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Effects of Safe Phlebotomy Trainings in Selected Health Facilities in Kenya

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Introduction (1)

- Competency (training) of health care workers (HCWs) in safe blood collection in developing countries is mostly inadequate
- Content not part of the training curricula at college/university level
- Also characterized by insufficient supplies of hygienic and personal protective equipment
- Occurrence of incidents involving possible exposure to blood-borne infections is likely common
- Outcome data following training activities are a rare occurrence

Introduction (2)

- Since 2011, MSH Strengthening Public-Health Laboratory System (SPHLS) project has been supporting trainings in safe phlebotomy

- Carried out in partnership with NASCOP

Objectives of the study

- To establish effects of the safe phlebotomy training at the health-facility level in targeted facilities in Kenya

Methodology (1)

- Prospective approach
- All HCWs undergoing training assessed; a sample followed up a year later (10% of the trained - all regions)
- Observations made during blood draws before and after training
- Quantitative data analyzed using STATA 10.0; thematic analysis applied to qualitative data.
- Non-parametric test - chi square, at significance level $p = 0.05$

Methodology (2)

	HCWs	Facility level
Baseline (sample size)	2312 (367 HF)	41 (6 HF)
Follow up (sample size)	228 (41 HF)	184 (41 HF)
Tool	HCW survey tool	• Capillary/venous draw checklists • Facility follow-up tool
Method	Self-administered	• Observation • Interview • Records review

Study population and data collection approach

Results 1: Cadres (follow-up)

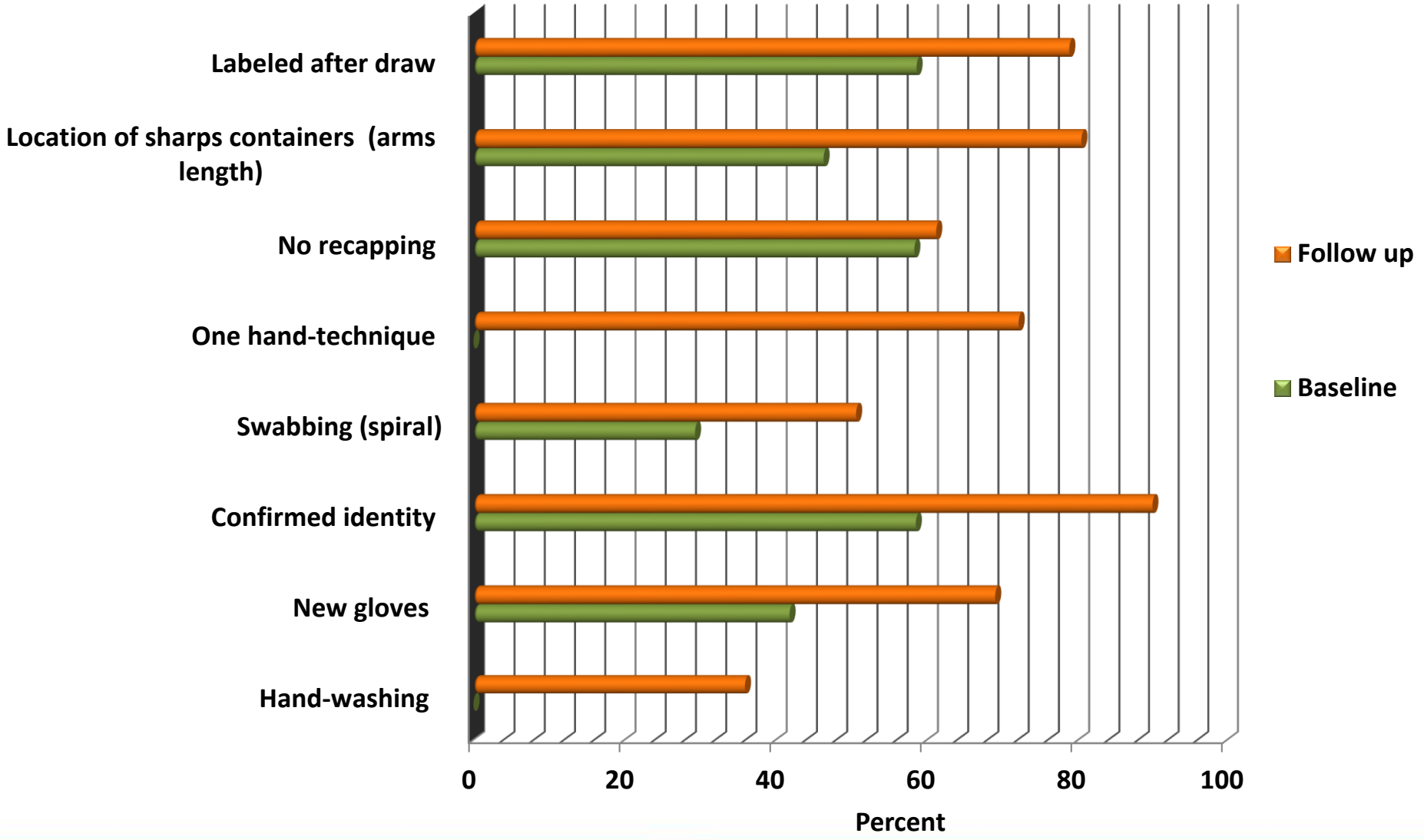
	HCW survey		Facility practices	
Cadre	**n**	**%**	**n**	**%**
Medical lab technologists	120	52.6	147	79.9
Medical officers/MO interns	22	9.6	6	3.3
Clinical officers/CO interns	32	14.0	15	8.2
Nurses	40	17.5	4	2.2
Others	14	6.2	12	6.5
Total	**228**	**100**	**184**	**100**

Results 2: HCW Survey

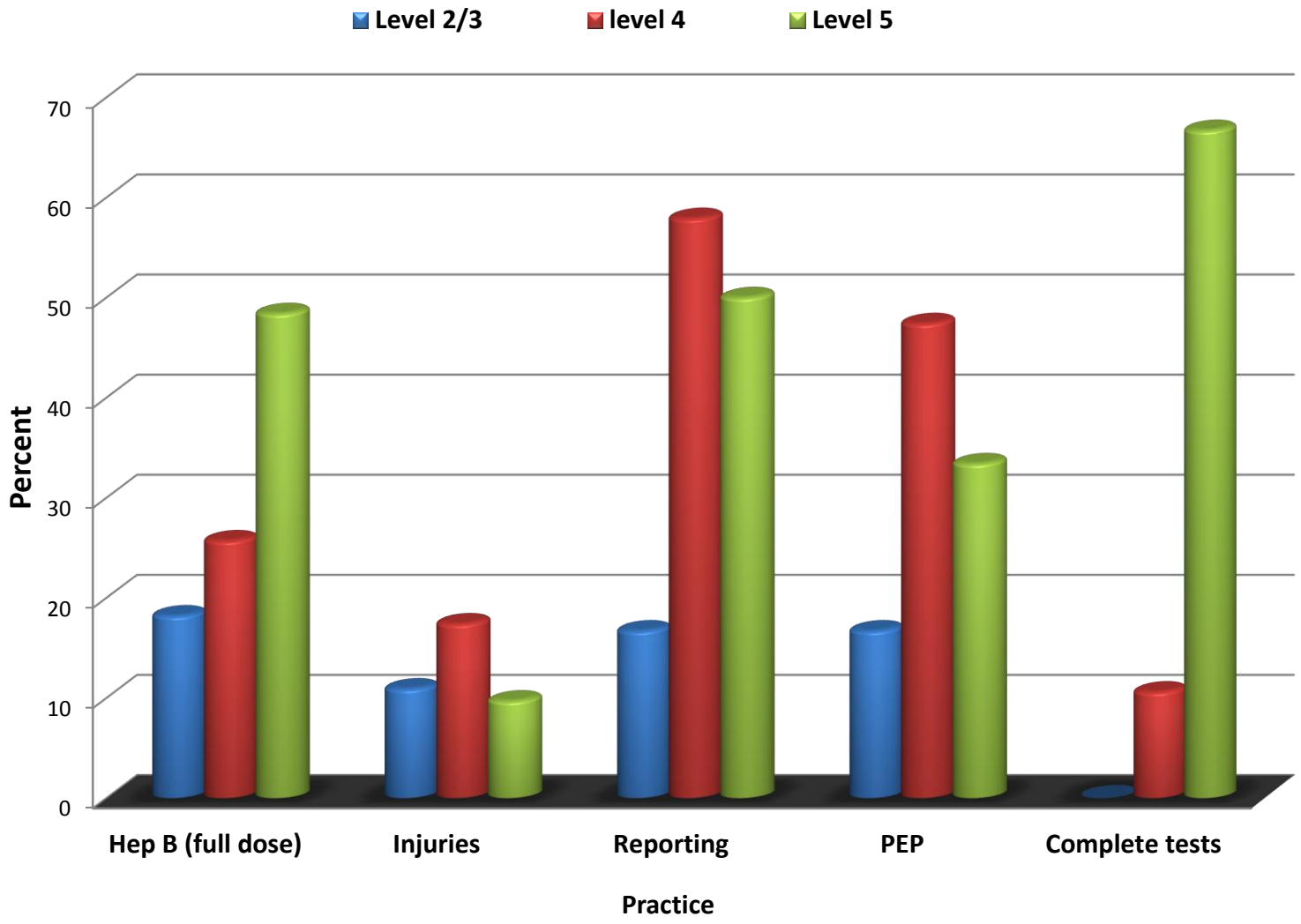
	Baseline (n = 2312)		Follow-up (n = 228)		Statistical significance
Practices	**n**	**%**	**n**	**%**	**p-value**
Sharps injuries	773	33.4	32	14.5	0.00
Reporting injuries	**321**	**41.5**	**17**	**53.1**	**0.19**
Offered PEP	189	24.4	14	43.8	0.01
Completed PEP	137	17.7	12	37.5	0.00
Completed tests	239	30.9	17	53.1	0.01
Hepatitis B vaccine	546	23.9	69	30.3	0.03
PEP availability	1843	80.4	219	94.7	0.00

HCW Practices at baseline and follow up

Results 3: Health Facility Practices Before and After Training



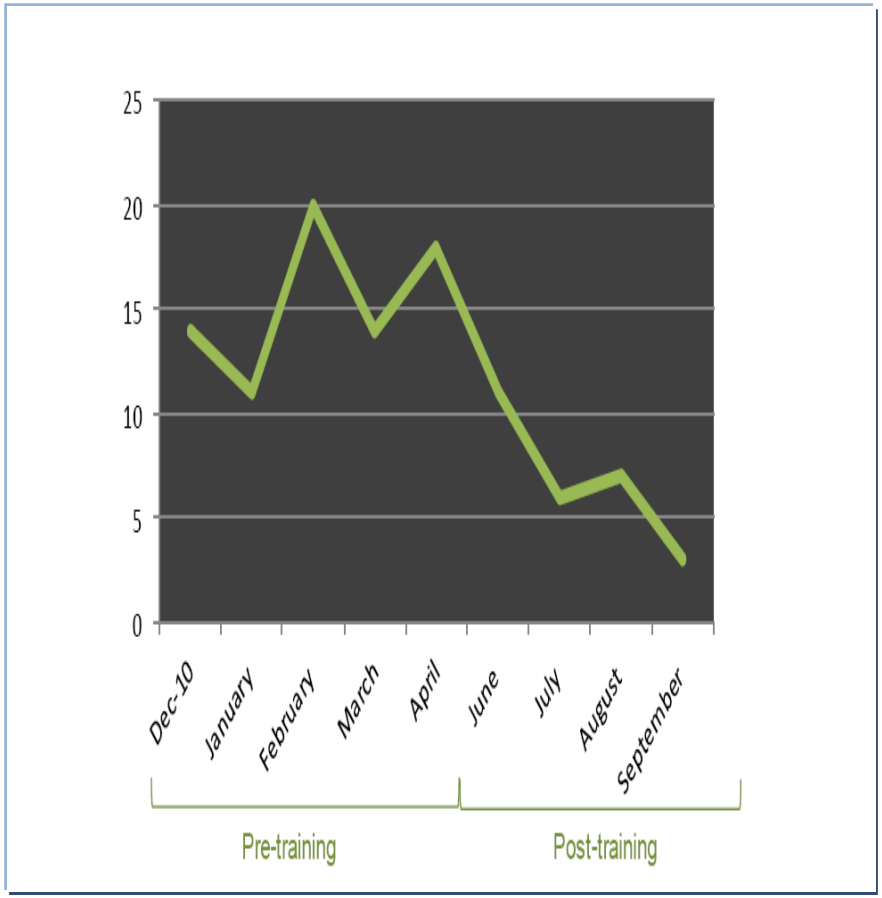
Results 4: Practice and Level of Care

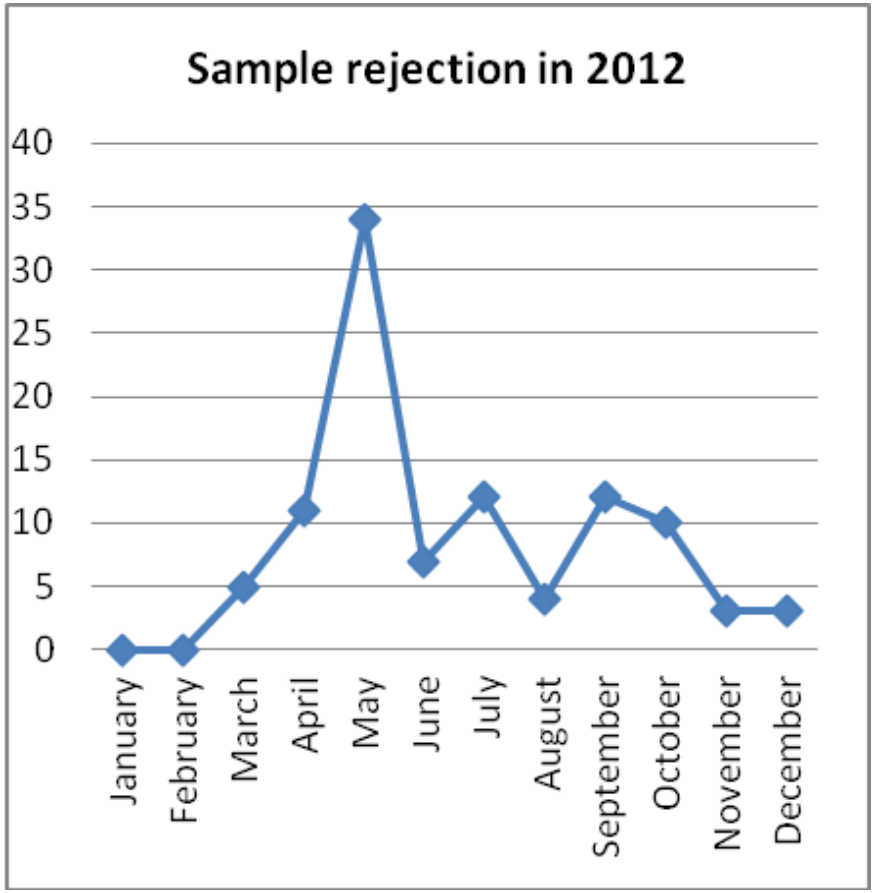


Results 5: Other Findings

- Availability of supplies was erratic, more so in levels IV and V – 9 (level II/III) had adequate supplies except butterfly sets; butterfly sets found in only 1 HF
- All the facilities were using FIF to complement KEMSA supplies
- Documentation of specimen rejection still a challenge – however, practice was adequate in a few facilities (5/20)
- Some of the challenges cited by facility management include high turnover of trained personnel and negative attitude

Results 6: Sample Rejection





Number of specimens rejected in two facilities (L5 and L4)

Conclusions

- Significant positive outcomes found in phlebotomy practices, including reduction of sharps injuries, uptake of PEP and lab tests, reporting - underscoring benefits of the training
- Challenges in blood-drawing supplies, high turnover of trained staff, especially the interns, thus loss to follow-up
- Need to target larger numbers for meaningful in-depth analysis
- M&E approaches (tracking outcomes) should be an integral part of project implementation strategies

Acknowledgement

The US President's Emergency Plan for AIDS Relief (PEPFAR) through the US Centers for Disease Control (CDC) has provided funding for this project.

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