred to: Reference Committee K
(Lynne M. Kirk, MD, Chair)

1 At its 2007 Interim Meeting, the AMA House of Delegates considered two resolutions concerning
2 at-home call: Resolution 821, "Residency Program At-Home Call Criteria," introduced by the
3 California Delegation and Resolution 825, "Monitoring of At-Home Call Implementation by
4 Residency Programs," introduced by the Resident and Fellow Section (RFS).

5
6 Resolution 821 asked that the American Medical Association urge the Accreditation Council for
7 Graduate Medical Education (ACGME) to collect additional evidence on the number of residency
8 programs nationwide that have changed prior in-house call rotations to at-home call since July
9 2003; and urge the ACGME to study, develop, and implement criteria under which a residency
10 program can establish at-home call, or change a prior in-house call rotation to at-home call.

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12 Resolution 825 asked that the AMA oppose the use of at-home call if being used to circumvent the
13 intent of current ACGME duty hour restrictions, and work with the ACGME and other interested
14 organizations to collect additional information on how residency programs nationwide are using at-
15 home call rotations; study the impact of at-home call on resident well-being, sleep patterns, and
16 patient safety, commenting on issues such as, but not limited to, total hours worked, number of
17 pages and phone calls received, and hours of continuous sleep; and study and develop best
18 practices for implementing at-home call, in residency and fellowship programs.

19
20 After hearing mixed testimony, the House of Delegates voted to refer both resolutions for further
21 study. Several speakers noted that at-home call practices vary among specialties, and it would be
22 important to study the issue on a specialty-by-specialty basis. In addition, representatives of
23 specific specialties expressed opposition towards a blanket condemnation of at-home call, although
24 others emphasized that the overarching goal was to address misuse of at-home call to circumvent
25 the intent of the ACGME duty hour restrictions.

26 27 ACGME definition of at-home call 28

29 The ACGME defines "home call (pager call)" as "[s]cheduled patient care assignments beyond the
30 normal work day that are taken from outside the assigned institution. It generally involves residents
31 providing coverage to a population of patients from their home, with the expectation that they may
32 need to come into the hospital upon being called, or via the telephone direct junior residents or
33 other health professionals in providing patient care."¹

Although not explicitly stated in the ACGME's definition, at-home call could also include providing direct patient care not just via telephone but by other electronic means (e.g., pediatricians taking patient e-mails or radiologists reading films at home on their computer).

ACGME standards for duty hours and at-home call

In July 2003, the ACGME instituted duty hour standards, in response to growing concern about the effects of sleep deprivation on residents/fellows and consequent impacts on patient safety. The standards stipulated, in part:

- An 80-hour weekly limit, averaged over 4 weeks, inclusive of all in-house call activities;
- One day in 7 free from patient care and educational obligations, averaged over 4 weeks, inclusive of call; and
- In-house call no more than once every 3 nights, averaged over 4 weeks.

In addition, the ACGME common program requirements (VI.E.4)² specifically mention at-home (or pager) call, and state:

- The frequency of at-home call is not subject to the every-third-night, or 24+6 limitation. However at-home call must not be so frequent as to preclude rest and reasonable personal time for each resident.
- Residents taking at-home call must be provided with one day in seven completely free from all educational and clinical responsibilities, averaged over a four-week period.
- When residents are called into the hospital from home, the hours residents spend in-house are counted toward the 80-hour limit.

The same document (II.A.4.j) notes that program directors must "monitor resident duty hours" and "adjust schedules as necessary to mitigate excessive service demands and/or fatigue; and, if applicable, monitor the demands of at-home call and adjust schedules as necessary to mitigate excessive service demands and/or fatigue."

Similarly, the ACGME also requires that programs "monitor the intensity and workload resulting from home call, through periodic assessment of the frequency of being called into the hospital and the length and intensity of the in-house activities."³ No specific direction is provided to programs on how to conduct such assessments.

Finally, the ACGME resident/fellow survey includes the following question: "Have you met the following ACGME duty hour requirements? At-home call must not be so frequent as to preclude rest and reasonable personal time for each resident/fellow" (Question 26). Possible responses are Always or Usually, Sometimes, Rarely, and Never or Not Applicable. Programs with 70% or more of residents/fellows completing the survey, and with at least four residents/fellows total, can receive summary survey data for their program. The ACGME continues to analyze and study data collected on the resident survey, but no aggregate data on at-home call have been released.

National GME Census data

Through the National GME Census, the AMA and the Association of American Medical Colleges (AAMC) collect information on residency/fellowship programs at the beginning of the academic

year that will be placed on FREIDA Online. Examining the data both pre- and post-2003 provides some insight into the use of at-home call vis-à-vis the duty hour limits.

We examined data from residency program surveys of the following academic years: 1998-1999, 2001-2002, 2002-2003, and 2007-2008. Programs provide information for FREIDA Online that pertain to the current academic year as well as the following academic year.

In 1998-1999, very few programs (2.6%) had only a home call schedule, and no hospital call. This increased more than eightfold by 2007-2008, with 22.2% of programs reporting only a home call schedule.

The percent of programs providing hospital call schedules but with no home or beeper call schedules dropped by nearly a third, from 35.2% of programs in 1998-1999 to 24.1% in 2007-2008. There was also a nearly 27% drop in the percent of programs that had both a hospital schedule and a home schedule, from 55.2% to 40.5%. It should be noted that the percent of programs reporting no call of any kind increased from 7.0% to 13.2%, nearly doubling.

The percentage of programs reporting hospital call was declining before discussion of changes in ACGME duty hours requirements; however, that decline accelerated between 2001-2002 and 2002-2003, with the opposing trend of an increasing percent of programs reporting home call only.

Literature search on changes in at-home call post-2003

A mid-July 2008 search on PubMed using the terms “at home call resident physician” returned a limited number of studies, the majority of which included discussion of at-home call only within the broader context of the overall effects of duty hours restrictions. Three of the studies were of otolaryngology residents, two of orthopaedic surgery residents, and one each of surgery residents and surgical subspecialty fellows.

One of the studies of otolaryngology residents, published in 2005, found that 54% of responding programs had changed from in-hospital to home call in response to duty hour restrictions.⁴ Another study, published in 2006, found that utilization of at-home call within otolaryngology programs was 33.1%.⁵ These and the other studies cited indicated that increased use of at-home call was a key component in teaching hospitals’ strategies in adjusting to the 80-hour work week.

Variation in acceptance of at-home call among specialties

Different specialties—cognitive and imaging specialties, for example—have had different experiences with at-home call. In some fields, it is seen almost as a benefit, akin to telecommuting for office workers; for others, it is simply considered an abuse of the 80-hour work week.

Discussion on online forums for residents⁶ illustrates these differences. Some situations are “nightmarish,” writes one resident, and some are not: “Derm, Rheumatology, Endo, etc., often get few, if any, calls. Even when I take GIM outpt call, I rarely get a call after 11PM. (ED calls go to the inpatient doc.) That’s the problem. Small Endo programs have their fellows on a week at a time, and it’s no big deal. When they wrote the rules, this is what they had in mind.”

In contrast, another resident describes the following “insane” schedule: “The fellows work standard hours 7/7:30am-5-6pm M-F. In addition, they work ‘home pager call’ 24 hours a day for 7 days

straight every third week (three fellows total) for the entire year. That's 17-18 weeks total. This means that twice a month the fellow is 'on' for all 168 hours in the week. During home call, the pager goes off day and night for the outpatients, the inpatients, the ER, the ward teams, consults, nurses, etc. The fellow must go in for urgent consults, obviously. That's twelve days straight total, seven of which are never free of duty. The average hours are 106.5 per week, averaged over 4 weeks."

An informal survey of residents/fellows via the AMA's GME e-Letter and the AMA Resident and Fellow Section eVoice in summer 2008 garnered additional anecdotal data on at-home call. (Note: Only six responses were received, so these data are purely anecdotal.) Generally, these current or former residents felt that at-home call is being abused and/or is acceptable in certain situations but needs to be more closely regulated. The one positive response was from an orthopaedic surgery resident who reported that the program counts all hours worked at-home as part of the 80-hour limit. Other respondents were less sanguine:

- "On the weekend we round on both services in the hospital on Saturday and Sunday from 8-6 on average, depending on the patient load. We are also on pager call the entire 64 hours of the weekend. . . . Our pages include calls from outside [physicians], parents, the ER, new inpatient consults, and various labs reporting results. On some of my call nights I have received 25-30 pages. On an average weekend (Fri PM to Mon AM) I sleep approximately 10-12 hours uninterrupted total . . . there are weekends when I have slept less than 5. There needs to be some imposition of guidelines to programs to regulate the usage of home call. In certain subspecialties, I imagine home call is not a particularly draining experience, but when I am covering 30-40 inpatients, many of whom are in the ICU, I can promise it is."

- At-home call "is an abuse of the 80-hour work week. It is good for experience, maturity, continuity of care, and responsibility. However, the interrupted sleep and work hours can easily violate the basic premises of the new work restrictions."

- "At-home call can work for services that do not get consults every night or rarely have emergencies, but not for such disciplines as transplant, trauma, general surgery, or very busy academic centers. At our surgery program, chief residents who are called back to the hospital tend to stay there—it's too tiring to drive back and forth more than once a night, and the gas cost adds up. If the chief resident stays home most of the night, however, very inexperienced housestaff are responsible for every surgical patient in the hospital."

DISCUSSION

The ACGME only counts the hours the resident works while physically in the hospital towards the 80 duty hour maximum. This does not include time spent at home answering questions, making medical decisions (such as a diagnosis or referral), prescription orders (or changes to existing orders), diagnostic testing orders, discharge orders, etc., perhaps over the course of several hours. For example, a resident who worked from home for 12 hours in a given week, but only came into the hospital for 2 of those hours, can still be scheduled for 78 more hours that week (under current ACGME rules), for an overall weekly total of 88 hours.

From an educational perspective, at-home call replacing in-house call decreases the opportunities for senior resident physicians to interact directly with junior resident physicians at the bedside. This has reduced the learning/teaching interactions that occurred naturally when senior residents took

1 call in-house; further, after making an evaluation, residents could return to their on-call room with
2 no more sleep interruption than if they had taken the call at home.

3 From a service perspective, increased use of at-home call is a logical response by programs to the
4 growing demands on all physicians, both residents and attendings. It may be that hospitals with
5 fewer financial resources cannot afford to hire additional providers and are more likely to impose
6 onerous at-home call duties on residents/fellows.

7
8 Residents'/fellows' reactions to the increased use of at-home call vary by specialty/subspecialty,
9 with some in favor, others in opposition. At the 2007 National Congress of Family Medicine
10 Residents, for example, a resolution was adopted that the American Academy of Family Physicians
11 "recommend that residents be required to factor any work they are asked to do outside of the
12 clinic/hospital as part of the 80-hour calculation."⁷ With the variations among specialties in the use
13 and acceptance of at-home call, as well as significant differences in the intensity of the work, a
14 flexible approach to regulation may be needed, rather than a one-size-fits-all mandate.

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16 Data on at-home call and its effects, pro and con, are still sparse, and more (and more in-depth)
17 information is needed. The ACGME Annual Educational Conference in March 2009 will focus on
18 sleep and duty hours, and may be a venue for raising awareness of this issue and encouraging
19 further research and study.

20
21 With increasing acceptance of and advances in communications technologies in medicine (and
22 society at large), the lines between "work" and "home" continue to blur. Just as the practice of
23 telemedicine continues to grow, a "virtual presence" in one's residency/fellowship program may
24 become more common, particularly in certain disciplines that lend themselves to technological
25 interventions.

26
27 More patient care activities can be provided outside of the usual clinical settings. For example, a
28 growing number of residents are choosing to "finish" their clinical notes at home after leaving the
29 hospital via a remote electronic medical record (EMR) connection. Regardless of whether residents
30 are doing such activities voluntarily for their convenience versus having such patient care activities
31 mandated so that clinical "homework" becomes necessary to avoid duty hour violations, the effect
32 is the same—the hours spent doing clinical work at home are not being included in the calculation
33 of total work hours.

34
35 At the same time, because of the intense demands of training on resident physicians, protected time
36 for rest and relaxation is required, free from e-mails, phone calls, and electronic paging. The
37 growing body of research on sleep deprivation and burnout attest to the importance of "down
38 time." Further, overuse of at-home call jeopardizes the irreplaceable opportunities for face-to-face,
39 in-person exchanges—with colleagues, mentors, and patients alike—that are a key component of
40 medical education and training as well as the inculcation of professionalism.

41
42 For these reasons, increased use and intensity of at-home call in graduate medical education should
43 be carefully monitored, studied, and amended as needed, to ensure that it serves the best interests of
44 resident education and well-being as well as promoting patient care quality and safety.

RECOMMENDATIONS

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

1. That our American Medical Association encourage 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. (Directive to Take Action)
2. That our AMA and the ACGME 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. (Directive to Take Action)
3. That our AMA 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. (Directive to Take Action)
4. That our AMA 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. (Directive to Take Action).
5. That our AMA encourage 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. (Directive to Take Action).

Fiscal Note: Less than \$500.

¹ Glossary of Terms Related to Resident Duty Hours (to be inserted into the “Glossary of Selected Terms Used in GME Accreditation”). ACGME. Available at: http://www.acgme.org/acWebsite/dutyHours/dh_glossary.pdf. Accessed July 18, 2008.

² Common Program Requirements, Effective: July 1, 2007. ACGME. Available at: http://www.acgme.org/acWebsite/dutyHours/dh_dutyhoursCommonPR07012007.pdf. Accessed July 18, 2008.

³ Frequently-Asked Questions about the ACGME Common Duty Hour Standards (Updated April 2007). Available at: http://www.acgme.org/acWebsite/dutyHours/dh_faqs.pdf. Accessed July 18, 2008.

⁴ Kupferman TA, Lian TS. Implementation of duty hour standards in otolaryngology-head and neck surgery residency training. *Otolaryngol Head Neck Surg*. 2005 Jun;132(6):819-22.

⁵ Brunworth JD, Sindwani R. Impact of duty hour restrictions on otolaryngology training: divergent resident and faculty perspectives. *Laryngoscope*. 2006 Jul;116(7):1127-30.

⁶ Work Hours Question – Student Doctor Network Forums. Available at: <http://forums.studentdoctor.net/showthread.php?p=6859320>. Accessed July 29, 2008.

⁷ Resolutions from the 2007 National Congress of Family Medicine Residents. Available at:

http://www.aafp.org/online/etc/medialib/aafp_org/documents/cme/courses/conf/conference/residentresolutions.Par.0001.File.tmp/2007-resident-resolutions.pdf. Accessed July 28, 2008.