

Association of Pediatric Program Directors (APPD) Position Statement **in Response to the IOM Recommendations on Resident Duty Hours**

Prepared April 2009 by the APPD Board of Directors in consultation with the membership of the APPD (an organization consisting of over 2,200 educators within accredited pediatric training programs), who participated via website comments, conference calls, and action teams, as well as at our annual meeting.

EXECUTIVE SUMMARY

The APPD leadership and members have given significant thought and study to the IOM Committee's recommendations. We support the principles of patient safety and education of residents and fellows in an environment that fosters resident well-being and development of a sense of professional responsibility. We are concerned, however, that the recommendations of the IOM Committee are intended to enhance patient safety without appropriate consideration for the educational and professional development of trainees. Furthermore, we are concerned that by neglecting these other important aspects of residency training, implementation of the IOM Committee's recommendations may ultimately risk both the safety and well-being of patients and the achievement of competencies sought in graduate medical education.

The APPD supports improved monitoring of existing duty hours requirements, enhanced supervision where that is lacking, improvement of patient handover processes, and monitoring of moonlighting activities both within and external to the training program. Furthermore (as stated by the IOM report), any implementation without appropriate system support and resources could result in unintended negative effects which could threaten patient, resident, and workforce outcomes.

Thus, the APPD strongly believes that few components of the IOM Committee's recommendations can be implemented without sufficient funding, workforce requirements, and other resources. There are some recommendations that we believe should never be implemented. We support moving forward now with improved monitoring of existing duty hours, reporting, oversight, monitoring of moonlighting and other aspects of the recommendations as below. We encourage more study and piloting of resident schedules and educational programs intended to enhance patient safety and the outcome for resident and fellow education.

CURRENT STATE

The APPD reaffirms the principles of patient safety, resident education and well-being, and support of resources for graduate medical education. We agree that the current system has room for improvement in oversight, handovers, and education as suggested by some data and reports. While data on the 2003 Duty Hours effects on Pediatrics are mixed and somewhat limited, we believe that most programs have effectively implemented and adhere to duty hours. (RRC News for Pediatrics, 2007) Programs presently have some degree of flexibility within the required duty hours to work in different shift, float, and night call systems. It is difficult to assess graduate and educational outcomes from these changes. Some educators and faculty are concerned that there may have been a reduction in attainment of educational goals and professional attitudes of trainees. Although there has not been a clear degradation in competence and other outcomes, the studies are lacking.

Since the 2003 enactment of duty hours requirements, systems of care, funding, and institutional commitment to GME have not fundamentally changed. Overall resident stress has been reduced by some reports, but there are persistent major competing demands in patient care, continuity, and education. Faculty and administrative leadership also report these challenges. There was essentially no new funding for the 2003 ACGME Duty Hours, and most programs adapted with internal institutional funding and increased demands on other providers and faculty. Testimony at the IOM hearings on resident duty hours defined the significant costs to graduate medical education training institutions. Presentations by Opas, Noah, Liekweg and Daschbach describe costs of 2.17 to 4.34 million dollars per institution. Few programs have had funding to conduct research and many unmet needs for oversight and research regarding the impact of the required changes remain. Institutional, insurer, and federal funding for GME have not significantly expanded. Thus, there are several current challenges and “gaps” which are very likely to be exacerbated by additional restrictions and limits on resident scheduling.

AREAS OF CONCERN:

SUPERVISION AND AUTONOMY

Graded supervision is a delicate balance between increasing learner responsibility for patient care and the desire by society, faculty and institutions to provide optimal care for patients. The IOM report outlines the educational principles and referenced literature with which our group of program directors agrees. It is clear that all residents are different. Some residents need less direction after certain behaviors and practices have been observed and accomplished. Other residents, even into the PL-2 and PL-3 years, may not be ready for greater independence in their care of patients. Graded responsibility and progressive autonomy are important aspects of the development of competent and safe pediatricians. Tension exists for both program

directors and faculty around the issue of what level of supervision is required for a given resident. Determination of the necessary level of supervision is based on a very complex set of decisions, and on observations of the individual resident and his/her past experiences and evaluations. Rather than relying on rigidly prescribed supervision requirements, it would be more beneficial to create a set of developmental milestones to attain. Such milestones should define specific, observable and well-defined actions/behaviors expected of a resident throughout their graduate pediatric training, consistent with the goals of the Milestones project.

The APPD recommends the following Action Items regarding supervision:

- a. Develop a set of standards that defines:
 - i. A reasonable framework of expectations for pediatric programs to evaluate learners in a developmental manner that will inform supervisors as to how individual residents should be supervised. This would go far beyond the artificial and rudimentary PL year, thus enhancing patient safety.
 - ii. Supervisory roles/levels such that program directors can develop their faculty to know and function within this supervisory framework. Faculty development in supervision is needed.

THE LEARNING ENVIRONMENT

The APPD cannot emphasize strongly enough the importance of the resident learning climate. The constraints that are inherent in overly prescriptive duty hours may encourage superficial experiences, lack of continuity with patients, and a lack of a sense of responsibility for their care. The fragmentation of care that would be imposed by the detailed work hours recommended by the IOM Committee is the most concerning aspect of the Report. The overarching importance and pressing need for time for reflective learning, interaction with supervisors and meaningful interaction with patients as a touchstone for training and professional formation cannot be ignored. There must be adequate time during residency training to allow these experiences to occur. Individual programs should be held responsible for close and available supervision that allows and encourages learners to reflect on their strengths, weaknesses, interactions, decisions, and outcomes, and enables them to form therapeutic relationships with patients. ACGME requirements should address aspects of supervision rather than further defining duty hours.

Key issues regarding the learning environment:

- Recommended duty hours are not compatible with current care models in the inpatient setting.
- Frequent nighttime shifts will negatively impact time for Continuity Clinic, an important component of pediatric residency training.
- Programs will move to shifts to avoid the “5 hour nap”.
- Training to achieve competency in pediatrics may need to be extended. If length of training is not extended there may be a shift toward increased inpatient assignments to address service needs, pulling residents away from important ambulatory educational experiences.
- Extended training length may result in fewer residents entering fellowship at a time when subspecialties are facing serious workforce issues.
- Newly recommended duty hours may negatively impact resident work-life balance, since their work schedule will frequently be out of synch with their family’s schedule.
- Duty hour limits will make fewer residents available to attend teaching conferences.
- Faculty willingness to provide increased clinical and teaching time to match resident schedules will be a challenge.
- A redesign of training must assure that residents have adequate educational opportunities.
 - Less direct time with patients leads to less experience.
 - Experience focused on caring for only patients with the greatest clinical need limits experience with more common, routine or preventative issues.
 - Ultimately these concerns translate into inadequate preparation for the demands of the profession after residency.

IMPACT OF WORKING IN SHIFTS

Duty hours are not a concern in the ambulatory areas of pediatrics and in the Emergency Room. However, in the inpatient arenas (Inpatient unit, PICU, NICU), there are many opportunities for improvement. The IOM recommendation of a 30 hour duty period with an incorporated 5 hour nap is not practical for implementation in any of the current models of care. Thus programs would be “forced” to move to a “shift” model as has already been done in some programs. It should be noted that Pediatric trainees spend close to 18 months in these three settings, so instead of programs having 1-3 months of night float as they do currently in some programs, night time assignments will have to increase as much as 10 fold.

A “shift to shifts” will create challenges that will have a serious impact on both education and patient safety. Shifts will not be practical if residents work only 3 or 4 nights in a row. Scheduling and staffing will be disruptive to daytime learning experiences. If residents are required to have 12 hours off after a night shift, there will be no overlap time for detailed handovers, an important patient safety concern. And when will teaching occur? Teaching at

night has limited focus, addressing primarily the patient care competency. Increasing shift work will negatively impact attendance at daytime didactic conferences and workshops that have been implemented in training programs to assure that residents receive a broad education in all the competencies. In addition, a key component of pediatric education is maintaining an active Continuity Clinic with a panel of patients. The ACGME requirement is a minimum of 36 Continuity Clinic sessions per year. Residents will not be able to maintain this important part of their education when working more night shifts. Residents working shifts for 3-4 continuous nights followed by 48 hours off will significantly shorten their clinical experiences in the inpatient setting. If competencies cannot be attained, training will likely need to be extended. There is no funding for increased training at this time. Another important consideration is whether moving to shifts will have a negative impact on resident work-life balance and their sense of well being. Extended times of night work will take away from time with their spouse, significant other, and children.

Key issues regarding the impact of working in shifts:

- Recommended duty hours are not compatible with current care models in the inpatient setting.
- Frequent nighttime shifts will negatively impact time for Continuity Clinic, an important component of pediatric residency training.
- Newly recommended duty hours may negatively impact resident work-life balance, since their work schedule will frequently be out of synch with their family's schedule.
- Concern is raised about faculty willingness to provide increased clinical and teaching time to match resident schedules.
- Educational conference attendance will decrease.
- Professionalism may be negatively impacted.
- A shift work mentality may result.
- Patient safety may be impacted with increased handovers to transfer care, which may increase number of medical errors or negate any potential improvements.
- Continuity of care will be decreased.
- The patient-doctor relationship will be eroded.
- Training must assure residents have adequate educational opportunities.
 - Less direct time with patients, leads to less experience.
 - Experience focused on caring for only patients with greatest clinical need, limits experience with more common, routine or preventative issues.
 - Residents will graduate with inadequate preparation for the demands of the profession after residency.

The APPD recommends:

- Training programs should study new models of care and education that reduce work hours when possible, make optimal use of time for resident education, and provide both supervision and teaching during all phases of the resident work schedule.

- The ACGME should allow the Residency Committees, with input from Program Directors, to develop specialty-specific recommendations for:
 - Duty hours
 - Level of supervision
 - Workload
- Formalized education and use of technology to improve patient handovers
- That institutions assure that systems of care exist that decrease the risk that any provider error reaches the patient

STAFFING REQUIREMENTS TO MEET RECOMMENDATIONS

THE CINCINNATI PILOT STUDY

“At least an additional 8,247 residents would be necessary.” (IOM Committee report) For individual programs, this would represent a significant increase in intern class size. The Cincinnati Children’s Hospital pediatric residency program conducted a pilot study of the implementation of all of the IOM recommendations on a single hospitalist/general service for one month:

Pros:

- More "day time off" for residents
- Fewer total hours per week for each resident
- Family centered rounds unchanged
- Better supervision and communication (teams signed out with the senior, intern, and attending together)
- Improved prioritization skills and efficiency
- Increased interaction between residents and attendings- both daytime and nighttime teaching
- Increased patient contact (more patients per intern with primary responsibility vs. cross coverage)

Cons:

- Continuity of patient care with same provider was poor (affects patients and education)
- Attendance at didactic educational experiences was poor
- No reflective learning time while on duty
- Negative impact on circadian rhythm (several residents did not adjust)
- Night residents felt "isolated" from the "rest of residency"
- Attending discontinuity - residents worked with multiple attendings, affecting oversight, feedback, evaluation and competency
- Estimated resident manpower required a 25% increase, additional faculty/hospitalist requirement of 1 FTE (33% increase)

STAFFING REQUIREMENTS

Expansion of the workforce to meet IOM Committee requirements using only additional residents is not feasible due to: a limited pool of qualified applicants, GME funding caps on residency slots, and lack of institutional support for more positions. The logistics of integrating additional trainees into the current system would require programs to ensure that they were able to meet the full RRC required distribution of rotations and competency experiences. Hiring of hospitalists, nurse practitioners, and other professionals would not only require additional funding and training, but it is unlikely that such an expanded workforce is available.

Without adequate funding or workforce expansion the current faculty at teaching hospitals would be asked to add to their current duties. Increased faculty involvement would further reduce the sense of resident autonomy and responsibility for their patients. Faculty members will suffer from increased fatigue thought to be detrimental to patient safety when suffered by residents. In the interest of patient safety duty hours limitations should apply to both faculty and residents

Finally, we anticipate future workforce implications if institutions and health systems are forced participate in accredited GME training with increased costs. This will inevitably result in the closing of some residency and fellowship programs. This is an especially high risk for small training programs.

COSTS TO IMPLEMENT THE IOM RECOMMENDATIONS

The IOM estimated overall costs of \$1.7 Billion. This is a significant underestimate of true costs since this estimate was based on replacing the patient care that would have been delivered only by the PL1 residents, rather than including all years of training, and did not project the annual expenses of sustaining this workforce. At the program level, Boston Combined Residency Program in Pediatrics has estimated cost to the Pediatric Department of approximately \$1.7million to 2.3 million/year. Difficulties identified by the program include *“The 30 hour with a 5 hour nap was felt untenable because of replacements across the program, so we immediately went to a day team/night team model. However, it is the combination of a) limiting night shifts to no more than 4 nights in a row; b) requiring one day off per week without averaging; c) having a 48-hour period off after a string of nights; and d) trying to optimize weekend days off (for lifestyle/personal health reasons) that creates the major problems and adds to costs.”*

The APPD identified the following areas, each with its own potential costs in money, time, and educational value, as important considerations. All costs should be examined from multiple perspectives: patient, resident, educational program, clinical department, institution/hospital, insurance payers, society/government and include both short-term and long-term/future cost implications (such as future workforce).

Financial considerations:

- Cost of increased number of providers (residents, nurse practitioners, hospitalists)
- Cost of increased monitoring by ACGME (admin. time, data systems, etc.)
- Cost of increased faculty number and time
- Cost of increased technology
- Cost of extending length of training (if require 4 yrs. vs. 3yrs. to meet equivalent)
- Cost of additional required space/rooms for increase in night personnel
- Inadequate reimbursement for GME (federal caps on resident salary, educational support)
- Increased financial burden to fellows with limited moonlighting opportunities
- Sustainability of smaller sized residency programs

APPD RECOMMENDATIONS REGARDING DUTY HOURS STANDARDS

The APPD is supportive of improved monitoring of existing duty hours requirements, oversight and monitoring of moonlighting, improved patient handover procedures, and careful attention to supervision of trainees. Our organization has concluded, however, that any revision of duty hour requirements should be undertaken with consideration for individual specialty and resident level training needs. The APPD recommends that few of the IOM Committee recommendations be implemented until funding is made available, as detailed below. We encourage study and piloting of schedules and curricula within and among residency training programs to achieve continued improvement in physician training.

The APPD Membership expressed concerns that the IOM data used as the basis for the recommendations consisted largely of studies with small sample sizes or were from non-medical fields. The greatest concern was that the recommendations would be an unfunded mandate with potential harm to patient safety and graduate medical education. Finally, we believe that the IOM recommended duty hour limits will significantly hinder the creativity and innovation which leads to improvement in resident education in all specialties, all program sizes, at every graduate medical training level.

The following table is a brief summary of the IOM recommendations and potential gaps in implementation. Some of the recommendations can be successfully implemented without major gaps in funding. However, many recommendations have major gaps in funding, workforce or resources and merit discussion of individual components - additional specifics are included in the sections that follow.

Summary table of IOM recommendations by Report Chapter	Summary of implementation/gap
(1) Duty Hour recommendations- additional limits in continuous hours, shift, days off, etc.	See detailed discussion, several gaps in ability to implement
(2) Moonlighting inclusion in hours- include limits, explicit requirements, programs to approve and monitor	Immediate implementation, no gaps (except financial for residents/fellows)
(3) Monitoring of hours- ACGME and programs, more monitoring	Move to implement, some administrative cost and time by residents
(4) Patient care “service” loads and balance with educational need- institutional support, caps, etc.	See detailed discussion, several gaps in ability to implement
(5) Oversight and supervision- level appropriate, graduated responsibility, on site faculty	Move to implement, although tied to gap in funding, faculty number and time
(6) Safe transportation options post-call	Move to implement, some administrative and institutional costs
(7) Development of safe hand offs, transitions, and attention to patient safety	Move to implement, some administrative and institutional costs
(8) GME sponsors should involve residents in quality, safety, duty hour monitoring	Immediate implementation, no gaps
(9) All GME funders should provide support to implement changes- also recommends meeting of funding groups	Outside of APPD, although we can provide supporting information, major gap financial
(10) ACGME to convene stakeholders to organize data, needs, resources. Also study, report, research needs.	Outside of APPD, although we can provide measurement information, major gap financial

APPD RESPONSE TO SPECIFIC ELEMENTS OF IOM PROPOSED DUTY HOURS

As indicated in the summary table above, the IOM report contains both a broad set of recommendations, in addition to specific proposals regarding duty hours. The following table is copied from the IOM Report, with the addition of our APPD recommendations for the corresponding specific items. Please see the footnotes for additional discussion of each issue.

	2003 ACGME Duty Hour Limits	IOM Recommendation	APPD Recommendations
Maximum hours of work per week	80 hours, averaged over 4 weeks	No change	No change
Maximum shift length	30 hours (admitting patients up to 24 hours then 6 additional hours for transitional and educational activities)	<ul style="list-style-type: none"> • 30 hours (admitting patients for up to 16 hours, plus 5-hour protected sleep period between 10 p.m. and 8 a.m. with the remaining hours for transition and educational activities) • 16 hours with no protected sleep period 	24 hours patient care and educational time plus 3 hours transition time ¹ (as done in NY state)
Maximum in-hospital on-call frequency	Every third night, on average	Every third night, no averaging	Every third night, with averaging ²
Minimum time off between scheduled shifts	10 hours after shift length	<ul style="list-style-type: none"> • 10 hours after day shift • 12 hours after night shift • 14 hours after any extended duty period of 30 hours and not return until 6 a.m. of next day 	<ul style="list-style-type: none"> ◆ 10 hours after any shift ³ ◆ 14 hours after any extended duty period of 24 hours or more
Maximum frequency of in-hospital night shifts	Not addressed	4 night maximum; 48 hours off after 3 or 4 nights of consecutive duty	5 night maximum; 48 hours off after 5 nights of consecutive duty ⁴
Mandatory time off duty	<ul style="list-style-type: none"> • 4 days off per month • 1 day (24 hours) off per week, averaged over 4 weeks 	<ul style="list-style-type: none"> • 5 days off per month • 1 day (24 hours) off per week, no averaging • One 48-hour period off per Month 	<ul style="list-style-type: none"> ◆ 5 days off per month, averaged over 6 months ⁵ ◆ 1 day off per week, with averaging ⁶ ◆ One 48-hour period off per month
Moonlighting	Internal moonlighting is counted against 80-hour weekly limit	<ul style="list-style-type: none"> • Internal and external moonlighting is counted against 80-hour weekly limit • All other duty hour 	<ul style="list-style-type: none"> ◆ Internal and external moonlighting is counted against 80-hour-weekly limit ◆ All other duty hour

		limits apply to moonlighting in combination with scheduled work	limits apply to moonlighting in combination with scheduled work ⁷
Limit on hours for exceptions	88 hours for select programs with a sound educational rationale	No change	No change
Emergency room limits	12-hour shift limit, at least an equivalent period of time off between shifts; 60-hour workweek with additional 12 hours for education	No change	No change

1. Maximum Shift Length

The IOM Report recommends maximum shift length of no more than 16 hours. Limiting shifts to 16 hours is concerning to the APPD for several reasons. Changing to a shift schedule would double the number of handovers on the rotations that typically have 24 hour call schedules, increasing the likelihood for patient care errors. The significant discontinuity of care associated with this fragmentation is not only a patient safety risk, but could jeopardize resident education associated with longitudinal care. Pediatric residents will lose the opportunity to follow the evolution of disease processes, as the average length of stay for most inpatient services is 2.5 days. It is likely that the disruption in continuity of care will also decrease patient care satisfaction, due to fragmentation in the patient-physician relationship.

These changes have the potential to significantly impact resident education. Anticipated areas of impact include: decreased reflective time, shifting from educational activities such as conferences, educational rounds and small group teaching sessions to patient care tasks and increased clerical/administrative tasks. Key educational elements of residency such as Continuity Care Clinic would be dramatically reduced since residents on night float could not attend clinic when working nights. Moving to a schedule that is designed using only shifts requires approximately 25% more residents. Since there are not sufficient residents available, implementing this schedule would require residents be assigned to additional patient care activities preferentially over educational activities.

These recommendations could disrupt the balance of educational experiences to shift the focus to inpatient and subspecialty training at the expense of ambulatory, community, and other aspects of pediatrics.

The data on sleep deprivation that was provided in the report does not directly apply to pediatrics. The literature cited supporting limited shift length is based on work that focuses on a single task activity throughout each duty shift. Residency differs in that it is a dynamic mix of clinical, reflective and other educational activities and not simply continuous repetitive tasks. Each patient case is unique, requiring different skills and activities, each with varying intensity and complexity. Resident patient care activities include supervisory experiences, communication with patients and families, communication with faculty and other educators, as well as the transfer of care to another physician.

As written, the IOM recommendations on shift length, series of shift length and required days off following shift work would lead to a negative impact on resident quality of life. Residents would have more time spent cross covering on patient care services and less time spent home at night. Increased resident burn-out has been reported with decreased satisfaction at work.

2. Maximum in-hospital on-call frequency

Although we support, in principle, the concept of every third night call with no averaging, the APPD feels it is important to allow residents flexibility in their schedule in order to ensure resident quality of life. There are similar concerns about the prescriptive recommendations for the number and timing of days off and weekends off without averaging. There must be oversight by the program director to ensure that this flexibility is not over-used and that the work schedule of the residents is constructed to provide adequate rest and continuity of experiences.

3. Minimum time off between scheduled shifts

The IOM Report recommends that the time required off between shifts should remain at 10 hours between any two shifts. This allows adequate time for transfer of information, and still allows the resident to return to work after the 10 hour break to provide continuity of care to the patients.

4. Maximum frequency of in-hospital night shifts

The IOM Report recommends that the number of consecutive night float shifts not exceed 4 days. To conform to a 3 or 4 day maximum is quite complex and disruptive to a program. The APPD strongly recommends a schedule of 5 consecutive night shifts. This schedule allows residents to maintain a reverse circadian rhythm throughout the week, instead of switching back and forth between days and nights. A 5 consecutive night schedule also reduces the disruption in education of residents from other services that would need to cover the gaps in the night float schedule. Residents cross-covering will not know the patients as well as residents who have cared for those same patients over time, placing patient safety at greater risk.

5. Mandatory time off duty

The IOM Report recommends 5 days off per month, without averaging. The APPD recommends that up to 5 days off per month should be averaged over 6 months, just as actual post-training practice has such variability.

6. Mandatory time off duty

The IOM Report recommends that each resident has one day off per week without averaging. The APPD recommends that residents have the flexibility to choose to group days off. Thus, averaging of one day off per week should be allowed to continue.

7. Moonlighting

The APPD recommends that all moonlighting hours should be under the direct supervision of the program director.

REQUEST FOR FUTURE PARTICIPATION

The Association of Pediatric Program Directors would like to express not only our willingness to participate in the Resident Duty Hours and the Learning Environment Congress, but our belief that it is essential that we are present at this important event. Pediatrics is different from other specialties in many ways, and we believe that no other specialty can represent our perspective adequately. We hope that we will be honored with an invitation to participate in this next step in the ACGME's process for defining its response to the IOM recommendations.