IMPROVING PATHOLOGY RESIDENT EDUCATION IN COAGULATION USING A CASE-BASED CURRICULUM

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CURRENTLY THERE IS NO STANDARDIZED CURRICULUM FOR COAGULATION AMONG PATHOLOGY RESIDENCY PROGRAMS. THE ABSENCE OF A “BEST PRACTICE” AND SPECIFIC GUIDANCE FROM NATIONAL ORGANIZATIONS IN THE FIELD OF PATHOLOGY EDUCATION PRESENTS A CHALLENGE FOR PATHOLOGY RESIDENCY PROGRAMS WHICH CAN RESULT IN DISPARATE RESIDENT EXPOSURE TO THIS AREA OF THE LABORATORY, AND VARIABLE EDUCATIONAL EMPHASIS IN THIS TOPIC AREA; WHICH IS LARGELY DEPENDENT UPON FACULTY INTEREST AND PROGRAM RESOURCES.

The prior curriculum for the coagulation rotation at MCW predominantly focused on assigned readings followed by one-on-one discussions with coagulation faculty. While some sessions were identical between faculty, others were highly variable in their content. Additionally, not all topic areas were consistently covered with rotating residents, depending on the individual resident’s rotation schedule. Another issue, was the limited opportunities for application of the knowledge gained during/after discussion sessions, either within the laboratory or via exposure to patients.

A recent evaluation of the coagulation rotation by residents identified multiple areas of concern (Figure 1), including low overall resident satisfaction with the rotation, compared to other clinical pathology resident rotations at MCW. The prior curriculum; how to approach certain topic areas when assigned to different faculty was not defined and not all topic areas were covered with each resident. As I continue to work on this project, I am also curious about improving resident engagement. The old curriculum was not defined and not all topic areas were covered with each resident. As I continue to work on this project, I am also curious about improving resident engagement. The old curriculum was not defined and not all topic areas were covered with each resident. As I continue to work on this project, I am also curious about improving resident engagement. The old curriculum was not defined and not all topic areas were covered with each resident. As I continue to work on this project, I am also curious about improving resident engagement.

METHODS

A new curriculum based on situational learning which utilizes case-based scenarios and one-week clinical experience was developed and implemented in the 2018-2019 academic year.

Four first-year pathology residents participated in the new coagulation rotation curriculum. Their performance on the end of rotation examination, ACGME milestones, and responses to a standard departmental end of rotation examination were compared to prior residents (prior to implementation of new curriculum).

RESULTS

The average exam scores by residents who rotated in the coagulation rotation after the new curriculum was implemented improved. Less variation in exam scores was also noted.

- Performance on the ACGME milestones was significantly improved in PC1 and ICS2.
- PC1 evaluates residents’ ability to analyze, appraise, and formulate consultations.
- ICS2 evaluates inter-departmental and Clinical Team Interactions.

- The new curriculum integrated a one-week clinical experience allowing application of knowledge via interactions with clinic and in-patients, and increased residents’ interaction with other clinical teams.

CONCLUSIONS

- Hematopathology faculty across multiple institutions involved resident education, specifically coagulation, provided significant assistance with building case-scenarios, providing resources, and helping to shape the overall organization of the new curriculum.
- Connect with the residents to get more information on confidence in triaging coagulation issues while on call after completing the new coagulation rotation.
- In the future I would also like to reach out to the Hematology clinical team to see how our resident education in coagulation could also benefit their team during rounds or in outpatient clinics.

My Entrepreneurial Mindset

CURIOSITY

At the start of my project, I was interested in defining a curriculum that was more standardized as I witnessed significant variation in resident experiences depending on which faculty they primarily engaged with. Although general topics covered were the same as the prior curriculum; how to approach certain topic areas when assigned to different faculty was not defined and not all topic areas were covered with each resident. As I continue to work on this project, I am also curious about improving resident engagement. The old curriculum was based on assigned readings rather than application of knowledge to real patients or patient case scenarios; however, there are still barriers to encouraging ownership and active engagement with the material.

CONNECTIONS

- The new curriculum provided more structure and standardization to resident education in coagulation, which improved interprofessional communication and exam scores.
- The case-based scenarios allowed for active application of knowledge which may translate to other programs with limited coagulation test menus.
- The case-scenarios were also beneficial to me as a new faculty member, as it provided structure to my teaching sessions and made the discussion sessions purposeful, rather than too broad or open ended.

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