Clerkship Administrator's Guide on Medical Education Administration

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Note from the Editors

In this edition, *Clerkship Administrator's Guide on Undergraduate Medical Education Administration,* will introduce some of the latest dynamic changes in medical administration. Undergraduate medical education is constantly evolving creates the need for such a resource for administrators. This guide is written for clerkship administrators, undergraduate medical education and academic administrators for the sole purpose of showcasing innovative administrative practices. The chapters that are included in this guide are an example of methods in which medical schools and hospital healthcare systems can further explore and perhaps adapt.

Each chapter is its own area of expertise. At the end of each chapter includes further resources for additional reading on the subject matter. Clerkships are designed and vary in administration and is not to say that one practice method is most preferred but rather an example.

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Organizational Management, Structure and Leadership

Quality improvement, a cornerstone of medical education, is driven by collecting data and seeking feedback on questions such as, how do we design a new curriculum or program to meet the needs of our students and community? How do we train our students to become leaders in health care? How should we design assessment systems? How do we build student community? How do we maintain financial, legal and accreditation standards? Medical education administrators are asked to be policy experts and visionaries to shape the medical education programs at our institutions, in order to answer these questions. This chapter's goal is to provide administrators a functional basis of quality improvement process and structure for their own professional development and growth.

And a medical education administrator must solve these complex system questions by relying upon knowledge, skills and strategies acquired through training and practice. Management science and, in particular, organizational management can help the medical education administrator cope with this complexity by organizing, planning and problem solving (1). In this chapter we will describe organizational management, how it relates to the medical education administrator, and structures of continuous quality improvement. Change is the new constant and the medical education administrator must be ready to use leadership skills to cope with change to motivate, inspire and align people to set direction. We will define effective leadership, emotional intelligence and the role of the professional development plan in personal goal setting to facilitate the medical education administrator as a change agent. Throughout this chapter, you will find case studies and reflective questions to take back to your teams to focus the discussion and build the case that cultivating a balance of meaning and purpose with knowledge and skills will restore the medical education administrator's balance toward not only doing things right, but doing the right things (2).

Organizational structure

The common ground upon which all organizations are built is on a mission statement and set of objective goals. The mission statement and set of goals may vary based upon the size, and history of an organization, making each unique and create an image of success that is specific to that organization.

In order to achieve the mission and set of goals, organizations must be arranged in a strategic way. Organizational management is the process of structuring, planning, and directing the resources of the members to achieve its goal. Organizational structure is the manner in which the parts of an organization interact with each other to achieve the organization's goal which are the principles of organizational management.

Organizations are commonly structured into one of the following: functional, divisional, matrix, and flat.

- Functional organizational structure is the most traditional and based on specialty as well as developing a hierarchy of management. This type of organizational structure

does not typically respond to change quickly and while clear divisions are set, communication can be poor and specialties can become isolated from one another. Health systems are often divided into this type of structure, with reporting of duties and accomplishments being reported up through different levels of administration.

- Divisional organizational structure is based on products or projects. This type of organizational structure allows for autonomy, but can also lead to competition of resources and time. Large corporations that have various divisions around countries or the globe, such as those that develop electronics or food and beverage companies, are often structured this way.

- Matrix organizational structure combines functional and divisional organizational structures wherein companies are divided into specialty and then sub-divided into products or projects. Matrix organizational structure is highly complex and requires thoughtful planning for it to be executed correctly. Starbucks is set up with this type of organizational structure, where various components of the company interact with one another.

- Flat organization structure follows at top-down hierarchy. This type of organizational structure allows employees to be highly involved in decisions and ideas, which may work better in small companies given the complexities that become present as companies grow and typically need more structure. Flat organizational structure is popular with start-ups and tech firms. (3)

As organizations evolve, the need to change the organizational structure may become necessary. Adaptation and change are necessary for an organization's survival. Organizations have to adjust both their operations according to the changing environment, and their organizational structures according to new operational models (4).

For individuals (typically those in management roles) who are responsible for initiating and executing organizational change, approaching the problem from a holistic view is recommended. Viewing the problem in singularity, without thinking about cause and effect on other areas within an organization can lead to downstream issues and consequences. The following framework is helpful in assessing an organizational structure change.

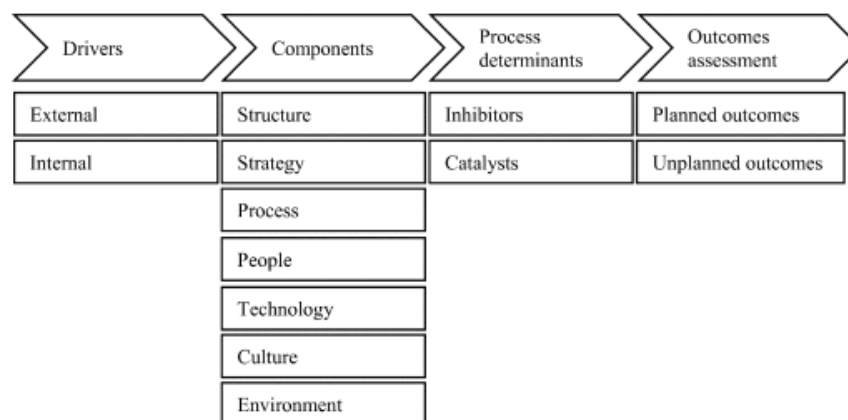| Drivers	Components	Process determinants	Outcomes assessment
External	Structure	Inhibitors	Planned outcomes
Internal	Strategy	Catalysts	Unplanned outcomes
	Process		
	People		
	Technology		
	Culture		
	Environment		

Fig 1. The framework used for assessment of organizational structure change. (4).

The above framework can be used in medical education to organize and initiate change. For example, an organization that is interested in revamping their curriculum could follow this framework. Their external factors could be cost or changing curriculum landscape, while their internal factors could be requests from medical students for a change in the curriculum. Various components would play a factor such as the number of people who need to be involved to execute the change and what kind of equipment or technology will such a change require. Academic institutions would also need to take into account anything that could slow the process down or potentially allow for a quicker delivery of the new curriculum. Along the same lines, the institution should consider how this will impact medical students, administrators, and how they will deal with any unforeseen results of the change.

There are various systems that can be implemented when an organization is initiating a change. One of the more popular systems is Continuous Quality Improvement (CQI). A theory based management system that explores processes and outcomes in organizations where management and employees are striving to continuously improve quality. A CQI system is defined as a process of identifying and describing by analyzing strengths and problems and then testing, implementing, learning from, and revising solutions. A CQI system or structure is frequently used in healthcare and academic institutions.

An additional change and improvement method is the Lean methodology, which focuses on continuous improvement and respect for people. Lean methodology is set on five basic principles:

1. Define Value: What is the customer willing to pay for?
2. Map the Value Stream: What contributes to the values? Items that do not add value are identified as waste. Waste is then broken down into two categories: non-valued added but necessary and non-valued and unnecessary.
3. Create Flow: Ensures smooth running of process
4. Establish Pull: Limits inventory and work in progress items
5. Pursue Perfection: Most important step that leads to lasting success and change within an organization (5)

Like CQI, lean methodology is frequently used in healthcare. For many healthcare organizations, the lean methodology allows them to take the steps to minimize waste in every process, procedure, and task through an ongoing system of improvement. Using lean principles, all members of the organization, from clinicians to operations and administration staff, continually strive to identify areas of waste and eliminate anything that does not add value for patients (6).

Over the last 15 years, curriculum reform has occurred frequently in medical schools worldwide (7). The following case illustrates the downstream effects of organizational change on a regional education program.

Case: Continuous quality improvement in a new curriculum

A new curriculum was initiated in 2015 across a school with six regional campuses. At the same time, a rigorous method of program evaluation was put in place to provide oversight of learning objectives, materials and assessment. Students were asked to fill out end of block evaluations,

weekly evaluations, just-in-time evaluations and participate in focus groups in order for leadership to identify what is working, what is not working and quickly respond to challenges in the new curriculum. After one year, students were frustrated with the lack of communication from leadership. Evaluation return rates were very poor and students reported that the administration was not responsive to feedback while administration was feeling overwhelmed by the student feedback. Students were asking, what is happening with all the feedback we are giving you?

Reflective case study questions:

What drivers, components, process determinants and outcome assessments surfaced in the continuous quality improvement case study?

What are the impacts to the communication break down with students and what are some strategies that leadership could have used to avoid this issue?

What processes should be put in place to assess the program evaluation?

Leadership

Leadership in medical education is traditionally defined as Deans, Chief Executives and CEO Suite personnel. In reality, educational leadership is a diverse cohort and found across the continuum from students to middle management in addition to the high level administrators. Leadership is a process of achieving the overall mission while facilitating individual efforts into the collective objective. "Effective leaders are change agents who are comfortable with working in uncertain and rapidly changing environments" (8).

As subject matter experts, medical education administrators often present highly detailed information to leaders, colleagues and students. This case illustrates the importance of recognizing the impact of your own emotions and feelings on the situation and the power of mentorship.

Case: Emotional Intelligence

"My supervisor and I left a series of intense meetings where I had taken the lead in negotiating funding for teaching and administrative staff support between our department and the school leadership and finance team. As the sole professional staff in the room, I had the most expertise in the programmatic details and was on point to answer all detail level questions and review the budget. As we walked out of the meeting, my supervisor asked, "What was your reaction to the meeting?" I assumed she was talking about some aspect of the decision made and I started talking about the outcome. She interrupted me and said, "No, what was YOUR emotional reaction to the interactions?" Did you want to talk about Dr. Jones' response to our proposal? Were you irritated?, how did you feel when Dr. Smith was asked to provide detail about her circumstances- did you feel empathy for her? – What was your reaction?" That made me stop and think. My emotional reaction had been that I'd wanted everyone to get along and to give everyone what they wanted, but that was not what was ultimately in the best interest for our department. Her question stopped me in my tracks and made me recognize my own emotional

response to the situation was empathy for a colleague and that I needed to honor my feelings. But I also somehow needed to hold a dual perspective, which was to obtain the funding to help Dr. Smith attain her goals. This technique, to ask myself, what was your reaction? is now one of my most important practices for long-term success and to avoid burnout."

Reflective questions:

Reflect upon a time when you used emotional intelligence competencies of self-awareness, self-management, social awareness and/or relationship management. What is one area you would like to work on this week?

Why is connecting to an emotional response helpful in avoiding burnout?

What mentoring techniques do you bring to your team?

Emotional intelligence (EI) is a person's ability to recognize reactions to situations and understand the perceived impact on others while regulating those emotions toward good decision making (9). Distinguishing competencies of successful leaders are emotional intelligence and humanism skills (10, 11). Goleman, a leader in the emotional intelligence movement, states that EI focuses on the management of personal responses and feelings during interactions with others (10). Bolden, Hawkins, Gosling, and Taylor combine Goleman's statement with Myers' premise and proclaim EI as "central…to foster[ing] a harmonious … environment." (12).

Goleman characterizes EI as the collective aptitude in four interrelated categories: self-awareness, self-management, social awareness, and relationship management. Aptitude in the emotional intelligence competencies, as shown in Table 1, provides the foundation for building effective relationships and managing conflicts, two essential skills for fostering an encouraging, collaborative and harmonious work environment (10, 12). Humanism skills include communication and self-management (11, 12, 14).

Table 1. Competencies of Emotional Intelligence

Self-Awareness	Self-Management	Social Awareness	Relationship Management
Recognizes impact of own emotions and feelings on others and situation	Stays calm in stressful situations, demonstrates self-control	Empathy, able to grasp the perspective of other participants in situation	Leader, inspirational, able to provide sense of common purpose
Self-confidence	Admit errors, takes responsibility for own actions	Able to understand organizational identity and culture	Able to influence others, achieve buy-in for ideas
Knows when to ask for help	Optimistic, sees opportunities, not setbacks	Anticipates, recognizes, and meets the needs of other	Collaborative, able to build bonds, rapport
	Innovative and ready to act on opportunities	Developing others, shows interest in the goals of others and assists toward achievement	Able to recognize need for change and able to navigate change process
	Conscientious and reliable		Able to find root of conflict, acknowledge issues, negotiate resolution

The motivated administrator, striving for a leadership role within medical education, needs to hone skills in the emotional intelligence (EI) competencies of self-awareness; self-management; social awareness; and relationship management as well as humanism skills such as communication (10). This can be achieved through the implementation of a structured format as provided in a professional development plan (PDP). The multistage PDP process allows the administrator to assess current levels of knowledge and skill in these specific competencies. After determining growth areas, the administrator can establish SMART [specific, measurable, achievable, realistic, and timely] goals to develop aptitude in these essential emotional competencies (15).

The process of completing a PDP is a multiphase system beginning with a self-assessment where the administrator is encouraged to reflect on capabilities, strengths, and weaknesses. After the assessment, a PDP framework is utilized to establish goals that are specific, measurable, achievable, realistic, and have assigned time parameters for completion of each stage of the goal (9, 16). The next phase of the PDP process allows for instruction and practice to occur with appropriate feedback (14, 17). The final stage of the PDP process is acquisition and mastery of the emotional intelligence or humanism skill. This stage requires resources and support and can take a substantial amount of time (18, 19).

Medical education administrators are often managing people, knowledge and skills up and down in the education leadership hierarchy. This case demonstrates the skills required in negotiating and advocating for your position in the hierarchy.

Case study: Administrator leadership

Linda is the Associate Director for Medical Education in the Department of Pediatrics and is asked to sit on the School of Medicine Strategic Planning Committee as a full voting member. There are ten voting members on the committee and seven members are male and three are female. Nine members of the committee are physicians and Linda is the only professional staff member. The school has not assigned a support person for the first few meetings and hopes to assign an individual in the near future. The group meets for the first time. After introductions are made and the charge letter is reviewed assistance is needed to set up the video connection and take action items. Linda is the only individual who has the technical expertise to run the systems. Linda sets up the systems and offers to take the action items for the first meeting. At the second meeting, there is still no support person and no one volunteers to take action items for the meeting. Linda is frustrated but again takes the notes and is concerned that she is not viewed with the same authority as the other members of the committee.

Reflective questions:

What social and relationship factors are impacting the work of this committee?

If Linda's goal is to be viewed with authority on her committee, what are some areas for growth for Linda as demonstrated in this case? How would you mentor Linda in this area?

What are tips to identify and gain skills in self-awareness and relationship management?

How should Linda approach the third committee meeting?

Phase One - Needs Assessment

As performance deficiencies can impact career advancement and the ability to deliver quality work, an administrator aiming for a leadership role is advised to develop essential skills (20). In a thorough professional development plan (PDP) process, the first step is to determine the administrator's current level of knowledge, skills, values, and capabilities in essential leadership competencies through the use of an assessment form (21-23). The Professional Skills Inventory Exercise, seen in Appendix A, provides the administrator a series of reflective statements to assess the importance of the skill for professional development as well as determine the current level of competence (24). The Professional Skills Inventory Exercise, is loosely affiliated with emotional intelligence competencies but also includes categories related to business skills. The emotional intelligence assessment seen in, Appendix B, is directly linked to the four EI competency categories of self-awareness, self-management, social awareness, and relationship management (10, 25, 26). With sufficient time for reflection, completing either assessment tool allows the administrative administrator time to assess current capabilities. Using the assessment

tool also provides an opportunity to assess personal willingness to undertake the learning and development process required to achieve leadership level competence in these areas (27).

Phase Two – Goal Setting

Administrators attempting to improve performance need to implement a goal setting process to determine specific steps and to identify necessary resources (28). Benefits of goal setting include giving direction to growth and development, directing the administrator toward appropriate learning strategies, and providing a sense of accomplishment and confidence upon completion of the goal (30, 31). Successful goals are specific, clear and simple; measurable, demonstrating when progress is being made; achievable, incremental in nature; realistic, aligning ambitions; and timely, including milestones and completion dates (16, 31, 32). The process for the PDP begins with the administrator completing the professional skills inventory and the emotional intelligence assessment to determine a specific goal to be transferred to the PDP. (24-26). The PDP should include sections for planning stages of skill development and listing resources required to successfully strengthen the emotional intelligence or humanism skill selected from the needs assessment.

Skill Development

Skill development is progressive, moving from simple and straightforward tasks to complex processes that require the integrated application of problem-solving techniques with knowledge of systems (19). The administrator working on leadership skills is limited only by personal creativity and ingenuity when determining the best methods and resources to incorporate toward the development of essential skills (33). Challis, Frost and Wallingford name a number of the instructional methods and resources available to adult learners including self-study programs; special assignments within the organization, coaching, mentoring, membership in professional society, attending seminars, workshops or professional conferences, ownership of professional development process and higher education programs (22, 23). The professional development plan (PDP) provides an opportunity for the administrator to select methods for skill development as well as determine resources required to pursue the goal targeted for development (17, 22, 25, 30). Throughout the goal acquisition process, the administrator must receive feedback that is non-threatening, constructive, focused on tasks, specific and not rushed (27). A mentor or motivating and supportive supervisor is the best person to deliver this feedback. A mentor is imperative to the success of the PDP and the administrator (17, 33).

In this chapter we've discussed coping with change, improving quality and the leadership characteristics necessary to foster collaborative and harmonious environments. An important key to developing leadership skill is coaching, mentoring and feedback. The mentor provides a supportive environment, opportunities, and guidance while also holding the administrator accountable for the professional development process (22). Professional development planning from skills assessment to goal development and action implementation is a fundamental process for an administrator striving for a leadership role.

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References

1.What Leaders Really Do, Kotter JP, Harvard Business Review, 1990 May-June; 68(3):103-11.

2. Drucker, Peter Ferdinand. *The Essential Drucker: Selections From the Management Works of Peter F. Drucker*. New York: HarperCollins, 2001.

3.Company Organizational Structure: Functional vs. Divisional vs. Matrix vs. Flat. Online. *https://status.net/articles/company-organizational-structure-functional-divisional-matrix-flat.* Accessed February 1, 2020.

4.Král, Pavel, and Věra Králová. Approaches to Changing Organizational Structure: The Effect of Drivers and Communication. *Journal of Business Research*, 2016;69, no. 11, 5169–5174.

5. Lean Methodology.   *The Five Principles of Lean*. Online. https://leankit.com/learn/lean/lean-methodology. Accessed December 8, 2019.

6. What Is Lean Healthcare? NEJM Catalyst. Online. https://catalyst.nejm.org/doi/full/10.1056/CAT.18.0193. Accessed February 7, 2020.

7. Irby DM, Cooke M, O'Brien BC. Calls for reform of medical education by the Carnegie Foundation for the advancement of teaching: 1910 and 2010. *Acad Med*. 2010;85:220–7.

8.McKimm, J. *Medical Education Leadership*. London, UK: Churchill Livingstone/Elsevier, 2013.

9. Cherniss, C, Adler, M. *Promoting Emotional Intelligence in Organizations: Making Training in Emotional Intelligence Effective*. Alexandria, Virginia: ASTD Press. 2000.

10. Goleman D. What it takes to achieve leadership success. Association for Talent Development Report. November 2014: 49-52.

11. Clark, T. *Learn, Work, Lead: Things Your Mentor Won't Tell You.* Albany, NY: Peterson's, 2014.

12. Bolden, R, Hawkins B., Gosling J, Taylor S.. *Exploring Leadership: Individual, Organizational, and Societal Perspectives.* New York, NY: Oxford University Press, 2011.

13. Zenger, J., Folkman J, Sherwin R Jr., Steel B. *How to Be Exceptional: Drive Leadership Success by Magnifying Your Strengths*. New York: McGraw-Hill, 2012.

14. Blaszczynski C , Green D. .Journal of Applied Research for Business Instruction, 10. *Effective Strategies and Activities for Developing Soft Skills, Part 1*. Online. http://search.proquest.com. Accessed February 8, 2016.

15. Lawlor K, Hornyak B and MJ. Developments in Business Simulation and Experiential Learning. SMART Goals: How the Application of SMART Goals Can Contribute to the Achievement of Student Learning Outcomes. Online. https://journals.tdl.org/absel/index.php/absel/article/view/90/86. Accessed February 4, 2016.

16. Whitaker, R. About Leaders: Leaders Making a Difference. *Harvard Study – Smart Goals and You*. Online. http://aboutleaders.com/harvard-study-smart-goals-and-you/#gs.WLEkqZE. Accessed February 7, 2016.

17. Eisele L, Grohnert T, Beausaert S, Segers M. European Journal of Training and Development 37. *Administrator Motivation for Personal Development Plan Effectiveness*.Online. Http://dx.doi.org/10.1108/EJTD-02-2013-0015. Accessed January 23, 2016.

18. Sterling A, Boxall P. Human Resource Management Journal 23. *Lean Production, Administrator Learning and Workplace Outcomes: A Case Analysis Through the Ability-Motivation-Opportunity Framework.* Online. Http://dx.doi.org/10.1111/1748-8583.12010. Accessed February 2, 2016.

19. Mumford M, Marks M, Connelly MS, Zaccaro S Reiter-Palmon R. Leadership Quarterly 11. *Development of Leadership Skills: Experience and Timing*. Http://dx.doi.org/10.1016/S1048-9843(99)00044-2. Accessed January 18, 2016.

20. Longnecker C, Yonker R. Industrial and Commercial Training 45. *Leadership Deficiencies in Rapidly Changing Organizations: Multisource Feedback as a Needs Assessment Tool – Part 1*. http://dx.doi.org/10.1108/00197851311320577. Accessed January 30, 2016.

21. Newbold C. Industrial and Commercial Training 42. *Four Stage Approach to Organizational Talent Development (part 1)*. http://dx.doi.org/10.1108/00197851011070677. Accessed January 24, 2016.

22. Challis, M. Medical Teacher 22, no. 3. *AMEE medical education guide no.19: Personal Learning Plans.* Online. http://search.proquest.com. Accessed January 24, 2016.

23. Frost D., Wallingford V. Journal of Management Development 32, no. 7. *Experiential Learning for Developing Leaders: A Practical Model*. Online. Http://dx.doi.org/10.1108/JMD-11-2011-0118. Accessed February 2, 2016.

24. Novak P. Professional Skills Inventory Exercise. Instructional Design and Technology. University of Denver. 2014. Accessed Winter Term 2014. Adapted by Gabel, Sharon – DU Organizational Effectiveness from Cripe, Edward, and Mansfield, Richard. 1999. The Value-Added Administrator. Houston: Gulf Publishing Co.

25. Linac. Management Development. *Emotional Intelligence Self-Assessment.* Online. http://www.linac.co.uk/images/PDFs/PersonalDownloads EI_SelfAssessment.pdf. Accessed February 12, 2016.

26. Clarion Enterprises. *Sample Emotional Competence Inventory. Clarion Enterprises Assessments*. Online. http://www.clarionenterprises.com/documents/ECISampleforwebsite.pdf. Accessed February 13, 2016.

27. Beausaert Simon, Mien Segers, DF, Gijselaers W. 2013. Journal of Workplace Learning 25. *Effect of Using a Personal Development Plan on Learning and Development*. Online. Http://dx.doi.org/10.1108/13665621311306538. Accessed January 30, 2016.

28. Medlin B, Green Jr. KW. Industrial Management and Data Systems 109. *Enhancing Performance Through Goal Setting, Engagement, and Optimism*. Online. http://dx.doi.org/10.1108/02635570910982292. Accessed February 13, 2016.

29. Latham G, Locke E. Organizational Dynamics 35. *Enhancing the Benefits and Overcoming the Pitfalls of Goal Setting*. Online. http://dx.doi.org/10.1016/j.org.dyn.2006.08.008. Accessed February 3, 2016

30. Bennett B. Development and Learning in Organizations 20. *Personal Development Plans: Evidence From Research On Their Use*. Online. Http://dx.doi.org/10.1108/14777280610706167. Accessed January 18, 2016.

31.Eikenberry K, Harris G. From Bud to Boss: Secrets to a Successful Transition to Remarkable Leadership. San Francisco, CA: Jossey-Bass, 2011.

32. Zenger, J, Folkman, J, Sherwin Jr. R, Steel B. How to Be Exceptional: Drive Leadership Success by Magnifying Your Strengths. New York: McGraw-Hill, 2012.

33. Laird, Dugan. Approaches to Training and Development: New Perspectives in Organizational Learning, Performance, and Change. Cambridge, MA: Basic Books, a member of the Perseus Group, 2003.

Appendix A

Professional Skills Inventory

Importance to my professional success				People skills: Leading Others	My Skill Level			
1	2	3	4	Establishing Focus: Developing and communicating goals in support of the business mission.	1	2	3	4
1	2	3	4	Providing Motivational Support: Enhancing others' commitment to their work.	1	2	3	4
1	2	3	4	Fostering Teamwork: Getting groups to learn to work together cooperatively.	1	2	3	4
1	2	3	4	Empowering Others: Conveying confidence in others' ability to be successful, allowing others freedom to decide how they will accomplish their goals and resolve issues.	1	2	3	4
1	2	3	4	Managing Change: Initiating, sponsoring, or championing organizational change; helping others to successfully manage organizational change.	1	2	3	4
1	2	3	4	Developing Others: Delegating responsibility and coaching other to develop their capabilities.	1	2	3	4
1	2	3	4	Managing Performance: Taking responsibility for one's own or one's assistants' performance by setting clear goals and expectations.	1	2	3	4

Importance to my professional success				People Skills: Communicating and Influencing	My Skill Level			
1	2	3	4	Attention to Communication: Ensuring that information is passed on to other who should be kept informed.	1	2	3	4
1	2	3	4	Oral Communication: Expressing oneself in conversations and interactions with others.	1	2	3	4
1	2	3	4	Written Communication: Expressing oneself clearly in business writing.	1	2	3	4
1	2	3	4	Persuasive Communication: Planning and delivering oral and written communications that persuade intended audiences.	1	2	3	4

Importance to my professional success					My Skill Level			
1	2	3	4	Interpersonal Awareness: Noticing, interpreting and anticipating others' concerns and feelings, and communicating this awareness empathetically to others.	1	2	3	4
1	2	3	4	Influence Skill: Gaining others' support for ideas, proposals, projects, and solutions.	1	2	3	4
1	2	3	4	Building Collaborative Relationships: Developing and maintaining partnerships with others.	1	2	3	4
1	2	3	4	Customer Orientation: Demonstrating concern for satisfying one's external and internal customers.	1	2	3	4

Importance to my professional success				Business Skills: Preventing and Solving Problems	My Skill Level			
1	2	3	4	Diagnostic Information Gathering: Identifying the information needed to clarify a situation, seeking that information from appropriate sources, and using skillful questioning to draw out the information.	1	2	3	4
1	2	3	4	Analytical Thinking: Approaching a problem by using a logical, systematic, sequential approach.	1	2	3	4
1	2	3	4	Forward Thinking: Anticipating the implications and consequences of situations and taking appropriate action to be prepared for possible contingencies.	1	2	3	4
1	2	3	4	Conceptual Thinking: Finding effective solutions by taking a holistic, abstract or theoretical perspective.	1	2	3	4
1	2	3	4	Strategic Thinking: Analyzing your competitive position by considering market and industry trends, existing and potential customers, and strengths and weaknesses as compared to competitors.	1	2	3	4
1	2	3	4	Technical Expertise: Depth of knowledge and skill in a technical area.	1	2	3	4

Importance to my professional success				Business Skills: Achieving Results	My Skill Level			
1	2	3	4	Initiative: Identifying what needs to be done and doing it before being asked or before the situation requires it.	1	2	3	4

Importance to my professional success	Self-Management	My Skill Level

1 2 3 4	Entrepreneurial Orientation: Looking for and seizing profitable business opportunities; taking calculated risks to achieve business goals.	1 2 3 4
1 2 3 4	Fostering Innovation: Demonstrating support for innovation and for organizational changes needed to improve the organization's effectiveness.	1 2 3 4
1 2 3 4	Results Orientation: Focusing on the desired result of one's own or one's unit's work; setting challenging goals, focusing effort on the goals, and meeting or exceeding them	1 2 3 4
1 2 3 4	Thoroughness: Ensuring that one's own and others' work and information are complete and accurate; careful preparation for meetings and presentation; following up with others to ensure that agreements and commitments have been fulfilled.	1 2 3 4
1 2 3 4	Decisiveness: Making difficult decisions in a timely manner.	1 2 3 4

Importance to my professional success	Self-Management	My Skill Level
1 2 3 4	Self Confidence: Faith in one's own ideas and ability to be successful; taking an independent position in the face of opposition.	1 2 3 4
1 2 3 4	Stress Management: Functioning effectively when under pressure and maintaining self-control in the face of opposition.	1 2 3 4
1 2 3 4	Personal Credibility: Demonstrating concern that one be perceived as responsible, reliable, and trustworthy.	1 2 3 4
1 2 3 4	Flexibility: Openness to different and new ways of doing things; willingness to modify one's preferred way of doing things.	1 2 3 4

(24)

Appendix B

Emotional Intelligence Assessment

Self-Awareness	Always	Usually	Sometimes	Occasionally	Rarely
Do you know which emotions you are feeling and why?					
Can you tell when your emotions are affecting your performance?					
Can you tell when you are starting to lose your temper or when your thoughts are turning negative?					
Do you have a guiding awareness of your values and goals?					
Are you aware of your strengths and weaknesses?					
Are you reflective, learning from experience?					
Are you open to candid feedback, new perspectives, continuous learning, and self-development?					
Are you able to show a sense of humor and perspective about yourself?					
Can you voice views that are unpopular and go out on a limb for what is right?					
Are you decisive, able to make decisions despite uncertainties and pressures?					
Self-Regulation/ Management	**Always**	**Usually**	**Sometimes**	**Occasionally**	**Rarely**
Do you manage your impulsive feeling and distressing emotions? (e.g. do you just get on with things when you are angry or state your concerns without anger or passivity when you are being excluded?)					
Do you stay composed, positive, and unflappable even in trying moments, e.g. in					

the face of another's anger?					
Do you think clearly and stay focused under pressure or when feeling anxious?					
Do you build trust through your reliability, ethical behavior, and authenticity?					
Do you admit your own mistakes and confront unethical actions in others?					
Do you take tough, principled stands, even if they are unpopular?					
Do you meet commitments and keep promises?					
Do you smoothly handle multiple demands, shifting priorities and rapid change?					
Are you flexible in how you see events?					
Are you open to novel ideas and new information?					

(25), (26)

Grading and Descriptive Assessments of Learner Competency

Clerkship programs are directed by the Liaison Commission on Medical Education (LCME) to assess student competency. Proper assessment of student competency requires both formative and summative feedback that can be incorporated into future clinical learning environments (1). Formative competency assessment is instrumental in the formative stages of learning, and summative competency assessment summarizes the student's performance, providing an informed judgment about the learner's readiness to advance toward greater autonomy and responsibility as a medical practitioner. Final clerkship grades, the formal Medical Student Professional Evaluation (MSPE), and departmental letters of recommendation for residency, capture and reflect summative assessment. Summative assessment, particularly descriptive assessment (i.e. using narrative descriptions of observed behaviors), will comprise the principal context of this paper.

This chapter is comprised of three main sections:
1. An overview of the assessment process including the most common grading schemas and assessment methods utilized by clinical clerkships;
2. The most common obstacles to timely and robust descriptive assessment during the clinical clerkship to inform summative grades, including subjectivity, reticence, and grade inflation;
3. A sample of recommended practices to overcome the aforementioned obstacles.

Overview of the Assessment Process

"Assessment, derived from a Latin word that means 'to sit beside and judge,' is appropriately used to describe the systematic gathering of information about what the learner should know, [is] able to do, or [is] working towards. It is usually associated with some measurement, marks or percentages, but could be associated with specific descriptors [such as] excellent, good, average, or poor"(2). Gibbs, Brigden and Hellenberg

As illustrated in Table 1, there are multiple grading systems used by US medical schools to record and standardize the outcomes of competency assessments. The most widely utilized are tiered structures employing Honors-High Pass-Pass-Fail and Honors-Pass-Fail (3).

Table 1: Number of U.S. Medical Schools Using Selected Grading Systems in Required Clinical Clerkships, 2016-2017 and 2017-2018
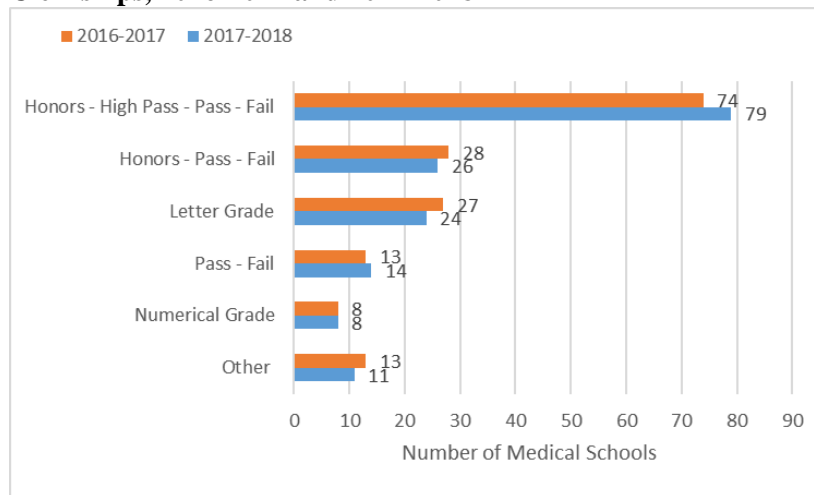
Assessment methods utilized during the clerkship to determine a student's grade are multifaceted, as well. According to the LCME and displayed in Table 2, the most widely utilized methods employed to assess medical learners' clinical knowledge and skill during the clerkship include direct observation of students by faculty and residents, standardized patient exams, National Board of Medical Examiners (NBME) subject examinations, and a review of clinical documentation (4).

Table 2. Methods Used for Clinical Knowledge and/or Skills Assessment in Clinical Clerkship Experience, 2017-2018
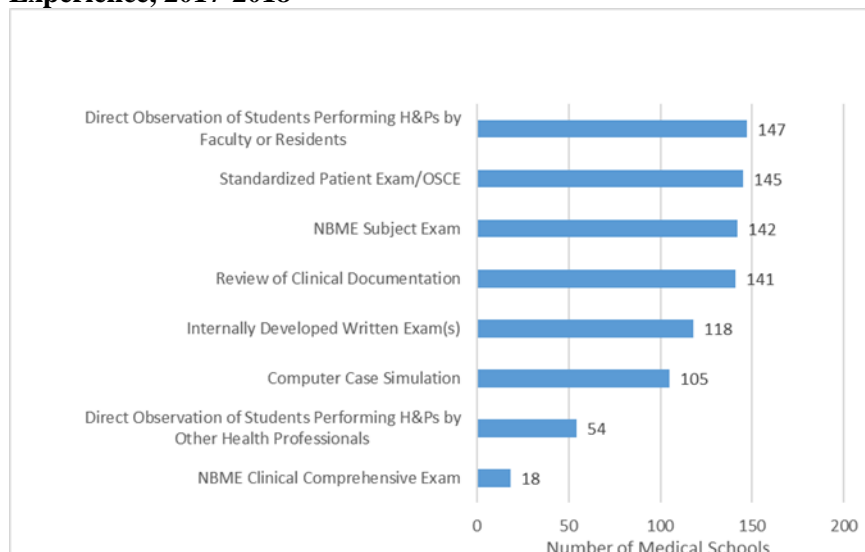
Recent years have seen an increase in use of more objective markers as components of clerkship grading. The Association of American Medical Colleges (AAMC) has reported data from the LCME Annual Medical School Questionnaire; all schools reported use of direct observation of

students by faculty or residents as a component of grading (5). Nearly every program reported using NBME subject exam scores, as well. The number of programs using a standardized patient examination has increased from 82 percent in 2011-2012 to 99 percent in the most recent 2017-2018 data. The most recent survey also included a new category of "computer case simulation," currently utilized in 71 percent of programs. These developments reflect efforts to leverage objective assessment methods to mitigate grade inflation and to offset problems inherent in the descriptive assessment process specifically faculty subjectivity and bias, and reticence.

Common Problems Encountered in the Descriptive Assessment Process

Implicit bias, either positive or negative, can influence faculty assessments, as can a personal reluctance to provide less-than-favorable feedback even when a student has not earned accolades. Moreover, writing narrative assessments in a manner that provides clerkship directors with substantive information for grading purposes and students with specific guidance for improvement requires time and focused thought. Pressing clinical duties and other professional and personal responsibilities may contribute to the reticence of faculty and residents to complete a thorough assessment of the students' demonstrated knowledge and skill.

Subjectivity and Bias in Assessment
Subjectivity in clerkship grading has been a long recognized concern, particularly in clinical evaluations. Previous data have demonstrated that faculty evaluations correlate poorly with student examination performance (6). Even so, few would argue with the importance of assessing clinical performance in patient care as this a meaningful measure in assessing the student's likely skill and capability as a future physician. This focuses attention on recognition and mitigation of bias.

Several studies have worked to characterize or measure bias in medical student grading. With respect to gender, prior studies have demonstrated differences in grades received by male and female students, which may be influenced by the gender of the evaluator (7, 8). One study of over 87,000 clinical evaluations at two different medical schools used natural language processing (i.e. a measure of the frequency a descriptor was used in and across evaluations) to compare differences in evaluation comments for male and female students; thirty-seven words showed statistically significant differences by gender, many relating to personality descriptors as opposed to competency-related behaviors. For example, words such as "lovely," "empathic," and "assertive" were more likely to be found in evaluations of female students, while the descriptors "scientific," "respectful," and "easy-going" were more frequently found in evaluations of male students (9).

In addition to gender, racial and ethnic biases have long been recognized in medical education. Notably, one study of 2,395 medical students from 105 institutions found that students underrepresented-in-medicine (URM) were more likely to report lower grades in all clerkships, and Asian students were more likely to report lower grades in obstetrics/gynecology, pediatrics, and neurology (10). A five year review of clerkship grades at one institution found statistically significant grading disparities in four of six required clerkships, favoring white students over minority students (11). In the natural language processing analysis, words present at a higher rate in evaluations of underrepresented-in-medicine (URM) students include "Spanish," "native," and

"pleasant." Words that were present at a statistically significantly lower rate in evaluations of URM students included "excellent," "impressive," "conscientious," and "thorough" (9). Review of this data is not to suggest causation or suggest that all evaluators demonstrate the same degree of bias. Some of these analyses may not have addressed differences in baseline characteristics or other confounding factors. Nonetheless, these recent studies highlight the serious disparities affecting narrative feedback in clinical evaluations.

Beyond demographic data such as race and gender, personality traits have been associated with clinical grades (12). For instance, extraversion has been associated with higher clinical evaluation scores, and learners with higher self-reported reticence or reserved behaviors score lower on the internal medicine clerkship (12,13). There are many possible confounding factors which may appropriately account for these associations; however, this has not been reliably assessed.

The "halo effect" is proposed as another source of bias in clinical evaluation (14,15). The halo effect is actualized when the positive assessment of a single skill, trait, or behavior leads to a favorable assessment of unrelated specific skill or behavior. A student's excellent performance in one skill may cause an evaluator to cast this positivity onto evaluations of other skills. The quintessential example of this in student evaluation is "straight line scoring," in which an evaluator scores a student the same in every category on an evaluation form (15). The halo effect is not limited to skills, but also to personality traits and behaviors. One study has even suggested an "attractiveness halo" in which perceived attractiveness may affect perceived academic performance (16). One proposed reason for the halo effect is insufficient observation of the range of skills to be evaluated, referred to as *undersampling*. This undersampling may prompt evaluators to generalize their ratings based on a few skills which they feel confident in assessing (17). Implicit biases generate significant subjectivity that may affect validity of clinical evaluations and clerkship grading.

Evaluator Reticence
Reticent and vague evaluations represent a significant limitation in accurately assessing student performance. Considered prevalent, the scope of this problem has not been frequently quantified in the literature. At one institution, 21 percent of faculty members identified as "low-performing" with respect to evaluations represented 75 percent of evaluation forms with insufficient written comments (18). Another study attempted to characterize feedback provided by internal medicine faculty, finding that only 22 percent of written comments were rated as high quality. Specifically, 29 percent of evaluative statements were non-specific and an additional 20 percent described personality traits as opposed to clinical acumen or competency (19). Similar observations of vague and general evaluation comments that do not enable accurate assessment of student ability have been reported elsewhere (20). Another contributing factor is insufficient opportunity for faculty observation; in one study, the number of days spent with a student during a clinical service correlated with good/average/poor knowledge of their learner's performance (21).

In trying to understand other contributing factors to evaluator reticence, the literature is scarce. Experience suggests that time investment, evaluation fatigue, and convenience may be additional driving factors of suboptimal detail in evaluations (22). Concern about potential negative impacts

on students' career prospects may also precipitate omission of deficiencies from evaluations. Additional research is required to better identify the factors contributing to reticent evaluations.

Grade Inflation
Grade inflation is a national epidemic in clinical clerkships, similar to other fields of academia. National survey data has attempted to capture the severity of the issue. In a 2011 survey, 61 percent of clerkship directors agreed that grade inflation exists at their institution (23). More alarmingly, prior survey data from 2009 found that 78 percent of internal medicine clerkship directors reported grade inflation as a "serious" or "somewhat serious" problem, and 38 percent admitted that there were students who passed the IM clerkship at their institution who should have failed (24). It is unknown whether the grade inflation trend has improved. However, anecdotally, UT Southwestern seen greater than 50 percent of students receiving a grade of "honors" in recent years.

In response to this inflation phenomenon and the escalating importance of clerkship grades, institutions have tried to modify grading schema. Pass/Fail structure has been increasingly popular in pre-clinical courses due to evidence for lower rates of burn-out, stress, and depersonalization (25), but this trend has not yet broadly translated to clinical clerkships. In looking at how grading systems for clinical clerkships have evolved over the past five years, more programs are introducing an additional grade descriptor of "High Pass"(5) and others are developing their own schemas. An emergency medicine clerkship replaced the Honors/High Pass/Pass/Fail grading structure with a similar five-tiered grading schema comprised of Top Five percent, Top 25 percent, Expected/Below Expected/Far Below Expected (26). This new schema elicited a decrease in the number of students receiving the top grade designation (from 22.8 percent to 9.8 percent and the second grade designation (from 49 percent to 41.2 percent Nevertheless, the presence of inflation still existed; 9.8 percent of students were characterized as "Top 5 percent" and an additional 41.2 percent of students characterized as "Top 25 percent" resulting in the majority of students ranking in the top quartile.

The significance of grade inflation relates to the importance of rankings to the residency application process. The 2018 National Resident Matching Program (NRMP) Director Survey reports that 73 percent of internal medicine programs cite performance in required clerkships as a factor for selecting applicants to interview (27). More strikingly, final grades awarded for the clerkship in a desired specialty has an average rating of importance of 4.3 (on a 5 point scale) for determining which applicants will be selected to interview. Only NRMP match violations, failed USMLE attempts, and professionalism are rated as more important (27). Further, clerkship grades also effect selection to Alpha Omega Alpha (AOA) and are reflected in the MSPE, additional major factors in the residency selection process.

Efforts to curb grade inflation often trigger an increase in grade appeals as a result of student dissatisfaction with grades. Beyond the issues of student satisfaction and the evaluator-student relationship, the importance of grading to career planning may promote inflation. Some faculty award higher grades with the understanding that the higher grades will best help the student in the pursuit of his or her career. Even at a leadership level, 43 percent of clerkship directors previously surveyed have opined that grade inflation has helped their students receive desired residency positions (23).

In order to address these evaluation discrepancies, best practices should be adopted to assure the accuracy of assessment processes (clinical evaluations in particular) to delineate different levels of competency. As discussed before, confronting subjectivity of evaluations, mitigating bias and the halo effect, and reducing reticent evaluations are essential to collect the primary data necessary for accurate assessment. Several practices to address these problems in the assessment process are discussed in the following section.

Best Practices in Descriptive Assessment of Medical Students

Rubrics
Descriptive evaluations of students following direct observation by faculty contribute the most weight to students' grades (28). But, as discussed in the previous section, objective and consistent assessment is not an innate skill. Therefore, rubrics used to standardize assessments of learners according to a given set of criteria provide faculty with a useable, portable framework to guide their written evaluations. Furthermore, rubrics provide students with clear standards and aims for their professional development as clinicians-in-training.

A rubric commonly used by internal medicine clerkships to assess clinical acumen is the RIME framework (28). A criterion-based assessment tool, it was developed by the eminent medical educator, Louis Pangaro, to make "descriptive evaluations more reliable, valid, useful and feasible (29). The acronym RIME stands for Reporter/Interpreter/Manager/Educator, progressive steps in the professional (i.e. clinical skills) formation of a learner. The designation of Reporter reflects learner competence in reliably gathering and reporting facts about a patient. The designation of Interpreter reflects the next step in competency as a clinician-in-training wherein the learner is able to identify, select and interpret clinical findings that support possible diagnoses. Next, the designation of Manager reflects interpersonal skill as well as clinical knowledge whereby the learner has shown they can develop and present a plan of care tailored to the patient's preferences. Finally, the designation of Educator reflects not only the aforementioned skills, but also the ability of a learner to research deeper clinical complexities and educate his/her team. According to language developed by Dr. Pangaro, these steps are summarized in Table 3 (29).

Table 3. The RIME Framework for Student Progress

Reporter	*"Consistently good in interpersonal skills; reliably obtains and communicates clinical findings."*
Interpreter	*"Able to prioritize and analyze patient problems."*
Manager	*"Consistently proposes reasonable options incorporating patient preferences."*
Educator	*"Consistent level of knowledge of current medical evidence; can critically apply knowledge to specific patients [while educating other members of the clinical team]."*

Rubrics can also support competency-based medical education curricula which articulate standards of readiness for residency. As such, clerkships may adopt elements of the Association

of American Colleges' *Entrustable Professional Activities* (EPAs) for a 'homegrown' framework of competency assessment. Also a stepwise measure of competency, EPAs can assess progress longitudinally from undergraduate to graduate medical education vis-à-vis the RIME rubric which reflects the learner's development at a single point in time (30, 31).   Categories for the rubric may include the following, as appropriate to the level of learner:

Table 4: AAMC Entrustable Professional Activities for Entering Residency

EPA	Activity
1	Gather a history and perform a physical examination
2	Prioritize a differential diagnosis following a clinical encounter
3	Recommend and interpret common diagnostic and screening tests
4	Enter and discuss orders and prescriptions
5	Document a clinical encounter in the patient record
6	Provide an oral presentation of a clinical encounter
7	Form clinical questions and retrieve evidence to advance patient care
8	Give or receive a patient handover to transition care responsibility
9	Collaborate as a member of an inter-professional team
10	Recognize a patient requiring urgent or emergent care and initiate evaluation and management
11	Obtain informed consent for tests and/or procedures
12	Perform general procedures of a physician
13	Identify system failures and contribute to a culture of safety and improvement

Merging the RIME rubric with the EPAs to create a comprehensive framework for evaluating learner competence has also been proposed for criterion-referenced assessments. It provides faculty with a tool for identifying and recording specific, observable behaviors in students who perform as Reporter, Interpreter, Manager, and Educator (32).

Rubrics may be distributed to faculty in advance of their supervision of students, or rubrics may comprise the structure of the learners' standardized evaluations.

Formal Evaluation Sessions ("Grading Discussions")
Written remarks of a student's performance during the clerkship provide the learner and the clerkship director with key data for grading. The descriptive comments may accompany Likert-scale ratings, and are particularly useful for grading where the ratings and comments are not

compatible. For example, a faculty member may assign a numeric rating that corresponds with "Excellent" or "Honors" on an evaluations rating scale, yet the written comments do not support the rating or correlate with the student's clinical skills as reported by other teaching team members (20). Discrepancies may manifest due to bias or evaluator reticence as discussed in the previous section.

Formal evaluation sessions, or grading discussions, between the clerkship director and faculty and housestaff can mitigate the aforementioned discrepancy and evaluator subjectivity and 'standardize' the language used in descriptive assessments (33). A national survey of internal medicine clerkship directors reported that 45 percent (38/84) of these conducted formal evaluation sessions with attendings to discuss their students' performances, and 51 percent (23/45) of clerkship directors who did not have grading conversations believed they should (28). Sessions may be conducted following each rotations with a group or in one-on-one conversations by the clerkship director with faculty and other members of the teaching team who submitted sub-par or discordant evaluations of students.

Grading conversations can serve multiple purposes in addition to improving the veracity of learner grades such as achieving consensus on and obtaining more accurate descriptions of students' performance during the clinical clerkship, improving the descriptive evaluation skills of faculty and housestaff, the identification of struggling or marginally performing learners, and generating robust summative feedback for the students (28, 33). Unfortunately, however, not all clerkships are sufficiently resourced to conduct these sessions or there are significant logistical challenges. Time constraints for the clerkship director, teaching team members' unavailability, the administrative burden of scheduling the sessions, and a multiplicity of training sites are cited obstacles to this practice (28).

Evaluator Training
Evaluator training to establish "shared mental models" has proven effective in improving consistency and correlation with clerkship standards for descriptive evaluation practices (33, 34). And investing time to develop faculty and housestaff to confidently assess the clinical performance of learners by equipping them with rubrics and examples of when and how to assign the rubric classifications will increase the likelihood that the descriptive evaluations they submit will be informative to students and clerkship directors.

Workshops and training materials, once developed, can be an efficient means for clerkship directors to instruct new faculty and house staff on the criteria and rubic(s) used to assess the clinical competency of learners and how to record specific, observable behaviors to substantiate their evaluations.

Furthermore, workshops and supplemental training materials can raise faculty and house staff awareness about the influence of subjectivity and bias on their assessment of students, and may include self-assessment resources that aid in identifying personal biases. One such resource is the well-respected Implicit Association Test developed by Harvard's Project Implicit available online free of charge and can be found at:

https://implicit.harvard.edu/implicit/takeatest.html

Electronic repositories, such as the cloud-based applications OneDrive or Google Docs, are an alternative way of distributing training materials to faculty who may not be able to attend a workshop. These repositories also provide convenient access to materials for faculty who would like to refresh their knowledge of local best practices before crafting descriptive assessments of their students.

Conclusions

"There will be increasing trust of assessment methods which recognize the primacy of evaluations by teachers and supervisors, an increasing reliance on a descriptive vocabulary for clinical competence, and, it is hoped, an escape from the tyranny of numbers over words" (35).
Louis Pangaro, MD

The limitations of faculty and resident evaluations in capturing a student's true level of competence are well described in the literature. Understanding these hindrances, such as gender bias, ethnicity, the halo effect, and grade inflation will allow clerkship programs to more accurately reflect learner competency.

The utilization of a standardized framework such as RIME provides faculty and house staff with a tool for identifying and recording specific, observable behaviors in students. However, implementation of standardized frameworks requires dedicated time for faculty and resident education for successful adoption, and, unfortunately, dedicated time is an increasingly scarce commodity in medical education

These approaches to gathering faculty and house staff observations can level the playing field by ensuring that all students are evaluated on stated competencies while omitting biased language. Grading conversations also decrease faculty reluctance to offer critical feedback or less-than-superlative final assessments.

Assessments are critical to students' formative development of professional competencies may also summarize student performance, both intra-institutionally and extra-institutionally. It is critical that assessments are rooted in objective measures of student competence and direct observation of performance. While objective assessments such as standardized testing, computer case simulations and Objective Structured Clinical Exams have become increasingly utilized the direct observation of student performance remains the cornerstone of learner competency assessment. Therefore, it is vital that observational evaluations are fair, substantive, and offer students guidance on their next toward the next level of autonomy and responsibility. Narrative evaluations constructed in this manner will inform grades that accurately reflect performance and provide a reliable signal of student achievement to the medical school and residency programs beyond.

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References

1. Association of American Medical Colleges. LCME Annual Medical School Questionnaire Part II, 2013-2014 through 2017-2018. Accessed October 27, 2019.

2. Gibbs T, Brigden D, Hellenberg D. Assessment and evaluation in medical education. S Afr Fam Pract 2006;48:5-7.

3. Association of American Medical Colleges. LCME Annual Medical School Questionnaire Part II, 2011-2012 through 2013-2014 and 2017-2018. Accessed October 27, 2019.

4. Association of American Medical Colleges and American Medical Association. LCME Functions and Structure of a Medical School: Standards for Accreditation of Medical Education Programs Leading to the MD Degree. In: AAMC, ed.2019:1.

5. Association of American Colleges. AAMC Curriculum Inventory. 2011-2018.

6. Dubosh NM, Fisher J, Lewis J, Ullman EA. Faculty Evaluations Correlate Poorly with Medical Student Examination Performance in a Fourth-Year Emergency Medicine Clerkship. The Journal of emergency medicine 2017;52:850-5.

7. Wang-Cheng RM, Fulkerson PK, Barnas GP, Lawrence SL. Effect of student and preceptor gender on clinical grades in an ambulatory care clerkship. Academic medicine : journal of the Association of American Medical Colleges 1995;70:324-6.

8. Rand VE, Hudes ES, Browner WS, Wachter RM, Avins AL. Effect of evaluator and resident gender on the American Board of Internal Medicine evaluation scores. Journal of general internal medicine 1998;13:670-4.

9. Rojek AE, Khanna R, Yim JWL, et al. Differences in Narrative Language in Evaluations of Medical Students by Gender and Under-represented Minority Status. Journal of general internal medicine 2019;34:684-91.
10. Capers Q, Clinchot D, McDougle L, Greenwald AG. Implicit Racial Bias in Medical School Admissions. Academic medicine : journal of the Association of American Medical Colleges 2017;92:365-9.

11. Low D, Pollack SW, Liao ZC, et al. Racial/Ethnic Disparities in Clinical Grading in Medical School. Teach Learn Med 2019;31:487-96.

12. Lee KB, Vaishnavi SN, Lau SKM, Andriole DA, Jeffe DB. "Making the grade:" noncognitive predictors of medical students' clinical clerkship grades. Journal of the National Medical Association 2007;99:1138-50.

13. Davis KR, Banken JA. Personality type and clinical evaluations in an obstetrics/gynecology medical student clerkship. American journal of obstetrics and gynecology 2005;193:1807-10.

14. Cockayne TW, Samuelson CO, Jr. Halo effect and medical student evaluation of instruction. Journal of medical education 1978;53:364.

15.Sherbino J, Norman G. On Rating Angels: The Halo Effect and Straight Line Scoring. J Grad Med Educ 2017;9:721-3.

16. Talamas SN, Mavor KI, Perrett DI. Blinded by Beauty: Attractiveness Bias and Accurate Perceptions of Academic Performance. PLoS One 2016;11:e0148284.

17. Beeson MS, Hamstra SJ, Barton MA, et al. Straight Line Scoring by Clinical Competency Committees Using Emergency Medicine Milestones. J Grad Med Educ 2017;9:716-20.

18. Pincavage A, Cifu A. Faculty member feedback reports. The clinical teacher 2015;12:50-4.

19. Jackson JL, Kay C, Jackson WC, Frank M. The Quality of Written Feedback by Attendings of Internal Medicine Residents. Journal of general internal medicine 2015;30:973-8.

20. Lye PS, Biernat KA, Bragg DS, Simpson DE. A pleasure to work with--an analysis of written comments on student evaluations. Ambulatory pediatrics : the official journal of the Ambulatory Pediatric Association 2001;1:128-31.

21. Osman NY, Walling JL, Mitchell VG, Alexander EK. Length of attending-student and resident-student interactions in the inpatient medicine clerkship. Teaching and learning in medicine 2015;27:130-7.

22. Barrett M, Georgoff P, Matusko N, et al. The Effects of Feedback Fatigue and Sex Disparities in Medical Student Feedback Assessed Using a Minute Feedback System. Journal of surgical education 2018;75:1245-9.

23. Fazio SB, Torre DM, DeFer TM. Grading Practices and Distributions Across Internal Medicine Clerkships. Teaching and learning in medicine 2016;28:286-92.
24. Fazio SB, Papp KK, Torre DM, Defer TM. Grade inflation in the internal medicine clerkship: a national survey. Teaching and learning in medicine 2013;25:71-6.

25.Reed DA, Shanafelt TD, Satele DW, et al. Relationship of pass/fail grading and curriculum structure with well-being among preclinical medical students: a multi-institutional study. Acad Med 2011;86:1367-73.

26. Weaver CS, Humbert AJ, Besinger BR, Graber JA, Brizendine EJ. A more explicit grading scale decreases grade inflation in a clinical clerkship. Academic emergency medicine : official journal of the Society for Academic Emergency Medicine 2007;14:283-6.

27. National Resident Matching Program DRaRC. Results of the 2018 NRMP Program Director Survey. National Residency Matching Program.

28. Hemmer PA, Papp KK, Mechaber AJ, Durning SJ. Evaluation, grading, and use of the RIME vocabulary on internal medicine clerkships: results of a national survey and comparison to other clinical clerkships. Teaching and learning in medicine 2008;20:118-26.

29. Pangaro L. A new vocabulary and other innovations for improving descriptive in-training evaluations. Academic medicine : journal of the Association of American Medical Colleges 1999;74:1203-7.

30. Chen HC, van den Broek WES, ten Cate O. The Case for Use of Entrustable Professional Activities in Undergraduate Medical Education. Academic Medicine 2015;90:431-6.

31. Lomis K, Amiel JM, Ryan MS, et al. Implementing an Entrustable Professional Activities Framework in Undergraduate Medical Education: Early Lessons From the AAMC Core Entrustable Professional Activities for Entering Residency Pilot. Academic Medicine 2017;92:765-70.

32. Meyer EG, Kelly WF, Hemmer PA, Pangaro LN. The RIME Model Provides a Context for Entrustable Professional Activities Across Undergraduate Medical Education. Academic medicine : journal of the Association of American Medical Colleges 2018;93:954.

33. Hemmer PA, Dadekian GA, Terndrup C, et al. Regular Formal Evaluation Sessions are Effective as Frame-of-Reference Training for Faculty Evaluators of Clerkship Medical Students. Journal of general internal medicine 2015;30:1313-8.

34. Salerno SM, Jackson JL, O'Malley PG. Interactive faculty development seminars improve the quality of written feedback in ambulatory teaching. Journal of general internal medicine 2003;18:831-4.

35. Pangaro LN. Investing in descriptive evaluation: a vision for the future of assessment. Medical teacher 2000;22:478-81.