

INSTITUTE OF HEALTH MANAGEMENT RESEARCH JAIPUR

DISSERTATION

at

CIVIL HOSPITAL, AHWA
DISTRICT DANG, GUJARAT

TO ENSURE A SAFE “BIOMEDICAL WASTE MANAGEMENT” OF THE HOSPITAL

February 2014 - May 2014

Under Guidance of
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ABOUT THE HOSPITAL

- Established in 1961
- Located 150km from Surat
- Government Funded Hospital
- Started with 119 beds, current strength: 170 beds
- New building under construction - 250 beds, multi specialty
- Specialties:
 - Ophthalmology
 - Gynecologist
 - Pediatrician
 - General surgery
 - Psychiatry
 - Nutritional
 - Emergency Department
 - SNICU



MISSION & VISION

MISSION

To enhance the patients' quality of life by providing specialized medical treatment and preventive healthcare at free/affordable cost.

VISION

To be the network of finest public healthcare institutions in the state of Gujarat, providing quality medical care services with the state of art technology with easy accessibility, affordability & equity to the people of Gujarat & beyond.



ACTIVITY PLAN

<i>Time</i> →	February		March				April				May	
<i>Activity</i> ↓	wk3	wk4	wk1	wk2	wk3	wk4	wk1	wk2	wk3	wk4	wk1	wk2
Understanding working of hospital and its various departments, discussing the project with CDMO												
Understanding prevalent BMW practices, and performing gap analysis, assessing staff on knowledge of BMW												
strategies and methods of safer handling and disposal of BMW in hospital, Training staff in basic BMW knowledge, based on results of assessment												
Assessing effectiveness of newly appointed measures												
Assessing staff on post-training knowledge of BMW through a questionnaire and performance												



PROJECT UNDERTAKEN

TO ENSURE “A SAFE BIOMEDICAL WASTE MANAGEMENT” OF THE HOSPITAL

- Why Selected
- Issues Identified
- Objectives
- Awareness of Staff
- Recommendations



WHY SELECTED

- Injuries from sharps
- Nosocomial infections
- Risk of infection outside hospital
 - Waste handlers
 - Scavengers
 - People living in vicinity of hospital
- Hazardous chemicals
- Disposables being repacked and sold
- Disposed off drugs being repacked & sold
- Risk of air, water and soil pollution
 - Direct
 - Indirect



ISSUES IDENTIFIED

○ Segregation

- Color coding not followed
- Patients using BMW bins for domestic waste

○ Collection

- Only 1 staff responsible for collection
- Irregularity of GP board vehicle to collect waste
- Route of collected waste from storage room to GP vehicle- from within hospital

○ Storage

- Storage Room- accessible to all- including stray animals
- Waste is stored for months together
- Cracked containers- lead to leakage



ISSUES IDENTIFIED (...CONTD.)

○ Disposal

- Mutilators non-functional
- Dumped in landfill
- Burnt within premises of hospital

○ Staff

- No replacement staff for collection- in case of absenteeism
- Lack of awareness among staff
 - Waste generated
 - Hazardous nature
 - Color coding
 - Protective gear



THE GRIM PICTURE OF REALITY

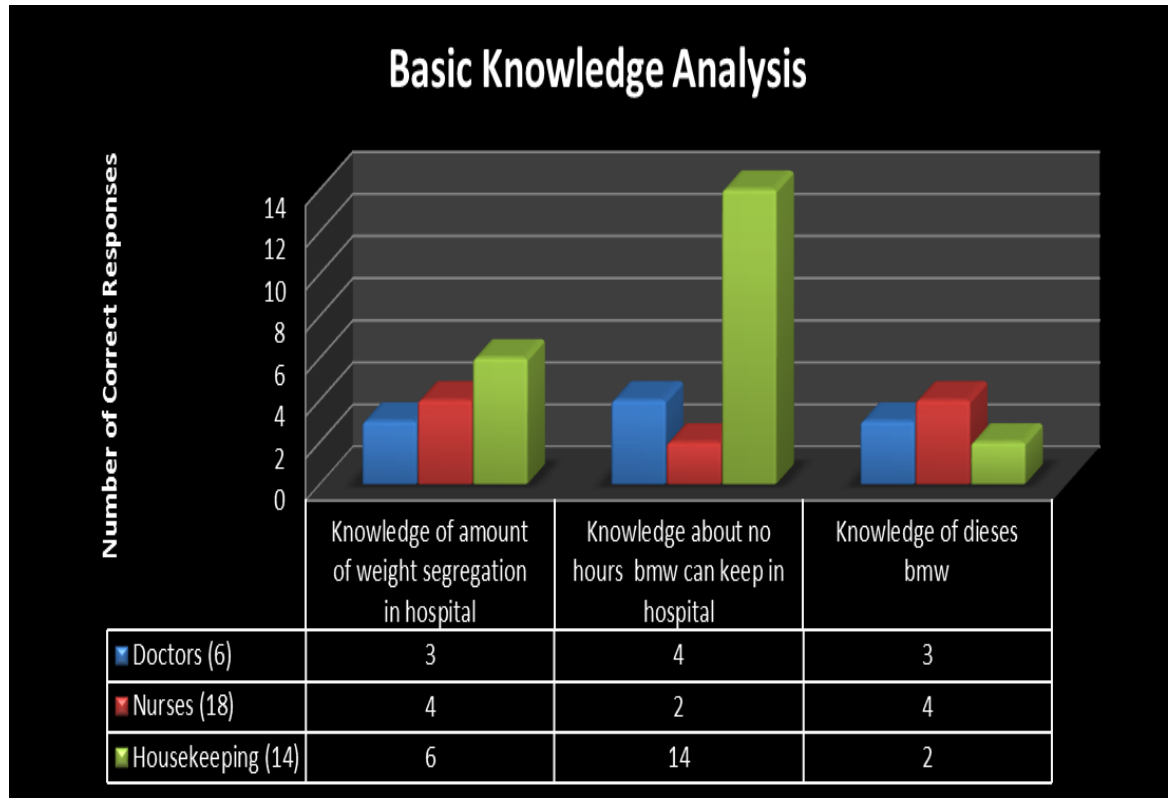


ACTIONS TAKEN

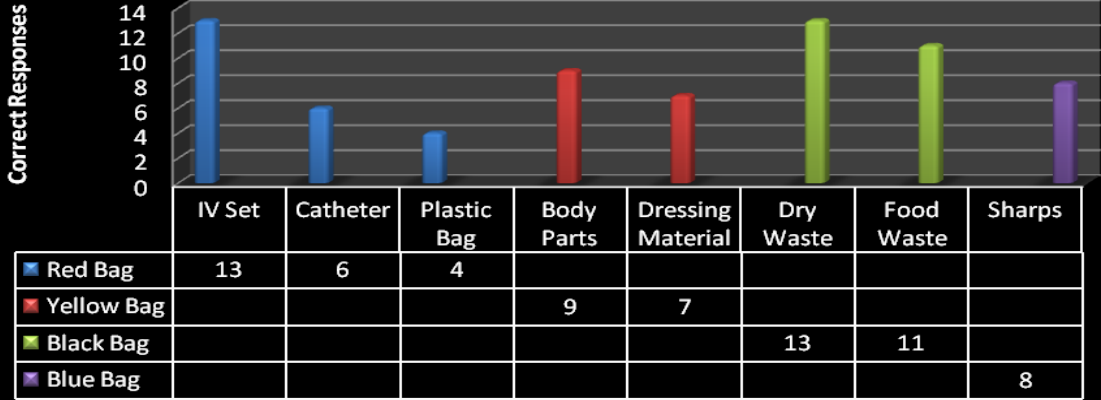
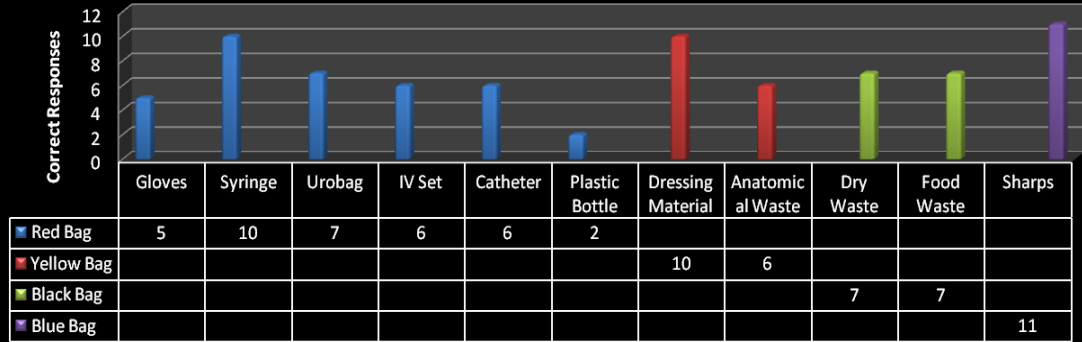
- Discussion With CDMO
 - Presented findings
- Pre-Training Questionnaire
 - Filled by Doctors, Nurses & Housekeeping staff
 - Analyzed Results
 - Discussed Results with CDMO
- Training to Staff
- Post-Training Questionnaire-
 - BMW Segregation

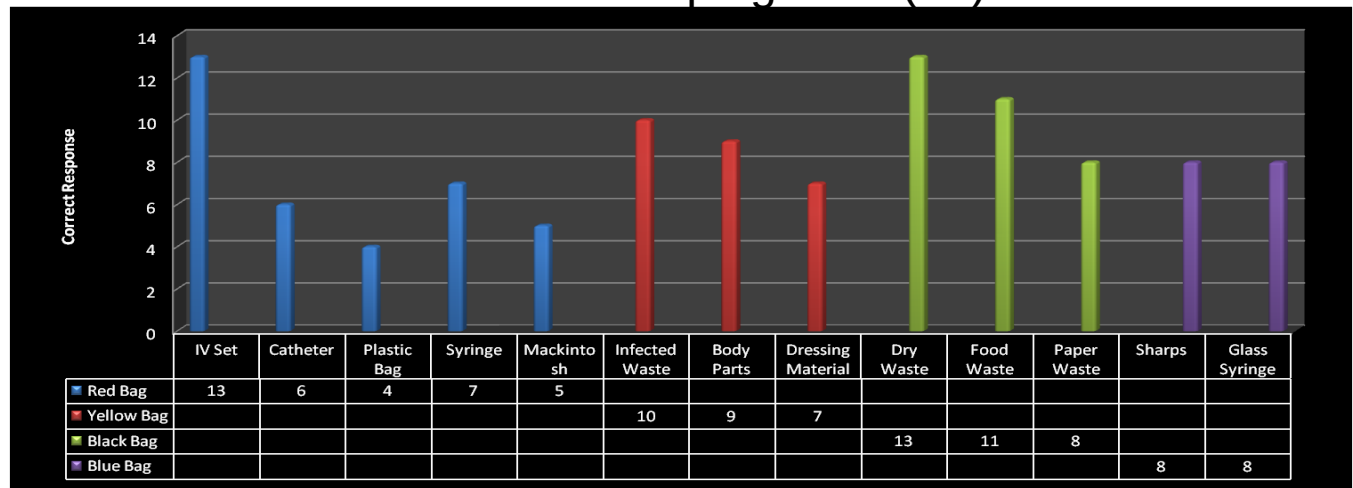
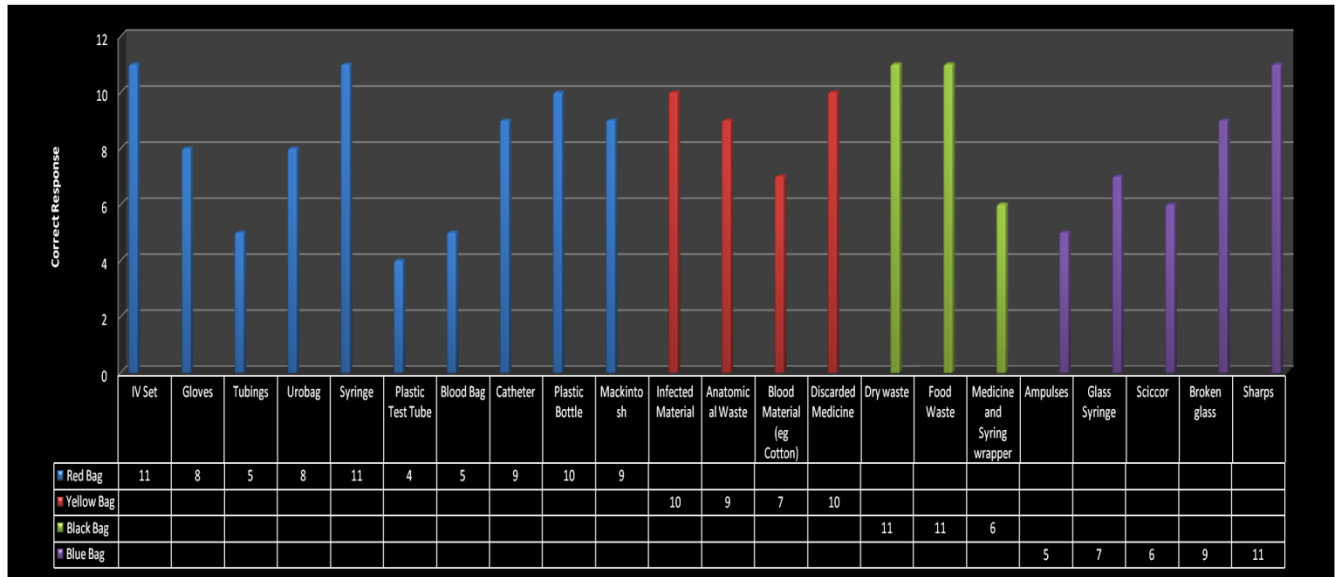


BASIC AWARENESS ANALYSIS



	IV Set	Catheter	Plastic Bag	Body Parts	Dressing Material	Dry Waste	Food Waste	Sharps
Red Bag	13	6	4					
Yellow Bag				9	7			
Black Bag						13	11	
Blue Bag								8

[illegible]



REVIEW

- Regular collection & weighing of waste by staff and GP vehicle
- Only 1 staff responsible for collection of waste
- Cleaning of BMW bins - more regular
- BMW segregation posters installed in all wards
- Protective gear worn during collection
- Repositioning of bins
- Checklist installed in every ward
- Records monitored by Housekeeping staff
- Black bins were collected by Gram Panchayat



LIMITATIONS OF STUDY OF BMW IN HOSPITAL

- Lack of human resources
- Duty roster
- Renovation redesigning & of hospital
- Work overload
- Lack of educated patients
- Lack of educated housekeeping staff



RECOMMENDATIONS

- Annual practical training in handling BMW
- Committee for BMW Management
 - Inspection of proper collection of BMW on a daily basis
 - Weekly report
- Set routine to collect BMW
- Separate way for transporting BMW, avoiding maximum possible interaction with people
- Disinfection with 1% hypochlorite solution, for a minimum of 30 minutes



RECOMMENDATIONS (...CONTD.)

- Allocating specific staff for collection, & assign replacement staff
- Educate staff on knowledge of BMW generated diseases & careful handling of BMW
- Weighed & record waste generated from each ward
- Clean & disinfect BMW bins, Storage room and place of keeping bins
- More frequent removal of the BMW during camp days (like NSV & TL)



RECOMMENDATIONS (...CONTD.)

- BMW with categories chart depicting proper segregation in every ward
- Record of needle stick or sharps injury caused due to BMW
- Repair mutilators
- BMW handler should wear Gloves, Face mask, Head mask, Apron and Shoes
- Symbol of biohazard on all BMW & symbol of cytotoxicity on cytotoxic container



CONCLUSION

- While major steps have been taken towards management of the bio-med-waste, a lot more needs to be done to ensure an environment of safety, for the patients, the staff, as well as for everyone in the vicinity of the hospital.
- Only constant efforts and right practices together could help achieve following slogan in letter and spirit:

- *“Let the waste of the sick not contaminate the life of the healthy”*



Thank
you



