Clinical Supervision and the Learning Environment: Lessons along the Continuum

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ACOI Trainer's Congress

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Disclosures

- None

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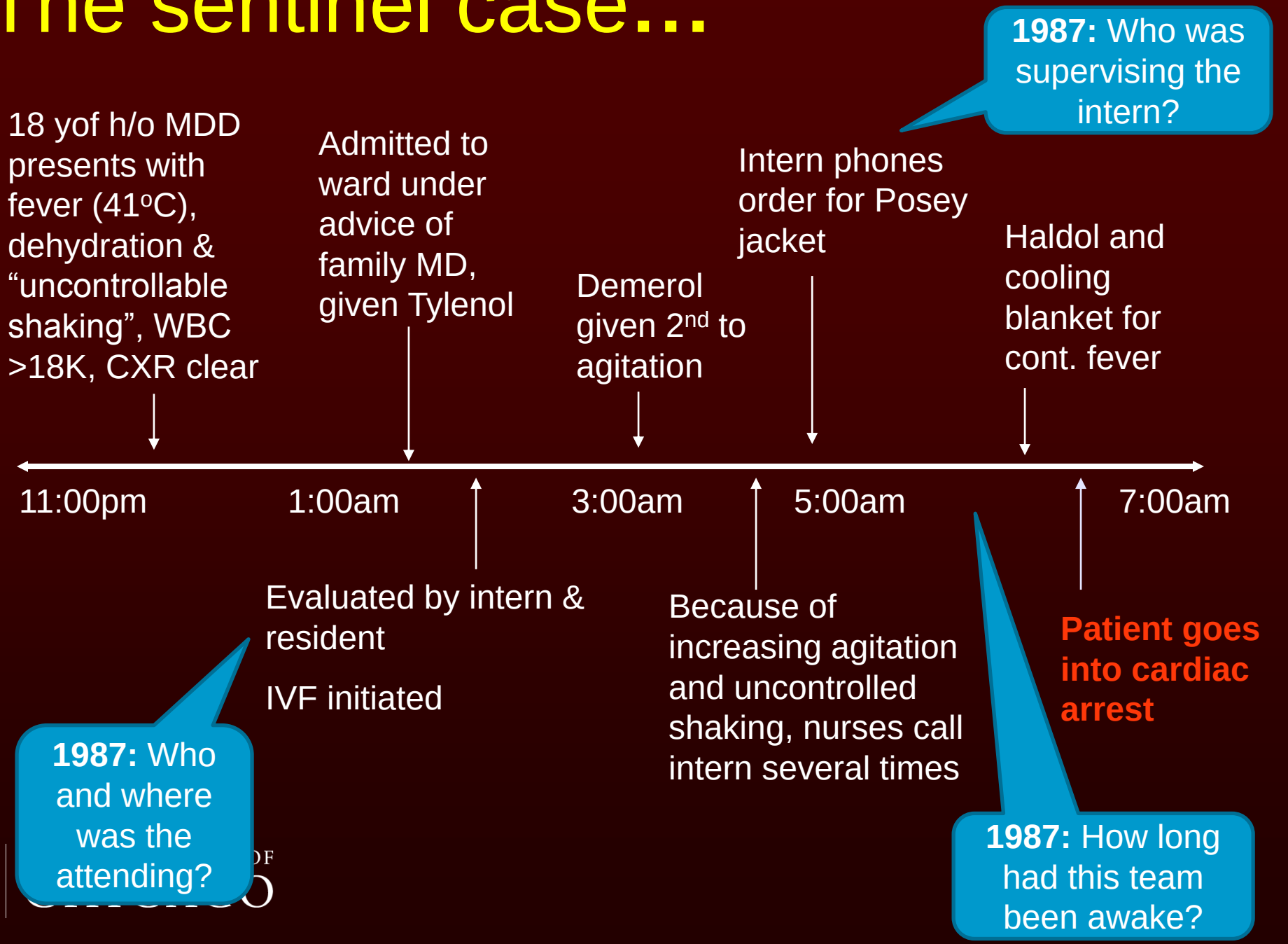
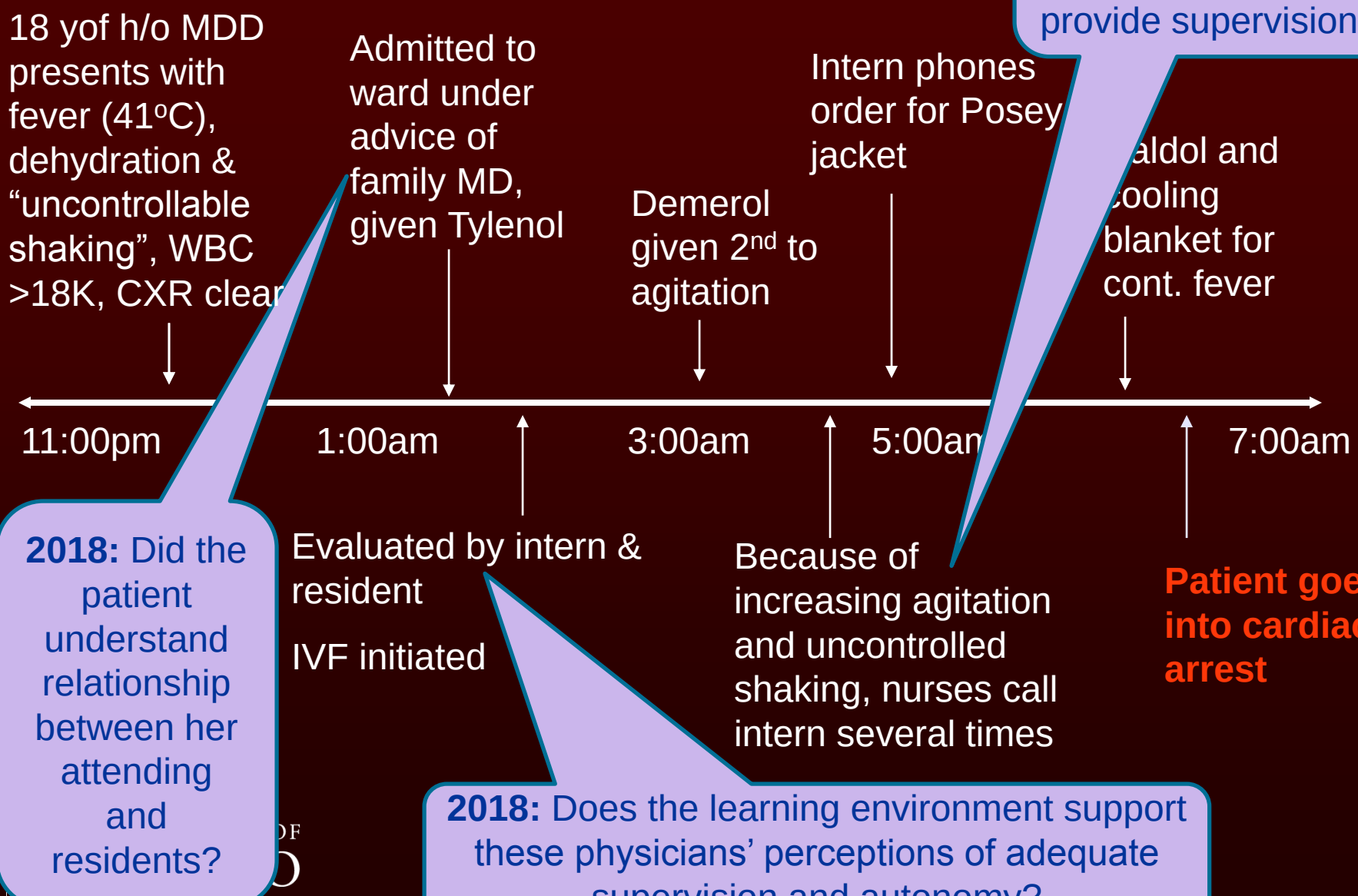
The sentinel case…



If it happened today…



The Aftermath

- Libby Zion 1965-1984
- May 1986 Grand Jury convenes
- Bell Commission 1987
- NY Health Code 405.4
- ACGME duty hour regulations 2003

"You don't need kindergarten to know that a resident working a 36-hour shift is in no condition to make any kind of judgment call—forget about life-and-death."

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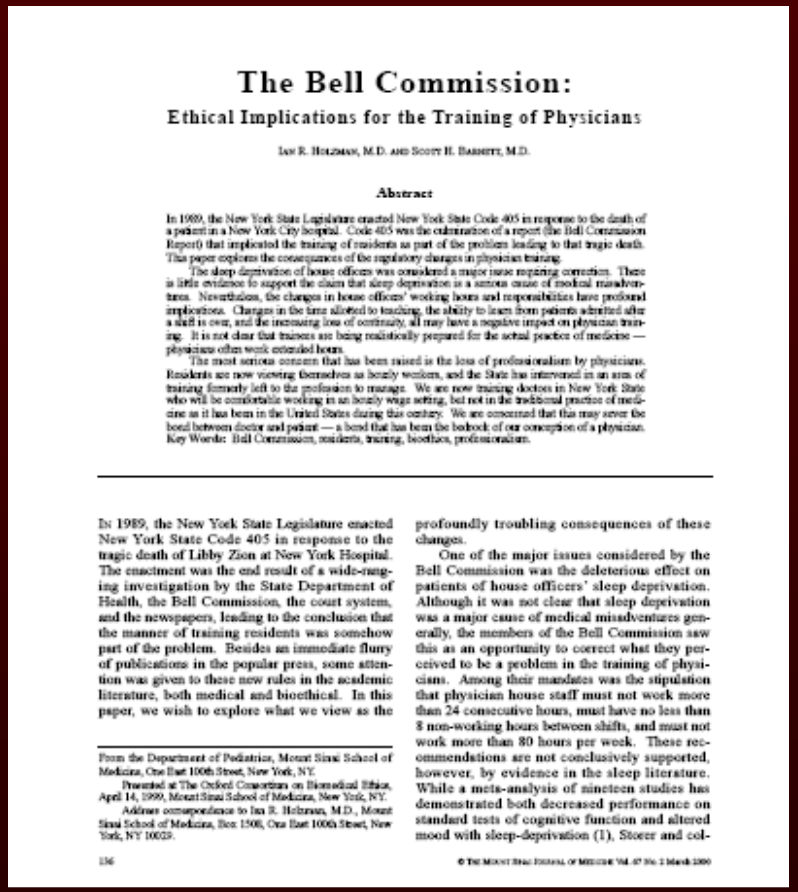
Asch, Parker, "The Libby Zion Case. One Step Forward or Two Steps Backward?" 1988.

Did Supervision Get Lost?

- Bell Commission
  - A major recommendation of the Bell Commission was to improve trainee supervision

"<u>Supervision</u> is more important than [duty] hours…"

Dr. Bertrand Bell, 2009



The Bell Commission:
Ethical Implications for the Training of Physicians

Ian R. Holzman, M.D. and Scott H. Barnett, M.D.

Abstract

In 1989, the New York State Legislature enacted New York State Code 405 in response to the death of a patient in a New York City hospital. Code 405 was the culmination of a report (the Bell Commission Report) that implicated the training of residents as part of the problem leading to that tragic death. This paper explores the consequences of the regulatory changes in physician training.

The sleep deprivation of house officers was considered a major issue requiring correction. There is little evidence to support the claim that sleep deprivation is a serious cause of medical misadventures. Nevertheless, the changes in house officers' working hours and responsibilities have profound implications. Changes in the time allotted to teaching, the ability to learn from patients admitted after a shift is over, and the increasing loss of continuity, all may have a negative impact on physician training. It is not clear that trainees are being realistically prepared for the actual practice of medicine — physicians often work extended hours.

The most serious concern that has been raised is the loss of professionalism by physicians. Residents are now viewing themselves as hourly workers, and the State has intervened in an area of training formerly left to the profession to manage. We are now training doctors in New York State who will be comfortable working in an hourly wage setting, but not in the traditional practice of medicine as it has been in the United States during this century. We are concerned that this may sever the bond between doctor and patient — a bond that has been the bedrock of our conception of a physician.

Key Words: Bell Commission, residents, training, bioethics, professionalism.

In 1989, the New York State Legislature enacted New York State Code 405 in response to the tragic death of Libby Zion at New York Hospital. The enactment was the end result of a wide-ranging investigation by the State Department of Health, the Bell Commission, the court system, and the newspapers, leading to the conclusion that the manner of training residents was somehow part of the problem. Besides an immediate flurry of publications in the popular press, some attention was given to these new rules in the academic literature, both medical and bioethical. In this paper, we wish to explore what we view as the profoundly troubling consequences of these changes.

One of the major issues considered by the Bell Commission was the deleterious effect on patients of house officers' sleep deprivation. Although it was not clear that sleep deprivation was a major cause of medical misadventures generally, the members of the Bell Commission saw this as an opportunity to correct what they perceived to be a problem in the training of physicians. Among their mandates was the stipulation that physician house staff must not work more than 24 consecutive hours, must have no less than 8 non-working hours between shifts, and must not work more than 80 hours per week. These recommendations are not conclusively supported, however, by evidence in the sleep literature. While a meta-analysis of nineteen studies has demonstrated both decreased performance on standard tests of cognitive function and altered mood with sleep-deprivation (1), Steerer and col-

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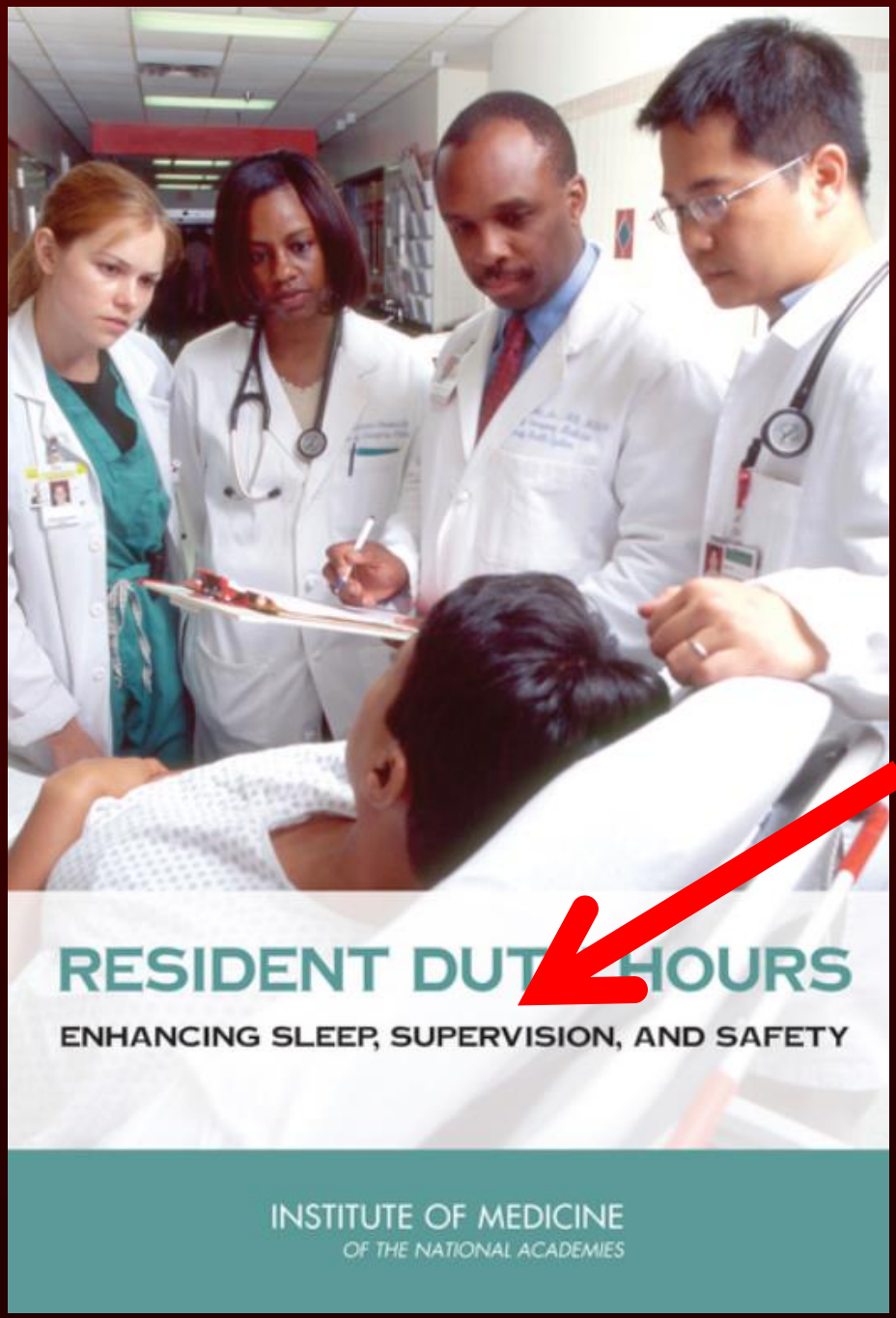

Perhaps not….

IOM report 2008

5 years post-duty hours

Recommended 24/7 (!) on-site supervision for all GME programs

Learning Objectives

- History, policy & types of supervision
  - Post-duty hours through CLER
- What do we know about supervision?
  - Review of literature
- Understanding & improving supervision
  - Trainee & attending perceptions
  - Current and best practice
  - UME to GME assessment

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Supervision & Autonomy Struggle

- Traditionally programs have been evaluated by ACGME on the ability to promote resident autonomy
  - Graduated responsibility to prepare residents for independent practice
- Tension between supervision & autonomy

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Aims of Supervision

- Amongst medical educators
  - Promote professional development
  - Ensuring patient safety
- Desired features of supervision
  - Normative = highlighting standard of care
  - Formative = feedback for improvement
  - Supportive = reflection & assistance
- Little guidance as to the nature/extent of supervision to be provided

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Med Educ 2000; 34:827-840,Med Educ 2005; 39: 696-703

Functions of Supervision

- Medical education
- Patient Safety
  - Institutional liability
  - Case review
    5 malpractice firms
    - 54% claims due to inadequate supervision
    - 19% due to poor handoffs
- Reimbursement

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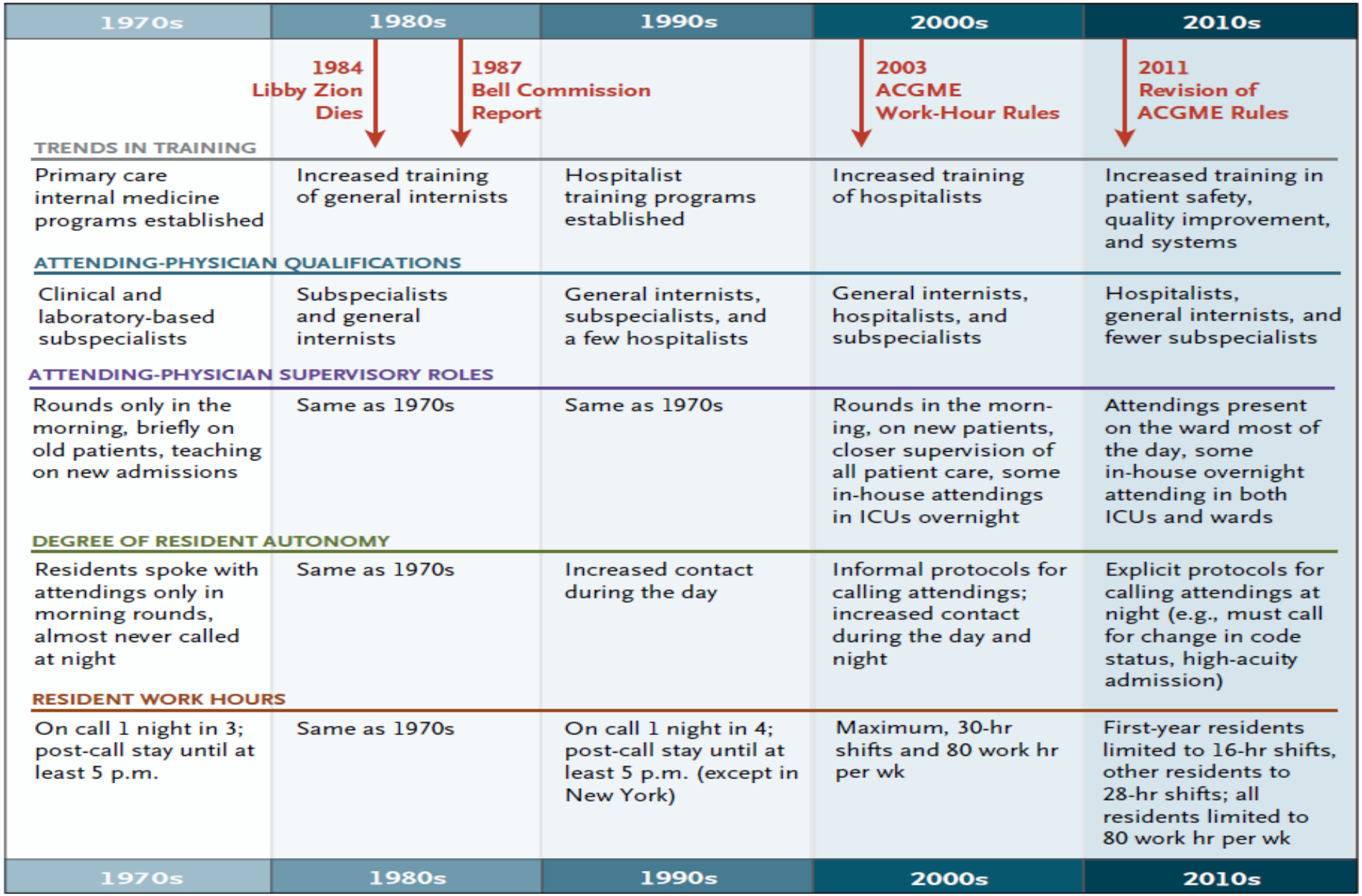
JAMA 2004; 292 (9): 1051-1056, Archives 2007;167(19):2030-2036



Timeline for Changes in Graded Autonomy in Internal Medicine Residency Programs, 1970s–2010s.

ACGME denotes Accreditation Council for Graduate Medical Education.

Detsky et al. NEJM 2014

What did we know about supervision?

Systematic Review

- ~1427 citations→ 230 articles reviewed→ 14 articles describing clinical supervision
- Enhanced attending supervision in already supervised activities (clinic, surgery, etc.) improves patient care & education
- Only 1 study examining effects of enhanced night-time attending supervision
  - Unclear impact on trainee & patient outcomes

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Farnan, Acad Med, 2012

Night-time Supervision

- Qualitative comments:

  "[the presence of the attending] is more often symbolically satisfying, than a real help"

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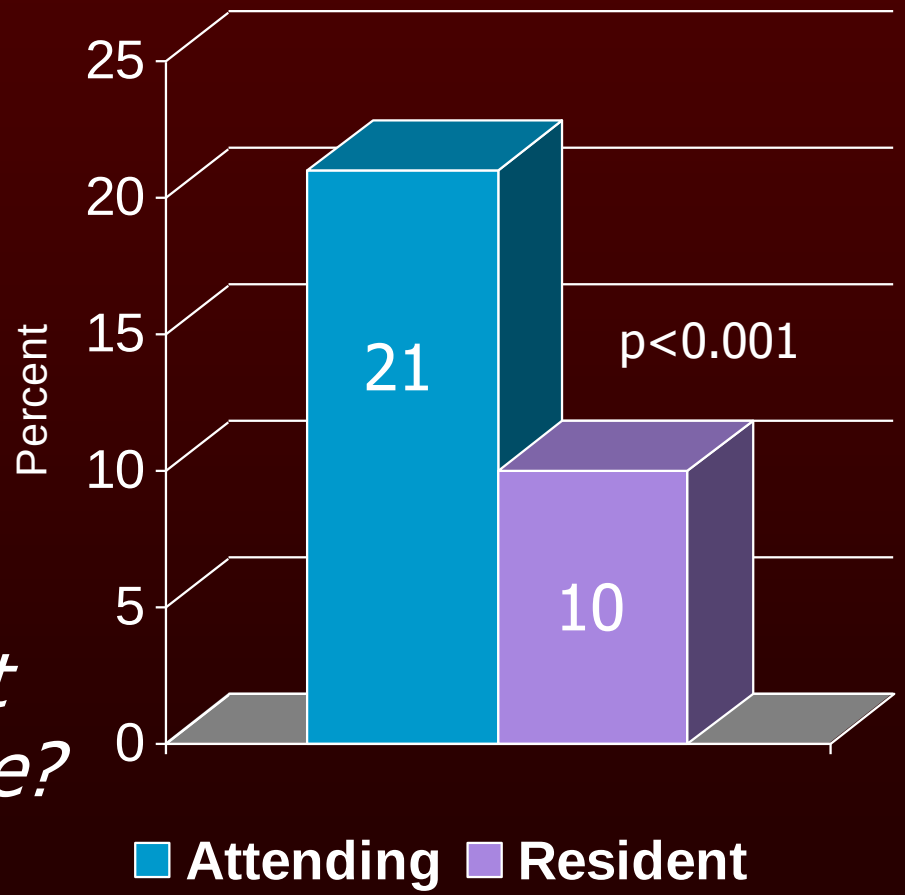
Farnan, Acad Med, 2012

Perceptions of Supervision

- IMR House-staff service @ UCM
- 81% of attendings vs. 91% of residents reported contact *at least once* per call night

Did attending input change plan of care?



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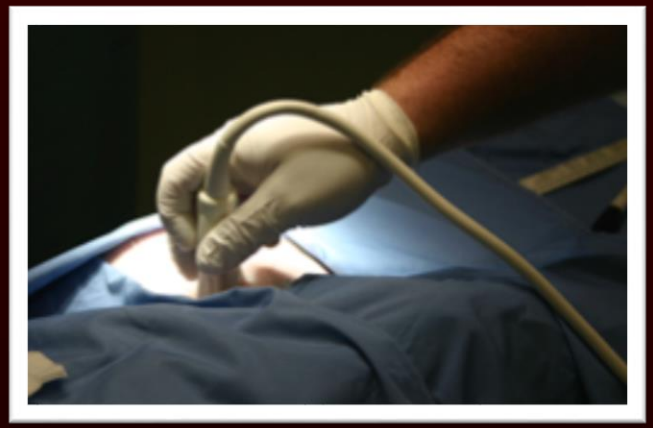
Farnan, AJM, 2009

Similarities in Preferences

- Residents & attendings ***agreed*** immediate notification warranted for:
  - Transfer of floor patient to the ICU
  - Cardiac/respiratory arrest
  - Housestaff personally performing an invasive procedure



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Farnan, AJM, 2009

"Phenotypes" of Supervision

"Micro-manager"

"We didn't have a lot of autonomy with our attending, it got dull and we withdrew from aspects of care because we knew we weren't going to make decisions anymore"

Resident apathy

Lack of faith in clinical competence

Characteristics of *effective* supervisors:

- "Safety net"
- "Teacher"
- "Mentor"
- "Role model"

"Absentee"

"There was one time where I paged him and he was in a meeting so I didn't hear from him… And I needed, I wanted an attending conversation because I didn't think that we should be taking care of [this patient] "

Abandonment

Medical decision making uncertainty

Farnan, AJM, 2009

- 18 events identified
- Resulted in
  - Adverse patient outcomes
  - Delay in care delivery
    - Procedure delays
    - Transfers to higher level of care
- Delays often due to "hierarchy of assistance"

Attdg
Fellows
Sr. Residents
Peer Residents
Literature and Refs

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Farnan et al, BMJ Qual & Safety, 2008

Determinants of Seeking Advice

Barriers	Facilitators
Conflict with autonomy Existence of hierarchy Fund of knowledge expectations Fear of repercussion	Need for escalation of care Options in decision-making Clinical experience Attending permission
"I thought my attending was very smart but it was a pain to run things by him because it would influence things too much and then you wouldn't get a chance to make up your own mind and figure it out."	*"it it needed to be addressed that night, if I had been I would have been critical, I would be totally comfortable calling my attending because she made it a point to know that that was fine calling"*

Farnan et al, BMJ Qual & Safety, 2008

Typology of Clinical Oversight

- Routine oversight
  - Clinical activities that are planned in advance
    - Post-call rounds, ambulatory clinic patients
- Responsive oversight
  - Secondary to trainee or patient-specific issues
- Direct patient care
  - All hands on deck
- Backstage oversight
  - Trainee is unaware

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Kennedy et al, JGIM, 2008

Accreditation Council for Graduate Medical Education

The ACGME 2011 Duty Hour Standard

Enhancing Quality of Care, Supervision and Resident Professional Development

2011 ACGME Standardized Levels of Supervision

Type		Definition	Example
Direct		Attending has direct contact with patient and is physically present with the resident in providing care	Cesarean delivery
Indirect	With direct supervision immediately available	Attending is physically within hospital and is immediately available to provide direct supervision	Attending anesthesiologist rotating between rooms
	With direct supervision available	Attending not physically within hospital but available by other means of communication (e.g., phone, pager)	Discussions with attending physician who is at home while residents are on call in house
Oversight		Attending reviews care that was given by resident after the fact with feedback	Post-call internal medicine rounds

ACGME Standards, 2011

Response to Enhanced Supervision following 2011 Recommendations

E.g., 24-hour overnight hospitalist coverage, ICU intensivist coverage

Positive	Mixed	Negative
Improved supervision	Perceptions of resident autonomy	Increased attending workload
No change in learning opportunities	Inconsistent supervision across faculty members	Increased role uncertainty and conflict
Enhances education on night float rotations	Discordance in expectations of supervision	Diminished resident decision-making
Improved patient safety and perception of better patient care	Few changes in patient outcomes	
Increased contact with attending during critical situations		

Farnan JM et al. J Hosp Med.2012
Garland et al. Am J Respir Crit Care Med 2012
Haber et al. J Hosp Med 2012

Kerlin et al. NEJM 2013
Sterkenburg et al. Acad Med 2010
Touchie et al. Med Ed 2014

Perceptions of 2011 ACGME Recommendations

National surveys of multi-specialty program directors and residents

- Most program directors (72%) agreed with proposal on supervision
- Residents (n=2,561):
  - Majority agreed improvement in well-being/QOL
  - 41% negative impact on quality of care
  - 54% negative impact on fund of knowledge
  - 63% negative impact on readiness to be a senior

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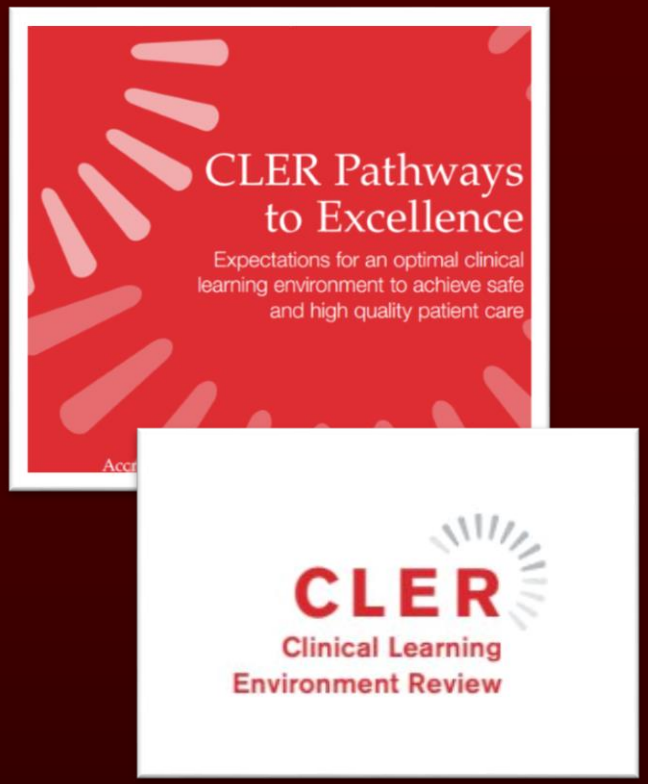
Antiel et al. NEJM 2010
Drolet et al. NEJM 2010

Supervision

- Pathway 1: Education on Supervision
- Pathway 2: Resident and Fellow Perception of Adequacy of Supervision
- Pathway 3: Faculty Perception of Adequacy of Supervision
- Pathway 4: Roles of clinical staff members other than physicians in resident/fellow supervision
- Pathway 5: Patients and families and GME supervision
- Pathway 6: Clinical site monitoring of resident/fellow supervision and workload



ACGME, CLER Pathways to Excellence, 2014

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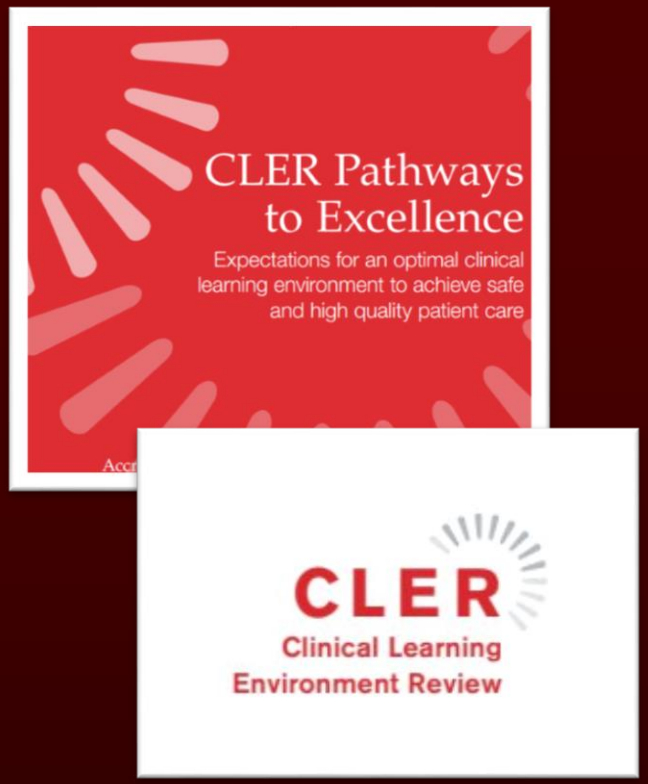

ACGME, CLER Pathways to Excellence, 2014

Defining Effective Supervision

"If you were to ask a dozen IM faculty what constitutes adequate resident supervision, you would probably get as many different answers…"

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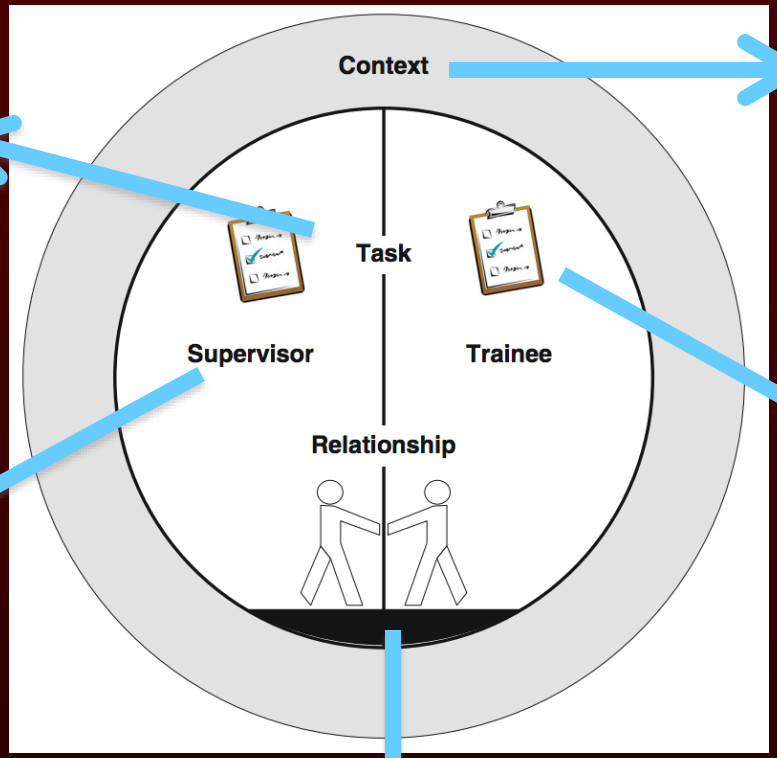
Trust- “gatekeeper to autonomy”

Task complexity
Patient complexity and risk



Workload
Workplace culture
Knowledge of the system

Familiarity with:
Assessment
Trainee
Clinical experience

Clinical competence and experience
Insight
Self-confidence
Anticipated specialty
Willingness ask for help

Expectations and approach to clinical care
Prior relationship

Hauer et al, Adv Health Science Ed, 2014
Choo, et al, JHM, 2014

Supervision Strategies

ORIGINAL RESEARCH

Strategies for Effective On-Call Supervision for Internal Medicine Residents: The Superb/Safety Model

Jeanne M. Farnan, MD, MHPE
Julie K. Johnson, MSPH, PhD
David O. Meltzer, MD, PhD
Ilene Harris, PhD
Holly J. Humphrey, MD
Alan Schwartz, PhD
Vineet M. Arora, MD, MA

- Qualitative analysis of appreciative inquiry responses
- Common issues identified included:
  - Ease of availability
  - Planned communication
  - Uncertainty recognized and addressed
  - Preservation of autonomy

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Farnan et al, JGME, 2010

Guides for Attending Supervision

	Domain	Sample strategy
S	Set expectations for notification	*I want you to contact me if a patient is being discharged, transferred to the ICU, going to surgery or another service, dies, or leaves AMA.*
U	Uncertainty	*It is normal to feel uncertain about clinical decisions. Please do contact me if you feel uncertain about a specific decision.*
P	Planned communication	*Let's plan on talking around 10pm on your call nights and before you leave the hospital each day. If you get busy or forget, I will contact you.*
E	Easy availability	*I am easy to reach by page, or you can use my cell phone or my home phone.*
R	Reassure fears	*Don't worry about waking me up, or that calling is a sign of weakness, or that I will think your question is stupid.*
B	Balance supervision and autonomy	*Tailor for level of resident experience*

Resident Guide for Attending Input

	Domain	
S	Seek attending input early	*Involving your attending early can often prevent delays in care and provide quicker results. They are also legally responsible for patients.*
A	Active clinical decisions	*Contact your attending if an active clinical decision is being made (surgery, invasive procedure, etc.)*
F	Feel uncertain about clinical decisions	*It is normal to feel uncertain about clinical decisions. You should contact your attending if you feel uncertain about a specific decision.*
E	End of life care discussions	*These complex discussions can change the course of care. Families and patients should also know that the attending is aware of the discussion.*
T	Transitions of care	*Transitions are risky for patients. Contact your attending if someone is being discharged, transferred to another service or ICU, or hospital.*
Y	Help with the sYstem / hierarchy	*Despite your best efforts, system difficulties and the hierarchy may hinder care for patients. Attendings can help expedite care through direct attending involvement with consultants*

Supervision

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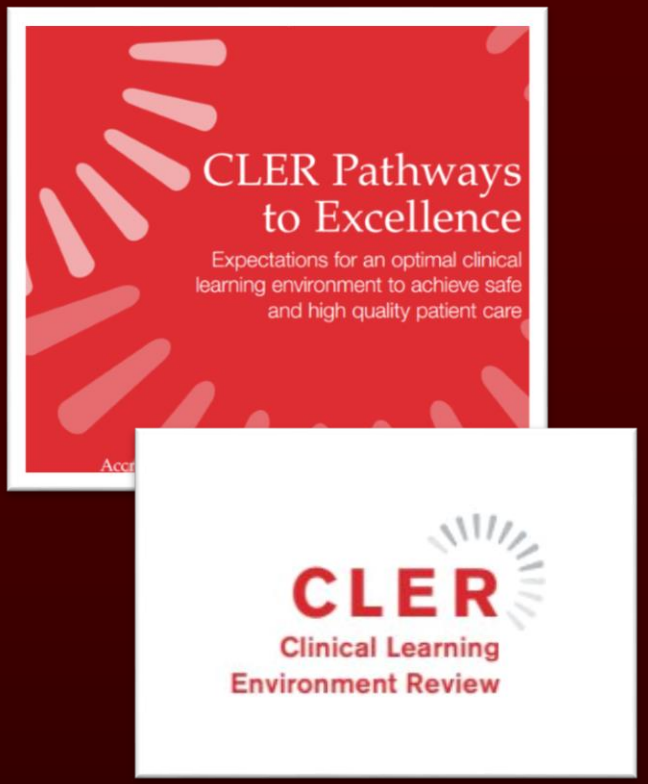

ACGME, CLER Pathways to Excellence, 2014

Faculty Perception of Housestaff Supervision and Autonomy

- Secondary data analysis of attending surveys 2001-2009 (n=514)
- Significant attending variability in perception of autonomy
  - **Perceived More Autonomy:**
    - Experienced attendings
    - Spring Season (April-June)
  - **Perceived Less Autonomy:**
    - After duty hours limits in 2003
    - Early career attendings
    - Hospitalists

TABLE 3. Association Between Agreement With Housestaff Autonomy and Attending Characteristics and Secular Factors

	Interns Involved With Decision Making		Resident Had Sufficient Autonomy	
Covariate	OR (95% CI)	*P* Value	OR (95% CI)	*P* Value
Attending characteristics				
0–4 years of experience	—	—	—	—
5–11 years of experience	2.16 (1.17-3.97)	0.013	1.73 (0.96-3.14)	0.07
>11 years of experience	2.05 (1.16-3.63)	0.014	1.50 (0.86-2.62)	0.154
Hospitalist	0.19 (0.06-0.58)	0.004	0.27 (0.11-0.66)	0.004
Hospitalist* 0–4 years of experience	—	—	—	—
Hospitalist* 5–11 years of experience	7.36 (1.86-29.1)	0.004	5.85 (1.75-19.6)	0.004
Hospitalist* >11 years of experience	21.2 (1.73-260)	0.017	14.4 (1.31-159)	0.029
Female sex	1.41 (0.92-2.17)	0.115	0.92 (0.60-1.40)	0.69
Secular factors				
Post-2003 duty hours	0.51 (0.29-0.87)	0.014	0.49 (0.28-0.86)	0.012
Spring academic season	1.94 (1.18-3.19)	0.009	1.59 (0.97-2.60)	0.064

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Martin et al, JHM, 2013

Too much supervision?

Whether by design or not, the middle of the night has historically been the time when trainees were able — and indeed required — to practice more independently. For many physicians, the need to make decisions on their own at night, knowing they could call for help if necessary, has been the crucible of their maturation as clinicians.

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Detsky et al. NEJM 2014

With successive duty hour limits, the percentage of patients who reported the attending as most involved in their care increased (pre-2003 20 %, post-2003–pre-2011 29 %, post-2011 37 %, p < 0.001)

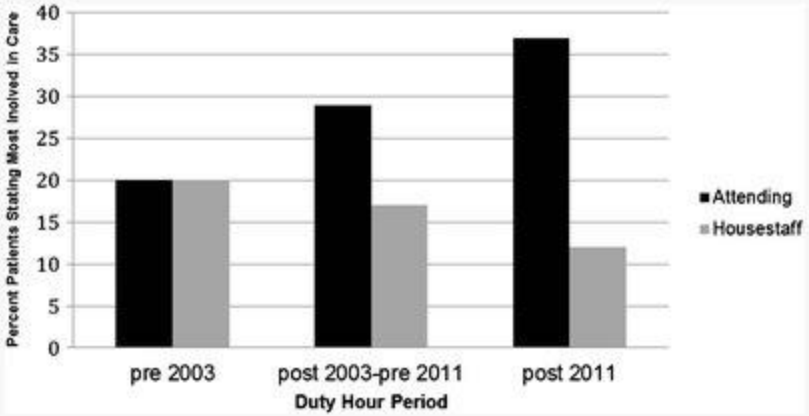

Figure 1.
Percentage of patients who identified attending or housestaff as most involved in their hospital care with successive duty hour restrictions (n = 22,750).

Simultaneously, fewer patients reported a housestaff physician (resident or intern) as most involved in their care (pre-2003 20 %, post-2003–pre-2011 17 %, post-2011 12 %, p < 0.001)

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Arora, et al, JGIM, 2015

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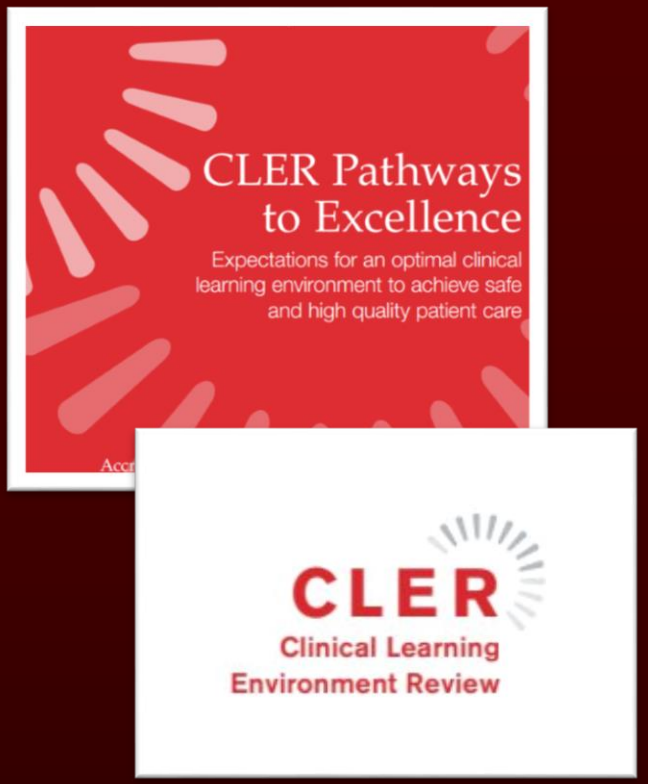

ACGME, CLER Pathways to Excellence, 2014

Clinical Site Monitoring of Supervision: Levels of Evaluating Supervision

Type	Definition	Example
Direct	Observation or visualization of supervision in action	Direct observation of supervision in clinical environment or simulation
Indirect	Monitoring supervision distantly but in real time	*Using the electronic health record to supervise*
Oversight	Reviewing supervision after the fact	Asking faculty or trainees about experiences of supervision, patient outcomes

Supervision and the EHR

- Offsite provider access to patient medical records is increasing
- Residents “EHR stalk” from home
  - 93% check lab results, 66% page colleagues
- Are attendings using EHR as supervision?
  - Teaching attendings on general medicine service at the University of Chicago
    - 31-item survey & 30-minute interview
    - Chart audit of H&Ps and Progress Notes
  - 97% of attendings surveyed (57/59) use EHR remotely
    - Increased self-reported time spent remotely using EHR associated with additional comments on attestations in documentation

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Deano, Arch Int Med, 2011
Martin et al, JGME, 2017

Electronic Supervision Practices

After viewing the EHR independently, there were:	% Attendings	
	At least once	At least 3x/week
Changes in clinical management due discovery	93	20
Discovered information not relayed to me by team	92	25
Did these changes occur:		
The next day on rounds?	86	52
That same evening (e.g., calling to speak to team or to cross- cover?)	54	13

"I take the Ronald Reagan approach to supervision, I am going to trust but verify."

"I don't think that just by virtue of being a resident everybody should make autonomous decisions. ..one of the values of monitoring is that over a period of a few days on service you can see how closely aligned everybody is."

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Like most things in GME….

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Table 2

Current Graduate Medical Education and Proposed Undergraduate Medical Education Entrustment and Supervision Scale

GME entrustment and supervision scale[15] (five levels)	Proposed UME entrustment and supervision scale (expanded to nine levels)	Example: CEPAER—perform general procedures of physician[1] (e.g., intravenous line insertion)
1. Not allowed to practice EPA	1. Not allowed to practice EPA a. Inadequate knowledge/skill (e.g., does not know how to preserve sterile field); not allowed to observe b. Adequate knowledge, some skill; allowed to observe	1a. Student needs training in patient confidentiality and universal precautions 1b. Student observes supervisor insert IV line
2. Allowed to practice EPA only under proactive, full supervision	2. Allowed to practice EPA only under proactive, full supervision a. As coactivity with supervisor b. With supervisor in room ready to step in as needed	2a. Student and supervisor work together to insert IV: student applies tourniquet and inserts IV with active verbal guidance from supervisor who points out target vein, hands over equipment, and secures IV with tape 2b. Student inserts and secures IV alone with supervisor observing closely and ready to step in and assist if necessary; supervisor provides feedback afterwards
3. Allowed to practice EPA only under reactive/on-demand supervision	3. Allowed to practice EPA only under reactive/on-demand supervision a. With supervisor immediately available, all findings double checked b. With supervisor immediately available, key findings double checked c. With supervisor distantly available (e.g., by phone), findings reviewed	3a. Student inserts and secures IV with supervisor outside room; supervisor closely double checks IV site for position, function, security, and any complications before IV is used 3b. Student inserts and secures IV with supervisor outside room; supervisor takes quick look at IV before or as IV is used 3c. Student inserts and secures IV with supervisor not on ward and reports completion of task to supervisor; supervisor only checks IV before IV is used if difficulty or problem is reported
4. Allowed to practice EPA unsupervised	4. Allowed to practice EPA unsupervised	4. Student independently inserts, secures, and begins use of IV without contact with supervisor (may not be achievable or allowed at some institutions)
5. Allowed to supervise others in practice of EPA	5. Allowed to supervise others in practice of EPA	5. Student supervises junior students in basic steps of IV insertion (may not be achievable or allowed at some institutions)

(Chen et al)

Chen et al, Acad Med, 2015

Modified Chen If you were to supervise this student again in a similar situation, which of the following statements aligns with how you would assign the task?	Corresponding excerpt from **original Chen** entrustment scale
1b "Watch me do this"	1b Not allowed to practice EPA; allowed to observe
2a "Let's do this together"	2a Allowed to practice EPA only under proactive, full supervision as coactivity with supervisor
2b "I'll watch you"	2b Allowed to practice EPA only under proactive, full supervision with supervisor in room ready to step in as needed
3a "You go ahead, and I'll double check all of your findings"	3a Allowed to practice EPA only under reactive/on demand supervision; with supervisor immediately available, all findings double checked"
3b "You go ahead, and I'll double check key findings"	3b Allowed to practice EPA only under reactive/on demand supervision; with supervisor immediately available, key findings double checked"

AAMC Core EPA Pilot Supervisory taskforce

Goal for transition to training: Level 3b

Elimination of 4 and 5 (supervisory role) as beyond UME scope

Co-activity scales → summative entrustment decisions

Recording meta-data and narrative feedback

https://www.aamc.org/download/479810/data/supervisorytaskforceexecdoc.pdf

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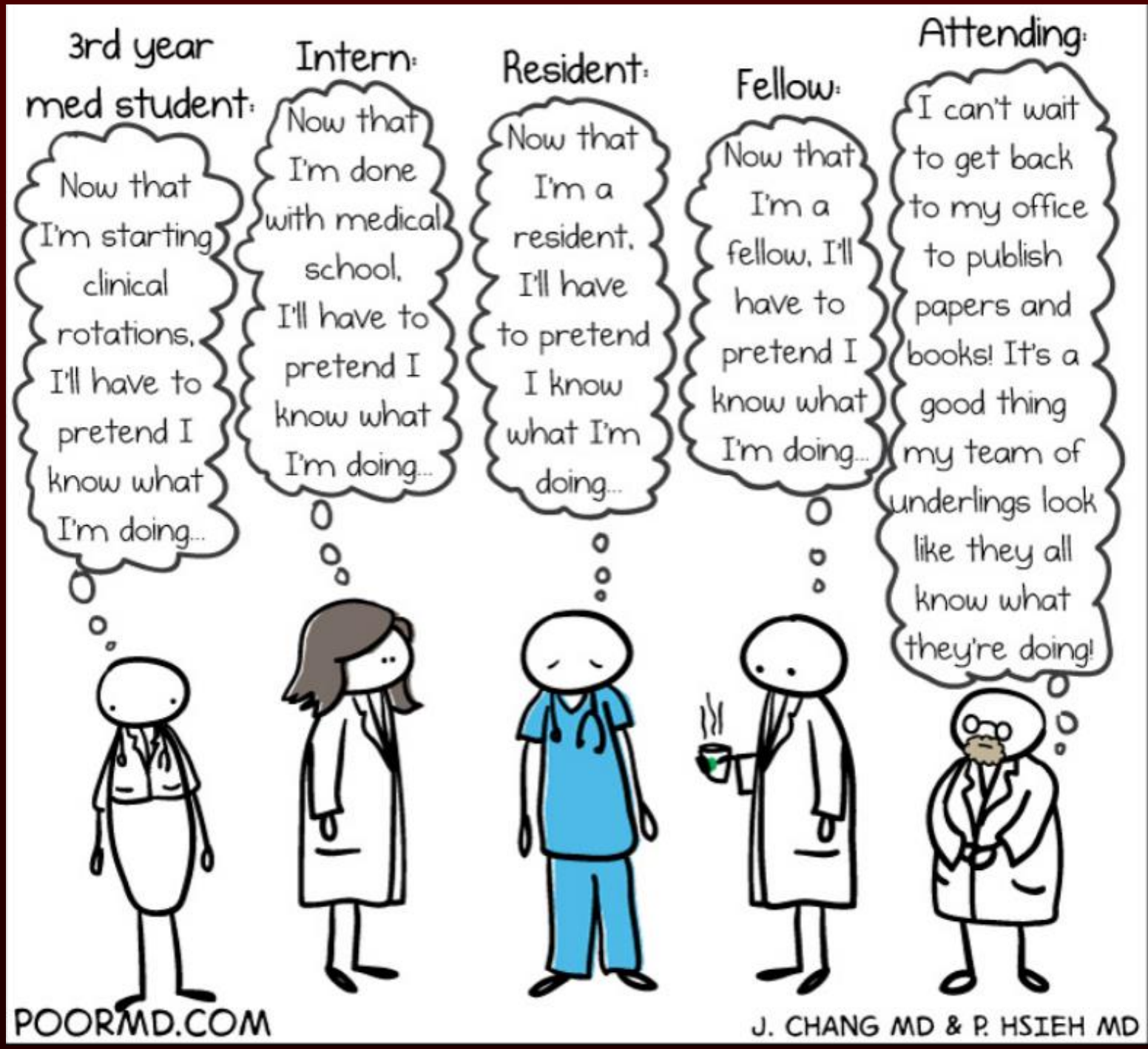
3rd year med student:
Now that I'm starting clinical rotations, I'll have to pretend I know what I'm doing...
Intern:
Now that I'm done with medical school, I'll have to pretend I know what I'm doing...
Resident:
Now that I'm a resident, I'll have to pretend I know what I'm doing...
Fellow:
Now that I'm a fellow, I'll have to pretend I know what I'm doing...
Attending:
I can't wait to get back to my office to publish papers and books! It's a good thing my team of underlings look like they all know what they're doing!
POORMD.COM
J. CHANG MD & P. HSIEH MD

Conclusions

- Clinical oversight dynamic relationship
  - Trust
  - Trainee, supervisor and task factors
- Improves safety and care but unknown impact on clinical decision making and supervisory readiness
- Unified assessment scales and language from UME to GME

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