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SOUNDING BOARD

Inappropriate Drug-Donation Practices in Bosnia and Herzegovina, 1992 to 1996

Humanitarian assistance to people suffering as a result of catastrophes generally includes large charitable donations of drugs from sources such as private individuals or companies, nongovernmental organizations, United Nations agencies, and foreign governments. Unfortunately, evaluations have repeatedly shown that many of the medical supplies sent are not the appropriate ones. (1,2)

During the war in Bosnia and Herzegovina, many areas became totally dependent on foreign help for medicines and medical supplies. Information circulated about massive quantities of irrelevant drugs that arrived in Mostar, Tuzla, Gorazde, Sarajevo, and Bihac, cities that were key targets for humanitarian assistance. These rumors prompted us to evaluate the donation of medical supplies in terms of quantity, quality, and appropriateness.

During August 1996, we met in central Bosnia with representatives of national and local health authorities; international agencies, including the World Health Organization (WHO), the United Nations High Commissioner for Refugees, and the European Commission Humanitarian Office; and nongovernmental organizations that implemented drug-supply and drug-distribution programs in Bosnia and Herzegovina. (3) Whenever permitted, we collected activity reports, stock records, and accounting documents. Detailed data were provided by 12 multilateral and nongovernmental organizations that were reported to have provided at least 40 percent of all the donated medical supplies. Additional data were obtained from local administrative or health authorities, warehouse keepers, and health workers. With these data, we compiled estimates of the quantities of medical supplies that entered Bosnia and Herzegovina between 1992 and mid-1996. To allow for the variation in accuracy of the data from sources other than the 12 multilateral and nongovernmental organizations, we present the results as minimal and maximal estimates derived from our calculations.

The quality of the drugs was assessed according to their appropriateness or inappropriateness. Inappropriate drugs were defined as useless and unusable medicines. Useless drugs included medicines irrelevant to the epidemiologic and clinical context or those not on WHO's list of essential drugs. (4) Unusable drugs were medicines that had already expired at the time of their arrival or soon afterward, unidentifiable drugs (e.g., those delivered unsorted or labeled in unknown foreign languages), drugs damaged during the shelling of warehouses, and drugs spoiled during transportation and storage.

To support our quantitative and qualitative appraisal of the medical supplies donated during the war, we made every reasonable effort to visit facilities where drugs and medical materials

were stored. At the time of our survey, a large part of the unused medical supplies was stored in warehouses. However, not all the storage places were known, and access to some warehouses was restricted (e.g., because of a lack of cooperation from local authorities). Nevertheless, we visited several important storage places, including the four main drug warehouses in Mostar and Tuzla. We were told that most of the storage places we did not visit were similar to those that we did visit. These visits permitted us to collect additional data on supplies sent by various groups and to identify the various sources of inappropriate drug donations. We also took pictures and collected samples.

Finally, after the field survey, we cross-checked our estimates with data on Bosnia and Herzegovina gathered by organizations in Europe and North America that are active in research, policy, and advocacy with respect to pharmaceutical issues, as well as by pharmaceutical and waste-management companies.

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Quantitative and Qualitative Assessment

We estimated that 27,800 to 34,800 metric tons of drugs and medical materials entered Bosnia and Herzegovina between 1992 and mid-1996 (Table 1). Three types of donation were identified, each one involving some degree of inappropriateness.

One was donations that conformed to WHO's interagency guidelines for drug donations, (5,6) consisting of hospital packs containing a single drug relevant to the disease pattern in the recipient country, labeled clearly with its international nonproprietary name (i.e., the generic name) and dosage, and with a remaining shelf life of at least one year. These donations were estimated at about 13,200 metric tons. However, approximately 5 percent were considered inappropriate. This was partly because initial supplies consisted mainly of prepackaged medical kits designed for refugee situations in developing countries and thus not fully applicable to the health needs of the people of the former Yugoslavia. Some medicines were provided in excess, whereas there were shortages of others -- in particular, medicines for chronic diseases common in industrialized countries (e.g., insulin for diabetes mellitus and drugs for the cardiovascular system). (7)

Another type of donation consisted of miscellaneous medicines, mainly small and nonprofessional consignments of unsorted medicines and free samples collected from private homes, health professionals, and charities. About 90 percent of these drugs were inappropriate; they were delivered unsorted and thus required the mobilization of considerable resources (already overstretched in a disaster) to sort and repackage them. The correct identification of the drugs was difficult (e.g., some were labeled with unfamiliar names), and many had expired or were not appropriate for local health problems.

The third type consisted of donations of large quantities of useless or unusable medicines, generally in the form of large parcels. Examples of materials received as a result of such "drug dumping" are army medical supplies from World War II, plaster tapes dated 1961, and dapsone (a drug for the treatment of leprosy, a disease not found in the former Yugoslavia). In addition, some of the boxes were mislabeled.

In total, we considered 50 to 60 percent of all the medical supplies donated to Bosnia and Herzegovina to be inappropriate (Table 1). Miscellaneous donations of small amounts of drugs accounted for 60 percent of all inappropriate donations, and the dumping of large quantities accounted for 35 percent of such donations.

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Managing the Costs of Inappropriate Drugs

By mid-1996, there was an estimated 17,000 metric tons of useless and unusable medicines stockpiled in warehouses and clinics in Bosnia and Herzegovina. To ensure proper disposal of these medicines, WHO planned to build incinerator plants. Other international relief agencies considered shipping inappropriate or expired medications back to the countries they came from.

For each ton of inappropriate drugs donated, the donor avoids destruction costs of $2,000 (U.S.), putting the recipients in the embarrassing position of having to destroy these quantities at a more or less equivalent cost, provided that adequate incineration facilities are available in the country to which the supplies were sent (Table 2). Thus, 17,000 metric tons of inappropriate drugs may save donors $25.5 million (after the deduction of $500 per ton for the cost of transportation to Bosnia and Herzegovina) and cost the recipient country $34 million. Donors may also benefit from substantial tax deductions, because their donations are considered "humanitarian gifts." Recipients bear the added costs of health and environmental hazards, as well as the costs of storing, handling, sorting, and managing the useless and unusable medicines.

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Implications

Given the difficulties of humanitarian-relief operations in Bosnia and Herzegovina, the relatively low proportion of inappropriate medicines among the medical supplies delivered in accordance with WHO guidelines is encouraging. Since we did not have access to all the warehouses in which drugs were stored, we have been conservative in estimating the amounts of inappropriate medical donations. Our investigations nonetheless underscore that inappropriate medical donations to Bosnia and Herzegovina were common, as they were to Armenia and Mexico after their earthquakes, (1,2) or to Africa during its food crisis, (8,9) and to the former Soviet Union. (10) Individuals and organizations have many reasons for sending medical supplies to a disaster area. Charitable gifts may lead to tax deductions and represent a convenient way to dispose of waste medical supplies without having to pay for their destruction. Publicity about humanitarian aid usually promotes the image of the people or organizations involved.

Because medical supplies with short expiration dates (one year or less) have little chance of being sold, a charitable gift of such supplies may permit the donor to avoid the costs of destruction. Such medicines can even be sold to donors eagerly searching for opportunities to spend money reserved for an emergency. Shortdated medical supplies might be valuable if used soon after arrival, but it is the responsibility of the donor to verify whether such supplies will be used while they are still valid. If a donor does not have that information, then it is better to refrain from delivering the supplies.

The former Yugoslavia was a signatory to the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. (11) Unused drugs were considered wastes to be controlled. The Basel Convention states that "any transboundary movement of hazardous wastes or other wastes that results in deliberate disposal (e.g., dumping) of hazardous wastes... in contravention of this Convention and of general principles of international law, shall be deemed to be illegal traffic." (11) In France, there are 22,500 metric tons of unused medicines each year -- approximately 40 percent of the drugs marketed annually; 80 percent of the unused drugs returned by individual consumers must be destroyed. (12) The temptation is great to send these medicines elsewhere. In most industrialized nations, legislation is very strict regarding the internal production, sale, and distribution of medicines. Yet there are no established international or national regulations concerning the re-use of surplus medical supplies for humanitarian purposes. (12,13,14,15)

During war, the coordination of emergency aid is particularly challenging, but it is necessary to ensure the best response In Bosnia and Herzegovina, effective coordination of drug donations was absent; dozens of organizations with disparate agendas provided medical supplies. Moreover, many local leaders were reluctant to cooperate with any kind of central health authority. During a period of four and a half years, no effective system of drug-supply management, monitoring, or reporting was established, in sharp contrast to the substantial funds dedicated to drug donations. This problem has also been discussed by others. (7) Effective coordination could have limited some excesses or deficits of medications and prevented the period of usefulness of valuable drugs from expiring.

The mandate of the WHO Regional Office for Europe in Bosnia and Herzegovina was to lead and centralize the coordination of health-related relief activities. (16,17) However, initiatives taken under its auspices to improve the coordination of medical-supply distribution remained limited. (18) It could be argued that financial constraints were the reason, but the WHO European office received $16 million from various sources to deliver medical supplies to Bosnia and Herzegovina. WHO should work to improve its ability to coordinate relief activities. (19)

Dumping medications and making well-intentioned donations of inappropriate miscellaneous drugs are unacceptable practices. The WHO interagency guidelines for drug donations outline basic principles for providing medical supplies in disasters. (5) There is also a consensus about drug-donation guidelines among numerous organizations often engaged in humanitarian-relief operations. (5,6) We see two principal mechanisms by which these recommendations could be enforced.

In the short term, there is an urgent need for better coordination of the provision of medical supplies. At the onset of a disaster, a permanent coordinating entity should be established. It should act like the conductor of an orchestra, inquiring about needs and adapting demands for medical supplies accordingly, directing appropriate donations to organizations that can use them, responding to offers of humanitarian aid, ordering supplies in the best time sequence, and promptly denouncing inappropriate donations. The coordinating group should delegate to others such logistics as transportation and handling of medical supplies and should neither manage nor be the source of funds donated for relief operations. Procedures could be defined and prepared in advance by experienced organizations and regularly updated. Indeed, such a system would require some willingness to truly coordinate such efforts and to allocate to their coordination a fraction of the funds usually dedicated to medical aid.

In the long term, regulations specifically addressing drug donations for humanitarian purposes should be devised by governments, using the above-mentioned guidelines and the Basel Convention as source documents. The primary goal of these regulations should be to determine the criteria that enable a medical donation to be labeled as "acceptable for humanitarian assistance." Permission to use this label could be granted by health ministries. Donations would have to carry the label before tax deductions could be taken or trucks full of charitable medical supplies could cross borders.

Punitive fines and other sanctions should be directed at companies or institutions that dump drugs. Among other things, the financial burden of destroying unusable donated drugs or eventually returning them to their country of origin should be placed on the donor. These fines and sanctions should be levied and enforced by the governments of the countries in

which the donors of inappropriate drugs and medical supplies are located. Such procedures would discourage ill-devised humanitarian initiatives. The Dutch government took such steps in 1994 when it opposed a project to collect unused drugs for humanitarian purposes. (20) We hope that other nations and humanitarian organizations will mobilize to avert the delivery of inappropriate medicines and will resolutely fight the dumping of medications and medical supplies.

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