

Survey of sharp waste disposal system in clinics of New Karachi

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Abstract

The World Health Organization (WHO) estimates that there are 350 million people with chronic HBV infection and 170 million people with chronic HCV infection worldwide. Hepatitis B is estimated to result in 563, 000 deaths and hepatitis C in 366, 000 deaths annually. Given its large population (180 million) and intermediate to high rates of infection, Pakistan is among the worst afflicted nations. The reuse of syringes and needles was a major factor contributing towards increased HCV prevalence. It was reported that there are several small groups involved in recycling and repacking of used unsterilized syringes, which were available in various drug stores. It was difficult for the public to differentiate between new sterilized syringes and recycled unsterilized syringes. In Pakistan, the number of estimated injections per

person per year ranged from 8.2 to 13.6, which was the highest among developing countries, out of which 94.2% were unnecessary. In 2000, the WHO recommended that countries should implement strategies to change the behaviour of health care workers and patients in order to decrease the over-use of injections, to ensure the practice of sterile syringes and needles, and to properly destroy sharp waste after use.

Keywords: HBV infection, HCV infection, Unsterilized, Recycled.

Introduction

The World Health Organization (WHO) estimates that there are 350 million people with chronic HBV infection and 170 million people with chronic HCV infection worldwide.^{1,2}

Hepatitis B is estimated to result in 563 000 deaths and hepatitis C in 366 000 deaths annually.³ Given its large population (165 million) and intermediate to high rates of infection,^{1,2} Pakistan is among the worst afflicted nations

The reuse of syringes and needles is a major factor contributing towards increased HBV and HCV prevalence.^{5,6}

It was reported that there are several groups involved in recycling and repacking of used syringes, which were sold in various drug stores. It was difficult for the public to differentiate between new sterilized syringes and recycled unsterilized syringes.⁷ In Pakistan, the number of estimated injections per person per year ranges from 8.2 to 13.6, which is the highest among developing countries, and out of which 94.2% are unnecessary.⁴ In 2000, the WHO recommended that countries should implement strategies to change the behaviour of health care workers and patients in order to decrease the over-use of injections, to ensure the practice of sterile syringes and needles, and to properly destroy sharp waste after use.⁸

Subject Method and Results

A survey was carried out on the sharp waste disposal practice at clinics in New Karachi. Convenient random sampling method was used to reduce cross-cultural bias. Healthcare providers one each at 85 clinics were requested to fill a structured questionnaire by Spectrum Market Research for The Health Foundation using professional interviewers. All 85 Healthcare providers were qualified doctors.

Required information was gathered using a structured questionnaire. Doctors filled the questionnaire themselves. Of the total, 89% respondents were male and 11% were female.

Results showed that 27% respondents administered 1-5 injections, 19% administered 6-10 injections, 16% administered 16-20 injections and 11% administered more than 30 injections per day at their clinics.

In 43% of cases doctors themselves dispensed injections while in 52% cases dispenser dispensed injections at the clinic.

It was observed that 73% of clinics had no Standard Operating Procedure (SOP) for Sharp Waste Management, 55% respondents separated needles from syringes after use whereas 45% did not. Whereas 60% of those who removed the needle from syringes after use did it by hand.

Sharp waste was thrown in open bins at 81% clinics with no colour coding of the container in 87% of clinics.

Table: Average number of patients examined by the Doctor in a day.

Number Patients	Number of Doctors	Percentage
1-20	23	27%
21-40	28	33%
41-60	20	24%
61-80	6	7%
81-100	4	5%
101 and Above	2	2%
Not Stated	2	2%
Total	85	100%
Average patients/day/clinic		40

Sweepers collected the sharp waste for final disposal from 69% of the clinics. Sharp waste from 83% of respondent clinics was dumped in communal garbage.

In all, 88% respondents stated that their waste collector was not vaccinated for Hepatitis B.

Recommendations:

The survey showed that even in clinics administering injections regularly majority (73%) were operating without any SOP for sharp waste management. Sharp waste was thrown in open communal garbage by 82% respondents. Sweepers collected sharp waste mixed with other non-infectious waste from 69% clinics and 88% waste collectors were not vaccinated against Hepatitis B.

In view of the above results it would be beneficial to draw a practical SOP for clinics for sharp waste management which should be distributed to clinics in each Town of Karachi. Sweepers should be included in high risk groups for Hepatitis B/C screening and Hepatitis B vaccination.

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