

## Process Improvement: Biomedical Waste Management

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### Abstract

The project was carried out at 500 bedded Hospital on improvement of the biomedical waste compliance for a period of 3 months. Hospital was with G+6 floors with departments like: Emergency, Laboratory, Radiology, Pharmacy, OPD, ICU, HDU, CCU, NICU, PICU, OT, Cath-lab, Wards etc and waste disposal area at basement. The audit was carried out on the parameters like; Knowledge on segregation, Handling at point of care, Segregation at point of care/ ward, Transportation & handling and Disposal.

**The adherence to the protocol was found to be 66% (baseline) and the non-compliances found were;**

Staffs are fresher's and don't have any previous knowledge or experience on BMW segregation, Training was provided only during induction, No guideline displayed on instant reference. PPE's are not worn while waste handling and lack of availability of sufficient PPE's at the POC. Mixing of waste of red and yellow bins, Bins were overflowing; Ampoules and needles are not discarded in the puncher proof container instead lying on the floor around it. Staffs are too reluctant to discard needle and ampoules in the designated container and throws from a distance. Wastes are transported in buckets which in smaller capacity and overflows while transporting. The bins are usually dragged with hands and waste fall off the buckets. Waste bags are transported unsealed. Puncher proof containers are opened and wastes are shifted to bigger buckets before handed over to agency. Reason being supply of puncher proof containers is limited due to unavailability of the budget. The waste segregations area found to be smaller as compare to the amount of waste generated. The frequency of the collection by agency is irregular. The puncher proof containers are lying outside the designated area as no specific area for demarcated.

The quality management tools like Dash-board, Histogram, Pareto, Fish Bone, CAPA, Gantt Chart was used in the project.

**The adherence has increased to 76% over 3 months** with following implementation; training at induction and periodic intervals and daily briefing, display of guidelines at waste segregation area, regularization of PPE supply with budget allocation, supply of proper sized waste bins and transport buckets; after reviewing the waste quantity. Waist height platforms were created to keep PPC for easy reach-out, sealing of waste bags at POC with proper labelling. Review and implement the system of "NOT TO OPEN SEALED PPCs" and demarked area for holding it, regularizing the agency visit from every alternate day to daily.

### Biography:

Samrat has completed his B Pharmacy (1998) from Nagpur University and Post Graduation and Hospital Management (2000) from IISWBM, India. He is currently working as Group Head for Quality for a Kolkata based Hospital chain; ILS Hospitals Pvt. Ltd. He has experience in hospital quality management and national (NABH) and international accreditations (Australian) for more than 19 years. He has delivered numerous process improvement projects during his professional tenure. He is a Lean Six Sigma Green Belt and Assessor for WHO Patient Safety Standard. He has also handled ISO 9001 projects for Hospitals, Medical Colleges, and Teaching Institutes & awarded Lead Assessor for ISO 9001 standards.

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