

Perspectives of the inaugural medical research and mentorship symposium for medical students and junior doctors in Zambia, Southern Africa: planning, outcomes and lessons learnt

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BACKGROUND

Africa is the second largest continent, with about 13% of the world's population yet bears 24% of the global disease burden.¹ Despite this unacceptably high disease burden, only less than 1% of health-related research originates on the continent.² In a cross-sectional study of six sub-Saharan African countries with 424 participants, Ngongalah et al explored the challenges faced by African researchers.² Their results showed areas of weakness including lack of training and awareness of the importance of research, inadequate support and collaborations amongst researchers in Africa. Thus, initiatives are needed to build a foundation for research that are home grown. In another study of medical schools in Sub-Saharan Africa, 168

medical schools were identified, 145 surveyed, 105 responded, reporting that of the approximately 10,000 medical student graduates on the continent, 68% leave the African continent workforce.¹ Some of the challenges reported were lack of mentorship and career structure. Mentorship is an integral part of our educational structure and career development. Mentorship can be formal with pairing of the mentee/mentor or informal by mentees seeking out a mentor. Mentorship provides an opportunity for trainees to gain constructive criticism, develop career goals and an opportunity for overall support through the learning process.³ With this background in mind we sought to organize a medical research and mentorship symposium targeted towards both medical students and junior resident doctors. This was a collaborative event by the Pan-African Organization for Health, Education and Research (POHER), Young Emerging Scientist Zambia (YES Zambia), and Copperbelt University School of Medicine (CBU-SOM) Mentorship Program. POHER is a non-governmental organization (NGO), co-founded by Drs Asombang and Mazimba, with a focus on the soundness of the health sector as the cornerstone of social and economic development of all African countries. YES Zambia is an initiative by Drs Kabwe and

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Lubeya, which has envisioned the creation of a renowned career and research hub for the young scientists that is cardinal in underpinning their career progression and leverage science to solve global challenges. CBUSOM mentorship program is a formal program co-founded by medical students and faculty at CBUSOM whose core value is to culture a pool of medical personnel that can receive and impart knowledge for academic and professional excellence.

CONFERENCE PLANNING AND ORGANIZATION

The medical research and mentorship symposium was planned to provide attendees with various career options after medical school, ranging from academia, private practice, non-governmental and research organisations. Being the first symposium with no prior published data, it was unclear what the response to the call for scientific abstracts would be like. Thus, the planning committee set expectations at eight to ten abstracts as the threshold for moving forward with hosting the symposium. The abstract categories were: case report/clinical vignette and clinical research. A total number of 19 abstracts were received, 16 of these were from the CBU-SOM and 3 from University of Zambia School of Medicine (UNZA-SOM). The categories submitted were two clinical vignettes and 17 clinical research. The distribution for the submitted clinical research abstracts according to study type was cross-sectional prospective nine (11) and retrospective six (6). The following were the specialties represented: obstetrics and gynaecology eight (8), paediatrics and child health four (4), public health three (3) and internal medicine one (1) while both clinical vignettes were under surgery. What was interesting was the uniformity in the thematic focus of the research topics, even though they were all conducted from different perspectives. Cervical cancer for instance was in three (3) of the abstracts, among them one highlighted the low uptake of cervical screening services by the female health practitioners at one of the tertiary hospitals which should be a public health concern. The other topics that were frequent with each having two different research

areas: Tuberculosis, diarrhoeal diseases in paediatrics and contraceptives. Unfortunately, five students withdrew from making their presentations at the last minute, thus highlighting the need of continued mentorship symposiums like this one for their exposure.

The reviewers for these submitted abstracts were senior doctors with diverse research experience and across specialties from USA, Japan and Zambia. A scoring sheet was created a priori based on uniqueness/originality, clarity and significance/impact. After individually scoring the applicants, the reviewers discussed each abstract over the phone and in person. Reviewers' comments were made available to each applicant. The final tally was based on points.

CONFERENCE ATTENDANCE AND PRESENTATIONS

The event was an astounding success based on attendance and on-site feedback by attendees. The symposium activities were organized in two segments. The morning session focused on the presentation of abstracts as both oral and poster presentations while the afternoon session was the mentorship component with the various speakers discussing career options and pathways post medical school. The symposium began at 9:00 am with welcoming remarks by the CBU-SOM mentorship program chairperson, Dr Chileshe Chibangula. Thereafter, guest speaker Professor Seter Siziya, Dean of the CBU-SOM gave his keynote address. Subsequently, within a timeframe of 10 minutes each, the oral presentations of abstracts were made. A question and answer forum followed the oral presentations, with judges in various fields providing constructive criticism and assessing the level of understanding of the individual projects. The poster presentations and viewing were in an adjoining building. Each poster presenter was also allotted a time period in which to present their work and answer questions.

The mentorship session was led by Dr Boniface Kawimbe, a senior pioneering surgeon and former minister of health in Zambia. He opened the session

by discussing the “alphabet soup post medical school in Zambia” which included explaining the specialty training programme (STP) and Master of Medicine (MMED) residency program. The other panel of speakers were Dr Dennis Sakala, an orthopaedic surgeon discussing private practice, Dr Rosemary Musonda, a research scientist discussed her experience with basic science research in Zambia and Botswana; Dr Natasha S Kaoma on creating your NGO; Dr Justor Banda training in Africa; Professor Henry Stalks training in Europe; Dr Akwi Asombang training in USA. As the planning processed wrapped up, there was an expressed need from the school of dentistry, hence dental specialization pathways were presented by Dr Mulawo.

An opportunity was given to the attendees to address questions to a panel of speakers on mentorship and career development prior to the conclusion of the ceremony. The symposium concluded with the award ceremony. The awards were given in the following categories: best overall research, oral presentations runner up, best clinical vignette and best poster presentation. The recipients were: a) Best Overall Research Award: Mundia N. et. al., 'Comparison of accuracy of traditional formulae of weight estimation with actual weights among children attending Kitwe Teaching Hospital'; b) Oral Presentation runner up: Kazungu C. et. al., 'Correlates of cervical cancer among screened women at Kitwe Central Hospital'; c) Best Clinical Vignette: Simbeya A. 'Polymorphous Low Grade Adenocarcinoma – a Case Report'; d) Best Poster Presentation: Sichimba D. 'Management of Traumatic Brain Injury in a Resource Restricted Centre – A case report'

POST CONFERENCE EVALUATION

The challenges that were faced in organizing the medical research symposium include difficulties in acquiring financing, convincing students to submit abstracts and low response rate to the post conference survey. Expenses for the symposium were mainly for the logistics, audiovisual, printed material and meals. Factors that contributed to the

difficulty in accessing finance for the symposium from the cooperate society included competing annual events like the graduating student's induction dinner which is sponsored by many private companies. In addition, most head offices of companies are not located in Ndola (the venue of the symposium) hence the likelihood of receiving financial assistance was dependent on willingness of the representative from Ndola to communicate with the head office in another town. With these obstacles in mind, we mostly sought products or services offered by companies but only received support from a few companies namely Shoprite, Coca Cola Zambia, Sky Print, Meit Prints and Polar water limited.

Another challenge faced was convincing students to submit their abstracts for presentation. The call for abstract submission was open to all medical students in Zambia and junior resident medical doctors. However, only 19 abstracts were submitted from this pool. In most cases this was attributed to prioritizing examinations or other school activities as school was in session and most students with completed research projects were in their final year. There was also a poor response in the post conference survey. There were approximately 300 attendees, yet only 27 responses were received from the online post conference survey. The survey had 4 sections that assessed; participant information, speakers, symposium facilities and aim of the symposium. This highlights that students do not understand the fundamental role that feedback plays in evaluation of academic activities as their input would help inform decisions in future.

The benefits of the symposium based on the post conference survey with 20 responses showed that 95% felt there were given the opportunity to present their work and receive constructive criticism, 100% agreed that that the symposium was able to provide information on career paths, 90% felt the importance of mentorship was discussed and 85% that the importance of research was discussed. In addition, 90% stated that they would pay to attend the symposium with 52% stating they would pay between kwacha 50-100 (\$4-7) as registration fee.

FUTURE CONSIDERATIONS

Given the important role of research and mentorship in medical education, more concerted efforts are needed to foster formal and structured activities aimed at this important task. This inaugural symposium demonstrates the feasibility of such conferences on the continent. While the scope of this conference was geographically confined to participants in Zambia, future conferences should aim at bringing medical students and practitioners from across the African continent.

CONCLUSION

Research and mentorship are a core aspect of medical training and career development. Research is important to gain an understanding of disease etiology, management and outcomes. Lack of research negatively contributes towards disease mortality and morbidity. Mentorship is important to serve as a guide and foundation for medical students and early career doctors. A symposium that fosters an environment of professional development,

mentorship and networking is important in the medical field. Opportunities for collaborations are developed, which lead to stronger educational structure and possibly impact policy.

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