An integrated EM/IM "Introduction to Hospital Medicine" series: Results from 3 years of implementation

Tom Morrissey MD PhD, Olga Petrucelli MD, Dave Caro MD, Jeff House DO, Arpitha Ketty MD
University of FL Health Science Center / Jacksonville

Introduction

- Recent multi-factorial changes in medical school education have limited the amount of ownership and responsibility that students assume for their patient's care
- Many believe these changes may have had unintended consequences. Some studies have noted decreased preparedness of new resident physicians[1,2].
- Medical educators from the departments of Emergency Medicine (EM) and Internal Medicine (IM) have collaborated to develop a course with the intended goal of "jump-starting" some of the characteristics valuable in new resident physicians.
- We report the results of three years of course implementation, including (specifically) changes in the curriculum driven by intern feedback as the course evolved.

Our "Hidden Curriculum"

- We believe professionalism, interpersonal interactions and communication skills to be as importance as medical knowledge. In a busy hospital John Donne's words ring true…*"No man is an island"*.
- We theorized that the provision of early social and professional contact between ED and IM interns should promote more effective interactions regarding patient management decisions, and result in improved patient care.

Materials and Methods

- We developed a 12 session series designed to integrate EM and IM interns. Goals included introductions to:
  - Importance of professional, collegial and cooperative interactions between services.
  - Understanding of initial approach (critical actions, considerations, orders) to common chief complaints.
  - Interpretation of commonly used tests.
- Interpersonal and professionalism development was measured by a pre/post series survey (right).
- Medical knowledge was assessed by a pre/post series test.
- Feedback from course participants was integrated into successive iterations of the educational series.

Perceptions of Communication between EM and IM Resident Physicians at UFCOM-Jax:

1. What is your area of specialty? (circle one) ED or IM
2. What is your year of training ? (circle one) PGY-1 PGY-2 PGY-3 Faculty

Please answer questions 3-6 using the following scale: (1=poor, 2=fair, 3=good, 4=very good, 5=excellent)

3. What is your perception of the working relationship between ED and IM resident (NON HOSPITALIST) physicians? 1 2 3 4 5
4. What is your perception of the quality of communication between ED and IM resident (NON HOSPITALIST) physicians? 1 2 3 4 5
5. How would you rate the coordination of care of patients between ED and IM resident (NON HOSPITALIST) physicians? 1 2 3 4 5
6. How would you rate the teamwork that occurs between ED and IM resident (NON HOSPITALIST) physicians? 1 2 3 4 5

Please rate the following using the following scale:
(1 = strongly disagree, 2 = somewhat disagree, 3 = agree, 4 = somewhat agree, 5 = strongly agree)

For ED Residents only:

7. IM residents resident (NON HOSPITALIST) respond in a timely fashion to my page for consultation. 1 2 3 4 5
8. IM residents (NON HOSPITALIST) are professional in their interactions with ED resident physicians. 1 2 3 4 5
9. IM residents (NON HOSPITALIST) value my input on initial diagnostic and management decisions regarding patients. 1 2 3 4 5
10. I feel as though the IM resident (NON HOSPITALIST) and I are part of a team. 1 2 3 4 5

For IM Residents only:

7. ED residents appropriately "work up" patients prior to calling for consultation. 1 2 3 4 5
8. ED residents are professional in their interactions with IM physicians. 1 2 3 4 5
9. ED residents value my input on initial diagnostic and management decisions regarding patients. 1 2 3 4 5
10. I feel as though the ED resident and I are part of a team. 1 2 3 4 5

For all residents:
From your perspective, please list the top 3 obstacles/difficulties you face during the admission process of a patient in the ED being admitted to an IM Medicine teaching service (NON HOSPITALIST).

1._____
2._____
3._____

Results

Post-course test scores improved vs. pre-course test scores (duh)

	First course iteration	Third course iteration
Pre-test score	71.2%	72.5%
Post-test score	82.9%	78.0%
Significance (ANOVA)	P<.001	P<.003

Session topics	Changes based on feedback
Introduction to professionalism and communication skills	Developed into: "how to survive" and organizational skills
Approach to "Chest pain"	More emphasis on choosing appropriate provocative testing
Approach to "Abdominal pain"	Run by course directors/case-based and interactive (feedback positive)
Approach to "Altered mental status"	Run by course directors (well received)
Diabetes emergencies	Overwhelming-required significant paring of content
Basic radiology	Never got past CXR Interactive and well received
Basic EKG interpretation	Always interactive, case-based and well received
ABG/acid-base	Always interactive, case-based and well received
Fluids and electrolytes	Limited to hyper K, hypo Na, (received as esoteric)
Resuscitation (using GI bleed as example)	Viewed as overwhelming amount of information
Sick-not-sick (How to avoid a code)	Well received (lost original/prime speakers)

Survey of interpersonal interactions demonstrate trends toward improvement

Working relationship	First iteration	Third iteration
Pre-course score	3.81	3.16
Post-course score	3.99	3.82
ANOVA	p=.72	**p=.01**
Communication quality	First iteration	Third iteration
Pre-course score	3.77	3.00
Post-course score	3.86	3.45
ANOVA	p=.99	p=.15
Coordination of patient care	First iteration	Third iteration
Pre-course score	3.84	3.11
Post-course score	3.75	3.45
ANOVA	p=.54	p=.29
Teamwork	First iteration	Third iteration
Pre-course score	3.91	3.06
Post-course score	3.84	3.39
ANOVA	p=.61	p=.31

- Only about 50% of the sessions were able to be morphed into case-based interactive sessions.
- Some resistance was encountered in getting faculty members to work together in developing their sessions.
- Significant resistance was encountered in getting the interns to mix at the table.
- There appears to be cross-service under appreciation of individual services needs and abilities.

Conclusions

- Convincing speakers to work together and develop case discussion-based educational sessions was met with more resistance than expected.
- Convincing interns to adopt a mixed-table seating pattern was harder than expected.
- Survey results compared to two years ago indicate:
  - During the first year of implementation there appeared to be no effect on perceived interdepartmental interactions.
  - During the third year, the surveys indicate some significant improvement in perceived interdepartmental interactions.
- Test scores provide evidence that medical knowledge continued to expand during the year. We cannot conclude, however, that this is the result of the course.
- Session feedback led to changes in "professionalism" and "survival" sessions.

Discussion

This is the third year we have run this course. For the first time, all residents in training will have "lived through" the course: it will truly have become part of the "training culture" at our institution.

Measuring cooperation, respect and interpersonal interactions is, to say the least, an imperfect science. As times change, we are shooting at a moving target. We feel that this exposure at least supplied some knowledge base and tools for residents to build a cooperative approach to patient care. Feedback and survey results indicate that important issues to address include:

1) The topic material needs to be timed to the prime needs of the learner. For example, incoming interns are more concerned about (thus willing to listen and learn) survival skills than professionalism.
2) There is benefit to showing interns the relative assets and liabilities of their specific services.
3) Overwhelming (or esoteric) topics cause learners to become disengaged.

The dynamic nature of medical education (and lack of appropriate control groups) makes it impossible to say if our sessions added to the medical knowledge base of the participating interns. That said, it would not be groundbreaking news to find that giving a pretest, followed by teaching the material, would lead to higher scores on a post test. We feel heartened by the lack of compelling evidence that we might have made our residents less intelligent by running them through this course.

References

1. Fields, et al; Acad. Med. 2002; 77(6) p 543
2. Wall, et al; Med Teach. 2006, 28 (5) p 435

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