A Survey of Learning Deficiencies in Dermatology Residents

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INTRODUCTION

As medical students transition from their medical education into their residency programs many are faced with large learning gaps, especially for highly competitive residencies like dermatology. As one transitions through the levels of medical education, their coping strategies and knowledge must develop accordingly or else academic and interpersonal deficiencies will become evident.[1,2] Studies have shown that learning deficiencies varied with the level of learning and many participants had multiple areas of deficiency.[3] Early on, trainees were more likely to have problems with mental well-being and communication, and medical knowledge while professionalism and judgment deficits increased at each level of training.[3,4] One of the greatest areas of struggle among new dermatology residents is adequately mastering the required American Board of Dermatology (ABD) approved American Board of Medical Specialties (ABMS) six competency areas. These six competencies include: medical knowledge, patient care, interpersonal communication skills, practice-based learning (PBL) and improvement, system-based practice, and professionalism.[5]

As a resident, remediation helps to identify a physician's weaknesses, often referred to as a resident 'in difficulty,' and help overcome them. This process leads to competency within healthcare and preparation for unsupervised practice. Remediation should be personally tailored to each physician to properly target the cause for the need for remediation. Early identification of weaknesses and immediate personalized remediation are shown to be the best course of action to prepare residents for providing patients with the best-unsupervised care possible.[6,7] However, the remediation process is a difficult process in that it requires an abundance of time, effort, and resources for both the physician and resident in difficulty.[8]

Workplace-based assessments (WBA) have been used to evaluate trainees' performance and competence in core skills required to be a capable physicians.[9] Despite WBA's being an effective tool in identifying and creating remediation plans, there is a deficit of literature on the difference in perspective between the resident trainees and faculty educators. By eliciting the perspectives of different parties involved in the remediation process, WBA's can be improved upon to guarantee the successful completion of residency programs.

In addition, there is currently a lack of studies on the cause of remediation among various trainee statuses. This is true, especially among specific specialties, such as dermatology. This study aims to examine sources of need for remediation among various trainee classes in dermatology, how faculty identified these sources, and what remediation tools were used in strengthening these residents' weaknesses.

METHODS

- An anonymous online survey on dermatology resident remediation was conducted from July 2019 to August 2019.
- Participants included dermatology residents at PGY2-PGY4 levels.
- Personal information collected: self-identified gender and position title.
- Survey distributed via Qualtrics to the Association of Professors of Dermatology Listserv.
- No incentives provided for survey completion; participation was voluntary.
- Survey took 5-10 minutes to complete, with consent obtained through participation.
- Participants were asked about learning deficiencies, identification methods, and remediation by year of residency.
- Questions categorized learning deficiencies into various areas: medical knowledge, clinical skills, clinical reasoning, time management, interpersonal skills, communication, professionalism, practice-based learning, and system-based practice.
- Data analyzed using descriptive statistics like median, mean, and standard deviation.
- Dermatology faculty identified learning deficiencies through methods like direct clinical observation, clinical incidents, morning reports, chart reviews, in-training exams, and more.
- Faculty used various remedial actions for resident improvement: feedback sessions, mentor assignment, letters of concern, probation, counseling, behavioral guidelines, didactics, leave of absence, formal assignments, and others.
- Dermatology faculty were surveyed about their methods of identifying learning deficiencies in dermatology residents by faculty were through the categories of Direct Clinical Observation, Clinical Incident, Poor Performance at Morning Report or Conference, Neglecting Patient Care Responsibilities, Chart Review or Record Audit, In-Training Exam, Mini-Clinical Evaluation Exercise, or Other.
- Dermatology faculty respondents were asked about their use of remedial action used to improve the performance of the residents. The categories the faculty were asked about included: More Frequent Feedback Sessions, Assigned Mentor for Supervision, Letter of Concern, Probation, Psychology Counseling, Strict Behavioral Guidelines, Remedial Didactics, Leave of Absence, Formal Learning Assignments, and Other.

RESULTS

-Faculty, learning deficiencies: Sometimes or more: Trend toward decreased frequency with increasing PGY level, except for professionalism with increased frequency with PGY level.
-Faculty, learning deficiencies: Sometimes or more: Significant decrease in frequency of time management deficiencies with increasing PGY level
-Faculty, learning deficiencies: Sometimes or more: trend towards decrease in frequency of medical knowledge deficiencies with increasing PGY level (same for residents)
-Faculty, learning deficiencies: Never, Sometimes or more: trend towards decrease in frequency of clinical skills deficiencies with increasing PGY level (same for residents)
-Faculty, learning deficiencies: Sometimes or more: trend towards decrease in frequency of clinical reasoning deficiencies with increasing PGY level (same for residents)
-Faculty, learning deficiencies: Sometimes or more: highest frequency of learning deficiencies in medical knowledge for all resident levels
-Residents, learning deficiencies: highest frequency of learning deficiencies in medical knowledge for all resident levels
-Residents, learning deficiencies: Sometimes or more: Significant decrease in frequency of medical knowledge with increasing PGY level
-Residents, learning deficiencies: Sometimes or more: Significant decrease in frequency of clinical skills with increasing PGY level
-Residents, learning deficiencies: Sometimes or more: Significant decrease in frequency of clinical reasoning with increasing PGY level
-Residents, learning deficiencies: Sometimes or more: Significant decrease in frequency of time management and organization with increasing PGY level
-Residents, learning deficiencies: Sometimes or more: Significant decrease in frequency of communication with increasing PGY level
-Residents, learning deficiencies: Sometimes or more: Significant decrease in frequency of PB: and improvement with increasing PGY level
-Residents, learning deficiencies: Sometimes or More: highest frequency of learning deficiencies for all Professionalism in PGY2 residents, second highest in PGY4 residents, and lowest frequency in PGY3 residents (opposite trend for faculty)
-Faculty, learning deficiencies: Sometimes or More: Trend toward increased frequency with increasing PGY level for Professionalism learning deficiency
-Residents, learning deficiencies: Residents were "harsher" in their responses by having higher frequencies of learning deficiencies reported compared to faculty
-Residents, learning deficiencies: Sometimes or More: no change in frequency of learning deficiencies in interpersonal skills from PGY3 to PGY4
-Residents, learning deficiencies: Sometimes or More: no change in frequency of learning deficiencies in systems-based practice from PGY3 to PGY4
-Residents, learning deficiencies: Sometimes or More: no change in frequency of learning deficiencies in professionalism from PGY3 to PGY4

-Faculty, learning deficiencies: Sometimes or more: Significant decrease in frequency of identification of learning deficiencies by poor performance at morning report or conference with increasing PGY level
-Faculty, methods of identification: Sometimes or more: Learning deficiencies were most likely to be identified through direct clinical observation
-Faculty, methods of identification: Sometimes or More Learning deficiencies were least likely to be identified through the "other" category and the Mini-Clinical Evaluation category
-Faculty, methods of identification: Sometimes or More: Trend toward increased frequency with increasing PGY level for faculty identified learning deficiencies through Neglecting patient care responsibilities
-Faculty, methods of identification: Sometimes or More: faculty identified learning deficiencies through In-Training exam with PG4 residents with the lowest frequency, followed by PGY2 residents, and PGY3 residents with the highest frequency

-Faculty, Remedial Action: Sometimes or more: More frequent feedback sessions were most likely used as remediation action to improve the performance of struggling residents
-Faculty, Remedial Action: Sometimes or more: Faculty were least likely to use a leave of absence as remediation for struggling residents
-Faculty, Remedial Action: Sometimes or more: PGY2 were more likely to have remedial action across all categories compared to PGY3 and PGY4 residents.
-Faculty, Remedial Action: Sometimes or More: Faculty use informal feedback as remedial action reported that it is never used for PGY3 (0%) and PGY4 (0%) residents but used 98% of the time for PGY2 residents

Figures

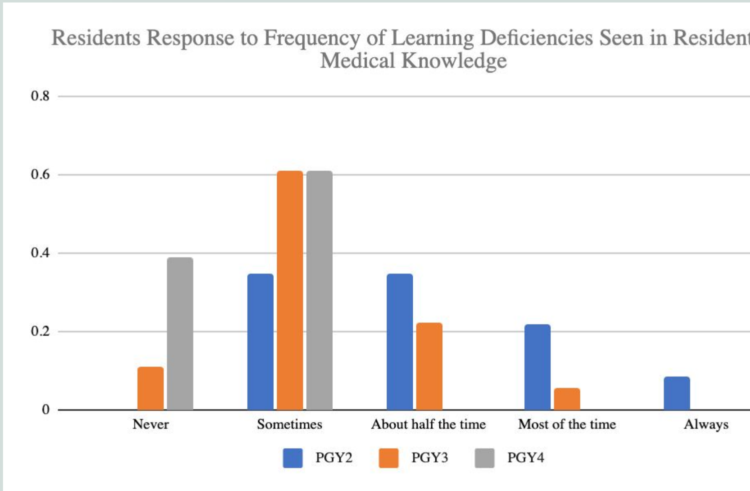

Figure 1. Resident respondents answers to frequency of learning deficiencies in medical knowledge.

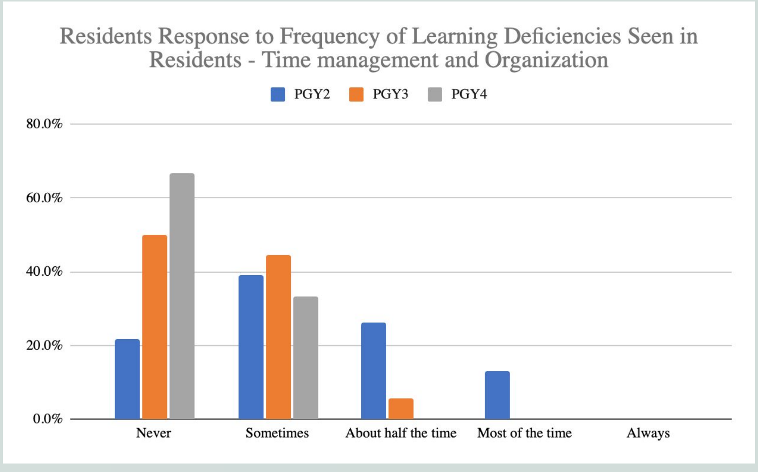

Figure 2: Resident respondents answers to frequency of learning deficiencies in time management and organization

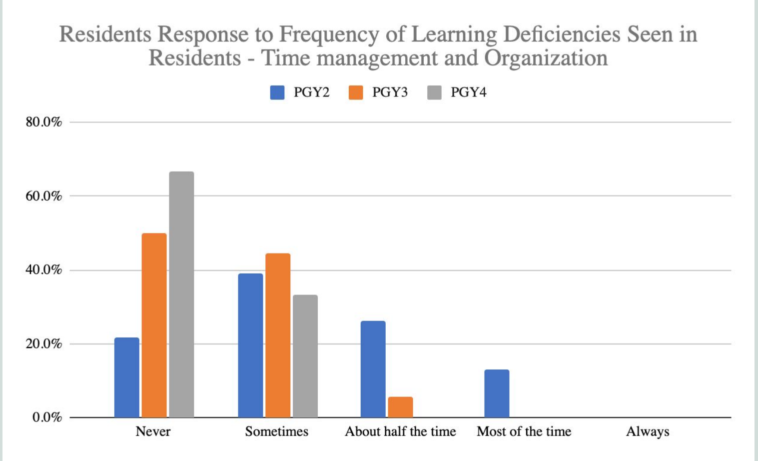

Figure 3. The frequency of faculty respondents who answered "Never" or "Sometimes" to learning deficiencies.

CONCLUSIONS

Learning deficiencies have been shown to appear in recognizable patterns in other specialties. Throughout the different levels of dermatology residency, the causes of remediation differ along with the type of remediation most commonly used. When new physicians begin their residency, their weaknesses are found to be related to clinical and medical knowledge. However, as they advance in their education, they are more likely to be deficient in issues relating to professionalism. Through this examination of the frequency of learning deficits experienced by dermatology residents, faculty can better anticipate and implement remediation by emphasizing standardized ways of strengthening these aspects of student development within the curriculum for future classes of trainees. Deficiencies that remain unaddressed throughout training can potentially carry over as physicians begin their careers, leaving negative impacts on patient care. With increased preparation and recognition of learning deficiencies in residency training they can be addressed, resolved, and improve overall patient care.

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