Feature article

Effective altruism: pearls and perils of volunteerism in dentistry

The altruistic pastime of health care workers providing volunteer services to vulnerable populations has increased in popularity in recent years. Numerous NGOs and charities now exist for this purpose, while the rise of social media communication and relative ease of travel has made the option of combining a volunteer service trip with a holiday to an interesting destination an appealing and realistic option for many.

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The numbers of dentists participating in these trips has risen along with other health service workers, and dental volunteering is also supported by the NZDA with financial grants available to members wishing to undertake international aid work. Dental professionals willing to donate their time, skills and often equipment and materials range from well experienced specialists and general dentists to dental students looking to gain valuable clinical experience.

More recently, the effectiveness of short-term volunteer-based interventions are being scrutinised for both clinical integrity and their impact on the development of sustainable long-term services for vulnerable populations.

Some authors have gone so far as listing common pitfalls of volunteer dentistry such as; lack of coverage and sustainability, inappropriateness of volunteer actions, inadequate use of evidence-based interventions, lack of accountability of volunteer and NGO actions, lack of integration and devaluation of the existing local healthcare system and its workers, and creating a dependence on volunteers and their NGOs.[1] It is vital that both those organising programs and those volunteering to provide services become well-informed about these issues and make conscious efforts to improve the effectiveness – and decrease potential harmfulness – of volunteer dentistry.

It is unsurprising that dental caries is the most common oral disease being treated in volunteer settings. In the context of this commentary, we have largely moved past the common perception of caries being a disease of the tooth, toward the concept of caries as a process that occurs within an individual and among communities. As such, it is a disease that it is influenced and propagated by sociodemographic inequalities. As clinical experts, we manage the symptoms of the caries process surgically and we are skilled at providing relief of pain services at the individual level. We are not so skilled at creating sustained improvements in oral health at a community level.

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Addressing dental caries along with other non-communicable disease requires consideration of the social drivers of disease. As acknowledged in the London Charter on Oral Health Inequalities, a biomedical approach to solving the caries problem is limited, with clinical preventive measures such as topical fluorides, fissure sealants and oral health advice to patients often providing only short-term positive outcomes.[2] It is therefore critical to acknowledge that as (short-term) volunteers, most dental professionals are limited to a biomedical approach that harnesses clinical and surgical expertise. This in turn dictates limitations in the role of the volunteer dentist in sustained management of disease.

And yet, volunteers working in unfamiliar environments may not recognise how their transient interventions are, in fact, impacting local community systems and contributing to ongoing perceptions of oral disease, and not always in a positive way. While single instances of volunteer dentistry may be experienced by volunteers as helpful in the moment, a persistent culture of volunteerism can accumulate and reinforce negative effects that may not be apparent to short-term visitors.

The purpose of this narrative is to provide some practical insights that will enhance the dental volunteer's experience. We offer two checklists for entering into volunteer activities mindfully and which will hopefully provide the highest chance for achieving a positive impact. Three case studies are presented below which provide examples of dental volunteering and some of the lessons learned retrospectively from these activities. The features of the location and organisations have been masked in order to facilitate open discussion.

Case Study 1 – Parachute dentistry

The fundraising went for months, dental companies gifted restorative materials and toothpaste, all-in-all the group arrived at the destination having spent around $25K on flights/accommodation/logistic support to conduct a five day clinic. The host organisation, working in a remote community over the past 15 years, had especially requested dental treatment and this trip was a response to that plea. 612 patients were seen, 568 teeth extracted, 113 restorations were placed, 14 children received resin fissure sealants, 18 received fluoride varnish, and 1000 toothbrushes with 50g tubes of toothpaste were distributed. Photos on social media were the evidence that tooth brushing demonstrations were completed. The visitors, having done their good deed, boarded the plane home grateful for a wonderful experience.

Reading between the lines

The treatment patterns represented by numbers of procedures performed suggested a heavy bias towards extraction dentistry rather than early management of carious lesions. Children carried a burden of 8-12 untreated lesions each, most of which could have been treated in a way that prevented future infection. However, each child received 15-30 minutes of care focused on extraction only. The treatment provided by the group would have cost US$3,500 - $6,000 had it been performed by a local provider.

Prevention was just a small feature of the treatment provided. National oral health data from this group suggested that most people already had the knowledge that they should brush their teeth with toothpaste and avoid sweet food. There is evidence that group oral hygiene instruction, without creating a modified environment will not lead to changes in behaviour or improvements in oral health. Unknown to the volunteers, there was no increase in tooth brushing behaviours following their visit because the water source in the school was not adequate to support daily tooth brushing activities. Furthermore, toothbrushes and toothpaste were ready available from local vendors, but they could not sell their products to a saturated community for a period of time after the visit.

Other valuable local resources were also diverted to provide the volunteer experience. The host organisation had to halt its scheduled activities to provide translation and host visitors. After the visiting dentists left they received calls for advice on how to manage post extraction complications which they were not equipped to deal with. General estimates in academic papers suggest that dry socket occurs in 5-10% of extraction cases and so it is realistic to expect 25-50 people in that community to be suffering for 2 weeks with unmanaged mouth pain. Once the local Ministry of Health representatives were informed of the clinic, the organisation was the subject of reprimand for hosting the dental team because they were registered as an education based organisation rather than a health provider.

Lessons learned

- 'Parachute dentistry' is not cost effective or efficient at managing the caries process.
- Visitor donations have impacts on local vendors. It is almost always possible to buy locally thereby supporting the local economy.
- Clear guidance on treatment decisions and priorities is helpful to make sure long-term benefits are realised and short-term complications are avoided.
- Toothbrushing habits won't change if the physical environment doesn't support changes in hygiene behaviours.
- Just because a group are invited to provide dentistry does not mean that the hosts have the authority and complete skillset to host the volunteers during the visit and to manage issues that may arise following departure.
- It is the volunteer's responsibility to anticipate, inquire, and help prepare local partners for the impact of a planned visit.

Case Study 2 – Tunnel vision

It was a sunny day on a tropical island and a local dentist retrieved the volunteer dentist from the airport. Eager to work and teach alongside local dental students, the volunteer dentist was greeted with a long line of patients ready to be treated and a battery of 40 enthusiastic students working 10 chairs at a local dental school. Work began with frequent bottlenecks due to instruments being unavailable, or materials unable to be found. There was a layer of grime on the chair fixtures and it was clear that there were no processes in place for validating the sterilisation cycle. By the end of the first week it was there was no clear record of who had been treated and the volunteer had no way of providing viable feedback to the students. Tunnel vision had everyone focused on 'doing dentistry' and there had been too much done, too quickly. Thankfully the next visiting dentist received information about the state of the clinic and was able to set aside 2 days putting the clinic in safe order, and to slow the workflow so that a more beneficial supervisor to student ratio could be achieved.

Reading between the lines

The dental school had been struggling to survive for a long time, and the previous year the Dean had recommended that the course be shut down due to inadequate resources. In response, a well-meaning foreigner arranged for second hand dental chairs to be installed as a last ditch effort to keep the course alive. The school still didn't have enough clinical support to provide adequate clinical tutorship and that was the context upon which the plea for clinical support had been raised. In the meantime, enough dental professionals to serve the needs of the small population were being trained at an alternative institution, but a potentially efficient pooling of local resources among these institutions had been subserved to capturing the enthusiastic contributions of donors. Thus, the poor treatment environment the volunteer encountered was actually a sign of how cumulative effects of well-meaning foreign interference had obstructed the development of a more effective and sustainable local system.

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Lessons learned

- Stop, look and listen – It may be necessary to first observe and assess the environment you are in, and to establish the safety and efficiency of how you will practice.
- Avoid seeing patients until you have been satisfied as to the safety and workflow of the clinic.
- Ask questions. If the working environment seems ill-equipped for the services being provided or high flow of patients being seen, it is not helpful to carry through at all costs. There may be an underlying unaddressed issue that is being reinforced by the volunteer presence.
- Communicate your experiences. It is critical that your feedback informs ongoing practice.

Case Study 3 – The 'seal' wasn't the (complete) deal

In a country where the phenomenon of the 'donor society' was prevalent, dentists had long been visiting to count the number of teeth accumulated in buckets at the end of week-long visits to various communities. A group of organisations wanted to move towards a coordinated prevention-based service model in the delivery of GIC pit and fissure sealants among 6-8 year-old children in a school setting. It was the first attempt to re-orientate services away from point-and-pull dentistry and to deliver a higher proportion of children into a cavity free permanent dentition. Literature from a western setting stated that 80% of carious lesions in the permanent dentition occur in the occlusal surface of first permanent molars. 66,000 children received fissure sealants. The project aligned organisations along a common goal and incentivised an 'upstream' approach.

Reading between the lines

Initial results were not as expected and the protocol was adjusted to achieve an improved 1-year preventive fraction. However, even after modification the intervention underperformed compared to results in western countries where previous research was done. One in five teeth that had received GIC fissure sealants still developed interproximal lesions. The problem was that the underlying rationale for selecting pit and fissure sealants as a mono-therapy in that environment was flawed: the local national oral health survey revealed that two in five 12 year old children had open cavities on permanent anterior teeth, and sealants achieve better preventive fractions in less extreme communities.[3]

On the other hand, there were systemic gains made in this intervention. Although the preventive benefits were not as great as expected, the project created a more resilient community of local dentists and dental volunteers. Multisectorial relationships were fostered among educators, health providers and administrators. Capacity was built around monitoring and evaluation. The size of the project meant that there was also some level of advocacy achieved in which families became more aware of the existence of preventive dentistry and the global community began to understand the importance of context specific interventions. The project was a sound first-step towards reorienting services for children away from 'point and pull' dentistry.

Image courtesy of shutterstock.com

Lessons learned

- Epidemiological data from western settings cannot be transplanted 'at will' on to developing countries where the overall diet and environment may be very different. It is important to consider assumptions around preventive therapies before designing an intervention in an unfamiliar location.
- Volunteers may tend to gravitate toward single-solution answers, which rarely if ever exist. Rather than choosing a single intervention because it is convenient or interesting, familiarise yourself with local literature and choose preventative and high-impact interventions that are relevant to the local population.

Discussion

New Zealand dentists have a long history of making significant contributions to underserved communities at home and abroad. As the volunteer tourism industry has grown, so too has the number of commercial providers of volunteer programs.[5] We are fortunate to have many local clinicians who have experience in volunteering and maintaining relationships with organisations working overseas. The case studies above highlight some of the issues that may be encountered when participating in these endeavours. While not all of them can be avoided, some preparation undertaken before leaving home can be invaluable in serving to enhance a volunteer trip and avoid common pitfalls.

As medical volunteers, it is important to acknowledge that the financial cost of participating in volunteer dentistry abroad is substantial, and if the primary aim of volunteering is to provide dentistry to underserved populations then there are more efficient and cost effective ways of achieving that goal. For example, financially supporting an existing organisation on the ground with a proven track record directs a much higher proportion of resources to services for marginalised communities. That said, working in vulnerable communities has its own value for us as professionals and human beings, and this is also worthy of our investment. The important thing is not to confuse one of these for the other. The decision to make the financial investment of traveling for medical volunteerism should be re-conceptualised away from the goal of service and towards the idea of the pursuit of personal and professional development of the volunteer. This personal development is most mutually beneficial when it includes knowledge exchange and advocacy alongside local actors.

This points to the need for a shift in the overall culture of volunteer dentistry, away from an exaggerated altruistic mentality that positions patients in vulnerable places as objects of rescue. While many volunteer trips are later narrated according to the number of treatments provided, post-activity reports should focus more heavily on professional development of the volunteer, and on experiences of collaboration with local actors. Reframing volunteer activities as personal development will also help to set up a stance of curiosity rather than saviorism, and avoid the deflation that can happen when a volunteer finds that their efforts cannot always be deployed upon recipients exactly as they had imagined. Furthermore, this new narrative will help to dismantle the potentially damaging effects of volunteerism and the cumulative negative impact of well-intentioned acts.

The checklists are provided to aid dental health professionals in their preparation before embarking on an altruistic service trip. A series of questions are presented that should be satisfied before committing to a volunteer experience, and a list of 'Do's to consider while undertaking these activities. It is vulnerable communities that are at the centre of volunteer services and it is possible to participate in these activities in a way that provides sustained value for those who are being served. The overarching challenge raised by this article is to ask about whether it is possible, as clinicians, to make a sustained, positive, impact on the ongoing disease experience of the communities we are looking to serve. Can we, as a professional community, ensure continued service development where knowledge is gathered and used to inform successional programs. Can we increase the positive impact realised by the communities we serve?

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Checklist 1 – Checklist for questions to ask before committing to a volunteer project

Questions for you:

1. What type of professional skills do you hope to develop through this volunteer experience?
2. Do you have a mentor who could provide guidance and help you to critically evaluate your experience upon return?
3. Does your trip leader or host NGO have relevant information on personal security and cultural safety?
4. How many patients can you treat each day without compromising ethical and clinical protocols that would be considered appropriate in your home environment?
5. What will happen in the event of a medical emergency or a needle stick injury? How is medical waste dealt with?
6. What is the water source like? Where and how do those in the community you will be visiting brush their teeth?

Questions for your partner organisation or team:

1. What is their overall service strategy and their target demographic? Do they have any epidemiological data on disease levels of their target community?
2. What is your scope of practice within this project and how will your role impact the long-term health experience of those who are being served?
3. What is the water source like? Where and how do those in the community you will be visiting brush their teeth?
4. What is the relationship of the project to local practitioners and local health authorities? How will your activities influence the existing health systems?
5. Does the organisation have the permission if required from appropriate governing local bodies to be there? And what are the local registration requirements for visiting volunteers?
6. Is there an explicit ethical and clinical protocol around consent, safety practices, and working with minors? And do those protocols align with the community where you will be working and your own expectations?
7. Is the organisation prepared to share any experiences of past mistakes and how they were remedied?

Checklist 2 – List of things to ‘DO’

- DO be clear about your goals and objectives for engaging in volunteer activities, critically review your participation on your return home
- DO consider observing and conducting a needs assessment first
- DO make sure you can comprehend and practice based on the best context specific evidence
- DO make sure your activities are registered with and in line with strategies of local health authorities
- DO make sure you are confident with best practice for sterilising in a field environment including management of aerosols and disposal of medical waste
- DO buy locally including toothbrushes and toothpaste
- DO ensure that your materials are in date
- DO go slow, work gently and focus on building relationships
- DO think long term and consider returning

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