

The role of Emergency Medicine Interest Groups in the development of Emergency Medicine: A case of MUST-EMIG in Uganda

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Short Report

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Abstract

Background

Emergency medicine (EM) is a new specialty in Uganda since 2017 which is currently actively engaged in improving its emergency care system. To build a strong emergency care system, it is important to have a critical mass of specially trained health professionals with the skillset and dedication to work in emergency departments. There is no current formal EM undergraduate curriculum and so most undergraduates do not get the chance to interact with the new specialists and to gain interest. The MUST-EMIG was established to bridge this gap. This study was done to assess the contribution of MUST-EMIG towards the development of this critical mass.

Objectives

1. Discover students' reasons for joining the Mbarara University of Science and Technology Emergency Medicine Interest Group (MUST-EMIG).
2. Assess whether interest in learning emergency medicine was affected by participation in MUST-EMIG.
3. Evaluate plans to pursue emergency medicine as a specialty before and after joining MUST-EMIG.
4. Determine whether MUST-EMIG affected students' perception of emergency medicine's importance in Uganda's health care system.
5. Elicit feedback from students on their experience as members of MUST-EMIG.

Methods

The MUST-EMIG executive developed a membership survey which was reviewed by MUST-EMIG's faculty advisor for suitability. Members of MUST-EMIG were voluntarily asked to participate in the online survey. Results of the survey were summarized using descriptive statistics and thematic analysis.

Results

49 responses (46.7% response rate) were collected and analysed. Participants included 29 (59.2%) male and 20 (40.8%) female medical students. The majority of participants were fourth year students 22 (44.9%). 44 (89.8%) students joined MUST-EMIG to learn how to handle medical emergencies, and expressed a desire of at least 6/10 to learn more about emergency medicine after utilising opportunities provided by MUST-EMIG. Overall, students had a good experience with MUST-EMIG. They reported that our interest group had provided them networking, unique learning, and leadership opportunities. Having an EMIG significantly affects students' desire to pursue a career in emergency medicine and their perception of the relevance of emergency medicine.

Conclusion

An EMIG helps develop interest of medical students in emergency medicine. Students passionate about emergency medicine need to be supported to help them preserve and further develop this passion.

Introduction

Emergency medicine (EM) is a relatively new specialty in Uganda and sub-Saharan Africa. EM is a critical component of health care, as acknowledged by the 72nd World Health Assembly's recent resolution stating EM as an essential component of universal health care. With emergency medicine becoming increasingly popular, Emergency Medicine Interest Groups (EMIGs) are sprouting up with local, and international, support. These provide medical students with invaluable opportunities to learn more about EM, acquire practical skills and knowledge, to network with EM folks and faculties, and acquire leadership skills (2). A recent career selection study, conducted among final year medical students in one public university in Uganda, found students to be actively interested in pursuing a career in EM as the career choice number increased. In this same study female students were more likely to than their male counterparts (3). Mbarara University was the first institution to offer a Master's in Emergency Medicine program in 2017 in Uganda. This was followed by Makerere University in 2018. With a 2019 EM educational program study in Uganda finding medical students to be actively on the look-out for EM training opportunities especially the hands on opportunities(1), in December 2020, learners passionate about EM at Mbarara University, officially launched the Mbarara University of Science and Technology Emergency Medicine Interest Group (MUST-EMIG), with both external and internal faculty support, to encourage and support students with an interest in EM early in their career trajectory. Its mission was to expose medical students to the field of emergency medicine, by providing them with a platform to acquire knowledge, attitudes and skills related to EM, while also creating a professional network of support. In order to achieve set objectives, MUST-EMIG organised a series of webinars, practical skills sessions (both physical and virtual), and identified and availed online resources such as courses and conferences about EM for students. To assess the impact and realization of our objectives, we performed an online survey of members of MUST-EMIG.

Methods

The MUST-EMIG executive developed a membership survey. This was departmentally reviewed by their faculty advisor for suitability. The questionnaire included both qualitative and quantitative sections. We collected qualitative data through an open-ended item where participants shared their experiences with our interest group. With informed consent, this survey was administered over 4 weeks to all Mbarara University of Science and Technology medical students in the MUST-EMIG WhatsApp group who had attended MUST-EMIG activities from academic year 2019/2020 to 2020/2021. The students' desire scores for a career in EM were determined using a rating of, Absolutely Yes = 4; Somewhat Yes = 3, "I never thought about it" = 2; and "I never knew that EM physicians exist" = 1. Relevance scores for students' perception of the importance of EM in their country's health care system were determined using

a rating scale of, Very relevant = 4; Somewhat relevant = 3; Slightly relevant = 2; and “The health system can function without it” = 1. The qualitative responses looked at by thematic analysis. The quantitative responses were analysed using Excel (Microsoft Corporation, 2019) using descriptive statistics. A Mann-Whitney test was performed using Graphpad Prism 8 (Version 8.4.0) to compare desire and relevance scores of students before and after joining MUST-EMIG.

Results

Of the 105 medical students registered under our EMIG and in our official WhatsApp communication platform, 49 (46.7% response rate) responses were received and analysed. No duplicates were found after cleaning of the data. Participants included 29 (59.2%) male and 20 (40.8%) female medical students. Majority of participants were fourth year students 22 (44.9%), followed by 9 (18.4%) second years, 8(16.3%) third years, 6(12.2%) first years and 4(8.2%) fifth years.

Students had different reasons for joining the EMIG. 9 (18.4%) students had personal motivation (e.g students who had ever been seriously critically ill or injured) to become Emergency physicians, 9 (18.4%) were recommended by a friend to join our interest group, 44 (89.8%) wanted to know how to handle medical emergencies, while 1(2%) joined our interest group due to band-wagon effect.

Participation in the MUST-EMIG to a great extent affected students’ interests in learning about EM. Prior to joining the group, most students (42.9%) had never thought about becoming an Emergency physician. After joining, more than half of the students actively considered becoming an emergency physician in the future. (More details in Fig. 1) 44 (89.8%) medical students expressed a desire of at least 6/10 to learn more about Emergency Medicine after utilising resources and opportunities provided to them by MUST-EMIG.

After being members of the MUST-EMIG, students voiced a more promising intention of pursuing an EM career. 71.4% of the surveyed students had interest in further being helped to develop their passion for becoming emergency physicians in future.

In response to students’ perceptions of the relevance of Emergency Medicine in Uganda’s health care system prior to and after becoming members of our interest group, a significant proportion of students believed Emergency medicine was very relevant to Uganda’s health care system after them being part of our interest group.

A range of responses were elicited regarding students’ experiences with MUST-EMIG but the overall response was very positive. The overarching theme from students’ experiences was that almost all respondents had a good experience. Other major themes from the analysis included MUST-EMIG serving as a great resource for networking, and it being a unique learning initiative. As R1 says, *“As a year one, I get to interact with seniors and also get knowledge about EM to apply in the future.”* Students said our EMIG has provided them with opportunities outside the classrooms to learn, and relearn medicine, thereby helping them build self-confidence in approaching patients in the future. R2 attests that, *“It’s been a whole*

new experience. I feel can now join in an emergency care team and be able to do something". Students have done online EM related courses and attended practical sessions including CPR and airway management training. They have discovered new online educational platforms like Daktari Online and Don't Forget The Bubble.

Despite having received few responses regarding the challenges experienced, students mentioned the COVID-19 pandemic, the costs of some EM courses, and poor follow up of activities communicated through WhatsApp.

Having an emergency medicine interest group had a significant positive effect on students' desire to become emergency physicians in the future and their rating of relevance of Emergency medicine to their country's health care system. (More details provided in Fig. 2)

Discussion

This is the first EMIG to be founded in Uganda. Despite this, prior opportunities to promote EM among medical students in Uganda, have included courses such as the one conducted by Mahadevan and colleagues (5). Evaluating the effectiveness of the MUST-EMIG in achieving its goal of promoting emergency medicine among medical students at Mbarara University of Science and Technology, was the main intention of running our survey. Students strongly demonstrated that activities ran by MUST-EMIG had equipped them with necessary EM knowledge, skills, and attitudes which were consistent with outcomes of EMIGs that have been previously identified (2, 6). Our findings further demonstrate an initiative that can be used equip students with locally established EM educational resources until we have structured EM education in Uganda (1).

From our survey we were able to determine that an EMIG significantly ($p < 0.0001$) affected students' desire to pursue a career in Emergency Medicine. We believe this could be explained by the pre-exposures to EM that MUST-EMIG provided to medical students, thereby informing change in their attitudes towards EM.

Global health organisations have been key players in the establishment of EM masters training programs in Uganda(4). We believe such collaborations will be helpful in supporting EMbound medical students to strengthen their passion for EM. We are already more than grateful for all the support we have received from organizations such as Don't Forget The Bubble, Emergency Care Courses Uganda, Emergency Care Society of Uganda, Seed Global Health, and Global Emergency Care, among others.

Our EMIG is the first ever interest group to set up at our university, and we give credence to the fact that several students may have signed up for registration including those who were truly not interested in EM, but were happy to join us to unwind from the rigorous nature of our medical training. This in turn may elucidate the low response rate we had in our survey.

Limitations

We had a small sample size but this was attributed to the fact that interest groups usually have a small number of students given it is not easy for students to make early desired career choices in medical school.

We used a non-validated survey questionnaire but we had a departmental review.

We used a subjective assessment of students which could allow us to truly determine EM knowledge and skills attained by students. Future studies should explore the use of standardized objective self-assessments of students' pre and post group activities to more credibly contribute to the scientific evidence concerning the benefit of EMIGs.

Interpretation

This survey revealed to us that many students developed a desire to learn more about Emergency Medicine following their participation in MUST-EMIG activities.

Generalisability

Our findings can not be generalized due to the small sample size. We recommend establishment of more EMIGs running similar surveys at other universities in Uganda and in other countries to confirm, or refute, our findings.

Conclusions

An Emergency Medicine Interest Group is an important initiative for exposing medical students to Emergency Medicine. We recommend the establishment and continued support for running of EMIGs in different university settings as an advocacy tool for the development of emergency medicine in their respective countries.

Declarations

Ethical approval and consent to participate.

The study was performed in accordance with the international ethical standards of the Declaration of Helsinki. The survey was approved by the Department of Emergency Medicine of Mbarara University of Science and Technology. Informed consent was obtained from all participants prior to participation.

Consent for publication

Not applicable

Availability of data and materials

All data generated or analysed during this study are included in this published article [and its supplementary information files].

Competing interests

No financial and non-financial interests declared.

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Author's contributions

JK & JAO developed an idea of the survey. JK designed and administered the survey. JK analysed the data and wrote the first manuscript draft. JAO, AT, MEL CM, BTK, JN, RK, JT, AK and FL reviewed and edited. All authors read and approved the final manuscript.

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Figures

Figure 1

Figure 1: Students' desire to become Emergency Physicians

Figure 2

Figure 2: Effect of having an EMIG on medical students' desire to pursue a career in Emergency Medicine and on their rating of the relevance of Emergency Medicine in Uganda's health care system

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [MUSTEMIGMembershipSurveyResponses.xlsx](#)