

113: USAGE OF MEASUREMENT AS THE KEY TO REDUCE PATIENT AND PERSONNEL RISKS, AND INCREASE EFFECTIVITY AND EFFICIENCY IN BIO-HAZARDOUS WASTE MANAGEMENT

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Objective:

To improve bio-hazardous waste management (BWM) in the ABC Medical Center in order to: a) reduce risk in health workers and patients; b) contribute to maintain a healthy environment in the areas surrounding the hospital; c) reduce disposal costs; and d) comply with official regulations.

Project description

BWM includes both the disposal of materials that have been in contact with human fluids as well as puncture prevention in health professionals and janitors. Thus, correct segregation of waste during care processes is the key to effective and efficient BWM. The American British Cowdray (ABC) Medical Center is a 200-bed private not-for-profit tertiary care hospital, one of the largest of Mexico. The ABC Hospital started its BWM program in 1995, carrying out a non-systematic approach, mainly through informal training to janitors and nurses. It resulted in a continuous increase in disposal costs and did not include prevention in puncture accidents. The weight of bio-hazardous waste (BW) increased steadily from 24 tons in January, 1998 to 38 tons in June, 2000, with no occupation variability. No record of puncture accidents was available. This set the beginning of a hospital program to control and improve processes based in systematic measurement.

Method:

A methodology for process control and improvement already used by the hospital in other areas, was implanted to control disposal of BW. It consists of continual measurements by the people involved in the BWM process, combined with cause analysis in teamwork and interventions. Indicators included: 1) Monthly BW generation, by hospital service; 2) Proportion of BW in normal garbage and vice versa; 3) Record of sharp objects found outside of containers; and 4) Record of accidents by type of personnel.

Interventions have included: Integration of a multifunctional BWM Committee; permanent information dissemination campaigns; elaboration, dissemination and implementation of a procedure manual; elaboration and dissemination of a sanction regulation; training or education of health professionals, janitors, patients and their companions; increase in number and relocation of BW containers; placement of needle recapping devices in key areas.

Results:

In two years, total weight of BW has dropped from 38 tons in June, 2002 to 20 tons in December, 2002. In relative terms, the amount of BW generated by occupied bed has gone from 8 kilograms to 5 kilograms during the same period. The proportion of regular garbage found in BW containers has declined from 50% to 19%. Puncture accidents have dropped from an average of 6 to 5 monthly accidents.

Conclusions:

Continuous and systematic measurement makes the difference in succeeding in a CQI effort. In such a broad process as BWM, measurement proved to also have positive side effects. Besides being very effective for process control and improvement, over two years it has produced integration among different organizational areas, personnel motivation and create awareness. Work still has to be done to increase puncture prevention.