

Implementation of a Research Curriculum

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INTRODUCTION

Our department's training programs would benefit from increased exposure and comfortability with the research process. Some trainees come in with prior research experience which helps them take the initiative in seeking mentorship and putting together a project while others who have minimal research experience coming into their training unfortunately graduate from training with not much success in research other than contributions to book chapters or case report poster presentation.

This has particularly been a challenge with the brain injury medicine fellowship of which I am the Program Director. Efforts have previously been made in collaboration with the spinal cord injury fellows in a joint research curriculum and pairing fellows with researchers in the hopes that this collaboration would result in mentorship and the development of a research project. Unfortunately, for various reasons there have been challenges in the realization of this in the first two years of the brain injury medicine fellowship and has had variable success with the spinal cord injury fellows. Our department has dedicated research departments that are strong in research grantsmanship and productivity and therefore the opportunity is there to form a good collaboration which should result in improving our trainee's exposure to research and ideally research productivity. The goal of this project would be to implement and operationalize a research curriculum thereby introducing our trainees to the research faculty and gain an appreciation of research process and ideally facilitate obtaining a research mentor to help improve their productivity.

METHODS

I will work collaboratively with the other Program Directors in my department along with research faculty in the development and implementation of a research curriculum. I will engage the brain injury research department for their buy-in for the process and seek out willing mentorship for the brain injury fellow, in particular, as continued collaboration and engagement with them will be necessary to help strengthen the fellowship. There will be a heavy reliance on the research faculty to maintain their engagement in the project and us as the Program Directors will have to monitor the process with our respective trainees to ensure it is effectiveness.

Current and former physiatry fellows as well as senior residents were polled regarding their feelings on their exposure to research during their respective training programs and their confidence they have in their research abilities currently. Additionally, current and past Program Directors were polled to assess what issues they may have faced in incorporating research into their programs. This feedback will be incorporated into the further development and implementation of the research curriculum. Current fellows and senior residents who participated in the research curriculum will also be asked to complete a survey to assess efficacy of the curriculum which will be further modified based on feedback received.

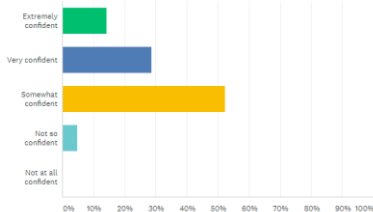
Surveys were designed to ease burden associated with survey completion and thereby promote compliance. Each survey asked 6 questions and designed to take no longer than 5 minutes.

RESULTS

PAL Resident and Fellow Survey

21 of 28 surveys were received from current and former senior residents and fellows. When asked how important incorporating research is into their respective training programs; 11 of 21 responded it was 'extremely' or 'very' important while the other 10 reported it as 'somewhat' or 'not so important'. A similar split was noted when asked if they felt well prepared to be incorporated in research projects after their current level of training with 10 respondents endorsing that they did and 11 endorsing that they did not. This was in contrast to a question that asked if they anticipate incorporating research into their careers where 12 respondents endorsed that they did and 9 respondents responded that they did not.

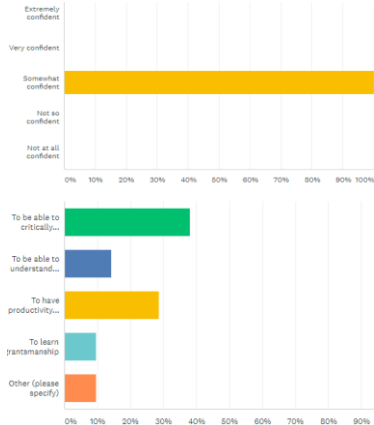
Of note 12 residents/fellows responded that they only felt 'somewhat' to 'not so confident' in their abilities to critically analyze literature.



When residents/fellows were asked what would be their goals in participating in a research curriculum with 8 of 21 answering 'to be able to critically analyze literature' and 7 (including a comment in 'Other') of 21 answering to have productivity such as a publication or poster. Only 3 respondents endorsed understanding of research theory and 2 respondents endorsed grantsmanship as priorities. One respondent wrote in 'all of the above'.

Program Director Survey Questions

3 of 5 responses were received and analyzed. 2 of the three PDs reported incorporating research into their training programs was 'extremely important' while 1 reported it as 'somewhat important'. When asked what were the perceived barriers to implementing such a research curriculum all respondents reported some variation of limited time in a short fellowship as being the most significant barrier. Responses were varied when asked what the goals of such a curriculum would be with poster presentation, better understanding of research theory and proficiency as a clinician researcher all being selected. 2 of the 3 PDs reported having $\leq 5\%$ of their professional time currently devoted to research and 2 of 3 reported their productivity as being primarily in authoring book chapters. Most striking was all respondents endorsed feeling 'somewhat confident' in their ability to explain research theory to their trainees.



DISCUSSION

It is anticipated that development of a research curriculum for the residents and fellows in our institution will improve their engagement with research faculty during their training and help improve research productivity. Additionally, this curriculum will help foster relationships between the research and clinical faculty at Mount Sinai and hopefully promote further collaboration.

Unfortunately, due to disruptions in our department brought on by the COVID-19 pandemic survey distribution was delayed and sent out midway through the academic year and included trainees who were currently involved in the research curriculum. We received 21 of 28 surveys from current and former residents/fellows and 3 of 5 from current and former Program Directors. Though the data is limited by a low sample size it does provide some useful information that will help inform decisions on further modifications of the research curriculum going forward. It stands out that there is interest from our trainees in particular aspects of research and this can be incorporated into the focus of the curriculum. Additionally, based on this feedback it might be beneficial to incorporate our PDs into these sessions as well to boost their own productivity and comfort level in research and thereby may foster enthusiasm in their trainees for research.

As a follow-up step, trainees who participated in the current research curriculum will be provided a post-completion survey regarding their experience to assess if their confidence in navigating and participating in research has been heightened by having completed the research curriculum. Data gained from this post-completion survey will be incorporated into ongoing development of the research curriculum.

CONCLUSION

Gamering appreciation for research in physiatry residents and fellows is of paramount importance. Whether trainees will develop into clinician researchers is not as important as inspiring their ability to critically analyze research studies and to be able to incorporate this into their careers. A dedicated research curriculum should help garner the trainees' interest and appreciation for the research process that goes into designing a study as well as further their ability to assess validity and scientific merit in studies they review that are relevant to their careers. Our field benefits from ongoing research into the interventions that we can offer as such developing physiatrists who be active participants in these studies whether actively in the research process or clinically in analyzing the data and incorporating these measures into their practice is critically necessary.