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# THE PREVENTION OF MEDICAL TRANSMISSION OF HIV/INJECTION SAFETY PROJECT: ZAMBIA

**ANNUAL PERFORMANCE MONITORING REPORT**

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# THE PREVENTION OF MEDICAL TRANSMISSION OF HIV/INJECTION SAFETY PROJECT: ZAMBIA ANNUAL PERFORMANCE MONITORING REPORT

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The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.



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## ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
ART	Anti-retroviral therapy
BCC	Behavior change communication
CBOH	Central Board of Health
CDE	Classified daily employees
DHMT	District Health Management Team
ECZ	Environmental Council Zambia
EDL	Essential drug list
EHT	Environmental Health Technician
EPI	Expanded Program of Immunization
GAVI	Global Alliance for Vaccines and Immunizations
HBV	Hepatitis B virus
HCP	Healthcare provider
HCV	Hepatitis C virus
HCWM	Healthcare waste management
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HSSP	Health Services and Systems Program
IEC	Information, education, and communication
IP	Infection prevention
IS	Injection safety
M&E	Monitoring and evaluation
MISP	Medical Injection Safety Project
MOH	Ministry of Health
MSL	Medical Stores Limited
NIPWG	National Infection Prevention Working Group
PEP	Post-exposure prophylaxis
PEPFAR	President's Emergency Plan for AIDS Relief
PHC	Primary healthcare
PMU	Project management unit
PPE	Personal protective equipment
STD	Sexually transmitted diseases
STI	Sexually transmitted infections
TB	Tuberculosis bacilli
TIPs	Trials of Improved Practices
USAID	United States Agency for International Development
ZANARA	Zambia National Response to HIV/AIDS



## EXECUTIVE SUMMARY

The Zambia Medical Injection Safety Project (MISP), a USAID-funded project under the President's Emergency Plan for Aids Relief (PEPFAR), targets 72 districts in Zambia. MISP is being implemented by Chemonics International in collaboration with subcontractors Jhpiego and the Manoff Group. The project, which started as a one-year pilot, is now in its fourth year of national implementation, with a goal of reaching all 72 districts in Zambia.

The objective of MISP is to reduce unsafe and unnecessary injections in order to prevent the medical transmission of HIV in Zambia, by improving systems and practices related to infection prevention (IP) and injection safety (IS) under the Ministry of Health (MOH). MISP components include: training and capacity building, commodity management and procurement, behavior change communications (BCC), healthcare waste management, policy environment, and monitoring and evaluation. This report covers the third year (October 2007 to September 2008) of MISP performance in its scale up.

### Summary of Overall Project Targets and Achievements

To date, MISP has covered 58 of 72 districts in all nine provinces of Zambia, reaching 80.5 percent of target levels. The project trained 876 healthcare providers (HCPs), oriented 306 healthcare managers, procured commodities worth \$1.7 million, and provided funding for 587 drama performances in 23 districts, which have sensitized 122,492 community members. The project conducted baseline and mid-term evaluations and continuously monitored project progress towards end targets. Finally, the project team provided supportive supervision to 48 of the 58 districts trained. The table below summarizes project achievements thus far.

**TABLE 1: PROJECT PROGRESS AND ACHIEVEMENTS TO DATE**

Indicators	Number Reached	Percent Achievement	End of Project Targets (2005-2009)
Districts reached	58	80.5%	72
Health centers reached	589	84.1%	700
HCP trained	876	81.1%	1080
Population reached	8,250,000	82%	10,000,000

### Summary of Achievements from October 2007 to September 2008

**Training.** The project trained 297 healthcare workers in infection prevention and injection safety (IP/IS) in the 12-month period. The MISP project team was encouraged to learn, during follow-up and supportive supervision visits, that 665 maids across 21 districts were oriented in IP/IS. Training sessions were conducted by HCPs who had received MISP training through independent institutional initiatives taken by healthcare facilities visited by the project. The team also provided technical support to five institutions in response to their requests.

**Behavior Change Communication.** BCC and IEC materials were distributed to 381 health centers and 2,512 neighborhood committees in 24 districts. MISP supported 12 community-

based drama groups and disseminated IP/IS messages to 103 health centers/communities, reaching 46,199 people.

**Policy and Guidelines.** The project continued to support the National Infection Prevention Working Group (NIPWG) in the implementation of the National Infection Prevention Strategy (2005-2007) by means of advocacy and technical support. Through the NIPWG, the project has spearheaded the IP/IS policy formulation, which is currently awaiting consensus building and approval by the Cabinet. Healthcare waste management guidelines were developed and launched and are currently being disseminated in all 72 districts. The team is also working on launching, in collaboration with the MOH, an official National Infection Prevention week and National Infection Prevention day to raise awareness on the national level of the importance of IP/IS.

**Commodity Management and Procurement.** The project has continued to collaborate with the MOH, the Central Medical Stores LTD, and other partners to strengthen the national-, provincial- and district-level commodity logistical chains. The project supported the MOH in procuring injection safety commodities worth \$90,000 in six districts, and procurement for an additional 11 districts is underway. A total of 17 districts were assessed for procurement during this reporting period.

**Monitoring and Evaluation.** The project successfully worked with the MOH, advocating for incorporation of IP/IS indicators into the National Health Management Information System (HMIS), thereby guaranteeing continuous monitoring of IP indicators by the MOH. In June 2008, the project completed a mid-term evaluation, showing the impact of training, procurement, and BCC activities against baseline indicators collected in 2006. Monitoring and supportive supervision visits were also conducted in 22 hospitals and 66 healthcare facilities, ensuring that IP/IS indicators were successfully integrated into facilities' monitoring and evaluation (M&E) tools.

## **Conclusion**

The project has followed the project monitoring plan and is on target with its planned life-of-project implementation goals. The project has achieved 70-80 percent of its overall year-end targets as evidenced in the mid-term evaluation. All project areas have achieved their annual targets during this reporting period and are on track to reach their end of project targets.

## OVERVIEW

This annual performance report presents project progress during the period of October 1, 2007, through September 30, 2008. During this reporting period, project activities were implemented in all technical areas of the contract scope of work, which include:

- Commodity management and procurement,
- Capacity building and training,
- Behavior change communication,
- Healthcare waste management,
- Private and informal healthcare providers,
- Policy environment,
- Monitoring and evaluation, and
- Knowledge sharing.

During the reporting period, implementation was comprehensive in terms of technical scope, field activities were implemented at the levels delineated in the work plan, and the project monitoring plan was followed. The project team maintained focus on sustainability and leveraging resources for injection safety initiatives. Sustainability activities were implemented to ensure the transfer of best practices to the MOH and to develop ownership of the project within the MOH. Additionally, in implementing project activities, staff sought to create linkages with other projects and organizations working in the areas of HIV/AIDS or health systems development, with the aim of leveraging resources toward IP/IS initiatives and expanding the scope of the project.

The report is structured so that each technical task of the project's scope of work is presented separately, although all technical tasks are linked intrinsically. Project activities are most often comprehensive in that they incorporate elements of each technical task and serve as the mechanism to measure project performance within each task. Sections of this report are organized to present activities and key results; challenges in implementation and how they have been or will be addressed; and success stories, where relevant. The results presented in the body of the report are only for the period referenced. Year-to-date data on project monitoring and evaluation indicators are presented in Annex A.

## TASK 1. PROCUREMENT AND COMMODITY MANAGEMENT

The objective of the procurement and commodity management project component is to build the capacities of health facilities at all levels of healthcare provision to ensure good planning, forecasting, budgeting, prioritization, procurement, and distribution of infection prevention and injection safety commodities.

In order to make progress towards the project objective, MISP undertook the following activities;

- Selected districts for IP/IS commodity assessment.

- Conducted needs assessments in the selected districts in order to establish facilities' existing IP/IS commodities and practices.
- Procured IP/IS commodities for selected districts to improve the availability of supplies within healthcare facilities.
- Conducted follow-up and supportive supervision visits to track the delivery and use of IP/IS commodities.
- Revised the MOH's standardized list of essential IP/IS commodities to include new technologies.
- Conducted capacity building and training to equip healthcare providers with skills and knowledge in procurement and commodity management.
- Worked with the MOH and other stakeholders to leverage resources and coordinate efforts in the procurement and distribution of IP/IS commodities.

### 1.1. Selected districts for IP/IS commodity assessment.

MISP, in collaboration with the MOH, identified and selected **17 districts** in six provinces to receive IP/IS assessments and training. Districts are identified by MOH provincial offices, who asked to select — in consultation with the director of clinical care and diagnostics services — two districts in their province where the assessments would be done. In most cases, the provincial officers gave priority to areas most in need. At the top of the list would be districts that are hard to reach, burdened in terms of diseases, and/or resource-restricted districts. Upon selection of the districts, the provincial offices notify the project. The table below summarizes the districts selected for the last project year:

<b>Province</b>	<b>Selected Districts</b>
Northern	Mbala Nakonde Mpulungu
Luapula	Mwense Milenge Chienge
Central	Chibombo Kapiri Mposhi
North Western	Kasempa Mufumbwe Chavuma
Western	Kaoma Kalabo Shagombo
Southern	Itezihitezhi Namwala Choma

### 1.2. Conducted needs assessments in the selected districts in order to establish facilities' existing IP/IS commodities and practices.

During this reporting period, MISP — in collaboration with the MOH at the central, provincial, and district levels — conducted procurement needs assessments in each of the selected 17

districts. The assessments examined the institutional capacity of districts and hospitals, including the functionality of their procurement and commodity management systems; stock-at-hand and facility consumption rates of IP/IS commodities; accountability systems in place at assessed facilities; and levels of support received from partners and stakeholders.

The results of the needs assessments were then presented to the facilities, district health management team(s), and the central MOH in order to highlight the gaps identified. The team found there was inadequate knowledge of procurement and commodity management among procurement staff in the districts and hospitals assessed. In most cases, there was no qualified procurement staff to manage the procurement unit. Stock levels of IP/IS commodities in most facilities were below 50 percent, which is inadequate to support and sustain IP/IS practices.



During the assessment of Kalabo District Hospital in Western Province, MISPA Procurement Advisor Matildah Zyambo (middle) collects data provided by the hospital pharmacist (right) while Provincial Pharmacist Catherine Munganaga (left) looks on.

Procurement and commodity management systems in more than half of the districts assessed were poorly implemented, and 70 percent of the districts were not implementing proper accountability systems to support the rational use of resources. Financial resources allocated for procurement of IP/IS commodities in many facilities were inadequate to meet and support IP/IS requirements.

### 1.3. Revised the MOH’s standardized list of IP/IS commodities to include new technologies.

The NIPWG adopted the revised standardized list of IP/IS commodities and recommended its inclusion into the MOH essential drug list. During discussions and meetings held with the MOH, it was noted that some of the IP/IS commodities were already on the essential drug list of the MOH. However the MOH, through the NIPWG, is already planning to include injection safety equipment that uses new technologies, including improved safety features, in their essential drug list.

**TABLE 3: SUMMARY OF IP/IS COMMODITIES INCLUDED ON THE REVISED STANDARDIZED LIST**

Injection Equipment	Personal Protective Equipment	Disinfectants & Antiseptics	Waste Receptors
Disposable needles, 21g	Examination gloves, large	Sodium hypochlorite	Sharps boxes 5 liters disposable

Injection Equipment	Personal Protective Equipment	Disinfectants & Antiseptics	Waste Receptors
Disposable needles, 23g	Examination gloves, medium	Hand rub	Waste bins
Disposable syringes, 2ml	Surgical gloves 7 1/2		Decontamination buckets
Disposable syringes, 5ml	Surgical gloves 8		Waste-bin liners
Disposable syringes, 10ml	Face masks		
Disposable cannulars with medicinal ports, 18g	Utility gloves		
Disposable cannulars with medicinal ports, 24g	Heavy-duty gloves		

#### **1.4. Procured IP/IS commodities for selected districts to improve the availability of supplies within healthcare facilities.**

The data collected during the needs assessment exercises were used by MISP to develop the lists of IP/IS equipment (including types and quantities) on which actual procurement of IP/IS commodities for assessed facilities and districts was based.

During this reporting period, MISP procured \$90,000 worth of IP/IS commodities for the following six districts: Mbala, Mpulungu, and Nakonde in Northern Province and Milenge, Chiengi, and Mwense in Luapula Province. The project is in the process of procuring \$70,000 worth of IP/IS commodities for an additional 11 districts: Chibombo and Kapiri Mposhi in Central Province; Kasempa, Mufumbwe, and Chavuma in North Western Province; Kaoma, Kalabo, and Shangombo in Western Province; and Itezhi Itezhi, Namwala, and Choma in Southern Province.

MISP continued to procure selected commodities from the procurement list but reduced the quantities of IP/IS commodities as part of a larger phase-out strategy, instead focusing on procuring selected commodities not yet on the MOH essential drug list. These commodities include personal protective equipment (PPE) — i.e. aprons, utility gloves, and heavy-duty gloves — and waste management equipment, including sharps boxes, waste bins, decontamination buckets, and waste-bin liners.

#### **1.5. Conducted follow-up and supportive supervision visits to track the delivery and utilization of IP/IS commodities.**

In collaboration with the MOH, MISP conducted follow-up and supportive supervision visits in 21 districts, in order to track the delivery and use of IP/IS commodities in recipient health centers and districts. Table 4 (next page) summarizes the districts in which supervision was conducted.

**TABLE 4: DISTRICTS IN WHICH FOLLOW-UP AND SUPPORTIVE SUPERVISION VISITS WERE CONDUCTED (N=21)**

Province	Selected Districts
Northern	Mbala Nakonde Mpulungu Luwingu Chilubi
Luapula	Mwense Milenge Chienge Nchelenge Kawambwa
Eastern	Katate Chadiza Mambwe
Central	Mumbwa M'kushi
North Western	Solwezi
Western	Mongu Senanga
Southern	Livingstone Monze Mazabuka
Copperbelt	Chingola

During follow-up and supportive supervision visits, the team compared the quantities of commodities received by facilities with what was procured to confirm receipt of supplies. The process of distributing commodities from the bulk warehouse to the point of use and the condition of the general storage was assessed to ensure proper logistics systems are in place. The team also monitored the use of commodities at the point of use to make sure best practices were being followed. Facility accountability systems were assessed, and technical support was provided to institutions lacking adequate systems.

Upon follow-up, the team found that all the facilities had received the IP/IS commodities procured for them, resulting in increased stock availability. Where commodities had run out, facilities were making efforts to procure IP/IS commodities using their own resources, encouraging sustainability of procurement systems. Seventy percent of the facilities had implemented accountability systems, and for the remaining 30 percent where systems were lacking, the team provided technical support.



Western Province provincial pharmacists inspect the control card for IP/IS commodities at Sitoti Rural Health Centre in Shangombo District during the assessment exercise. Matildah Zyambo and staff from the center look on.

## **1.6. Worked with MOH and other stakeholders to leverage resources and coordinate efforts in the procurement and distribution of IP/IS commodities.**

MISP continued to work with the MOH and other stakeholders to leverage resources and synergize efforts to procure and distribute IP/IS commodities. As a result of the work of the team in collaboration with the MOH, MISP is now procuring only about 20 percent of IP/IS commodities, with the MOH procuring about 80 percent of the remaining required commodities. In addition, the MOH, through Medical Store Limited, is meeting the distribution cost of all commodities procured by MISP.

MISP had also been working with local commodities firms, assuring them of the demand for IP/IS commodities in the various districts in which the project has been working. Through MISP's work, there has been a lot of awareness raised among providers of the need to prioritize the procurement of IP/IS commodities. With the data collected by MISP on the districts assessed and trained, local firms have been able to draw up marketing strategies detailing how to reach the customers in those districts. With continued advocacy and sensitization, more local firms have partnered with international firms to service the facilities better with competitively price and affordable commodities. There has also been local investment in the manufacturing of these commodities. For example, Pharmanova Pharmaceuticals is manufacturing local sodium hypochlorite, which is in turn being procured by local facilities (including the MOH) at a very low price.

### **Constraints and Challenges**

MISP has continued to work with partners and stakeholders in an effort to leverage resource and coordinate procurement efforts, and has been successful in working with the MOH to meet this objective. However, as the project continues to phase out procurement activities, there is concern that the MOH — due to financial constraints — may not be able to take up procurement of all necessary commodities that MISP procures, which may in turn result in stock-outs of critical IP/IS commodities.

The cost of IP/IS commodities on the market poses a challenge, though some local firms have started investing in manufacturing these products locally to reduce their cost. If more firms invest in manufacturing these products locally, then many facilities will be able to procure them cheaply.

## **TASK 2. CAPACITY BUILDING**

MISP seeks to foster the standardization of safe IP/IS practices among healthcare providers within the private and public health sectors through capacity building and training in the form of awareness-building activities, training workshops, and supportive supervision visits conducted at the facility level.

During the reporting period MISP undertook the following activities in order to achieve this objective:

- Trained 297 healthcare staff (in 22 districts across seven provinces) in infection prevention and injection-safety best practices.
- Conducted facility-level supportive supervision visits in districts in which project training activities and procurement of commodities had been implemented.
- Provided technical assistance to public and private health institutions implementing IP/IS training activities for their staff.
- Worked to create linkages with organizations and programs focusing on capacity building of healthcare personnel in the public and private sectors.

## 2.1. Trained 297 healthcare staff in infection prevention and injection-safety best practices.

Seven training workshops were held to build the IP/IS capacity of healthcare providers, in which 297 healthcare providers were trained. The table below presents a summary of the training workshops implemented by the project during this reporting period.

Provinces	Districts/Institutions Covered	Training Dates	Number of Participants	Sponsors
Eastern	Katete Chadiza Mambwe	October 8-13, 2007	35	USAID
Central	Kapiri Mposhi Chibombo	June 23-27, 2008	36	
Northern	Nakonde Mpulungu Mbala	November 26-30, 2007	36	USAID
Luapula	Mwense Milenge Chienge	January 15-19, 2008	33	USAID
Copperbelt	*Chililabombwe Konkola Mine (KCM) Hospital	March 5-10, 2008	31	KCM partly funded project
Lusaka	*Cancer Diseases Hospital	April 5-7, 2008	20	MOH
Northwestern	Chavuma Mufumbwe Kasempa	July 21-26, 2008	35	USAID
Western	Kalabo Shangombo Kaoma	September 1-6, 2008	35	USAID
Southern	Choma Namwala Itezhitezhi	September 22-27, 2008	36	USAID
<b>9 provinces</b>	<b>22 districts</b>		<b>297 people</b>	

The workshops incorporated training in the following competencies:

- Procurement and commodity management: a detailed overview of the public logistics system (or supply-chain cycle) and the role of healthcare providers within it. Also includes lessons in forecasting supply requirements and in proper recordkeeping.
- Infection prevention and injection safety: provided an overview of disease transmission cycles, how to identify and mitigate transmission risks, and basic principles in infection

prevention. Includes in-depth training on standard injection healthcare administration precautions, techniques, and practices. Also, incorporates training on the importance and use of PPE during injection administration and waste disposal.

- Interpersonal communication with patients (BCC): provided (1) an introduction to interpersonal communication and communication processes, (2) insight into knowledge, attitudes, and beliefs held by patients that might lead them to resist change, and (3) instruction on interpersonal communication techniques and proper use of BCC materials.
- Medical waste management: provided an overview of types of medical waste and appropriate disposal practices. Included demonstration and hands-on training on sharps box assembly.
- Policy environment: provided instruction on management of an infection prevention program at the facility level.
- Monitoring and evaluation of provider practices and behavior: included an overview of developing IP/IS indicators and monitoring provider practices.



Major M.M. Banda demonstrates techniques at one of the stations during training.

Training workshops last four days and are conducted with assistance from representatives of the NIPWG and other trainers. Following completion of the training, select participants are chosen to serve as IP/IS focal people to champion implementation of IP/IS activities in their workplace.

## **2.2. Conducted facility-level supportive supervision visits in districts in which project training activities and procurement of commodities had been implemented.**

Follow-up and supportive supervision was carried out in 21 districts (Luwingu, Monze, Mazabuka, Livingstone, Nchelenge, Kawambwa, Nakonde, Mpulungu, Mbala, Chilubi Islands, Chienge, Milenge, Mwense, Chadiza, Mambwe, Katete, Mkushi, Mazabuka, Mongu, Senanga, and Mumbwa) to monitor provider IP/IS practices after MISP training activities had been implemented and commodities received.

The follow-up and supportive visit report in the 21 districts monitored shows that:

- All facilities visited in the 21 district were using new sterile needles and syringes for each injection.
- The occurrence of two-hand recapping of needles continues to reduce with the overall percentage at 8.3 percent as observed in the latest follow-up report.
- Hand washing before and after procedures (the single most important infection prevention intervention) was found at 58 percent and 65 percent respectively.



A nurse demonstrates hand washing during follow up in a rural health center in Mumbwa district.

- Needles left inserted in multi-dose vials were found to have decreased to 6 percent in the districts monitored.
- Decontamination of instrument after use was at 59 percent, while cleaning was at 66 percent. High-level disinfection and sterilization were at 66 percent and 73 percent respectively. Instrument processing is a major concern as improper processing is a big source of nosocomial infection transmission.
- Use of personal protective equipment (PPEs) during risk procedures was at 71 percent.

### **2.3. Provided technical assistance to public and private health institutions implementing IP/IS training activities for their staff.**

MISP provided technical assistance to organizations, programs, and facilities training their staff in IP/IS upon request. Organizations were responsible for the cost of the training, allowing MISP to reduce or eliminate the normal costs associated with project training activities. Technical assistance was provided to the following organizations during this reporting period.

- MISP facilitated an orientation workshop, organized by the Mumbwa District Health Management Team (DHMT) in Central Province for its facility and ward administrators, on proper IP/IS practices. The workshop provided instruction on management of a facility-level IP programs, healthcare waste management, post-exposure prophylaxis, procurement and commodity management, and monitoring and evaluation of provider practices. A total of 24 healthcare personnel participated in the workshop.
- Konkola Copper Mine PLC manages the Konkola Copper Mine Hospital in Copperbelt Province, a private hospital for mine staff. The company organized and financed a full four-day training workshop for 31 of its healthcare providers to build their capacity in IP/IS. MISP conducted the training workshop with assistance from NIPWG representatives.
- At the request of the Medical Council of Zambia (MCZ), MISP conducted assessments of IP/IS practices at two private health facilities, Kara Laboratories/Clinic and the Jon Hospice. Upon completion of the assessments, formal recommendations were made to the facilities and the MCZ on how the identified gaps could be addressed.
- At the request of the Society for Family Health (SFH), MISP conducted an assessment of IP/IS practices at the new male circumcision clinic based at the New Start Center at the Young Women's Christian Association. Upon completion of the assessments, recommendations were made to the facilities and the MCZ on how the identified gaps (notably poor injection safety practices and waste management) could be addressed. Training in male circumcision, which included IP/IS, was organized with technical assistance provided by MISP.
- At the request of Cancer Diseases Hospital and with sponsorship from the MOH, MISP trained 31 healthcare providers in IP/IS. Thirty classified daily employees (CDEs), specifically cleaners and waste handlers, were also trained from Cancer Diseases Hospital.
- At the request of Lusaka DHMT, MISP conducted an orientation workshop for their managers in IP/IS. Approximately 20 managers (including the director) were in attendance. MISP is currently assisting the district in planning for on-the-job training for all their healthcare providers.

## **2.4. Worked to create linkages with organizations and programs focusing on capacity building of healthcare personnel in the public and private sectors.**

MISP has continued to work with Health Services and Systems Program (HSSP), the General Nursing Council, and the MCZ to incorporate IP/IS into pre-service curricula for healthcare personnel. At present, MISP is providing technical assistance to the aforementioned stakeholders through the revision of curricula for medical doctors. To date, MISP has provided technical input into revisions for a number of pre-service curricula for healthcare personnel, ensuring IP/IS components were adequately incorporated. MISP has also worked with the MOH Child Health Technical Committee and the Global Alliance for Vaccines and Immunizations (GAVI), providing technical input on disposal and management of waste resulting from immunization campaigns, as well as encouraging IP/IS best practices during immunization campaigns.

### **Constraints and Challenges**

Limited financial resources continue to hamper the ability of the MOH to sustain in-service IP/IS training activities in the public sector. In some districts, high turnover among management and healthcare personnel also continues to hamper the promotion of IP/IS best practices. MISP has continually provided technical assistance to the MOH Directorate of Clinical Care and Diagnostic Services in the development of its annual action plan. MISP has contributed to the inclusion of capacity-building initiatives in the FY 2008-2009 action plan, notably through promotion of activities that build the capacity of facility and ward administrators in IP/IS and strengthen supportive supervision systems. The project has continued to lobby for inclusion of IP/IS training for the healthcare workforce in action plans at all levels (central, provincial, district, and facility). It is hoped that this will result in increased appropriation of public funds for IP/IS training.

## **TASK 3. BEHAVIOR CHANGE COMMUNICATION**

MISP supports the MOH in its efforts to influence changes in IP/IS perceptions and behaviors among healthcare providers, clients/patients, and community members in order to reduce the demand for and use of unnecessary injections. Activities undertaken during this period include:

- Conducted public education campaigns through print (distribution of BCC materials) and folk media (drama performances).
- Trained HCPs in health communication techniques, enabling them to influence behavior change among different target audiences.
- Finalized formative research in the formal private sector using the TIPs approach and production of a draft BCC strategy.
- Participated in advocacy meetings to lobby for support of IP/IS among administrators within the public and private sector at all levels.
- Conducted supportive supervision and follow-up visits to monitor behavior change in the target groups.
- Monitored appropriate, display, use and availability of IEC materials.

### 3.1. Conducted public education campaigns through print and folk media.

#### 3.1.1. Print Media

BCC/IEC materials on IP/IS were distributed to 24 districts (home to 381 health facilities) in the public sector and one health institution in the private sector where training had taken place. The types of BCC/IEC materials distributed were:

- Four types of posters promoting IP/IS best practices: two posters target healthcare providers and two target community members.
- A packet/folder with materials on IP/IS was circulated to health policymakers and healthcare facility administrators.
- Two types of fact sheets on IP/IS were distributed: one targeting community health workers and one targeting policymakers and healthcare facility administrators.
- Two types of stickers promoting recommended IP/IS practices were distributed: one sticker targeting healthcare providers and the other targeting community members.

Table 6 shows the distribution of BCC/IEC materials by districts and health facilities.

	<b>District</b>	<b>Populations Reached</b>	<b>No. of Health Centers</b>	<b>NHCs</b>
1	Namwala	109,630	12	92
2	Itezhitezhi	55,701	10	50
3	Choma	245,807	31	80
4	Shangombo	103,187	13	89
5	Kalabo	126,698	13	169
6	Kaoma	183,120	24	176
7	Kasempa	72,067	17	64
8	Mufumbwe	50,992	13	48
9	Chavuma	39,761	6	36
10	Kapiri Mposhi	259,257	19	161
11	Chibombo	275,453	22	184
12	Chienge	103,855	7	175
13	Milenge	31,524	7	42
14	Mwense	120,690	18	133
15	Monze	187,310	22	140
16	Mazabuka	270,600	36	NA
17	Kalomo	276,310	23	124
18	Livingstone	115,273	12	24
19	Mpulungu	77,004	7	70
20	Mbala	171,217	16	240
21	Nakonde	127,766	8	81
22	Katete	240,097	16	162

	District	Populations Reached	No. of Health Centers	NHCs
23	Mambwe	56,926	6	36
24	Chandiza	118,400	11	136
	<b>Total</b>	<b>5,108,645</b>	<b>381</b>	<b>2512</b>

### 3.1.2. Folk Media

Drama assessments were conducted in 15 new districts (Petauke, Monze, Livingstone, Chingola, Mongu, Mumbwa, Senanga, Chongwe, Kapiri Mposhi, Mukushi, Choma, Kaoma, Kasempa, Lusaka, and Solwezi). Twelve community drama groups in the districts were contracted by MISP through the DHMT to carry out the drama performances. The team assessed the locally established drama groups to determine their ability to disseminate clear IS/IP messages according to the script, the correctness of IP/IS messages they transmitted, and their ability to hold discussions with their audiences.

Out of the 15 districts selected, MISP has funded nine districts (Petauke, Monze, Lusaka, Chingola, Solwezi, Kapiri Mposhi, Mongu Senanga, and Livingstone) during this reporting period. Six districts (Choma, Mumbwa, Chongwe, Kasempa, Kaoma, and Mukushi) have submitted plans and budgets to MISP for possible funding. All drama groups are established locally and have been trained and are being supported by the DHMT.

**TABLE 7: DRAMA PERFORMANCES AND PEOPLE REACHED BY DISTRICTS**

District	No. of Drama Groups	Performances Allocated*	Performances Carried Out	Health Centers Reached	Audience Reached	Comments
Petauke	1	20	20	20	3,292	Completed
Solwezi	2	38	20	12	3,500	Ongoing
Chingola	2	25	25	20	6,636	Completed
Mongu	1	38	NA	NA	NA	Just funded
Lusaka	1	48	22	11	15,734	Ongoing
Kapiri Mposhi	1	33	NA	NA	NA	Just funded
Senanga	1	25	20	11	4,025	Completed
Monze	1	25	25	15	4,773	Completed
Livingstone	2	39	39	14	8237	Completed
<b>Total</b>	<b>12</b>	<b>291</b>	<b>162</b>	<b>103</b>	<b>46,199</b>	

\*Performances allocated refers to the number of performances budgeted during activity planning.

### 3.2. Trained HCPs in health communication techniques, enabling them to influence behavior change among different target audiences.

Training aims to impact knowledge and skills among healthcare providers, so they can make informed decisions and influence attitudes/behaviors over the long term. Nine training workshops for 297 HCPs in both the public and private health sector were conducted during the reporting period (details provided in Task 2 above). The BCC training provided participants with an introduction to behavior change communication methods, communication processes, methods for dealing with resistance to change, appropriate use of BCC/IEC materials, and interpersonal communication.

### **3.3. Finalized formative research in the formal private sector using the TIPs approach and production of a draft BCC strategy.**

Follow-up visits were conducted in private-sector facilities in three of the districts (Kitwe, Luanshya, and Lusaka) included in the baseline assessment portion of the formative research project. Specifically, the following activities were completed:

- A total 105 observations of 57 HCPs, including observations of:
  - 23 HCPs who prescribe injections (they were also interviewed)
  - 34 HCPs who administer injections (they were also interviewed)
- In-depth interviews with 15 health facility managers regarding IP/IS policies and practices.

The formative research project was completed and a report produced. MISP then held two BCC strategy development workshops for the private health sector in Copperbelt and Lusaka provinces. The workshops produced a draft BCC strategy, which is presented in Annex B as a matrix describing the possible actions that can be implemented by the MOH, MCZ, managers of different private health facilities, and stakeholders like MISP to modify behavior identified during the formative research.

### **3.4. Participated in advocacy meetings to lobby for support of IP/IS among administrators within the public and private sector at all levels.**

At the national level, MISP participated in 11 meetings with NIPWG partners to advocate for incorporation of IP/IS activities into MOH action plans and encourage the MOH to take ownership of IP/IS activities. Nine meetings were held with the Child Health Technical Committee, eight meetings with the subcommittee coordinating IP Week, and six meetings with the waste management subcommittee.

At the provincial and district levels, meetings were held with facility managers and DHMT officials in each of the 21 districts visited following supportive supervision visits. IP/IS best practices were encouraged, while poor IP/IS practices were identified and solutions proposed. MISP lobbied for inclusion of IP/IS BCC activities, like production of job aids, in health facility and district action plans.

At the community level, 142 community meetings were held to encourage people to avoid unnecessary injections, change perceptions that injections are the most effective and fast-acting form of treatment, discuss injection safety with providers, and report dangerous medical waste observed in their communities.

### **3.5. Conducted supportive supervision and follow-up visits to monitor behavior change in the target groups.**

The table below summarizes the results of behaviors and practices observed during follow-up and supportive visit in 20 districts.

**TABLE 8: BEHAVIOR CHANGE OBSERVED DURING SUPPORTIVE SUPERVISION VISITS**

Districts (n=20)	Use of a new, sterile syringe (%)	Two-hand recapping of used needles (%)	Needles disposed of in sharps boxes immediately after use (%)	Wash hands before injection (%)	Leave needle inserted in vial (%)	HCP develops rapport with patient (%)	Re-use of needles without processing (%)	Preparation on a clean designated table/tray (%)
Luwingu	100	0	100	0	33	100	0	Not observed
Monze	100	33	100	100	33	100	0	Not observed
Livingstone	100	0	100	100	0	100	0	Not observed
Nchelenge	100	0	100	100	0	100	0	Not observed
Kawambwa	100	0	100	100	0	100	0	Not observed
Chandiza	100	0	75	40	20	100	0	100
Chienge	100	0	80	60	10	100	0	100
Chilubi	100	0	78	70	0	100	0	100
Katete	100	0	66	40	15	100	0	33
Mambwe	100	0	75	60	0	100	0	80
Mazabuka	100	0	50	75	0	66	0	66
Mbala	100	15	60	60	10	100	0	100
Milenge	100	0	79	50	0	100	0	100
Mukushi	100	20	80	66	13	87	0	100
Mongu	100	20	50	60	20	33	0	75
Mpulungu	100	0	70	55	15	100	0	100
Mumbwa	100	25	50	60	0	80	0	100
Mwense	100	20	45	66	0	100	0	66
Nakonde	100	25	33	45	0	100	0	100
Senanga	100	0	45	70	0	100	0	66
<b>Average</b>	<b>100%</b>	<b>7.9%</b>	<b>69%</b>	<b>63.8%</b>	<b>8.45%</b>	<b>93.3%</b>	<b>0%</b>	<b>64.3%</b>

The table shows some improvement in behaviors and practices when compared to the 2006 baseline survey findings. For example, recapping after injection reduced from 12 percent in the baseline survey to 7.9 percent during follow-up visits. Leaving the needle inserted on multi-dose vial for withdrawal of more doses reduced from 43 percent in the baseline to 8.45 percent during follow-up and disposal of sharps in safety boxes immediately after use. Additionally, use of single use needles and syringe have been maintained at 100 percent with no record of reuse of used needles and syringe without processing

The table further indicates that 93 percent of the healthcare providers created rapport with the patients, enabling the patient to talk about their treatment, 64.3 percent prepared the treatment on a clean designated table and 100 percent used new syringes and needles from a sterile pack.

### 3.6. Use of BCC/IEC Materials

Availability, appropriate display, and use of BCC materials were assessed in four facilities in 20 districts; the table below shows the findings.

**TABLE 9: AVAILABILITY AND DISPLAY OF BCC MATERIALS (N=48)**

District (n=20)	BCC Issues	
	Availability of BCC Materials (%)	Appropriate Display (%)
Chandiza	100	50
Chiengwe	100	100
Chilubi	100	100
Katete	100	100
Mambwe	50	40
Mazabuka	85	100
Mbala	60	100
Milenge	50	100
Mukushi	100	100
Mongu	100	40
Mpulungu	75	66
Mumbwa	100	100
Mwense	50	100
Nakonde	75	75
Senanga	100	50
Luwingu	50	100
Monze	40	90
Livingstone	50	100
Nchelenge	50	83
Kawambwa	33.3	100
<b>Average</b>	<b>73%</b>	<b>84.7%</b>

Availability of BCC/IEC materials with IP/IS messages in districts was found in approximately 73 percent of facilities visited. The appropriate display of BCC/IEC material had improved from an average of 46.6 percent of facilities doing so during the baseline survey to 84.7 percent during the follow-up visit.

### Challenges and Constraints

MISP will continue to advocate and lobby for inclusion of print and folk media activities in MOH actions plans and associated budgets, as they are often the first activities to get cut when budgets are constrained.

Another challenge is extending program activities, including BCC activities (especially cost of production of BCC materials) to the private health sector. MISP — in collaboration with MOH and other stakeholder — is in the process of disseminating the results of the formative research report, in which a BCC strategy to address the private sector was developed. During the strategy dissemination meetings, MISP will lobby private health facilities to incorporate BCC activities in their implementation programs and budgets.

## TASK 4. ESTABLISHING A STANDARDIZED SYSTEM FOR PROPER SHARPS DISPOSAL

MISP supports the MOH, in collaboration with other ministries, in establishing a standardized waste management system for medical waste disposal. Listed below are activities undertaken by MISP toward achieving this objective:

- Provided technical assistance to the MOH and the Environmental Council Zambia (ECZ) in the development and dissemination of national healthcare waste management guidelines.
- Conducted district-level assessments of healthcare waste management practices and systems currently being used.
- Conducted training workshops for healthcare providers in waste disposal best practices.
- Conducted facility-level supportive supervision visits in districts where project IP/IS training activities have been implemented.

#### **4.1. Provided technical assistance to the MOH and the ECZ in the development and dissemination of national healthcare waste management guidelines.**

MISP supported the MOH and the ECZ in the finalization and dissemination of healthcare waste management guidelines. These guidelines are currently being distributed to health facilities throughout the 72 districts by the MOH and ECZ. The project has continued to support the dissemination of the guidelines by incorporating some of their best practices — such as using a color coding system for waste bins — into project waste management training packages.

#### **4.2. Conducted district-level assessments of healthcare waste management practices and systems currently being used.**

In collaboration with the MOH, MISP conducted assessments of healthcare waste management practices in 17 districts during the reporting period. The districts assessed include: Mbala, Nakonde, and Mpulungu in Northern Province; Mwense, Milenge, and Chiengi in Luapula Province; Chibombo and Kapiri Mposhi in Central Province; Kasempa, Mufumbwe, and Chavuma in North Western Province; Kaoma, Kalabo, and Shangombo in Western Province; and Itezhi Itezhi, Namwala, and Choma in Southern Province.



**Indiscriminate disposal of waste at Kalabo District Hospital in Western Province**

The assessment tool focused on facilities' waste management systems, including disposal methods and types of waste receptors used. The assessment teams found that many of the facilities do not have personnel in charge of waste management issues. Many of the waste management systems are poor, in part due to lack of knowledge of waste management best practices (from segregation of waste at point of generation to final disposal).

#### **4.3. Conducted training workshops for healthcare providers in waste disposal best practices.**

Trainings include a large component of healthcare waste management, which focuses on the identification of waste, segregation of waste at the point of generation, handling of waste, and final disposal systems. In addition, the MOH and ECZ — in collaboration with MISP — are conducting trainings specifically on healthcare waste management. So far, provincial trainers of trainers (TOT) workshops have been conducted and are being rolled out in the districts.

#### 4.4. Conducted facility-level supportive supervision visits in districts where project IP/IS activities have been implemented.

In collaboration with MOH, MISP conducted the follow-up and supportive visits in 21 districts listed in Table 4 above. During follow-up and supportive supervision visits, project staff focused on the type of PPE used by healthcare workers and waste handlers, proper placement and use of waste receptors, and any new initiatives facilities have put in place to support waste management.

During follow-up, project staff were heartened to find that the number of healthcare facilities with satisfactory disposal of used injection equipment had increased, as shown in the table below.

<b>Disposal Issue</b>	<b>Baseline Result</b>	<b>Follow-up Result</b>
Overflowing sharps containers	10.2%	0%
Presence of used sharps in immediate surroundings	22.0%	4.3%
Secured disposal site	23.7%	21.7%
Labeling of disposal site	1.7%	5.8%
Labeling of disposal equipment	0%	0%

#### Constraints and Challenges

Healthcare waste management remains a challenge in most health facilities. Waste management has not received the attention it deserves, as evidenced by the lack of resources allocated by government and by its relatively low priority among policymakers. In turn, this neglect results in poor waste disposal infrastructure and equipment in health facilities. In its remaining year, the MISP project will continue to train healthcare professionals and waste handlers in waste management and procure the necessary equipment for this activity, as well as advocate for waste management commodity inclusion in essential MOH procurement lists.

## TASK 5. PRIVATE PROVIDERS

MISP has continued to work with the MOH and other partners to ensure that private providers and the informal health sector are using safe injections and safe disposal practices. Activities undertaken during this period include:

- Disseminated results from the formative research to key stakeholders.
- Developed BCC strategy for the private sector.
- Provided technical assistance to private health institutions and organizations on request.

### 5.1. Disseminated results from the formative research to key stakeholders.

MISP successfully completed the follow-up analysis of the formative research in three districts (Lusaka, Luanshya, and Kitwe), including the following activities:

- Conducted 105 observations with 57 healthcare providers, including:
  - 23 healthcare providers who prescribe injections (they were also interviewed).
  - 34 healthcare providers who administer injections (they were also interviewed).
- Conducted in-depth interviews with 15 health facility managers regarding IP/IS policies and practices.

Two dissemination workshops were held in Lusaka and Copperbelt provinces with representation from various private and for-profit providers, including mine hospitals, the Medical Council, and the local government represented by the councils.

### 5.2. Developed BCC strategy for the private sector.

As a result of the research generated by the project, MISP (with full participation from all stakeholders) formulated a BCC strategy for the private sector. This strategy focused on major issues, including capacity building, ensuring the availability of essential IP/IS supplies, and management of the healthcare waste.

### 5.3. Provided technical assistance to private health institutions and organizations on request.

MISP activities have increased recently due in part to promotion of MISP activities by the MCZ and by church and faith-based organizations. While the role of IP in the private health sector remains a challenge, several private health institutions have continued to request technical assistance from MISP. During the reporting period, MISP trained 31 HCPs from a hospital run by Konkola Copper Mine in response to their request for technical assistance. As part of this assistance, MISP carried out an onsite assessment to support the hospital management plan and budget for IP/IS activities. MISP also undertook an assessment of IP/IS requirements at Kara HIV Counseling Centre and Hospice, which is partly faith-based as well as supported by donors such as USAID through Catholic Relief Services. In collaboration with the MCZ and MOH, the

project has continued to work towards developing a strategy of how to effectively involve the private sector in IP/IS initiatives.

## **Constraints and Challenges**

Finding the best way to involve the private sector in national IP/IS activities still poses a challenge and yet carries significant urgency. Most of the truly private (e.g., privately managed and owned) health institutions have been left out of very important programs such as those covering IP, prevention of mother-to-child transmission of HIV, antiretroviral therapy, and malaria. The MOH has acknowledged this to be one of the major challenges in the provision of quality healthcare. Therefore, this task is of particular importance to MISP. MISP has continued to provide technical assistance to the private sector. However, a more systematic approach is needed to reach out to the private health sector.

## **TASK 6. POLICY ENVIRONMENT**

Under this task, MISP's objective is to continue to support the MOH and other partners to put in place a National Infection Prevention Policy and appropriate guidelines, resulting in an enabling environment for the implementation of standardized IP/IS activities.

In order to achieve this objective, the project carried out the following activities:

- Facilitated the implementation of the activities of the National Infection Prevention Working Group.
- Worked with the MOH to revise and disseminate the National Infection Prevention guidelines.
- Created, established, and maintained working relationships with organizations and/or projects whose scope of work is potentially synergistic with that of MISP.
- Advocated for incorporating IP/IS indicators into HMIS.
- Facilitated the development of the National Infection Prevention Policy.

### **6.1. Facilitated the implementation of the activities of the National Infection Prevention Working Group.**

MISP has continued in its role as secretariat of the NIPWG, facilitating and organizing the NIPWG and working with the MOH through the Directorate of Clinical Care and Diagnostic Services (chair of the NIPWG). During this reporting period, the project has organized and participated in six NIPWG meetings. Representatives from the NIPWG further assist the project in implementing activities such as training and supportive supervision visits. MISP also participated in other MOH technical groups — such as those that focus on emergency obstetric care, post-abortion care, prevention of mother-to-child transmission, and antiretroviral therapy — in an effort to incorporate IP/IS considerations and activities into these initiatives. In collaboration with the ECZ, the Zambia National AIDS Response Project and the MOH, MISP has participated in the ongoing trainings and dissemination of the healthcare waste management guidelines.

## **6.2. Worked with the MOH to revise and disseminate the National Infection Prevention guidelines.**

MISP, through the NIPWG subcommittee on the revision of the guidelines, has been participating in the ongoing revision exercise. The national infection guidelines were first launched in 2003. While the dissemination and training activities continue, some components of the guidelines need to be changed and more information added. Several partners, including the pre-service schools, have been involved in the process.

## **6.3. Created, established, and maintained working relationships with organizations and/or projects whose scope of work is potentially synergistic with that of MISP.**

MISP, by creating linkages among partners' activities, was able to include and/or expand IP/IS initiatives into other projects, thereby ensuring consistency in guidance and information provided to targeted populations. The project continued to establish and/or maintain working relationships with organizations and projects with complementary scopes of work. In this regard, the project has and will continue to work closely with a large number of agencies and organizations to achieve project objectives at reduced cost as a result of partner collaboration. For example, several partners are currently developing a train-the-trainer program to build the capacity of healthcare personnel in waste management. MISP will provide technical input during the development of the curriculum for this program and will seek out similar leveraging activities with other partners. In doing so in the past, the project created linkages between partners' activities that enable (1) inclusion and/or expansion of IP/IS initiatives, and (2) ensure consistency in guidance and information provided to targeted populations. In this regard, the project has and will continue to work closely with a large number of agencies and organizations, including the ECZ; MCZ; Churches Health Association of Zambia; National AIDS Council; Zambia National Response to HIV/AIDS (ZANARA) program; World Health Organization (WHO); UNICEF; Zambia National Blood Transfusion Service; Zambia HIV/AIDS Prevention, Care, and Treatment Partnership; and the HSSP.

## **6.4. Advocated for incorporating IP/IS indicators into HMIS.**

The project has worked closely with the MOH HMIS coordinator in the development of baseline study data collection tools, supportive supervision tools, and the project performance monitoring plan. The team will continue working with the HMIS coordinator in an effort to facilitate incorporation of the IP/IS indicators used to measure project performance into the current HMIS.

## **6.5. Facilitated the development of the National Infection Prevention Policy.**

Through the NIPWG, MISP has — in collaboration with MOH and other partners — supported the development of the National Infection Prevention Policy by offering technical support during meetings. In March 2008, MISP participated in a four-day meeting organized and financed by the MOH to review and draft a national IP policy. The MOH and NIPWG are reviewing the draft. A consensus-building meeting with all key stakeholders has been planned, and within the next few months the process of formulating policy will be finalized. Policy issues discussed included the provision of post-exposure prophylaxis hepatitis B vaccination to healthcare workers and have been incorporated in the IP policy document. The project continued to work

with the MOH to develop and enact policies to drive implementation of PEP and Hepatitis B vaccination programs.

During this reporting period, project staff also worked with the MOH and the ECZ in preparation of the launch and dissemination of the national healthcare waste management guidelines. In addition, MISP has continued to work closely with HSSP and the MCZ in revising pre-service curricula for various healthcare personnel. The MOH, the ECZ, and the ZANARA program are presently developing a train-the-trainer program to build the capacity of healthcare personnel in waste management. MISP is providing technical input during the development of the curriculum for this program.

### **Constraints and Challenges**

After March 2009, a reduced staff complement will create a challenge for the project as it works to support the public and private sectors. However, staff have already discussed ways to continue to provide targeted technical support and assistance to these sectors, in addition to assisting MOH-led efforts in MISP component areas. Finally, staff will have to work to hand over the secretariat of the NIPWG to the MOH and to hand over project legacies so that the efforts of the MISP project are continued.

## **TASK 7. MONITORING AND EVALUATION**

MISP works with and supports the MOH in improving injection safety by establishing a system for continuous monitoring of the content and process of care, identifying quality gaps, reporting results, then developing and implementing improved interventions based on the results.

Project performance continued to be monitored and evaluated via three mechanisms: active surveillance, trials in improved practices, and follow-up and supportive supervision activities. In order to meet the project's monitoring and evaluation goals, the following activities were undertaken:

- Worked with the MOH to incorporate IP/IS indicators into the national HMIS.
- Worked with provincial and district health offices to incorporate IP/IS indicators into existing M&E tools.
- Conducted mid-term evaluation of the project.
- Carried out monitoring and supportive supervision visits.

### **7.1. Worked with the MOH to incorporate IP/IS indicators into the national HMIS.**

The HMIS is the MOH's data management system, capturing indicator data from district, provincial, and national health facilities. To ensure the sustainability of project activities, MISP continues to hold discussions with the MOH to review HMIS data and advocate for the inclusion of more IP/IS indicators in the HMIS system. As a result of these discussions, the following indicators were included to improve the planning, monitoring, and evaluation of IP/IS activities:

- **Infection Prevention.** This indicator aims for 80 percent of public health facilities to carry out their activities in accordance with infection prevention standards. Some of the cardinal infection prevention standards in the district performance appraisals include appropriate instrument-processing procedures; the provision of personal protective equipment to healthcare workers and waste handlers, the availability of post-exposure prophylaxis, and the appropriate management of healthcare waste.
- **Waste Management.** This indicator entails all health facilities complying with health waste management guidelines and standards appropriate for each facility type. The MOH and ECZ have finalized, have published, and are distributing the healthcare waste management guidelines to all the nine provinces and 72 districts. Training sessions in healthcare waste management for environmental health staff and IP focal point people are being scaled up in all districts. To measure these indicators, staff identify the type of healthcare waste management system in place at a facility and monitor how healthcare waste is being managed from the point of generation to final disposal.
- **Commodity Management.** MISP has advocated for continued availability of IP/IS commodities and assurance that records for IP/IS commodities comply with the following rules:
  - All drugs on the essential drug list (including medical surgical supplies) have a quantity balance between their recommended minimum and maximum.
  - All stock control cards and books are updated continuously.
  - Monthly physical counts are conducted, and the first-in-first-out principle is followed.
  - IP/IS commodity indicators are continuously collected.

MISP has advocated for the inclusion of IP/IS commodities on the essential drug list (a list of drugs and commodities that the MOH procures centrally). Due in part to MISP interventions, the list now has been expanded to include IP/IS commodities that were not initially on the list, like sharps boxes. Some of these commodities are also procured by MISP depending on procurement needs assessments and identified gaps.

## **7.2. Worked with provincial and district health offices to incorporate IP/IS indicators into existing M&E tools.**

In addition to inclusion of IP/IS indicators in the HMIS, MISP continued to work with provincial and district health management teams to improve monitoring and capture of IP/IS data. During this reporting period, the project visited all nine provinces to assess how the IP/IS indicators included in the HMIS are being captured in their performance assessment tools. The project further reviewed the actions plans for the districts to assess whether IP/IS have been included. It was found that all nine provinces had included infection prevention activities in their action plans, which suggest that provinces are now planning, budgeting, and carrying out IP activities with funds from MOH.

The table below summarizes the IP/IS indicators that have been captured in the provincial and district performance assessment tools for the nine provinces of Zambia.

**TABLE 11: IP/IS INDICATORS INCLUDED IN THE HMIS AND PROVINCIAL PERFORMANCE ASSESSMENT TOOLS**

Functional Area	Indicators	Minimum Acceptable Standard	Source of Information
<b>Infection control and infection prevention</b>	Number of health centers complying with infection prevention standards (out of total number of health centers)	At least 80% of health centers comply with infection prevention standards	Consolidated health center PA report, physical checks
<b>Medical waste management</b>	Number of facilities complying with waste management standards appropriate for their level (out of a total number of health facilities)	All health facilities comply with waste management standards appropriate for their level	Consolidated HC Performance Assessments PA report and hospital PA reports, Physical checks
<b>Commodity management</b>	Number of drugs with balance at hand between minimum and maximum quantities (out of sample of 10 selected drugs on EDL)	Facility has an on-hand balance of drugs on the essential drug list that is between minimum and maximum quantity	Physical check, stores records
<b>Commodity management</b>	Number of stock control cards updated and complete (out of sample of 10 items)	All stock control cards and books are continuously updated	Stock control cards and books
<b>Commodity management</b>	Number of items having monthly physical counts (out of sample of 10 items)	Monthly physical counts and first-in-first-out principle followed	Stock control cards and bin cards

### 7.3. Conducted mid-term evaluation of the project.

The MISP team developed a monitoring and evaluation plan at the start of the project in order to properly assess whether the project was meeting its long- and short-term objectives. The M&E plan, as a management tool, facilitates continuous assessment of project performance on expected results.<sup>1</sup> The M&E plan describes 43 performance indicators, a plan for data acquisition and analysis, anticipated data quality issues, and reporting procedures.

The mid-term evaluation was conducted in June 2008 with the goal of assessing (1) whether, and to what extent, MISP is achieving its intended results (against baseline indicators collected in 2006), (2) how effective the current strategy has been, and (3) what lessons can be learned to inform ongoing project implementation. The mid-term evaluation used process-and-output analysis of the project's M&E indicators to establish how the activities were being carried out and to gauge project achievements. The findings of the mid-term evaluation showed that the project had performed well with 70 percent of project end targets being reached in most of the project components. The strides achieved in the 43 project indicators can be viewed in Annex A.

<sup>1</sup> The performance indicators presented in Annex A are organized according to the tasks outlined in the project's statement of work.

#### **7.4. Carried out monitoring and supportive supervision visits.**

Monitoring and supportive supervision visits were conducted to assess the effectiveness and efficiency of IP/IS activities in the following areas: procurement, training, BCC, waste management, and policy. During this reporting period, 22 hospitals and 66 healthcare facilities were monitored. Providers and facilities in 21 districts that had received training in IP/IS, BCC materials and IP/IS commodities and who were implementing infection prevention activities were targeted. During these visits, the team offered onsite supportive supervision, assessed the impact of the training provided by MISP, and assessed the behaviors and practices through observation of health provider practices and interviews with facility managers and patients.

Output performance indicators — such as number of healthcare providers trained, districts funded for drama performances, and amount spent on IP commodities — were collected using project monitoring tools. Other IP/IS data were also collected and analyzed from secondary sources, such as surveys conducted by the MOH or the Central Statistics Office. However, IP/IS data obtained from secondary sources were used to augment reporting on project performance and not as the primary means through which performance was determined. The project is working and will continue to work with MOH to incorporate IP/IS indicators into the HMIS.

#### **Constraints and Challenges**

Resource constraints have limited the number of monitoring and supportive supervision visits the project can undertake in a particular district. The current design only allows one follow-up and supportive supervision visit per district. However, there has been increased demand by districts for MISP to conduct more follow-up and supportive supervision of IP/IS activities. The project is working with the MOH, through the NIPWG, to advocate for inclusion of M&E activities in the MOH action plan as part of a larger sustainability plan.

As MISP visited provincial and district health management teams to understand how IP/IS indicators are being monitored and captured, it became clear that the definitions of some indicators (i.e., infection prevention standards) were not understood equally by all facilities. Differences in interpretation of the indicators make data analysis across different facilities and districts incomparable and can lead to incorrect conclusions. Therefore, there is a need to develop a checklist and standard list of definitions so that each of the monitors and assessors can know and measure using the same standards and come up with the same measurements. Alternatively, a list of infection prevention areas that a facility could be measured against would also be possible. Such tools would assist the health facilities working towards achievement of this standard. MISP plans to hold a stakeholder meeting with the MOH and national, provincial, and districts teams to define IP/IS standards and define guidelines for facilities. This will help improve the quality of data capture and reporting by facilities.

## ANNEX A. PERFORMANCE INDICATOR TRACKING MATRIX

### Preventing the Medical Transmission of HIV in Zambia

Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
<b>Overall IP/IS Indicators</b>								
Average number of medical injections per person per year [PEPFAR]	The average number of injections administered for purposes of prevention and treatment to a person aged 15-49 in the last six months.  <b>Unit:</b> Number <b>Numerator:</b> Number of injections administered by a healthcare worker to all respondents aged 15-49 <b>Denominator:</b> Number of women and men aged 15-49 surveyed	Population survey/baseline then every two-three years  Community surveys/ baseline then every two-three years	Gender	2005 sample survey  2.2	1.5		1	
Proportion of women and men aged 15-49 reporting that the last healthcare injection was given with a syringe and needle set from a new, unopened package [PEPFAR]	This indicator measures the proportion of men and women, aged 15-49, reporting that the last healthcare injection they received (in the past six months) was given with a syringe and needle set from a new, unopened package.  <b>Unit:</b> Percent <b>Numerator:</b> Number of men and women who recall that the last injection received was given with a syringe and needle set from a new, freshly opened package <b>Denominator:</b> Number of women and men aged 15-49 surveyed who recall	Population survey/baseline then every two-three years  Community surveys/ baseline then every two-three years	Gender  Age	2006 baseline survey	TBD	99.1%	TBD	

Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
	receiving an injection							
Proportion of healthcare facilities in which project activities have been fully implemented. <b>[PEPFAR]</b>	The proportion of healthcare facilities in targeted districts in which project activities have been fully implemented.  <b>Unit:</b> Percent <b>Numerator:</b> Number of healthcare facilities in which project activities have been implemented <b>Denominator:</b> Total number of facilities	Project activity reports / quarterly	Facility (level, public vs. private)  District  Activity	2004  4.4%	12.1%	43.7%	35.2%	
Project activities implemented in all targeted districts <b>[SI Partners]</b>	This indicator measures the number of districts in which the project has been fully implemented.  <b>Unit:</b> Number	Project activity reports / quarterly	Province	2005  2	20	49	72	
Proportion of population covered by the project SI interventions <b>[SI Partners]</b>	Proportion of population covered by the project SI interventions.  <b>Unit:</b> Percent <b>Numerator:</b> Population covered by project SI interventions <b>Denominator:</b> Total population	National DHS surveys or census reports / annually	District  Province	2005		75%	100%	

Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
Average number of injections per patient per a specific diagnosis <b>[SI Partners]</b>	The average number of injections given per patient per a specific diagnosis or symptom (e.g., ARI, diarrhea, STD, etc.) per year.  <b>Unit:</b> Number <b>Numerator:</b> Number of injections administered by a healthcare worker to all respondents <b>Denominator:</b> Number of people surveyed	Facility surveys / baseline then every two-three years  Chart reviews / baseline then every two-three years	Diagnosis  Age  Gender	2005 sample survey  STD 2.3 <sup>2</sup>	STD 2	2	STD 1	
Healthcare facilities reusing sharps on patients without reprocessing <b>[SI Partners]</b>	Proportion of healthcare facilities where sharps are observed to be reused on patients without reprocessing.  <b>Unit:</b> Percent <b>Numerator:</b> Number of healthcare facilities where sharps are observed to be reused on patients without reprocessing <b>Denominator:</b> Total number of facilities observed	Direct observations during facility assessments / annually	Facility (level, public vs. private)  Geographic location (district, province, rural vs. urban)	2004/2005  0% <sup>3</sup>	0	0	0	

<sup>2</sup> Co-artem, fansider, and quinine are the common drugs for the treatment of malaria, quinine being given both as oral and injection. Most patients are on oral treatment except for serious cases. STD treatment was mainly through injectables.

<sup>3</sup> Results from both pilot phase and extension phase have shown that there are no sharps being re-used without being reprocessed.

Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
Proportion of facilities providing post-exposure prophylaxis to staff after a sharps injury [SI Partners]	<p>This indicator measures the proportion of facilities that have a system in place to offer post-exposure prophylaxis to staff within 24 hours after sharps injury or blood borne pathogen exposure.</p> <p><b>Unit:</b> Percent <b>Numerator:</b> Number of facilities who have a system in place to offer post exposure prophylaxis within 72 hours to its staff after sharps injuries or blood borne pathogen exposure <b>Denominator:</b> Total number of facilities surveyed</p>	<p>Post-exposure prophylaxis and sharps injury logs / annually</p> <p>Key informant interviews/ Annually</p>	<p>Facility (level, public vs. private)</p> <p>Geographic location (district, province, rural vs. urban)</p>	2006 34 %	TBD	53%	TBD	
Vaccination of healthcare facility workers immunized against Hepatitis B	<p>The proportion of healthcare facility employees who have been immunized against Hepatitis B.</p> <p><b>Unit:</b> Percent <b>Numerator:</b> Number of healthcare facility employees immunized against Hepatitis B <b>Denominator:</b> Total number of healthcare facility employees surveyed</p>	<p>Key informant interviews/ Annually</p> <p>Facility surveys/ Annually</p>	<p>Job</p> <p>Facility (level, public vs. private)</p> <p>Geographic location (district, province, rural vs. urban)</p>	2006 2%	TBD	8.4%	TBD	

Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
<b>Task 1: Commodity Management and Procurement</b>								
<i>Objective:</i> To support the Central Board of Health (CBOH) to ensure that public facilities, private providers, and NGO sector providers can estimate, finance, procure, and distribute the appropriate levels of injection equipment, supplies, and waste disposal containers.								
Activities:								
a) Identification and selection of suppliers in collaboration with MOH/CBOH to assess the IP program needs								
b) Assessing the existing of recurring gaps in commodities and supplies needed to ensure effective supply commodities								
c) Standardizing the list of IP program commodities and introduce new IP/IS items								
d) Undertake and implement the procurements of identified commodities and supplies needed to support the objectives of the program								
e) Integrate procurement and delivery procedures in MOH/CBOH to build commodity management related to injection safety at all levels								
f) Integrate best practices into national procurement plans								
g) Coordinate with other donors, leveraging with other projects								
Health personnel trained in IP/IS commodity logistics management [SI Partners]	Number of health personnel trained in IP/IS commodity logistics management  <b>Unit:</b> Number	Project activity reports / quarterly	Job  Training  Facility (level, public vs. private)  Geographic location (district, province, rural vs. urban)	2004  58	328	771	1,080	
Standard list of IP/IS commodities developed	Refers to development of a standardized and recognized list of IP/IS commodities that will be used to guide procurement.  <b>Unit:</b> N/A	Project progress reports/ Annually	N/A	2004	Standard list finalized	Already done	Standard list is fully implemented	

Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
IP/IS commodities integrated into MOH/CBOH procurement plan	An outcome indicator that measures project success in having IP/IS commodities included in the MOH/CBOH procurement plan. <b>Unit:</b> N/A	Project progress reports/ Annually  Review of MOH procurement plan/ Annually	IP/IS commodity	2005	IP/IS commodities integrated into procurement plan	It has been included	IP/IS commodities integrated into procurement plan	
IP/IS commodities procured by the project	The number of IP/IS commodities purchased by the project for distribution to target health facilities. <b>Unit:</b> Number	Project progress reports/ Quarterly	IP/IS commodity	2004  0	\$1,100,000	\$1,200,000	\$2,100,000	
Health personnel using identified procurement best practices in the procurement of IP/IS commodities	Proportion of health personnel observed using identified procurement best practices in procurement of IP/IS commodities. <b>Unit:</b> Percent <b>Numerator:</b> Number of health personnel observed using identified procurement best practices in procurement of IP/IS commodities <b>Denominator:</b> Total number of healthcare providers observed	Direct Observation during facility assessments/ Annually	Facility (level, public vs. private)  Facility department  Geographic location (district, province, rural vs. urban)	2006 baseline survey	75%	85.7%	100%	
Health personnel using identified procurement best practices in the procurement of IP/IS commodities	Proportion of health personnel observed using identified procurement best practices in procurement of IP/IS commodities. <b>Unit:</b> Percent <b>Numerator:</b> Number of health personnel observed using identified procurement best practices in procurement of IP/IS	Direct Observation during facility assessments/ Annually	Facility (level, public vs. private)  Facility department  Geographic location (district, province, rural vs. urban)	2006 baseline survey	75%	85.7%	100%	

Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
	commodities <b>Denominator:</b> Total number of healthcare providers observed							
Proportion of facilities with no stock-outs of new sterile standard or safety syringes in past six months <b>[SI Partners]</b>	Proportion of facilities with no recorded stock outages of sterile standard or safety syringes in the prior six months.  <b>Unit:</b> Percent <b>Numerator:</b> Number of facilities reporting no stock-outs of needles/syringes <b>Denominator:</b> Total number of facilities surveyed	Stock card review/ Semiannually  Key informant interviews/ Semiannually	Facility (level, public vs. private)  Geographic location (district, province, rural vs. urban)  Injection equipment	2004/2005  Needles 21g-94.4% 23g-100% Syringes 2ml-72.2% 5ml-88.9% 10ml-72.2% <sup>4</sup>	50%	94.3%	100%	
Proportion of facilities with no stock-outs of safety boxes for sharps disposal in prior six months <b>[SI Partners]</b>	Proportion of facilities with no recorded stock outages of safety boxes for sharps disposal in the previous six months.  <b>Unit:</b> Percent <b>Numerator:</b> Number of facilities reporting no stock-outs of safety boxes <b>Denominator:</b> Total number of facilities surveyed	Stock card review/ Semiannually  Key informant interviews/ Semiannually	Facility (level, public vs. private)  Geographic location (district, province, rural vs. urban)	2004/2005  11.1%	30%	87%	70%	
Healthcare facilities with supplies of oral formulations of common medications	Proportion of healthcare facilities with supplies of oral formulations of common medications. <sup>5</sup>	Facility assessments / annually	Medication  Facility (level, public vs.	2005 sample survey	STD oral	85%	STD oral 30%	

<sup>4</sup> Information for the above two indicators is coming from commodity assessment on IP/IS commodities in 12 districts (including the two pilot districts) assessed for that particular month.

<sup>5</sup> This is a measure of facilities where alternatives to injections are available (e.g., oral penicillin available as an alternative to injectable penicillin).

Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
[SI Partners]	<b>Unit:</b> Percent <b>Numerator:</b> Number of facilities with supplies of oral formulations of common medications <b>Denominator:</b> Total number of facilities surveyed		private)  Geographic location (district, province, rural vs. urban)	STD Injection 100% <sup>6</sup>	70%			

### Task 2: Capacity Building and Training

*Objective:* To foster normalization of safe and necessary injection practices.

Activities:

- Injection safety orientation, advocacy, and training in IP/IS best practices (BCC, procurement, IPC, healthcare waste management, M&E tools)
- Supportive supervision/follow-up visits to monitor behavior change among target groups
- Technical assistance to locally organized trainings by PHO/DHOs and hospitals

Healthcare providers trained in IP/IS best practices [PEPFAR]	Number of healthcare providers trained in IP/IS best practices.  <b>Unit:</b> Number	Project activity reports/ Quarterly	Job  Training  Facility (level, public vs. private)  Geographic location (district, province, rural vs. urban)	2004  58	328	771	1080	
Healthcare providers give each injection with a new sterile standard or safety syringe [SI Partners]	Proportion of healthcare providers observed giving injections with a new sterile standard or safety syringe.  <b>Unit:</b> Percent <b>Numerator:</b> Number of healthcare providers	Direct Observation during facility assessments / annually	Facility (level, public vs. private)  Facility department  Geographic	2004/ 2005  39% <sup>7</sup>	90%	100%	95%	

<sup>6</sup> Facilities in the mini-survey had more oral drugs for treating malaria and only serious cases were treated by injection, but no facility had oral drugs for treating STDs.

<sup>7</sup> Information for the above 3 indicators is coming from Trials of Improved Practices (TIPS) conducted in 2004 and 2005 in 5 districts in which 522 providers were observed.

Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
	observed giving each injection with a new sterile standard or safety syringe <b>Denominator:</b> Total number of healthcare providers observed		location (district, province, rural vs. urban)					
Healthcare providers dispose of used sharps without recapping them <b>[SI Partners]</b>	Proportion of health workers observed who dispose of used sharps without recapping.  <b>Unit:</b> Percent <b>Numerator:</b> Number of healthcare providers observed disposing of sharps without recapping <b>Denominator:</b> Total number of healthcare providers observed	Direct observations during facility assessments/ annually	Facility (level, public vs. private)  Facility department  Geographic location (district, province, rural vs. urban)	2004/2005  30%	86.66%  85%	97.1%	95%	
Healthcare providers dispose of used sharps in a safety box or a puncture- and leak-proof sharps container immediately after administering an injection <b>[SI Partners]</b>	Proportion of healthcare workers observed disposing of used sharps in a safety box or a puncture- and leak-proof sharps container.  <b>Unit:</b> Percent <b>Numerator:</b> Number of healthcare providers observed disposing of sharps in a safety box or a puncture- and leak-proof sharps container immediately after administering an injection <b>Denominator:</b> Total number of healthcare providers observed	Direct observations during facility assessments/ annually	Facility (level, public vs. private)  Facility department  Geographic location (district, province, rural vs. urban)	2004/2005  31%	69.7%  75%	93.3%	100%	
Healthcare providers reporting on needlestick injuries <b>[SI Partners]</b>	Proportion of healthcare providers reporting one or more needlestick injury in the past six months.	Facility surveys/ annually  Review of Sharps	Facility (level, public vs. private)	2006 baseline survey 17.3%		6.7%	0%	

Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
	<b>Unit:</b> Percent <b>Numerator:</b> Number of healthcare providers reporting one or more needlestick injuries <b>Denominator:</b> Total number of healthcare providers surveyed	Injury Log/ annually	Facility department  Geographic location (district, province, rural vs. urban)					
Waste handlers reporting on needlestick injuries [SI Partners]	Proportion of healthcare providers reporting one or more needlestick injury in the past six months.  <b>Unit:</b> Percent <b>Numerator:</b> Number of healthcare providers reporting one or more needlestick injuries. <b>Denominator:</b> Total number of healthcare providers surveyed	Facility surveys/ annually  Review of Sharps Injury Log/ annually	Facility (level, public vs. private)  Facility department  Geographic location (district, province, rural vs. urban)	2006 baseline survey 4.1%		1.6%	0%	
Healthcare providers adequately wash hands (with soap or hand rub) before and after injection procedure	A qualitative indicator used to measure the proportion of health workers observing proper hand hygiene before and after administering injections.  <b>Unit:</b> Percent <b>Numerator:</b> Number of healthcare providers observed properly washing hands before and after injection procedure <b>Denominator:</b> Total number of healthcare providers observed	Direct observations during facility assessments/ annually	Facility (level, public vs. private)  Facility department  Geographic location (district, province, rural vs. urban)	2006 baseline survey 30.45%	70%	69.2%	90%	
Patients reporting	Proportion of patients that	Exit interviews/	Facility (level,	2006	70%	99.1%	85%	

Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
that a needle and syringe taken out of a new package and shown to them before the injection was administered	report a needle and syringe was taken out of a new package and shown to them before receiving an injection.  <b>Unit:</b> Percent <b>Numerator:</b> Number of patients reporting that a needle and syringe taken out of a new package and shown to them before the injection was administered <b>Denominator:</b> Total number of patients surveyed	annually  Community surveys/ annually	public vs. private)  Facility department  Geographic location (district, province, rural vs. urban)	baseline survey 46.6%				
Health providers leaving a needle inserted in a vial to withdraw multiple doses	Proportion of health providers that leave a needle in a vial for the purpose of drawing several doses.  <b>Unit:</b> Percent <b>Numerator:</b> Number of healthcare providers observed leaving a needle inserted in a vial to withdraw multiple doses <b>Denominator:</b> Total number of healthcare providers observed	Direct observations during facility assessments / annually	Facility (level, public vs. private)  Facility department  Geographic location (district, province, rural vs. urban)	2006 baseline survey 42.5	25%	13.9%	10%	
Health providers placing needle and syringe directly in the puncture-resistant container after use	Proportion of health providers who place a needle and syringe directly in the puncture-resistant container after use.  <b>Unit:</b> Percent <b>Numerator:</b> Number of healthcare providers observed placing needle	Direct observations during facility assessments / annually	Facility (level, public vs. private)  Facility department  Geographic location (district,	2006 baseline survey 69.7%		93.3%	100%	

Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
	and syringe directly in the puncture-resistant container after use <b>Denominator:</b> Total number of healthcare providers observed		province, rural vs. urban)					
Use of personal protective equipment by healthcare personnel	This indicator measures the number of healthcare personnel who wear protective equipment during the disposal of sharps.  <b>Unit:</b> Percent <b>Numerator:</b> Number of healthcare personnel observed wearing proper protective equipment during disposal of sharps <b>Denominator:</b> Total number of healthcare personnel observed	Direct observations during facility assessments / annually	Job  Facility (level, public vs. private)  Facility department  Geographic location (district, province, rural vs. urban)	2006 baseline survey 22%		49.6%	100%	

### Task 3: Behavior Change

*Objective:* To support the CBOH to change beliefs and behaviors of providers and clients to reduce unnecessary demand and use of injections.

Activities:

- a) Review and finalize the national advocacy and BCC strategy
- b) Formative research
- c) Pretest BCC materials developed in the pilot phase
- d) Conduct advocacy meetings to lobby for support among health managers, administrators, and policy makers for IP/IS programs
- e) Conduct exit interviews at facility and community levels on a semiannual basis
- f) Develop and carry out IP/IS public education campaigns through electronic, print, and folk media programs

Healthcare personnel trained in interpersonal communication/BCC regarding safe injections <b>[SI Partners]</b>	Number of healthcare personnel trained in BCC regarding safe injections.  <b>Unit:</b> Number	Project activity reports/ quarterly	Job  Training  Facility (level, public vs. private)  Geographic	2004  58	540	771	1,080	
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Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
			location (district, province, rural vs. urban)					
Appropriate display of BCC materials at health facilities	The number of targeted health facilities that are appropriately (correctly) using project BCC materials.  <b>Unit:</b> Number	Facility surveys/ semiannually	Facility (level, public vs. private)  Facility department  Geographic location (district, province, rural vs. urban)	2006 baseline survey 47.9%		87%		
Exposure to BCC messages about IP/IS <b>[SI Partners]</b>	Proportion of clients interviewed who have heard BCC messages about injection safety.  <b>Unit:</b> Percent <b>Numerator:</b> Number of patients (or community members) interviewed who recognize BCC messages related to injection safety <b>Denominator:</b> Total number of patients (or community members) surveyed	Community Surveys / annually  Exit Interviews / annually	Gender  Age  Geographic location (district, province, rural vs. urban)	2006 baseline survey 54.1%	90%	55.6%	95%	
Healthcare providers prescribing oral formulations	The proportion of prescriptions indicating oral formulations used where injectables of similar efficacy are available.  <b>Unit:</b> Percent <b>Numerator:</b> Number of visits in which an oral formulation was prescribed	Facility surveys/ semiannually  Chart reviews/ semiannually	Diagnosis  Facility (level, public vs. private)  Facility department  Geographic	2006 baseline survey 28.4%	40%	70.8%	55%	

Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
	where injectables of similar efficacy are available <b>Denominator:</b> Total number of patient records reviewed in which medication was prescribed		location (district, province, rural vs. urban)					
Patients requesting oral medications	The proportion of patients that request oral medication.  <b>Unit:</b> Percent <b>Numerator:</b> Number of patients who request oral medications <b>Denominator:</b> Total number of patients surveyed	Facility surveys/ semiannually  Exit interviews/ annually	Gender  Age  Geographic location (district, province, rural vs. urban)	2006 baseline survey 28.4%	30%		20%	

#### Task 4: Establish a Standardized System for Proper Sharps Disposal

*Objective:* To support the CBOH, in collaboration with other ministries, to establish a standardized Medical Waste Management System.

Activities:

- Assessment of current healthcare waste management system
- Coordinate and plan with other organizations and donors to incorporate sound waste-management practices at all levels
- Advocate incorporation of infection prevention activities and supplies in the action plans at all levels

Healthcare personnel trained in medical waste management best practices <b>[SI Partners]</b>	Number of healthcare personnel trained in medical waste management best practices.  <b>Unit:</b> Number	Project activity reports/ quarterly	Job  Training  Facility (level, public vs. private)  Geographic location (district, province, rural vs. urban)	2004  58	540	771	1,080	
Healthcare facilities using safety boxes for sharps waste	Proportion of targeted healthcare facilities using safety boxes for sharps	Facility assessments/ annually	Facility (level, public vs. private)	2004/ 2005	30%	93.3%	70%	

Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
disposal [SI Partners]	waste disposal.  <b>Unit:</b> Percent <b>Numerator:</b> Number of healthcare facilities observed in which safety boxes are used for sharps disposal <b>Denominator:</b> Total number of facilities observed		Geographic location (district, province, rural vs. urban)	11.1% <sup>8</sup>				
Healthcare facilities with satisfactory disposal of sharps and used injection equipment (i.e., no used sharps where they pose a needle stick risk for providers or the general population either inside or outside the facility and no overflowing or open safety boxes) [SI Partners]	Proportion of facilities with satisfactory disposal of used injection equipment.  <b>Unit:</b> Percent <b>Numerator:</b> Number of healthcare facilities observed in which sharps and used injection equipment is disposed of properly <b>Denominator:</b> Total number of facilities observed	Facility assessments/ annually	Injection equipment  Facility (level, public vs. private)  Geographic location (district, province, rural vs. urban)	2004/2005  17.4% <sup>9</sup>	50%		80%	
Districts include medical waste management in their action plans	The number of districts whose health sector action plans include waste management.  <b>Unit:</b> Number	Key informant interviews/ annually	Geographic location (province, rural vs. urban)	2006 baseline survey		47 districts		

<sup>8</sup> Data from IP/IS commodity assessments performed in 12 districts (including the two pilot districts).

<sup>9</sup> Data from waste management assessments performed in 12 districts (including the two pilot districts).

Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
National medical waste management guidelines are finalized	This is a qualitative indicator assessing effectiveness of project TA to support the MOH produce final guidelines for waste management.  Unit: N/A	Project progress reports/ Annually	N/A	2004  No guidelines exist	Guidelines are finalized	Done	Guidelines are finalized	

#### Task 5: Private Providers and the Informal Health Sector

*Objective:* To ensure that private providers are using safe injection and safe sharps-disposal practices in the country.

Private healthcare providers trained in IP/IS best practices <sup>10</sup>	Number of private healthcare providers trained in IP/IS best practices  Unit: Number	Project activity reports/ Quarterly	Geographic location (district, province, rural vs. urban)	2006  TBD	540	771		
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#### Task 6: Policy Environment

*Objective:* To support the CBOH to establish a policy environment that will facilitate the availability of relevant guidelines, adequate resources for safe injection practices, strong values supporting injection safety, and continuous monitoring and improvement of injection practices.

Activities:

- Continue to participate in NIPWG activities
- Finalize and disseminate the national infection prevention guidelines and policies related to safe medical waste management
- Participate in the national drug formulary review committee
- Collaborate with key regulatory bodies (ECZ, MCZ, pharmacy and poisons board, and nursing council)
- Review the post-exposure prophylaxis guidelines and facilitate the development of policy for healthcare workers with the MOH/CBOH
- In collaboration with the MOH/CBOH, UNICEF, WHO, and other organizations, advocate for the provision of hepatitis B vaccine for healthcare providers

Health personnel oriented in safe injection policies and related issues <b>[SI Partners]</b>	Number of health personnel oriented in safe injection policies and related issues.  Unit: Number	Project activity reports/ quarterly	Job  Content of orientation  Facility (level, public vs. private)	2004  58	540	771	1,080	
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<sup>10</sup> Many of the indicators listed under the preceding disaggregate public and private sector; therefore, indicators measuring IP/IS capacity are not presented under this task.

Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
			Geographic location (district, province, rural vs. urban)					
National IP/IS guidelines implemented at the facility level <b>[SI Partners]</b>	The proportion of targeted healthcare facilities that have implemented the national IP/IS guidelines.  <b>Unit:</b> Percent <b>Numerator:</b> Number of healthcare facilities observed in which national IP/IS guidelines have been implemented <b>Denominator:</b> Total number of facilities observed	Facility assessments/ annually	Facility (level, public vs. private)  Geographic location (district, province, rural vs. urban)	2006 baseline survey		Done		
National IP/IS strategic plan finalized <b>[SI Partners]</b>	Refers to support provided by the project towards finalization of the national IP/IS strategic.  <b>Unit:</b> N/A	Project progress reports / annually	N/A	2005	National IP/IS strategic plan incomplete	Done	National IP/IS strategic plan implemented	
Participation of stakeholders in IP/IS coordination	This indicator measures the number of stakeholders (including donors) who participate in the Infection Prevention Working Group meetings.  <b>Unit:</b> Number	Project progress reports/ semiannually	Stakeholder (public vs. private)	2004		In progress		

#### Task 7: Monitoring and Evaluation (M&E)

*Objective:* To support the Zambia CBOH to establish a system for continuous monitoring and improvement of injection safety through monitoring the content and process of care, identifying quality gaps, developing and implementing improvement interventions, and continuous reporting of results.

*Activities:*

Indicator	Indicator Definition and Unit of Measure	Data Source/ Reporting Frequency	Disaggregation	Baseline (specify year)	Intermed. Target FY 2006/07	Actual FY 2007/08	EOP Target FY 2008/09	Actual FY 2008/09
a) Develop M&E tools to be used for monitoring at all levels								
b) Support MOH/CBOH and collaborate with other partners to incorporate IP/IS indicators in HMIS								
c) Collaborate with the MOH/CBOH, ZANARA, ECZ, and MCZ to monitor the existing healthcare waste disposal practices								
M&E tools developed	Refers to various instruments developed by the project for data collection and management.  <b>Unit:</b> N/A	Project progress reports/ Annually	N/A	2005	Tools developed and tested	Done	Tools finalized; used for monitoring	
IP/IS indicators included in the HMIS	Refers to inclusion of IP/IS indicators into the HMIS operated by the CBOH.  <b>Unit:</b> N/A	Project progress reports/ Annually	N/A	2005	Indicators identified; CBOH to incorporate in HMIS	Done	Indicators incorporated in HMIS	

## ANNEX B. BEHAVIOR CHANGE COMMUNICATION STRATEGY FOR THE PRIVATE HEALTH SECTOR IN LUSAKA PROVINCE

Target Group: Healthcare Providers Who Prescribe Injections

Behavioral Analysis				Behavior Change Strategy/Activities				
Desired Practices	Current Practices or Problem Behavior	Major Resistances/ Barriers to Change	Motivations and Other Supports to Change	Communication	Training	Supplies/ Equipment	Policy Change	Other
Prescribe injections only when necessary, based on correct assessment (e.g., when there is no equivalent oral medication)	<p>Almost all HCPs have good rapport with clients and two-thirds ask sufficient questions to make a reliable diagnosis</p> <p>The study indicates that approx. 10% of HCPs prescribe unnecessary injections</p>	<p>Few providers have or consult treatment guidelines</p> <p>Some providers prefer injections because they believe patients want them</p> <p>Some providers prefer injections because they feel they work faster, assure the patient gets the full dose, and avoid patients' incorrectly taking oral medicine at home</p>	<p>40 of 109 HCPs felt oral medicine saved them time because patient could take at home</p> <p>Decrease from 9.7% to 5.2% in prescription of injections (for which there is an equivalent oral medicine) in the trials shows feasibility of improvements</p> <p>75% of HCPs welcomed authoritative guidance on best form of medication</p>	<p>Better dissemination of guidelines to facilities and individual providers</p> <p>MISP poster</p>	<p>Providers need orientation on treatment guidelines, focusing on conditions where most unnecessary injections given; need to hear benefits in safety and reduced waste</p>	<p>Facility must ensure sufficient supply of oral medicine</p>	<p>Improvements in guidelines needed</p> <p>MCZ to ensure each facility has the National Drug Formulary</p>	<p>Facility medical directors should review treatment patterns and give feedback on any over-prescribing of injections</p> <p>Observation of prescribing (correct diagnosis and treatment) should be part of supervision</p> <p>Develop a tool to monitor the treatment patterns</p>
Discuss with clients the medication you are prescribing	60% of HCPs were observed discussing treatment options with	58% of HCPs claimed to consult with patients/ families on type of medicine	Patient satisfaction		Providers don't really need training to do this, just orientation			Reinforce this thru supportive supervision

Desired Practices	Current Practices or Problem Behavior	Major Resistances/ Barriers to Change	Motivations and Other Supports to Change	Communication	Training	Supplies/ Equipment	Policy Change	Other
	clients	Attitude of some providers that treatment is their decision and that patient should always accept their decisions			and reminders in staff meetings; practice to be emphasized during training			
Wash hands with soap or used alcohol hand rub before and after examining every patient	About half of HCPs wash or use hand rub before examining patients	With many patients waiting, some HCPs feel they don't have time  No hand washing station with available in room  Irregular water supply in some facilities	Hand washing prevents the transmission of infections	MISP should provide copies of the hand washing reminder poster	Providers don't really need training to do this, just orientation and reminders in staff meetings	Facility must ensure sufficient supply of water, soap, paper or personal hand towels, glycerin rub (if used) and sinks or basins	Each facility should have a hand washing policy that is feasible based on the availability of HW stations, water, soap, towels, and providers' time; using glycerin rub may be included	Reinforce this thru supportive supervision

### Target Group: Healthcare Providers Who Administer Injections

Behavioral Analysis				Behavior Change Strategy/Activities				
Desired Practices	Current Practices or Problem Behavior	Major Resistances/ Barriers to Change	Motivations and Other Supports to Change	Communication	Training	Supplies/ Equipment	Policy Change	Other
Clean your hands before each injection and prepare a clean environment in area where	In observations two-thirds of HCPs did not wash hands and a small	With many patients waiting, HCPs feel they don't have time  No hand washing station with soap	Good (but not spectacular) results in trials indicates that progress feasible for hand washing	MISP should provide copies of the hand washing reminder poster	Providers don't really need training to do this, just orientation and	Facility must ensure sufficient supply of water, soap, towels, glycerin rub	Each facility should have a hand washing policy that is feasible based on the availability of	Reinforce this thru supportive supervision  Adequate staffing of HCPs

Desired Practices	Current Practices or Problem Behavior	Major Resistances/ Barriers to Change	Motivations and Other Supports to Change	Communication	Training	Supplies/ Equipment	Policy Change	Other
you give injections	number do not maintain a clean environment	available in room  Irregular water supply in some facilities  Insufficient motivation/time to clean area	and use of alcohol rub		reminders in staff meetings	(if used) and sinks or basins	HW stations, water, soap, towels, and providers' time; using glycerin rub may be included	
Use a fresh AD syringe for each injection	Virtually all HCPs appear to do this already	No important barrier as long as sufficient AD syringes available	No stock-out problems apparent at present and no reported needle reprocessing			Sufficient AD syringes are essential		Reinforce this thru supportive supervision
Show the patient that you are taking a fresh needle and syringe from the package Prepare and draw your injection in the presence of your patient	Few HCPs do this	Lack of realization that this is a good practice  Shortage of HCPs	Improve staff to patient ratio	MISP poster	Providers don't really need training to do this, just orientation and reminders in staff meetings		MCZ should reinforce to ensure that this is implemented in each HCP facility	Reinforce this thru supportive supervision
Avoid recapping and other hand manipulations of needles — if recapping is necessary, use single-handed scoop	Some HCPs two hand re-capping after injections  A small number of HCPs manually remove the used needle	Some HCPs trained to recap	Avoid recapping is clearly in the HCPs best interest — decreased from 55.3% to 8.5% in trials		Providers don't really need training on this, but there should be an open discussion at a staff meeting about the			Reinforce this thru supportive supervision

Desired Practices	Current Practices or Problem Behavior	Major Resistances/ Barriers to Change	Motivations and Other Supports to Change	Communication	Training	Supplies/ Equipment	Policy Change	Other
technique	from the syringe				dangers of recapping			
Immediately after use, place used needle and syringe into a safety box	<p>In interviews, almost all HCPs claimed to do this, but only 4 of 11 did in observations</p> <p>Many HCPs set down the syringe and needle before disposal</p> <p>Many HCPs leave needles stuck on vial multi-dose vials</p>	In 11 of 15 facilities safety boxes not placed within arm's length of place of injections	<p>Following practice is easy as long as sufficient safety boxes, well-placed</p> <p>Good improvement in not setting down syringe in trials</p> <p>Good improvement but still at 10.7% at end of trials</p>			Sufficient safety boxes are essential		Reinforce this thru supportive supervision
Assemble and fill safety boxes correctly	<p>Half of HCPs do not assemble safety boxes correctly</p> <p>In 3 of 15 facilities HCPs over-filled sharp boxes</p> <p>Some HCPs</p>	<p>Busy HCPs may not take the time to retrieve empty safety box once current one is three-quarters full</p> <p>Facility manager does not purchase enough safety boxes</p>			<p>Some training and practice in assembling boxes seems necessary + orientation on not overfilling</p> <p>Constant orientation</p>			Reinforce this thru supportive supervision

Desired Practices	Current Practices or Problem Behavior	Major Resistances/ Barriers to Change	Motivations and Other Supports to Change	Communication	Training	Supplies/ Equipment	Policy Change	Other
	do not always have safety boxes to use				on IP/IS			
Safe delivery and disposal of all filled up safety boxes by incineration	Many providers do not store boxes in a secure site; supervisors give little attention to stored sharp boxes			Label the sharp box when it is first used.  Time framework put in place for emptying the sharp boxes				
Report needle-stick injuries and seek PEP should one occur	4 of 15 facilities claim staff have received PEP	Poor dissemination of guidelines: only 1 of 15 managers could produce PEP guidelines, although 9 claimed to have them  Some HCPs may be reluctant to report because feel it reflects badly on them  They fear their status will be known	Make available PEP as quickly as possible		Orientation of HCPs on PEP			

## Target Group: Policy Makers, Administrators, Health Managers, and Regulating Agencies

Behavioral Analysis				Behavior Change Strategy/Activities				
Desired Practices	Current Practices or Problem Behavior	Major Resistances/ Barriers to Change	Motivations and other Supports to Change	Communication	Training	Supplies/ Equipment	Policy Change	Other
<p>Indicate your full support for IP/IS at staff meetings and in your budgets and work plans and strategic direction</p> <p>Enforce the law on management of medical wastes</p> <p>Support local manufacture of safety boxes</p>	<p>Only 2 of 15 managers could produce the current national IP/IS guidelines, although 6 claimed to have them</p> <p>7 of 15 facilities had IP/IS addressed in current action plans</p>	<p>Lack of exposure of policy makers</p> <p>IP/IS not seen as a priority</p> <p>Lack of policy guideline</p> <p>Lack of awareness of the provision of key laws</p>	<p>In interviews, managers showed a complete and accurate understanding of IP/IS issues</p> <p>Most facilities are private for profit</p> <p>Presence of the finalized HCWM guidelines</p>	<p>MISP advocacy folder and fact sheet</p> <p>MISP pamphlet on IP/IS</p> <p>Produce a certification document</p> <p>Reminder letter from ECZ on key legal provisions on management of HCW</p>	<p>Include orientation of managers on HCWM in IP/IS training</p> <p>In-service training of staff already in the field</p>	<p>Provision of HCW guidelines</p> <p>Ensure the standardized IP commodities are available at all health facilities</p>	<p>Finalize and implement IP/IS policy</p>	
<p>Organize systematic orientation/ training for staff on IP/IS</p>	<p>9 of 15 claimed that clean staff oriented on IP/IS and HCPs had received some training</p>	<p>Time is the main constraining factor</p>	<p>Staff in management willing to be trained in HCWM</p>	<p>Communicate training needs in good time</p>	<p>Encourage on-the-job training</p>	<p>Ensure availability of IP/IS commodities</p>	<p>Provide policy guidelines on IP for all HCPs</p>	<p>Establish a system of continued on-the-job training</p>
<p>Purchase sufficient key IP/IS supplies and equipment for your facility</p>	<p>IP/IS supplies generally adequate except for color-coded bin receptacles</p>	<p>Lack of information about the sources</p>	<p>Management willing to plan and budget for IP/IS supplies</p>	<p>Produce and distribute standardized list of IP/IS commodities</p>	<p>In-service training and orientation of staff</p>	<p>Ensure availability of IP/IS commodities</p>		<p>Constant supportive supervision</p>
<p>Provide good management and supportive</p>	<p>Most do not provide good management</p>	<p>Lack of knowledge and inadequate</p>	<p>Ongoing staff briefings</p>	<p>Provision of IP/IS supervisory tool or checklist</p>	<p>Orient supervisors and</p>	<p>Ensure availability of IP/IS</p>	<p>Management to abide by the national</p>	

Desired Practices	Current Practices or Problem Behavior	Major Resistances/ Barriers to Change	Motivations and other Supports to Change	Communication	Training	Supplies/ Equipment	Policy Change	Other
supervision for IP/IS	and supportive supervision for IP/IS; 5 of 15 had supervisor checklist or guidelines	supportive supervision			management on importance IP/IS	commodities	IP policy	
Provide adequate stocks of equipment and supplies for IP/IS	Facilities lack adequate stocks of equipment and supplies for IP/IS (except for AD syringes)  There are insufficient safety boxes for use at national, provincial and district levels (all levels)  3 of 15 facilities had separate waste bins for infectious and non-infectious waste	Cost of equipment and supplies  Lack of good orientation on what they should purchase Lack of knowledge about suppliers	Management willing to plan and budget for IP/IS supplies	Produce and distribute standardized list of IP/IS commodities	Orient supervisors and management on importance IP/IS	Ensure availability of IP/IS commodities		
Ensure that the disposal site is well secured and supplied with appropriate and environmentally	5 of 15 waste disposal areas fenced, 2 sites had used needles and syringes lying around	Cost of equipment and supplies  Lack of good orientation on what they should	Visible improvements in waste area may attract more clients	Clear guidelines on waste disposal should be disseminated	Orient supervisors and management on importance IP/IS	Ensure appropriate equipment is available and secured	Management to abide by the national IP policy	

Desired Practices	Current Practices or Problem Behavior	Major Resistances/ Barriers to Change	Motivations and other Supports to Change	Communication	Training	Supplies/ Equipment	Policy Change	Other
sound methods of waste disposal or destruction		purchase						

### Target Group: Cleaning Staff and Environmental Health Technicians

Behavioral Analysis				Behavior Change Strategy/Activities				
Desired Practices	Current Practices or Problem Behavior	Major Resistances/ Barriers to Change	Motivations and Other Supports to Change	Communication	Training	Supplies/ Equipment	Policy Change	Other
Collect each type of waste (needles/ syringes, other infectious, anatomical, and common) in separate containers and place each type of waste in separate, appropriate areas	Few do this now because containers that segregate waste are available in few facilities	This is a new concept to most facilities  Lack of color-coded bins or bin liners  Although some have received training it is not generally complete on IP/IS or standardized Bins are not readily available	This practice protects cleaners, HCP and patients	MISP poster and leaflets	In-house orientation	Ensure availability of adequate bins & bin liners		Reinforce this thru supportive supervision  Ensure regular inspections by MCZ, ECZ, and local authorities
Dispose of each type of waste in an appropriate, safe, and environmentally sound manner	Careless disposal of sharps and other medical wastes in many facilities	Inadequate information and physical infrastructure for disposal	This practice protects cleaners and the public	Reminders posters and stickers				
Always wear PPE: at a minimum,	<40% of waste handlers	In availability of PPEs due to cost and PPEs are	Inadequate knowledge on the importance	IEC through print- stickers and leaflets and		Management to ensure availability of	Develop policy to ensure	

Desired Practices	Current Practices or Problem Behavior	Major Resistances/ Barriers to Change	Motivations and Other Supports to Change	Communication	Training	Supplies/ Equipment	Policy Change	Other
boots and gloves, apron, and goggles if possible	wear any one item of protective equipment (goggles, overalls, facemasks, gloves)	uncomfortable  Some staff reluctant to use PPEs because they make them appear less professional	of using PPE	IPC with supervisors		PPEs	provision and use of PPEs in all private health institutions	
Report needle-stick injuries and seek PEP should one occur ]	4 of 15 facilities claim staff have received PEP	Only 1 of 15 managers could produce PEP guidelines, although 9 claimed to have them  Some HCPs may be reluctant to report because feel it reflects badly on them  Stigma associated with HIV infection if found +ve after needle-stick injury	Availability of testing kits and centers  Availability of PEP drugs	IEC through print- stickers and leaflets and IPC with supervisors  Disseminate PEP guidelines and benefits		Ensure PEP drugs are easily accessible to all		

### Target Group: Patients, Caretakers, and Community Members

Behavioral Analysis				Behavior Change Strategy/Activities				
Desired Practices	Current Practices or Problem Behavior	Major Resistances/ Barriers to Change	Motivations and Other Supports to Change	Communication	Training	Supplies/ Equipment	Policy Change	Other
When an injection is prescribed, discuss with HCP if an	Most accept whatever type of treatment the HCP offers; a	Many clients fear questioning the HCP  About 5% of clients feel an injection is an	Approximately ¾ of community members know the dangers of	IEC needed to address community perceptions re: superiority of	HCPs need orientation to welcome clients' questions	Ensure availability of oral formulation of medicines		Orient NHCs and community leaders about IS and the need to orient other community

Desired Practices	Current Practices or Problem Behavior	Major Resistances/ Barriers to Change	Motivations and Other Supports to Change	Communication	Training	Supplies/ Equipment	Policy Change	Other
oral medication is possible	few request for injection even for ailments that do not require them	essential part of good treatment  More community members prefer injections than oral medicine	injections; many dislike pain of injections and some fear dangers such as abscess or HIV	injections				members
Observe that the HCP uses a fresh needle and syringe for each injection	Few do this because they are not conscious that it is a good practice	Inadequate knowledge on this practice	Existing good relationships between HCPs and patients		HCPs need orientation to welcome clients' questions	Ensure availability of oral formulation of medicines		
Accept injection only from qualified health worker	Injections provided by the patient - self medication (untrained injection givers)	Some people still prefer unqualified providers because of high confidence, convenience, low cost, etc.						
Warn your children to stay away from medical waste	21 of 41 respondents said they had talked to children about this							
Report any non-secure medical waste in your community to a clinic administrator	5 of 41 said that they had seen medical waste in their community	Inadequate knowledge on this practice	Existence of the local authorities at local level	IEC on the importance of reporting all poorly managed site - drama	Orientation of NHC			

Note: Community traditional practices using sharps (to be looked into in future).