The Role of Medical Students in Short-Term Experiences in Global Health: A Perspective from São Tomé Island

O Papel dos Estudantes de Medicina nas Experiências de Curta Duração em Saúde Global: Uma Perspetiva da Ilha de São Tomé

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The case study: a short-term experience in global health in São Tomé

Two Portuguese medical students participate on a two-week short-term experiences in global health (STEGH) organised by a non-governmental development organization in São Tomé and Príncipe, an island located in the Western Equatorial coast of Central Africa that shares numerous political, social and economic relationships with Portugal.

These students join specific organizational programs that are carried out in cooperation with other Portuguese and European agencies and the São Tomé and Príncipe government with the intention to improve local health care. Programs are focused on three important areas - primary care, specialist care and telemedicine – and rotate around organized medical missions conducted in partnership with Portuguese medical doctors.

The programs aim to provide specialized healthcare that is not available in the country, reinforce health and human resources by providing training to local providers, and develop local health infrastructure, through the provision of medical supplies.[1] Evaluation literature published by the organization suggests that their various programs have contributed to make São Tomé one of the best countries in Sub-Saharan Africa on the basis of certain health indicators like life expectancy at birth, infant mortality rate and rate of tuberculosis.[1] In terms of health-care costs, there are also supposed economic benefits, specifically around reducing in half the number of medical evacuations and associated costs, although a formal assessment of overall economic impacts remains to be conducted.[1]

The growth of STEGH: opportunities and challenges

In recent years, global health work has gone mainstream. At a policy level, this movement has resulted in a significant focus on healthcare in the crafting of the Sustainable Development Goals (SDGs); at a more grassroots level, it has also driven greater participation by healthcare providers and trainees in the phenomenon of STEGH.[2]

Many factors have contributed to the growing popularity of STEGH among medical students, including but not limited to an altruistic focus, a sense of duty to serve, or a desire to travel and learn in settings outside of one's home country. Students typically hope to address the needs of challenging contexts around the world, and wish to pursue learning abroad as part of their training.[3] This popularity has given rise to hundreds of organizations responsible for STEGH, with students from high-income countries visiting low and middle income settings, on experiences that vary in length and frequency of visits, team composition, focus of activities, and resources.[4] Exact data on popular destinations is limited but in general, many countries throughout the world host STEGH in some form or another.

STEGH present a unique opportunity for students and young professionals. Benefits noted in literature include contact with diseases unseen in their home countries, skills improvement, networking with peers and mentors, and personal fulfilment and inspiration.[3] However, while STEGH are perceived as helpful for improving health conditions in low-income settings, literature has documented many negative impacts for hosting communities that can exacerbate health inequities and compromise patient safety.[5]

One chief criticism has been the use of STEGH by trainees to practice their skills beyond their scope of training. For many reasons, literature has identified such practices as unethical as it may lead to the provision of suboptimal medical care, particularly if done without supervision.[5] Another critique of STEGH is the lack of integration with services provided by local government and agencies, which can paradoxically reduce capacity within local health care systems and foster a resultant dependence on the work of visiting STEGH.[6]

This paper aims to explore key principles around

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student involvement in STEGH and to apply these in the context of the case study as part of a broader call to action to address and understand the phenomenon as it grows in Portugal and across the world.

Applying principles to improve student involvement in STEGH

Identified concerns suggest that while STEGH represents an important opportunity for personal and professional development for medical students, it is important to reduce harms by refocusing STEGH on the needs of the host communities and empowering local community leadership.[4]

Proposed principles to address these critiques suggest that all STEGH should be based on cross-cultural understanding, bidirectional collaboration, strengthening of local health systems and promotion of sustainability.[5] The intent behind these principles is to ensure that STEGH are conducted with a focus on host community development and autonomy rather than only accomplishing the personal interest of volunteers.

Ethics, professionalism, and responsibility are different concepts that are tied together in the appropriate conduct of STEGH on the part of students. Professionalism dictates that students keep in line with appropriate codes of conduct, to allow them to understand their responsibilities in their work and identify ethical quandaries that may arise. In ensuring that all three are aligned towards the needs and direction of the host community, students must ensure that their activities are aligned and held accountable to professional standards, project expectations, and overarching moral principles.

At a minimum, several broad measures could be applied to promote these principles in the involvement of medical student participants on STEGHs:

1. Optimal pre-departure training

Pre-departure training is a critical opportunity that should extend beyond simple safety and crisis training and focus on preparing students with an understanding of the local healthcare and social services system, local epidemiology and disease control priorities, the philosophy and strategy of the organization, practice pearls and pitfalls, ethics, and cultural diversity. Appropriately prepared students are better able to effectively support the goals of the STEGH and integrate into the host community.[5]

2. Improving evaluation systems and data collection

Monitoring the impact of activities is essential to program evaluation and priority setting. In an era of metrics, indicators and digital data, measuring the impact of STEGH is imperative. Any STEGH program should thus ensure that evaluation is broadly applied, particularly to support low resource settings where data collection is difficult or not prioritized. Ideally, this monitoring should be done together with local partners and agencies before, during ,and after these experiences.[7]

Medical students should be prepped in how to objectively assess the safety, effectiveness, and sustainability of their activities, and to seek community stakeholders' perspectives of it. Students should also bring their knowledge of potential novel data sources (e.g. social media) to support such evaluation efforts.

3. Bidirectionality of educational exchange awareness

Reciprocal learning relationships are essential to promoting respect for host communities, responsibility, and sustainability as a basis of STEGH. They help foster mutual respect and mitigate any feelings of ill-will on the part of local workers.

An evaluation of the host community's perspectives on STEGH is also essential to ensuring alignment as far as possible between community needs and desired competencies for trainees. As one study highlighted, learning from the reality of the community and ensuring a continuity of the communication, even after the experience, are major goals for many host mentors, reinforcing the importance of valuing STEGH as collaborative educational opportunities between academic communities.[8]

Genuine exchange supports the development of local capacity in host settings, through professional development, as well as reverse innovation for effective ideas brought back by STEGH participants to their home settings.[5]

4. Choosing participants with the right skills mix; limiting student autonomy

Medical students tend to see STEGH as opportunities to develop experience and skills around conditions and diseases that they don't normally see in their home countries, which often diverges from host community members' perspectives that tend to consider communication and collaborative skills more important than clinical competencies.[8] A lack of focus on the needs of communities does little to improve population health outcomes, reduce health disparities, or drive development.

STEGH should therefore deploy students with appropriate preparation and training under the direction of approved supervisors, as they would in their home settings. STEGH should also aim to recruit and prepare students and skilled professionals to support non-clinical efforts beyond the healthcare system that are focused more on prevention campaigns, health promotion, surveillance and systems development.

Case study revisited

According to one STEGH framework, our case study involved students on a volunteer program within a system that comprised of multiple visiting organizations over the course of a year and a single local partner present in the local community most of the time.[4]

Despite this, the volunteers found that technical resources remain scarce in São Tomé, which resulted in significant variation in medical practice as compared to their home country, highlighting the need for optimization of pre-departure training. The lack of knowledge of local practices was most evident in the unknown algorithms to which the volunteers were expected to abide, which resulted in

insecurity and doubt. Potential harms were mitigated, however, by limiting students' autonomy and providing adequate supervision by local physicians, which is a defined best practice within the literature, as one of the above-mentioned responsibility principles.[5,6]

A more comprehensive pre-departure training program could have helped attenuate the discrepancy between students' beliefs and the real epidemiological profile of São Tomé. While infectious diseases were the leading cause of mortality historically, non-communicable diseases now account for over two-thirds of the deaths in São Tomé and Príncipe, leading to a change in disease and intervention priorities.[1] The students felt that direct clinical service provision was of limited impact and that their recruitment and programming would have been more valuable and aligned with local community needs if it focused instead on prevention and population health work, under the appropriate supervision and training.

Specific to learning relationships, students felt that their openness to cultural and educational exchange facilitated their integration in the local community and contributed positively to developing a reciprocal learning experience.

Finally, the students found it difficult to objectively assess the impact of their activities, since goals were not clearly defined and no evaluation procedures were applied. Every STEGH is part of a long-term project to improve health disparities, so evaluation procedures should be compulsory in order to objectively analyse the effect of the interventions on the community and inform the priorities of such programs.

CONCLUSION

When properly undertaken, STEGH can have a positive impact both to student participants and the target community visited, if clear guidelines for a more effective and ethical enrolment are deployed. By focusing on empowering host community leadership and setting up programs with appropriate preparation, evaluation, reciprocity and supervision, STEGH should aim to not only address immediate health inequities, but also support local capacity development and longer-term sustainability and community health improvements in various limited resource settings abroad. As this phenomenon continues to grow in Portugal, it will also be important to track the trends of students participating in such efforts, and evaluate them carefully for impacts, both positive and negative, in the years to come.

REFERENCES

1. Freitas P, Santana P, Zaky A, Vaz A, Neves E, Lima A. Saúde para todos: mudando o paradigma de prestação dos cuidados de saúde em São Tomé e Príncipe: estudo de caso. Lisbon: Instituto Marquês de Valle Flôr; 2010.
2. Gostin LO, Friedman EA. The sustainable development goals: one-health in the world's development agenda. JAMA. 2015;314:2621-2.
3. Drain PK, Primack A, Hunt DD, Fawzi WW, Holmes KK, Gardner P. Global health in medical education: a call for more training and opportunities. Acad Med. 2007;82:226-30.
4. Loh LC, Cherniak W, Dreifuss BA, Dacso MM, Lin HC, Evert J. Short term global health experiences and local partnership models: a framework. Global Health. 2015;11:50.
5. Melby MK, Loh LC, Evert J, Prater C, Lin H, Khan OA. Beyond medical "missions" to impact-driven short-term experiences in global health (STEGHs): ethical principles to optimize community benefit and learner experience. Acad Med. 2016;91:633-8.
6. Roche SD, Ketheeswaran P, Wirtz VJ. International short-term medical missions: a systematic review of recommended practices. Int J Public Health. 2017;62:31-42.
7. Maki J, Qualls M, White B, Kleefield S, Crone R. Health impact assessment and short-term medical missions: a methods study to evaluate quality of care. BMC Health Serv Res. 2008;8:121.
8. Cherniak W, Latham E, Astle B, Anguyo G, Beaunoir T, Buenaventura J, et al. Visiting trainees in global settings: host and partner perspectives on desirable competencies. Ann Glob Health. 2017;83:359-68.