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# ASSESSMENT REPORT

## GUYANA SAFER INJECTION PROJECT

MARCH 2005

This publication was produced for review by the United States Agency for International Development. It was prepared by Initiatives Inc.



GUYANA  
MINISTRY OF HEALTH



## **ACKNOWLEDGEMENTS**

Completion of the assessment survey was a significant milestone, as the data built the foundation for all Guyana Safer Injection Project (GSIP) activities. It was conducted under the pressure of time, climate and logistical challenges. We would like to recognize those who effectively and energetically contributed to its completion:

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The information contained in this report is the product of an evaluation conducted by Initiatives Inc. The report was prepared under the auspices of the Technical Assistance and Support Contract (TASC2 Global Health), implemented by Initiatives Inc. under Task Order No. GHS-I-02-03-00040-00 issued by the U.S. Agency for International Development.

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## LIST OF ABBREVIATIONS

AIDS .....	Acquired Immune Deficiency Syndrome
BASICS.....	Basic Support for Institutionalizing Child Survival
BSS .....	Behavioral Study Specialist
CRIV .....	Combined Requisition and Issue Voucher
EPI .....	Extended Program on Immunization
FBO.....	Faith Based Organization
FHI .....	Family Health International
GSIP .....	Guyana Safer Injection Project
GPHC.....	Georgetown Public Hospital Corporation
JSI.....	John Snow Incorporated
MCH.....	Maternal and Child Health
MOH .....	Ministry of Health
MMU.....	Materials Management Unit
NGO .....	Non-Governmental Organization
NISG.....	National Injection Safety Group
PAHO.....	Pan American Health Organization
PEP .....	Post-Exposure Prophylaxis
PEPFAR.....	President's Emergency Plan for AIDS Relief
SIGN.....	Safe Injection Global Network
SIP .....	Safe Injection Plan
SPSS .....	Statistical Package for Social Sciences
STI.....	Sexually Transmitted Infections
UP .....	Universal Precaution
USAID .....	United States Agency for International Development
WHO .....	World Health Organization

# EXECUTIVE SUMMARY

## BACKGROUND

The World Health Organization (WHO) has calculated that globally, 2 million annual needle-stick injuries to health care workers result in Hepatitis B and C and HIV infection. However, the estimate suffers from under-reporting. Interestingly, 90% of the occupational exposures occur in the developing world, while 90% of the reports of occupational infection occur in the United States and Europe. The prevalence of HIV affects the risk of transmission, as does the overuse of injections, supply of equipment and staff, competency of staff and awareness of risk.<sup>1</sup> Addressing the risk factors and making available prophylactic care are the best defense against accidental transmission.

Guyana has the second highest HIV/AIDS prevalence in the Caribbean. Between 1989 and 2000, the incidence of AIDS deaths in Guyana rose from 2.7 to 64 deaths per 100,000 people, an increase of 2,270%. The current estimate of AIDS prevalence among the general adult population is between 3.5% and 5.5%, but a weak national seroprevalence data system casts doubt on the accuracy of the number. AIDS is recognized as the second leading cause of death overall and the leading cause of death for persons aged 25 to 44 years in Guyana.

With a declining economy, Guyana relies on donor support to help prevent HIV transmission and to care for those infected and affected. Its status as a country under the President's Emergency Plan for AIDS Relief (PEPFAR) opens it to additional aid. The USAID contribution to AIDS care and prevention increased from \$200,000 in FY 2000 to \$4.2 million in FY 2003.

Injection safety measures have been introduced largely through the EPI Project. Single-use needles and syringes have been the norm since the 1990s; disposable safety boxes are commonplace for vaccinations and are found generally in health centers. Government policy supports a one needle, one person policy, but no comprehensive policy supports the reduction of unsafe and unnecessary injections.

In 2003 the Ministry of Health (MOH), with the support of the World Bank and PAHO/WHO, carried out an assessment of medical waste environmental management. As a result, a bio-medical waste committee under the leadership of the Minister of Health was created to address the disposal of medical waste. The lack of suitable waste disposal methods, limited burial areas, high water tables and poor infrastructure hamper the development of safe and effective disposal strategies. Inappropriate ordering and distribution by MOH healthcare facilities also results in under-stocking or, at times, stock-outs of specific types of needles and syringes and safety equipment.

This assessment provides an opportunity to identify the current practices, attitudes and knowledge of the community, health facility

staff and clients. Its results will guide the development of a policy, plans and activities to address the determinants of accidental transmission. The assessment was carried out from November 11-19, 2004 by a combination of Guyana Safer Injection Project (GSIP) staff, MOH staff, and retired and private nurses from the selected regions. The database was created by a staff member from Family Health International (FHI), a GSIP partner organization. The analysis was done by a team comprised of Initiatives and subcontractor technical staff.

## METHODS

The instruments used in the assessment were adapted from the standard WHO/BASICS assessment Tool "C", as recommended by the Safe Injection Global Network (SIGN). In all, the survey had 13 sections including interviews, observations and record reviews to assess injection and prescription practices, supervision, waste handling, laboratory and dental clinic practices, logistics and client attitudes. The actual number of instruments used at each site varied with the services and staffing patterns at the sites.

The convenience sample covered five regions representing a cross section of demographics, geographic settings, infrastructure challenges, services, and private and public ownership. Four teams, comprised of two field investigators and one GSIP staff member, collected the information. Injection and sharp waste disposal practices were observed in 51 sites: 38 public health centers and hospitals, one dental school and 12 private providers or facilities. The

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<sup>1</sup> Wilburn, S., and G. Eijkemans. *Preventing Needle-stick Injuries among Healthcare Workers: A WHO-ICN Collaboration*, INT J Occup Environ Health 2004; 10-451-456.

commodity management questionnaire was conducted in a sub-sample of 21 public facilities. The data was entered using Epi InfoVersion 6.04d and exported to SPSS version 12.0 for analysis.

## RESULTS

Disposable needles and syringes were used in all 51 sites visited. In total, a physical review of records revealed that 23,638 injections were given over the last three months: 55.5% for curative care, 39.6% for vaccinations, and 4.9% for family planning. Based on exit interviews the annual number of injections per adult is 1.9; but the rate drops to 1.6 when Georgetown Public Hospital Corporation respondents, where high rates of injection are typical, are removed.

The sample size for the following results varies with the services and staffing patterns available at each site.

Thirty-nine supervisors were interviewed, the majority at public facilities. Guidelines help staff understand the proper procedures or steps to follow in carrying out tasks or taking protective actions. The survey found written procedures for Universal Precautions in 5% of the sites (2/38), 26% of the sites stated availability for HIV/AIDS Post-Exposure Prophylaxis (PEP) (10/39), but in reality it was physically found in only 5/36 sites. Written procedures for administering injections were found in 22% of the sites (8/37), and 13% had guidelines for sharps and health care waste disposal (5/38). Needle-stick injuries were reported to have occurred at 16% (6/38) of the sites but incident registers were only found in 16%

of the MOH facilities (6/38), and to date none had a recorded entry. Only 28% of the supervisors (11/39) reported availability of HIV/AIDS PEP drugs on-site, although in reality they were found in 8/39 sites.

The availability of appropriate equipment is a prerequisite for safety. Stock-outs of the complete range of syringes were not observed for injection equipment in health facilities, but previous investigation revealed that the appropriate sizes of syringes and needles could not be assured. Containers for sharps waste were available at nearly all health centers, but they were improvised and of variable quality in many of the hospitals.

Twenty-one facilities were included in the commodity management interviews. In 60% of the facilities (12/20), no standard formula was used to reorder syringes for curative services to prevent stock-outs. In 25% of the cases (5/20), facilities merely estimated the number of syringes required to serve an expected number of patients during the next review period. Ninety-five percent of facilities (19/20) did not include sharps boxes in curative care orders.

To assess compliance with safe practices, 38 injection providers were observed giving an injection. Twenty-six percent of the providers (10/38) washed their hands before preparing injections. Recapping needles was observed in 8% of staff (3/38), even though government policy is against recapping. Eight percent of staff (3/38) manually separated the needle from the syringe before disposal. Eighty-seven percent of the providers (33/38) removed the

needle and syringe from a sealed packet in front of the patient.

Forty-five waste handlers were interviewed in MOH facilities, of those 12/39 respondents (31%) reported being stuck by a used needle at least once in the past year and only 28% (11/40) reported wearing puncture-resistant gloves while 65% (26/40) wore closed shoes to protect themselves. Hazardous waste was segregated from non-hazardous waste in 93% of these sites (40/43) but only 19% of waste handlers (8/43) had received any form of training in proper disposal practices. Awareness of disease transmission risks from used injection equipment was 76% for HIV (31/41), 10% for hepatitis B, and 0% for hepatitis C. In only 48% of the facilities (20/42) were disposal sites separated from animals and the community. Some form of incineration or closed oven burning was found in 32% of the sites while 37% of facilities burned their waste in the open, exposing the community and staff to additional risks. Used sharps were observed around the disposal site in 7/37 facilities (19%).

Thirty-six prescribers consisting of medex,<sup>2</sup> where available in health centers, and physicians, predominantly found in hospital or private clinics, were interviewed from both the public and private facilities. Injection use increases the risk of needle-stick injuries. A total of 720 prescriptions were reviewed; 135 (19%) of prescriptions included at least one injection. Perceptions can

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<sup>2</sup> Medical extension worker, qualified as a nurse and having 18 months of clinical training. Medex can make prescriptions in Guyana and as such are included in the prescriber category for the purposes of this survey.

influence the type of medication prescribed. Thirty-six percent of prescribers believed that their patients preferred injections for febrile illness, but only 14% of the clients (22/160) between the ages of 15-49 expressed this opinion. Although 97% of prescribers (33/34) were concerned about HIV transmission via used injection equipment, the concern for hepatitis B was only 56% (19/34) and 35% for hepatitis C (12/34). Patient knowledge was high, with 97% spontaneously reporting HIV as a transmission risk.

Fourteen laboratories/phlebotomy areas and eight dental clinics were included in the assessment. Stock-outs of sharps containers occurred more frequently in these services than in health centers and hospitals. Laboratories reported experiencing stock-outs of sharps containers in 6/14 sites (43%); dental clinics are more apt to re-use plastic containers (3/8), emptying these containers is a potentially risky practice for waste handlers. Staff from 3 of 7 dental clinics stated they had had needle-stick injuries in the past year. In laboratories, 3 of 13 sites reported a total of eight needle-stick injuries in the past year.

## CONCLUSIONS AND RECOMMENDATIONS

The results of the survey support the need for a national policy on safe injection and healthcare waste management, the final goal of which should be a reduction in the risk of disease transmission to staff, patients and the community. The policy should articulate the steps needed to improve injection practices, standardize prescription records, streamline commodity procurement and distribution, and

improve the safety of healthcare waste management. It should also address the creation of the following:

### POLICY

- *Access to PEP information* should be guaranteed at all facilities and communicated to health care staff; a source of PEP drugs should be available within reasonable distance of all health facilities to ensure treatment within the two hour MOH-recommended timeframe. A systematic approach to needle-stick recording should be encouraged and reviewed at the national level.
- *Pre- and in-service training* on universal precautions, disease transmission and the benefits of oral formulation versus injectable medication usage, as well as medical waste disposal safety, should be built into professional schools and continuing education programs for relevant audiences.
- *Health care waste management plans*, approved and monitored by the National Safe Injection Group (NISG), should be a standard requirement for each facility.
- *A national policy on health care waste management* is needed to articulate proper procedures for treatment and final disposal of medical waste, as well as to provide a framework for supervision and management oversight. Clear guidelines are needed for supervising injection providers and waste management staff.
- *Protective barriers* for waste handlers should be a standard provision at health facilities along with prophylactic hepatitis and tetanus treatment.
- *Standards* for injection provision, universal precautions, waste handling and commodity management and PEP should be available at all facilities.
- *Continual review of the essential drug list* to ensure adequate provision of and support for oral formulation alternatives should be ensured.
- *Monitoring data* should be collected nationally on injection use, waste management, needle-stick injuries and the availability of PEP. Norms should be identified and data reviewed against the standard. The analysis should facilitate the development of action plans to address weaknesses.
- *Private sector providers and facilities* should be provided with MOH standards.
- *The right of protection against accidental exposure to transmission of HIV/AIDS* infection should be guaranteed for all workers.

Additional recommendations for activities to improve the safety of injections include:

### SAFE INJECTION SUPPLIES

- The applicability of auto-destruct needles and syringes and cost should be explored

for use in infectious wards and STI clinics.

- Curative medications should be ordered with the proper number of syringes, needles and safety boxes.

#### COMMODITY MANAGEMENT

- *The revised MOH procedures for reordering and recording/reporting stock transaction data* should be adopted by all healthcare facilities to ensure proper forecasting.
- *Safe injection-related supplies, including safety boxes, should be reordered and reported using the new MOH reordering and reporting forms* to ensure consistent supply.
- *Training on proper inventory control, reordering, warehousing and distribution* should be provided to health care facility personnel involved in commodity management through existing government in-service training and continuing education programs.
- *The program for improved capability of the MMU to accurately forecast nationwide need for safe injection supplies and better planning and monitoring of their procurement* should be continued.

#### WASTE DISPOSAL

- *Coordination between organizations supporting waste management initiatives in the health sector* should be strengthened to avoid

replication, ensure consistency of practices, and improve the economic efficiency of health care waste disposal projects.

- *Training on health care waste management, including safe disposal procedures, the purpose and practice of segregation, proper use of essential equipment and supplies (including safety boxes and needle cutters), and the potential risks of improper handling, treatment, storage and disposal* should be a pre- and in-service requirement for waste handlers, supervisors and providers.
- *Protective clothing for waste handlers* should be a requirement for service. Waste management supplies including basic waste segregation supplies, such as safety boxes, covered, color-coded waste containers, non-PVC color-coded bin liners and cleaning products, should be included in facility budgeting and ordering.
- *Training to increase staff awareness of the importance of wearing protective clothing consistently, and supervision guidelines to ensure compliance*, should be developed.
- *Effective safe final disposal options* are needed. A plan for outlining segregation procedures, handling of safety boxes and infectious waste, transport and final disposal should be developed for each facility. Budget allocations to fund improvements to final

disposal systems for health care waste should be considered.

#### BEHAVIOR CHANGE

- *Community awareness efforts* should focus on increasing demand for oral medication, while raising awareness of potential risk of disease transmission through used injection equipment.
- *Provider training and prescriber advocacy approaches* should be used to encourage client use of oral formulations where possible.
- *Job aids* should be developed for health care workers and waste handlers to promote awareness of and compliance with injection safety, PEP and sharps disposal procedures.
- *Peer education opportunities* among waste handlers and waste carriers should be explored to encourage consistent use of safety gear and compliance with safe waste-handling guidelines.
- *Health Care Professional organizations* should use publications and meetings as vehicles for promoting rational use of injections, PEP and injection safety at the workplace.
- *Collaboration with local NGOs and FBOs* should be explored to develop strategies to further SIP objectives.

# I. INTRODUCTION

## GUYANA IN CONTEXT

The state of injection safety and potential for improvement in Guyana need to be viewed against the country's social, economic, geographic, human resource and health service circumstances. Guyana is the third smallest country in South America totaling 215,000 square km, 80% of which is covered by rain forest. The country is divided into ten administrative regions. Eighty-seven percent of the population is clustered along the four coastal regions, while the largely inaccessible interior is sparsely populated by Amerindians. The word Guyana actually translates to 'the land of many waters', and the high water tables and large number of rivers and lakes affect both access to regions and services and finding suitable, safe waste disposal options.

Guyana, also one of the poorest countries in the western hemisphere, has a per capita GNI of US\$900 and ranks 104 out of 177 nations on the Human Development Index (2004), a drop in its prior year's rating. A 1998 study<sup>3</sup> found Guyana had the highest emigration rate in a sample of 61 developing countries, and that more than 70% of those leaving had a tertiary education. In 2002 alone, 1.4% of the population emigrated to the U.S.<sup>4</sup> Guyana's net out migration rate of 2.07 results in a 'brain drain' to the region and developed countries,

<sup>3</sup> Carrington, William J. and Enrica Detragiache, *How Extensive is the Brain Drain*, Working Paper WP/98/102, pp. 1-27, July 1999.

<sup>4</sup> 2004 Bureau of Western Hemisphere Affairs.

which adversely impacts the skilled service industry, including education and health care.

### GUYANA STATISTICS

*Population:* 742,041 (2002 census)

Indo-Guyanese: 50%

Afro-Guyanese: 36%

Amerindian: 7%

Other: 7%

*Size:* 215,000 sq km

*Per capita GNI:* \$900 (2003)

*Net Migration Rate:* -2.07 (2004)

*HIV Infected:* 18,000 (2004)

### GUYANA AND PEPFAR

PEPFAR was introduced in 2003 with the goal of treating 2 million HIV-infected people, preventing 7 million new infections, and caring for 10 million HIV-infected people and AIDS orphans. Worldwide HIV infections due to unsafe injection practices or overuse of injections are estimated to be 80,000 to 160,000 infections annually. Injection safety programs attempt to block a small but highly preventable mode of transmission and as such are being addressed in the 15 PEPFAR countries.

The Caribbean has the highest HIV rate outside of Africa, and Guyana is second only to Haiti in the region. By the end of 2001, 2,185 cases had been reported but under-reporting is believed to be widespread and the number of cases growing. The current estimate is that 18,000 people have HIV<sup>5</sup>; the prevalence estimate among the general adult population is between 3.5% and 5.5%. AIDS is currently the second leading cause of death overall and the leading

<sup>5</sup> 2001 estimate, UNAIDS.

cause of death for persons aged 25 to 44 years in Guyana.

### A GLOBAL RESPONSE TO SAFE INJECTIONS

Injections are safe when they pose no threat to the provider, facility staff, client or community. This requires the use of sterile needles, clean preparation surfaces, and immediate and proper disposal of used devices as well as an effective and safe method of final disposal to avoid accidental transmission of blood-borne disease. The risk of accidental transmission increases with the number of injections provided, as the potential for needle-stick accidents grows with each injection. Risk is also affected by the adequacy and appropriateness of injection equipment, the use of sharps containers, the level of staffing, and the incidence of recapping, the awareness of risk, and the effectiveness and availability of training.

The Safe Injection Global Network (SIGN), comprised of international organizations, governmental organizations, consumer groups and health workers, was formed to address injection safety. Its plan focuses on three main strategies:

- Behavior change to ensure rational injection use and promote safer practices.
- Provision of a sufficient and continuous supply of injection equipment and infection control supplies.
- Promotion of safe and appropriate waste management practices.

SIGN has developed a plan of action to assist countries in developing a sustainable approach to improving injection safety. The action plan is based on data gathered through country assessments that reveal the status of injection use and practices, commodity management, waste disposal, and knowledge and attitudes toward injections. The data from the assessment provides input into the development of policy, action plans and norms and standards to design and monitor safe injection activities.

## **INJECTION USE IN GUYANA**

Injection use is guided by the presenting condition, the availability of alternative oral formulations of medicines, and knowledge and attitudes of both clients and prescribers. According to this assessment, the average Guyanese adult receives 1.9 injections per year, dropping to 1.6 without the respondents from the national hospital. This is in line with other studies in the Latin American region where the average number of annual injections is listed as 1.7, with a low of 1.6 and a high of 1.8.<sup>6</sup> Children under 5 receive 4.23 injections annually, most of which are immunizations. In the 51 sites surveyed during this assessment, 23,638 injections were given in past three months: 55.5% for curative care; 39.6% for vaccinations and 4.9% for family planning.

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<sup>6</sup> Hutin, Yvan J F; Anja M Hauri; and Gregory L Armstrong. *Use Of Injections In Healthcare Settings Worldwide, 2000: Literature Review And Regional Estimate*. Department of Blood Safety and Clinical Technology, World Health Organization, Geneva, 2000.

Rational use of injectables is another factor in decreasing the risk of needle-stick injuries. In a review of 720 prescriptions in this survey, 19% (135) included the prescription of at least one injection. Among prescriptions with any injections, the average was 1.2 injections per prescription.

## **INJECTION SAFETY**

The growing rate of HIV infection in Guyana is an indication that all efforts to reduce potential spread through contaminated injection equipment should be seriously pursued. Guyana has the foundation upon which a strong safe injection program can be built. All facilities use disposable needles and syringes, lessening the risk from improper sterilization of injection equipment. Injections are provided by trained nurses or physicians and generally occur in public and private health centers and hospitals. EPI programs have promoted the importance of one needle per client. In addition, the EPI program has provided injection equipment and sharps containers in sufficient numbers to ensure safe disposal of vaccination equipment in health centers, although sharps containers for curative care injections are not routinely ordered.

However, supply factors within the EPI program alone cannot ensure observance of proper practices. Facilities are often understaffed, supervisors are overloaded, policies, standards and supervisory guidelines are lacking, and infrastructure limitations as well as non-compliance with Universal Precautions (UP) practices sometimes results in improper injection techniques or inadequate disposal modes. Hospitals more typically use improvised safety

boxes of variable quality and do not maintain an adequate supply of the desired size syringes for curative services. In addition, awareness of the risk of disease associated with used injection equipment must be shared by the health staff and the general community to reduce the risk of infection for all.

## II. STUDY DESIGN

### GOAL

The development, based on data, of a comprehensive strategy to improve rational use of injections and increase safe injection and waste disposal practices in Guyana.

### OBJECTIVES

- To determine the system-related determinants of safe injection practices
- To identify provider practices that contribute or detract from the safety of injections
- To identify the extent, appropriateness and rationale for prescribing injections
- To identify the waste management system weaknesses and strengths
- To identify client-related determinants of injection use
- To provide a baseline against which to measure progress

## SAMPLING STRATEGY

Injection and health care waste disposal practices were observed in 51 sites: 11 MOH hospitals, 27 health centers, one dental school and 12 private facilities. Thirteen instruments were used to gather data on injection use, injection providers and their practices, waste handlers, dental clinics, laboratories, public and private prescribers, prescriptions, the community, and the commodity management system. The tools were adapted from the WHO/BASICS assessment Tool “C” and strengthened by input from technical experts in waste management and logistics; the dental tool was added at the suggestion of the MOH. Using a convenience sampling strategy, sites were selected from 5 of Guyana’s 10 regions, representing 26% of the population and a cross-section of the large and small population base, rural and urban settings, those with easy accessibility and those with poor accessibility, those connected to hospitals and those free-standing, those with MCH centers and those providing only curative care. Consideration was given to select regions which had substantial representation of the three major

ethnic groupings in Guyana. Facilities were selected based on meeting one or more of the following criteria:

- the presence of a prescriber on staff;
- potential for being included as a demonstration site;
- logistically feasible;
- district or large hospital;
- and in the case of private facilities or physicians, the consent of the establishment.

Private providers are almost exclusively found in the coastal regions. This immediately eliminated all health posts, as injections are not provided at these part-time facilities. It was felt such sampling would give a better understanding of the practices, knowledge and attitudes from the full range of social, cultural, economic, and health conditions in Guyana and provide data to help the MOH develop a comprehensive policy and plan of action.

**Table 1: Sampling Description**

<i>Region</i>	<i>Eligible MOH Hospitals</i>	<i>MOH Hospitals Included</i>	<i>Eligible MOH HCs</i>	<i>MOH HCs Included</i>	<i>Private Providers Included</i>
3	4	3	15	9	1
4	1	1	29	10 <sup>7</sup>	4
6	4	4	14	5	4
7	2	1	3	0	0
10	3	2	13	3	3

<sup>7</sup> The 51<sup>st</sup> site was the dental school.

The data sample for the logistics section was confined to 21 key hospital and health centers from the larger survey. The selected facilities represented a range of sizes, locations and cluster models (linkage of health centers and a referral hospital) to provide information on the present systems used for forecasting, ordering, receiving, storing and reordering supplies. The data will facilitate system improvements at the central and facility level.

### **IMPLEMENTATION: DATA COLLECTORS**

The Regional Health Offices from four of the five regions (excluding Region 7) included in the survey recommended skilled nursing staff to assist in the data collection. Eight active and retired nurses were selected based on their knowledge of the respective regions as well as their familiarity with prescriptions and injection procedures. They were trained over a three-day period, initially in the classroom and later in the field. Role plays were used to help them approach potential respondents and understand the meaning of the questions they were to pose.

Two field tests were organized to give all a chance to use the instruments before the actual data collection started. Opportunities were provided to give feedback and allow additional discussion. The nurses used vacation or compensation time and GSIP paid their daily expenses and provided transportation and lunch. GSIP staff was trained to answer questions and review data collected on a daily basis. The data for the logistics section was collected by a GSIP staff member

trained by the technical consultant from John Snow Incorporated (JSI).

### **DATA COLLECTION AND ANALYSIS**

Four teams, each consisting of two field investigators and one GSIP staff member as team leader, collected the information in five regions. Each team was responsible for a single region, except for one group that collected data from region three and seven. Data collection began on November 11th, 2004 and continued until the 19th. Data was checked by the GSIP team leader on a daily basis. The logistics portion was collected during the same period by the GSIP staff member.

A Behavioral Study Specialist (BSS) staff member from FHI, a subcontractor on the project, created the database and analyzed the findings. The data was entered using Epi Info Version 6.04d and exported to SPSS version 12.0 for analysis. Most data was entered by two contracted data entry consultants, with the portion on prescriptions entered by GSIP staff. The analysis of the findings was prepared by key technical consultants from the subcontractor and Initiatives staff. The logistics data was calculated and analyzed by the JSI commodity management specialist, who also designed the assessment section on logistics.

### **LESSONS LEARNED IN STUDY IMPLEMENTATION**

The teams kept to a strict schedule and were able to reach all sites and gather pertinent data. One private physician refused to participate and one health center was dropped because the health center staff was

on outreach visits; another two centers were omitted due to logistical barriers. The presence of local data collectors helped to gain the cooperation of the staff and community and in locating relevant registers. Interviewees were cooperative and willing to give of their time even with busy patient schedules, and clients were quite willing to participate.

The greatest obstacle was collecting information on prescriptions and the number of injections given. Record keeping was inconsistent, extending over several different record-keeping systems, which had to be cross-referenced. In some situations, records were misplaced or lost; information on injections provided was often not recorded if the patient belonged to another health center catchment area. In some cases, if the medex was on leave or itinerant, the records were also not available. Difficulty in getting information is reflected in the inconsistent denominator listed in the indicator findings.

### III. RESULTS

#### FIELD WORK RESULTS

Assessment data was collected from a total of 51 health facilities. The number of interviews, observations and record reviews varied at each site in conformity with the services offered and staffing patterns.

#### RISK TO INJECTION RECIPIENT

The conditions that increase risk to clients receiving injections include the competency of the injection provider, the provider's compliance with universal precaution standards, the presence of adequate and appropriate injection and disposal equipment, and the number of injections provided.

*Competency and Context.* Injections are provided by trained nurses, graduates of accredited schools in which they were trained to administer injections. Alternative or traditional forms of medicine are not widely used; only 2% of clients (3/188) reported receiving injections outside of the clinic or hospital at a local pharmacy. Also, it is rare for clients to purchase their own injection equipment.

*Training and Support.* Reinforcement of provider performance through written standards on injection procedures is only found in 22% (8/37) of the sites. Supervision, also important to maintaining performance, is stated to occur in 53% (20/38) of the public facilities but the definition of supervision is not standardized. Only 37% (14/38) of providers reported having had training on universal precautions in

the last three years; a finding reinforced by the fact that only 26% (10/38) of providers were observed washing their hands before preparing an injection.

*Injection Practice.* Disposable injection equipment has been available since the 1990s. There is no reported re-use or stock-outs of injection equipment, although the appropriate size needle and syringe may be lacking, causing nurses to use larger than necessary syringes. This, in turn, affects the accuracy of the measurement of medications, a fact determined in a pre-survey data collection. Ninety-two percent of the clients who responded (153/166) remembered that their last injection was given with a new, sterile needle and syringe removed from a sealed packet in front of them.

**Table 2: Number of Instruments Administered per Staff**

Survey Form	Survey Method	Target Group	Number Administered
1	Interview	Supervisor	39
2	Interview	Injection Provider	43
3	Observation	Injection Provider	38
4	Interview/Observation	Waste Handler	45
5	Interview/Observation	Laboratory	14
6	Interview/Observation	Dental Clinic	8
7	Interview	Prescriber	36
8	Review	Prescription	720
9	Interview	Client	188
10-13	Logistics	Interview	21

*Prescriptions.* In the past three months, surveyors counted 23,638 injections in facility record books; of those 55% were for curative

care. Injections were prescribed in 19% of the 720 prescriptions reviewed (135/720). These 135 injections represented an average

of 1.2 injections per prescription. One-hundred and sixty clients, age 15-49, reported receiving 154 injections in the last 6 months,

corresponding to 1.9 annual injections per client. However, this information is skewed by one site, the Georgetown Public Hospital Corporation (GPHC), where six clients interviewed reported receiving a total of 33 injections. Without the GPHC data, the annual rate for injections in Guyana is 1.6 (121/154).

## **RISK TO INJECTION PROVIDER**

The injection provider is put at risk if there is a lack of protocols; proper injection and sharps disposal equipment; preventive and post-exposure prophylaxis; in-service or refresher education; and supervisory feedback to monitor performance.

*Support.* In contrast to the responses of the supervisors, providers in only 14% of the facilities (5/36) were able to present PEP procedures; and 21% (8/39) stated they had access to PEP drugs onsite. Sixty percent of providers interviewed (25/42) stated they had received three doses of hepatitis B vaccine, leaving 40% unprotected. Sixteen percent (6/38) of supervisors reported that they keep a log of needle-stick injuries. In contrast, 22% (8/36) of providers reported receiving a needle-stick injury in the last year, none of which were recorded, although government policy requires recording of these events.

*Training.* Written universal precaution standards were in evidence in 5% of facilities (2/38), and only 37% of providers (14/38) had received training in the past three years on these life-saving procedures.

*Compliance.* Contrary to the written injection procedures

available in 22% of facilities (8/37), 8% (3/38) of injection providers observed continue to use the risky practice of removing needles from syringes before disposal, and 8% of providers (3/38) recap needles before disposal, despite a government policy against recapping. Only 26% washed their hands (10/38) before giving injections, putting themselves and their patients at risk.

*Commodity Management Supply Sites.* The array of forms, multiple sources, and lack of standardized processes for ordering directly impact the availability of appropriate supply. Of those hospitals that responded, almost all receive their syringes for curative services from the Materials Management Unit (MMU) (5/6). Public sector health centers, on the other hand, may receive their syringes from a variety of sources. For the vaccination program, the Maternal and Child Health (MCH) department of the MOH supplies all facilities (12/12). For curative services and family planning, the sources include the MMU (8/12); the regional bond or warehouse (3/12) and a nearby hospital/health center (1/12).

*Commodity Management Ordering Practices.* Nearly all hospitals and health centers are responsible for determining the amounts of syringes to reorder for curative services, family planning and vaccinations. The reorder interval depends on the program and source of the commodity. For curative services, if MMU is the source, the reorder interval is almost always quarterly. If MMU is not the source, the reorder interval is generally monthly. In the case of vaccinations, the reorder interval is almost always monthly.

The MOH Combined Requisition and Issue Voucher (CRIV) is used practically universally to request syringes for curative services from the MMU (19/20). Health Centers that request syringes from a facility other than the MMU use a variety of forms to request re-supply. In the case of vaccinations, an existing monthly reporting form includes a section for vaccine and syringe requests.

There is no uniformity in the methodology used to calculate the amount of syringes to reorder for curative services or family planning. Some healthcare facilities will order the same amount each time no matter what they have in stock (6/20) while others will only reorder when they believe they do not have enough to last another reorder interval (4/20). Finally, some facilities will only order re-supply of syringes for curative services and family planning when they have stocked out (1/20). The remaining use some form of a predetermined formula.

Safety boxes are only supplied through the vaccination program and are normally packaged along with syringes whenever the vaccines are re-supplied. Curative programs must order safety boxes separately from medications, typically leaving curative programs without safety boxes.

*Commodity Management Training.* Nearly all staff responsible for reordering supplies at healthcare facilities were trained in using the CRIV (17/21); however, for most this training took place more than two years ago (14/21).

Many of these same staff have also been trained to complete the recently revised CRIV (13/21) but use of the form is still inconsistent;

half do not possess the form and 13/21 do not use the new form.

The survey results showed that only a small portion of healthcare facilities (33%) complete a monthly consumption report for syringes (6/21), and nearly none complete it for safety boxes. On the other hand, almost the same percentage is aware of the existence of a revised consumption report.

## **RISK TO WASTE HANDLER**

The waste handler's awareness of disease transmission risk through used injection equipment, and training in proper waste management procedures, including the use of protective barriers, constructive supervision and adequate mechanisms for effective and safe disposal, are critical to prevention of accidental sharps injury.

*Awareness.* Seventy-six percent of waste handlers (31/41) knew that HIV can be transmitted via used syringes and needles, but only 5/41 (12%) knew that hepatitis B could be transmitted and none were aware of the risk of hepatitis C transmission. Six out of 41 waste handlers (15%) could not name any diseases that could be transmitted through used injection equipment.

*Training.* Of those who responded, 8 of 43 waste handlers (19%) reported that they had received training in waste management and the risk of disease transmission through used needles and syringes. Twenty-six of 40 waste handlers

(65%) questioned about wearing protective clothing reported that they wore closed shoes or boots. Eleven of 40 (28%) claimed that they wore gloves that resist puncture, and 6 of 40 (15%) reported wearing clothing that prevents puncture.

*Procedures.* Twelve out of 38 health centers visited (32%) reported that written procedures on sharps or health care waste disposal had been drafted for their facility, but only 5 of the facilities (13%) actually had written procedures available on site.

*Waste Management.* In 93% of the facilities visited (40/43), waste generated from curative injections is separated at the point of origin into one of two categories: sharps and non-sharps. In health centers, sharps are most often disposed of in safety boxes. In hospitals, the disposal containers are more often improvised, and may be either cardboard boxes or plastic bleach containers with holes cut in the top. Several facilities were seen to have state-of-the-art disposable plastic safety boxes, but contents were often emptied into a second box for final disposal and the plastic container reused.

In an improvised or standard form, safety boxes were available in injection rooms in 95% of facilities (40/42) and 86% of injection providers (32/37) were observed disposing of sharps in a puncture-resistant container immediately after an injection. Ten percent of safety boxes (4/39) were overflowing, pierced or open.

Sources for the supply of safety boxes for curative programs are not consistent. In health centers, where numbers of curative injections are low, EPI safety boxes are used for curative sharps, if they are available. Other centers used improvised, sometimes unreliable, safety boxes.

A pre-survey assessment revealed that most disposal bins for non-sharps waste are not lined, and very few of them have lids. Bins and buckets used for collection are not labeled as biohazardous. In this survey, 11% of the facilities (4/36) were found to have a color-coded system for separation of different types of waste, although none of the waste handlers could fully describe the difference between the colors and the types of waste to which the color corresponded.

Final disposal systems varied, as shown in Table 3. Note that the term "incinerator" is used loosely, and refers to controlled burning in any type of structure, including traditional incinerators, open and closed burn boxes, or barrels.

Several clinic attendants and porters were not particularly aware of the dangers of accessible infectious waste and the necessity of keeping disposal areas closed to the community and scavenging animals. Sharps were observed around the waste disposal site or health center in 19% of health facilities (7/37), an issue both for staff and the community.

<i>Interviewee</i>	<i>Type of Waste</i>	<i>Incinerator</i>	<i>Open Burning</i>	<i>Offsite</i>	<i>Hospital</i>	<i>Other</i>	<i>No Reply</i>
<i>Waste handlers</i>	Sharps	12/38 (32%)	--	7/38 (18%)	6/38 (16%)	2/38 (5%)	11/38 (28%)
<i>Waste handlers</i>	Non-sharps	13/43 (30%)	16/43 (37%)	7/43 (16%)	--	2/43 (3%)	5/43 (12%)
<i>Laboratory staff</i>	Sharps	5/14 (36%)	2/14 (14%)	2/14 (14%)	1/14 (7%)	1/14 (7%)	3/14 (21%)
<i>Private providers</i>	Sharps	5/11 (10%)	3/11 (25%)	9/11 <sup>8</sup> (18%)	--	--	--

## **RISK TO COMMUNITY**

The risk to the community is directly affected by their knowledge of disease transmission risks through used injection equipment, attitudes toward injections, and the safety of waste disposal practices and unnecessary prescription of injections either through provider insistence or client demand.

*Awareness.* In this survey, 97% of the clients who responded (148/153) stated they were aware that used injection equipment could transmit HIV infection. Similarly, 97% of prescribers (33/34) were concerned about HIV transmission through used injection equipment. In contrast, only 35% of prescribers (12/34) were concerned about the potential of hepatitis C transmission and 56% (19/34) were concerned about the transmission of hepatitis B.

*Demand.* In exit interviews, 65% of the clients between the ages of 15 and 49 reported a preference for

oral medications in the case of fever (104/160), 14% favored injections (22/160), and 5% were non-committal (8/160) and of those present with children, 12% (7/58) said they preferred injections for their children in the same situation. This differs sharply from the 36% of prescribers (12/33) believing clients prefer injections in the case of fever and 36% believing that they prefer oral formulations over injections (12/33). In practice we found that 135 prescriptions out of 720 listed at least one therapy involving injection, and for each of those prescriptions the average was 1.2 injections per prescription.

*Safety.* In 48% of facilities (20/42) the waste disposal site was removed from the community and animals but not fenced. Of those clients who responded to this issue, 6% reported they see used injection equipment lying around the health center (11/185) and 7% reported used injection equipment in the community (13/186). Survey team inspection of waste sites at the facilities found used sharps lying outside the disposal area in 19% of the sites (7/37). Incinerators or closed ovens

accounted for 32% (12/38) of sharps waste disposal and open burning for 37% (16/43); the river was used as the disposal site in one instance (3%). All of these methods pose environmental and health problems as well as security risks for community members.

## **RISK TO OTHER SERVICE PROVIDERS**

### **PRIVATE FACILITIES**

PEP written procedures were found in 2 of the 12 sites. Sharps containers were seen to be open, pierced or overflowing in 2 of 12 private clinics. Waste bins were lined with plastic in 7 out of 12 clinics, but none of the plastic liners were color-coded to distinguish infectious and non-infectious waste. Only three providers had had UP training in the past three years. In observations of providers in the private sector, only 7 of 12 washed their hands before giving an injection. Two of 12 did not open the needle and syringe packet in front of the patient, 1 of 12 removed the needle from the syringe before disposing of it and one recapped with one hand. Only

<sup>8</sup> For private providers, the options are not mutually exclusive; they may burn and still remove remains offsite.

four providers received three doses of hepatitis B vaccine.

#### **DENTAL**

All eight dental clinics surveyed reported that infectious and non-infectious waste is separated. Only three of the clinics reported that waste bins were lined with plastic and none of the plastic waste liners were color-coded. Half of the eight dental clinics reported needle-stick injuries in the past year. Four of seven dentists responding stated they had had universal precaution training in the past three years.

#### **LABORATORY/ PHLEBOTOMY AREAS**

In the 14 sites visited, six reported stock outs of sharps containers. Only 3 of 14 had PEP procedures available, while 3 of 13 reported the occurrence of needle-stick injuries in the past year. Only two out of nine had any system for recording needle-stick injuries. Universal precaution training was confirmed by 10 of 14 sites.

## IV. DISCUSSION

Guyana has made significant advances in injection safety with the introduction of plastic disposable equipment in the 1990s, which negated the need for sterilization of reusable glass syringes and metal needles. Yet needle-stick injuries continue to be an issue in all service areas and for many categories of staff and with it, the risk of disease transmission.

### STAFF SAFETY

The survey points out that the safety of staff is compromised by the absence of a training and supervision system. A systematic approach to training requires a delineation of tasks and clear standards or protocols upon which to base and monitor performance either through self-assessment or external monitoring to ensure compliance with accepted practices. Anecdotal evidence shows us that job descriptions are not commonplace in the health system. Based on interview data, guidelines for administering injections are present in only about one-fifth of the sites, and supervision of injection providers, although reported, is not clearly defined. Nationally, the absence of pre- and in-service training for staff means that continual updates on injection and universal precaution procedures to reduce transmission risk are not being addressed.

Reducing the number of injections is the most effective route for preventing infections. Incomplete and/or inaccurate data and record keeping prevents the gathering of accurate information on the use and appropriateness of prescribed injections. Surveyors found a complex array of registers for

recording injections for vertical programs, the hoarding of records by itinerant medex, the misplacement of records and registers, and the lack of a standard system for recording injections. The lack of access to patient records in the absence of the medex places clients at risk. Moreover, the absence of accurate data also prevents deeper analysis of the rationale for injectable medications over oral formulations. The survey indicates that while a third of prescribers believe clients prefer injections, only 14% of clients actually do.

### COMMODITY MANAGEMENT

The assessment results show that the MOH distribution and reordering system is in need of repair. Health care facilities do not understand the basic concepts of inventory management and thus maintain little or no buffer stock to prevent stock-outs. An array of methodologies is used for reordering, most based on replenishing stock to meet the need witnessed in the preceding reorder period. This often results in under-stocking or stock-outs of syringes and/or sharps boxes.

The problems with reordering observed in this assessment result from a lack of standardized procedures for recording and utilizing stock transaction data. The assessment clearly showed that many health care facilities do not record stock transactions (i.e. issue and receipt of syringes and safety boxes), let alone use the data to determine the proper amounts to reorder. This partly stems from a lack of proper training in standard inventory management practices. However, it also results from the lack of

importance attached to the product, especially safety boxes. The assessment points out that the MOH has not emphasized the need for health care facilities, especially hospitals, to report on safety boxes for curative services, or the importance of ordering these products.

The problems related to proper recording and reporting stock transaction data affect not only the healthcare facility's ability to accurately reorder supplies, but also adversely affects the MMU's ability to correctly forecast nationwide demand. Accurate forecasting is dependent on the data received. The absence of data on actual consumption from most facilities forces the MMU to rely on health care facility requests to determine procurement. As these requests are based on inaccurate projections, the MMU often procures an improper amount for nationwide supply, exacerbating an already bad situation.

Efforts are currently underway within the MOH to correct some of the aforementioned problems. The MOH has recently revised the CRIV and the Monthly Consumption Report to provide the data necessary to make intelligent decisions on re-supply. Though these new forms and accompanying instructions for proper reorder have been distributed to most healthcare facilities, they are not being utilized at present. Additional training and monitoring is required to make their proper utilization a reality.

In addition, the MMU is in the midst of updating its computing capability. Within a few months it should be able to automatically process orders and monthly consumption reports from health

care facilities. Assuming most health care facilities routinely submit these new reporting forms, the MMU will have the ability not only to better assess what to re-supply, but also to better forecast procurement to meet nationwide demand.

## **MEDICAL WASTE CONTROL**

Improper handling of medical waste can be dangerous to the health staff as well as the clients and greater community. The survey indicates that although awareness of HIV infection through medical waste is high among waste handlers, they have not been trained in proper and safe waste disposal practices or the

fundamentals of disease transmission. This affects their motivation to use protective barriers. The provision of protective barriers by the facility was not standard; the safety, effectiveness and cleanliness of waste disposal sites were not uniform. The waste site was safeguarded from the community in less than half of the facilities visited. The use of color-coded systems for separating waste is poorly understood and underutilized.

## **POST-EXPOSURE PROCEDURES**

Procedures for responding to needle-stick injuries were in evidence in only five sites, although

several others stated they had received the memorandum but could not locate it. PEP drugs were available in eight sites, leaving the majority of staff at risk of delaying treatment and negating its prophylactic effect. Staff seemed oblivious to the need for immediate reaction to needle-stick injuries. On a national level, the absence of reporting registers and the lack of reporting incidents in all sites leave the country without data to understand the extent of the problem and to develop remedial actions.

## V. CONCLUSION AND RECOMMENDATIONS

The study provides evidence of the factors within the health system that accentuate the risk of disease transmission to health care workers, clients and the community through improper injection and waste disposal procedures. The information should be used to implement system and facility improvements to reduce that risk.

### POLICY

- *Access to PEP information* should be guaranteed at all facilities and communicated to health care staff; a source of PEP drugs should be available within reasonable distance of all health facilities to ensure treatment within the two hour recommended timeframe. A systematic approach to needle-stick recording should be encouraged and reviewed at the national level.
- *Pre- and in-service training* on universal precautions, disease transmission and the benefits of injectable medication versus oral formulation usage, as well as the safety of waste disposal, should be built into professional schools and continuing education programs for relevant audiences.
- *Health care waste management plans* should be a standard requirement from each facility, approved by the NISG.

- *A national policy* on health care waste management is needed to articulate proper procedures for treatment and final disposal of medical waste, as well as to provide a framework for supervision and management oversight. Clear guidelines are needed for supervising injection providers and waste management staff.
- *Protective barriers* for waste handlers should be a standard provision at health facilities along with prophylactic hepatitis and tetanus treatment.
- *Monitoring data* should be collected nationally on injection use, waste management, needle-stick injuries and the availability of PEP. Norms should be identified and data reviewed against the standard. The analysis should facilitate the development of action plans to address weaknesses.
- *Private sector providers and facilities* should be provided with MOH standards.
- *The right of protection against accidental exposure to transmission of HIV/AIDS* infection should be guaranteed for all workers.

Additional recommendations for activities to improve the safety of injections include:

### SAFE INJECTION SUPPLIES

- The applicability of auto-destruct needles and syringes and cost should be explored

for use in infectious wards and STI clinics.

- Curative medications should be ordered with the proper number of syringes, needles and safety boxes.

### COMMODITY MANAGEMENT

- *The revised MOH procedures for reordering and recording/reporting stock transaction data* should be adopted by all healthcare facilities to ensure proper forecasting.
- *Safe injection related supplies, including safety boxes, should be reordered and reported* using the new MOH reordering and reporting forms to ensure consistent supply.
- *Training on proper inventory control, reordering, warehousing and distribution* should be provided to health care facility personnel involved in commodity management through existing in-service training and continuing education programs.
- *The program for improved capability of the MMU* to accurately forecast the nationwide need for safe injection supplies and better plan and monitor procurement of these commodities should be continued.

### WASTE DISPOSAL

- *Coordination* between organizations supporting waste management initiatives in the health sector should be

strengthened to avoid replication, ensure consistency of practices, and improve the economic efficiency of health care waste disposal projects.

- *Training* on health care waste management, including safe disposal procedures the purpose and practice of segregation, proper use of essential equipment and supplies (including safety boxes and needle cutters), and the potential risks of improper handling, treatment, storage and disposal should be a pre- and in-service requirement for waste handlers, supervisors and providers.
- *Protective clothing* for waste handlers should be a requirement for service. Waste management supplies, including basis waste segregation supplies, such as safety boxes, covered, color-coded waste containers, non-PVC color-coded bin liners and cleaning products, should be included in facility budgeting and ordering.
- Training to increase staff awareness of the importance of wearing protective clothing consistently, and supervision guideline to ensure compliance, should be developed.
- *Effective safe final disposal options* are needed. A plan outlining segregation procedures, handling of safety boxes and infectious waste, transport and final disposal must be outlined for each facility. Budget allocations to

fund improvements to final disposal systems for health care waste should be considered.

## **BEHAVIOR CHANGE**

- *Community awareness efforts* should focus on increasing demand for oral medication while raising awareness of potential risk of disease transmission through used injection equipment.
- *Provider and prescriber training* should be used to encourage client use of oral formulations instead of injections where possible.
- *Job aids* should be designed for health care workers and waste handlers to promote awareness and compliance with injection safety, PEP and sharps disposal procedures.
- *Peer education opportunities* among waste handlers and waste carriers should be explored to encourage them to use their safety gear consistently and comply with safe waste-handling guidelines.
- *Health care professional organizations* should use publications and meetings as vehicles for promoting rational use of injections, PEP and injection safety at the workplace
- *Collaboration with local NGOs and FBOs* should be explored to develop strategies to further SIP objectives.

## ANNEX I: SURVEY RESPONSES

### RISK TO INJECTION RECIPIENT

	%	Total
<b>Indicator: Hygiene</b>		
Injection Provider washes hands before preparing injection	26%	10/38
<b>Indicator: Safety</b>		
Sharps found lying on ground in health facility complex	19%	7/37
Injection Providers were observed to remove the needle and syringe from a sealed packet in front of the patient	87%	33/38

### RISK TO INJECTION PROVIDER

	%	Total
<b>Indicator: Training</b>		
Received training on UP in last 3 years	37%	14/38
<b>Indicator: Quality Assurance &amp; Supervision</b>		
Injection provider is supervised	53%	20/38
Evidence of needle-stick injury record	16%	6/38
<b>Indicator: Risk of injuries</b>		
Needle-stick injury in last 12 months	22%	8/36
Needle separated by hand from syringe before disposal	8%	3/38
Needle recapped with two hands before disposal	5%	2/38
Needle recapped with one hand	3%	1/38
Evidence of safety boxes	95%	40/42
Evidence of overflowing safety boxes	10%	4/39
<b>Indicator: Procedures</b>		
Evidence of written procedures on universal precautions	5%	2/38
Evidence of written procedures on post exposure prophylaxis	14%	5/36
Evidence of written procedures on administering injections	22%	8/37
<b>Indicator: Policy</b>		
Injection Providers received 3 doses of HEP B	60%	25/42
PEP drugs available in the facility	21%	8/39
<b>Indicator: Commodity Management Practices</b>		
Facilities that ordered only when stocked out	5%	1/20
Facilities that ordered same amount each time no matter circumstances	30%	6/20
Facilities that ordered based only on conception of past usage	20%	4/20
Facilities order based on a predetermined formula	30%	6/20
<b>Indicator: Commodity Management Training</b>		
Facilities that use new CRIV	62%	13/21
Facilities that use new consumption report	29%	6/21

## RISK TO WASTE HANDLER

	%	Total
<b>Indicator: Training</b>		
Trained in proper disposal practices and disease transmission risk	19%	8/43
<b>Indicator: Awareness</b>		
Stated that HIV can be transmitted through used injection equipment	76%	31/41
Stated that HEP B could be transmitted	12%	5/41
Stated that HEP C could be transmitted	0%	0/41
<b>Indicator: Procedures</b>		
Presence of written procedures on sharps and waste care disposal	13%	5/38
Evidence of sharps lying around the facility	19%	7/37
<b>Indicator: Segregation</b>		
Ordinary waste is separated from sharps waste	93%	40/43
Color coded separation	11%	4/36
<b>Indicator: Needle-stick Injuries</b>		
Needle-stick injury ever	31%	12/39
<b>Indicator: Policy</b>		
Waste handler vaccinated against tetanus	83%	36/43
Waste handler vaccinated against Hep B ( <i>unknown dose count</i> )	60%	25/41
<b>Indicator: Protective Barriers</b>		
Wears closed shoes or boots	65%	26/40
Wears puncture proof gloves	28%	11/40

## RISK TO COMMUNITY

	%	Total
<b>Indicator: Number of Injections</b>		
Prescriptions including at least one injection	19%	135/720
Average number of injections reported by adults per year	1.9	
Average number of injections reported by adults per year without GPHC, the national hospital	1.6	
<b>Indicator: Demand</b>		
Percentage of adult population (15-49) reporting a preference for injections in the case of fever for themselves	14%	22/160
Percentage of population reporting a preference for injections in the case of fever for their child	12%	7/58
Prescriber believed client preferred injections	36%	12/33
<b>Indicator: Awareness</b>		
Clients spontaneously reporting risk of HIV infection associated with injections	97%	148/153
<b>Indicator: Safety</b>		
Waste disposal site is separated from community and animals	48%	20/42

## RISK TO ANCILLARY SERVICES

	%	Total
<b>Area: Laboratory</b>		
<b>Indicator: Supplies</b>		
Stock-outs of sharps containers reported	43%	6/14
<b>Indicator: Procedures</b>		
Presence of PEP procedures	21%	3/14
<b>Indicator: Training</b>		
Percentage of lab technicians trained on UP in last 3 years	71%	10/14
<b>Indicator: Quality Assurance</b>		
Recording system for needle-stick injuries	22%	2/9
<b>Indicator: Needle-stick Injuries</b>		
Needle-stick injuries	23%	3/13
<b>Area: Dental Clinic</b>		
<b>Indicator: Supplies</b>		
Stock-outs of sharps containers reported	50%	4/8
Reuses plastic sharp containers	37%	3/8
<b>Indicator: Procedures</b>		
Presence of PEP procedures	25%	2/8
<b>Indicator: Needle-stick Injuries</b>		
Percentage of sites where injuries occurred	50%	4/8
<b>Indicator: Training</b>		
Percentage of dentists trained on UP in last 3 years	57%	4/7
<b>Area: Private Providers</b>		
<b>Indicator: Procedures</b>		
Presence of PEP procedures	25%	3/12
<b>Indicator: Training</b>		
UP Training	25%	3/12
<b>Indicator: Safety</b>		
3 doses of Hepatitis B vaccine	33%	4/12

## ANNEX 2: SURVEY INSTRUMENTS

### GUYANA SAFER INJECTION SURVEY, NOVEMBER 11-22

Number: \_\_\_\_\_ Date: \_\_\_\_\_

Name of Facility: \_\_\_\_\_

Region: \_\_\_\_\_

Type of Facility: Hospital \_\_\_\_\_

Health Center \_\_\_\_\_

Private Clinic \_\_\_\_\_

Private Provider \_\_\_\_\_

Department or Ward: \_\_\_\_\_

Name of Data Collector: \_\_\_\_\_

Instrument	Quantity
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	

## I. SUPERVISOR FOR HEALTH CENTERS OR OUTPATIENT DEPT AT HOSPITAL

**FIND MANAGER OR MOST SENIOR HEALTH WORKER RESPONSIBLE FOR OUTPATIENT SERVICES, INTRODUCE YOURSELF, AND READ THE FOLLOWING:**

*[Greetings] My name is \_\_\_\_\_, and I work with the Guyana Safer Injection Project. We are conducting a survey on injection practices. The Project is run by the MOH and the US Government. This facility was chosen as one site. The information will help us to develop strategies to reduce the incidence of HIV and benefit all of us. It is voluntary and no names will be used. Can I have a few minutes of your time?*

*Please feel free to ask any questions before you agree to take part.*

General Questions	
1. Count the number of patients for the last three months. <i>(Suggest to the supervisor that you can look at the register later)</i>	1. Total _____ 2. NA _____
2. How many in-patient beds do you have? <i>(This question is for hospitals only)</i>	1. Number _____ 2. NA _____
3. Can you tell me how many of the following staff work at this facility? <i>(In a hospital get this information only for the unit you are assessing)</i>	A. Medex _____ B. Physician _____ C. Health Visitor _____ D. RN _____ E. Nurse Assistant _____ F. Nurse Midwife _____ G. Single trained midwife _____ H. Maid/Clinical Attendant _____ I. Nurse Aide/PCA _____ J. Waste Handler _____
4. Do you have a laboratory or phlebotomy room? <i>(If yes, state you may wish to visit them later)</i>	1. Yes _____ 2. No _____
5. Do you have a dental clinic? <i>(If yes, state you may wish to visit them later)</i>	1. Yes _____ 2. No _____
6. Are the staff that administer injections supervised? <i>(if no, skip to question 11)</i>	1. Yes _____ 2. No _____
7. If yes, where is the supervisor located?	1. Health Center _____ 2. RHO 3. Hospital 4. Other _____ 5. NA _____
8. Who supervises the injection providers?	1. Position _____
9. Does the supervisor observe injection procedures including disposal of equipment?	1. Yes _____ 2. No _____
10. How often does s/he supervise?	1. Daily 2. Monthly _____ 3. Bimonthly _____ 4. Quarterly _____ 5. Other _____ 6. NA _____

11. Which staff are vaccinated against Hep B?	A. _____ B. _____ C. Other _____ D. don't know E. all staff members
12. Which staff members are vaccinated against tetanus?	A. _____ B. _____ C. Other _____ D. Don't Know _____ E. All Staff members _____
<b>Waste Disposal</b>	
13. Are there written procedures on sharps and health care waste disposal <i>(Ask to see them and if you can take a copy)</i>	1. Yes observed _____ 2. Reported, not seen _____ 3. No _____
14. Is there someone in the facility who is specifically responsible for disposing of medical waste?	1. Yes _____ 2. No _____ 3. Don't Know _____
15. Is the person supervised?	1. Yes _____ 2. No _____ 3. Don't know _____
16. Please indicate the supervisor's position.	1. Title _____ 2. Don't know _____
17. Does the waste handler perform other tasks than waste disposal?	1. Yes _____ 2. No _____ 3. Don't Know _____
18. Has the waste handler been trained in waste handling procedures?	1. Yes _____ 2. No _____ 3. Don't know _____
19. Has the waste handler been trained on the danger of disease transmission through poor waste handling?	1. Yes _____ 2. No _____ 3. Don't know _____
20. Does the facility provide outreach vaccinations or injections in the community or at health posts. <b>If no, skip to 22</b>	1. Yes _____ 2. No _____
21. What do you do with the used injection equipment when you are in the field?	1. Carry it back to the facility for final disposal ____ 2. Dump it in a pit ____ 3. Burn it in the field ____ 4. Bury it ____ 5. Other _____
22. How does this facility dispose of hazardous waste and items which are not reused (e.g. gauze)?	1. Burned in incinerator ____ 2. Burned in open pit. ____ 3. Burned and buried ____ 4. Burned and removed to offsite dump ____ 5. Burned in drum ____ 6. Thrown in trash/open pit ____ 7. Thrown in pit latrine 8. Removed offsite ____ 9. Other _____

23. How does this facility dispose of needles and other sharps?	1. Together with other waste _____ 2. Burned in incinerator ____ 3. Burned in open pit ____ 4. Burned and buried _____ 5. Burned and removed to offsite dump ____ 6. Burned in drum ____ 7. Thrown in trash/open pit____ 8. Thrown in pit latrine 9. Removed to offsite dump ____ 10. Other _____
24. If waste is taken offsite, how is it finally disposed of?	1. Incinerated _____ 2. Taken to local dump and burned ____ 3. Taken to local dump and not burned ____ 4. Other _____ 5. Don't Know _____ 6. NA ____
<b>Procedures for Injection Safety</b>	
25. Do you keep a record of needle stick injuries? <i>(if yes, ask to see the record)</i>	1. Yes observed ____ 2. Reported, not shown ____ 3. No____
26. How many needlestick injuries were reported in the last 12 months?	1. Number _____
27. How many were recorded in the log?	1. Number _____ 2. Don't Know _____
28. Do you have written procedures for universal precautions? <i>(If yes, ask to see them)</i>	1. Yes observed ____ 2. Reported, not shown ____ 3. No____ 4. Don't know _____
29. Are there any procedures for post-exposure prophylaxis (PEP) for accidental needlestick injury? <i>(If yes, ask to see them)</i>	1. Yes observed, 2. Yes reported not seen____ 3. No ____ 4. Don't know _____
30. Do staff have access to PEP drugs in the center or facility?	1. Yes _____ 2. No _____
31. May I see the drug? <i>(note the name, expiry date)</i>	1. Name of medication _____ 2. Expiry Date _____ 3. Kept elsewhere _____

**END OF SECTION ONE**

## 2. INTERVIEW: INJECTION PROVIDER

(generally a nurse in EPI or a nurse in outpatient department – could be same person and a midwife)

<p>Ask to speak to the person providing injections. Introduce yourself and read the following :</p> <p><i>[Greetings] My name is _____, and I work with the Guyana Safer Injection Project. We are conducting a survey on injection practices. The Project is run by the MOH and the US Government. This facility was chosen as one site. The information will help us to develop strategies to reduce the incidence of HIV and benefit all of us. It is voluntary and no names will be used. Can I have your cooperation for a few minutes.</i></p> <p><i>Please feel free to ask any questions before you agree to take part.</i></p>	
<p>32. In the last three months, how many injections have been given for immunizations? Count the number for the last three months and record the total. <i>(Suggest you can review the register at the end of the interview)</i></p>	<p><b>1. NA</b> _____</p> <p>Number for Month One _____</p> <p>Number for Month Two _____</p> <p>Number for Month Three _____</p> <p><b>2. Total</b> _____</p>
<p>33. In the last 3 months, how many injections have been given for curative care? Count the number of injections for the past 3 month and provide the total. <i>(Suggest you can review the register if possible at the end of the interview)</i></p>	<p>Number for Month One _____</p> <p>Number for Month Two _____</p> <p>Number for Month Three _____</p> <p><b>1. Total</b> _____</p>
<p>34. In the last 3 months, how many injections have been given for family planning purposes? Count the number for the last 3 months and provide the total. <i>(Suggest you can review the register if possible at the end of the interview)</i></p>	<p><b>1. NA</b> _____</p> <p>Number for Month One _____</p> <p>Number for Month Two _____</p> <p>Number for Month Three _____</p> <p><b>2. Total</b> _____</p>
<p>35. Have many doses of hep B vaccine have you ever received?</p>	<p>1. Doses _____</p>
<p>36. Do you remove needles from the syringes before disposing of them? <i>(If yes, ask how)</i></p>	<p>A. Yes 1. By hand _____</p> <p>2. With needle removers _____</p> <p>3. Other _____</p> <p>B. No _____</p>
<p>37. Do you recap needles before disposing of them? <i>(If yes, ask how)</i></p>	<p>A. Yes 1. With one hand _____</p> <p>2. With two hands _____</p> <p>3. Other _____</p> <p>B. No _____</p>
<p>38. Have you had a needlestick injury in the last 12 months? If so how many? <i>If no, skip to 40</i></p>	<p>A. Yes _____</p> <p>1. Number _____</p> <p>2. Don't remember _____</p> <p>B. No _____</p>
<p>39. Did you report the injury?</p>	<p>1. Yes _____ 2. No _____</p> <p>3. NA _____</p>

40. Do you have any written procedures for administering injections in the facility? <i>(If yes, ask to see them and if you can take a copy)</i>	1. Yes (observed) _____ 2. Reported not observed ____ 3. No ____ 4. Don't know _____
41. Can you name diseases that may be transmitted through unsafe injections?	A. HIV ____ 1.Yes _____ 2. No _____ B. Hep B __ 1.Yes _____ 2. No _____ C. Hep C__ 1.Yes _____ 2. No _____ D. Other____ 1.Yes _____ 2. No _____ E. Doesn't know _____
42. Are there any written procedures for post-exposure prophylaxis (PEP) for accidental needlestick injury? <i>(Ask to see them and if you can take a copy)</i>	1. Yes observed, 2. Yes reported not seen ____ 3. No ____ 4. Don't know _____
43. Do staff have access to PEP drugs in the center?	1. Yes _____ 2. No _____ 3. Don't know ____
44. May I see the drug? <i>(Note: name, and expiry date)</i>	1. Name of medication _____ 2. Expiration Date _____ 3. Not available/Not in the unit _____
45. Have you received training on universal precautions? <i>If yes when?</i>	1. Yes in past 1 year ____ 2. Yes in past 2-3 years ____ 3. No training in past 3 years ____
46. Are stocks of syringes always delivered with vaccines?	1. Yes _____ 2. No _____ 3. Don't Know ____ 4. NA____
47. If yes, are there sufficient number of syringes to cover the number of vaccines?	1. Yes _____ 2. No _____ 3. Don't Know ____ 4. NA _____
48. Are stocks of syringes always delivered with sufficient quantities of puncture-proof sharps containers to cover the disposal needs of syringes and needles?	1. Yes _____ 2. No _____ 3. Don't Know ____ 4. NA____
49. How often is non-infectious waste removed from the unit?	1. Daily ____ 2. Weekly ____ 3. 2/week ____ 4. 3/week ____ 5. Other _____
50. How often is infectious waste removed from the unit?	1. Daily ____ 2. Weekly ____ 3. 2/week ____ 4. 3/week ____ 5. Other _____
51. How often are sharps containers removed from the unit?	1. Daily ____ 2. Weekly ____ 3. 2/week ____ 4. 3/week ____ 5. Other _____
52. What is used when sharps containers are not available?	1. Recycled cardboard box 2. Plastic container (eg, bleach bottle) 3. Other (specify) ____ 4. Always available _____

53. How many puncture proof boxes are in stock?  
*(ask to see the stock room)*

1. Number \_\_\_\_\_

**END OF SECTION TWO**

### 3. OBSERVATION: INJECTION PROVIDER

*Ask the provider if you can watch her provide an injection. However if there are no patients, ask the injection provider to demonstrate how she gives and disposes of injection equipment. Stand where you can observe but not interfere in the process.*

54. Does the provider wash hands before preparing the injection?	1. Yes _____ 2. No _____
55. Is the preparation prepared on a clean designated table or tray, where blood or body fluid contamination is unlikely?	1. Yes _____ 2. No _____
56. Is the needle and syringe removed from the package in sight of patient?	1. Yes _____ 2. No _____
57. Is the sharps container next to the provider so she can reach it without moving around with the needle?	1. Yes _____ 2. No _____
58. Does she remove needles from the syringes before disposing of them?	a. Yes _____ 1. By hand _____ 2. needle removers _____ 3. needle cutters _____ 4. Other _____ b. No _____
59. Does she recap needles before disposing of them?	A. Yes _____ 1. With one hand _____ 2. With two hands _____ B. No _____
60. Does she dispose of sharps in puncture resistant containers immediately?	1. Yes _____ 2. No _____
61. Does she dispose of the needle and syringe in the same container?	1. Yes _____ 2. No _____

**END OF SECTION THREE**

#### 4. OBSERVATION: INJECTION ROOM

Injection Room	
62. Are safety boxes in areas where injections are given?	1. Yes _____ 2. No _____
63. Are the containers overflowing, pierced or open?	1. Yes _____ 2. No _____
64. Count the number of full, sealed sharps boxes waiting for disposal/incineration stored in a secure area. <i>(Ask to see the store room if necessary)</i>	1. Number _____ 2. None - Reuses plastic sharps container _____
65. How many full sharps boxes waiting for disposal/incineration are stored in an unsecured area with easy access to the public?	1. Number _____ 2. None – Reuses plastic sharps container _____
66. Are there any sharps in open containers exposing staff to needlestick injuries?	1. Yes _____ 2. No _____
67. Are waste containers lined with plastic?	1. Yes _____ 2. No _____

**END OF SECTION FOUR**

## 5. INTERVIEW/OBSERVATION: WASTE HANDLER/CLINICAL ATTENDANT

[Greetings] My name is \_\_\_\_\_, and I work with the Guyana Safer Injection Project. We are conducting a survey on injection practices. The Project is run by the MOH and the US Government. This facility was chosen as one site. The information will help us to develop strategies to reduce the incidence of HIV and benefit all of us. It is voluntary and no names will be used. Can I have your cooperation for a few minutes.

Please feel free to ask any questions before you agree to take part.

68. Is ordinary waste separated from the safety boxes and needles and syringes? <i>(If no, skip to 73)</i>	1. Yes _____ 2. No _____
69. Where do you take the used needles and syringes and safety boxes?	1. Location _____
70. Where do you take ordinary garbage?	1. Location _____
71. Is there a color coded system for separation?	1. Yes _____ 2. No _____
72. If yes, can you tell me the purpose of the colors?	1. Red _____ 2. Black _____ 3. White _____ 4. Yellow _____ 5. NA _____
73. Is the waste disposal site protected from community/animals?	1. Yes _____ 2. No _____ 3. NA _____
74. Are there any used sharps around disposal site or health center? <i>(Observe)</i>	1. Waste visible _____ 2. Waste not visible _____
75. How do you transport waste from point of use to disposal area?	A. Cart 1. Yes ___ No ___ B. Wheelbarrow 1. Yes ___ No ___ C. Plastic bag/box 1. Yes ___ No ___ C. Other _____ 1. Yes ___ No ___
76. What do you do with waste at this facility? <i>(You may need to ask – check only one)</i>	1. Open burning on ground _____ 2. Open burning in a hole or enclosure _____ 3. Burial _____ 4. Dumping in pit latrine or other secure pit _____ 5. Dumping in unsupervised area _____ 6. Transport for off-site treatment _____ 7. Incinerator _____ 8. Other _____
77. If waste is incinerated, is the heat intense enough to burn the needles? <i>(check in incinerator to see if needles are still visible or ask this question)</i>	1. Yes _____ 2. No _____ 3. NA _____
78. If no, ASK what is done with the sharps remains. <i>(skip to 80)</i>	1. Bury _____ 2. Remains in incinerator 3. Other _____ 4. NA _____
79. How many times in the last three months have you been out of fuel for incineration?	1. Number _____ 2. Don't Know _____ 3. NA _____
80. Have you received a vaccination against Hep B?	1. Yes _____ 2. No _____
81. Have you received a vaccination against tetanus?	1. Yes _____ 2. No _____

82. Have you received training in waste management (trash) and risk of disease transmission through used needles and syringes? <i>(If no, skip to 85)</i>	A. Waste management 1. Yes ___ 2. No ___ B. Disease transmission 1. Yes ___ 2. No ___
83. How long was training for waste management?	1. Length _____ 2. NA _____
84. How long was training in disease transmission?	1. Length _____ 2. NA _____
85. Can you tell me what diseases can be contracted through used needles or syringes?	a. HIV 1. Yes _____ 2. No _____ b. Hep C 1. Yes _____ 2. No _____ c. Hep B 1. Yes _____ 2. No _____ d. Other___1. yes _____ 2. No _____ e. Doesn't know _____
86. Have you ever been stuck by a used needle? <i>If no, skip to 89</i>	1. Yes _____ 2. No _____
87. Did you report it to your supervisor?	1 Yes _____ 2. No _____ 3. NA _____
88. Have you been told what to do when you experience a needle stick injury?	1. Yes _____ 2. No _____
89. Do you wear protective clothing? <i>(If yes, ask what kind)</i>	A. Yes _____ 1. Closed shoes or boots _____ 2. Gloves that resist puncture _____ 3. Clothing cover that prevents puncture _____ 4. Goggles _____ 5. Mask _____ B. No _____

**END OF SECTION FIVE**

## 6. OBSERVATION/INTERVIEW: LABORATORY/PHLEBOTOMY CLINIC

[Greetings] My name is \_\_\_\_\_, and I work with the Guyana Safer Injection Project. We are conducting a survey on injection practices. The Project is run by the MOH and the US Government. This facility was chosen as one site. The information will help us to develop strategies to reduce the incidence of HIV and benefit all of us. It is voluntary and no names will be used. Can I have your cooperation for a few minutes.

Please feel free to ask any questions before you agree to take part.

Laboratory (if applicable) Observe and ask	
90. <b>Observe:</b> Are there any sharps containers open, pierced or overflowing?	1. Yes _____ 2. No _____
91. How many disposable sharps containers are filled in a day?	1. Number ____ 2. Other ____
92. Is infectious and non-infectious waste separated? <i>If no skip to 95</i>	1. Yes _____ 2. No _____
93. How many infectious waste containers are filled per day?	1. Number ____ 2. Other ____
94. How many non-infectious waste containers are filled per day?	1. Number ____ 2. Other ____
95. How is sharps waste finally disposed of?	1. Incinerated _____ 2. Buried _____ 3. Don't know _____ 4. Other _____
96. Does the lab ever run out of sharps containers?	1. Sometimes _____ 2. Often ____ 3. Never _____ 4. Reuses plastic sharps container _____
97. Are there procedures for disposing of used blood collection equipment? <i>(ask to see procedures and take a copy with you)</i>	1. Yes observed _____ 2. Yes reported _____ 3. No _____
98. Are there post exposure prophylaxis procedures for accidental needlestick injuries <i>(ask to see procedures and if you can take a copy with you)</i>	1. Yes observed _____ 2. Yes reported _____ 3. No _____ 4. Don't know _____
99. To your knowledge, how many needlestick injuries occurred over the last year in this unit? <i>(If no skip to 101)</i>	1. Number _____
100. If yes, how many were reported?	1. Number _____
101. Is there a system for recording needlestick injuries? <i>(if so, ask to see register)</i>	1. Yes observed _____ 2. Yes reported _____ 3. No _____
102. Is training on universal precautions offered at or through this facility	1. Yes _____ 2. No _____
103. Have you received any training on universal precautions? <i>(If yes, ask when)</i>	A. Yes 1. in past 1 year ____ 2. in past 2-3 years ____ B. No training in past 3 years ____

**END OF SECTION SIX**

## 7. DENTAL CLINIC INTERVIEW/OBSERVATION

[Greetings] My name is \_\_\_\_\_, and I work with the Guyana Safer Injection Project. We are conducting a survey on injection practices. The Project is run by the MOH and the US Government. This facility was chosen as one site. The information will help us to develop strategies to reduce the incidence of HIV and benefit all of us. It is voluntary and no names will be used. Can I have your cooperation for a few minutes.

Please feel free to ask any questions before you agree to take part.

104.	Have there been any needlestick injuries in the past year in your clinic? <i>If so, how many</i>	A. Yes _____ 1. 0___ 2. 1-3___ 3. 4-6 ___ 4. 7+ _____ B. No _____
105.	Are there any written procedures on prophylaxis care for needle stick injuries? <i>(if so ask to see a copy )</i>	1. Yes observed ___ 2. Yes reported ___ 3. No _____
106.	Are there any drugs onsite to treat needle stick accident victims? <i>(If yes, note name and expiry date)</i>	A. Yes 1. Name _____ 2. Expiry Date _____ B. No _____
107.	<b>Observe:</b> Are there any sharps containers open, pierced or overflowing?	1. Yes _____ 2. No _____
108.	How many disposable sharps containers are filled per week?	1. Number ___ 2. Other _____
109.	Are infectious and non-infectious waste separated?	1. Yes _____ 2. No _____
110.	How many infectious waste containers are filled per day?	1. Number ___ 2 Other _____
111.	How many non-infectious waste containers are filled per day?	1. Number _____
112.	Are the waste bins lined with plastic?	1. Yes _____ 2. No _____
113.	Are the plastic liners color-coded? <i>(If no, skip to 115)</i>	1. Yes ___ 2. No _____
114.	If so, what do the colors mean?	1. Red _____ 2. White _____ 3. Black _____ 4. Yellow _____
115.	Is the clinic ever out of sharps containers?	1. Sometimes _____ 2. Often _____ 3. Never _____ 4. Reuses plastic sharp containers _____
116.	How often are the sharps containers disposed of?	1. Daily _____ 2. 2/week _____ 3. 3/week ___ 4. Weekly _____ 5. Other _____
117.	Ask how the containers are collected.	1. Waste handler ___ 2. Private waste carrier ___ 3. Public trash collection ___ 4. Self –transport _____ 5. Other _____

118. Are there any facility written procedures on universal precaution practices for dental care? <i>(Can you take a copy of the document?)</i>	1. Yes observed ____ 2. Yes Reported ____ 3. No ____
119. Is there any formal training on universal precaution practices for dentists? If yes, who provides the training?	A. Yes ____ 1. Training Agency/organization _____ B. No ____
120. Have you been trained in universal precaution practices?	1. Yes in past 1 year ____ 2. Yes in past 2-3 years ____ 3. No training in past 3 years ____

**END OF SECTION SEVEN**

## 8. PRESCRIBER (PRIVATE AND PUBLIC)

[Greetings] My name is \_\_\_\_\_, and I work with the Guyana Safer Injection Project. We are conducting a survey on injection practices. The Project is run by the MOH and the US Government. This facility was chosen as one site. The information will help us to develop strategies to reduce the incidence of HIV and benefit all of us. It is voluntary and no names will be used. Can I have your cooperation for a few minutes.

Please feel free to ask any questions before you agree to take part.

121.	How many patients have you seen in the last three months? (s/he should check register)	. Month One ____ Month Two ____ Month Three ____ <b>1. Total</b> _____
122.	What are the 3 leading diseases for which you prescribe an injection?	1. _____ 2. _____ 3. _____
123.	Are you aware of alternative oral formulations to these injections?	1. Yes ____ 2. No ____
124.	If so, why do you prescribe the injection instead of oral medication?	A. Patient request 1. Yes ____ 2. No ____ B. Curative care 1. Yes ____ 2. No ____ C. Lack of oral medication 1. Yes ____ 2. No ____ D. More effective 1. Yes ____ 2. No ____ E. Acuteness of condition 1. Yes ____ 2. No ____
125.	Who generally gives the injection that you prescribe?	1. Nurse ____ 2. Medex ____ 3. Self ____ 4. Other _____
126.	What treatment do patients prefer for a febrile illness?	1. Injections ____ 2. Oral medications or other non-injectables ____ 3. Either ____ 4. Don't know ____
127.	In your opinion, what diseases transmitted through used injection equipment should we be most concerned about?	A. HIV 1. Yes ____ 2. No ____ B. HEP C 1. Yes ____ 2. No ____ C. HEP B 1. Yes ____ 2. No ____ D. Other ____ 1. Yes ____ 2. No ____
128.	Can I review the prescriptions for the <b>past month</b> to determine how many injectables have been prescribed? (if not available, skip to 132)	1. Yes ____ 2. No/NA ____
129.	Look at record and determine how many prescriptions were made in the past month.	1. Number ____ 2. NA ____
130.	Of those how many prescriptions in the last month included at least one injection?	1. Number. ____ 2. NA ____
131.	<b>Complete table on prescriptions (form 9)- fill in up to 20 prescriptions</b>	

**STOP HERE IF THIS WAS AN MOH FACILITY – IF NOT, CONTINUE !!!!!!!**

<i>Additional questions for private providers only</i>	
132. Where do you put used sharps	1. Puncture proof container _____ 2. Other ( <i>specify</i> ) _____
133. How are sharps from this facility finally disposed of?	1. Together with non-infectious trash _____ 2. Burned _____ 3. Burned and buried _____ 4. Incinerated _____ 5. Trash pit _____ 6. Removed offsite _____ 7. Other _____ 8. Don't know _____
134. If taken offsite, how are the containers collected?	1. Waste handler ____ 2. Private waste carrier ____ 3. Public trash ____ 4. Other _____ 5. Don't know ____ 6. NA _____
135. How many needlestick injuries have been experienced at this center in the past year?	1. Number _____
136. Are there any written procedures on prophylaxis care for needle stick injuries? <i>(and if so ask to see a copy)</i>	1. Yes observed _____ 2. Yes reported _____ 3. No _____
137. Are there any post exposure pharmaceuticals on hand to treat needle stick accident victims? <i>(ask to see the drug and note name and expiry date)</i>	1. Name _____ 2. Expiry Date _____ 3. Not available _____
138. <b>Observe:</b> Are there any sharps containers open, pierced or overflowing?	1. Yes _____ 2. No _____
139. How many disposable sharps containers are filled per week?	1. Number ____ 2. other ____
140. How many infectious waste containers are filled per day?	1. Number ____ 2 Other ____
141. Are the waste bins lined with plastic?	1. Yes _____ 2. No _____
142. Are the plastic liners color-coded? <i>(If no, skip to 144)</i>	1. Yes ____ 2. No _____
143. If so, what do the colors mean?	1. Red _____ 2. Yellow _____ 3. White _____ 4. Black _____
144. How often are the sharps containers disposed of?	1. Daily _____ 2. 2/ week _____ 3. 3/ week ____ 4. Weekly _____ 5. Other _____
145. Is there any formal training on universal precaution practices for private providers? <b>If yes, who provides it</b>	A. Yes 1. Training: Agency/Organization _____ B. No

146. Have you been trained in universal precaution practices	1. Yes in past 1 year ____ 2. Yes in past 2-3 years ____ 3. No training in past 3 years ____
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**END OF SECTION EIGHT**

## 9. DATA COLLECTION FORM FOR PRESCRIPTIONS

*Do you keep a record of all your prescriptions, may I review those from the last month?  
Choose every 3<sup>rd</sup> prescription until you reach 20.*

Prescription No	Drug prescribed	Antibiotic	From Essential Drug List (EDL)	Not from EDL	Injection
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

**END OF SECTION NINE**

## 10A. GENERAL POPULATION INTERVIEW: POTENTIAL INTERVIEWEES 0-7

Explain the purpose of the survey and ask if they can spare 5 minutes to answer some questions about injection practices. This should be conducted as the patient is leaving the facility.

147. Of the following age groups to which do you belong. <b>Read the choices</b>	1. under 15 ___ 2. 15-24 ___ 3. 25-34 ___ 4. 35-44 ___ 5. 45-49 ___ 6. over 50 ___
148. Gender	1. Male _____ 2. Female _____
149. During the last 6 months, how many injections did you receive? ( <i>may have been given by a nurse, doctor, dentist, relative, other person or yourself.</i> )	1. Number _____
150. Can you remember the last date you received an injection?	1 Date: Month/Year _____ 2. No _____
151. Who gave you the last injection?	1. Medical doctor ___ 2. Medex ___ 3. Nurse ___ 5. FP Specialist ___ 4. Self ___ 5. Dentist ___ 6. Pharmacist ___ 7. Someone else (specify) ___ 8. Don't remember ___
152. At what location did you receive the injection?	1. Clinic _____ 2. Home _____ 3. Hospital _____ 4. Dental Office ___ 5. Other _____ 6. don't remember _____
153. Can you remember whether the provider opened the needle and syringe from a sealed package?	1. Yes _____ 2. No _____ 3. Don't know/remember _____
154. If child is present, provide gender. <b>(if no, skip to 158)</b>	1. Male ___ 2 Female ___
155. How many immunization injections has the child had in the last six months?	1. Number _____
156. How many curative injections has the child had in the last six months?	1. Number _____
157. If your child has a fever do you prefer oral medication or injections?	1. Oral _____ 2. Injections ___ 3. Don't Care ___
158. Have you ever given yourself an injection? <b>(If no, skip to 163)</b>	1. Yes _____ 2. No _____
159. Do you use disposable needles and syringes?	1. Yes _____ 2. No ___ 3. NA _____
160. Do you reuse the equipment?	1. Yes _____ 2. No ___ 3. NA _____
161. If sterilizable, how do you clean the needle and syringe?	1. Wash with soap 2. Boil 3. Other _____ 4. NA _____

162. Where do you dispose of these needles/syringes?	1. With regular household waste ____ 2. In hospital sharps container ____ 3. Other ( <i>specify</i> ) ____ 4. NA ____
163. When you are sick with a fever, do you prefer tablets or injections?	1. Tablets ____ 2. Injections ____ 3. I don't care ____
164. Do you think that used syringes can transmit disease? If yes, what diseases (check those mentioned)	A. HIV 1. Yes ____ 2. No ____ B. Hep C 1. Yes ____ 2. No ____ C. HepB 1. Yes ____ 2. No ____ D. Abscesses 1. Yes ____ 2. No ____ E. Don't know ____
165. Have you or anyone in your family ever been accidentally stuck by a injection needle left n the garbage or environment?	1. Yes ____ 2. No ____ 3. Don't remember ____
166. Do you see used needles or syringes on the grounds of the health facility?	1. Sometimes ____ 2. Often ____ 3. Never ____
167. Do you see used needles or syringes on the grounds in your community?	1. Sometimes ____ 2. Often ____ 3. Never ____

**END OF SECTION TEN**

## 10 B. GENERAL POPULATION

Explain the purpose of the survey and ask if they can spare 5 minutes to answer some questions about injection practices. This should be conducted as the patient is leaving the facility.

168. Of the following age groups, to which do you belong?	1. under 15 ___ 2. 15-24 ___ 3. 25-34 ___ 4. 35-44 ___ 5. 45-49 ___ 6. over 50 ___
169. Gender	1. Male _____ 2. Female _____
170. During the last 6 months, how many injections did you receive? ( <i>may have been given by a nurse, doctor, dentist, relative and other person or yourself.</i> )	1. Number _____
171. Can you remember the last date you received an injection?	1. Date: Month/Year ___ 2. No _____
172. Who gave you the last injection	1. Medical doctor ___ 2. Medex ___ 3. Nurse ___ 5. FP Specialist ___ 4. Self ___ 5. Dentist ___ 6. Pharmacist ___ 7. Someone else (specify) ___ 8. Don't remember ___
173. At which location did you receive the injection?	1. Clinic _____ 2. Home _____ 3. Hospital _____ 4. Dental Office _____ 5. Other _____ 6. don't remember _____
174. Can you remember whether the provider removed the needle and syringe from a sealed package?	1. Yes _____ 2. No _____ 3. Don't know/remember _____
175. If child is present, provide gender. <b>(if not skip to 179)</b>	1. Male ___ 2 Female ___
176. How many immunization injections has the child had in the last six months?	1. Number _____
177. How many curative injections has the child had in the last six months?	1. Number _____
178. If your child has a fever do you prefer oral medication or injections?	1. Oral _____ 2. Injections ___ 3. Don't Care ___
179. Have you ever given yourself an injection? <b>(if no, skip to 184)</b>	1. Yes _____ 2. No _____
180. Do you use disposable needles and syringes?	1. Yes _____ 2. No ___ 3. NA _____
181. Do you reuse the equipment?	1. Yes _____ 2. No ___ 3. NA _____
182. If sterilizable, how do you clean the needle and syringe?	1. Wash with soap 2. Boil 3. Other _____ 4. NA _____
183. Where do you dispose of these	1. With regular household waste _____

needles/syringes?	2. In hospital sharps container _____ 3. Other ( <i>specify</i> ) _____ 4. NA _____
184. When you are sick with a fever, do you prefer tablets or injections?	1. Tablets _____ 2. Injections _____ 3. I don't care _____
185. Do you think that used syringes can transmit disease? If yes, what diseases (check those mentioned)	A. HIV 1. Yes ___ 2. No___ B. Hep C 1. Yes ___ 2. No___ C. HepB 1. Yes___ 2. No ___ D. Abscesses 1. Yes __ 2. No ___ E. Don't know _____
186. Have you or anyone in your family ever been accidentally stuck by a injection needle left n the garbage or environment?	1. Yes _____ 2. No_____ 3. Don't remember _____
187. Do you see used needles or syringes on the grounds of the health facility?	1. Sometimes ___ 2. Often ___ 3. Never ___
188. Do you see used needles or syringes in your community?	1. Sometimes ___ 2. Often _____ 3. Never _____

**END OF SECTION TEN**

## 10 C. GENERAL POPULATION

*Explain the purpose of the survey and ask if they can spare 5 minutes to answer some questions about injection practices. This should be conducted as the patient is leaving the facility.*

189.	Of the following age groups to which do you belong?	1. under 15 ___ 2. 15-24 ___ 3. 25-34 ___ 4. 35-44 ___ 5. 45-49 ___ 6. over 50 ___
190.	Gender	1. Male _____ 2. Female _____
191.	During the last 6 months, how many injections did you receive? <i>The injection may have been given by a nurse, doctor, dentist, relative and other person or yourself.</i>	1. Number
192.	Can you remember the last date you received an injection?	1. Date: Month/Year _____ 2. No _____
193.	Who gave you the last injection?	1. Medical doctor ___ 2. Medex ___ 3. Nurse ___ 5. FP Specialist ___ 4. Myself ___ 5. Dentist ___ 6. Pharmacist ___ 7. Someone else (specify) ___ 8. Don't remember ___
194.	At which location did you receive the injection?	1. Clinic _____ 2. Home _____ 3. Hospital _____ 4. Dental Office ___ 5. Other 6. don't remember _____
195.	Can you remember whether the provider removed the needle and syringe from a sealed package?	1. Yes _____ 2. No _____ 3. Don't know/remember _____
196.	If child is present, provide gender. <b>(if no, skip to 200)</b>	1. Male ___ 2 Female ___
197.	How many immunization injections has the child had in the last six months?	1. Number ___
198.	How many curative injections has the child had in the last six months?	1. Number ___
199.	If your child has a fever do you prefer oral medication or injections?	1. Oral _____ 2. Injections ___ 3. Don't Care ___
200.	Have you ever given yourself an injection? <b>(If no, skip to 205)</b>	1. Yes _____ 2. No _____
201.	Do you use disposable needles and syringes?	1. Yes _____ 2. No ___ 3. NA _____
202.	Do you reuse the equipment?	1. Yes _____ 2. No ___ 3. NA _____
203.	If sterilizable, how do you clean the needle and syringe?	1. Wash with soap ___ 2. Boil ___ 3. Other _____ 4. NA _____

204.	Where do you dispose of these needles/syringes?	1. With regular household waste ____ 2. In hospital sharps container ____ 3. Other ( <i>specify</i> ) ____ 4. NA ____
205.	When you are sick with a fever, do you prefer tablets or injections?	1. Tablets ____ 2. Injections ____ 3. I don't care ____
206.	Do you think that used syringes can transmit disease? If yes, what diseases (check those mentioned)	A. HIV      1. Yes ____ 2. No ____ B. Hep C    1. Yes ____ 2. No ____ C. HepB     1. Yes ____ 2. No ____ D. Abscesses 1. Yes ____ 2. No ____ E. Don't know ____
207.	Have you or anyone in your family ever been accidentally stuck by a injection needle left n the garbage or environment?	1. Yes ____ 2. No ____ 3. Don't remember ____
208.	Do you see used needles or syringes on the grounds of the health facility?	1. Sometimes ____ 2. Often ____ 3. Never ____
209.	Do you see used needles or syringes in your community?	1. Sometimes ____ 2. Often ____ 3. Never ____

**END OF SECTION TEN**

## 10 D. GENERAL POPULATION

Explain the purpose of the survey and ask if they can spare 5 minutes to answer some questions about injection practices. This should be conducted as the patient is leaving the facility.

210.	Of the following age groups to which do you belong?	1. under 15 ___ 2. 15-24 ___ 3. 25-34 ___ 4. 35-44 ___ 5. 45-49 ___ 6. over 50 ___
211.	Gender	1. Male _____ 2. Female _____
212.	During the last 6 months, how many injections did you receive? <i>The injection may have been given by a nurse, doctor, dentist, relative and other person or yourself.</i>	1. Number _____
213.	Can you remember the last date you received an injection?	1 Date: Month/Year _____ 2. No _____
214.	Who gave you the last injection?	1. Medical doctor ___ 2. Medex ___ 3. Nurse ___ 5. FP Specialist ___ 4. Self ___ 5. Dentist ___ 6. Pharmacist ___ 7. Someone else (specify) ___ 8. Don't remember ___
215.	At what location did you receive the injection?	1. Clinic _____ 2. Home _____ 3. Hospital _____ 4. Dental Office _____ 5. Other _____ 6. don't remember _____
216.	Can you remember whether the provider removed the needle and syringe from a sealed package?	1. Yes _____ 2. No _____ 3. Don't know/remember _____
217.	If child is present, provide gender. <b>(if not skip to 221)</b>	1. Male _____ 2 Female _____
218.	How many immunization injections has the child had in the last six months?	1. Number _____
219.	How many curative injections has the child had in the last six months?	1. Number _____
220.	If your child has a fever do you prefer oral medication or injections?	1. Oral _____ 2. Injections ___ 3. Don't Care ___
221.	Have you ever given yourself an injection? <b>(If no skip to 226)</b>	1. Yes _____ 2. No _____
222.	Do you use disposable needles and syringes?	1. Yes _____ 2. No ___ 3. NA _____
223.	Do you reuse the equipment?	1. Yes _____ 2. No ___ 3. NA _____
224.	If sterilizable, how do you clean the needle and syringe?	1. Wash with soap _____ 2. Boil ___ 3. Other _____ 4. NA _____
225.	Where do you dispose of these	1. With regular household waste _____

needles/syringes?	2. In hospital sharps container _____ 3. Other ( <i>specify</i> ) _____ 4. NA _____
226. When you are sick with a fever, do you prefer tablets or injections?	1. Tablets _____ 2. Injection _____ 3. I don't care _____
227. Do you think that used syringes can transmit disease? If yes, what diseases ( <i>check those mentioned</i> )	A. HIV 1. Yes ___ 2. No ___ B. Hep C 1. Yes ___ 2. No ___ C. HepB 1. Yes ___ 2. No ___ D. Abscesses 1. Yes ___ 2. No ___ E. Don't know _____
228. Have you or anyone in your family ever been accidentally stuck by a injection needle left n the garbage or environment?	1. Yes _____ 2. No _____ 3. Don't remember _____
229. Do you see used needles or syringes on the grounds of the health facility?	1. Sometimes ___ 2. Often ___ 3. Never ___
230. Do you see used needles or syringes in your community?	1. Sometimes _____ 2. Often _____ 3. Never _____

**END OF SECTION TEN**

## 10 E. GENERAL POPULATION

Explain the purpose of the survey and ask if they can spare 5 minutes to answer some questions about injection practices. This should be conducted as the patient is leaving the facility.

231. Of the following age groups to which do you belong?	1. under 15 ___ 2. 15-24 ___ 3. 25-34 ___ 4. 35-44 ___ 5. 45-49 ___ 6. over 50 ___
232. Gender	1. Male _____ 2. Female _____
233. During the last 6 months, how many injections did you receive? <i>The injection may have been given by a nurse, doctor, dentist, relative and other person or yourself.</i>	1. Number _____
234. Can you remember the last date you received an injection?	1. Month/Year _____ 2. No _____
235. Who gave you the last injection?	1. Medical doctor ___ 2. Medex ___ 3. Nurse ___ 5. FP Specialist ___ 4. Self ___ 5. Dentist ___ 6. Pharmacist ___ 7. Someone else (specify) ___ 8. Don't remember ___
236. At which location did you receive the injection?	1. Clinic _____ 2. Home _____ 3. Hospital _____ 4. Dental Office _____ 5. Other _____ 6. don't remember _____
237. Can you remember whether the provider removed the needle and syringe from a sealed package?	1. Unopened package _____ 2. Other (specify) _____ 3. Don't know/remember _____
238. If child is present, provide gender. <b>(if not skip to 242)</b>	1. Male _____ 2 Female _____
239. How many immunization injections has the child had in the last six months?	1. Number _____
240. How many curative injections has the child had in the last six months?	1. Number _____
241. If your child has a fever do you prefer oral medication or injections?	1. Oral _____ 2. Injections _____ 3. Don't Care _____
242. Have you ever given yourself an injection? <b>(If no, skip to 247)</b>	1. Yes _____ 2. No _____ 3. NA _____
243. Do you use disposable needles and syringes?	1. Yes _____ 2. No _____ 3. NA _____
244. Do you reuse the equipment?	1. Yes _____ 2. No _____ 3. NA _____
245. If sterilizable, how do you clean the needle and syringe?	1. Wash with soap 2. Boil 3. Other _____ 4. NA _____
246. Where do you dispose of these	1. With regular household waste _____

needles/syringes?	2. In hospital sharps container _____ 3. Other ( <i>specify</i> ) _____ 4. NA _____
247. When you are sick with a fever, do you prefer tablets or injections?	1. Tablets _____ 2. Injection _____ 3. I don't care _____
248. Do you think that used syringes can transmit disease? If yes, what diseases (check those mentioned)	A. HIV 1. Yes ___ 2. No ___ B. Hep C 1. Yes ___ 2. No ___ C. HepB 1. Yes ___ 2. No ___ D. Abscesses 1. Yes ___ 2. No ___ E. Don't know _____
249. Have you or anyone in your family ever been accidentally stuck by a injection needle left n the garbage or environment?	1. Yes _____ 2. No _____ 3. Don't remember _____
250. Do you see used needles or syringes on the grounds of the health facility?	1. Sometimes ___ 2. Often ___ 3. Never ___
251. Do you see used needles or syringes on the ground in your community?	1. Sometimes _____ 2. often _____ 3. Never _____

**END OF SECTION TEN**

## 10 F. GENERAL POPULATION

Explain the purpose of the survey and ask if they can spare 5 minutes to answer some questions about injection practices. This should be conducted as the patient is leaving the facility.

252. Of the following age groups to which do you belong?	1. under 15 ___ 2. 15-24 ___ 3. 25-34 ___ 4. 35-44 ___ 5. 45-49 ___ 6. over 50 ___
253. Gender	1. Male _____ 2. Female _____
254. During the last 6 months, how many injections did you receive? <i>The injection may have been given by a nurse, doctor, dentist, relative and other person or yourself.</i>	1. Number _____
255. Can you remember the last date you received an injection?	1 Yes Date: Month/Year _____ 2. No _____
256. Who gave you the last injection?	1. Medical doctor ___ 2. Medex ___ 3. Nurse ___ 5. FP Specialist ___ 4. Myself ___ 5. Dentist ___ 6. Pharmacist ___ 7. Someone else (specify) ___ 8. Don't remember ___
257. At what location did you receive the injection?	1. Clinic _____ 2. Home _____ 3. Hospital _____ 4. Dental Office _____ 5. Other _____ 6. don't remember _____
258. Can you remember whether the provider removed the needle and syringe from a sealed package?	1. Yes _____ 2. No _____ 3. Don't know/remember _____
259. If child is present, provide gender. <b>(if not skip to 263)</b>	1. Male _____ 2 Female _____
260. How many immunization injections has the child had in the last six months?	1. Number ___
261. How many curative injections has the child had in the last six months?	1. Number ___
262. If your child has a fever do you prefer oral medication or injections?	1. Oral _____ 2. Injections ___ 3. Don't Care ___
263. Have you ever given yourself an injection? <b>(If no, skip to 268)</b>	1. Yes _____ 2. No _____
264. Do you use disposable needles and syringes?	1. Yes _____ 2. No ___ 3. NA ___
265. Do you reuse the equipment?	1. Yes _____ 2. No ___ 3. NA _____
266. If sterilizable, how do you clean the needle and syringe?	1. Wash with soap ___ 2. Boil ___ 3. Other _____ 4. NA _____
267. Where do you dispose of these	1. With regular household waste _____

needles/syringes?	2. In hospital sharps container _____ 3. Other ( <i>specify</i> ) _____ 4. NA _____
268. When you are sick with a fever, do you prefer tablets or injections?	1. Tablets _____ 2. Injection _____ 3. I don't care _____
269. Do you think that used syringes can transmit disease. If yes, what diseases (check those mentioned)	A. HIV 1. Yes ___ 2. No ___ B. Hep C 1. Yes ___ 2. No ___ C. HepB 1. Yes ___ 2. No ___ D. Abscesses 1. Yes ___ 2. No ___ E. Don't know _____
270. Have you or anyone in your family ever been accidentally stuck by a injection needle left n the garbage or environment?	1. Yes _____ 2. No _____ 3. Don't remember _____
271. Do you see used needles or syringes on the grounds of the health facility?	1. Sometimes ___ 2. Often ___ 3. Never ___
272. Do you see used needles or syringes lying around in your community?	1. Sometimes _____ 2. Often _____ 3. Never _____

**END OF SECTION TEN**

## 10 G. GENERAL POPULATION

Explain the purpose of the survey and ask if they can spare 5 minutes to answer some questions about injection practices. This should be conducted as the patient is leaving the facility.

273. Of the following age groups to which do you belong?	1. under 15 ___ 2. 15-24 ___ 3. 25-34 ___ 4. 35-44 ___ 5. 45-49 ___ 6. over 50 ___
274. Gender	1. Male _____ 2. Female _____
275. During the last 6 months how many injections have you received? <i>The injection may have been given by a nurse, doctor, dentist, relative and other person or yourself.</i>	1. Number _____
276. Can you remember the last date you received an injection?	1. Date:--Month/Year _____ 2. No _____
277. Who gave you the last injection?	1. Medical doctor ___ 2. Medex ___ 3. Nurse ___ 5. FP Specialist ___ 4. Myself ___ 5. Dentist ___ 6. Pharmacist ___ 7. Someone else (specify) ___ 8. Don't remember ___
278. At what location did you receive the injection?	1. Clinic _____ 2. Home _____ 3. Hospital _____ 4. Dental Office _____ 5. Other _____ 6. don't remember _____
279. Can you remember whether the provider removed the needle and syringe from a sealed package?	1. Yes _____ 2. No _____ 3. Don't know/remember _____
280. If child is present, provide gender. <b>(if not skip to 284)</b>	1. Male _____ 2 Female _____
281. How many immunization injections has the child had in the last six months?	1. Number _____
282. How many curative injections has the child had in the last six months?	1. Number _____
283. If your child has a fever do you prefer oral medication or injections?	1. Oral _____ 2. Injections ___ 3. Don't Care ___
284. Have you ever given yourself an injection? <b>(If no skip to 289)</b>	1. Yes _____ 2. No _____
285. Do you use disposable needles and syringes?	1. Yes _____ 2. No ___ 3. NA _____
286. Do you reuse the equipment?	1. Yes _____ 2. No ___ 3. NA _____
287. If sterilizable, how do you clean the needle and syringe ?	1. Wash with soap _____ 2. Boil _____ 3. Other _____ 4. NA _____

288.	Where do you dispose of these needles/syringes?	1. With regular household waste ____ 2. In hospital sharps container ____ 3. Other ( <i>specify</i> ) ____ 4. NA ____
289.	When you are sick with a fever, do you prefer tablets or injections?	1. Tablets ____ 2. Injection ____ 3. I don't care ____
290.	Do you think that used syringes can transmit disease? If yes what diseases (check those mentioned)	A. HIV 1. Yes ____ 2. No ____ B. Hep C 1. Yes ____ 2. No ____ C. HepB 1. Yes ____ 2. No ____ D. Abscesses 1. Yes ____ 2. No ____ E. Don't know ____
291.	Have you or anyone in your family ever been accidentally stuck by a injection needle left n the garbage or environment?	1. Yes ____ 2. No ____ 3. Don't remember ____
292.	Do you see used needles or syringes on the grounds of the health facility?	1. Sometimes ____ 2. Often ____ 3. Never ____
293.	Do you see used needles or syringes on the grounds in your community?	1. Sometimes ____ 2. Often ____ 3. Never ____

**END OF SECTION TEN**

## IIA. LOGISTICS POTENTIAL I-3 QUESTIONNAIRES

Answer questions these questions for each supplier of syringes/needles. Interviewers should pose these questions to the Medex/Person in Charge of Commodity Management at Health Center or Storeroom/Pharmacy Supervisor in Charge of Commodity Management at Hospital

294. Where do you get disposable syringes/needles?	A. MMU 1. Yes ___ 2. No ___ B. Hospital 1. Yes ___ 2. No ___ C. HC 1. Yes ___ 2. No ___ D. Regional Bond 1. Yes ___ 2. No ___ E. EPI Program 1. Yes ___ 2. No ___ F. Other _____ 1. Yes ___ 2. No ___
295. Please provide complete name of suppliers.	1. _____ 2. _____ 3. _____
296. Does this facility determine the quantity of disposable syringes/needles required and order this from the supplier?	1. Yes ___ 2. No ___  <p style="text-align: center;"><b>If yes , skip to question 300</b></p>
297. If the quantity of disposable syringes/needles that you receive is determined elsewhere, who determines what you receive?	A. MMU 1. Yes ___ 2. No ___ B. Regional Health Office 1. Yes ___ 2. No ___ C. Hospital 1. Yes ___ 2. No ___ D. HC 1. Yes ___ 2. No ___ E. Regional Bond 1. Yes ___ 2. No ___ F. EPI Program 1. Yes ___ 2. No ___ G. Other _____ 1. Yes ___ 2. No ___
298. If the quantity of disposable syringes/needles that you receive is determined elsewhere, how does that entity determine what you receive?	1. Standard fixed supply _____ 2. Based on number of injectable medicines supplied _____ 3. Other _____ (explain) _____ 4. Don't know _____
299. If the quantity of disposable syringes/needles that you receive is determined elsewhere, how often does your supplier supply them?	1. Less than Monthly _____ 2. Monthly _____ 3. Quarterly _____ 4. Bi-annually _____ 5. Other fixed schedule _____ 6. No fixed schedule _____  <p style="text-align: center;"><b>go to question 303</b></p>
300. How often do you normally order syringes/needles?  <i>Do not consider emergency orders.</i>	1. Less than Monthly _____ 2. Monthly _____ 3. Quarterly _____ 4. Bi-annually _____ 5. Other fixed schedule _____ 6. No fixed schedule _____

<p>301. How do you decide when to order disposable syringes/needles?</p> <p><i>Do not consider emergency orders.</i></p>	<p>1. Order only when stock falls to zero _____</p> <p>2. Order only when stock falls to predetermined level _____</p> <p>3. Order every time no matter what the stock level _____</p> <p>4. Other _____</p> <p>Note: If 2 or 4, collect information on how decision is made.</p>
<p>302. How do you decide how many disposable syringes/needles to order?</p> <p><i>Do not consider emergency orders.</i></p>	<p>A. Order to return stock to predetermined level _____</p> <p>1. specify level: _____</p> <p>B. Order same amount every time _____</p> <p>1. specify amount: _____</p> <p>C. Use formula to determine how many to order _____</p> <p>1. specify formula: _____</p>
<p>303. Does your facility normally use a <i>CRIV</i> to request syringes/needles?</p>	<p>1. Yes _____</p> <p>2. No _____</p> <p>a. If no, what is used? _____</p> <p><i>(specify and bring back copy of form used)</i></p>
<p>304. Who is responsible for transporting disposable syringes/needles to your facility?</p>	<p>1. Self _____</p> <p>2. MMU _____</p> <p>3. Regional Health Office _____</p> <p>4. Regional Bond _____</p> <p>5. Hospital _____</p> <p>6. HC _____</p> <p>7. EPI Program _____</p> <p>8. Other _____</p> <p><i>If answer is not 1, skip to question 307</i></p>
<p>305. If self is responsible party, indicate how long it takes</p>	<p>1. Hours _____</p> <p>(explain _____)</p>
<p>306. If self is responsible party, are costs a problem</p>	<p>1. Yes _____ 2. No _____</p> <p>(explain if necessary _____)</p>
<p>307. Does your facility maintain a stock ledger for these syringes/needles?</p>	<p>1. Yes _____ 2. No _____</p>
<p>308. Was the person responsible for maintaining the stock ledger for syringes trained?</p>	<p>1. Yes within past year _____</p> <p>2. Yes between one and two years ago _____</p> <p>3. More than two years ago _____</p> <p>4. No _____</p>
<p>309. If yes, who provided the training?</p>	<p>1. Training organization/person _____</p> <p>2. NA _____</p>
<p>310. Are there any written procedures for using stock ledger to record issues and stock balances for these syringes?</p>	<p>1. Yes observed _____</p> <p>2. Yes reported _____</p> <p>3. No _____</p> <p><i>If yes, bring back sample of instructions.</i></p>

**END OF SECTION ELEVEN**

## I I B. LOGISTICS: USE THIS IF THERE IS A SECOND SUPPLIER

311. Please provide complete name of supplier.	1. _____														
312. Does this facility determine the quantity of disposable syringes/needles required and order this from the supplier?	1. Yes _____ 2. No _____  <b>If yes , skip to question 316</b>														
313. If the quantity of disposable syringes/needles that you receive is determined elsewhere, who determines what you receive?	<table border="0"> <tr> <td>A. MMU</td> <td>1. Yes _____ 2. No _____</td> </tr> <tr> <td>B. Regional Health Office</td> <td>1. Yes _____ 2. No _____</td> </tr> <tr> <td>C. Hospital</td> <td>1. Yes _____ 2. No _____</td> </tr> <tr> <td>D. HC</td> <td>1. Yes _____ 2. No _____</td> </tr> <tr> <td>E. Regional Bond</td> <td>1. Yes _____ 2. No _____</td> </tr> <tr> <td>F. EPI Program</td> <td>1. Yes _____ 2. No _____</td> </tr> <tr> <td>G. Other _____</td> <td>1. Yes _____ 2. No _____</td> </tr> </table>	A. MMU	1. Yes _____ 2. No _____	B. Regional Health Office	1. Yes _____ 2. No _____	C. Hospital	1. Yes _____ 2. No _____	D. HC	1. Yes _____ 2. No _____	E. Regional Bond	1. Yes _____ 2. No _____	F. EPI Program	1. Yes _____ 2. No _____	G. Other _____	1. Yes _____ 2. No _____
A. MMU	1. Yes _____ 2. No _____														
B. Regional Health Office	1. Yes _____ 2. No _____														
C. Hospital	1. Yes _____ 2. No _____														
D. HC	1. Yes _____ 2. No _____														
E. Regional Bond	1. Yes _____ 2. No _____														
F. EPI Program	1. Yes _____ 2. No _____														
G. Other _____	1. Yes _____ 2. No _____														
314. If the quantity of disposable syringes/needles that you receive is determined elsewhere, how does that entity determine what you receive?	1. Standard fixed supply _____ 2. Based on number of injectable medicines supplied _____ 3. Other _____ (explain) _____ 4. Don't know _____														
315. If the quantity of disposable syringes/needles that you receive is determined elsewhere, how often does your supplier supply them?	1. Less than Monthly _____ 2. Monthly _____ 3. Quarterly _____ 4. Bi-annually _____ 5. Other fixed schedule _____ 6. No fixed schedule _____ <b>go to question 319</b>														
316. How often do you normally order syringes/needles?  <i>Do not consider emergency orders.</i>	1. Less than Monthly _____ 2. Monthly _____ 3. Quarterly _____ 4. Bi-annually _____ 5. Other fixed schedule _____ 6. No fixed schedule _____														
317. How do you decide when to order disposable syringes/needles?  <i>Do not consider emergency orders.</i>	1. Order only when stock falls to zero _____ 2. Order only when stock falls to predetermined level _____ 3. Order every time no matter what the stock level _____ 4. Other _____  Note: If 2 or 4, collect information on how decision is made.														

<p>318. How do you decide how many disposable syringes/needles to order?</p> <p><i>Do not consider emergency orders.</i></p>	<p>A. Order to return stock to predetermined level _____</p> <p>1. specify level: _____</p> <p>B. Order same amount every time _____</p> <p>1. specify amount: _____</p> <p>C. Use formula to determine how many to order _____</p> <p>1. specify formula: _____</p>
<p>319. Does your facility normally use a <i>CRIV</i> to request syringes/needles?</p>	<p>1. Yes _____</p> <p>2. No _____</p> <p>a. If no, what is used? _____</p> <p><i>(specify and bring back copy of form used)</i></p>
<p>320. Who is responsible for transporting disposable syringes/needles to your facility?</p>	<p>1. Self _____</p> <p>2. MMU _____</p> <p>3. Regional Health Office _____</p> <p>4. Regional Bond _____</p> <p>5. Hospital _____</p> <p>6. HC _____</p> <p>7. EPI Program _____</p> <p>8. Other _____</p> <p><i>If answer is not 1, skip to question 323</i></p>
<p>321. If self is responsible party, indicate how long it takes.</p>	<p>1. Hours _____</p> <p>(explain _____)</p>
<p>322. If self is responsible party, are costs a problem?</p>	<p>1. Yes _____ 2. No _____</p> <p>(explain if necessary _____)</p>
<p>323. Does your facility maintain a stock ledger for these syringes/needles?</p>	<p>1. Yes _____ 2. No _____</p>
<p>324. Was the person responsible for maintaining the stock ledger for syringes trained?</p>	<p>1. Yes within past year _____</p> <p>2. Yes between one and two years ago _____</p> <p>3. More than two years ago _____</p> <p>4. No _____</p>
<p>325. If yes, who provided the training?</p>	<p>3. Training organization/person _____</p> <p>4. NA _____</p>
<p>326. Are there any written procedures for using stock ledger to record issues and stock balances for these syringes?</p>	<p>1. Yes observed _____</p> <p>2. Yes reported _____</p> <p>3. No _____</p> <p><i>If yes, bring back sample of instructions.</i></p>

**END OF SECTION ELEVEN**

**I IC. LOGISTICS: USE ONLY IF THERE IS A 3<sup>RD</sup> SUPPLIER**

<p>327. Please provide complete name of suppliers</p>	<p>1. _____</p>
<p>328. Does this facility determine the quantity of disposable syringes/needles required and order this from the supplier?</p>	<p>1. Yes _____ 2. No _____</p> <p style="text-align: center;"><b>If yes , skip to question 332</b></p>
<p>329. If the quantity of disposable syringes/needles that you receive is determined elsewhere, who determines what you receive?</p>	<p>A. MMU 1. Yes ___ 2. No ___          B. Regional Health Office 1. Yes ___ 2. No ___          C. Hospital 1. Yes ___ 2. No ___          D. HC 1. Yes ___ 2. No ___          E. Regional Bond 1. Yes ___ 2. No ___          F. EPI Program 1. Yes ___ 2. No ___          G. Other _____ 1. Yes ___ 2. No ___</p>
<p>330. If the quantity of disposable syringes/needles that you receive is determined elsewhere, how does that entity determine what you receive?</p>	<p>1. Standard fixed supply _____          2. Based on number of injectable medicines supplied _____          3. Other _____          (explain) _____          4. Don't know _____</p>
<p>331. If the quantity of disposable syringes/needles that you receive is determined elsewhere, how often does your supplier supply them?</p>	<p>1. Less than Monthly _____          2. Monthly _____          3. Quarterly _____          4. Bi-annually _____          5. Other fixed schedule _____          6. No fixed schedule _____</p> <p style="text-align: center;"><b>go to question 335</b></p>
<p>332. How often do you normally order syringes/needles?</p> <p><i>Do not consider emergency orders.</i></p>	<p>1. Less than Monthly _____          2. Monthly _____          3. Quarterly _____          4. Bi-annually _____          5. Other fixed schedule _____          6. No fixed schedule _____</p>
<p>333. How do you decide when to order disposable syringes/needles?</p> <p><i>Do not consider emergency orders.</i></p>	<p>1. Order only when stock falls to zero _____          2. Order only when stock falls to predetermined level _____          3. Order every time no matter what the stock level _____          4. Other _____</p> <p>Note: If 2 or 4, collect information on how decision is made.</p>

<p>334. How do you decide how many disposable syringes/needles to order?</p> <p><i>Do not consider emergency orders.</i></p>	<p>A. Order to return stock to predetermined level _____</p> <p>1. specify level: _____</p> <p>B. Order same amount every time _____</p> <p>1. specify amount: _____</p> <p>C. Use formula to determine how many to order _____</p> <p>1. specify formula: _____</p>
<p>335. Does your facility normally use a <i>CRIV</i> to request syringes/needles?</p>	<p>1. Yes _____</p> <p>2. No _____</p> <p>a. If no, what is used? _____</p> <p><i>(specify and bring back copy of form used)</i></p>
<p>336. Who is responsible for transporting disposable syringes/needles to your facility?</p>	<p>1. Self _____</p> <p>2. MMU _____</p> <p>3. Regional Health Office _____</p> <p>4. Regional Bond _____</p> <p>5. Hospital _____</p> <p>6. HC _____</p> <p>7. EPI Program _____</p> <p>8. Other _____</p> <p><i>If answer is not 1, skip to question 339</i></p>
<p>337. If self is responsible party, indicate how long it takes</p>	<p>1. Hours _____</p> <p>(explain _____)</p>
<p>338. If self is responsible party, are costs a problem?</p>	<p>1. Yes _____ 2. No _____</p> <p>(explain if necessary _____)</p>
<p>339. Does your facility maintain a stock ledger for these syringes/needles?</p>	<p>1. Yes _____ 2. No _____</p>
<p>340. Was the person responsible for maintaining the stock ledger for syringes trained?</p>	<p>1. Yes within past year _____</p> <p>2. Yes between one and two years ago _____</p> <p>3. More than two years ago _____</p> <p>4. No _____</p>
<p>341. If yes, who provided the training?</p>	<p>1. Training organization/person _____</p> <p>2. NA _____</p>
<p>342. Are there any written procedures for using stock ledger to record issues and stock balances for these syringes?</p>	<p>1. Yes observed _____</p> <p>2. Yes reported _____</p> <p>3. No _____</p> <p><i>If yes, bring back sample of instructions.</i></p>

**END OF SECTION ELEVEN**

## 12A. LOGISTICS

*Answer questions for each supplier of sharps boxes. Interviewers should pose these questions to the Medex/Person in Charge of Commodity Management at Health Center or Storeroom/Pharmacy Supervisor in Charge of Commodity Management at Hospital.*

<p>343. Who is the supplier of sharps boxes for this facility?</p>	<p>1. MMU                    1. Yes ___ 2. No ___          2. Hospital            1. Yes ___ 2. No ___          3. HC                    1. Yes ___ 2. No ___          4. Regional Bond    1. Yes ___ 2. No ___          5. EPI Program      1. Yes ___ 2. No ___          6. Other                1. Yes ___ 2. No ___</p>
<p>344. Please provider complete name of supplier.</p>	<p>1. _____          2. _____          3. _____</p>
<p>345. Does this facility determine the quantity of sharps boxes required and order this from the supplier?</p>	<p>1. Yes _____ 2. No _____</p> <p style="text-align: center;"><b><i>If yes , skip to question 349</i></b></p>
<p>346. If the quantity of sharps boxes that you receive is determined elsewhere, who determines what you receive?</p>	<p>1. MMU                    1. Yes ___ 2. No ___          2. Regional Health Office 1. Yes ___ 2. No ___          3. Hospital                1. Yes ___ 2. No ___          4. HC                      1. Yes ___ 2. No ___          5. Regional Bond        1. Yes ___ 2. No ___          6. EPI Program          1. Yes ___ 2. No ___          7. Other                  1. Yes ___ 2. No ___</p>
<p>347. If the quantity of sharps boxes that you receive is determined elsewhere, how does that entity determine what you receive?</p>	<p>1. Standard fixed supply _____          2. Based on number of injectable medicines supplied _____          3. Other _____ (explain) _____          4. Don't know _____</p>
<p>348. If the quantity of sharps boxes that you receive is determined elsewhere, how often does your supplier supply them?</p>	<p>1. Less than Monthly _____          2. Monthly _____          3. Quarterly _____          4. Bi-annually _____          5. Other fixed schedule _____          6. No fixed schedule _____</p> <p style="text-align: center;"><b><i>Skip to question 352</i></b></p>
<p>349. How often do you normally order sharps boxes?</p> <p><b><i>Do not consider emergency orders.</i></b></p>	<p>1. Less than Monthly _____          2. Monthly _____          3. Quarterly _____          4. Bi-annually _____          5. Other fixed schedule _____          6. No fixed schedule _____</p>

<p>350. How do you decide when to order sharps boxes?</p> <p><i>Do not consider emergency orders.</i></p>	<p>1. Order only when stock falls to zero _____</p> <p>2. Order only when stock falls to predetermined level _____</p> <p>3. Order every time no matter what the stock level _____</p> <p>4. Other _____</p> <p><i>Note: If 2 or 4, collect information on how decision is made.</i></p>
<p>351. How do you decide how many sharps boxes to order?</p> <p><i>Do not consider emergency orders.</i></p>	<p>A. Order to return stock to predetermined level _____ 1 specify level: _____</p> <p>B. Order same amount every time _____ 1 specify amount: _____</p> <p>C. Use formula to determine how many to order _____ 1. specify formula: _____</p>
<p>352. Does your facility normally use a <i>CRIV</i> to request sharps boxes?</p>	<p>1. Yes _____ 2. No _____</p>
<p>353. If no, specify what is used.</p>	<p>1. _____</p> <p><i>Take a copy of order form with you</i></p>
<p>354. Who is responsible for transporting sharps boxes to your facility?</p>	<p>1. Self _____</p> <p>2. MMU _____</p> <p>3. Regional Health Office _____</p> <p>4. Regional Bond _____</p> <p>5. Hospital _____</p> <p>6. HC _____</p> <p>7. EPI Program _____</p> <p>8. Other _____</p> <p><i>If 1 is not answer, skip to 357</i></p>
<p>355. If self, how long does it take?</p>	<p>1. Hours _____ explanation _____</p>
<p>356. If self, are transportation costs a problem?</p>	<p>1. Yes _____ 2. No _____ (explanation) _____</p>
<p>357. Does your facility maintain a stock ledger for these sharps boxes?</p>	<p>1. Yes _____ 2. No _____</p>
<p>358. Was the person responsible for filling in the stock ledger trained?</p>	<p>1. Yes in the past year _____</p> <p>2. Yes between one and two years _____</p> <p>3. Yes more than two years _____</p> <p>4. No _____</p>
<p>359. If yes, who provided the training?</p>	<p>1. Training organization/person _____</p> <p>2. NA _____</p>
<p>360. Are there any written procedures for using stock ledger to record issues and stock balances for these sharps boxes?</p>	<p>1. Yes observed _____</p> <p>2. Yes reported _____</p> <p>3. No _____</p> <p><i>If yes, bring back sample of instructions.</i></p>

**END OF SECTION TWELVE**

## 12B. LOGISTICS: ONLY USE IF SECOND SUPPLIER

361. Please provider complete name of supplier.	1. _____														
362. Does this facility determine the quantity of sharps boxes required and order this from the supplier?	1. Yes ____ 2. No ____  <i>If yes , skip to question 366</i>														
363. If the quantity of sharps boxes that you receive is determined elsewhere, who determines what you receive?	<table border="0"> <tr> <td>1. MMU</td> <td>1. Yes ____ 2. No ____</td> </tr> <tr> <td>2. Regional Health Office</td> <td>1. Yes ____ 2. No ____</td> </tr> <tr> <td>3. Hospital</td> <td>1. Yes ____ 2. No ____</td> </tr> <tr> <td>4. HC</td> <td>1. Yes ____ 2. No ____</td> </tr> <tr> <td>5. Regional Bond</td> <td>1. Yes ____ 2. No ____</td> </tr> <tr> <td>6. EPI Program</td> <td>1. Yes ____ 2. No ____</td> </tr> <tr> <td>7. Other</td> <td>1. Yes ____ 2. No ____</td> </tr> </table>	1. MMU	1. Yes ____ 2. No ____	2. Regional Health Office	1. Yes ____ 2. No ____	3. Hospital	1. Yes ____ 2. No ____	4. HC	1. Yes ____ 2. No ____	5. Regional Bond	1. Yes ____ 2. No ____	6. EPI Program	1. Yes ____ 2. No ____	7. Other	1. Yes ____ 2. No ____
1. MMU	1. Yes ____ 2. No ____														
2. Regional Health Office	1. Yes ____ 2. No ____														
3. Hospital	1. Yes ____ 2. No ____														
4. HC	1. Yes ____ 2. No ____														
5. Regional Bond	1. Yes ____ 2. No ____														
6. EPI Program	1. Yes ____ 2. No ____														
7. Other	1. Yes ____ 2. No ____														
364. If the quantity of sharps boxes that you receive is determined elsewhere, how does that entity determine what you receive?	1. Standard fixed supply _____ 2. Based on number of injectable medicines supplied _____ 3. Other _____ (explain) _____ 4. Don't know _____														
365. If the quantity of sharps boxes that you receive is determined elsewhere, how often does your supplier supply them?	1. Less than Monthly _____ 2. Monthly _____ 3. Quarterly _____ 4. Bi-annually _____ 5. Other fixed schedule _____ 6. No fixed schedule _____  <i>Skip to question 369</i>														
366. How often do you normally order sharps boxes?  <i>Do not consider emergency orders.</i>	1. Less than Monthly _____ 2. Monthly _____ 3. Quarterly _____ 4. Bi-annually _____ 5. Other fixed schedule _____ 6. No fixed schedule _____														
367. How do you decide when to order sharps boxes?  <i>Do not consider emergency orders.</i>	1. Order only when stock falls to zero _____ 2. Order only when stock falls to predetermined level _____ 3. Order every time no matter what the stock level _____ 4. Other _____  <i>Note: If 2 or 4, collect information on how decision is made.</i>														
368. How do you decide how many sharps boxes to order?  <i>Do not consider emergency orders.</i>	A. Order to return stock to predetermined level ____ 1 specify level: _____ B. Order same amount every time ____ 1 specify amount: _____ C. Use formula to determine how many to order ____ 1. specify formula: _____ _____														

369.	Does your facility normally use a <i>CRIV</i> to request sharps boxes?	1. Yes _____ 2. No _____
370.	If no, specify what is used	1. _____  <b><i>Take a copy of order form with you</i></b>
371.	Who is responsible for transporting sharps boxes to your facility?	1. Self _____ 2. MMU _____ 3.. Regional Health Office _____ 4. Regional Bond _____ 5. Hospital _____ 6. HC _____ 7. EPI Program _____ 8. Other _____  <b><i>If 1 is not answer, skip to 374</i></b>
372.	If self, how long does it take?	1. Hours _____ explanation _____
373.	If self, are transportation costs a problem?	1. Yes _____ 2. No _____ (explanation) _____
374.	Does your facility maintain a stock ledger for these sharps boxes?	1. Yes _____ 2. No _____
375.	Was the person responsible for filling in the stock ledger trained?	1. Yes in the past year _____ 2. Yes between one and two years _____ 3. Yes more than two years _____ 4. No _____
376.	If yes, who provided the training?	1. Training organization/person _____ 2. NA _____
377.	Are there any written procedures for using stock ledger to record issues and stock balances for these sharps boxes?	1. Yes observed ____ 2. Yes reported _____ 3. No ____ <b><i>If yes, bring back sample of instructions.</i></b>

**END OF SECTION TWELVE**

**12 C. LOGISTICS: ONLY USE IF THIRD SUPPLIER**

378. Please provider complete name of supplier.	1. _____														
379. Does this facility determine the quantity of sharps boxes required and order this from the supplier?	1. Yes ____ 2. No ____  <i>If yes , skip to question 383</i>														
380. If the quantity of sharps boxes that you receive is determined elsewhere, who determines what you receive?	<table border="0"> <tr> <td>1. MMU</td> <td>1. Yes ____ 2. No ____</td> </tr> <tr> <td>2. Regional Health Office</td> <td>1. Yes ____ 2. No ____</td> </tr> <tr> <td>3. Hospital</td> <td>1. Yes ____ 2. No ____</td> </tr> <tr> <td>4. HC</td> <td>1. Yes ____ 2. No ____</td> </tr> <tr> <td>5. Regional Bond</td> <td>1. Yes ____ 2. No ____</td> </tr> <tr> <td>6. EPI Program</td> <td>1. Yes ____ 2. No ____</td> </tr> <tr> <td>7. Other</td> <td>1. Yes ____ 2. No ____</td> </tr> </table>	1. MMU	1. Yes ____ 2. No ____	2. Regional Health Office	1. Yes ____ 2. No ____	3. Hospital	1. Yes ____ 2. No ____	4. HC	1. Yes ____ 2. No ____	5. Regional Bond	1. Yes ____ 2. No ____	6. EPI Program	1. Yes ____ 2. No ____	7. Other	1. Yes ____ 2. No ____
1. MMU	1. Yes ____ 2. No ____														
2. Regional Health Office	1. Yes ____ 2. No ____														
3. Hospital	1. Yes ____ 2. No ____														
4. HC	1. Yes ____ 2. No ____														
5. Regional Bond	1. Yes ____ 2. No ____														
6. EPI Program	1. Yes ____ 2. No ____														
7. Other	1. Yes ____ 2. No ____														
381. If the quantity of sharps boxes that you receive is determined elsewhere, how does that entity determine what you receive?	1. Standard fixed supply _____ 2. Based on number of injectable medicines supplied _____ 3. Other _____ (explain) _____ 4. Don't know _____														
382. If the quantity of sharps boxes that you receive is determined elsewhere, how often does your supplier supply them?	1. Less than Monthly _____ 2. Monthly _____ 3. Quarterly _____ 4. Bi-annually _____ 5. Other fixed schedule _____ 6. No fixed schedule _____  <i>Skip to question 386</i>														
383. How often do you normally order sharps boxes?  <i>Do not consider emergency orders.</i>	1. Less than Monthly _____ 2. Monthly _____ 3. Quarterly _____ 4. Bi-annually _____ 5. Other fixed schedule _____ 6. No fixed schedule _____														
384. How do you decide when to order sharps boxes?  <i>Do not consider emergency orders.</i>	1. Order only when stock falls to zero _____ 2. Order only when stock falls to predetermined level _____ 3. Order every time no matter what the stock level _____ 4. Other _____  <i>Note: If 2 or 4, collect information on how decision is made.</i>														
385. How do you decide how many sharps boxes to order?  <i>Do not consider emergency orders.</i>	A. Order to return stock to predetermined level ____ 1 specify level: _____ B. Order same amount every time ____ 1 specify amount: _____ C. Use formula to determine how many to order ____ 1. specify formula: _____ _____														

386.	Does your facility normally use a <i>CRIV</i> to request sharps boxes?	1. Yes _____ 2. No _____
387.	If no, specify what is used.	1. _____  <b><i>Take a copy of order form with you</i></b>
388.	Who is responsible for transporting sharps boxes to your facility?	1. Self _____ 2. MMU _____ 3.. Regional Health Office _____ 4. Regional Bond _____ 5. Hospital _____ 6. HC _____ 7. EPI Program _____ 8. Other _____  <b><i>If 1 is not answer, skip to 391</i></b>
389.	If self, how long does it take?	1. Hours _____ explanation _____
390.	If self, are transportation costs a problem?	1. Yes _____ 2. No _____ (explanation) _____
391.	Does your facility maintain a stock ledger for these sharps boxes?	1. Yes _____ 2. No _____
392.	Was the person responsible for filling in the stock ledger trained?	1. Yes in the past year _____ 2. Yes between one and two years _____ 3. Yes more than two years _____ 4. No _____
393.	If yes, who provided the training?	1. Training organization/person _____ 2. NA _____
394.	Are there any written procedures for using stock ledger to record issues and stock balances for these sharps boxes?	1. Yes observed _____ 2. Yes reported _____ 3. No _____ <b><i>If yes, bring back sample of instructions.</i></b>

**END OF SECTION TWELVE**

### 13. CRIV

*Interviewers should pose these questions to the Medex/Person in Charge of Commodity Management at Health Center or Storeroom/Pharmacy Supervisor in Charge of Commodity Management at Hospital.*

395. Was the person responsible for using the CRIV trained?	1. Yes within past year 2. Yes between one and two years ago 3. Yes more than two years ago 4. No _____
396. If yes, who provided the training	1. Training organization/person _____ 2. NA _____
397. Does your facility possess any written procedures for using the CRIV?	1. Yes Observed ____ 2. Yes Reported ____ 3. No _____  <b><i>If yes, bring back sample of instructions.</i></b>
398. Are you aware that there is a revised CRIV? If so, does your facility use it?	A. Aware 1. Yes ____ 2. No ____ B. Possess 1. Yes ____ 2. No ____ B. Use ---- 1. Yes ____ 2. No ____
399. Was the person responsible for filling in the revised CRIV trained?	1. Yes ____ 2. No ____
400. If you or your staff did receive training on the revised CRIV, who provided the training?	1. Training organization/person _____ 2. NA _____
401. Does your facility possess any written procedures for using the revised CRIV?	1. Yes Observed ____ 2. Yes Reported ____ 3. . No. _____  <b><i>If yes, bring back a sample of instructions.</i></b>
402. Does your facility submit a consumption report for syringes?	1. Yes ____ 2. No ____  <b><i>If yes, bring back example of report.</i></b>
403. Does your facility submit a consumption report for sharps boxes?	1. Yes ____ 2. No ____  <b><i>If yes, bring back example of report.</i></b>
404. If your facility does submit a consumption report, how often does it submit the report?	1. Monthly ____ 2. Quarterly ____ 3. Yearly ____ 4. Other ____ 5. NA _____
405. To whom do you submit the report?	1 MMU 1. Yes ____ 2. No ____ 2. Regional Health Office 1. Yes ____ 2. No ____ 3. Hospital 1. Yes ____ 2. No ____ 4. HC 1. Yes ____ 2. No ____ 5. Regional Bond 1. Yes ____ 2. No ____ 6. Other _____
406. Are you aware that there is a revised consumption report? If so, does your facility use it?	1. Aware: a. Yes ____ b. No ____ 2. Use: a. Yes ____ b. No ____

407. Was the person responsible for filling in the revised consumption report trained to do so?	1. Yes within past year _____ 2. Yes between one and two years ago ____ 3. Yes more than three years ago ____ 4. No _____
408. Who provided the training?	1. Training organization/person _____ 2. NA _____
409. Does your facility possess any written procedures for using the revised consumption report?	1. Yes observed _____ 2. Yes reported _____ 3. No. _____  <i>If yes, bring back a sample of instructions.</i>

**END OF SECTION THIRTEEN**