

Surgical Volunteerism

Nomikos IN

Introduction

“Sometimes give of your services for nothing. And if there be an opportunity for serving one who is a stranger in financial straits, give full assistance to all such. Wherever the art of medicine is loved, there is also a love of Humanity” [1]. This statement was made by Hippocrates thousands of years ago and couldn't be more timely appropriate than in our days. Medicine arose out of the primal love for one's fellow man and the desire to help those in sorrow, need and sickness.

On this primal health care nucleus, the global health initiatives were developed based on moral values such as: **humanitarianism**, a philosophy of acting in a manner based on compassion, empathy, and altruism; **utilitarianism**, the subjective feeling or happiness felt by an individual who performs an act that benefits others; **equity**, a relational concept of ethical distribution of healthcare initiatives; and **rights**, the notion that health care is a right. These values and their application, impose duties and obligations on those with the ability to grant and provide these health care services [2].

Besides the aforementioned and dominant moral values, every health care system should apply the following ethical principles: 1) Health care is a human right. 2) The care of the individual is at the center of health care, but the whole system needs to work to improve health of the population. 3) The health care system must treat illness, alleviate suffering and disability and promote health. 4) Cooperation with each other, those served and those in other sectors is essential for all who work in health care. 5) All who provide health care must work to improve it and 6) Do not harm [3].

Surgeons have a unique tradition of responding to societal needs at the same time that they provide health care services to individual patients. By doing so, surgeons experience a deep sense of pride originating from the altruistic roots of surgical profession.

There is now increasing evidence showing the magnitude of impact that surgical volunteerism can have on societies and economies. Usually, this movement needs to be under the auspices of a nonprofit and volunteer sector.

Components of Volunteerism

A variety of roles and contributions to the community are available for surgeons within a nonprofit volunteer sec-

tor with the majority of them observed in the international field. The provided services range in nature from education and training to research, clinical medicine (surgical care to telemedicine) emerging technologies and infrastructure. For example, the benefits that result from building and functioning a new hospital in a community without previous health care services beyond providing care, extend to professional training, economic growth potential and infrastructure to a local health system [4].

For a volunteerism program to be successful, productive and rewarding for its human potential, some basic principles are always appropriate whether someone is volunteering at local, national or international field. These include cultural sensitivity, mutual respect, well-managed expectations, and partnership with those served. In pursuing a sustainable project, the role of long term relationships between the providers and receivers is of outmost importance [4].

The educational component

The impact of volunteerism as an educational tool is increasingly evident in the new generation of health care providers. Medical students, by enrolling in volunteerism programs, obtain international experience and a special interest in global health issues. In considering optimal educational outcomes, volunteer experiences, provide many learning opportunities that appear to complement didactic sessions as well as clinical rotations.

A retrospective study conducted to assess the educational benefits of general surgery residents spending one international month elective in Kenya, showed that those residents who took part in this mission demonstrated improved physical examination and decision-making skills, greater cost-effectiveness and a sense of having returned “a better doctor”. So, the educational component seems to be an abundant resource of experience and is rewarding for all the participants, especially for medical students and residents [5].

The clinical component (surgical care)

The provision of health care services in the underserved populations is not always the same everywhere and is not provided with the same feasibility and flexibility. Providing medical care is completely different to providing surgical care. This is especially evident in the United States, where administering appropriate and timely surgical care to nearly 45 million uninsured people who have limited access to non-emergent surgical care, is a complex process compared to

Corresponding author: Iakovos N Nomikos MD FACS,
55 Psarron St., 18120 Koridallou, Piraeus Greece
e-mail: nomikosj@otenet.gr

Received Apr 11, 2020; Accepted Apr 15, 2020

medical care which as a process is simple and easy to apply.

Effective delivery of surgical care depends on an appropriate facility where the surgeon can operate safely and collaborate with other members necessary to administer perioperative care and follow-up to patients. It is evident that all these requirements increase the complexity of delivering surgical care. Under these circumstances, volunteerism could not be considered an altruistic action but rather a symbiotic necessity between patients and health care providers [6].

Patients residing in underserved areas are provided with free health care services, while providers gain experience managing difficult clinical situations. At the same time, providers gain public respect and recognition from their contribution to the society. However, the transient and short-time character of these services does not provide long-term assistance and follow-up of patients. Surgical complications in the postoperative period without the proper follow-up and timely appropriate intervention could be considered as iatrogenic injuries. In this case, one could argue that the humanitarian nature of such efforts justifies the potential risk of postoperative events [4,6].

Volunteerism as an elective process: The classic aspect

As surgeons, we are considered as curative practitioners, in contrast to medical colleagues enrolled in preventive medicine and public health. As curative physicians, we focus on diagnosis and treatment and we care for the whole patient. However, we rely on the existing health care system. Preventive medicine and public health are focused on population. They give emphasis on health promotion and disease and they rely on many sectors outside the health system [7]. In the volunteerism setting these two concepts need to merge and to work in a horizontal collaborative way to try to understand and deal with the global health issues in an integrated, practical, and cost-effective way.

The development of the horizontal approach and streaming concept is a more disease-specific approach. This allows both sides of the healthcare team to prioritise their efforts and share the advantages of individualised care, triage and population/cohort dynamics. The curative practitioner looking at the horizontal model now places his individual patient in perspective, where all aspects are considered. The public health or preventive medicine practitioner also sees how the population or cohort fits into the streaming process so all components of the healthcare system are used in a coordinated, caring and cost-effective manner [8].

Individual Volunteering

For those wishing to enroll on a volunteer experience, the first consideration is whether it will be at local, regional,

national or international level. One does not have to travel far from home to volunteer for medical or nonmedical services.

Most international volunteer efforts are short-term (<2 weeks). The International Medical Volunteers Association (www.imva.org) has a very practical approach with invaluable information [9]. Once a group or organisation is identified, it is prudent for the volunteer to inquire further information from individuals involved with that group and to look it up on Guide Star (www.guidestar.org). This site provides valuable information about nongovernment groups (NGOs). Most health-related NGOs are registered with Guide Star (www.guidestar.org). Other are registered as private voluntary organisations with United States Agency for International Development (USAID).

For surgeons looking to participate in international missions, the following considerations need to be fulfilled during the preparation period, giving priority to security and personal health issues:

- Equipment and supplies
- License requirements
- Documents: passport, visa, work permit
- Immunisation prophylaxis (yellow fever, smallpox, hepatitis A&B, malaria prophylaxis, typhoid, BCG)
- Insurance issues (life, health, evacuation)
- Communication (home, hospital, call schedule)
- Language-hand signals
- Living conditions, lodging
- Local diseases (Hepatitis, HIV, diarrhea)
- Climate
- Personal medications

Volunteerism in Disasters

Disasters are a major area in which local, regional, national, or international calls for volunteers are needed and/or requested. Volunteering in this area relies on three requirements: an interest and desire to get involved; a search for opportunities to gain basic knowledge and skills in this area and volunteer with established individuals, groups or organisations.

The role for general surgeons and surgical specialties is varied. Despite basic training and experience with trauma at the ATLS level, which is helpful, under mass casualty conditions there is a basic change in focus. Whereas the focus on the most severely traumatised patient(s) is clearly logical, the triage approach requires a reorientation and reevaluation of delivering concentrated care to the less injured patients [6].

In catastrophic disasters, the role of surgeons is primarily triaging along with the care of sequelae of acute events. Triage is the key process for a successful outcome in case of mass casualties. In contrast, in chronic situations, it becomes more difficult and sometimes emotionally painful.

Seeing a large volume of patients with varying degrees of disease severity requires full use of the surgeon's objective and subjective criteria. Recognising the limitations of this initiative, is of paramount significance. The surgeon needs to think twice and cut once. Better to leave people with hope, rather than desperation [6,10].

A practical outline of triaging is the following [11]:

On – site triage (level 1)

- Rapid categorisation of victims with potentially severe injuries needing immediate medical care “where they are lying” or at a triage site.
- Personnel are typically first responders from the local population or local emergency medical personnel.
- Patients are characterised as “acute” or “not acute”.
- Simplifying color coding may be done if resources permit: acute= red, non-acute=green.

Medical triage (level 2).

- Rapid categorisation of victims at a casualty site by the most experienced medical personnel available to identify the level of medical care needed.
- “The greatest good for the greatest number of people”.
- Knowledge of the medical consequences of various injuries (e.g. burn, blast, exposure to chemicals).
- Colour-coding may be used.

Evacuation (level 3)

- Level 3 triage assigns priorities to disaster victims for transfer to medical facilities.
- Goal is appropriate evacuation (by air or land) of victims according to injury severity and the available resources.
- Same medical personnel as in level 2 triage.

Volunteerism in the new COVID-19 era.

COVID-19 is the first new occupational disease to be described in this decade. Previous experiences in coping with the SARS-CoV and MERS-CoV outbreak have better prepared us to face this new challenge. While the explosive increase in cases, in China has overwhelmed the health care system initially. We know that public health measures such as early detection, quarantine and isolation of cases can be effective in containing the outbreak. All health personnel should be alert to the risk of COVID-19 in a wide variety of occupations, and not only to health care workers. These occupational groups can be protected by good infection control practices. These at-risk groups should also be given adequate social and mental health support, which is needed but sometimes overlooked [12,13].

Volunteerism and American College of Surgeons

The number of deaths due to surgical conditions world-

wide was estimated to be 16.9 million in 2010 and well exceeded the number of deaths due to HIV/AIDs, tuberculosis and malaria combined [14,15]. The Lancet Commission on Global Surgery estimates that five billion people worldwide lack access to safe and affordable surgical and anesthetic care with the greatest disparity existing in low and middle-income settings [16,17]. Organisations worldwide, including the World Health Organization and the Lancet Commission on Global Surgery, continue to recognise and advocate for an increased surgical presence in developing nations. They are working towards establishing goals for improved surgical care worldwide.

The volunteerism initiative of the American College of Surgeons (ACS), serves as a comprehensive resource center where someone can find information to investigate and participate in surgical volunteer opportunities. Operation Giving Back (OGB) provides the necessary tools to facilitate humanitarian outreach among ACS members of all specialties, at all stages of their profession, and with an emphasis on domestic and/or international service.

The mission of OGB is to leverage the passion, skills and humanitarian ethos of the surgical community to effectively meet the needs of the medically underserved. By delivering information on opportunities to volunteer through patient care, education, training, systems strengthening, advocacy efforts and donation of needed equipment and supplies, OGB focuses these resources to address critical public health issues as they relate to the provision of safe, timely and necessary surgical care around the globe. Through a network of high-impact partner organisations, OGB directs every one who is interested to volunteer opportunities that align with his/her skills, passions, and beliefs [18].

References

1. Hippocrates of Kos 460-370 BC. Xnd ed.
2. Alkire S, Chen L. Global Health and moral values. *Lancet* 2004;364:1069-74.
3. Hanlon CR. Ethical principles for everyone in health care. *J Am Coll Surg* 2001;192:72–8.
4. Casey KM. The global impact of surgical volunteerism *Surg Cl North Amer* 2007;87:949-60.
5. Klaristenfeld DD, Chupp M, Cioffi WG, et al. An international volunteer program for general surgery residents at Brown Medical School: The Tenwek Hospital Africa experience. *J Am Coll Surg* 2008;207:125-8.
6. Pezzella T. Volunteerism and Humanitarian Efforts in Surgery. *Curr Probl Surg* 2006 43:848-929.
7. Merson MH, Black RE, Mills AJ. *International Public Health*. Gaithersburg, MD: Aspen Publishers; 2001. p. XIX.
8. Braithwaite J, Goulston K. Turning the health system 90° down under. *Lancet* 2004;364:397-9.

9. The Major International Health Organizations. [Internet] [Accessed 2020 April 11]. Available from: <http://www.imva.org/Pages/Orgbio.htm>.
10. World Health Organization—Emergency and Humanitarian Action. [Internet] Available from: <https://www.who.int/emergencies/en/>
11. Briggs SM, Brinsfield KH. Advanced Disaster Medical Response—Manual for Providers. 1st ed. Harvard Medical International Trauma and Disaster Institute; Boston; c2003.
12. Xiang YT, Yang Y, Li W, et al. Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *Lancet Psychiatry* 2020;7:228-9.
13. Koh D. Occupational risks for COVID-19 infection. *Occup Med* 2020;70:3-5.
14. Shrimel MG, Bickler WS, Alkire BC, et al. Global burden of surgical disease: An estimation from the provider perspective. *Lancet Glob Health* 2015;3:S8-9.
15. Lett R. International surgery: Definition, principles and Canadian practice. *Can J Surg* 2003;46:365-72.
16. Lozano R, Naghavi M, Foreman K, et al. Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: A systematic analysis for the Global Burden of Disease Study 2010. *Lancet* 2012;380:2095-128.
17. Meara JG, Greenberg SL. The Lancet Commission on Global Surgery 2030: Evidence and solutions for achieving health, welfare and economic development. *Surgery* 2015; 157:834-5.
18. American College of Surgeons Operation Giving back. [Internet] [Accessed 2020 April 11]. Available from: <http://www.facs.org/memberservices>.