# A STUDY ON IMPACT EVALUATION OF IMPLEMENTATION OF KAYAKALP: SWACCHTA GUIDELINES AT LORD MAHAVIRA CIVIL HOSPITAL, LUDHIANA


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# INTRODUCTION

- Swachh Bharat Abhiyaan was introduced by the Prime Minister of India on October 2, 2014 to encourage cleanliness in public places
- MOHFW, GOI launched KAYAKALP on May 15, 2015 to promote cleanliness and augment the quality of public healthcare facilities.
- Kayakalp-Swacchta guidelines have been issued by MOHFW along with the award scheme to serve as an encouraging factor for the public healthcare facilities.

# Award Scheme and its Objective

- Two Best District Hospitals in each state
- Two best SDH/CHC in each state
- One PHC in each district

OBJECTIVES OF AWARD SCHEME

- To promote cleanliness, hygiene and Infection Control Practices in Public Health Care Facilities.
- To give incentives and recognition to the public healthcare facilities that show exemplary performance
- To build a culture of ongoing assessment and peer review

# Cash Awards

| Category | Type of Facility | Assessment Score | Amount (Rs. in Lakhs) |
|---|---|---|---|
| I. Large States | DH | Highest (Best) | Rs. 50.00 |
| | | Runner-up | Rs. 20.00 |
| | SDH/ CHC | Highest (Best) | Rs 15.00 |
| | | Runner-up | Rs. 10.00 |
| | PHC | One in each District | Rs. 2.00 |
| II. Small States | DH | Highest (Best) | Rs. 50.00 |
| | CHC | Highest (Best) | Rs. 15.00 |
| | PHC | One in each District | Rs. 2.00 |
| **Commendation & Cash Award (70% or more)** | | | |
| All States | DH | More than 70% Score | Rs. 3.00 |
| | SDH/CHC | | Rs. 1.00 |
| | PHC | | Rs 0.50 |

# Institutional Framework

| | | |
|---|---|---|
| State Level Award Committee | Chairperson: MD/Health Secretary.<br>Members: senior officers from Health directorate, SQAC, development Partners Medical Colleges, NGOs Public Health Engineering department, Pollution Control Board and water and Sanitation department. | Dissemination, Assessors Team constitution, Trainings, coordinate &validate Assesment, finalize winners & award, conflict resolution |
| District level Award Nomination Committee | Chair person: DM/CMO<br>Members: Zilla Panchayat Health committee, DQAC, Civil society representatives, RKS members | Dissemination, internal & peer assessment, Trainings, monitoring, nomination for awards. |
| Hospital Cleanliness & Infection Control Committee | Medical Superintendent, Matron, Hospital Manager, Pathologist/ Microbiologist , Departmental In charges | Internal Assessment, Action Planning , Gap Closure, Hands on Training , Monitoring of cleanliness |

# KAYAKALP ASSESSMENT PROCESS

**Preliminary Internal Assessment**

- Scoring Done by hospital staff
- Gaps are found
- Gaps fulfillment is done

**Final Internal Assessment**

- Scoring done by the same team

**Peer Assessment**

- The facilities are assessed by the other hospital teams from the district and the scoring is done

**External Assessment**

- Only the facilities obtaining 70% in peer assessment, qualify for this step
- Done by a team of experts nominated by the State

# Assessment Activities

## Internal Assessment

- Hospital Staff
- Periodic Exercise
- Scores to be Reported to District Committee
- Followed by Action Plan

## Peer Assessment

- Staff from other health facilities
- Once 70% score is achieved in internal Assessment
- Essential for nomination for State level External assessment

## External Assessment

- By team of trained external assessor
- Once nomination is received from district nomination committee
- Essential for State level award and commendation prize

# Criteria for Assessment- DH/ SDH/Satellite/CHC

600

100


Hospital upkeep

100


Sanitation & Hygiene

100

Waste Management

100

Infection Control

50

Support Services.

50

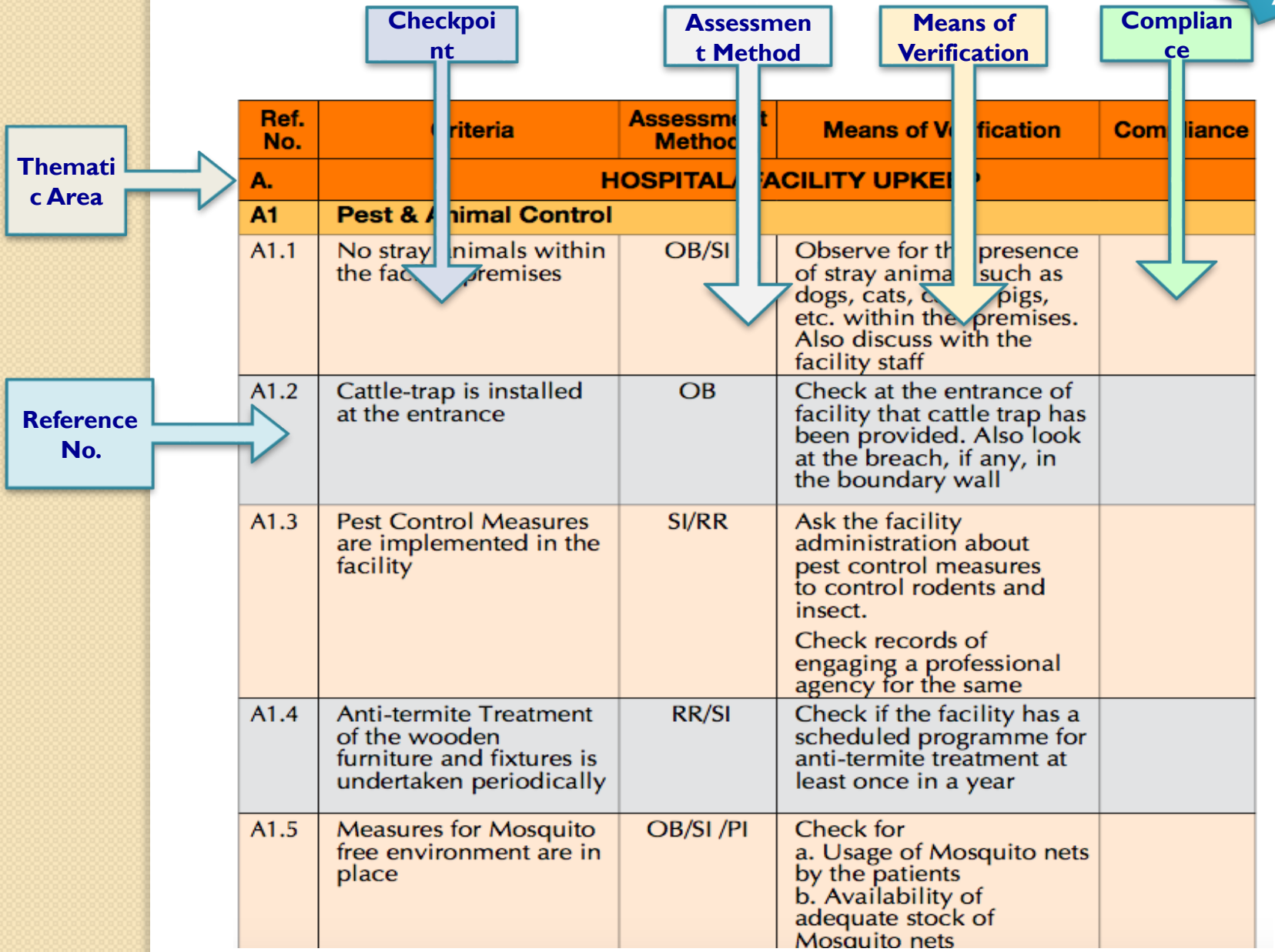
Hygiene promotions

100

Beyond Hospital Boundary

# KAYAKALP—Anatomy of Score Ca

Page-14, Kayakalp




| Ref. No. | riteria | Assessm t Metho | Means of V fication | Com liance |
|---|---|---|---|---|
| A. | HOSPITAL ACILITY UPKE | | | |
| A1 | Pest & imal Control | | | |
| A1.1 | No stray nimals within the fac premises | OB/SI | Observe for th presence of stray anima such as dogs, cats, c pigs, etc. within the premises. Also discuss with the facility staff | |
| A1.2 | Cattle-trap is installed at the entrance | OB | Check at the entrance of facility that cattle trap has been provided. Also look at the breach, if any, in the boundary wall | |
| A1.3 | Pest Control Measures are implemented in the facility | SI/RR | Ask the facility administration about pest control measures to control rodents and insect.<br>Check records of engaging a professional agency for the same | |
| A1.4 | Anti-termite Treatment of the wooden furniture and fixtures is undertaken periodically | RR/SI | Check if the facility has a scheduled programme for anti-termite treatment at least once in a year | |
| A1.5 | Measures for Mosquito free environment are in place | OB/SI /PI | Check for<br>a. Usage of Mosquito nets by the patients<br>b. Availability of adequate stock of Mosquito nets | |

# Assessment Method

OBSERVATION
(**OB**)

STAFF INTERVIEW
(**SI**)

RECORD REVIEW
(**RR**)

PATIENT INTERVIEW
(**PI**)

# Compliance & Scoring Rules

| | | |
|---|---|---|
| Full Compliance | 2 | ➢ All Requirements in Checkpoint are Meeting<br>➢ All Tracers given in Means of verification are available<br>➢ Intent of check point is meeting |
| Partial Compliance | 1 | ➢ Some of the requirements in checkpoints are meeting<br>➢ All Least 50% of tracers in Means of verification are available<br>➢ Intent of check point is partially meeting |
| Non Compliance | 0 | ➢ Most of the requirements are not meeting<br>➢ Less than 50% of tracers in Means of verification are available<br>➢ Intent of Check point is not meeting |

# कायाकल्प

## Clean Hospital Initiative


Theme A – Hospital / Facility upkeep

Theme A

Hospital Upkeep

Work Place Management


Pest & Animal Control

Landscaping & Gardening

Water Conservation

Maintenance of open area

Removal of Junk Material

Hospital Appearance

Maintenance of Furniture & Fixtures

Illumination

Infrastructure Maintenance

# कायाकल्प

## Clean Hospital Initiative


Theme B – Sanitation & Hygiene

Clean Circulation area

Clean Wards

Drainage and sewage management

Clean procedure area

Monitoring of cleanliness activities

Theme B


Sanitation & Hygiene

Standard methods for cleaning

Clean Ambulatory area

Clean Auxiliary areas

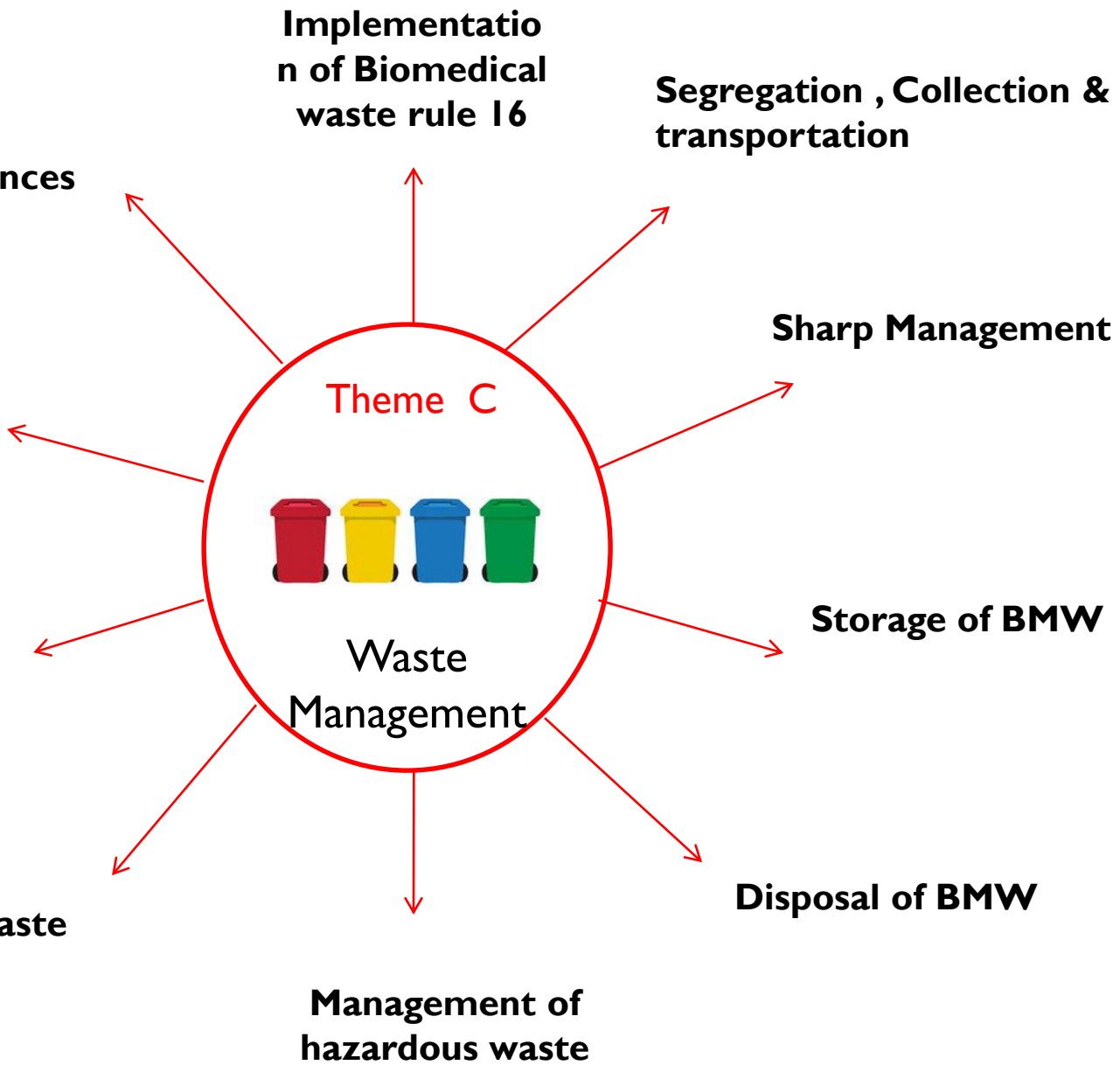
Clean Toilets

Standard material and equipment for cleaning

# कायाकल्प

## Clean Hospital Initiative

Theme C – Waste Management


Implementation of Biomedical waste rule 16
Segregation , Collection & transportation
Statuary Compliances
Sharp Management
Equipment & supplies of BMW
Theme C
Waste Management
Storage of BMW
Liquid waste management
Disposal of BMW
Solid general waste management
Management of hazardous waste

# कायाकल्प

## Clean Hospital Initiative

Theme D – Infection Control Practices

Theme D

Infection Control

Hand Hygiene

Personal Protective Equipments

Personal Protective Practices

Disinfection & Cleaning

Autoclaving & Sterilization

Spill Management

Isolation & Barrier Nursing


Infection Control Program


Infection Surveillance

Environmental Control

# कायाकल्प

## Clean Hospital Initiative

Theme E – Support Service

# Support Services

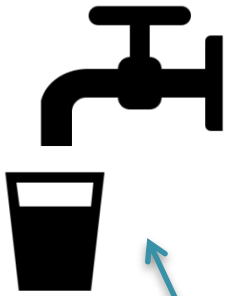
Kitchen Services

Water Sanitation

Security Services

Outsourced services

Laundry & Linen Services

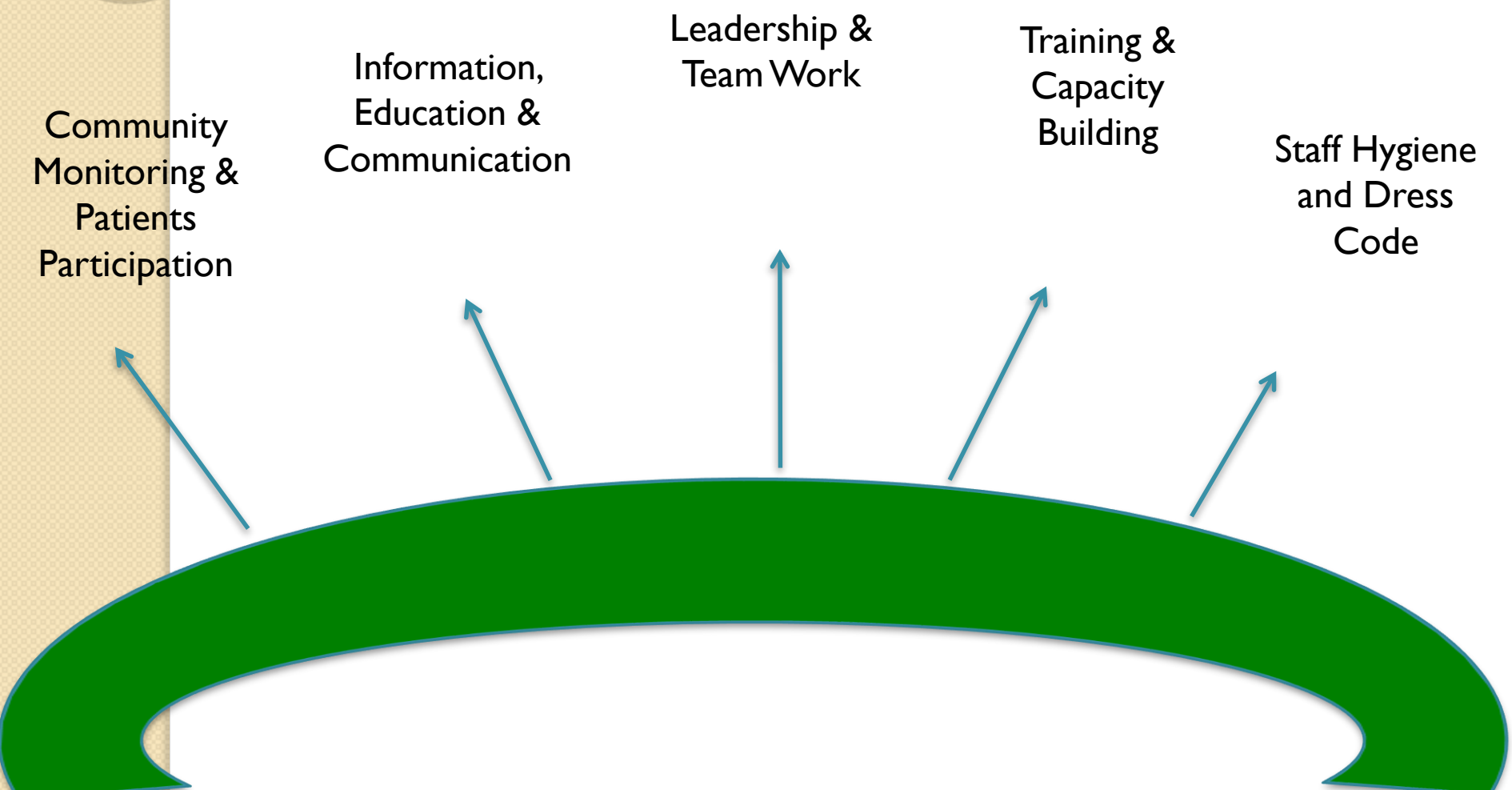




# कायाकल्प

## Clean Hospital Initiative

Theme F – Hygiene Promotion

# Hygiene Promotion



# OBJECTIVES

**General**

- To implement Kayakalp- Swacchta guidelines in District Hospital Ludhiana and evaluate the impact of implementation of the guidelines on Cleanliness, hygiene, waste management and infection control practices in the hospital and the cleanliness practices beyond the hospital boundary.

**Specific**

- To do the gap closures according to the initial assessment and achieve more than 75% score in order to be able to achieve good scores in peer assessment( more than 70%) and qualify for the external assessment
- To recommend strategies for improving the level of cleanliness in the hospital and beyond its boundary.

# STUDY METHODOLOGY

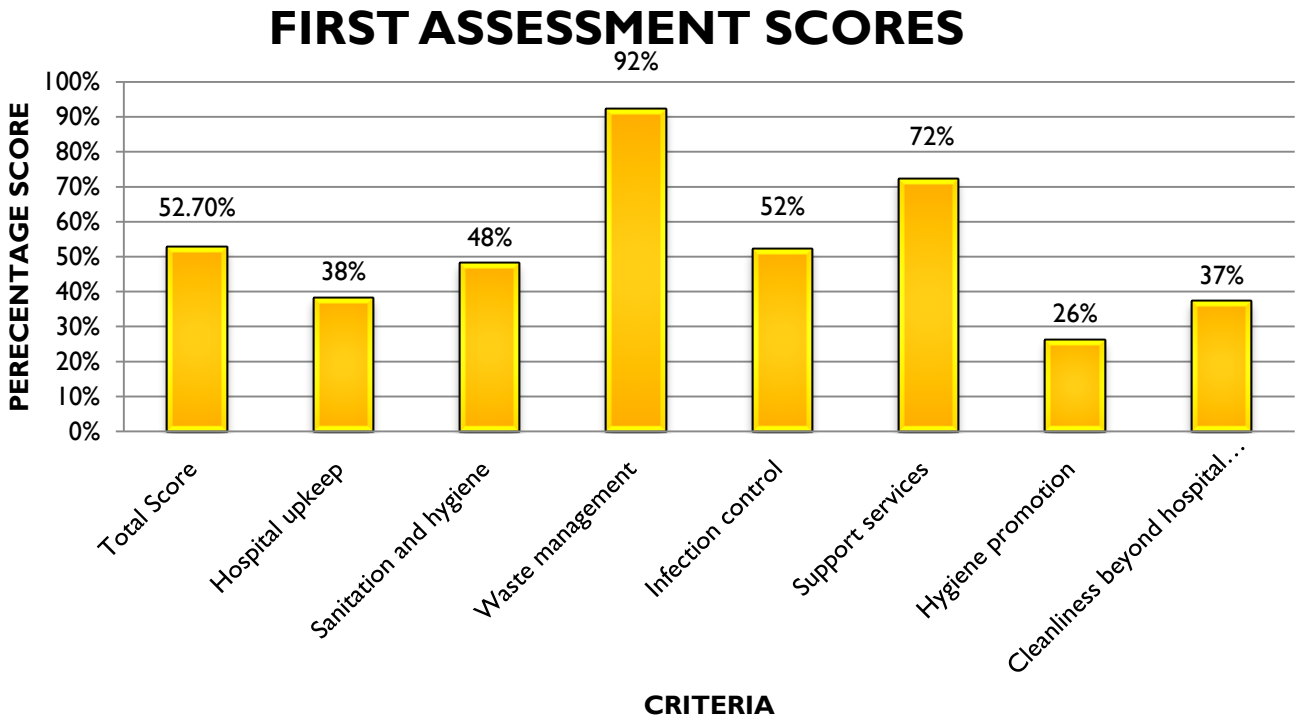
- The study was carried at Lord Mahavira Civil Hospital, Ludhiana from February 1, 2018 to April 30, 2018.
- District Hospital Ludhiana caters to around 7000 Outpatient load, 4000 Inpatient load and 800 deliveries a month. Cleanliness was a major concern in the hospital due to huge rush daily. Thus Kayakalp was implemented with the aim of improving cleanliness and overall sanitation of the hospital .
- Study area –Lord Mahavira Civil Hospital , Ludhiana.
- 
- Study design – Descriptive Study
- 
- Data Collection– Direct Observation, Record Review and Interview(Staff, patient and patient attendants )
- 
- Data analysis – Using Microsoft Excel.
- Duration of Study: 3 months

- PARAMETERS ASSESSED
- The parameters on which the performance of the facility would be judged are as follows:
- Hospital/Facility Upkeep
- Sanitation and hygiene
- Waste Management
- Infection control
- Support Services
- Hygiene Promotion

- **Data Collection Method :-** Qualitative& Quantitative data collected through survey questionnaire, record and personal interview of the staff, patients as well attendents.
- Collection through direct observations.
- Interacting with the patients or the attendants of the patients of this hospital.
- Interacting with the staff of this hospital
- Information obtained through Hospital records.
- Information gathered through internet.

# PRELIMINARY INTERNAL ASSESSMENT

- This was the first assessment done from February 5,2018 to February 28, 2018



# PRIORITY AREAS

Defined in the order in which improvements are needed to be made

**PRIORITY A :** The areas which require major improvement to achieve 70% score

1. Hygiene Promotion
2. Cleanliness beyond hospital boundary
3. Hospital upkeep

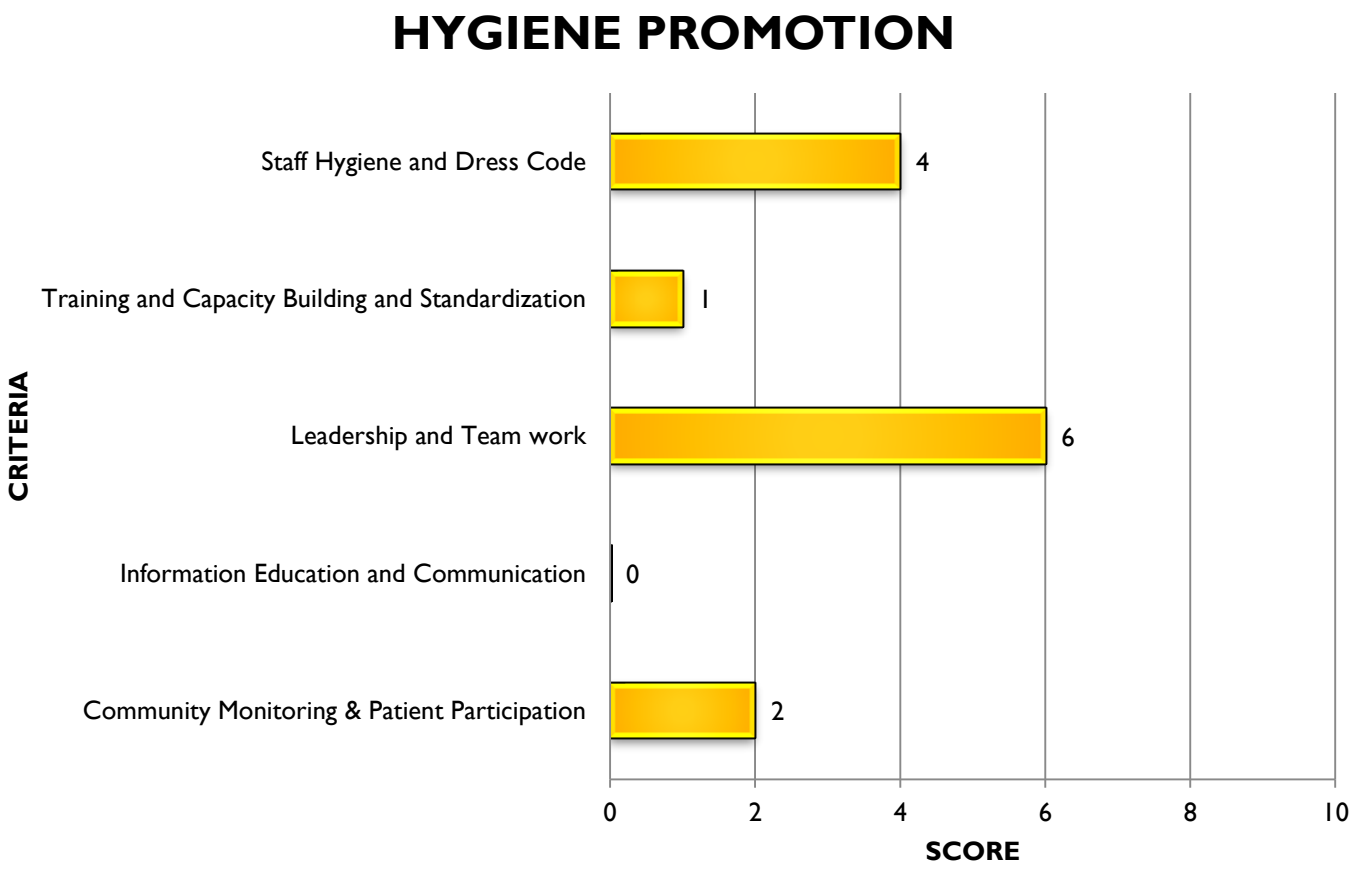
**PRIORITY B :**The areas which require some improvements to achieve 70% score

1. Sanitation and hygiene
2. Infection control

**PRIORITY C :** The areas which donot require any further interventions

1. Support services
2. Waste Management

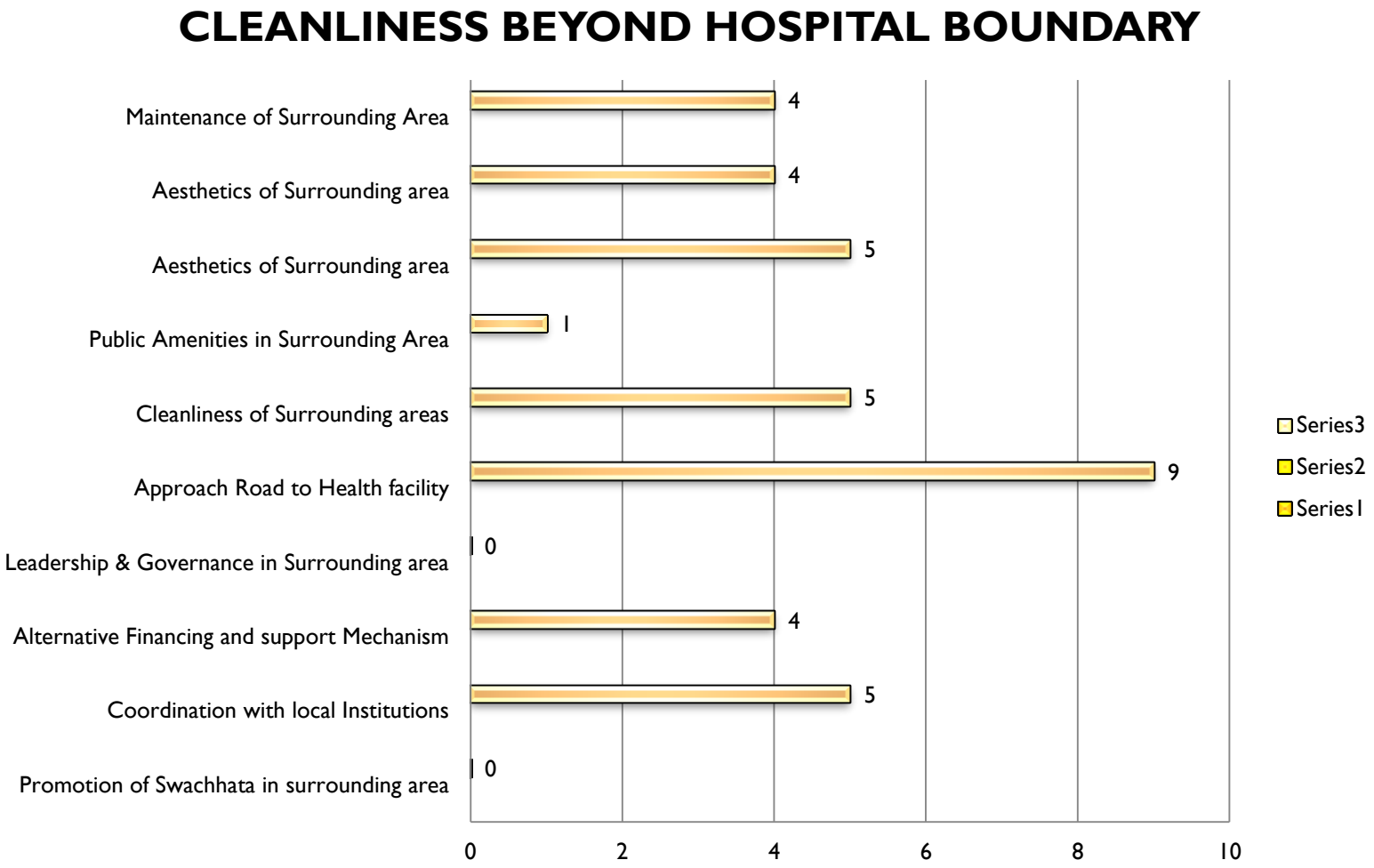
# GRAPH SHOWING SCORES OF HYGIENE PROMOTION AFTER PRELIMINARY ASSESSMENT



# Major Gaps found w.r.t Hygiene Promotion

- IEC material for hygiene promotion is not displayed at points of use.
- Staff training w.r.t. Infection control measures, Hand washing methods, Moments of hand washing etc. and maintaining training records
- Active Participation of community and Rogi kalyan Samiti members for maintaining and monitoring the cleanliness in the hospital premises.
- Patient education w.r.t. their roles and responsibilities regarding cleanliness
- Defined Grievance Redressal Mechanism and display of IEC related to it.
- Constitution and effective operationalisation of Infection control committee.

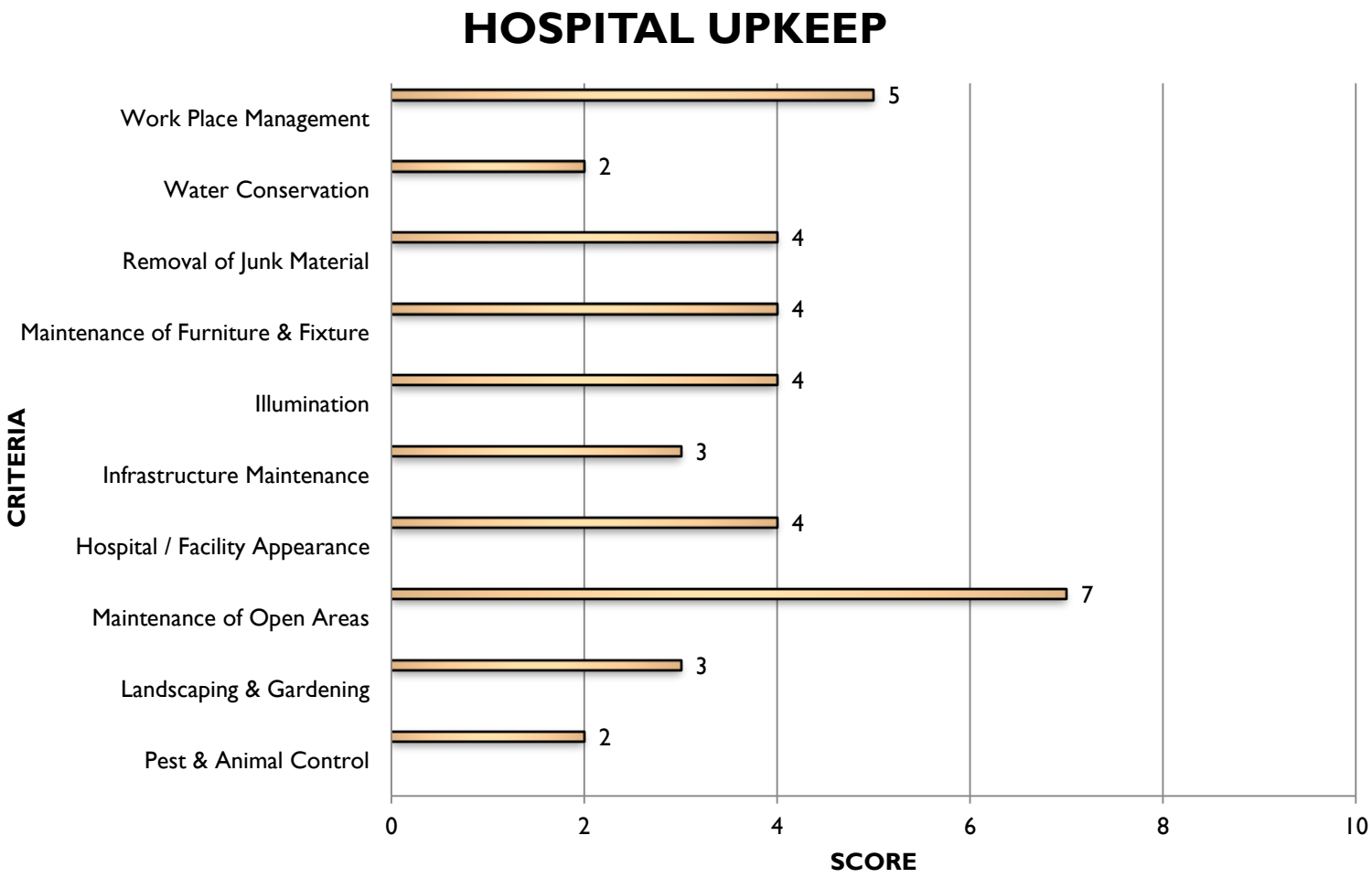
# GRAPH SHOWING SCORES OF CLEANLINESS BEYOND HOSPITAL BOUNDARY AFTER PRELIMINARY ASSESSMENT



# Major Gaps w.r.t. Cleanliness Beyond Hospital Boundary

- Lack of community awareness activities for maintaining cleanliness
- Swacchta Pakhwadas not conducted periodically
- Lack of Coordination with NGOs,municipal corporation for sanitation and hygiene improvement.
- Less attraction of the firms for CSR activities
- Lack of activities for maintaining cleanliness, safety and hygiene in the surroundings of hospital

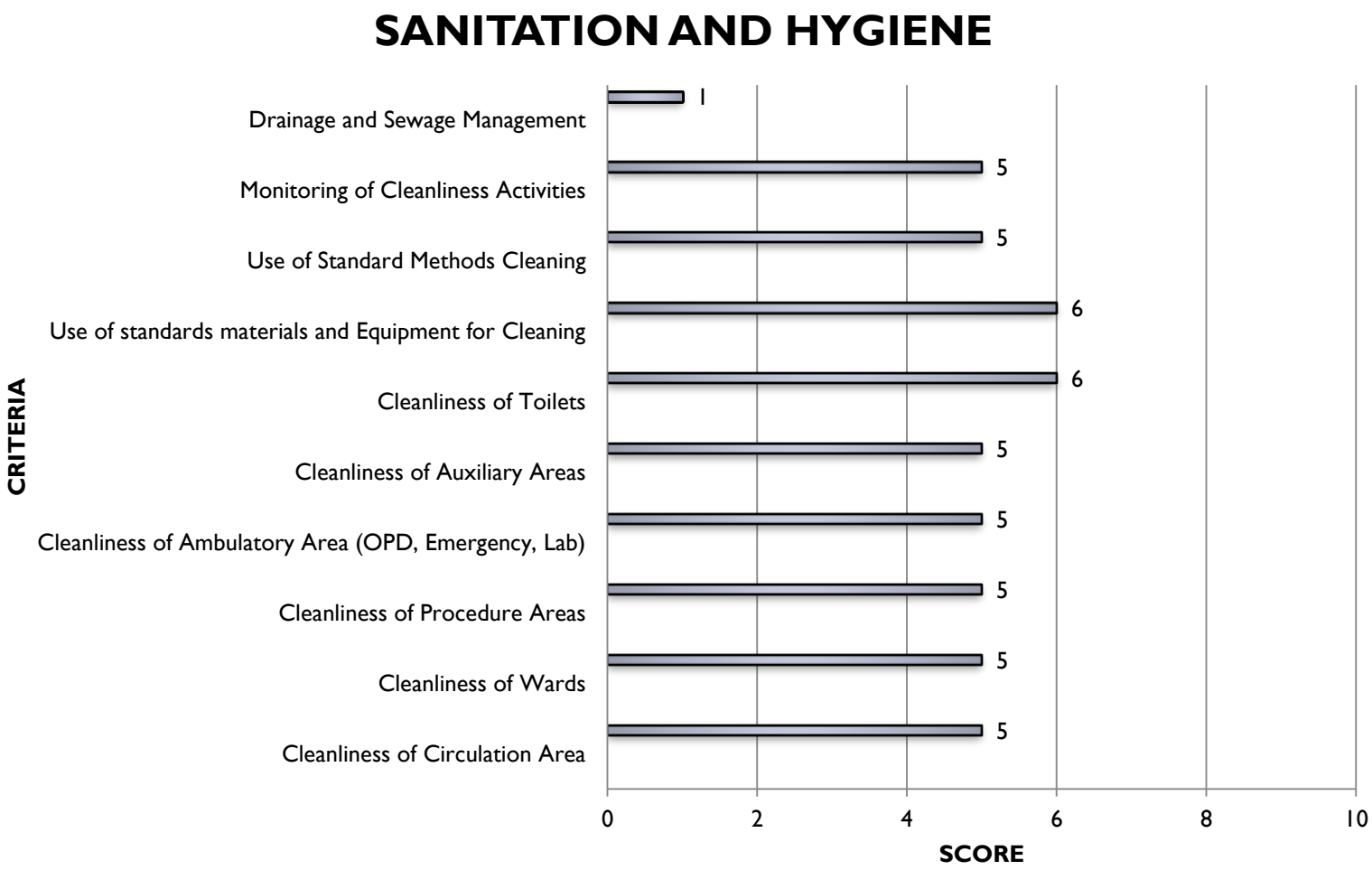
# GRAPH SHOWING SCORES OF HOSPITAL UPKEEP AFTER PRELIMINARY ASSESSMENT



# Major Gaps w.r.t Hospital Upkeep

- Lack of measures for pest control, anti termite treatment, mosquito free environment, cattle and dog trapping.
- Landscaping of the open areas not optimum
- Painting of the interiors and exteriors of the hospital to be done : walls, roofs, doors,windows etc.
- Herbal garden not present
- Fencing of the gardens absent
- Broken furnitures, fixtures, doors, windows etc
- unwanted posters
- Uniform signage system absent
- Faulty electrical fittings and wires
- Inadequate illumination in many areas
- Junk in open areas
- Water Conservation methods absent

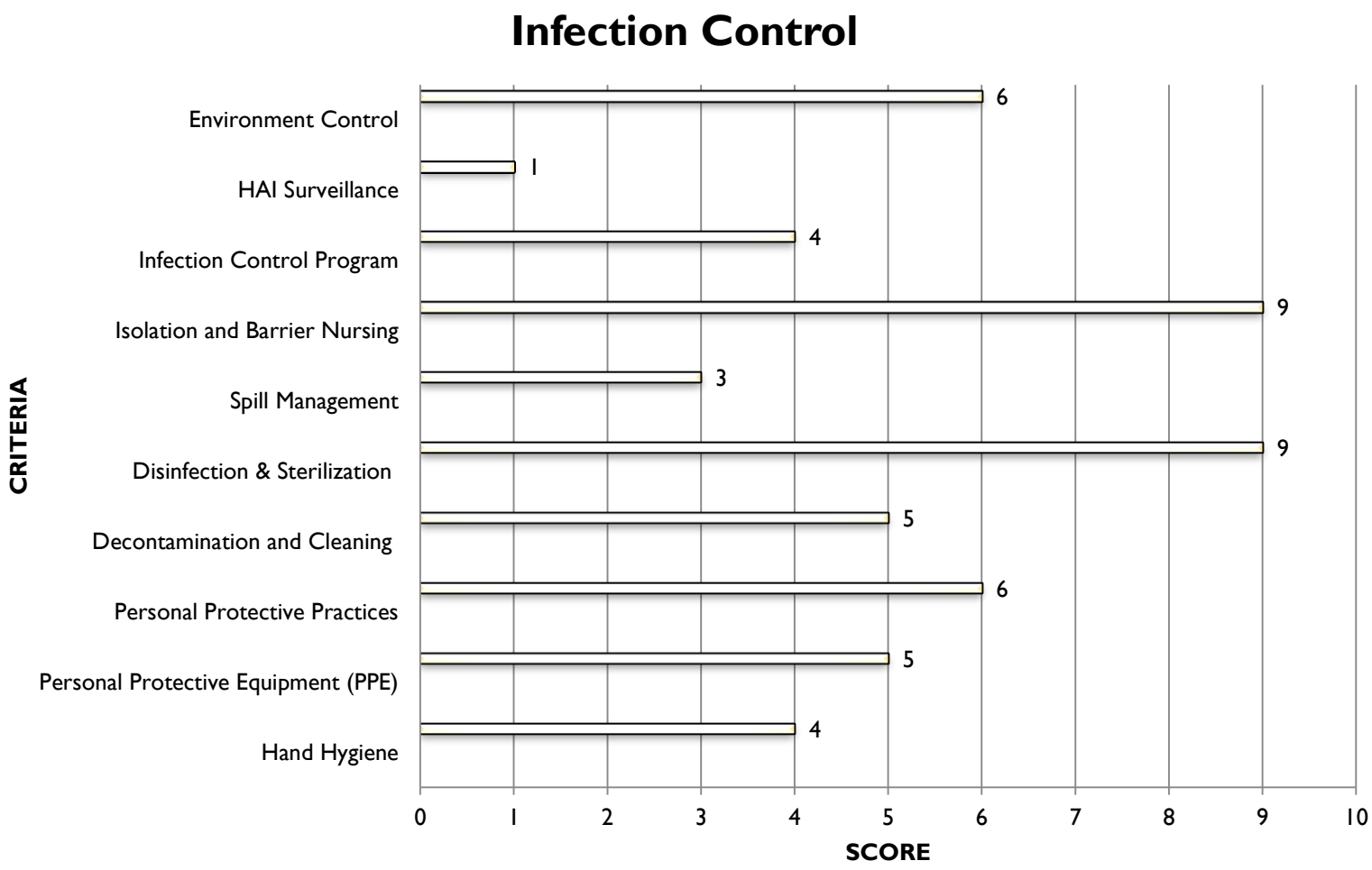
# GRAPH SHOWING SCORES OF SANITATION AND HYGIENE AS PER PRELIMINARY ASSESSMENT



# Major gaps w.r.t. Sanitation and hygiene

- Dirt, grease , stains, cobwebs, birdnests at multiple locations in the hospital.
- Housekeeping doesnot follow any checklist and also no defined schedule of cleaning and dusting is followed properly
- Staff doesn't know the correct method of dilution of cleaning agent
- Staff doesn't follow unidirectional mopping
- Drainage system is open which leads to blockages and overflow of the drains

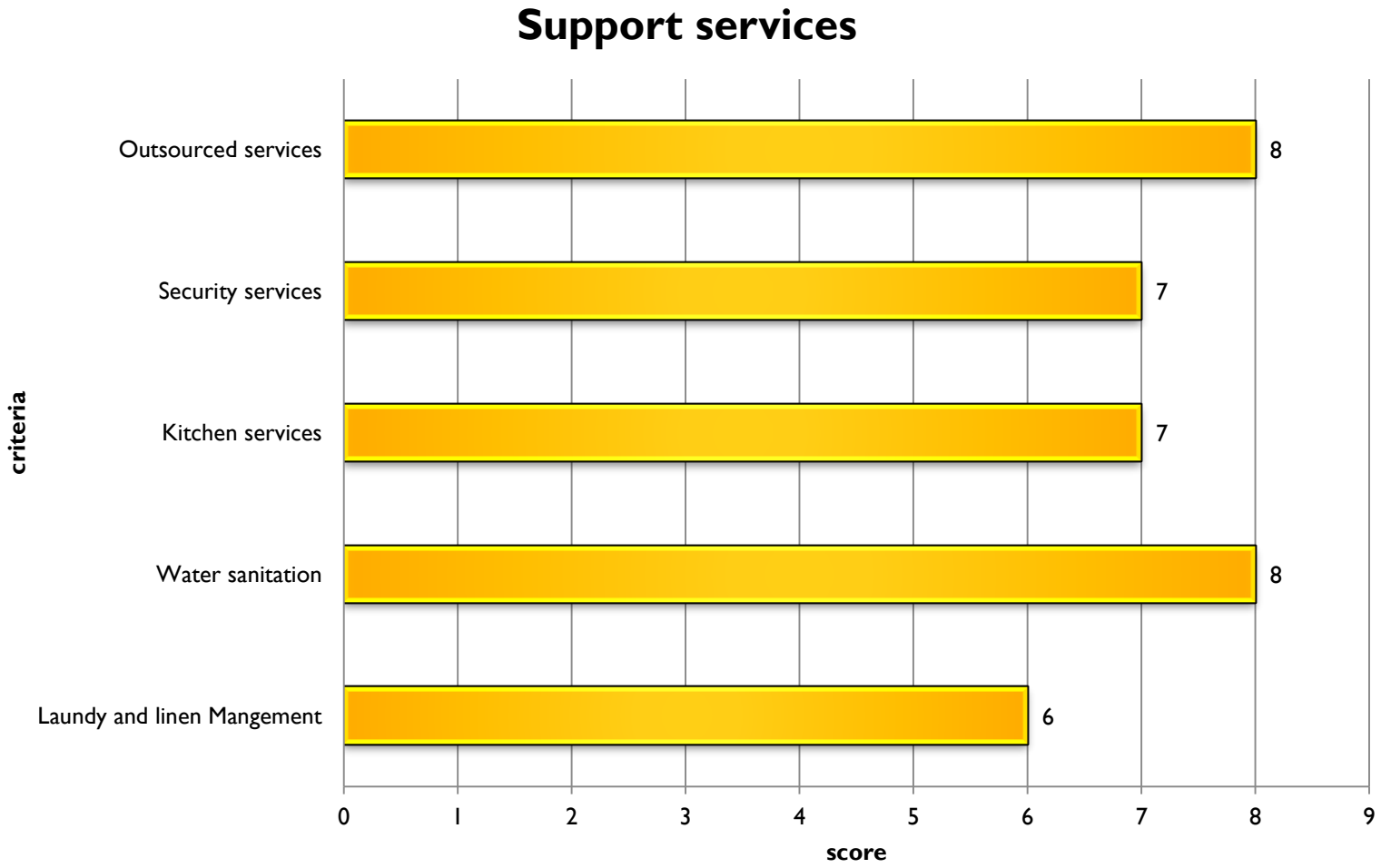
# GRAPH SHOWING SCORES OF INFECTION CONTROL AS PER PRELIMINARY ASSESSMENT



# Major Gaps found w.r.t. Infection Control

- Infection Control Committee not constituted .
- IEC not displayed at points of use
- Staff not trained for hand hygiene and use of PPE
- Staff not rained for decontamination of instruments
- Staff not trained for spill management
- Lack of adequate space doesnot allow minimum distance between beds
- No surveillance done for HAI
- Temperature and pressure not maintained in OT

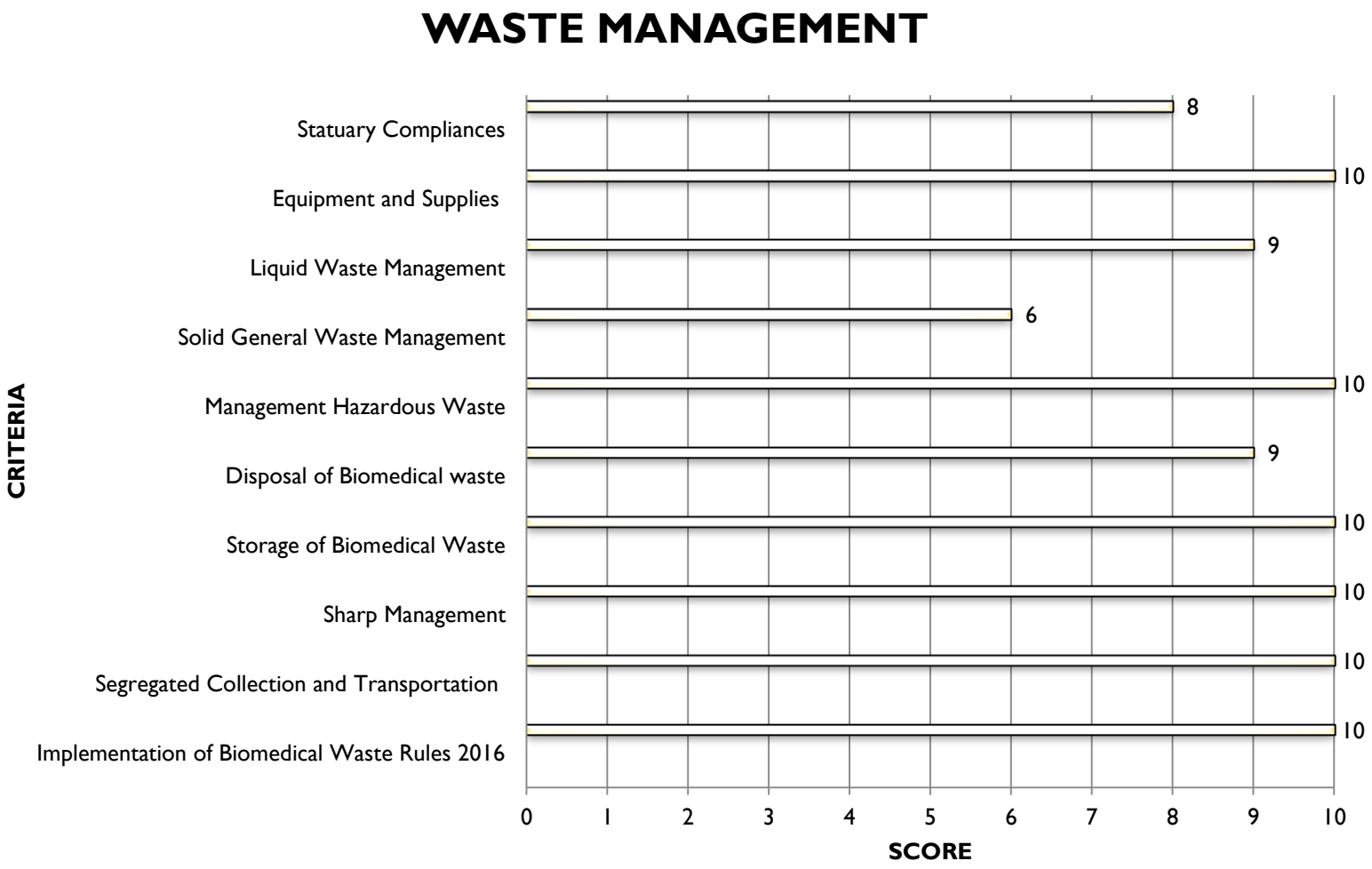
# Major Gaps found w.r.t. Infection Control



# Major gaps w.r.t. Support Services

- Linen gets patchy because the staff doesnot know how much concentration of hypochlorite is to be used
- Quality of water not checked periodically
- Performance monitoring and evaluation of the outsourced staff is not done periodically

# GRAPH SHOWING SCORES OF WASTE MANAGEMENT AS PER PRELIMINARY ASSESSMENT



# Major gaps w.r.t. Waste management

- No innovative measures like Vermicomposting etc are taken into play
- The hospital doesn't maintain its website, hence annual reports cannot be updated .

# ACTIVITIES CARRIED OUT BY HOSPITAL AUTHORITIES TO IMPLEMENT KAYAKALP- SWACCHTA GUIDELINES

- These activities were carried out by the hospital authorities after gap analysis from the Preliminary internal assessment.
- These gaps were fulfilled during the period March 1, 2018 to April 20, 2108
- The Security Supervisor was instructed to keep an eye on the entry of dogs in the premises. In case of failure in doing so, the contractual security staff would be held responsible .
- Rodent sprays were purchased and used wherever needed. There was a areas.
- Wire meshes of the windows were replaced in case of faulty meshes and new meshes were placed wherever needed.
- The front of the facility is undergoing landscaping by a charitable trust Ludhiana Ladies Club
- Gardener was outsourced for a week . In collaboration with the permanently employeed gardener, they cut all the overgrown shrubs, branches of trees and the wild vegetation.

- Fencing of all the gardens was done
- A Herbal Garden was made
- Abandoned part of the building present on the second floor in the old wing is undergoing construction and will be used as an administrative department (not yet finalized )
- The walls of both the wings (interiors and exteriors ) were painted again in order to get rid of the chipped off plaster .
- All the outdated posters removed and wall writings washed or painted.
- 
- The Underlying causes of seepage in various areas takien into account and corrected by the plumber.( Wherever correction was not possible, the toilets have been closed till the time any solution is found)
- An electrician was outsouced who in collaboration with the permanent employee electrician, ensured the correction of all electronic faults, loose hanging wires etc
- Parking space was demarcated for staff, patients/patient attendants and higher authorities

- Illumination was checked using the luxometer app and wherever needed the new light bulbs ( LED Bulbs ) were placed in order to obtain optimum illumination and energy efficiency.

| | |
|---|---|
| Wards | 100 Lux |
| Toilets | 100 Lux |
| Procedure areas | 300 Lux |
| Nursing station | 150-300 Lux |

- Carpenter was outsourced in order to repaiir the broken doors and windows , broken chairs, stools etc
- Broken Window glasses were replaced .
- All the rusted patient beds , trolleys, wheel chairs and stretchers were painted and the wheels were lubricated.
- Broken beds were repaired and the ones grossly damaged were discarded and replaced.
- The repaired furniture, doors and windows were painted .
- A room on the second fllor of the new building was identified to be used as a junk room and all the junk lying here and other in the hospital was collected here. (The items not of any further use were condemned in accordance with the condemnation policy).

- The outsourced plumber repaired all the leaking taps , overflowing tanks and dysfunational cisterns .
- IEC regarding water conservation was displayed.
- The staff was given training for managing workplace (5S).
- The Contractual Housekeeping was called on two consecutive Sundays for cleaning any dirt, grease , stains, cobwebs, bird nests etc
- A housekeeping checklist for cleaning was made and housekeeping staff was instructed to display the same in every toilet, ward, OPD, OT, labour room, laboratory, emergency room, radiology department. The same was to be filled by the staff by the morning, evening and night housekeeping staff and countersigned by the housekeeping supervisor at 10 AM , 2 PM and 8 PM.

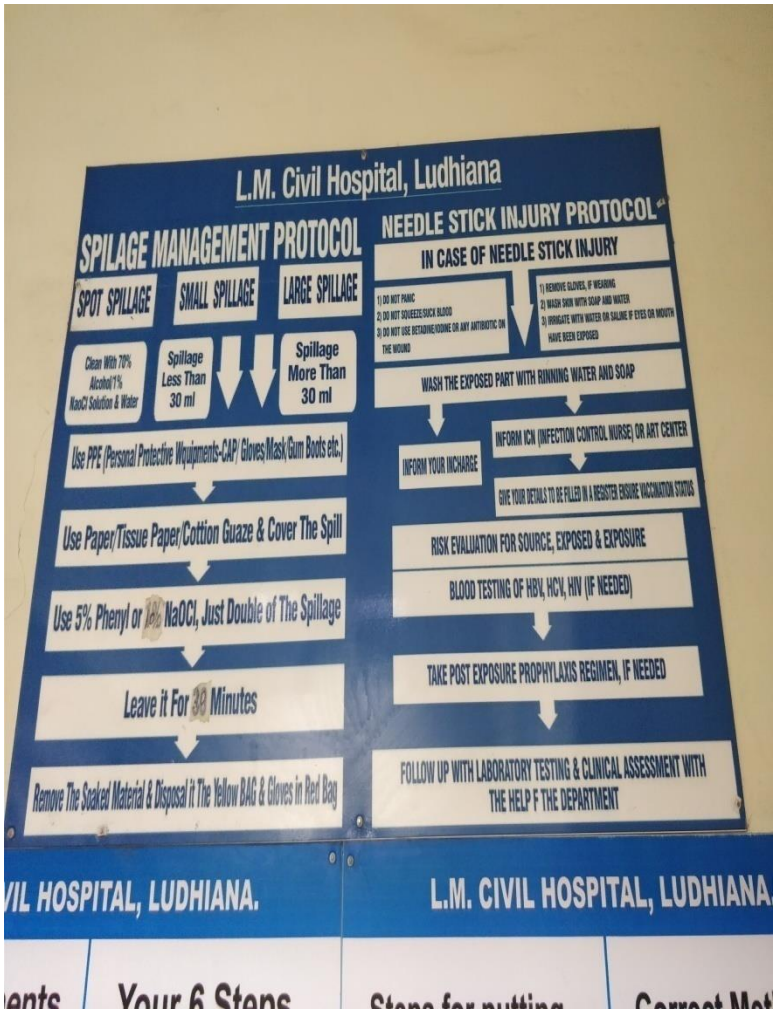
- Housekeeping staff was given training for the dilution of hypochlorite .
- Housekeeping staff was giving training regarding three bucket system of cleaning and mopping directions.
- IEC regarding 6 Hand washing steps and 5 moments of hand washing to be displayed at all points of use.
- Alcohol based hand rub made available.
- Staff trained for 6 steps of hand washing and 5 moments of hand wshing.
- Staff trained for when and how to wear PPE.
- Contractual housekeeping staff instructed to issue the annual stock of the PPE material for the class 4 staff as per the contract.
- Staff trained for spill management.
- IEC regarding spill management displayed at all points of use.

- Infection control committee was constituted.
- Infection control nurse was assigned the duty of daily monitoring of infection control practices.
- Periodic Quality Check of water was done by municipal corporation.
- IEC regarding Swachh Bharat Abhiyaan displayed within the facilities' premises.
- Swacchta Pakhwada was observed in the hospital from April 1 to April 15.
- Local NGOs were involved in the cleanliness drives.
- Vardhman donated various essentail equipments under CSR.

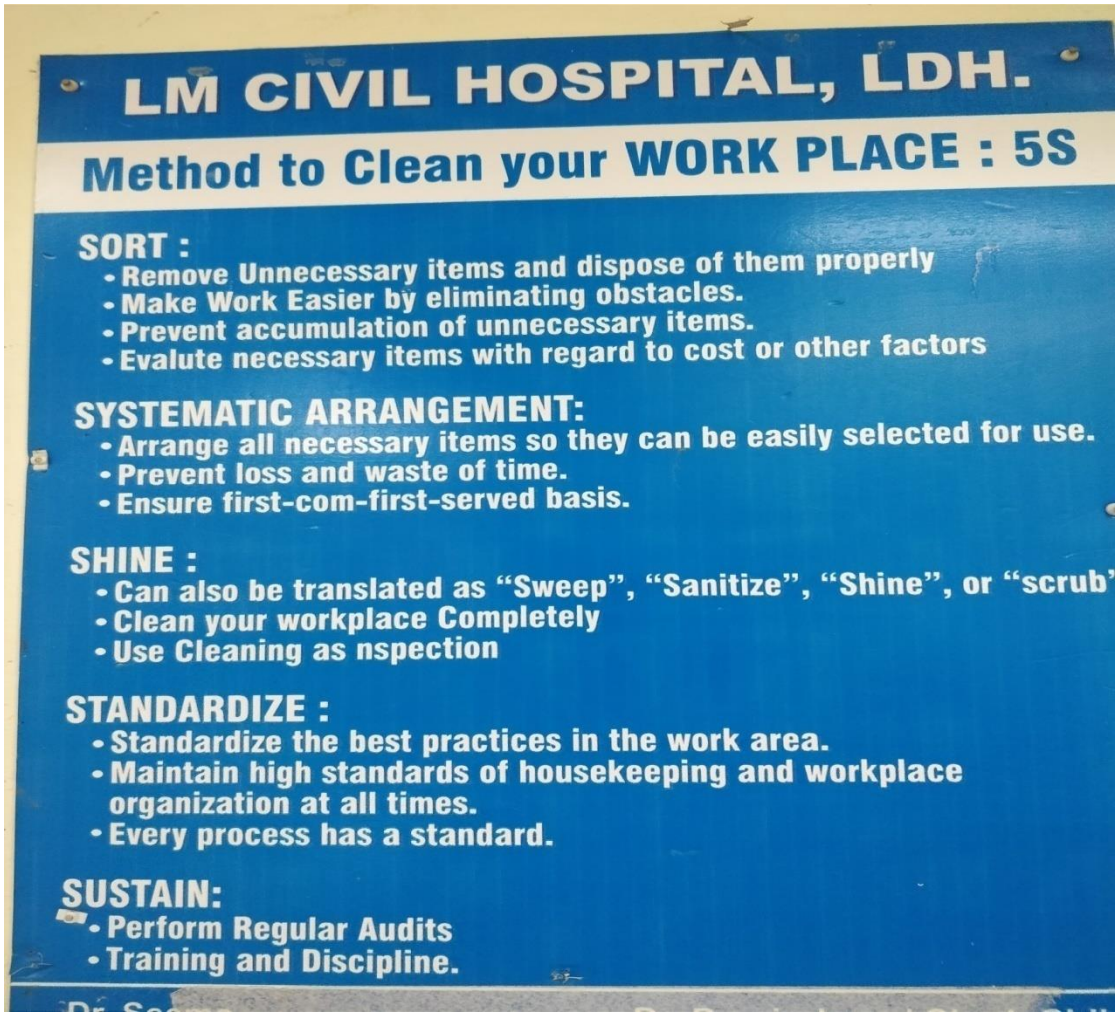
# Signages in uniform color


# Bilingual signages

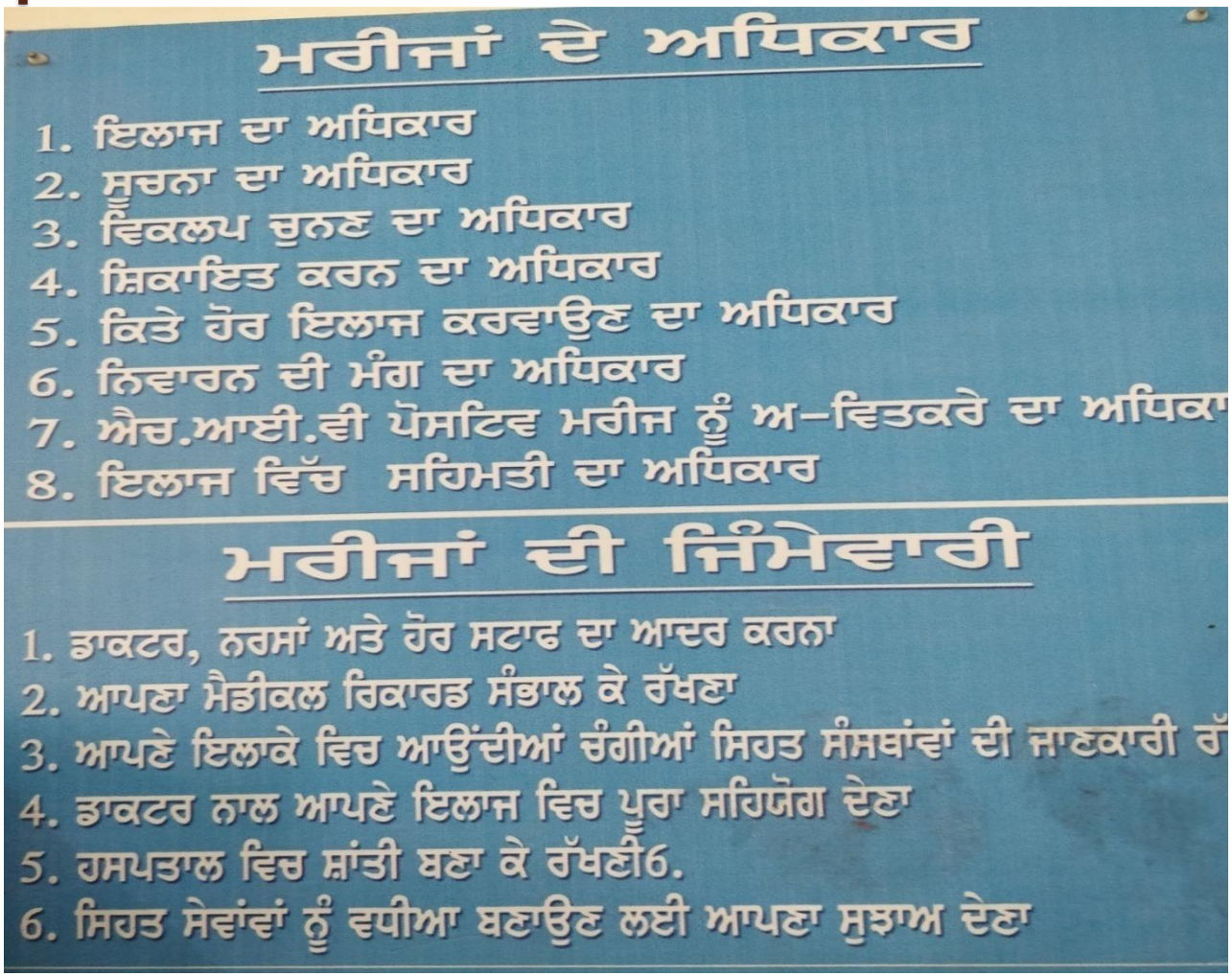

# IEC displayed for Spill Management

# IEC for Work place management (5S)



# IEC for Patients Rights and Responsibilities

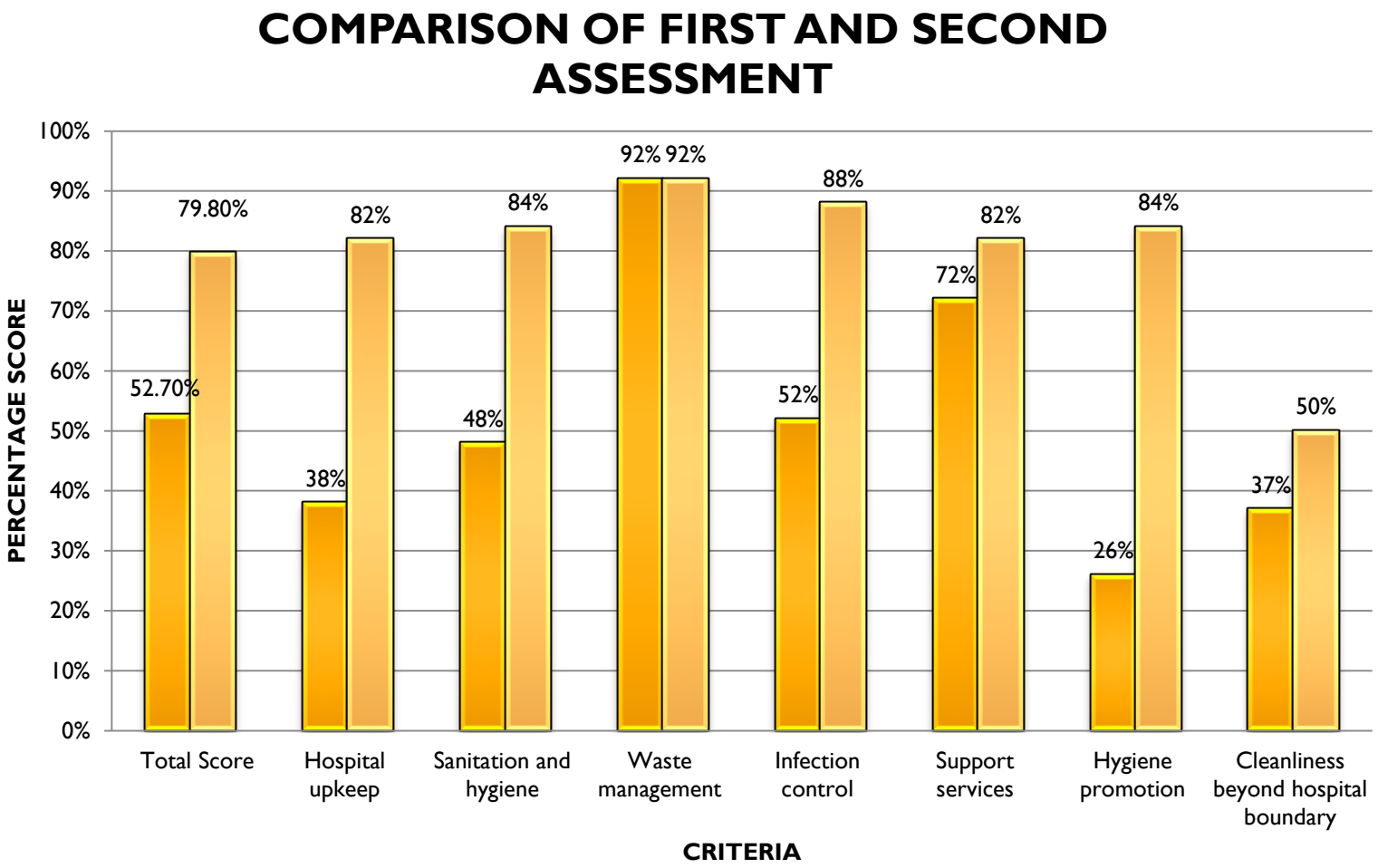


# Herbal Garden Set up

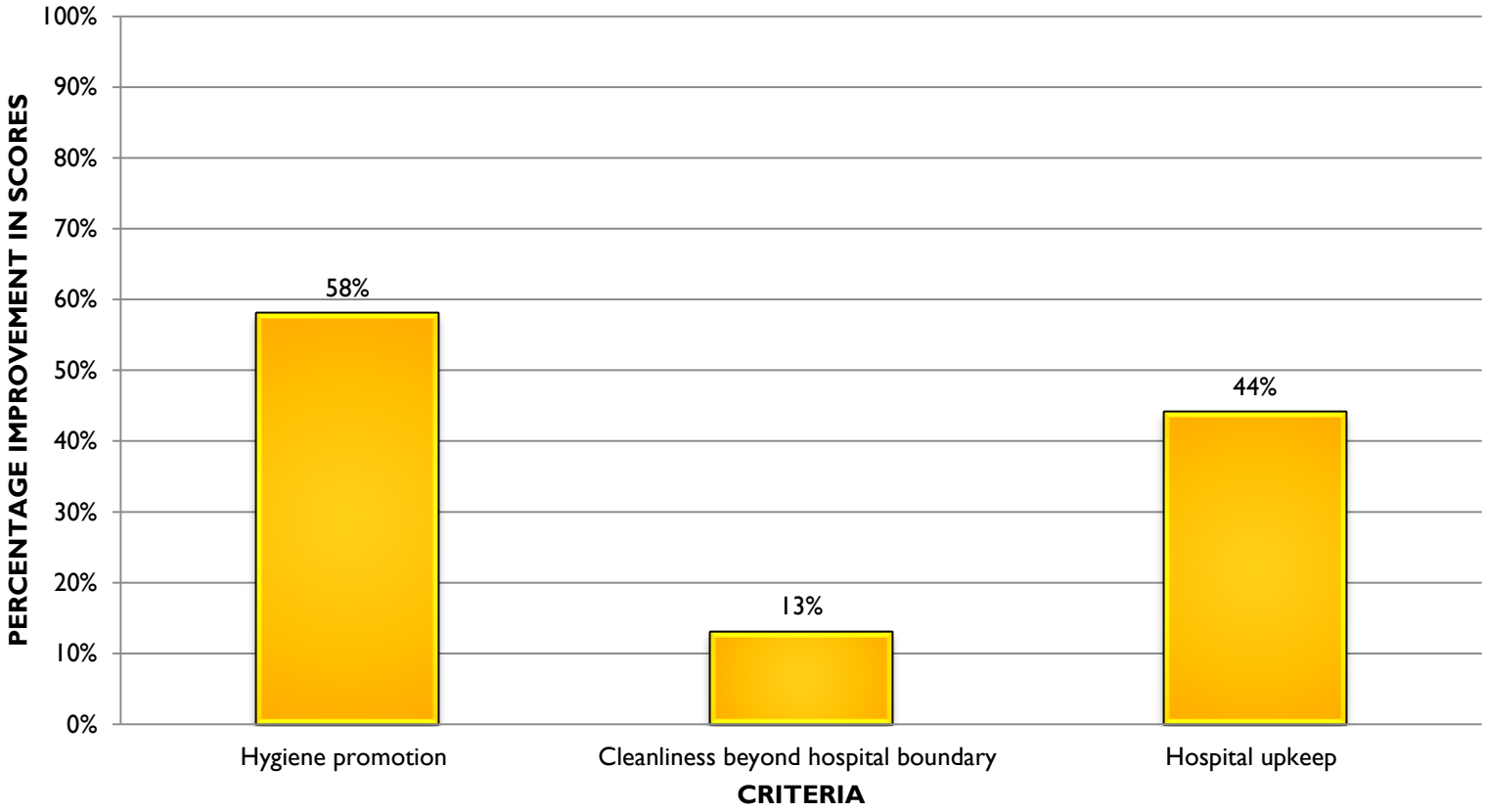
# IEC for hand hygiene displayed at all points of use

# FINAL INTERNAL ASSESSMENT

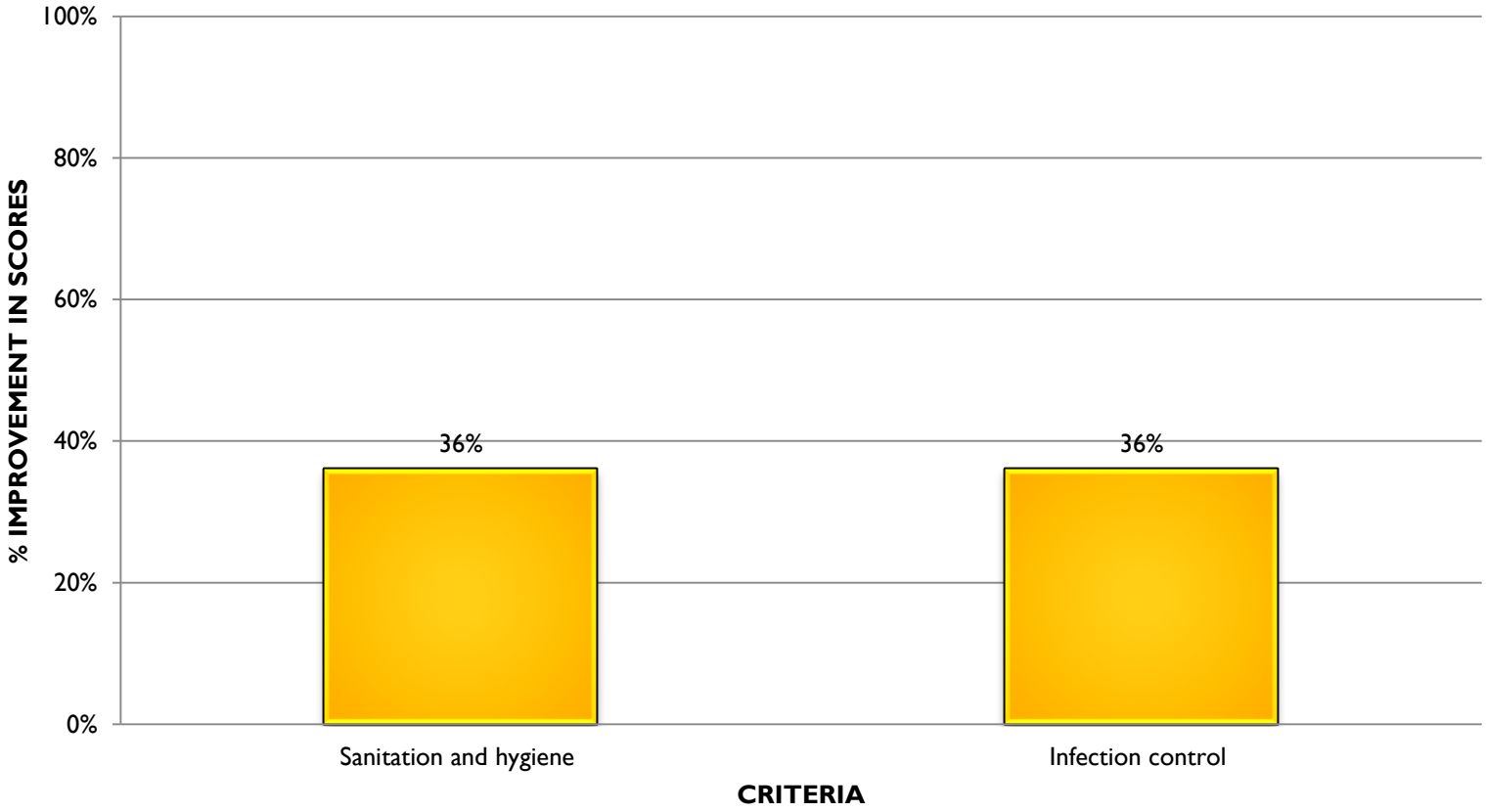
- After the gap closures, Re assessment was done in order to quantify the improvements. The final assessment was done from April 26 to April 30, 2018

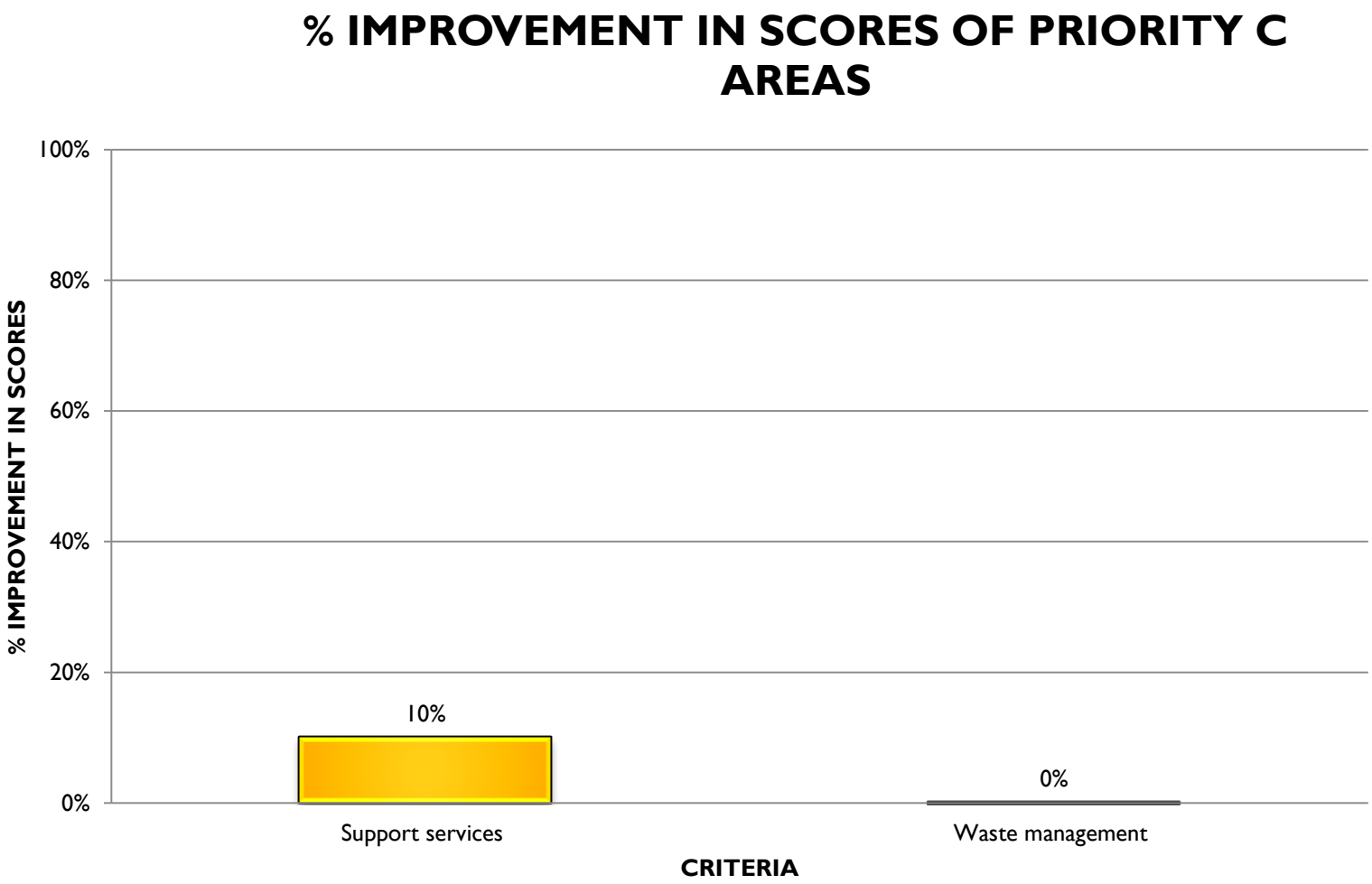

COMPARISON OF FIRST AND SECOND ASSESSMENT
PERCENTAGE SCORE
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
52.70%
79.80%
38%
82%
48%
84%
92%
92%
52%
88%
72%
82%
26%
84%
37%
50%
Total Score
Hospital upkeep
Sanitation and hygiene
Waste management
Infection control
Support services
Hygiene promotion
Cleanliness beyond hospital boundary
CRITERIA

# % IMPROVEMENT IN SCORES OF PRIOIRITY A AREAS



# % IMPROVEMENT IN SCORES OF PRIORITY B AREAS




% IMPROVEMENT IN SCORES OF PRIORITY C AREAS
100%
80%
60%
40%
20%
0%
% IMPROVEMENT IN SCORES
10%
0%
Support services
Waste management
CRITERIA

# Conclusion

- Implementation of Kayakalp Swacchta guidelines helped in improving the overall cleanliness in the hospital but due to constraints of finances and manpower, the cleanliness beyond the hospital boundary couldn't be improve much.
- The areas which showed major improvements after the implementation of Kayakalp are Hygiene promotion (score increased by 58 %) , Hospital upkeep (score increased by 44%), sanitation and hygiene ( score increased by 38%), Infection Control (score increased by 38%).
- The improvements were at par with the priority areas decided after Preliminary internal assessment i.e.
- The priority A areas which needed major improvements, showed major improvements The Priority B areas which needed moderate amount of improvements , underwent good percentage of improvement.
- The priority C areas which didn't require any interventions, underwent minimal improvements
- The only area which did not improve as per the Priority decided is Cleanliness Beyond Hospital Boundary

## **RECOMMENDATIONS** (Activities to be undertaken by the hospital authorities for further improvement of Kayakalp Score)

- Cattle trap to be installed near the left side of the entry side .
- Board of the hospital name which illuminates at night , to be displayed
- The height of boundary wall to be increased in order to overcome daily complaints of thefts and IV drug abusers entering the premises.
- Rain water harvesting system to be constructed.
- The open drainage system has to be closed (Open drainage system is leading to blockage and overflow)
- Innovative measures like Vermicomposting to be taken into action
- Website of the hospital to be designed .
- Local governance bodies, NGOs and RKS to be involved in monitoring the cleanliness of hospital at predefined intervals.
- Nursing staff to be sensitized and conviced for following the dress code.
- Identity cards to be made available to the staff.