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Mini Review

Medical Advancements: A Boon with Risks?

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Medical Advancements: A Boon with Risks?

Diabetes was, is and will be a major cause of concern in the healthcare sector. The control of diabetes has been a mission since a long time all over the world. The use of the glucometer has made life easier for the common man. However the lack of knowledge regarding the disposal of the glucose strips and needles has also become a matter of concern. A multi-nation study reflected that about 46.9% to 67.6% of diabetics disposed the sharps into the household bins and that less than 10% used, specific containers [1]. In similar studies, improper disposal of sharps was found to be as high as 80-90% [2,3]. A study from Pakistan showed that more than 90% patients discarded them into the household bin [4]. According to the Indian Council of Medical Research, India Diabetes study circulated in 2011, revealed that about 62.4 million people in India were diabetics [5]. This makes India, the home to a huge diabetic inhabitant.

Table 1: General Guidelines for Sharps Disposal.

Option	Description	Advantages	Disadvantages
Drop-off container collection sites	Usually health centers, pharmacies, community organizations, police and fire stations, and medical waste facilities Patients carry containers with sharps to these	Used sharps get separated from the usual household garbage Disposal in a proper manner as medical waste Patients can use empty household containers	Inconvenience for the sharp user because of travel requirements Fear of losing confidentiality Strict compliance to local regulations and biomedical safety standards may be a problem for collection sites
Household hazardous waste collection sites	Usually in municipalities where patients dispose sharps in sharp collection bins	Similar to drop-off container collection sites	Similar to drop-off container collection sites
Residential special waste pickup services	Patients place special sharp containing containers to be picked up by trained sharp waste handlers Services have either regular pick up schedules or need the patient to call	Economical in the long run More control over the program	Need of trained staff Start-up cost high
Mail-back programs	Used sharps mailed to a collection sites in special containers	Can be utilized for both individual use and community level use Protects privacy Ideally suited for rural communities, remote areas, etc.	Logistics and travel requirements Cost of mailing may be high for some individuals
Syringe exchange programs	Usually, run by community organizations who exchange used syringes with new syringes	Have been found to be cost-effective, particularly in HIV prevention	May have to face significant regulatory restrictions Local community opposition
Home needle destruction devices	After destructing the needle by clipping, melting or burning through special devices, patients throw the syringe into the household trash	Convenience Low cost	Puts waste workers and waste recyclers at risk of needle stick injuries

Thereby, the seriousness of the situation not only limits to diagnosing and treating the diabetic population, but it also further includes the knowledge about the proper diabetic self-care with the diet and self-monitoring of blood glucose levels forming the important part of the same. With this being said, the disposal of the waste generated from such self-monitoring techniques becomes a part of it. Thus, if neglected, it can cause substantial damage to the health of the population as well as it may reflect a marked loss to the economy, further increasing its burden. Table 1 below shows the various sharp waste disposal techniques followed [6]. According to the Environmental Protection Agency, syringes (needles) and lancets are medical wastes called "sharps." Sharps can be hazardous to those handling garbage, if the sharps are thrown in the regular waste. "Sharps boxes" are recommended for home use. Various pharmacies sell sharps boxes at a reasonable price tag and also will allow you to return the boxes when they are full [7,8].

Hence, always use a sharps box for sharps disposal. Your physician may help to learn about your local disposal options and procedures. Never to re-cap your syringes before you dispose of them. In case you do not have a regular sharps box, use a hard (puncture-proof) non-clear container for disposing used clipped or

un-clipped syringes and lancets. If you choose to clip the syringes, use a device that traps the clipped points in a puncture-proof compartment. Properly dispose of your syringes and lancets when traveling or bring your used sharps home for disposal [7,8]. Do not drop your used syringes or lancets into the regular trash. Do not cut off syringe needles with scissors or break off the needles. The needle could break off as you are cutting it and could hurt you or someone else. Do not use clear plastic bottles for syringe disposal as children or drug users may see the syringes and try to open the bottle. Do not put plastic bottles filled with syringes/lancets in recycle bin [7]. Therefore. it becomes very important to educate the individual about proper waste disposal of such sharps that are used at home to prevent any cross infection or any re-use of such materials in any manner.

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