ACADEMIC PROGRAM REVIEW
DEPARTMENT OF EMERGENCYMEDICINE

UNIVERSITY OF ARIZONA, TUCSON

MARCH 2017

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Introduction

This report represents an impartial and regularly scheduled Academic Program Review [APR] of the Department of Emergency Medicine, as required by the Office of the Provost, University of Arizona, Tucson. The last APR was conducted in 2009. Since the last review, there is a new Dean, College of Medicine, a new Chair, Department of Emergency Medicine, and a new merger with the Banner Healthcare system.

The internal and external reviewers spent two full days on site, meeting with University of Arizona academic leaders in the Office of the Provost, the Office of the Dean, College of Medicine, the department chair and administrator, seven additional department chairs, senior administrators in the Banner organization, and emergency medicine faculty, staff, residents, and fellows.

Department Leadership

The Department Chair, Dr. Sam Keim, and the Administrator, Dale Borgeson, are an experienced, dynamic duo. It is clear, after interviewing members of the department, and institutional colleagues, that they have the respect of the administration, staff, trainees and faculty.

Clinical Operations

Strengths

The UA Department of Emergency Medicine (EM) has a long history of delivering outstanding care to Tucson and the entire Southern Arizona region. To optimize delivery of care, they have developed strong interdepartmental and cross-disciplinary relationships.

Overall, clinical productivity is high with marked increases in volume and RVU productivity for the past 4 years. In order to address this growth and increasing medical complexity and acuity, the Department has developed a number of innovative care delivery models. These include the Rapid Medical Evaluation (RME) initiative and a robust Clinical Decision Unit (CDU).

The Chair, medical directors, and administrator are well respected and supportive of each other. The Department has developed strong emergency medicine subspecialties (toxicology, critical care, ultrasound, informatics, simulation training, EMS), which provide and enable many strong relationships in interdisciplinary collaboration.

Challenges

The Department faces a number of operational challenges and opportunities in the delivery of emergency care. The Department's initial intake and entry area for patients is the Rapid Medical Evaluation [RME] area. Unfortunately, the innovative RME program is located in a confined, former administrative office space in the Emergency Department. This space is inadequate for care delivery, inhibits patient privacy, and represents a potential risk from a regulatory and compliance standpoint (see Appendix for photographs).

Like many other academic institutions, the Department faces numerous challenges in terms of patient flow and throughput. These challenges include long wait times for specialty consultation services, lack of timely outpatient follow-up for patients, and lack of availability of on-site translation services for the large Spanish speaking patient population seen in the Department. The transition to a Banner facility has brought a new focus on throughput as a core metric, but also risks de-emphasizing other important quality metrics, such as appropriateness of imaging studies and patient experience (the latter for which no data was provided in the self-study report).

The Banner transition has also posed a number of other challenges to the clinical operations. The ED nurse staffing model instituted under Banner does not appear to synchronize well with the faculty and resident staffing, resulting in units or pods being closed despite patients waiting to be seen and physicians available to provide care. In addition, reviewers felt that additional seasonal surge staffing, particularly faculty physicians, was warranted during the busy winter months in the Pediatric ED.

This fall, the institution will undergo its second electronic medical record (EMR) transition in less than 5 years. The Cerner transition will lead to short-term operational challenges.

Historically, the department has been known for its institution-leading revenue cycle team, one that maximized appropriate coding and reimbursement opportunities. This expertise has been marginalized with the transition to the Banner model, but a test of change is underway to use outside resources to address this deficit.

Finally, reviewers were surprised to learn that the CDU is not currently managed by the Department of Emergency Medicine. Given the increasing interest in new models of care (urgent care, telemedicine, observation units like the CDU), and the innovative care delivery focus and experience of the Department, this would seem like an excellent opportunity for the Department of Emergency Medicine. Emergency Medicine – managed CDUs lead to shorter lengths of stay without sacrificing quality.

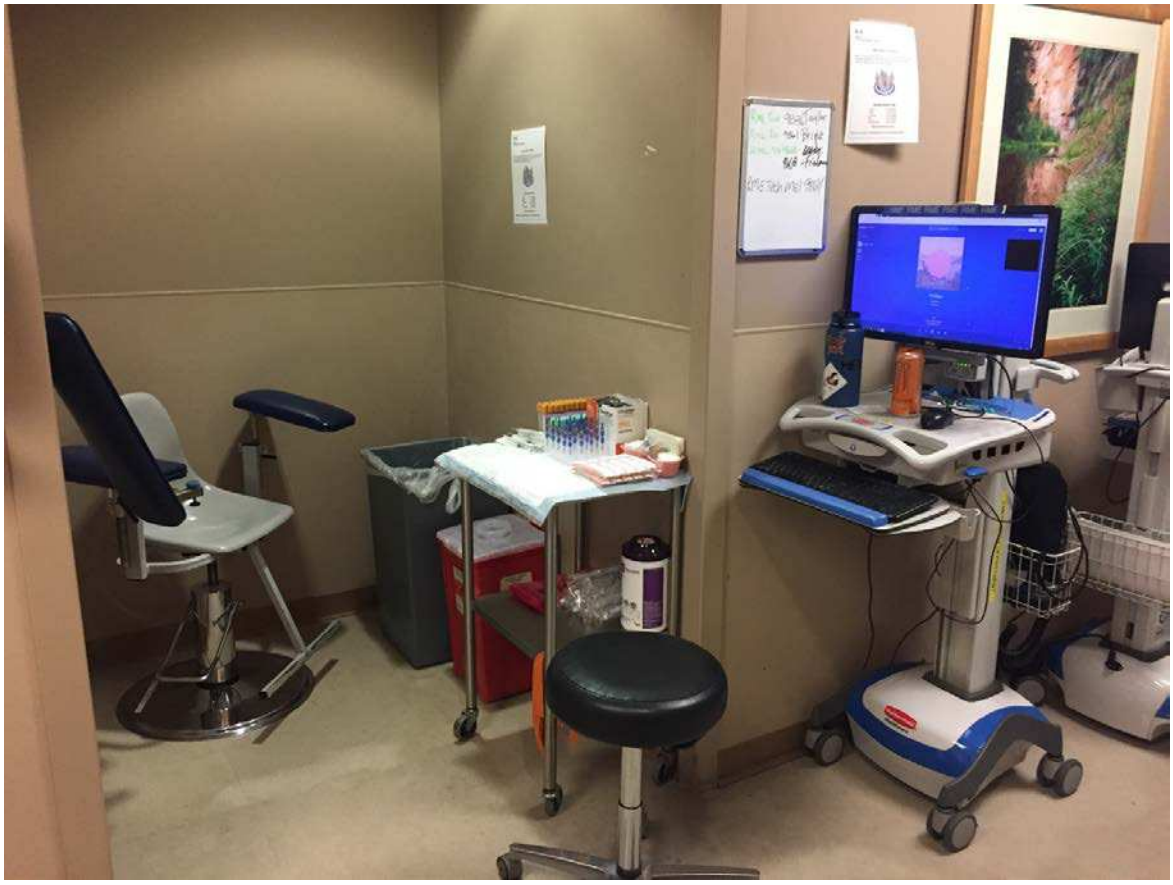
Recommendations

- Remodel front entry of ED to provide space and appropriate patient care area for RME program
- Improve ED patient flow by addressing nurse staffing issues, pediatric Winter surge staffing, consult response timeliness, and outpatient follow-up challenges
- Focus on patient experience and other quality metrics in addition to throughput
- Leverage Department strengths by fostering collaboration on new care models including the RME, CDU, and other opportunities
- Fully leverage the expertise of the existing EM revenue cycle team

Figures of current RME space inadequate for patient care

Figure 1: RME patient care and holding area

Figure 2: RME patient care space located in hallway alcove



Education

Undergraduate Medical Education

Strengths

The Emergency Medicine and Emergency Medicine Critical Care rotations are highly praised and sought-after rotations. The students valued resident teaching and mentorship. They noted a strong EM presence throughout the four years of medical school, which speaks to a highly involved program with a desire to reach out to and attract medical students. The faculty and staff are highly respected among medical students, and a high percentage of senior medical students seek EM residency training.

Challenges

Student advisors are available but there is a concern that advising may be inconsistent. There were concerns raised by a couple of students related to the Standard Letter of Evaluation (SLOE), including a perception of bias related to the final evaluation. This was amplified by the perception that only one faculty member determines the student's final evaluation.

The number of Sub-intern rotation slots early in the 4th year is inadequate to accommodate the number of students who wish to pursue EM residency training. This is pushing students to secure away rotations early in their fourth year in order to secure a SLOE.

It was noted that the EM Sub internship architecture does not optimize the students' learning. Specific feedback includes:

a. The rotations would benefit from more didactics.
b. Geographic limitations of ED teams may limit student ability to see new patients.
c. Faculty members are overly stressed by clinical work so students have difficulty presenting patients and receiving enough clinical teaching.

UGME Recommendations

- Clarify advising process within the College of Medicine to verify that students are receiving consistent and accurate information about away rotations, schedules, applications and match list strategies.
- SLOE should be more committee focused – broader input should result in a more fair assessment and less perception of bias. [Reference: www.cordem.org/esloe/]

Graduate Medical Education (GME)

The Department of Emergency Medicine offers three residency programs (EM at two locations and integrated EM/Peds) which are complemented by fellowships in critical care, EMS, informatics, simulation, ultrasound, toxicology, sports medicine, research, and palliative care.

Strengths

Residents express tremendous respect and admiration for the Program Director and residency leadership team and value their mentorship both academically and clinically. They appreciate having access to multiple sites and a broad range of clinical

experiences. The residents feel the positive influence of the many strong EM subspecialty groups. Specifically admired are the Ultrasound, Critical Care, Pediatrics, and EMS. They feel the program values resident wellness, and the residents seem happy.

The residents derive benefit from a good balance of autonomy and back-up/oversight. The residents specifically mentioned the "Resuscitation Captain" role for Senior Residents as an outstanding learning opportunity. The ASTEC simulation lab and the simulation faculty are a tremendous asset to the program.

Challenges

Uncertainty about the future of GME programs (2019) at U of A poses a significant recruitment and reputation threat, not just for emergency medicine, but for all the GME programs. The residents also keenly feel that the clinical demands and pressure for rapid throughput are negatively impacting teaching and learning.

The residents' funds for education/travel now require an increased administrative burden to obtain funds through the Banner system. And, important resident spaces (including charting room in the ED, library, lounge) are felt to be at significant risk during ongoing capital projects.

The residents do not have an observation/CDU experience. In addition, the residents are spending several hours after each shift completing their charting.

GME Recommendations

- The uncertainty regarding the future of GME training at the University of Arizona should be rectified and communicated as soon as possible, as this could have serious consequences for the reputation of many GME programs, and negatively impact recruitment.
- Re-emphasize and prioritize the teaching/learning experience for the residents versus the heavy emphasis on productivity and throughput.
- Resident educational funds should to be supported and processes developed to simplify access to the funds.
- Adequate space for resident work, charting, education, training, and relaxation must be preserved during and after the campus construction and remodel.
- Identify opportunities to reduce administrative and documentation burden on residents, especially in light of a new EMR rollout. (Scribes are one possible solution)

Faculty

Strengths

A core group of senior faculty members are considered "trailblazers" in their respective fields of study, recognized nationally and internationally as being innovative and forward thinking. Supportive evidence includes department ranking 18th (out of 36) in NIH funding. The mid-career and younger faculty members are dedicated, enthusiastic and mutually supportive. The trainees see their faculty as terrific mentors and great role models. The faculty members appear to be hard-working, collaborative and benevolent. There is a strong alumni network throughout Az. The faculty development structure appears well designed.

Challenges

Environment

Productivity pressures are perceived as unbalanced and discourage academic commitment and growth. While senior faculty have well-developed and sustainable career paths, the junior and mid-career faculty express ambiguity regarding the alignment of department vision, mission and their respective career goals. Expectations for this group are unclear and there is uncertainty on how current realities will allow for support of their ambitions to pursue academics. One faculty member stated "If things continue to evolve in this way, why should I stay here?"

Compensation and Employment

The risks of a two-class system – Banner versus UA employment – are a palpable concern among all of the faculty members, regardless of employer or rank. Issues of perception and transactional-financial differences relate to differences in total compensation and benefits. An unexpected risk category is identified: Banner employed faculty members with young children are at increased risk, and potential disadvantage, with diminished childcare and health benefits.

The compensation plan is complex and designed to focus and reward clinical work, without adequate attention and reward placed on academic efforts. For example, the buy-down for academic time is charged at replacement cost of the clinical time ($275/h) while buy-down is compensated at the AAMC benchmark.

Faculty Organization, Communication and Development

The department has a flat leadership model with no Divisions/Sections, impacting the appreciation of organization around thematic/programmatic interests, expertise, operations, innovation and mentorship. Yet, half the faculty members are fellowship trained or board certified in another specialty or subspecialty. There appears to be inadequate administrative support for faculty tasks.

Developmental activities include a series of retreats organized by departmental areas of focus. However, these retreats may not be translating across the faculty in a way that is meaningful.

Recommendations:

- Consider formulation of Divisions/Sections with leadership helping to drive tripartite mission, programmatic and faculty development.
- Revisit retreat structure and process to examine objectives and results – Are the faculty engaged, responsive and impacted?
- Explore ability to revise the compensation plan to achieve:
    - Greater transparency and adjustments to base compensation to achieve similar total compensation between Banner and UA faculty
    - Provide leadership roles to Banner faculty to avoid sense of "have-nots"
    - The current compensation plan is not aligned with the goals of a successful academic clinical department. Faculty compensation should be considered in a manner that encompasses clinical, quality and academic productivity. Successful academic models at other institutions include metrics related to clinical productivity, service/leadership contributions and education contributions.
    - The chair should have the opportunity to distribute some of these funds in a manner consistent with culture and mission. In this way, the Chair can ensure that the faculty are compensated fairly and achieve clinical excellence. This also provides for a compensation environment that promotes education and innovation.

Scholarship

Strengths

Scholarship within Emergency Medicine is facilitated by the Arizona Emergency Medicine Research Center (AEMRC), which was created in 1990. AEMRC has allowed the department to establish an outstanding national reputation, with a current ranking of 18th in NIH funding for academic emergency medicine departments. This is due to academically oriented faculty with innovative ideas. Thirteen (13) percent of the faculty members have h-index scores of 20 or greater (the h-index is a measure of productivity and citation impact).

Clinical research is facilitated by membership in two nationally based consortia to promote clinical trials in emergency care: 1) NIH-sponsored Strategies to Innovate Emergency Care Clinical Trials Network (SIREN), and 2) Pediatric Emergency Care Applied Research Network (PECARN). Emergency Medicine is currently enrolling patients in 12 clinical trials.

Challenges

Challenges that limit scholarship productivity stem from a lack of incentives for clinical-scientists to pursue research. In addition, the current funds flow model limits the ability of the Department Chair to provide strategic investment in research. Such investment could include protected research time to promote funding applications.

Recommendation

- Provide adequate discretionary funds to the Department Chair to strategically invest in promising faculty members, with the ability to provide protected research time to promote scholarly inquiry, discovery and grant submissions

Diversity

The University of Arizona and the College of Medicine are committed to diversity and inclusion in the health professions. The Department of Emergency Medicine states it is committed to supporting diversity and disparity research and academic programs. However, there is a notable lack of diversity at all levels, including leadership. 80% of Emergency Medicine faculty members are male compared with 64% in the College of Medicine. With respect to ethnicity, 80% of Emergency Medicine faculty members are White Caucasian compared with 64% in the College of Medicine. The disparity was evident when the committee met with tenured faculty (only males present), tenure-eligible faculty (male), and other faculty members (clinical scholar, clinical series, educator scholar, research track). The other faculty members were also overwhelmingly male with only five women present (who seated themselves on the edges of the group). However, there was far greater diversity in the residents and fellows, which suggests that there may be an improved pipeline of potential diverse faculty members.

Recommendations

- College of Medicine funds allocated to the Chair of Emergency Medicine to recruit a mid-career clinical-scientist, with specific focus and attention on recruiting for diversity
- Continued education and support for efforts to recruit, retain and promote diverse faculty members, fellows and residents