

Role of Biosafety and Biosecurity Training in infection prevention and Laboratory infrastructure development.

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Introduction

- ✓ Biosafety defines the containment conditions under which infectious agents can be safely manipulated.(protection of personnel from pathogens)
 - ✓ Biosecurity on the other hand involves protection, control and accountability for Valuable Biological Materials within laboratories in order to prevent their unauthorized access ,loss, intentional misuse, diversion or intentional release. (Protection of pathogens from Personnel).
 - ✓ Both play a key role in infection prevention and control.
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Intro.

- ✓ According to WHA Resolution 58.29 (2005), Enhancement of laboratory Biosafety through trainings on laboratory Biosafety biosecurity and establishment of systems were key issues to be implemented by member states.
 - ✓ Laboratory Biosafety and Biosecurity training is an intensive skills based training comprising of practical and theoretical knowledge transfer from trainers to participants.
 - ✓ In Sept. 2014, MSH- SPHLS project in collaboration with NBO and Health department of U.G county begun training of personnel drawn from all Facilities in the county
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Problem statement.

- ✓ Biosafety and Biosecurity training enhances infection prevention efforts through human and structural capacity building which were evidently lacking in most public health facilities in Uasin Gishu county.
- ✓ In this era of laboratory accreditation efforts according ISO 15189 through WHO Afro SLIPTA process, Laboratory Biosafety and Biosecurity under Facilities and Safety plays a major role contributing more points than all the other II QSE.



Relationship with ISO 15189 standard

Audit Score Sheet		
<i>Section</i>	<i>Total Points</i>	<i>Audited Score</i>
Section 1: Documents & Records	25	2
Section 2: Management Reviews	17	1
Section 3: Organization & Personnel	20	7
Section 4: Client Management & Customer Service	8	0
Section 5: Equipment	30	3
Section 6: Internal Audit	10	0
Section 7: Purchasing & Inventory	30	5
Section 8: Process Control and Internal & External Quality Assessment	33	22
Section 9: Information Management	18	7
Section 10: Corrective Action	12	1
Section 11: Occurrence/Incident Management & Process Improvement	12	0
Section 12: Facilities and Safety	43	22
TOTAL SCORE	258	70

Study objectives

- ✓ Asses the knowledge and skills application gained in the Biosafety Biosecurity training thereby training impact.
- ✓ Advice facilities on areas of improvement to achieve safe and secure work environment.



Methodology

- ✓ About 60 laboratory personnel were trained in 2 trainings sponsored by MSHs- SPHLS project and the NBO, the participants developed facility specific work plans. A baseline audit was conducted in the facilities and a score recorded. A follow up in collaboration with the facilities management, Uasin Gishu department of Health and MSH-SPHLS was made by trainers to assess implementation of the work plans and suggest points of improvement. The assessment was conducted using the WHO Afro SLIPTA check list on facilities and safety with focus on waste segregation, appropriate use and availability of PPE, PEP protocols, Signages and modified safety devices among other aspects of safety.
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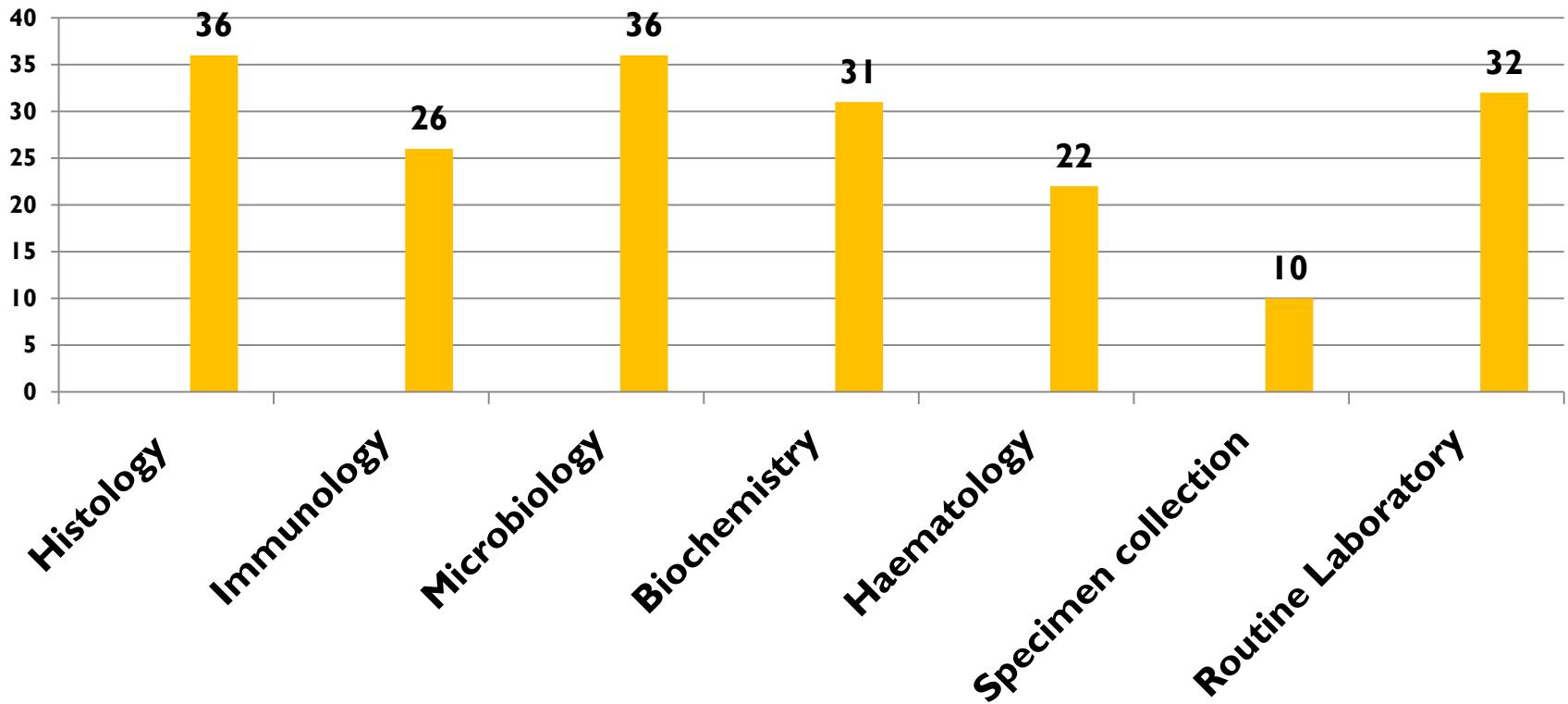
Results

In the follow-up assessment there was remarkable improvement in Biosafety and biosecurity programs according to the facilities specific work plans and the recommendations made in the baseline audit. The average score using the Facilities and safety section of the WHO Afro SLIPTA checklist was 30 compared 18 points in the baseline audit out of the possible 43 points.

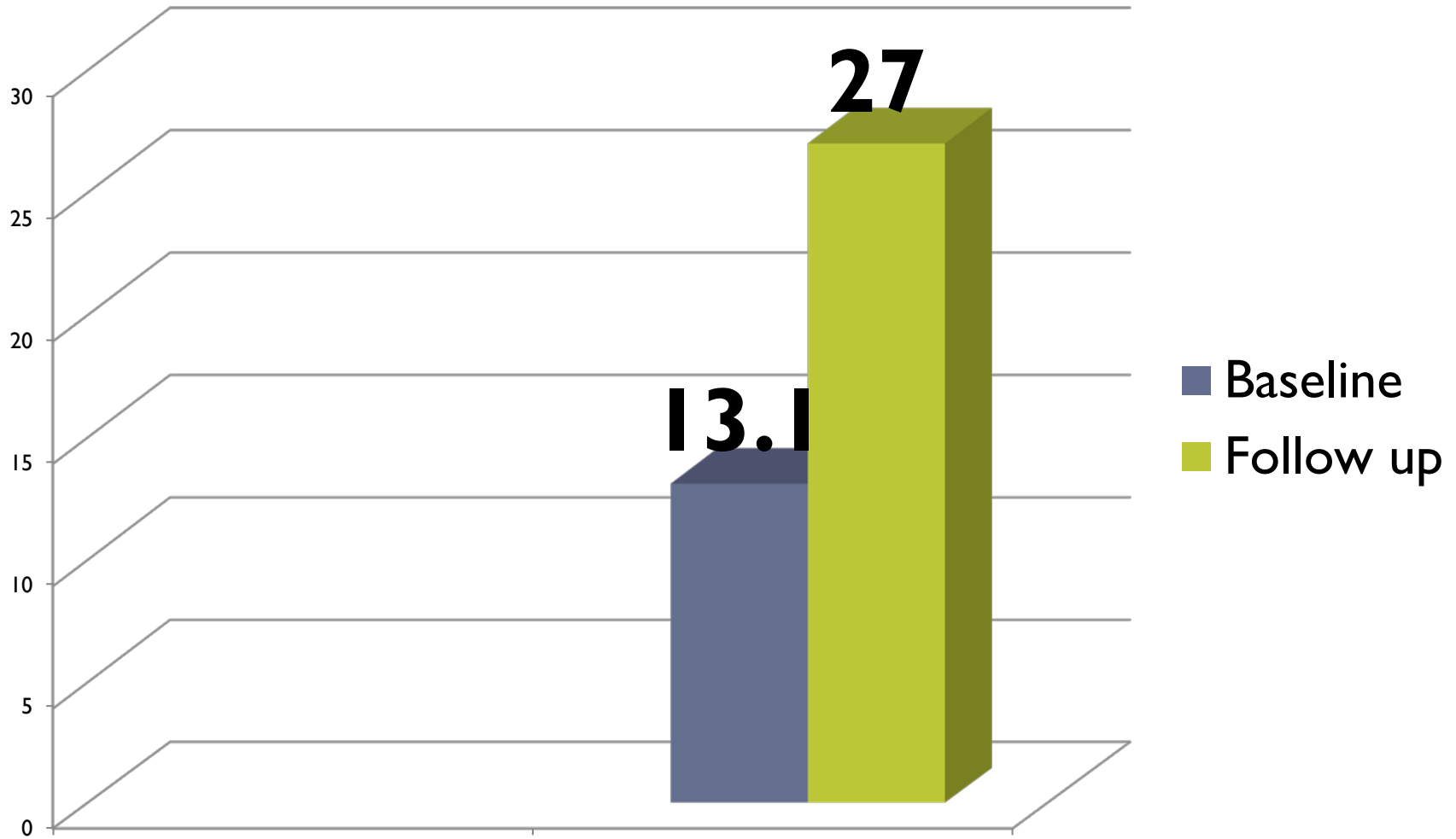


Results contd.

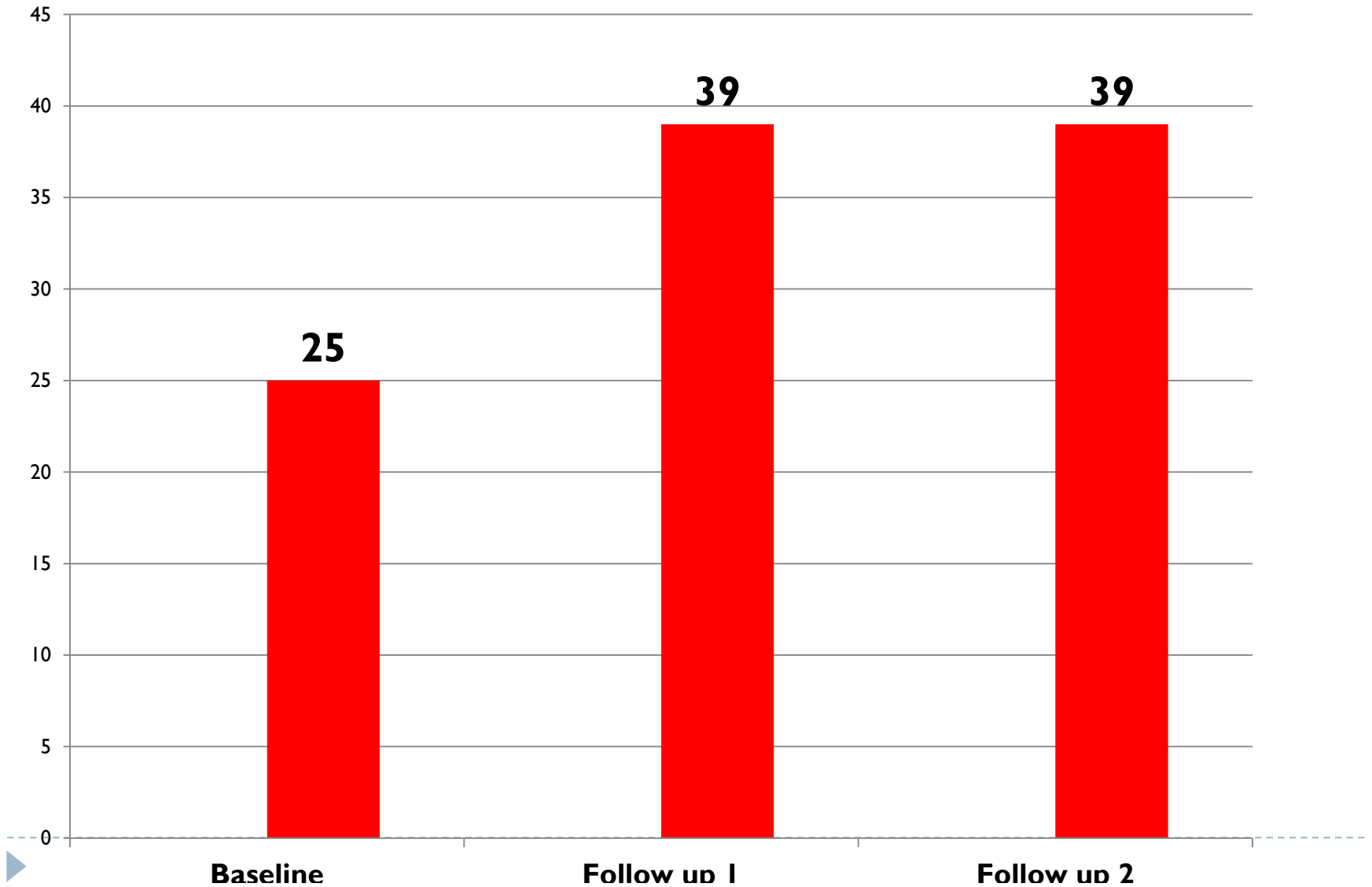
MTRH- laboratory department.



Uasin Gishu county Hospital



Regional Blood Transfusion center- Eldoret



Discussion

- ▶ From the results of the assessment, facilities management support was evident in aiding the trainees execute their work plans and recommendations by the trainers during the baseline assessment. Records of CMEs to untrained staffs by the trainees also evident.

Improved safety devices
Biological spill kit, eye wash stations etc.



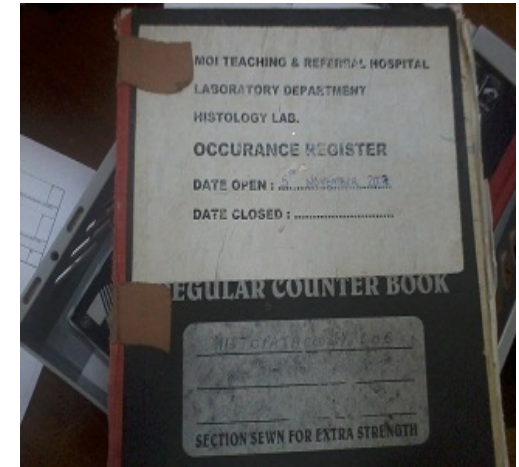
Contd

- ▶ Development of Facility SOPs and job aids on;
 - ❖ Spillage management and Hand washing
- ▶ Appropriate vaccines and awareness.
- ▶ Clear separation of Testing, clerical and phlebotomy areas.
- ▶ VBM Registers and access controls in the labs.
- ▶ Improvement of Waste management.
- ▶ Post Exposure Prophylaxis protocols.(PEP)
- ▶ Correct utilization of PPEs.
- ▶ Training of support staff on infection prevention and waste handling.





Incidents occurrence register.



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 - ❖ Spillage management.
 - ❖ Hand washing
- ▶ Appropriate vaccines and awareness.
- ▶ Clear separation of Testing, clerical and phlebotomy areas.
- ▶ Improvement of Waste management.
- ▶ Post Exposure Prophylaxis protocols.
- ▶ Correct utilization of PPEs.



Conclusion

- ▶ Biosafety and biosecurity training equips personnel with skills and knowledge ensuring a safe work environment for both the personnel and patients. From the results obtained in the assessments there was evident improvement in Biosafety and biosecurity programs across all the facilities.
- ▶ Facility management support is key in the attainment of Facilities and safety requirements.



Recommendations and challenges

Recommendations

- ▶ There is still need for more training on laboratory Biosafety and biosecurity in the county.
- ▶ Strengthening of Biosafety and infection prevention training issues in all other health cadres.
- ▶ More sensitization of county and facility managements on the importance of Biosafety, Biosecurity and infection prevention in general

Challenges

- ▶ Stock outs of safety supplies such as waste bin liners , safety boxes and gloves.
- ▶ Distribution of trained officers in health facilities.



Acknowledgements

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