Drug donations meet online dating: “www.drugmatch.com”

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Introduction

Drug donations from pharmaceutical companies account for a significant source of medication supplies in resource-poor regions around the world. A case in point: every year, Glaxo-SmithKline donates 400 million tablets of albendazole to help eliminate soil-transmitted helminths.¹ Despite the philanthropic and well-intentioned nature of drug donations, numerous examples have been documented around the world where this act has led to undesirable and unexpected results.²

Issues surrounding drug donations led to the creation of the World Health Organization (WHO) Guidelines for Drug Donations in 1996, which were revised in 1999 and most recently in 2010.^{3,4} Despite advancements in these educational tools, many shortfalls still exist. This article proposes that drug donations take a page from the dating industry through the creation of an online platform, such as “www.drugmatch.com” (please note: this website does not currently exist). This website would provide matching services to aid groups providing medical services in resource-poor areas, with a database of pharmaceutical manufacturers seeking to donate medications. The benefits offered by this tool would facilitate the acquisition of appropriate medications and allow pharmaceutical donors to benefit both their corporate image and financial interests.

Background

It is a common assumption that it is better to donate something rather than nothing. On face value, this assertion appears reasonable, but once the lifecycle of inappropriate donations is examined, it becomes clear that this can cause more harm than good. Inappropriate drug donations can present in a variety of forms, including expired medications, unsorted medications, medications that are not relevant to the disease pattern in that region, foreign language-labeled medications, inappropriate dosage forms and excessive quantities.⁵ In all such cases, this creates unnecessary financial, human resource and

logistical issues for aid groups already working under constrained circumstances.

When small aid groups go abroad to provide medical clinics, a large quantity of donated medications are brought with them or shipped directly to the site. Once donations arrive at these sites, oftentimes there is limited infrastructure to store the medications, especially in emergency relief situations such as natural disasters.⁵ As a result, the arrival of excessive unsorted donations poses a significant burden for the staff involved because it can take weeks to sort the supplies, and this diverts staff from carrying out their mission roles. Furthermore, when excessive or expired products arrive, the recipient group is responsible for their disposal.² This requirement poses another major challenge for the team because of the lack of drug disposal facilities in most remote areas.⁶ As a result, this has led to a variety of unfavourable situations, such as drug burials, inappropriate incineration and cost-intensive export of drugs to neighbouring countries that have appropriate facilities.² Not only do these actions present serious public safety threats, but they also raise environmental concerns.

Cases

Two global events and the drug donation challenges that were identified in their aftermath are discussed.

Conflict relief: Bosnia and Herzegovina

During the war in Bosnia and Herzegovina between 1992 and 1996, it is estimated that approximately 27,800 to 34,800 tons of medical supplies were donated to the region.⁶ Of these supplies, 13,200 tons were medication-containing hospital packs that met the WHO's drug donation guidelines.⁶ Only 5% of these hospital packs were deemed unsuitable for the needs of the local population.⁶ In contrast, 90% of donations that were classified as miscellaneous were deemed inappropriate for the disease states being treated in the region and often arrived unsorted or expired.⁶ Near the end of the conflict in 1996, field

researchers estimated that 17,000 tons of useless medications were stored in warehouses throughout the region.⁶

Disaster relief: Mozambique

Floods affected Mozambique in 2000, with 500,000 people being displaced.² The government of Mozambique created 3 lists of medications, containing a total of 33 drugs, to request from the international community and aid groups.² The weight of the requested drugs should have totaled approximately 1393 tons.² On the whole, however, the international community donated only 37% of the weight that was requested.² Despite only 33 drugs being requested based on Mozambique's national formulary, they received more than 400 different agents, only 19 of which corresponded to the requested list.² Moreover, only 5 of the 19 requested agents were donated in the appropriate quantities.²

Past solutions

Guidelines have been created to help set standards for the drug donation process. The earliest guidelines were created in the 1980s by humanitarian organizations, such as the International Committee of the Red Cross.³ In 1996, the WHO Guidelines for Drug Donations were created based on consultation from more than 100 international humanitarian aid agencies with the aim of improving the quality of drug donations; however, these are not international law.³ The WHO guidelines are based on 4 principles, out of which 12 overarching statements have been created. The 4 core principles for a donation are maximum benefit to the recipient, respect for wishes and authority of the recipient, no double standards in quality and effective communication between donor and recipient.³

It is apparent from recent global events that implementation has been initially inconsistent, but data from recent events show that some improvements have been made. Following the 2001 earthquake in Gujarat, India, of the 1308 tons of drugs donated, 95% were in compliance with the WHO guidelines.⁷ Factors that contributed to such high compliance include a provincial essential medicines list that guided donations, a large number of health care workers coordinating the distribution of medications and the fact that most of the medications donated came from other parts of India.⁷

Gaps in past solutions

Despite signs of improvement, many shortcomings still exist, especially in emergency situations.⁸ A major example of post-natural disaster drug donations gone wrong is the aftermath of the 2004 tsunami that affected numerous countries in South East Asia. Despite no formal request being made by the Indonesian government for donation of medications, more than 4000 tons of medications were donated, and they could not be sent back to the donors because the guidelines consider medications to be hazardous goods.^{5,7} A study of post-tsunami drug donations by Pharmaciens Sans Frontières Comité

International determined that 25% of the medications were expired, 60% were not listed on the national formulary, and 70% were labeled in foreign languages not understood by the local health care staff.⁹ As a result, the estimated cost to the Indonesian government to dispose of the expired medications would be 2.4 million euros⁹—an unintended consequence.

In addition, the WHO conducted a review that examined adherence to drug donation guidelines during events from 2000 to 2008. A total of 96 drug donation events were examined, and it was determined that disaster-related donations were the least likely type of donation to comply with WHO guidelines.⁷ This is probably due to the unexpected nature of these events and lack of adequate planning.

Proposed solution

From the current state of drug donations, it is apparent that there is a disconnect between the drug donors and the aid group recipients. Any realistic solution to this problem would need improved communication between these 2 parties. In addition, the proposed solution would have to be user-friendly and one that is readily accessible, given the unexpected nature of many global events. A website such as www.drugmatch.com could serve as a solution to this long-standing issue. The concept is based on similar platforms used by common dating websites, such as www.match.com. The mission of the platform would be to pair aid groups with 1 or more drug donors that have the requested medications that meet the aid group's specific parameters, such as dose, dosage form, quantities and expiry dates. The phases for potential rollout of this website would include recruitment of pharmaceutical companies, recipient recruitment, product endorsement and mobile application development.

Phase 1 would involve formally contacting the large pharmaceutical companies to inform them about this service and request their participation. Once a sufficient number of large donors were recruited and their inventories uploaded to the website, phase 2 would begin by offering the platform to potential recipients. This would allow an aid group to create a profile, in which they could list medications requested, quantities and date of delivery, which would then be matched with pharmaceutical companies in the database that meet the specified requirements. This matching would facilitate a channel of communication between donors and recipients and help secure appropriate drug donations along with the relevant documentation required to transport large quantities of medications. Once the concept was proven, phase 3 would focus on seeking endorsements from agencies that currently are helping to organize drug donations, such as Health Partners International Canada. These endorsements would provide further expertise and credibility to this area. Phase 4 of the project would see the development of a mobile application to make the service more accessible in emergency relief situations where electricity or Internet services might not be readily available.

Financial incentives

Pharmaceutical companies would be interested in signing up for www.drugmatch.com because it would facilitate their ability to donate a greater amount of medications, as the available medications could be accessed by more aid groups. This enhanced ability to reach aid groups would also have financial incentives for the company, as drug donations in donor countries are linked to tax deductions. In Canada, if drug companies make a donation of medication to be used outside of Canada, they are eligible to receive a tax deduction credit equal to the fair market value of the drugs donated.¹⁰ Drug manufacturers based in the United States are eligible to receive tax write-offs for up to twice the production costs of the drugs donated.¹¹

Social incentives

Becoming a member of a drug-matching website and then publicizing this fact broadly could have many beneficial outcomes for companies. Although it is difficult to measure the impact of such activities, positive signs include attracting new investors who seek socially responsible companies and improving the public's perception of the pharmaceutical industry as a

whole.¹² Furthermore, actively joining a movement to improve the supply of medications to those in need would be viewed as a major social commitment and could serve to boost the morale of the company's employees.¹² An example of the positive impact of taking part in drug-related social initiatives is the Mectizan (ivermectin) donation program undertaken by Merck to eliminate river blindness in Africa.¹² This initiative has led to Merck's receiving recognition awards from numerous international organizations.¹²

Conclusion

In this modern era of technology, donating medications continues to be a process that is rife with poor communication and lack of dedicated platforms. The proposed intervention, www.drugmatch.com, has the potential to provide a solution through a platform that functions uniquely to facilitate accessibility to drug donors and improve the accuracy of drug donations. Aid groups exert an enormous amount of effort in providing medical relief, and platforms such as www.drugmatch.com are necessary to better support these groups in their ability to help those in need. ■

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